Racial, Ethnic, and Gender Disparities in Labor Market Outcomes in the Aftermath of the COVID-19 Pandemic

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Abstract

Using longitudinal data from the Understanding America Study (UAS) covering the onset and aftermath of the COVID-19 pandemic, we examine the evolution of sex and racial/ethnic disparities in employment status and work arrangements. We document differences across workers in the type of work in which they engage (full/part-time, gig work), ability/possibility to work-from-home (WFH), and willingness to pay for more days of WFH. We relate WFH arrangements to job satisfaction, turnover intentions, and workers' well-being. We find that the labor market turmoil induced by the pandemic in 2020 predominantly impacted minority workers, particularly Blacks and Hispanics, who faced higher transitions out of full-time employment compared to Whites. These differences narrowed over time, and full-time employment levels for Blacks and Hispanics rebounded to pre-pandemic standards by 2023. However, disparities in work arrangements are substantial and persistent. After adjusting for socioeconomic factors and occupation type, female, Black, and Hispanic workers show a stronger preference for more WFH days than their employers offer or allow compared to male and White workers. Accordingly, they are significantly more likely to accept a pay cut of 5% or more for an additional WFH day per week. We detect a significant positive association between workplace/schedule flexibility and job satisfaction. This relationship is more pronounced for women, who exhibit higher job satisfaction when their WFH preferences are met compared to men. Employees with unfulfilled WFH preferences are more inclined to seek new job opportunities, exhibit lower mental health, and report worse work-life balance.

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1. Introduction

Disparities in the labor market by sex, race, and ethnicity have been persistent issues of concern for policymakers and a topic of interest for economists for decades. Historically, women and individuals from racial and ethnic minority backgrounds have faced systematic barriers, including unequal pay for similar roles, limited avenues to senior positions, and outright discrimination (Altonji and Blank, 1999; Neumark, 2018). The onset of the COVID-19 pandemic spotlighted new dimensions of inequality, emphasizing gaps in work schedule adaptability and chances to undertake supplemental work, like gig jobs. As the trend towards remote work took hold, disparities across sectors and roles that do not afford the privileges of workplace and schedule flexibility have started to emerge. Given that workers are unevenly sorted across these sectors and roles based on socioeconomic factors and pre-existing barriers, the shift in work dynamics might have exacerbated disparities rooted in sex and race/ethnicity.

Indeed, the pandemic had enormous effects on the U.S. labor market. Individuals remained home due to fear of infection, and government mandates closed schools and businesses, leading to sharp reductions in employment (Goolsbee and Syverson, 2021). These impacts have not been evenly distributed across the population – racial and ethnic minorities experienced significantly higher job losses and lower rates of job recovery (Montenovo et al., 2022), with Hispanics the hardest hit (Saenz et al., 2021). On the other hand, with the historically fast recovery of the labor market, wages at the bottom of the distribution have increased more than elsewhere, potentially implying a reduction in wage disparities between White and non-White workers (Kochhar and Bennett, 2021). While labor force participation rates have increased since April 2020, women and minorities' labor supply remains differentially affected (Lim and Zabek, 2023).

Changes in employment and wages, while important, represent an incomplete picture of the evolving labor market. The COVID-19 pandemic also created an abrupt and unprecedented social experiment in working arrangements (Brynjolfsson et al., 2020). In the past three years, the concepts of "workplace" and "work schedule" have dramatically changed, and many predict these changes to be long-lasting (Barrero et al., 2021). Working from home (WFH) has become much more common and remains the norm for many employees. Such a widespread phenomenon has modified workers' habits and expectations, firms' investment strategies (Bloom et al., 2021), and job demands (Lund et al., 2021). Additionally, given pre-existing trends, many individuals who were adversely impacted by labor market shocks during the pandemic may have transitioned to nonstandard forms of employment, such as part-time jobs and gig work (Katz and Krueger, 2017).

While the entire workforce has witnessed changes in workplace and schedule arrangements, different demographic and socioeconomic groups have been differentially impacted. School closures disproportionately disadvantaged working mothers, with potentially damaging consequences for their careers (Albanesi and Kim, 2021). Minority and lower-educated workers, who are more likely to be employed in "essential" occupations, faced unequal health risks and, in the absence of adequate paid sick leave, increasing job insecurity (Wolfe et al., 2021). Anecdotal evidence suggests that client-facing employees, who are more likely to be minority and female, have recently been the target of abusive behavior from unruly customers (New York Times, 2022; the Atlantic, 2021). Workers who cannot work from home may have experienced a steeper decrease in job satisfaction than those who can participate in remote work.

In this paper, we use newly collected longitudinal data from the Understanding America Study (UAS) covering the onset and aftermath of the COVID-19 pandemic to examine the evolution of sex and racial/ethnic disparities in employment status, preferences for, and employers' accommodation of WFH. In particular, we analyze individuals' forms of employment and job

stability before and during the pandemic (e.g., full/part-time, gig work). For the period 2021-2023, we document trends in the prevalence of remote work as well as in individuals' preferences for WFH and willingness to pay for more days of WFH. We also investigate how a more flexible work arrangement – as measured by the ability/possibility to WFH – affects job satisfaction, work-life balance, mental health, and propensities to seek a new job across workers. As above, we explicitly examine heterogeneity in these outcomes across sex, race, and ethnicity, to gauge whether existing labor market disparities have narrowed or widened as the pandemic has progressed.

Consistent with prior research, we find that the labor market turmoil induced by the pandemic in 2020 predominantly impacted minority workers, particularly Blacks and Hispanics, who faced higher transitions out of full-time employment compared to Whites. With the labor market's strong recovery in 2021 and 2022, these differences narrowed, and full-time employment levels for Black and Hispanic individuals rebounded to pre-pandemic standards, aligning closely with the level observed among White workers. However, disparities in work arrangements following the pandemic appear to be substantial and persistent. After adjusting for demographic, socioeconomic factors, and occupation type, female, Black, and Hispanic workers show a stronger preference for more WFH days than their employers offer or allow compared to male and White workers. Accordingly, female and minority workers (especially Hispanics and Mixed-race) are significantly more likely to accept a pay cut of 5% or more for an additional WFH day than male and White workers.

Our findings also underscore a significant positive association between workplace/schedule flexibility and job satisfaction. This relationship is more pronounced for women, who appear to benefit more in terms of job satisfaction when their WFH preferences are met compared to men. Additionally, WFH is a stronger predictor of job satisfaction than other job benefits like paid sick leave, health insurance, and access to employer-sponsored retirement plans.

Moreover, employees with unmet WFH preferences are more inclined to seek new job opportunities, exhibit lower mental health, and report worse work-life balance. Given the evident ties between WFH and multiple aspects of workers' well-being, addressing disparities in WFH accommodations across gender and race/ethnicity has the potential to reduce existing inequalities in labor market outcomes.

The remainder of the paper proceeds as follows. Section 2 briefly describes the data used for this study. Section 3 provides details about how specific outcomes of interest are constructed and used for our research purposes. It also presents the results of the empirical analyses and interprets the main findings. Section 4 concludes.

2. Data

We use data from the Understanding America Study (UAS), a probability-based Internet panel that longitudinally tracks a sample representative of the U.S. adult population since 2014 (Alattar et al., 2018). The UAS pool of respondents is regularly refreshed with new recruitment batches, which are adaptively selected in order to improve the representativeness of the panel relative to the U.S. adult population. UAS members are recruited exclusively through Address Based Sampling and receive a tablet and a broadband connection (and related training) if they do not have Internet access. This mitigates selection problems facing convenience panels, where respondents are recruited from existing Internet users. As of September 2023, the UAS counts 13,000 members, who, on average, receive two or three invitations per month to complete surveys online.

The UAS administers 15 core surveys to all participants on a biannual basis. These include surveys about demographics, personality traits, cognitive ability, financial literacy, financial behaviors, financial outcomes, knowledge of Social Security rules, and the entire Health and Retirement Study (HRS) instrument. Through these questionnaires, we have access to a vast array

of background details and comprehensive data for every panel participant. Apart from the core surveys, other surveys are administered across the panel with different frequencies (typically on a yearly basis). For this study, our main analyses use two specific longitudinal questionnaires, though we incorporate additional data from other UAS surveys for auxiliary analyses. In this section, we give a concise overview of the two main surveys used in this paper, with a detailed breakdown of the specific metrics used for our empirical analyses presented in the results section below.

The Financial Health (FH) Survey

Since 2018, UAS panel members have completed an annual survey, fielded in late April/early May, tracking their financial lives in detail. We refer to this general longitudinal survey as the *Financial Health (FH) Survey*. A comprehensive module about employment was added to this survey since 2019, allowing us to observe individuals' labor market outcomes and changes in these outcomes a year before the onset of the COVID-19 pandemic (2019), during its peak (2020-2021), and when its severity had started to decline (2022). The employment module of the *FH Survey* elicits individuals' current labor force status (whether a person is currently working for pay, unemployed, retired, etc.), specific employment situation (whether a person works full-time or part-time for someone else; whether a person is self-employed or an independent consultant/contractor), earnings, and job-related benefits (e.g., paid sick leave, paid vacation days, health insurance, retirement plans, etc.). Importantly for our goals, the questionnaire asks about each respondent's engagement in gig or temporary work, such as one-off tasks done online or in person, "on-call" jobs, and work performed under short-term contracts. Although other UAS surveys, including the UAS COVID-tracking survey conducted from March 2020 to July 2023, provide data on labor force status and employment, they either lack pre-pandemic data or do not always maintain consistent questioning over time.

The Work-from-Home (WFH) Survey

The bulk of the analysis in this study is based on data from a longitudinal survey that we specifically developed to elicit work arrangements during and in the aftermath of the COVID-19 pandemic. This survey, which we will call the *Work-from-Home (WFH) Survey*, was administered to the entire UAS panel in the Summer of 2021, in the Spring of 2022, and again in the Spring of 2023. Its focus is on specific labor market outcomes of interest, including, but not limited to, an individual's ability to work remotely, preferences for WFH and employers' plans to accommodate them, number of days working at home and on business premises, willingness to pay for an additional day of WFH, typical commuting time to and from the workplace, job satisfaction, and intentions and actions taken to change employment. In the 2023 wave, we added questions about workers' caregiving responsibilities, which may affect the desire to WFH more frequently, and items measuring work-life balance.

We supplement the FH and WFH surveys with additional modules fielded in the UAS. First, we use Standard Occupation Codes, available for all UAS panel members since 2021, to identify job types and related tasks. Second, we rely on the UAS COVID-tracking survey to retrieve information about COVID-19 infection, vaccination, and mental health status. Finally, we obtain basic demographics, including sex, race/ethnicity, age, education, marital status, household income, household composition, and state of residence from the My Household survey, which is administered to all panel members when they join the study and updated on a quarterly basis.

Since we use data across different surveys, the sample size in our analyses differs depending on the outcome and independent variables. Because of the continued expansion of the UAS sample, newer recruits have completed fewer surveys by design. Rather than limiting the empirical analyses to the group of individuals for whom all measures are available, we prefer to maximize the sample size for each sub-analysis and let the sample size vary. This approach

presents two main advantages. First, it allows us to use as many observations as possible. This is particularly important given our focus on sex and racial/ethnic disparities in labor market outcomes and, therefore, the need to have large enough samples to reliably detect differences across groups. Second, since all our data come from surveys administered to all UAS members, all our analytic samples exhibit a composition similar to that of the entire UAS panel. Throughout this study, we mainly focus on working individuals, who are likely to have different demographic characteristics than the whole adult population. Table 1 provides the demographic breakdown of the sample of 6,401 working individuals in the UAS who answered at least one wave of our WFH survey between 2021 and 2023.

The sample proportions reported in the table reflect the over- or under-representation of certain segments of the population in the entire UAS, with differences stemming from the fact that our sample is limited to working individuals. Like the entire UAS, there is a notably higher percentage of female participants compared to males. To study labor market disparities by race/ethnicity, we categorize individuals into five distinct racial/ethnic groups: non-Hispanic Whites, non-Hispanic Blacks, non-Hispanic Asians, non-Hispanic Mixed-race, and Hispanics (we excluded Native Americans and Pacific Islanders due to their smaller representation). This racial/ethnic classification remains consistent throughout our analysis. Our data are generally representative of all these groups, although Black workers are slightly less represented compared to population benchmarks. By focusing on working individuals, our sample tends to be younger and more educated than the UAS as a whole. This offsets the lower representation of the young in the UAS but makes the under-representation of less-educated individuals more pronounced. It is worth noting that the UAS over-samples California and Los Angeles County residents, a trait our sample also possesses. To factor in potential regional differences in labor market results, we will

incorporate “Census region augmented” indicators as seen in the table below in all our regression models.

Table 1: Sample Composition Among UAS Respondents Who Answered at Least One Wave of the WFH Survey and Are Working

Sample Composition: UAS Working Individuals (unweighted proportions)	
Female	58.30
Race-ethnicity	
White	65.47
Black	7.50
Asian	6.76
Mixed	4.74
Hispanic	15.54
Age (years)	
18–39	31.82
40–49	26.36
50–59	24.22
60+	17.61
Education	
High school or less	14.32
Some college	32.25
Bachelor or more	53.43
Census region (augmented)	
Northeast	11.24
Midwest	23.50
South	27.20
West, excluding California	8.76
California, excluding Los Angeles County	12.36
Los Angeles County	16.94

3. Data Analysis and Results

a. Employment Transitions and Gig Work

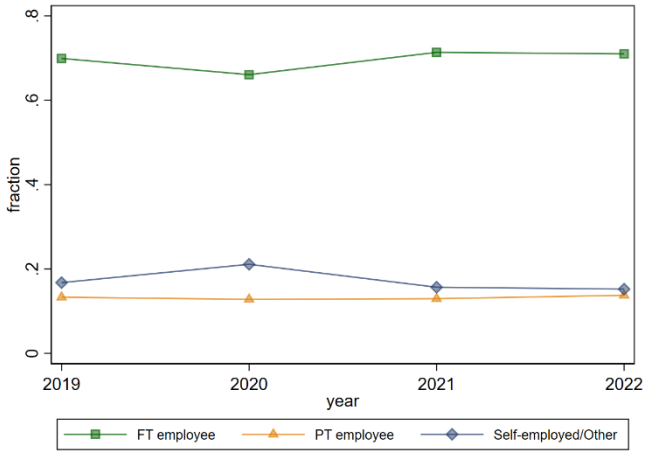
We begin our empirical analysis by focusing on trends in employment status over time. For this purpose, we construct a panel dataset using our annual FH Survey. The period covered by this longitudinal survey spans the time before the onset of the COVID-19 pandemic (2019), the time

when the pandemic hit and was at its peak (2020 and 2021), and the time when the pandemic had significantly declined both in terms of intensity and severity (2022). This panel dataset includes 9,390 unique individuals, of whom 36% are observed for four years, 21% for three years, 19% for two years, and 24% for one year only.

For each individual in the panel, we know whether they are currently working for pay, whether they are employed full-time or part-time, and whether they work for themselves or as independent consultants/contractors. The survey also asks if respondents engaged in temporary or gig work the previous month, regardless of whether these activities are part of their primary job or performed in addition to their primary job. We assign working respondents to three mutually exclusive employment categories: full-time employees, part-time employees, and self-employed/other (where other includes independent consultants or contractors). We also create an indicator for whether they engaged in gig work in the previous month, taking value one if the individuals completed one-off tasks either online or in-person, were hired as an on-call worker, or performed work under a short-term contract.

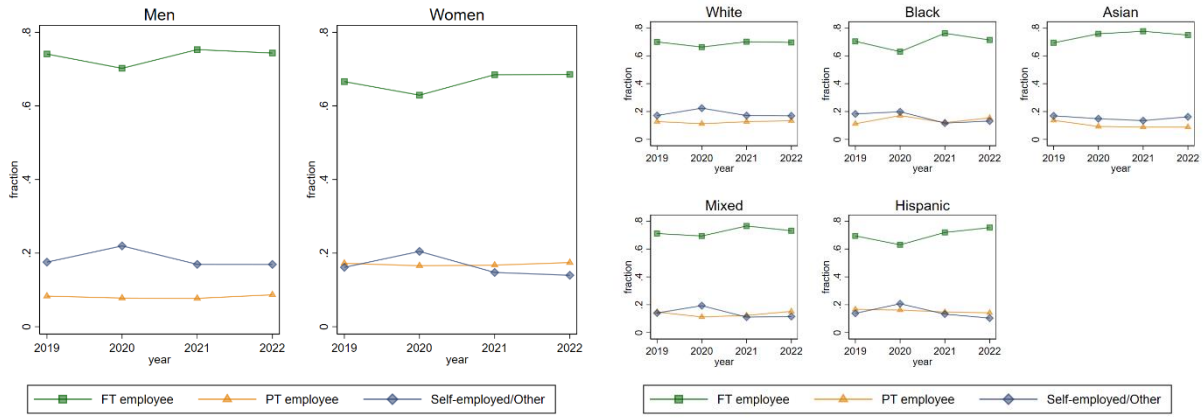
Figure 1 shows trends in employment status over the observation period. Among working individuals, 70% were full-time employees in 2019; this fraction dropped to 66% in 2020, reflecting the adverse effect of the pandemic's onset on employment, and climbed back to 71% in 2021 and 2022. The fraction of part-time employees remained constant at around 13% over time. The fraction of self-employed/others increased from 17% in 2019 to 21% in 2020 and remained slightly above 15% in 2021 and 2022. These trends are common to male and female workers. As can be seen in Figure 2, women are less likely to be employed full-time and more likely to be employed part-time than men. This difference has remained constant over time, with both groups exhibiting a similar decline in the fraction of full-time employees in 2020 mirrored by an increase in the fraction of self-employed/others.

Figure 1: Employment Status Over Time (All)



The breakdown by race/ethnicity reveals that Black and Hispanic workers were the two groups mostly affected by the labor market turmoil brought about by the onset of the pandemic. Both groups experienced a drop in full-time employment of about 7 percentage points between 2019 and 2020. However, with the speedy recovery of the labor market in 2021 and 2022, full-time employment among Black and Hispanic workers returned to its pre-pandemic level. The fraction of full-time employees among Asian workers increased by about 5 percentage points between 2019 and 2020 and remained constant thereafter. In contrast, both the fractions of part-time employees and self-employed/others exhibited a slight decline over time. There is some evidence that Whites are more likely to be self-employed/other than other racial/ethnic groups, and this tendency appears to be more apparent from 2020 onward.

Figure 2: Employment Status Over Time by Sex and Race/Ethnicity



As documented in Figure 2, the pandemic-induced drop in the fraction of full-time employees – those who typically enjoy better work conditions and greater job security – was not equally experienced by all working individuals. Given that moving from full-time to part-time work or self-employment can indicate more job insecurity, it is crucial to assess how widespread these shifts were among different workers. To this end, we consider the sub-sample of full-time employees in 2019 and examine the likelihood of transitioning out of full-time employment in subsequent years. The results of this analysis are reported in Table 2. In these regressions, the dependent variable is a binary indicator for moving out of full-time employment in 2021, or 2022. The excluded category is 2020.

In column (i), we regress this indicator on sex, race/ethnicity, and year dummies (controlling for age, marital status, education, household income, Census region, and occupation). The estimated coefficients reveal a marked decrease in the likelihood of transitioning out of full-time employment in 2021 and 2022 relative to 2020. This result reflects the drop in full-time employment when the pandemic hit and the recovery of the labor market in subsequent years: unconditionally, the likelihood of moving out of full-time employment was 13% in 2020, 8% in 2021, and 10% in 2022.

Table 2: Transitions Out of Full-Time Employment Over Time by Gender and Race/Ethnicity

	(i)	(ii)	(iii)
Female	0.005	-0.001	0.005
	(0.014)	(0.019)	(0.014)
Black	0.004	0.004	-0.003
	(0.025)	(0.025)	(0.036)
Asian	-0.028	-0.028	-0.080***
	(0.024)	(0.024)	(0.028)
Mixed	0.022	0.022	0.032
	(0.028)	(0.028)	(0.044)
Hispanic	-0.010	-0.010	0.024
	(0.021)	(0.021)	(0.034)
Year 2021	-0.054***	-0.054***	-0.053***
	(0.009)	(0.014)	(0.011)
Year 2022	-0.033***	-0.043***	-0.032**
	(0.011)	(0.015)	(0.012)
Year 2021 × Female		0.001	
		(0.019)	
Year 2022 × Female		0.018	
		(0.021)	
Year 2021 × Black			-0.010
			(0.039)
Year 2021 × Asian			0.075*
			(0.041)
Year 2021 × Mixed			0.013
			(0.051)
Year 2021 × Hispanic			-0.046
			(0.033)
Year 2022 × Black			0.032
			(0.045)
Year 2022 × Asian			0.089**
			(0.039)
Year 2022 × Mixed			-0.050
			(0.047)
Year 2022 × Hispanic			-0.061
			(0.037)
N	4,085	4,085	4,085

Covariates include indicators for age categories (40-49, 50-59, 60+), marital status (separated/divorced/widowed, never married), education (some college, college degree or more), household income brackets ($30,000-$59,999, $60,000-$99,999, $100,000+), Census region (Midwest, South, West), and occupations. White, Black, Asian, and Mixed-race groups exclude Hispanics, as described in the text. Standard errors clustered at the individual level in parentheses. *: p – value < 0.1, **: p – value < 0.05, ***: p – value < 0.01.

In columns (ii) and (iii), we interact the sex and race/ethnicity dummies with year dummies to assess whether different groups of workers experienced differential trends in transitioning out of full-time employment. By and large, the decrease in the likelihood of moving out of full-time

employment was widespread. While the interaction coefficients for Hispanics do not achieve statistical significance, the negative and sizeable coefficients reflect the higher impacts of the pandemic on employment in 2020 for this group. We only detect one statistically significant interaction suggesting that Asian full-time employees did not experience the same decrease in the likelihood of transitioning out of full-time employment in 2021 and 2022 relative to 2020 as their White counterparts.

There is evidence that essential workers suffered symptoms of burnout because of the added stress and demands brought about by the pandemic (Woods et al., 2023). Because of that, transitions out of full-time employment may have been more prevalent among essential workers and differentially so by sex and race/ethnicity. Relying on first-tier Standard Occupation Codes (SOCs) available for all UAS participants, we define essential occupations as healthcare practitioners, healthcare support, protective service, food preparation and serving, farming, fishing and forestry, construction and extraction, installation, maintenance, production, transportation and material move. While we acknowledge that this definition is broad and coarse, it has the advantage of preserving as much sample as possible, given that first-tier SOCs are less likely to be missing than second- and third-tier SOCs, which would allow for a more nuanced classification.

In Table 3, we investigate whether transitions out of full-time employment exhibit a different trend for those in essential occupations, separately by sex and race/ethnicity. The results show that, among female workers, those in non-essential occupations were significantly less likely to transition out of full-time employment in 2021 and 2022 (in the context of a strong labor market) relative to 2020 (at the height of the pandemic turmoil). This pattern is not observed for female workers in essential occupations, as they were equally likely to move out of full-time employment in 2021 and 2022 as in 2020. A possible interpretation is that female workers in essential occupations experienced higher psychological overload and burnout when the pandemic hit and

were more likely to cut hours of work in 2021 and 2022, while the labor market had recovered from the turmoil induced by the pandemic. We do not find differences between essential and non-essential workers among men, Whites, or racial/ethnic minorities.

Table 3: Transitions Out of Full-Time Employment Over Time by Gender and Race/Ethnicity and Essential Occupation

	Gender		Race/Ethnicity	
	Male	Female	White	Other
Year 2021	-0.042**	-0.075***	-0.054***	-0.075***
	(0.017)	(0.015)	(0.013)	(0.022)
Year 2022	-0.050***	-0.044***	-0.045***	-0.045*
	(0.018)	(0.017)	(0.014)	(0.024)
Essential Occupation	0.023	-0.032	0.002	-0.019
	(0.028)	(0.026)	(0.022)	(0.037)
Year 2021 × Essential Occupation	-0.032	0.073**	0.004	0.050
	(0.030)	(0.030)	(0.024)	(0.043)
Year 2021 × Essential Occupation	0.018	0.063*	0.040	0.024
	(0.032)	(0.035)	(0.027)	(0.046)
N	1,915	2,170	2,963	1,122

Covariates include indicators for age categories (40-49, 50-59, 60+), marital status (separated/divorced/widowed, never married), education (some college, college degree or more), household income brackets ($30,000-$59,999, $60,000-$99,999, $100,000+), and Census region (Midwest, South, West). Standard errors clustered at the individual level in parentheses. *: p – value < 0.1, **: p – value < 0.05, ***: p – value < 0.01.

The pandemic may have affected the need and opportunity to engage in gig work. On one hand, those who lost their jobs or whose hours of work were cut at the onset of the pandemic may have had to rely more on temporary and gig work to supplement their income, especially after the cessation of the government's economic stimulus program. On the other hand, public health measures in place during the pandemic (e.g., business closure, stay-at-home orders, social distancing) and fears of infection may have decreased the demand for one-off services typically provided by gig workers (e.g., ride-hailing). Documenting the evolution of gig work in recent years and differences in trends by sex and race/ethnicity provides insights into the degree of job security and stability faced by different groups of workers in the current labor market.

For this purpose, we regress an indicator for engaging in gig work in the previous month (completing one-off tasks either online or in-person, working on-call, or performing work under a short-term contract) on sex, race/ethnicity, and year dummies as well as their interactions. The

results of this exercise are reported in Table 4. The estimated coefficients show that the prevalence of gig work, which is 10% overall, does not vary significantly across groups, although there is some weak evidence that Black workers are more likely to take on gig work. We observe a clear downward trend in the prevalence of gig work. Relative to 2019, workers in the U.S. were 5 and 3 percentage points less likely to engage in gig work in 2021 and 2022, respectively.[1] This may be a result of an increase in full-time opportunities becoming available in the strong labor market recovery as well as a consequence of low demand for one-off services that has persisted beyond the most severe phase of the pandemic. Although none of the interactions in columns (ii) and (iii) are statistically significant, the coefficients suggest that women and Asians became less likely to engage in gig work over time, while Blacks and Mixed-race workers became more likely. We repeated these regressions using only the sub-sample of workers who were not in full-time employment in 2019. While gig work is slightly more prevalent within this group in general (12%), we observe the same patterns over time and similar differences by sex and race/ethnicity as those reported in Table 3.[2]

Table 4: Likelihood of Engaging in Gig Work Over Time by Gender and Race/Ethnicity

	(i)	(ii)	(iii)
Female	-0.002	0.014	-0.002
	(0.007)	(0.014)	(0.007)
Black	0.021*	0.021*	0.011
	(0.013)	(0.013)	(0.027)
Asian	0.017	0.017	0.063
	(0.014)	(0.014)	(0.040)
Mixed	0.008	0.008	-0.025
	(0.014)	(0.014)	(0.030)
Hispanic	-0.005	-0.005	-0.001
	(0.009)	(0.009)	(0.021)
Year 2020	-0.004	0.010	-0.008
	(0.008)	(0.012)	(0.009)
Year 2021	-0.048***	-0.036***	-0.049***

[1] We find no difference between 2019 and 2020. This might be due to the second wave of the survey being completed in April 2020, before the full impact of the pandemic had manifested in the labor market.

[2] We estimated all the models in this section by fixed-effects, including only time-varying covariates and interactions between time dummies and sex and race/ethnicity dummies. The results confirm the absence of differential trends in the outcome of interest by sex and race/ethnicity.

		(0.007)	(0.010)	(0.008)
Year 2022		-0.033***	-0.026**	-0.030***
		(0.007)	(0.011)	(0.009)
Year 2020 ×	Female		-0.026	
			(0.017)	
Year 2021 ×	Female		-0.021	
			(0.014)	
Year 2022 ×	Female		-0.013	
			(0.014)	
Year 2020 ×	Black			0.039
				(0.034)
Year 2020 ×	Asian			-0.041
				(0.046)
Year 2020 ×	Mixed			0.025
				(0.040)
Year 2020 ×	Hispanic			0.008
				(0.027)
Year 2021 ×	Black			0.024
				(0.029)
Year 2021 ×	Asian			-0.051
				(0.040)
Year 2021 ×	Mixed			0.050
				(0.037)
Year 2021 ×	Hispanic			-0.008
				(0.024)
Year 2022 ×	Black			-0.015
				(0.029)
Year 2022 ×	Asian			-0.059
				(0.040)
Year 2022 ×	Mixed			0.034
				(0.035)
Year 2022 ×	Hispanic			-0.010
				(0.024)
N		15,284	15,284	15,284

Covariates include indicators for age categories (40-49, 50-59, 60+), marital status (separated/divorced/widowed, never married), education (some college, college degree or more), household income brackets ($30,000-$59,999, $60,000-$99,999, $100,000+), Census region (Midwest, South, West), and occupations. White, Black, Asian, and Mixed-race groups exclude Hispanics, as described in the text. Standard errors clustered at the individual level in parentheses. *: $p-value < 0.1$, **: $p-value < 0.05$, ***: $p-value < 0.01$.

b. Work-from-Home (WHF): Prevalence and Preferences

In this section, we focus on disparities in work-from-home (WFH) arrangements and schedule flexibility. We carry out our analysis using longitudinal information about WFH preferences and arrangements collected via our WFH Survey, administered to the entire UAS during and in the aftermath of the COVID-19 pandemic (summer 2021, spring 2022, and spring 2023). The panel dataset at our disposal includes 10,013 unique respondents, of whom 6,401 are working

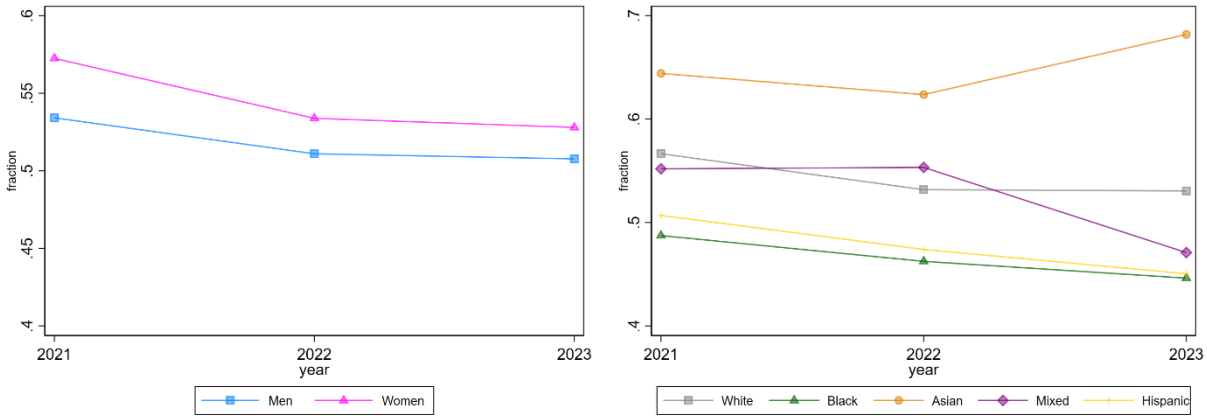
individuals. The majority of them (60%) are observed in all three periods, 20% are observed for two periods, and the remaining 20% for one period.

To identify who has a job that can be done remotely, at least partially, the survey asked the following question, previously used by other WFH researchers (Aksoy et al., 2022):

"*Consider your current job. Are you able to do that job from home at least partially? (For example, a bartender is not able to do their job from home; an administrative assistant working in an office should be able to work from home, at least partially).*"

Within our sample, the fraction of those with a WFH-amenable job was 56% in 2021, and dropped to 52% in 2022 and 2023. Figure 3 shows how, unconditionally, the fraction of workers holding WFH-amenable jobs varies by sex and race/ethnicity. Compared to men, women are about 3 percentage points more likely to have a job that, at least partially, can be done remotely. This difference has shrunk slightly over time. Relative to White workers, Black and Hispanic workers are 8 and 7 percentage points less likely to have WFH amenable jobs, a difference that has remained stable over time. Asian workers are 10 points more likely than their White counterparts to have jobs that can be done remotely, and this gap appears to have widened recently.

Figure 3: Unconditional WFH Amenability Over Time by Sex and Race/Ethnicity



In Table 5, we investigate the extent to which differences in WFH amenability across groups of workers persist after controlling for demographics and types of occupation. As can be seen in column (i), women conserve their advantage over men in terms of WFH amenability. Conditional on age, education, marital status, household income, location, and occupation, female workers are about 5 percentage points more likely to have jobs that can be done remotely. This may reflect a stronger preference for remote work among women than men, and, therefore, a higher likelihood that women sort into WFH-amenable jobs, even conditional on individuals' socioeconomic characteristics and occupation types.

After controlling for other demographics and types of occupation, racial/ethnic differences in WFH amenability become much smaller in magnitude and are not statistically significant. This suggests that the unconditional differences by race/ethnicity reported in Figure 3 result from the differences in socioeconomic status and occupation across racial/ethnic groups.[3] The disadvantaged socioeconomic status of Blacks and Hispanics results in a lower prevalence of WFH amenability for these groups.

Table 5: WFH Amenability Over Time by Sex and Race/Ethnicity

	(i)	(ii)	(iii)
Female	0.048***	0.058***	0.048***
	(0.013)	(0.016)	(0.013)
Black	0.024	0.024	0.021
	(0.021)	(0.021)	(0.028)
Asian	-0.014	-0.014	-0.031
	(0.023)	(0.023)	(0.028)
Mixed	-0.008	-0.008	-0.023
	(0.025)	(0.025)	(0.033)
Hispanic	-0.010	-0.010	-0.005
	(0.018)	(0.018)	(0.022)

[3] Not surprisingly, WFH amenability increases sharply with education and household income, and is substantially higher in sectors like business and finance, computer and mathematics, life, physical and social sciences, community and social services, legal services, office and administrative support, arts and entertainment. In the 2023 wave of our WFH Survey, we also collected additional information about individuals' education. Specifically, whether college graduates attended a public or private school and whether courses were taught in person or online. Adding this information to the regression model does not modify the estimated sex or racial/ethnic differences in WFH amenability.

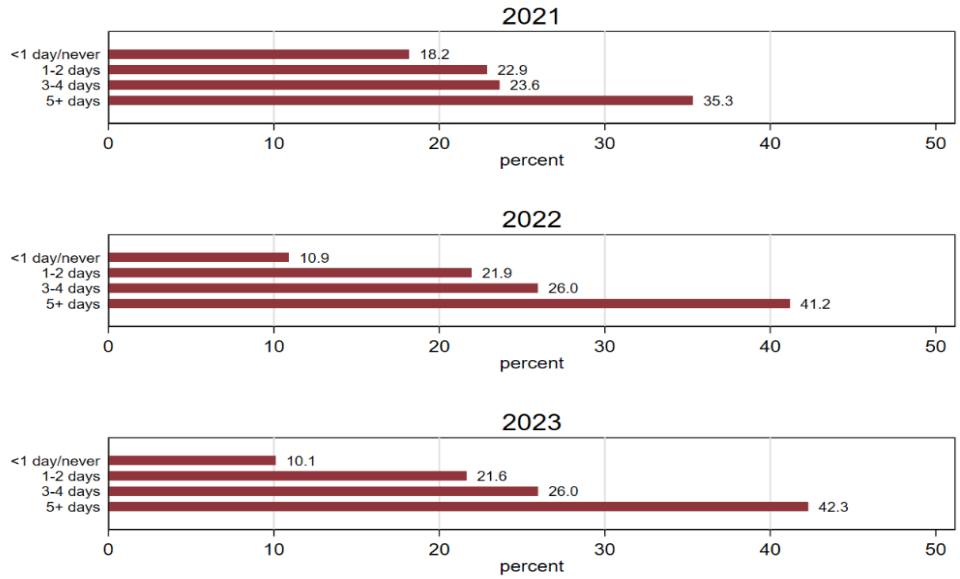
Year 2022		-0.024***	-0.016	-0.026***
		(0.007)	(0.010)	(0.008)
Year 2023		-0.043***	-0.033***	-0.044***
		(0.008)	(0.011)	(0.010)
Year 2022 ×	Female		-0.015	
			(0.013)	
Year 2023 ×	Female		-0.017	
			(0.016)	
Year 2022 ×	Black			0.012
				(0.028)
Year 2022 ×	Asian			-0.007
				(0.026)
Year 2022 ×	Mixed			0.049
				(0.031)
Year 2022 ×	Hispanic			-0.004
				(0.020)
Year 2023 ×	Black			-0.005
				(0.033)
Year 2023 ×	Asian			0.064**
				(0.031)
Year 2023 ×	Mixed			-0.015
				(0.037)
Year 2023 ×	Hispanic			-0.014
				(0.023)
N		10,671	10,671	10,671

Covariates include indicators for age categories (40-49, 50-59, 60+), marital status (separated/divorced/widowed, never married), education (some college, college degree or more), household income brackets ($30,000-$59,999, $60,000-$99,999, $100,000+), Census region (Midwest, South, West), and occupations. White, Black, Asian, and Mixed-race groups exclude Hispanics, as described in the text. Standard errors clustered at the individual level in parentheses. *: p – value < 0.1, **: p – value < 0.05, ***: p – value < 0.01.

There exists a slight downward trend in WFH amenability, which is largely shared by all workers. The only exception is observed for Asian workers, for whom the gap in WFH amenability relative to White workers did not change in 2022 compared to 2021 but increased in 2023 compared to 2021 (conditional on demographics and occupation type, WFH amenability among Asians was 3 percentage points lower than among Whites in 2021 and 2022, but 3 percentage points higher in 2023).

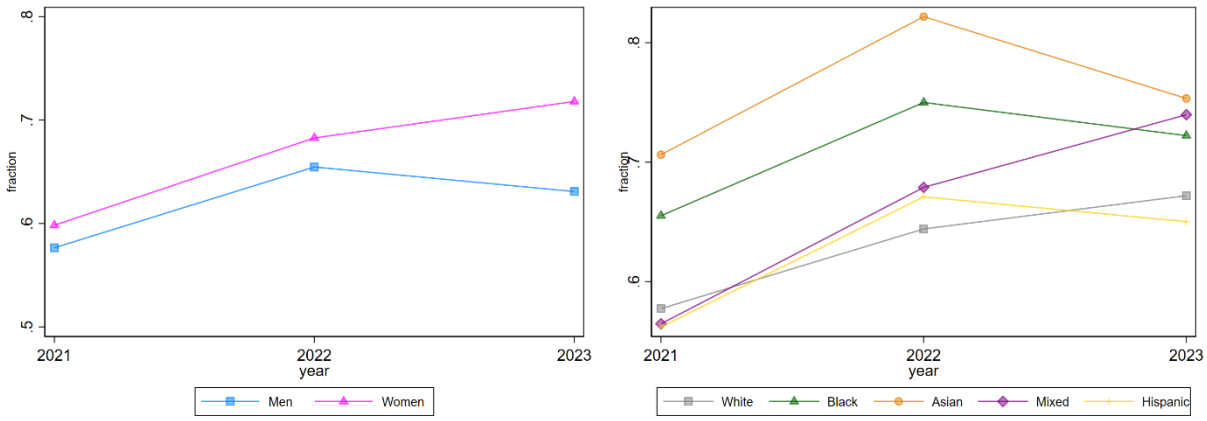
Among those holding jobs that can be done remotely, our WFH survey elicits individuals' preferred number of WFH days in a week. Figure 4 reports the evolution of individuals' WFH preferences over time. It clearly shows an increase in the number of days people would like to WFH from 2021 to subsequent years. The fraction of workers revealing a preference for at least 3 days of WFH per week increased from 59% in 2021 to 67% in 2022 and 68% in 2023.

Figure 4: Preferred Number of WFH Days a Week Over Time



Differences by groups are also apparent. As documented in Figure 5, women are more likely to express a preference for 3 or more WFH days a week than men. This gap has also grown over time. Female workers were only 2 and 3 percentage points more likely to want 3 or more days of WFH than male workers in 2021 and 2022, respectively. By the year 2023, this difference had climbed to 9 percentage points. Blacks and Asians stand out as the two racial groups with the strongest preference for WFH. Relative to their White counterparts, Black workers were 8, 10, and 5 percentage points more likely to report a preference for 3 or more WFH days in 2021, 2022, and 2023, respectively. Differences between Asian and White workers were of the order of 13, 18, and 8 percentage points in 2021, 2022, and 2023, respectively. Individuals of mixed race developed a stronger preference for WFH over time. Among them, the fraction of individuals wanting 3 or more days of WFH a week passed from 56% in 2021 to 74% in 2022.

Figure 5: Unconditional Preference for 3+ Days of WFH a week Over Time by Sex and Race/Ethnicity



Heterogeneity in WFH preferences across groups is largely confirmed by a regression analysis, where we control for demographics as well as types of occupation. The results of this regression analysis, reported in Table 6, convey a few main points. First, preferences for WFH have increased over time. Second, women are more likely to want 3 or more days of WFH per week than men, a pattern that has become more apparent in 2023. Third, relative to White workers, Black and Asian workers prefer more WFH days per week. Fourth, there is no evidence of a differential evolution of WFH preferences over time by race/ethnicity (the same is true when estimating differential trends with individual fixed effects).

Table 6: Preference for 3+ Days of WFH a week Over Time by Sex and Race/Ethnicity

	(i)	(ii)	(iii)
Female	0.063***	0.039*	0.063***
	(0.019)	(0.024)	(0.019)
Black	0.057*	0.058*	0.060
	(0.033)	(0.033)	(0.045)
Asian	0.059**	0.059**	0.055
	(0.029)	(0.029)	(0.041)
Mixed	-0.002	-0.002	-0.039
	(0.039)	(0.039)	(0.053)
Hispanic	-0.027	-0.026	-0.041
	(0.026)	(0.026)	(0.035)
Year 2022	0.082***	0.077***	0.067***
	(0.011)	(0.017)	(0.013)
Year 2023	0.085***	0.043**	0.090***
	(0.013)	(0.020)	(0.015)

Year 2022 × Female		0.007	
		(0.023)	
Year 2023 × Female		0.070***	
		(0.025)	
Year 2022 × Black			0.022
			(0.047)
Year 2022 × Asian			0.053
			(0.040)
Year 2022 × Mixed			0.044
			(0.051)
Year 2022 × Hispanic			0.047
			(0.036)
Year 2023 × Black			-0.036
			(0.048)
Year 2023 × Asian			-0.049
			(0.046)
Year 2023 × Mixed			0.073
			(0.060)
Year 2023 × Hispanic			-0.016
			(0.041)
N	5,686	5,686	5,686

Covariates include indicators for age categories (40-49, 50-59, 60+), marital status (separated/divorced/widowed, never married), education (some college, college degree or more), household income brackets ($30,000-$59,999, $60,000-$99,999, $100,000+), Census region (Midwest, South, West), and occupations. White, Black, Asian, and Mixed-race groups exclude Hispanics, as described in the text. Standard errors clustered at the individual level in parentheses. *: p – value < 0.1, **: p – value < 0.05, ***: p – value < 0.01.

In additional analyses, which are not reported here in the interest of space, we find that the increasing gap in WFH preferences between female and male workers depends on the type of occupation in which people work. Specifically, among those in essential occupations, women are 15 percentage points more likely to express a preference for 3 or more days of WFH a week than men (a difference significant at the 1% level). Among those in non-essential occupations, the gap shrinks to 2 percentage points (and is not statistically significant).

We also analyze the relationship between WFH preferences and commute time. We estimate that conditional on demographics and types of occupation, a 10% increase in commute time makes the average worker 0.6 percentage points more likely to prefer a workweek with at least 3 WFH days (an effect significant at the 1% level). The relationship between WFH preferences and commute time does not vary by sex but exhibits some heterogeneity by race/ethnicity. Specifically, a longer commute leads to a stronger preference for WFH among

White, Asian, and Mixed-race workers but not among Black and Hispanic workers. Finally, we find no correlation between WFH preferences and whether the individual has had COVID-19 or is vaccinated against COVID-19.

c. Mismatch in Work-from-Home (WHF) Preferences Between Employers and Employees

While informative, individual preferences do not tell the whole story, especially when the focus is on assessing disparities in work arrangements across segments of the population. A better measure for our research goals is the discrepancy between what workers prefer and what their employers accommodate. To this end, our WFH Survey asks respondents in WFH-amenable jobs to report the number of days they worked from home in the past week as well as the number of WFH days they expect their employers to grant them in the next six months. By contrasting individual WFH preferences with either the actual or the expected number of WFH days, we gauge the extent to which individual WFH preferences are matched and document the extent to which the mismatch varies across groups.

Among those with WFH-amenable jobs, the median number of WFH days in the past week increased from 2 in 2021 to 3 in 2022 and 2023. The median number of WFH days in the past week for men is 3, while it is 2 for women. When restricting the sample to only full-time workers, the pattern remains consistent, indicating that the gender disparity is not simply because women often work fewer hours overall. Given that women have a higher preference for WFH (as previously mentioned) and are more likely to hold a job that is amenable to WFH, this constitutes preliminary evidence that they are more prone to having their work arrangement preferences unfulfilled. Regarding heterogeneity by race/ethnicity, the highest number of WFH days in the past week among those with a job where WFH is possible is observed among Asians (median of

4), followed by Whites and Blacks (median of 3), Mixed-race workers (median of 2), and Hispanics (median of 1).

Next, we examine individuals' expectations about how often their employers will allow them to work remotely in the next six months. In 2021 and 2022, 25% of individuals had employers planning a fully remote workweek, which rose to 27% in 2023. Those with employers planning for 3 or 4 WFH days per week represented 12% of the sample in 2021, 14% in 2022, and 15% in 2023. Meanwhile, 31% of those with WFH-amenable jobs had employers with no remote work plans in 2021 and 2022, which declined to 28% in 2023. Predictably, there has been a reduction in uncertainty regarding employers' remote work plans. In 2021, 19% of those in WFH-amenable jobs were unsure of their employer's remote work intentions, but this dropped to 14% in 2022 and further to 12% in 2023. Considering the growing interest in remote work from employees (as mentioned earlier), these statistics indicate a move by employers to accommodate these desires. In line with the documented gender and racial/ethnic disparities in the number of actual WFH days in the past week, we find that women are more likely than men to have employers that do not plan to accommodate remote work (32% vs. 27%). Women are also more uncertain than men about employers' WFH plans (17% vs. 13%). Black and Asian workers report the highest number of expected WFH days allowed by their employers, while Hispanics report the lowest. For instance, the fraction of respondents who expect their employers to never allow remote work is 19% among Asians and 36% among Hispanics. Given the observed parallels between the actual number of WFH days in the previous week and the anticipated WFH days employers are expected to permit in the upcoming six months, we will focus solely on the former to evaluate how well individual WFH preferences are being satisfied.[4]

[4] Following this approach, we do not have to exclude data when a respondent shares their WFH preference but is uncertain of their employer's upcoming WFH plans (which is the case in 15% of instances). The findings reported in this section remain consistent, both qualitatively and quantitatively, when comparing the desired number of WFH days to the expected number of days employers will allow in gauging how individual WFH desires are met.

Figure 6: Preferred vs. Actual Number of WFH Days a Week Over Time

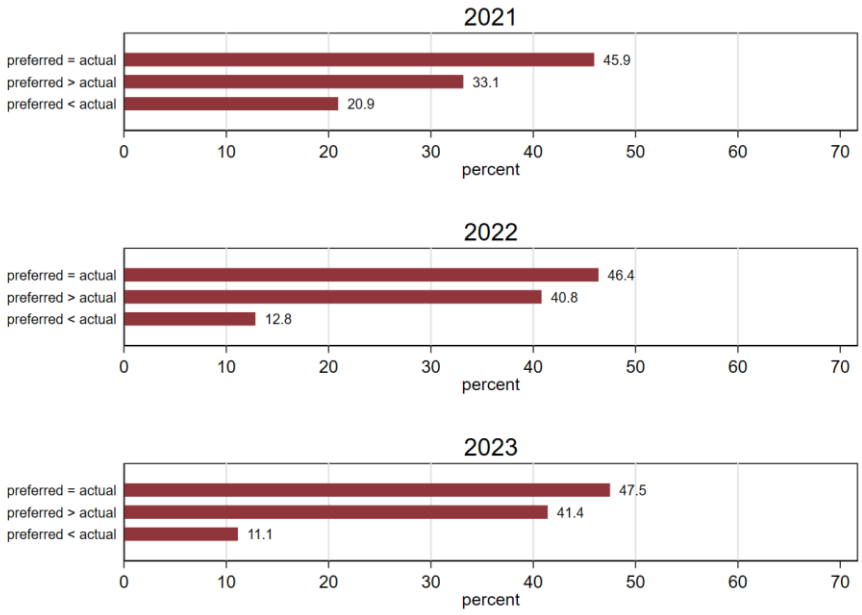
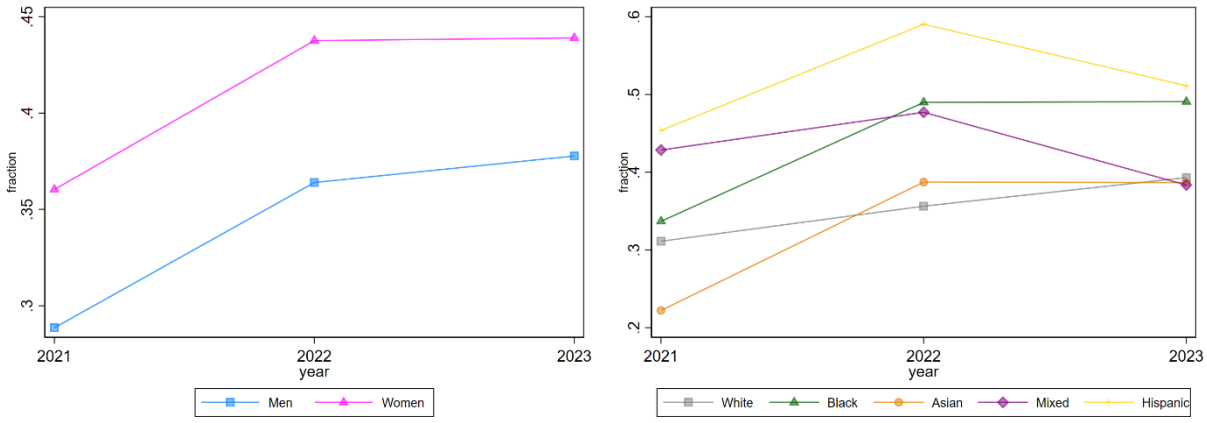


Figure 6 reports how the match/mismatch between the preferred and actual number of WFH days per week has evolved in recent years. The fraction of workers with matched preferences has remained constant over time at about 46%. The fraction of those who prefer more WFH days than what they actually had in the past week grew from 33% in 2021 to 41% in 2022 and 2023. This increase is mirrored by a decrease of about 10 percentage points in the fraction of individuals who would like to WFH fewer days than they did in the past week.

Figure 7: Unconditional Preference for More WFH Days than Actual Over Time by Sex and Race/Ethnicity



As we anticipated above, the higher preference for WFH among women is not fully matched by actual work arrangements. Figure 7 shows that, compared to men, women are more likely to want more WFH than what they are allowed to by their employers. This gap has remained constant over time. Even though, on average, Hispanics had the least strong desire for WFH, they exhibit the highest prevalence of unfulfilled WFH preferences. In contrast, Asian workers, who report the highest number of preferred WFH days a week, have one of the lowest rates of unmet WFH preferences.

In Table 7, we regress a dummy variable for unmet WFH preference (taking value 1 if the number of preferred WFH days is greater than the actual number of WFH days in the past week) on sex, race/ethnicity, and year indicators, controlling for demographics and types of occupation. The estimated coefficients confirm that women and racial/ethnic minorities (Hispanics, Blacks, and Mixed-race) are more likely to have their WFH preferences unfulfilled.

Table 7: Preference for More WFH Days than Actual Over Time by Sex and Race/Ethnicity

	(i)	(ii)	(iii)
Female	0.032*	0.031	0.032*
	(0.018)	(0.025)	(0.018)
Black	0.058*	0.058*	-0.006
	(0.035)	(0.035)	(0.051)
Asian	0.008	0.008	-0.062
	(0.029)	(0.029)	(0.041)
Mixed	0.073*	0.073*	0.105*
	(0.039)	(0.039)	(0.058)
Hispanic	0.155***	0.155***	0.127***
	(0.026)	(0.026)	(0.038)
Year 2022	0.075***	0.072***	0.047***
	(0.014)	(0.021)	(0.017)
Year 2023	0.088***	0.091***	0.085***
	(0.015)	(0.023)	(0.018)
Year 2022 × Female		0.005	
		(0.027)	
Year 2023 × Female		-0.004	
		(0.030)	
Year 2022 × Black			0.104*
			(0.057)
Year 2022 × Asian			0.112**
			(0.049)
Year 2022 × Mixed			0.004

			(0.066)
Year 2022 ×	Hispanic		0.084**
			(0.040)
Year 2023 ×	Black		0.073
			(0.063)
Year 2023 ×	Asian		0.080
			(0.056)
Year 2023 ×	Mixed		-0.115
			(0.075)
Year 2023 ×	Hispanic		-0.020
			(0.046)
N		5,444 5,444	5,444

Covariates include indicators for age categories (40-49, 50-59, 60+), marital status (separated/divorced/widowed, never married), education (some college, college degree or more), household income brackets ($30,000-$59,999, $60,000-$99,999, $100,000+), Census region (Midwest, South, West), and occupations. White, Black, Asian, and Mixed-race groups exclude Hispanics, as described in the text. Standard errors clustered at the individual level in parentheses. *: p – value < 0.1, **: p – value < 0.05, ***: p – value < 0.01.

In additional analyses (not reported here), we find that even though women in essential occupations are more likely to prefer a week with at least three days of WFH than men, they are less likely to have their WFH preferences unmet. The likelihood that the number of preferred WFH days is greater than the number of WFH in the past week is 8 percentage points higher for women than men in non-essential occupations (a difference significant at the 1% level), but similar (not statistically distinguishable from 0) in essential occupations. This may suggest disproportionate efforts by employers to accommodate WFH preferences across sectors.

There is some evidence of a differential trend in unmet WFH preferences for Asians and Hispanics (this is confirmed by fixed-effects regressions). Relative to White workers, Asian workers were less likely to have unmet WFH preferences in 2021 but became more likely by 2022, a difference significant at the 5% level. Relative to White workers, Hispanic workers were 13 percentage points more likely to have unmet WFH preferences in 2021, and this gap grew to 21 percentage points in 2022, a difference significant at the 5% level.

As documented above, workers who have a longer commute favor more remote work days. As a result, we anticipate a positive relationship between commute time and the chance of not having WFH desires met. Our regression analysis confirms this conjecture. Although we do not

report the results in the text, we find a significant yet moderate link between these two variables. Specifically, if commute time doubles, there is a 2.5 percentage point (or 6% relative to the average) increase in the likelihood of unmet WFH preferences. We also detect a significant relationship between COVID-19 infection and the likelihood of unfulfilled WFH preferences. Holding other relevant factors constant, workers who had COVID are 5.5 percentage points more likely to want more remote work than they currently have. This finding may indicate that those who got infected are more cautious and would like to reduce the chances of reinfection. There is no evidence that this effect varies by sex or race/ethnicity. We detect no significant association between mismatched WFH preference and COVID vaccination.

The 2023 survey asked respondents whether they provide care for a family member with health conditions or disability. In Table 8, we investigate if and to what extent caregiving increases the likelihood of wanting more remote work than employers allow. Overall, there is no meaningful relationship between being a caregiver and having unmet WFH preferences (column (i)). However, this general result masks heterogeneity by sex and race/ethnicity. In particular, while among non-caregivers women are only 3.5 percentage points (and not statistically significant) more likely to have unmet WFH preferences, this gender gap is 10 percentage points larger among caregivers. That is, female caregivers are 10 percentage points less likely to have their WFH preferences met than male caregivers. We also find that among non-caregivers, Asian and Mixed-race employees generally show a higher likelihood of not having their remote work preferences met compared to White workers. However, when they are caregivers, they are notably less likely than Whites to have unfulfilled WFH preferences.

Table 8: Preference for More WFH Days than Actual Over Time by Caregiving Status

	(i)	(ii)	(iii)
Female	0.054**	0.035	0.055**
	(0.022)	(0.024)	(0.022)
Black	0.040	0.035	0.035
	(0.040)	(0.040)	(0.045)
Asian	-0.016	-0.015	0.013
	(0.035)	(0.035)	(0.040)
Mixed	0.026	0.026	0.085
	(0.048)	(0.048)	(0.053)
Hispanic	0.129***	0.129***	0.123***
	(0.031)	(0.030)	(0.034)
Caregiver	0.005	-0.062*	0.024
	(0.024)	(0.037)	(0.029)
Caregiver × Female		0.100**	
		(0.047)	
Caregiver × Black			0.014
			(0.091)
Caregiver × Asian			-0.149**
			(0.074)
Caregiver × Mixed			-0.228**
			(0.107)
Caregiver × Hispanic			0.026
			(0.068)
N	3,948	3,948	3,948

Covariates include indicators for age categories (40-49, 50-59, 60+), marital status (separated/divorced/widowed, never married), education (some college, college degree or more), household income brackets ($30,000-$59,999, $60,000-$99,999, $100,000+), Census region (Midwest, South, West), occupations, and the logarithm of commute time. The analysis is based on data from 2023 only, where caregiving information is available. White, Black, Asian, and Mixed-race groups exclude Hispanics, as described in the text. Standard errors clustered at the individual level in parentheses. *: p – value < 0.1, **: p – value < 0.05, ***: p – value < 0.01.

d. Work-from-Home (WHF): Willingness to Pay

After documenting how the desire for remote work differs across different groups of workers, has changed over time, and mismatches in employers' and employees' preferences, we now turn to investigate how much people value remote work. To this end, our WFH Survey included a discrete choice experiment eliciting individuals' willingness to pay for an additional day of WFH per week. Specifically, we asked respondents whose preferred number of WFH days is greater or equal than the actual number of WFH days to choose between maintaining their current level of pay and work arrangement and accepting a lower wage in exchange for an additional day of remote work. Using

each respondent's level and frequency of pay obtained within the same survey, the discrete choice experiment poses a series of questions of this kind:

"*Imagine that you had the option to work from home one more day per week in exchange for reducing your pay. Would you accept [LEVEL of PAY* $\times(1-\delta)$*] per [FREQUENCY of PAY] and work from home one more day per week?*"

where δ starts at 5% and progressively moves down in the sequence (towards larger pay cuts) after an affirmative answer and up (towards smaller pay cuts) after a negative answer. The pay cuts considered in the experiment ranged from 1% to 25% in a non-linear fashion ($\delta \in \{1\%, 2\%, 3\%, 4\%, 5\%, 10\%, 15\%, 20\%, 25\%\}$).

Figure 8 reports the frequencies of elicited willingness to pay for an additional day of WFH over time. Just over half of the respondents are not inclined to pay for additional remote work opportunities, a proportion that has been consistently rising throughout the study. At the same time, it is remarkable that at least 45% of the sample would give up a non-negligible share of their current pay to be able to WFH one more day each week. The fraction of workers willing to accept a pay cut between 1% and 5% has slightly increased from 30% in 2021 to 32.5% in 2023. The fraction of those willing to accept a pay cut of 10% or greater has instead decreased from 17% in 2021 to 12% in 2023. Given the documented growth in the number of desired WFH days and in the percentage of employees wanting more remote work than they currently have, these patterns may suggest that workers increasingly see WFH as a standard benefit they do not feel they should pay extra for.[5]

[5] The survey also elicits willingness to pay for one fewer day of WFH for those who prefer to work remotely fewer days than they actually do. Among these respondents (about 10% of those with WFH-amenable jobs), about 70% are not willing to pay for one fewer WFH day a week, 20% are willing to give up between 1% and 5% of their current earnings, and 10% would accept a pay cut of 10% or more. Interestingly, individuals with a desire for less remote

Figure 8: Willingness to Pay for an Additional Day of WFH Over Time

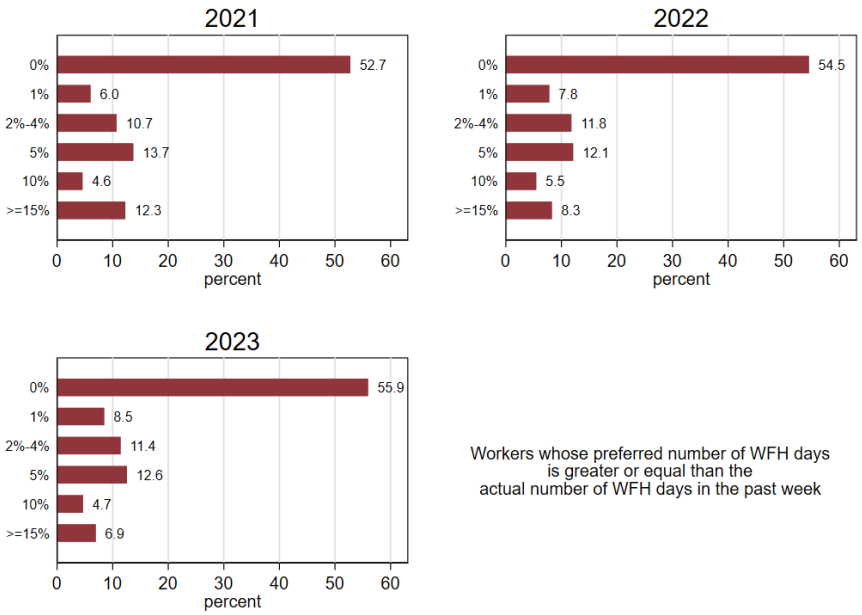
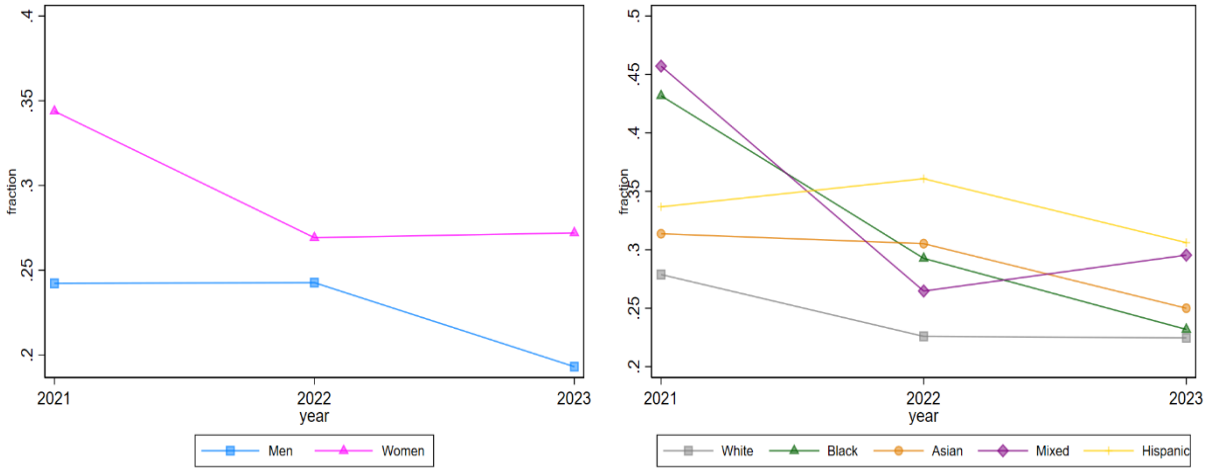


Figure 9 presents differences in willingness to pay for more remote work by sex and race/ethnicity. Given the non-linear scale used to elicit willingness to pay, we consider as our outcome variable an indicator taking value 1 if the individual is willing to accept a pay cut of 5% or greater in exchange for one additional day of WFH per week. Averaging across all observations over the study period, 26% of workers who would like to WFH more than what they currently do would give up at least 5% of their current pay for one additional day of remote work. Overall, women are about 6 percentage points more likely than men to accept a 5% or greater pay cut. This gap was the largest in 2021 (10 percentage points), decreased markedly in 2022 (3 percentage points), and returned to be sizeable (8 percentage points) in 2023. Figure 9 reveals interesting differences across racial/ethnic groups. Whites are the least willing to accept a 5% or greater pay cut for more remote work (slightly below 25% over the three years), while Hispanics exhibit the

work were significantly more likely to give up a positive share of their current earnings for one fewer WFH day in 2021 than in 2022 and 2023.

highest willingness (34% over the three years). Black and Mixed-race workers were significantly more likely to accept a substantial pay cut for one more WFH day in 2021, but their willingness decreased sharply over time. Interestingly, the ranking of racial/ethnic groups in terms of willingness to pay resembles the ranking of racial/ethnic groups in terms of mismatched WFH preferences in Figure 7.

Figure 9: Unconditional Fraction of Workers Willing to Accept a Pay Cut of 5% or Greater for 1 More WFH Day Over Time by Sex and Race/Ethnicity



As can be seen in Table 9, the gender gap in willingness to pay remains sizeable and statistically significant after controlling for demographics and types of occupation. Similarly, we estimate that minority workers, especially Hispanics and Mixed-race, are significantly more likely to accept a pay cut of 5% or more for an additional WFH day than White workers. Willingness to pay shows a decreasing trend over time, as the fraction of workers who would give up at least 5% of their earnings is about 5 percentage points lower in 2022 and 2023 relative to 2021. In line with the pattern shown in Figure 9, we detect a significant shrinking of the gender gap in 2022 relative to 2021, while there appear to be no differential trends across racial/ethnic groups (again confirmed in fixed-effects regressions).

We perform a series of additional analyses to examine the relationship between willingness to pay for extra WFH and other potentially relevant factors. While we do not report the full set of

results here, we describe the main findings. In line with the analysis focusing on unmet WFH preferences, we estimate that women in essential occupations are less likely to accept a pay cut in exchange for an additional day of WFH. The likelihood of accepting a 5% pay cut or greater is 6.5 percentage points higher for women than men in non-essential occupations (a difference significant at the 1% level), but 6.5 percentage points lower (a difference significant at the 10% level) in essential occupations. Willingness to pay for more remote work by type of occupation (essential vs. non-essential) does not exhibit differential patterns across racial/ethnic groups. Workers who have a longer commute are more inclined to accept a 5% pay cut or greater to be able to WFH one more day per week. This effect, however, does not vary significantly by sex or race/ethnicity. We do not find an association between willingness to pay and either past COVID infection or vaccination.

Table 9: Willingness to Accept a Pay Cut of 5% or Greater for 1 More WFH Day Over Time by Sex and Race/Ethnicity

	(i)	(ii)	(iii)
Female	0.052**	0.094***	0.053**
	(0.023)	(0.036)	(0.023)
Black	0.007	0.008	0.082
	(0.042)	(0.042)	(0.079)
Asian	0.052	0.052	0.006
	(0.042)	(0.042)	(0.070)
Mixed	0.109**	0.110**	0.186**
	(0.050)	(0.050)	(0.088)
Hispanic	0.070**	0.070**	0.013
	(0.034)	(0.034)	(0.056)
Year 2022	-0.056***	-0.005	-0.067***
	(0.020)	(0.031)	(0.023)
Year 2023	-0.053**	-0.042	-0.049*
	(0.022)	(0.033)	(0.026)
Year 2022 × Female		-0.085**	
		(0.040)	
Year 2023 × Female		-0.017	
		(0.044)	
Year 2022 × Black			-0.050
			(0.084)
Year 2022 × Asian			0.070
			(0.074)
Year 2022 × Mixed			-0.122
			(0.106)
Year 2022 × Hispanic			0.097

				(0.064)
Year 2023 ×	Black			-0.174*
				(0.095)
Year 2023 ×	Asian			0.047
				(0.081)
Year 2023 ×	Mixed			-0.059
				(0.113)
Year 2023 ×	Hispanic			0.042
				(0.066)
N		2,635	2,635	2,635

Covariates include indicators for age categories (40-49, 50-59, 60+), marital status (separated/divorced/widowed, never married), education (some college, college degree or more), household income brackets ($30,000-$59,999, $60,000-$99,999, $100,000+), Census region (Midwest, South, West), occupations, and the logarithmof commute time. The sample only includes workers whose preferred number of WFH days is greater or equal than the actual number of WFH days in the past week. White, Black, Asian, and Mixed-race groups exclude Hispanics, as described in the text. Standard errors clustered at the individual level in parentheses. *: p – value < 0.1, **: p – value < 0.05, ***: p – value < 0.01.

The regressions in Table 10 use data from 2023 to investigate whether workers with caregiving responsibilities are more inclined to accept lower earnings for more remote work. The results provide empirical support for this hypothesis. Specifically, we estimate that, other things equal, caregivers are 6 percentage points more likely to accept a 5% pay cut or greater in exchange for an additional day of WFH than non-caregivers. The analysis in the 2023 sub-sample confirms the general patterns described above, whereby female and minority workers exhibit a greater willingness to pay for extra remote work. There is no evidence, however, of differential relationships between caregiving and willingness to pay by sex or race/ethnicity.

Table 10: Willingness to Accept a Pay Cut of 5% or Greater for 1 More WFH Day by Caregiving

		(i)	(ii)	(iii)
Female		0.067***	0.069***	0.065***
		(0.025)	(0.026)	(0.025)
Black		0.007	0.007	-0.025
		(0.045)	(0.045)	(0.048)
Asian		0.042	0.042	0.016
		(0.045)	(0.045)	(0.050)
Mixed		0.136**	0.136**	0.167**
		(0.058)	(0.058)	(0.068)
Hispanic		0.062*	0.062*	0.078**
		(0.037)	(0.037)	(0.040)
Caregiver		0.059**	0.067	0.056
		(0.029)	(0.050)	(0.036)
Caregiver ×	Female		-0.012	

		(0.060)	
Caregiver × Black			0.125
			(0.113)
Caregiver × Asian			0.169
			(0.108)
Caregiver × Mixed			-0.109
			(0.126)
Caregiver × Hispanic			-0.068
			(0.082)
N	2,324	2,324	2,324

Covariates include indicators for age categories (40-49, 50-59, 60+), marital status (separated/divorced/widowed, never married), education (some college, college degree or more), household income brackets ($30,000-$59,999, $60,000-$99,999, $100,000+), Census region (Midwest, South, West), occupations, and the logarithm of commute time. The sample only includes workers whose preferred number of WFH days is greater or equal than the actual number of WFH days in the past week. The analysis is based on data from 2023 only, where caregiv- ing information is available. White, Black, Asian, and Mixed-race groups exclude Hispanics, as described in the text. Standard errors clustered at the individual level in parentheses. *: p – value < 0.1, **: p – value < 0.05, ***: p – value < 0.01.

e. Job Satisfaction, Turnover Intentions, and Workers' Well-being

The empirical evidence presented thus far indicates a substantial and growing inclination towards WFH, a novel employment perk that appears to be highly valued by workers.[6] We now investigate the extent to which the ability to WFH affects job satisfaction, an outcome that has been a focus of interest in economic research given its predictive power for job turnover and labor force attachment (Freeman, 1978; Clark, 2001). Our WFH Survey asks about overall job satisfaction by posing the question:

"Taking everything into consideration, how satisfied are you with your current job?"

Answers are provided on a 5-point Likert scale, where 1 indicates "very dissatisfied" and 5 "very satisfied." Average job satisfaction has remained stable at 3.7 between 2021 and 2023. However, there is evidence of heterogeneity across groups of workers.

[6] While WFH arrangements existed before the pandemic, they were significantly less prevalent. Using data from the American Community Survey, the U.S. Government Accountability Office estimated that only 5.7% of workers teleworked for most of the week in 2019 (GAO, 2023).

Figure 10: Unconditional Job Satisfaction Over Time by WFH, Sex and Race/Ethnicity

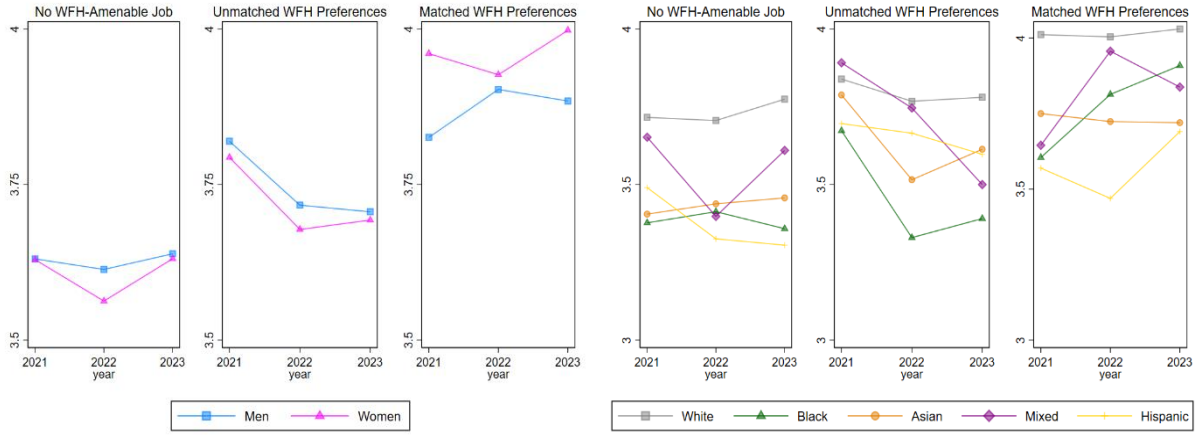


Figure 10 shows a clear gradient: job satisfaction tends to be the lowest among workers with jobs that cannot be done remotely and increases with the extent to which individual WFH preferences are fulfilled (in what follows, unmatched WFH preferences indicate that workers prefer either more or fewer WFH days than what they actually have). Women report slightly lower levels of job satisfaction than men if they have a non-WFH-amenable job or if their WFH preferences are unmatched by their current working arrangement. In contrast, they exhibit higher levels of satisfaction if they can WFH as much as they would like to. The unconditional patterns reported in Figure 10 point to a significantly lower level of job satisfaction among racial/ethnic minorities relative to Whites. By and large, though, for each racial/ethnic group, there exists an apparent WFH gradient by which job satisfaction tends to increase with the degree of working schedule flexibility. Since this may just be a proxy for job quality, we examine the relationship between job satisfaction and WFH arrangements in a regression framework, where we can hold constant other relevant factors that are not accounted for in Figure 10.

The regression results in Table 11 confirm the unconditional patterns reported in Figure 10. Conditional on demographics, occupation type, and commute time, there exists an apparent WFH gradient in job satisfaction. Relative to workers with WFH-amenable jobs and matched

WFH preferences, job satisfaction is 0.22 (6% negative change from the mean) lower among those whose jobs cannot be done remotely, and 0.16 (4% negative change from the mean) lower among those whose WFH preferences are not matched by their current WFH arrangements. We find a small and marginally significant difference in job satisfaction by sex, with women reporting a slightly higher level of satisfaction over the observation period. In column (ii), where interactions between the female indicator and the WFH variables are included, the coefficient for female raises to 0.17 and is strongly statistically significant. Given the inclusion of the interactions of female with "No WFH Amenability" and "Unmatched WFH Days", this coefficient should be interpreted as the difference between women and men among workers with matched WFH preferences. Hence, it points to a higher satisfaction for women than men among those who are able to WFH as much as they like. The negative coefficients of 0.13 and 0.12 for the interactions of female with "No WFH Amenability" and "Unmatched WFH Days" largely erode the positive gap, showing that women who cannot WFH or cannot WFH as much as they want have statistically similar levels of job satisfaction as men. These results largely confirm the patterns in Figure 10.

Table 11: Job Satisfaction and WFH

	(i)	(ii)	(iii)
Female	0.067*	0.165***	0.066*
	(0.035)	(0.063)	(0.035)
Black	-0.213***	-0.214***	-0.167
	(0.058)	(0.058)	(0.118)
Asian	-0.187***	-0.189***	-0.227**
	(0.059)	(0.059)	(0.101)
Mixed	-0.106	-0.106	-0.221
	(0.069)	(0.069)	(0.143)
Hispanic	-0.247***	-0.247***	-0.347***
	(0.048)	(0.048)	(0.109)
No WFH Amenability	-0.220***	-0.146**	-0.225***
	(0.040)	(0.061)	(0.047)
Unmatched WFH Days	-0.158***	-0.089	-0.212***
	(0.037)	(0.056)	(0.045)
No WFH Amenability × Female		-0.127*	
		(0.075)	
Unmatched WFH Days × Female		-0.120	
		(0.074)	
No WFH Amenability × Black			-0.054

			(0.135)
No WFH Amenability × Asian			0.013
			(0.126)
No WFH Amenability × Mixed			0.095
			(0.172)
No WFH Amenability × Hispanic			0.044
			(0.120)
Unmatched WFH Days × Black			-0.056
			(0.148)
Unmatched WFH Days × Asian			0.108
			(0.127)
Unmatched WFH Days × Mixed			0.227
			(0.185)
Unmatched WFH Days × Hispanic			0.247**
			(0.122)
N	9,403	9,403	9,403

Covariates include indicators for years, age categories (40-49, 50-59, 60+), marital status (separated/divorced/ widowed, never married), education (some college, college degree or more), household income brackets ($30,000-$59,999, $60,000-$99,999, $100,000+), Census region (Midwest, South, West), occupations, and the logarithm of commute time. White, Black, Asian, and Mixed-race groups exclude Hispanics, as described in the text. Standard errors clustered at the individual level in parentheses. *: p – value < 0.1, **: p – value < 0.05, ***: p – value < 0.01.

Column (i) in Table 11 shows that the racial/ethnic gaps are sizeable and strongly significant. Compared to White workers, Black and Hispanic workers exhibit a 0.2/0.25 lower level of job satisfaction, constituting a 5% to 6% negative difference from the overall mean in the sample. Job satisfaction is also significantly lower for Asian workers, although to a somewhat lesser extent. The interactions between race/ethnicity indicators and WFH variables in column (iii) reveal that, in contrast with other minority groups, Hispanic and Mixed-race workers with WFH-amenable jobs exhibit similar levels of job satisfaction whether or not they WFH preferences are matched (the coefficient on Unmatched WFH Days and its interacts with Hispanics and Mixed-race roughly cancel out).

As far as other regression coefficients are concerned (not reported in Table 11), we observe a very steep job satisfaction gradient with household income. Relative to those with household income below $30,000 a year, those with $100,000 or more report a higher level of job satisfaction by 0.35 points (about 10% positive change from the mean). We also observe a strong, negative association between job satisfaction and commute time: a 10% increase in commute time is associated with a 0.5 decrease in the level of job satisfaction. Moreover, those who had COVID

report a lower level of job satisfaction, an effect that is modest in magnitude (-0.1 or 3% negative change from the mean), but highly significant (p-value<0.01).

After documenting a strong link between WFH arrangements and job satisfaction, an interesting exercise is to compare WFH with other more traditional job-related benefits. For this purpose, we estimate the same regression model as the one in Table 11, adding indicators for whether the job provides paid sick leave, paid vacation, health insurance, an employer-sponsored retirement plan, a pension or cash balance plan.[7] The results of this exercise in Table 12 show that even after controlling for other kinds of job-related benefits, WFH remains a strong predictor of job satisfaction. Among the other job-related benefits, only the availability of paid sick leave is significantly associated with job satisfaction. To put things in perspective, not being able to work remotely at all or not as much as desired decreases job satisfaction twice as much than not having paid sick leave. The strong relationship between job satisfaction and WFH status contrasts with the weak relationship with other benefits.

Table 12: Comparison of WFH with Other Job-Related Benefits

No WFH Amenability	-0.235***
	(0.038)
Unmatched WFH Days	-0.178***
	(0.037)
Paid Sick Leave	0.103**
	(0.043)
Paid Vacation	-0.045
	(0.049)
Health Insurance	-0.066
	(0.048)
Retirement Plans	0.020
	(0.039)
N	8,435

Covariates include indicators for years, age categories (40-49, 50-59, 60+), marital status (separated/divorced/widowed, never married), education (some college, college degree or more), household income brackets ($30,000-$59,999, $60,000-$99,999, $100,000+), Census region (Midwest, South, West), occupations, and the logarithm of commute time. Standard errors clustered at the individual level in parentheses. *: p – value < 0.1, **: p – value < 0.05, ***: p – value < 0.01.

[7] The sample size in this case is about 1,000 smaller than in Table 10 given that job-related benefit information is taken from other UAS surveys and is missing for some respondents (our WFH survey only asks about other job-related benefits in 2021).

We also estimated (unreported) models with full interactions between benefits and either sex or race/ethnicity to examine whether there is heterogeneity in how different sexes or races value the indicated job benefits. While interaction effects are relatively imprecisely estimated due to the limited number of observations in each cell defined by the interaction terms (e.g., Black workers with paid sick leave; Hispanic workers with a pension or cash balance plan, etc.), we find suggestive evidence that women appreciate WFH and health insurance more than men, but a pension or cash balance plan less. Black workers appear to value health insurance substantially more than other racial/ethnic groups.

Given the observed relationship between WFH arrangements and job satisfaction, one may expect the extent to which an individual can work remotely to affect turnover intentions as well as mental health. We investigate this conjecture in Table 13. Specifically, we consider three outcome variables. The first is an indicator of whether the individual has been looking for another job in the last month (available in 2021 and 2023, but not in 2022); the second is an indicator of whether an individual would tolerate a pay cut of 5% or greater before starting to look for another job (this is related to the concept of reservation wage and was only asked in 2021); and the third is the PHQ-4 index of mental health, ranging from 0 to 12 with higher values indicating worse mental health.[8]

Table 13: Turnover Intentions, Mental Health, and WFH

	(i)	(ii)	(iii)
	Looking for another job	Tolerable pay cut before looking for another job ≥5%	Mental health
Female	0.010	0.006	0.381***
	(0.012)	(0.023)	(0.087)
Black	0.041*	0.033	-0.884***
	(0.023)	(0.041)	(0.130)

[8] The PHQ-4 index was retrieved from the UAS COVID-tracking survey at a point in time that is closest to the time when the individual completed the WFH surveys. It is obtained as the sum of the following 4 items: "Feeling nervous, anxious, or on edge," "Not being able to stop or control worrying," "Feeling down, depressed, or hopeless," and "Little interest or pleasure in doing things" over the past month. For each item, answers are provided on a 4-point Likert scale: 1=not at all; 2=several days; 3=more than half the days; 4=nearly every day.

Asian	0.024	-0.002	-0.242
	(0.024)	(0.045)	(0.161)
Mixed	0.075***	-0.120**	-0.259
	(0.029)	(0.052)	(0.185)
Hispanic	0.028*	-0.050	-0.300**
	(0.017)	(0.033)	(0.120)
No WFH Amenability	0.031**	0.026	0.016
	(0.015)	(0.029)	(0.094)
Unmatched WFH Days	0.033**	-0.061**	0.184**
	(0.015)	(0.030)	(0.087)
N	5,628	2,183	7,626

Covariates include indicators for years (2023 in column (i); 2022 and 2023 in column (iii)), age categories (40-49, 50-59, 60+), marital status (separated/divorced/ widowed, never married), education (some college, college degree or more), household income brackets ($30,000-$59,999, $60,000-$99,999, $100,000+), Census region (Midwest, South, West), occupations, and the logarithm of commute time. White, Black, Asian, and Mixed-race groups exclude Hispanics, as described in the text. Standard errors clustered at the individual level (columns (i) and (iii)) or robust standard errors (column (ii)) in parentheses. *: p – value < 0.1, **: p – value < 0.05, ***: p – value < 0.01.

As noted above, intentions to change jobs are only measured in 2021 and 2023. Pulling data across these two periods together, the fraction of working individuals who report having looked for another job in the past month is 18%, with not much difference between 2021 and 2023. The regression results in column (i) in Table 13 reveal that female and male workers share a similar likelihood of looking for new job opportunities. There is, however, heterogeneity across racial/ethnic groups. Hispanics and Blacks are 3 and 4 percentage points more likely than Whites to look for another job (although these effects are only significant at the 10% level), while Mixed-race workers are 7.5 percentage points more likely than their White counterparts to look for another job. Interestingly, intentions to change jobs are significantly higher among workers who cannot WFH or who cannot WFH as much as they would like to relative to those whose WFH preferences are met.

In column (ii) of Table 13, we turn to study the likelihood that an individual would tolerate a pay cut of 5% or greater before starting to look for another job. This variable, which is only available in 2021, has a sample average of 0.66, indicating that about two-thirds of workers would tolerate a substantial pay cut before looking for alternatives. Consistently with Hispanic and Mixed-race workers having higher job turnover intentions, these two groups are, respectively, 5

and 12 percentage points less likely than their White counterparts to tolerate a 5% or greater pay cut (although the coefficient for Hispanics is not precisely estimated). There is a significant association between WFH and tolerable pay cut level, as workers with WFH-amenable jobs and unmatched WFH preferences are 6 percentage points less inclined to tolerate a 5% or greater pay cut than those with matched WFH preferences.

In column (iii) of Table 13, we investigate the relationship between WFH and mental health. Other things equal, having unmet WFH preferences correlates with worse mental health. Overall, the findings in Table 13 confirm the conjecture that by directly affecting job satisfaction, WFH arrangements are bound to influence both job turnover intentions and workers' general well-being as captured by mental health.[9]

In the 2023 wave of our WFH Survey, we measured individuals' work-life balance. We asked respondents to use a 4-point frequency scale – rarely, sometimes, often, most of the time – to rate the following three statements: "*My work schedule makes it difficult to fulfill personal responsibilities*," "*Because of my job, I don't have the energy to do things with my family or other important people in my life*," and "*Job worries or problems distract me when I am not at work*." In Table 14, we regress each one of these variables on indicators of sex and race/ethnicity, WFH arrangements, essential occupation, and caregiving status, as well as the logarithm of commute time (controlling for demographics).

Women are more likely to state that, because of their jobs, they do not have enough energy to do things with family and other important people in their lives relative to men. Black and Hispanic workers tend to report lower levels of interference from work to private life than Whites. Compared to those with WFH-amenable jobs and fulfilled WFH preferences, individuals who

[9] We also estimated models featuring interactions between WFH arrangement indicators and either sex or race/ethnicity indicators. We did not find evidence of differential effects of WFH arrangements on turnover intentions or mental health by sex and race/ethnicity.

cannot work remotely are significantly more likely to perceive that their work schedule makes it difficult to fulfill personal responsibilities and that, because of their jobs, they do not have enough energy to do things with family and other important people in their lives. At the same time, they report that job worries and problems distract them when they are not at work with a significantly lower frequency. There seems to be no difference in the three outcomes of interest when comparing workers with aligned and misaligned WFH preferences. This could mean that jobs suitable for WFH tend to be such that they support a better work-life balance, regardless of whether they are actually conducted from home. Alternatively, it could be that working from home sometimes, even if it is not as much as one would like, is enough to have a positive impact on work-life balance. Two factors are especially harmful to work-life balance: the duration of the commute and being a caregiver. For both of these variables, we observe notable and highly significant correlations with all three measures of work interference in personal life.

Table 14: Work-Life Balance and WFH

	(i) Work schedule makes it difficult to fulfill personal responsibilities	(ii) Don't have enough energy to do things with family	(iii) Job worries/problems distract me when not a work
Female	-0.034	0.098***	0.043
	(0.029)	(0.032)	(0.030)
Black	-0.129**	-0.272***	-0.239
	(0.063)	(0.066)	(0.191)
Asian	0.016	0.007	-0.156
	(0.060)	(0.063)	(0.123)
Mixed	0.064	-0.061	-0.123
	(0.072)	(0.074)	(0.161)
Hispanic	-0.086*	-0.069	-0.194
	(0.045)	(0.048)	(0.124)
No WFH Amenability	0.151***	0.139***	-0.237***
	(0.041)	(0.045)	(0.054)
Unmatched WFH Days	0.061	0.030	-0.043
	(0.043)	(0.046)	(0.059)
Essential Occupation	0.089***	0.037	-0.048
	(0.032)	(0.035)	(0.033)
Log Commute Time	0.102***	0.067***	0.036**
	(0.016)	(0.018)	(0.017)
Caregiver	0.149***	0.196***	0.093**
	(0.038)	(0.042)	(0.039)
N	2,723	2,723	2,723

Covariates include indicators for age categories (40-49, 50-59, 60+), marital status separated/divorced/widowed,

never married), education (some college, college degree or more), household income brackets ($30,000-$59,999, $60,000-$99,999, $100,000+), Census region (Midwest, South, West. White, Black, Asian, and Mixed-race groups exclude Hispanics, as described in the text. Robust standard errors in parentheses. *: p – value < 0.1, **: p – value < 0.05, ***: p – value < 0.01.

4. Conclusion

The early days of the COVID-19 pandemic led to tremendous tumult in the U.S. labor market, including a large spike in unemployment. Additionally, the health risk posed by the virus, along with mandates for individuals to stay at home, led to a surge in work-from-home (WFH) arrangements. Importantly, the pandemic's initial labor market effects were not uniformly experienced across workers. Women and racial and ethnic minorities experienced significantly higher job losses and initially lower rates of job recovery than their respective counterparts. Also, WFH was initially considerably more prevalent among higher-income and higher-educated employees, who are disproportionately White and male.

In this paper, we examine how sex and racial/ethnic disparities in labor market outcomes and WFH arrangements evolved following the pandemic's onset. Consistent with prior research, we find that initial employment shocks were concentrated among minority workers - Blacks and Hispanics were significantly more likely to transition out of full-time employment than Whites in 2020. However, following the robust recovery of the labor market in 2021 and 2022, the disparate shock was short-lived as full-time employment among Blacks and Hispanics returned to pre-pandemic levels, and similar to the levels experienced by White workers in 2022. We observe smaller aggregate differences by gender, with important heterogeneity by job type – female workers in essential occupations were significantly more likely to transition out of full-time employment as the pandemic progressed, possibly due to stress and burnout. We do not observe similar trends for male essential workers.

While much of the disparity in full-time employment was relatively short-lived, we find substantial and persistent differences in working arrangements by sex and race/ethnicity. Women

are 3 percentage points more likely than men to hold a job that can be done at least in part from home. Blacks and Hispanics were 8 and 7 percentage points less likely than Whites, respectively, to have a job amenable to WFH in 2021, while Asians were 10 percentage points more likely to have a WFH-amenable job. These racial and ethnic gaps have not decreased as the pandemic progressed. Regression results reveal that these gaps are driven by differences in socioeconomic status and type of occupation.

Preferences for WFH have increased over time. Among those who have a job that can be done at least in part remotely, the fraction of employees who would like to work 3 or more days from home per week increased from 59% in 2021 to 68% in 2023. Women are more likely to prefer 3 or more days of WFH per week, and this gap has been growing over time from 2 percentage points in 2021 to 9 percentage points more than men in 2023. Among racial and ethnic minorities, Blacks and Asians are, respectively, 5 and 8 percentage points more likely than Whites in 2023 to report a preference for 3 or more days of WFH.

While (increasing) preferences for WFH and differences by sex, race, and ethnicity are informative, they do not necessarily imply disparities in work arrangements. A better measure of inequality is the (mis)match between employees' WFH preferences and employers' accommodations across groups. We document notable gender and racial/ethnic gaps in unmet WFH preferences. After accounting for demographic, socioeconomic characteristics, and occupation type, women are 3 percentage points more likely than men to prefer more WFH than allowed by their employer, and the gender gap is particularly large among caregivers – female caregivers are 10 percentage points more likely to have their preferences for WFH unfulfilled than their male counterparts. We also find evidence of racial and ethnic disparities. Relative to Whites, Black and Hispanic workers with WFH-amenable jobs are 6 percentage points and 16 percentage points, respectively, more likely to prefer more WFH days than their employer will accommodate.

Moreover, these gaps appear to be growing over time. Hispanic workers were 13 percentage points more likely to have unmet WFH preferences in 2021 than White workers, yet this gap grew to 21 percentage points in 2022. Consistently with these patterns in unmet WFH preferences, we find evidence that women and minorities value WFH days more. We estimate that women are 6 percentage points more likely than men to accept a 5% or more pay cut in order to WFH one more day per week. Blacks, Hispanics, and Mixed-race workers are also more likely to accept a 5% pay cut than White workers in exchange for more remote work.

Finally, we examine how workplace and schedule flexibility relates to job satisfaction, job-seeking behavior, work-life balance, and mental health. We provide empirical evidence that WFH is strongly linked to job satisfaction. Our analysis reveals a clear gradient where job satisfaction tends to increase with the extent to which remote work is allowed. This is particularly true for women as they experience a significantly larger increase in job satisfaction from having their WFH preferences met than men. WFH stands out as a significant determinant of job satisfaction. Among the various job benefits we evaluated, WFH is the perk most strongly associated with the level of job satisfaction, with a predictive power superior to that of paid sick leave, paid vacation, health insurance access, and retirement plan availability.

Perhaps unsurprisingly given its importance to workers, we find that the extent to which remote work is possible and allowed is linked to both proclivity to search for a new job and mental health. Workers with unmatched preferences for WFH are more likely to be actively looking for a new job and have lower mental health than similar individuals whose employer meets their WFH preferences. Relatedly, individuals with non-WFH-amenable jobs are more likely to report lower levels of work-life balance.

The strong relationships between workplace/schedule flexibility and job satisfaction, turnover intentions, and mental health establish that the disparities in WFH accommodations

across sex and race/ethnicity matter. Minorities, particularly Blacks and Hispanics, are less likely to have jobs that are amenable to WFH than White workers. Conditional on holding a job in which WFH is feasible, women and minorities are less likely to have their preferences for WFH met by their employer than male and White workers. Unmatched WFH preferences and working a job where WFH is not possible are associated with lower job satisfaction, a higher propensity to search for alternative jobs, and lower mental health. Initiatives by policymakers to encourage consistent adoption of WFH policies, combined with employers' growing support for remote work, could enhance the satisfaction and well-being of the labor force in general and potentially reduce existing disparities in labor market outcomes across workers.

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