The New Economics of Working with Children*

Yana Gallen Stephanie Karol Dmitri Koustas Ithai Lurie

December 10, 2024

Abstract

The labor force participation of mothers of young children has never been higher. At the same time, the rates of use of paid childcare have fallen 10-15 percent below pre-pandemic levels in the United States. Exploiting never-before-used administrative tax data on paid childcare, linked to maternal labor supply, we investigate the cause of these seemingly incongruous trends. The key hypothesis we probe is the role of increased workplace flexibility in the post-COVID era. In particular, we examine whether the decline in paid childcare is driven by mothers in more flexible occupations and at firms with more generous remote-work policies. We also examine the role of increased grandparental caregiving driven by COVID-era early retirements and changes in the quality and price of non-relative childcare, and how grandparental availability interacts with the workplace flexibility of mothers. By matching firm remote-work policies with tax records, and leveraging differences in the timing of flexible arrangements among otherwise similar firms, we analyze the impact of increased workplace flexibility in the post-COVID era on childcare demand and wage growth for mothers. Our panel dataset, encompassing the universe of U.S. taxpayers, provides an unprecedented first look at how the remote work revolution is shaping the gender wage gap.

Keywords: Work from home, Gender Pay Gap, Childcare

JEL Codes: J13; J22; J24; J31

*Gallen: University of Chicago, Harris School of Public Policy and IZA. E-mail: yana@uchicago.edu. Koustas: University of Chicago, Harris School of Public Policy. Email: dkoustas@uchicago.edu. Karol: Office of the Treasury. Email: stephanie.karol@treasury.gov. Lurie: Office of the Treasury. Email: ithai.lurie@treasury.gov. We thank Gustavo Luchesi for his excellent research assistance. This research was conducted while Gallen, Karol, Koustas and Lurie were employees at the U.S. Department of the Treasury or the Internal Revenue Service (IRS). The findings, interpretations, and conclusions expressed in this paper are entirely those of the authors and do not necessarily reflect the views or the official positions of the U.S. Department of the Treasury or the IRS. Any taxpayer data used in this research was kept in a secured IRS data repository, and all results have been reviewed to ensure that no confidential information is disclosed.

1 Introduction

In 2023, the labor force participation of US mothers with young children hit an all-time high. For working mothers, childcare is an important complement to work, but childcare availability is low and costs are high (Herbst, 2023). In light of this unprecedented labor force participation, we document a new and surprising fact: paid childcare usage is down significantly—by more than 10 percent—from pre-COVID levels.

In this paper, we probe three potential drivers of the simultaneous reduction in use of paid childcare and the increase in female labor force participation using tax records on the population of mothers of young children, their employers, and never before used tax records on household childcare spending. First, we investigate the role of the remote-work revolution on the ability of women to work without securing formal care for their children. Next, we probe the impact of the increasing availability of gig-work on the ability of mothers to work at times convenient for them without purchasing formal childcare. We seek to answer whether the shift toward remote and otherwise flexible work post-Covid has moved women closer to closing what Goldin (2014) refers to as the "last chapter" of the gender pay gap: the wage penalty stemming from the conflict between inflexible job demands and motherhood.

By improving women's ability to work from home, has technology reduced households' demand for paid childcare? We link publicly announced return to office mandates for Fortune 100, public companies with administrative tax data to study how employment decisions and childcare usage respond to the availability of remote work. Using an event study approach comparing women at companies with different return-to-office dates, we are able to identify how childcare choices and career outcomes relate to the physical location of work. In addition to this direct approach, we employ a more data-driven identification of the availability of work-from-home arrangements which we can apply to a broader swath of firms using a measure of 2020/2021-era changes in the dispersion of employee zip-codes associated with an employer.

A related but distinct possibility is increased schedule flexibility due to a rise in self-

employment/gig work in recent years, particularly post-COVID. Compared to wage and salary work, self-employment is often seen as providing more flexibility, potentially allowing for balancing work while children are at school or when alternative childcare is available. The largest rise in self-employment has come from gig work, in particular rideshare and delivery jobs. These jobs are therefore not remote, however they are characterized by low barriers to entry and schedule flexibility.

We also study how changes in the supply of childcare have affected, and interacted, with other changes in the economy. We focus on the relative availability of grandparental care driven by early retirements, alongside changes in the price and quality of formal center-based childcare. The availability of grandparental care and the rise of remote work are features of the economy which have the potential to greatly affect women, but we do not think of these as are not mutually exclusive explanations. These effects may may magnify one another and their relative role may vary by the age of the youngest child in the household.

To understand how changes in the availability of grandparental care affect the propensity of women to work without purchasing formal childcare, we construct a three-generation link in the US tax data. We study how having a close grandparent (as measured by their zip-code of residence) affects usage of paid childcare, and how this relationship is mediated by the quality of formal childcare available. The COVID pandemic induced a wave of early retirements, potentially providing more opportunities for grandparents to help out with childcare responsibilities. We draw on both administrative IRS tax records and public data sources. To our knowledge, we are the first paper to analyze IRS tax data on childcare usage.

In addition, the low-wage labor market was tight in the recovery from the Covid-induced recession (Autor et al., 2023). In the tax data, we are able to proxy for employee quality using past wages and education, and year-to-year employee turnover as a proxy for center-level quality (Caven et al., 2021). We study whether women in zipcodes most affected by interruptions in formal, center-based paid childcare were more likely to rely on grandparental care, and/or more likely to work in firms with remote work arrangements. We note that we

do not think of any of these explanations as mutually exclusive and some may instead be mutually reinforcing, i.e. flexibility on the job may allow for sharing childcare responsibilities with grandparents, who may only have preferences to provide childcare on a part-time basis.

Finally, we turn to understanding the impacts these structural changes have had on women's career trajectories and, consequently, on the gender pay gap. Recent and complementary work on the same question includes Harrington and Kahn (2024), which studies the decline in employment associated with motherhood and how it is mitigated in careers where women can work from home post-Covid. Our paper makes use of panel data and identification of specific firm policies to connect the ability to work from home with wage growth and career progression. On the one hand, work-from-home policies allow women to remain employed rather than leave the labor force when they become mothers. On the other hand, if work from home induces women to substitute away from care arrangements which take place out of the home and towards care arrangements which take place inside the home, there may be substantial productivity costs and career consequences associated with the shift towards working from home post-Covid (Adams-Prassl et al., 2023; Gallen, 2023).

This paper is organized as follows: we begin by describing the IRS tax data and public-use data used in our paper. Section 3 describes our empirical strategy. In Section 4, we explore summary statistics and trends in both sources. Results are presented in Section 5.

Our results using IRS data are still pending disclosure and cannot be publicly shared at this time. We expect to have disclosed results in mid-January.

2 Data

2.1 IRS Tax Data

We draw on the universe of US tax records as well as birth records shared with the IRS from the Social Security Administration (SSA). In particular, we combine tax records on paid childcare usage with tax records on maternal labor supply. We also further examine

the filings of firms where mothers work, and examine the location of grandparents in the tax data based on multi-generation mother-child SSA links. We describe each of these data elements in turn. Many labor market and childcare variables of interest are available back to 2000. We draw on these data to show trends over time. Given our main interest is more recent changes, our main empirical analysis will be conducted on panel from 2015 to the latest data available in 2023.

2.1.1 Paid Childcare in Tax Data

U.S. tax data provide a unique link between a household, their dependent children and care providers. To our knowledge, we are the first to analyze the tax data recording childcare usage. These data are collected when tax units with children claim the Child and Dependent Care Tax Credit (CDCC) or a Dependent Care Flexible Spending Account (DCFSA).

The United States has had a federal CDCC since 1976. In the most recent tax year, a tax unit can receive up to $2,100 in federal tax credits for childcare. In addition, many states offer top ups that can double the value of the federal credit. Qualifying tax units are those with any childcare or dependent care expenses that allow the filer (or spouse) to work, look for work, or go to school. Qualifying children must be under 13 years old.[1] The credit amount is a percentage of the first $3,000 of qualifying expenses, or $6,000 for two or more qualifying children. The credit is nonrefundable, and is therefore only relevant for tax units with tax liability. We will return to this point when we compare counts from the tax data with other sources of data on paid childcare usage. Another related tax benefit is the DCFSA, which has been available since 1982. Filers can contribute up to $2,500 into DCFSAs, per filer, pre-tax ($5,000 for a married couple). Taxfilers with a DCFSA may also claim the CDCC, but the DCFSA amount is deducted from the cap on qualifying CDCC expenses.

The CDCC is claimed by filing a tax form known as Form 2441, and tax units receiving

[1] While our focus is on mothers with young children, qualifying dependents can be any age if they cannot provide care for themselves.

a DCFSA also file this form. The important elements of this form are shown in Appendix Figure A.1. Tax units list each care provider, the SSN or EIN of the care provider, and amount paid. They also list the expenses for each of their eligible children.

2.1.2 Construction of Our Main Estimation Panel Using SSA child links

We begin with a spine of all mothers with young children born since 2014, where both the mother and child have been issued a Social Security Number (SSN). When someone files for a SSN, often at birth in the United States, the SSA also collects the SSNs of mothers and fathers, when available.[2] These data are shared with the IRS by the SSA.

To this dataset of matched mother-child pairs, we look one generation further back, linking the mothers to their parents (thus identifying the grandparents of the children).

2.1.3 Self-employment and Gig Work in Tax Data

Rates of self-employment have been declining in the major labor market surveys for decades. However, in recent years, there has been a rise in self-employment in the gig economy, driven by the rise of ridesharing and delivery platforms. These types of platform gig jobs are characterized by their low barriers to entry and hours flexibility.

Self-employment can be identified in tax data in a couple of ways. First, self-employed individuals file tax forms, Schedule C and SE. In addition, gig workers receive a tax form from the firms that they work for. Similar to a W2 for employees, gig companies issue a tax form known as Form 1099 to their gig workers. New platform gig companies can be further identified based on cross-referencing names with lists of major platforms (Garin et al., 2022).

[2]Mother SSNs are rarely missing, but may be missing if the mother has not been issued an SSN, such as when a foreigner gives birth in the U.S. Father's SSNs can be missing in the case the father is not known or similarly has not been issued a SSN.

2.1.4 Other tax data elements

Our main focus is on working mothers. We consider female labor supply both from employee and non-employee income. Our main measure of female labor supply comes from receiving a W2 for wage and salary income. We also consider self-employment income, as indicated by the filing or Form Schedule SE, or the receipt of a 1099 from a gig economy payer. We also extract self-reported occupation on the 1040, when available. We use occupation to classify jobs based on whether they can be done remotely, using a methodology discussed in more detail below. Geographic location (zipcode and state) is determined based on the location where the W2 is sent if the mother is an employee, where a 1099 is sent if the mother is a gig worker with no W2 income, or where a 1040 is filed if a mother is a non-gig self-employed worker only.

We also add mortality, geographic location, labor supply and retirement status of the grandparents. First, we link to death dates, as recorded by the SSA (if applicable). We note whether the grandparents work as employees based on receipt of W2, or are retired, based on receipt of Social Security income (1099-SA) or pension/retirement account withdrawals (1099-R). We identify the location of grandparents based on 1040 filings or information returns received in a tax year.

2.2 Public-Use Data (CPS ASEC)

We complement tax data with public use data from the CPS ASEC for a similar period, from 2000 to the present. The CPS is the premier labor force survey in the United States, with rich detail available on jobs, worker demographics and household structure.[3] Since October 2022, the CPS has asked a series of questions about telework.[4] Given the CPS records detailed household stucture, we also flag if a grandparent is living in the same household.

[3]One possible concern during the immediate COVID period is that response rates declined dramatically. However, we are looking at a longer period through the latest data available.

[4]The question is asked in the monthly survey. The main question asked is "At any time last week, did (you/name) telework or work at home for pay?" The respondent is then asked about the hours engaged in telework and if they also teleworked prior to February 2020.

The CPS also asks some questions related to paid childcare.[5] We validate cross-sectional statistics when possible in both the CPS and tax data. There are a number of potentially desirable properties of the CPS data for this purpose. Households can report using paid childcare in the CPS whether or not they are tax filers. In addition, there is no incentive in the CPS to conceal "under the table" childcare. There are also no tax credit-induced incentives to over-report spending. Unlike the tax data, however, there is no further information about the childcare which parents purchase. Beyond the small sample relative to the tax data, another potential drawback is that individuals may not accurately recall the cost of childcare when asked by an enumerator, compared to when filling out their taxes under the potential risk of audit.

3 Empirical Strategy

3.1 Identifying Telework

We are interested in the relationship between telework and paid childcare. We thus need to identify telework. While the CPS does ask whether someone can telework from their job, this variable is only available beginning in October 2022, which is obviously limiting. Unfortunately, there is no flag in the tax data for telework. We thus employ multiple complementary approaches to identify telework.

3.1.1 Occupation-Based Measure

One possible approach to measure teleworkability is to use the index from Dingel and Neiman (2020), which classifies occupations based on their feasibility for remote work using O*NET

[5]Between 2001 and 2006, the question was: Did (you/anyone in this household) pay for the care of (your/their) (child/ children) while they worked in [year]? [include preschool and nursery school; do not include kindergarten or grade/elementary school]. From 2007 onwards, the question became: Did (you/ anyone in this household) pay for the care of (your/their) (child/children) while (you/they) worked in [year] [include: all child care expenses including preschool and nursery school expenses before and after school care, and summer care. Do not include: cost of kindergarten or grade/elementary school.]

survey data on job characteristics. We can apply this index to occupations in both the tax data and CPS.[6] Since O*NET's six-digit codes are more detailed than CPS's four-digit codes, we utilize crosswalks between O*NET, SOC, and CPS codes with harmonized occupation codes from IPUMS, to align the data. The index is then aggregated to the CPS occupational level to create our teleworkability variable. The main limitation of this approach is that we cannot compare teleworkability across firms within occupation.

3.1.2 Dispersion measure

The tax data include self-reported occupation, to which we can apply the Dingel and Neiman (2020) measure, but additionally include firm-level information which we use to create two finer measures of firm-level rates of work-from-home. First, for firms with more than 50 employees in every year between 2013 and 2023, we create a proxy for the Covid-era increase in remote work arrangements based on increases in geographic dispersion of workers. We first count the number of unique ZIP3s where employees at a specific firm work. We then identify firms with stability in this measure pre-2019, but large changes between 2019 and 2022.[7] Specifically, for firm j with N_{jt} employees in year t, we measure

$$\omega_{jt} = \frac{\#unique\ ZIPi3_{jt}}{N_{jt}}$$

We consider a firm "work from home" if we see $\omega_{j,2022} - \omega_{j,2019} > 0.1$, and changes of less than .01 in absolute value in the measure between any consecutive years in the window excluding 2019-2022.[8]

[6] As noted above, occupation is self-reported in the tax data on 1040s.

[7] ZIP3 refers to the first three digits of a 5 digit zipcode. There are 875 ZIP3s in the United States.

[8] For disclosure reasons we cannot explain the rational behind these cutoffs, but we are taking a data-driven approach and will explain our choices clearly once disclosed.

3.1.3 Return to Office Mandates

In a third approach, we collect data on the return-to-office (RTO) policies of Fortune 500 companies using publicly available information from news articles and management statements. Specifically, we record the dates when these companies introduced RTO mandates requiring corporate staff to return to the office for any number of days per week. Additionally, we document the adoption of full-time RTO mandates and track the evolution of remote work policies, as some companies transitioned from hybrid schedules to five-day in-office requirements.

To construct this dataset, we first performed Google searches that combined company names with the terms "RTO mandate", "return-to-office", and "work from home", covering the period from May 2020 to December 2024 for the 100 largest companies. This approach allowed us to document remote work policies for a sample of 66 companies. Among these firms, 58 implemented some form of company-wide RTO mandate, while the remaining 8 maintained generally flexible work arrangements. These flexible companies either allowed individual teams to determine their preferred work schedules or publicly stated that they had no plans to require employees to return to the office.[9]

We supplement the collected RTO dates with information from the Flex Index database, an online platform documenting work-from-home policies for over 10,000 companies and maintained by carpool company Scoop Commute. The database includes details about the type of policy adopted (fully flexible, hybrid, or full-time in-office), the minimum number of required in-office days per week, and whether specific days are mandated for attendance (e.g., Monday through Wednesday or other weekday combinations).

Finally, for the public companies in our dataset, we retrieved EIN tax IDs from an online source, enabling us to link RTO mandate dates to our sample of employees in the tax data.[10] This linkage allows us to analyze how changes in flexible work arrangements affected

[9] NVidia (Fortune) and Intel (Forbes) are famous examples of companies within the Tech space that embraced flexible work models and opted out of RTO mandates.

[10] EIN tax IDs come from eintaxid.com.

employment and childcare decisions among working women.

3.2 Self-Employment/Gig Work and Grandparental Care

We also examine the role of self-employment and gig work, and grandparental care. We create indicators for self-employment in the CPS and tax data, and also create an indicator for platform gig work in the tax data. In the CPS, we can only identify a grandparent if they live in the same household. We know if they are working or are retired. In the tax data, we can see if a grandparent is alive, working, retired, and living locally, which we define as living within a 25 mile radius as calculated by the Haversine distance between zipcode centroids.

3.3 Regression Decomposition

3.3.1 Explaining the Decline in Usage of Paid Childcare

To understand the causes of the decline in paid childcare, we consider the impact of each of three candidate drivers. While some of our measures of telework are available for most workers (e.g. our measure based on Dingel and Neiman (2020) is available for all mothers in the CPS, and those listed interpretable occupations on their 1040s, the dispersion based measure is available for all mothers at large firms), the RTO data are only available for the Fortune 100 companies.

Our baseline specification can be run in both public use and tax data:

$$PaidChildcare_i^t = \alpha + \beta_1^t Telework_i + \beta_2^t SelfEmployed_i + \beta_3^t Grandparent_i + Controls + \epsilon_i^t \quad (1)$$

Where $Telework_i$, $SelfEmployed_i$ and $Grandparent_i$ are indicators for mother i having the ability to telework, being self-employed, and having grandparental care available, as described and defined above. We also consider interactions between our main explanatory variables of interest—i.e. to capture if grandparental availability becomes more important

when a worker is in a teleworkable job or is self-employed.

In the tax data, we have a panel, so we know if a worker changed their employment status or a grandparent has now retired and lives nearby, so we can instead examine a specification using within-period differences over time.

Denote an explanatory factor of interest $Z \in \{Telework_i, SelfEmployed_i, Grandparent_i\}$. Then the share of the decline in paid childcare in year t relative to 2019 that can be explained by factor Z can be written as follows:

$$ZShare_t = \frac{\overline{Z}_{2019}\left(\beta_z^t - \beta_z^{2019}\right)}{\overline{PaidChildcare}_t - \overline{PaidChildcare}_{2019}} + \frac{\beta_z^t\left(\overline{Z}_t - \overline{Z}_{2019}\right)}{\overline{PaidChildcare}_t - \overline{PaidChildcare}_{2019}} \tag{2}$$

Where $\overline{X}$ denotes the sample average. As this decomposition shows, there are two main ways (not mutually exclusive) that these factors may contribute to the decline in paid childcare. First, as indicated by the left term, the importance of any of these factors could be increasing over time. Hence, we estimate separate coefficients for every year, denoted by the superscript t. In addition, the share of workers with these factors could be increasing over time, given by the term on the right. We will therefore describe trends in our factors of interest in the next section.

3.3.2 Impact of Remote Work Arrangements

We next study the impact on women's careers of being employed at a firm which returned to office soon after the pandemic. To do this, we consider women on similar career trajectories before 2021 (for example, those working in Bank of America vs. those working in American Express with similar tenure and earnings in 2021). We compare women's average earnings growth between 2021 and 2023, relative to the earnings growth of non-mothers and men in strict RTO-firms relative to more lenient firms.[11]

[11] See examples of firms with relatively lenient vs. relatively strict in-office requirements in Appendix Table A.1.

We consider the following difference-in-differences regression:

$$y_{it} = \gamma_t + \delta_{j(i,2020)} + \sum_{s=-6}^{4} \beta_s M_{it} \times RTO_{j(i,2020)} \times \mathbf{1}\left[t = 2020+s\right] + \sum_{s=-6}^{4} \kappa_s RTO_{j(i,2020)} \times \mathbf{1}\left[t = 2020+s\right] + \varepsilon_{it} \tag{3}$$

where y is the outcome of interest for individual i in year t. γ_t and $\delta_{j(i,2020)}$ represent year and firm fixed-effects, respectively. When we include firm fixed-effects, we include them based on the firm in which individuals worked in 2020, when work-from-home policies were similar across firms. Individuals may move firms post-pandemic, potentially in response to RTO policies, so we think of this as a measure of intent to treat.[12] The main coefficients of interest are β_s which measure the effect of working in a firm which has an early RTO over time for mothers, indicated by M_{it}, relative to other workers.

We consider several outcomes of interest. First, we verify that usage of paid childcare responds to the ability to work remotely. Second, we evaluate the effect of RTO mandates on the careers of women by using (i) year-to-year earnings growth and (ii) pay rank within the firm as outcomes in regression (3) above. Finally, we check whether effects are heterogenous by youngest child age, grandparental care availability, and by occupation, as reported on IRS form 1040.

4 Summary Statistics and Trends

4.1 Maternal labor supply

We begin with the trends in maternal labor supply for mothers in the CPS. Figure 1, panel (a), plots the share of mothers with any employment over the course of the year, back to 2009. We further break this out by age of the youngest child: 0 to 5, and 6 to 14. Both groups have seen large increases in employment since mid 2010s, post Great Recession. Mothers had a decline in their employment in 2020 and 2021, but employment bounced back beginning

[12] We can also document the labor market churn associated with these policies, similar to Wright et al. (2024).

in 2022. As of 2023, mothers have their highest employment rates on record. Not only are mothers more likely to be working, but they are more likely to be working full-time. Panel (b) focuses on full-time work, defined as usually working 30+ hours per week. Full-time employment is similarly at record high rates. Interestingly, full-time employment for mothers of young kids ages 0-5 shows no discernible decline in 2020 and 2021, at least on average.

4.2 Paid childcare usage

We next turn to paid childcare usage. Figure 2, panel (a), plots the total number of tax units reporting paid childcare in tax data, alongside the comparable measure in the CPS. Panel (b) reports the dollars spent, conditional on having paid childcare, which is available in the CPS since 2009. While the CPS counts are noisy compared to the tax data, the tax data appears to capture on average 88 percent of the number of households using paid childcare, and around 80 percent of the dollars spent. The second takeaway from this comparison is that in both the CPS and tax data, counts of paid childcare usage are down 10-15 percent since 2019. We view this as encouraging that our measure in the tax data picks up the majority of paid childcare usage in the United States.

Figures 1 and 2 (a) present the main "puzzle" at the heart of our paper: the labor supply of mothers is at an all time high, while paid childcare usage is at a two-decade low.

4.3 Telework

The red line in Figure 3 shows the share of mothers of 0-5 year olds with teleworkable jobs in the CPS, according to the Dingel and Neiman (2020) measure. Interestingly, the share rises sharply by 3 percentage points post COVID, suggesting sorting into occupations that are compatible with teleworking.

Even if the jobs are amenable to teleworking, this does not mean a firm allowed it. Figure 4 shows that nearly all large firms switched to remote work for the first two years of the

pandemic. Beginning in January 2022, many firms began to require workers back in the office at least some days. By the end of 2024, only around one quarter of firms have a full-time RTO policy, however.

4.4 Self-employment and gig work

Platform gig work has been rising dramatically since 2012, and experienced major growth during COVID. As shown in Figure 3, self-employment rose slightly in the CPS post 2020 (and did not decline, like wage employment did in 2020 and 2021). However, the CPS measure of self-employment only tells part of the story.

Figure 5 shows the number of people receiving at least some income from a gig platform company, which more than doubled in the COVID period from under 2 million workers in 2019 to nearly 5 million by 2021. This was largely driven by growing demand for gig services during COVID, and demand has remained persistently higher since. Further, as shown in Figure 6, much of this growth came from young, female workers. Outside of platform gig work, other types of self-employment have been largely stable (or even declined) in recent years (Garin et al., Forthcoming, 2023). Given the unique characteristics of platform gig jobs and their dramatic growth, we can test whether paid childcare usage among platform gig workers differs from more traditional forms of self-employment.

5 Results From Public Use Data

Our results using IRS data are still pending disclosure and cannot be publicly shared at this time. Results will be public in time for the conference in February.

For now, we provide a discussion of results using public use data. We also discuss the limitations of the public use data compared to the tax data.

Table 1 presents results from a version of the regression specification given by Equation (1). We modify this slightly to pool together coefficients into a single post period. We run

regressions of Any Paid Childcare on whether mothers work in teleworkable jobs ("Teleworkable"), whether a grandmother is present in the household ("GrandmotherPresent"), and whether a mother has self-employment income ("Any Self-Employment"), including a set of rich controls for mothers income, age, number of children, youngest child age, race, marital status, education and urbanicity. Interestingly, we find that teleworkable occupations are associated with more paid childcare usage, likely due to correlation with other unobservable features of these occupations. However, this effect declined dramatically in the post-COVID era. Having a grandmother present and being self-employed were both associated with less paid childcare usage. While having a grandmother present becomes more strongly negative in the post-COVID period, the difference is not statistically significant. Interestingly, the coefficient on self-employment in the post period goes in the opposite direction. One reason may be because the composition of women who are self-employed changes in this time period.

Table 2 calculates the full statistical decomposition from Equation (2). We find that the increase in share of mothers working in teleworkable jobs, combined with the coefficient on telework falling, explains nearly one quarter of the decline in paid childcare. We do not find a significant role for the other factors, at least in the CPS. These results are suggestive of a large role for teleworkable jobs. However, grandparental support and self-employment are both much better measured in tax data than in the CPS—we look forward to refining these conclusions.

References

Adams-Prassl, Abi, Kotaro Hara, Kristy Milland, and Chris Callison-Burch, "The Gender Wage Gap in an Online Labor Market: The Cost of Interruptions," *The Review of Economics and Statistics*, 02 2023, pp. 1–23.

Autor, David, Arindrajit Dube, and Annie McGrew, "The Unexpected Compression: Competition at Work in the Low Wage Labor Market," Working Paper 31010, National Bureau of Economic Research March 2023.

Caven, Meg, Noman Khanani, Xinxin Zhang, Caroline E. Parker, and Regional Educational Laboratory Northeast & Islands, "Center- and program-level factors associated

with turnover in the early childhood education workforce: Study snapshot," Technical Report 2021. REL 2021-069.

Dingel, Jonathan I. and Brent Neiman, "How many jobs can be done at home?," *Journal of Public Economics*, 2020, *189*, 104235.

Gallen, Yana, "Motherhood and the Gender Productivity Gap," *Journal of the European Economic Association*, 10 2023, *22* (3), 1055–1096.

Garin, Andrew, Emilie Jackson, and Dmitri Koustas, "Is Gig Work Changing the Labor Market? Key Lessons from Tax Data," *National Tax Journal*, 2022, *75* (4), 791–816.

_ , _ , and _ , "New Gig Work or Changes in Reporting? Understanding Self-Employment Trends in Tax Data," *American Economic Journal: Applied Economics*, Forthcoming.

_ , _ , Dmitri K. Koustas, and Alicia Miller, "The Evolution of Platform Gig Work, 2012-2021," Working Paper 31273, National Bureau of Economic Research May 2023.

Goldin, Claudia, "A Grand Gender Convergence: Its Last Chapter," *American Economic Review*, April 2014, *104* (4), 1091â1119.

Harrington, Emma and Matthew Kahn, "Has the Rise of Work-from-Home Reduced the Motherhood Penalty in the Labor Market?," *Working Paper*, 2024.

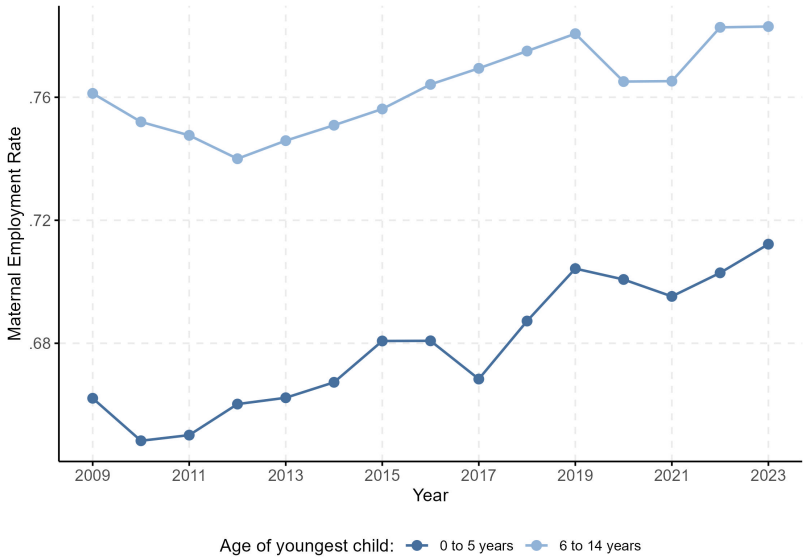
Herbst, Chris M., "Child Care in the United States: Markets, Policy, and Evidence," *Journal of Policy Analysis and Management*, 2023, *42* (1), 255–304.

Wright, Austin, David Van Dijcke, and Florian Gunsilius, "Return to Office and the Tenure Distribution," Working Paper 2024-56, Becker Friedman Institute for Economics 2024.

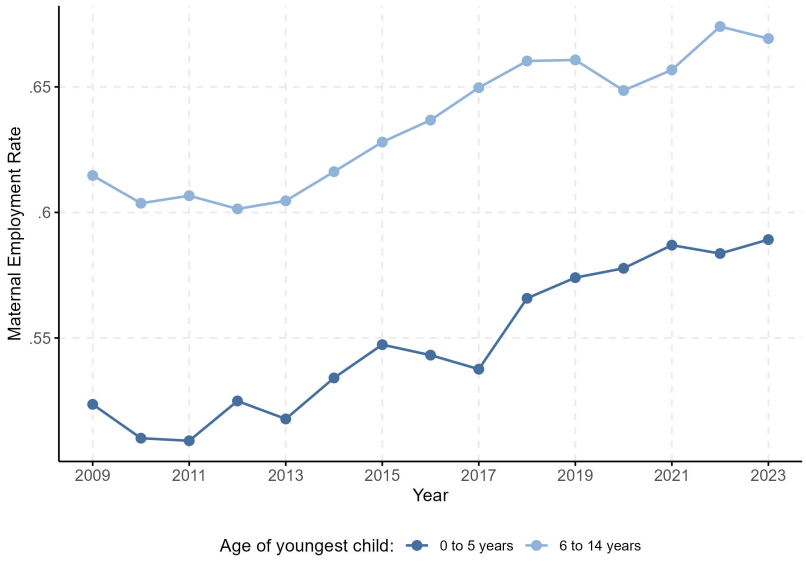
Figures

Figure 1: Mothers' Labor Force Participation: Current Population Survey

(a) Any Work



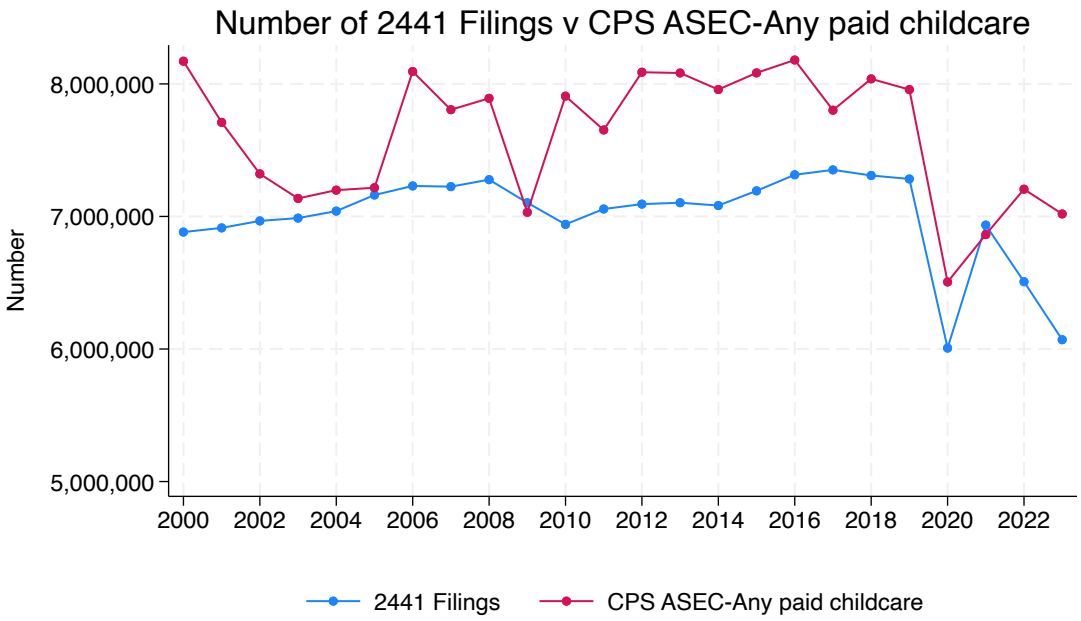
(b) Full-time Work (30+ hours per week)



Notes: Among families with at least 1 child under 15. Data comes from the CPS ASEC (2010-2024)

Figure 2: Use of Paid Childcare: IRS data v Current Population Survey

(a) Counts



(b) Dollars

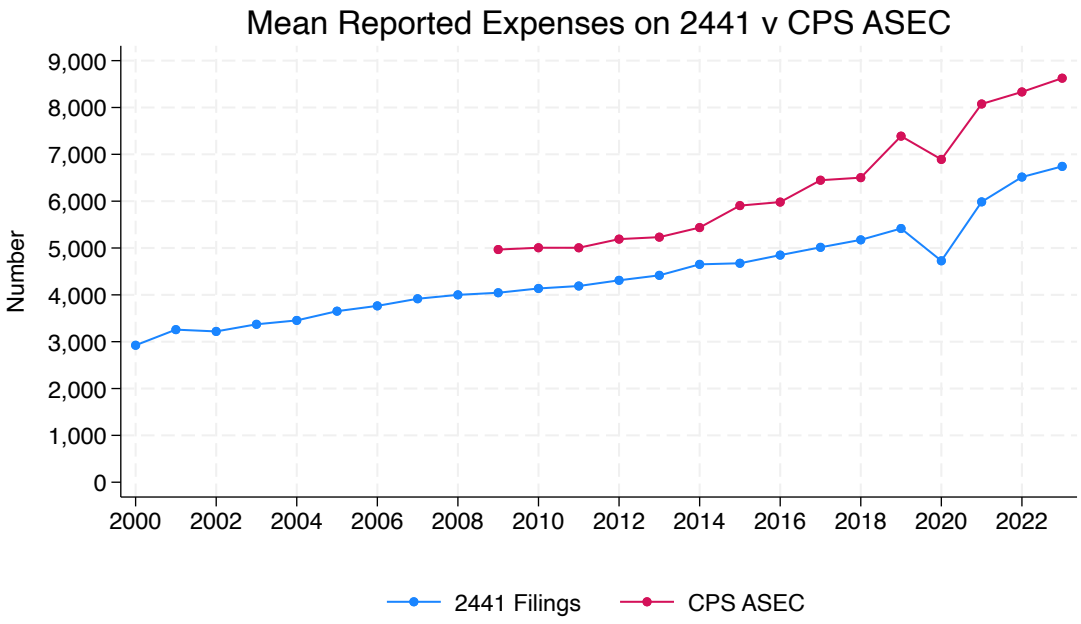


Figure 3: Trends in Current Population Survey

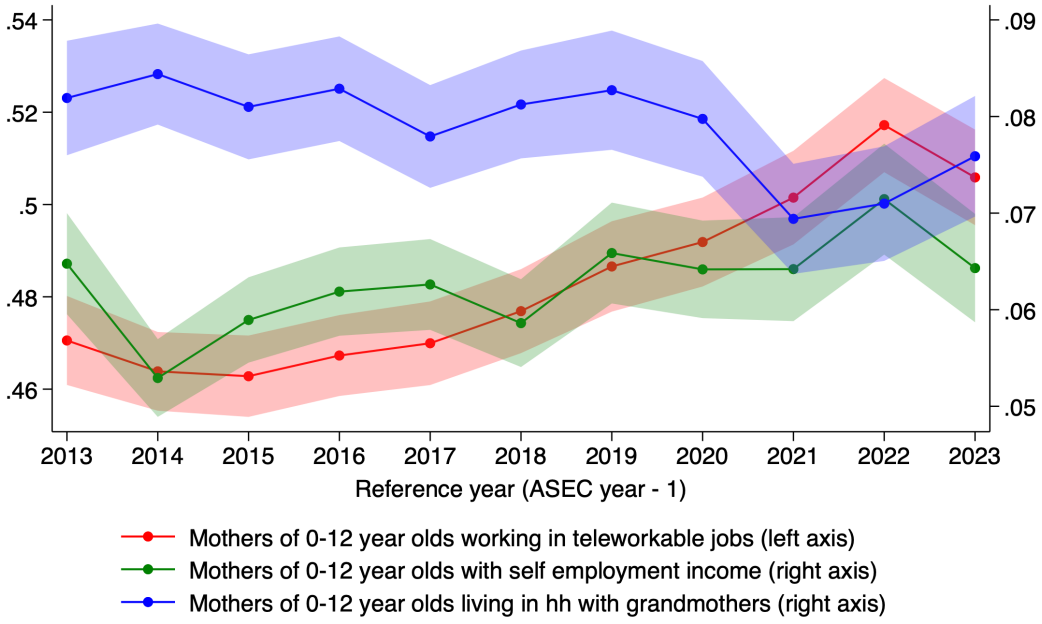


Figure 4: RTO Policies, Fortune 100

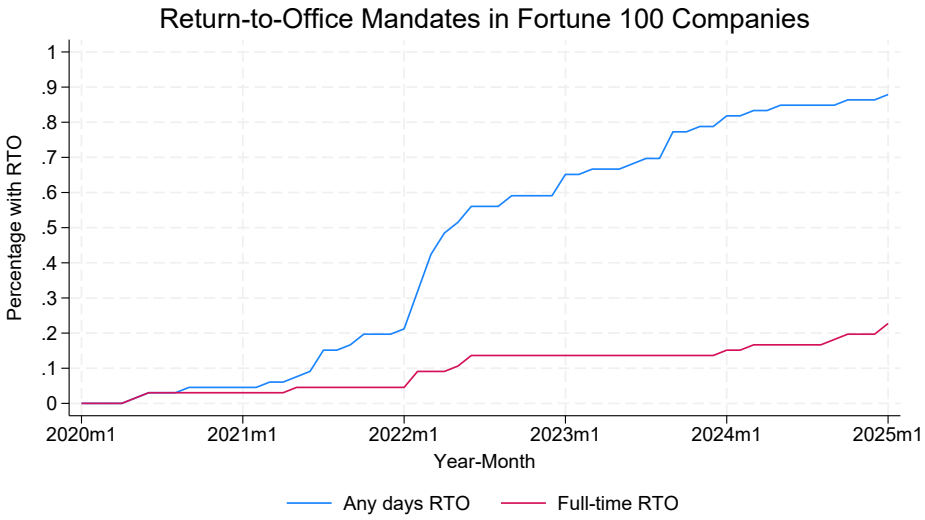
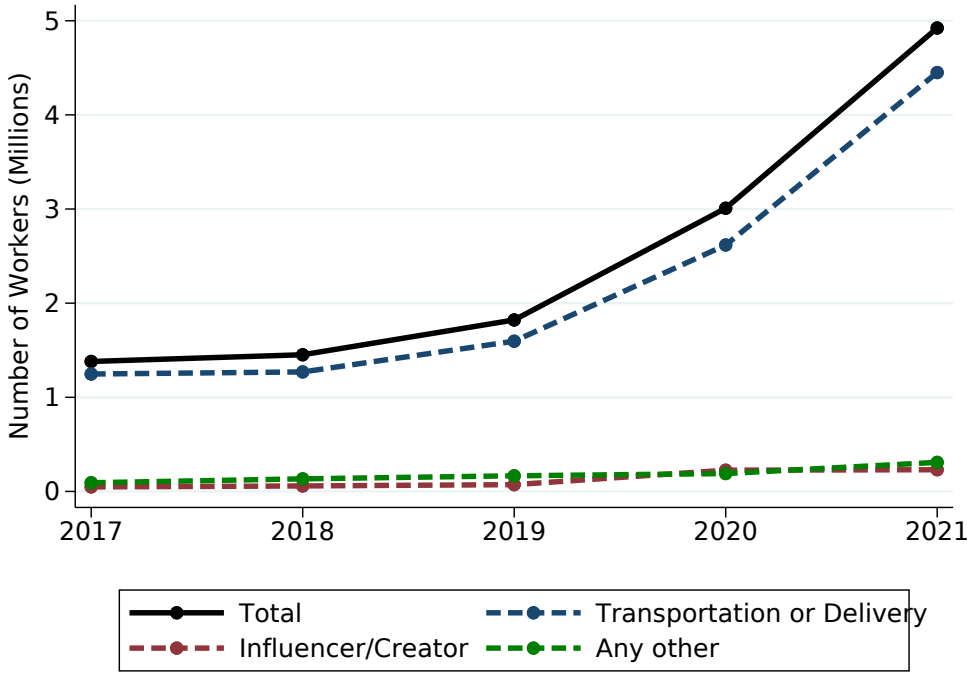


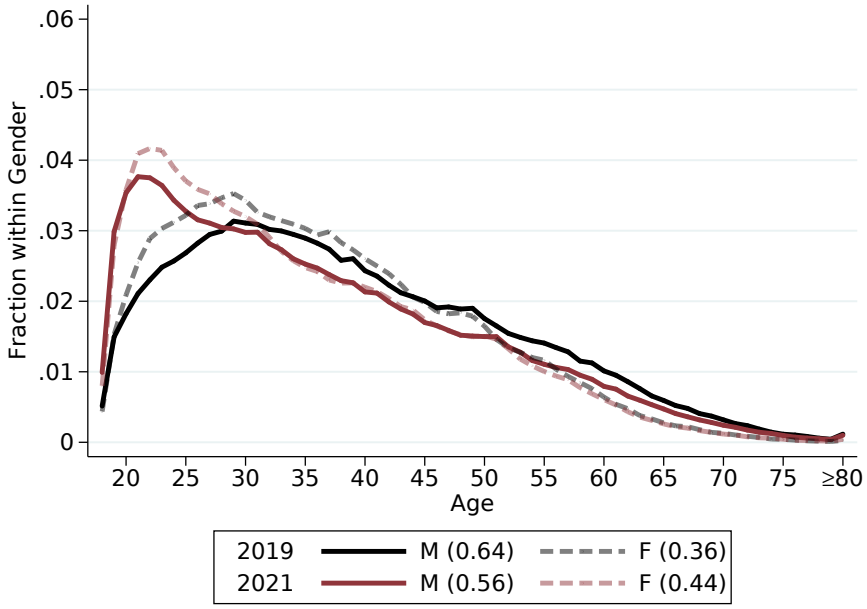
Figure 5: The Rise of the Gig Economy in Tax Data



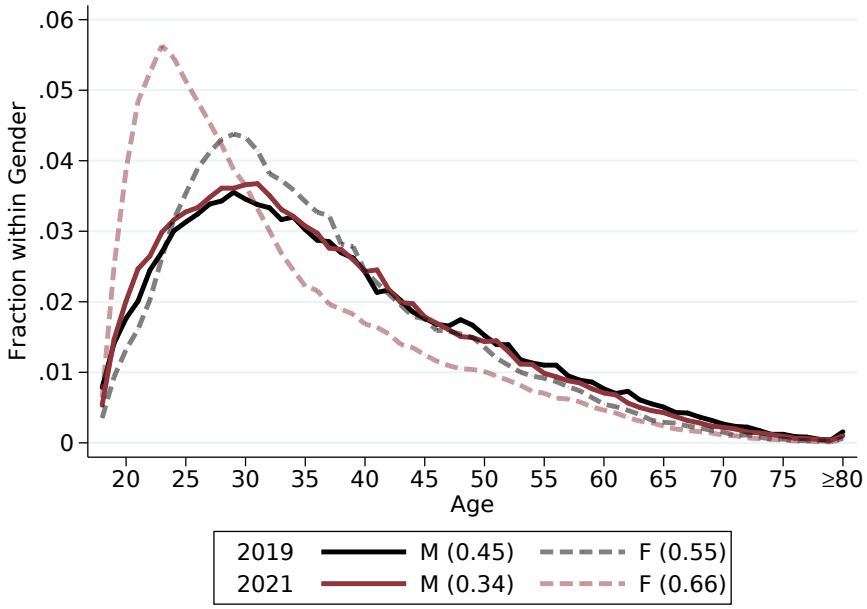
Source: Garin et al. (2023)

Figure 6: Age Distribution of Platform Gig Work, by Year and Gender

(a) Transportation & Delivery Platforms



(b) All Other Platforms



Notes: Figure shows the age distribution of platform gig workers separately by year and gender as recorded in SSA data. The share of the gender share of platform gig workers in each year is reported in parentheses in the legend. Source: Garin et al. (2023)

Tables

Table 1: Regression Decomposition of the Decline in Paid Childcare

	(1) Any Paid Childcare	(2) Any Paid Childcare	(3) Any Paid Childcare	(4) Any Paid Childcare
Teleworkable × Post	-0.0160**			-0.0167**
	(0.00734)			(0.00737)
GrandmotherPresent × Post		-0.0149		-0.0154
		(0.0116)		(0.0117)
Self-Employment × Post			0.0404***	0.0415***
			(0.0132)	(0.0133)
Teleworkable	0.0359***			0.0365***
	(0.00405)			(0.00406)
GrandmotherPresent		-0.0289***		-0.0283***
		(0.00718)		(0.00723)
Any Self-Employment			-0.0247***	-0.0266***
			(0.00697)	(0.00705)
N	124218	125931	125931	124218
R-squared	0.114	0.114	0.114	0.115
Controls	X	X	X	X

Notes: Regression includes year fixed effects and controls for mothers income, age, number of children, youngest child age, race, marital status, education, and urban. Robust standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01 Source: CPS ASEC, 2013-2023, excluding 2020.

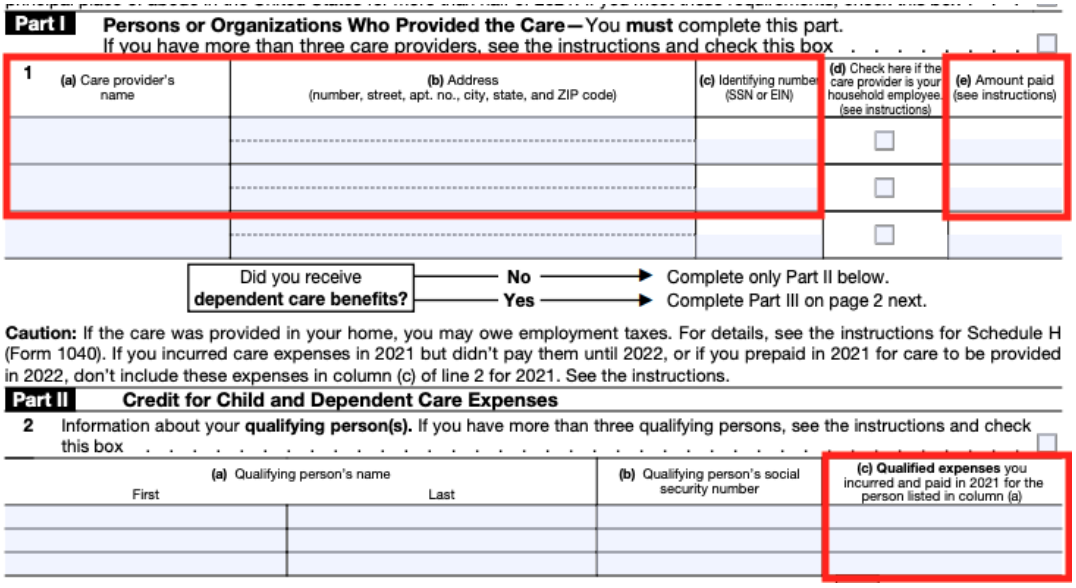
Table 2: Decomosition of the Sources of the Decline in Paid Childcare

	(1) Pre-level	(2) P.p. Change	(3) Pre-coefficient	(4) Change in Coefficient	(5) Share of Decline Explained
Teleworkable	0.471	0.0371	0.0365	-0.0167	0.2353
Grandmother Present	0.0817	-0.0096	-0.0283	-0.0154	0.02768
Self-Employment	0.0608	0.0059	-0.0266	0.041	-0.0851

Notes: Share of decline explained = ((1)*(4)+(2)*((3)+(4))) / -0.0404.

A Appendix Figures and Tables

Figure A.1: Form 2441 Child and Dependent Care Expenses



Part I **Persons or Organizations Who Provided the Care**—You **must** complete this part.
If you have more than three care providers, see the instructions and check this box

1 (a) Care provider's name	(b) Address (number, street, apt. no., city, state, and ZIP code)	(c) Identifying number (SSN or EIN)	(d) Check here if the care provider is your household employee (see instructions)	(e) Amount paid (see instructions)
			☐	
			☐	
			☐	

Did you receive **dependent care benefits?** — **No** → Complete only Part II below.
— **Yes** → Complete Part III on page 2 next.

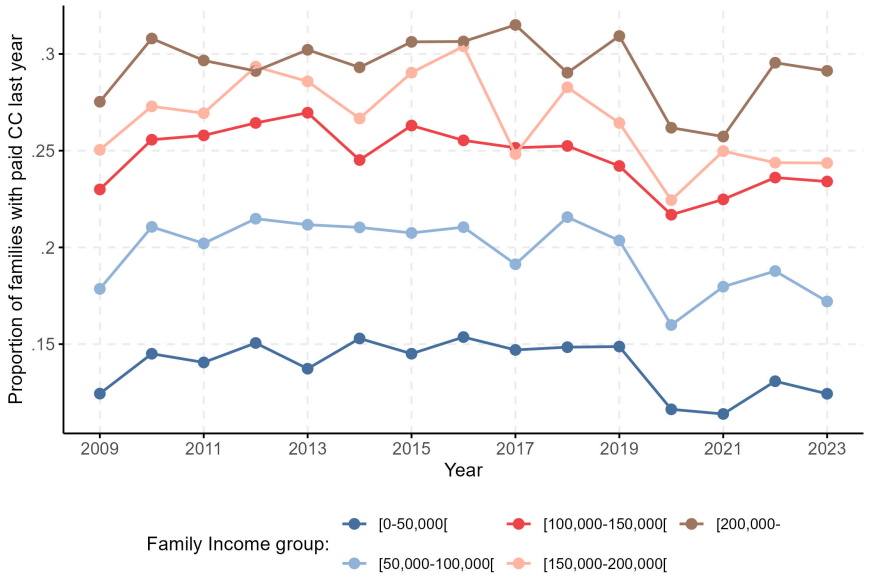
Caution: If the care was provided in your home, you may owe employment taxes. For details, see the instructions for Schedule H (Form 1040). If you incurred care expenses in 2021 but didn't pay them until 2022, or if you prepaid in 2021 for care to be provided in 2022, don't include these expenses in column (c) of line 2 for 2021. See the instructions.

Part II **Credit for Child and Dependent Care Expenses**

2 Information about your **qualifying person(s).** If you have more than three qualifying persons, see the instructions and check this box

(a) Qualifying person's name First	Last	(b) Qualifying person's social security number	(c) **Qualified expenses** you incurred and paid in 2021 for the person listed in column (a)

Figure A.2: Usage of paid childcare by household income



Note: Among families with at least 1 child under 15. All income values in 2019 US dollars.

Most Strict	**More Lenient**
Amazon	Microsoft
Exxon Mobil	Cencora
JPMorgan Chase	PepsiCo
Bank of America	American Express
Phillips 66	Progressive Insurance
Tesla	Nvidia
Goldman Sachs	Allstate
Morgan Stanley	Cisco Systems
UPS	Intel
Dell	HP
Boeing	
HCA Healthcare	

Table A.1: Categorization of Companies from Most Strict to More Lenient