

**EMPREENDEDORISMO E TRABALHO DE CUIDADOS DOS PAIS  
DURANTE A PANDEMIA: EVIDÊNCIA COM DADOS PARA OS  
ESTADOS UNIDOS**

**ENTREPRENEURSHIP AND CARE WORK FOR PARENTS DURING  
THE PANDEMIC: EVIDENCE FROM US DATA**

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**RESUMO**

Durante a pandemia de COVID-19, os Estados Unidos experimentaram um aumento nas solicitações de abertura de empresas. Neste estudo, examinamos a atividade empreendedora de pais e mães em relação às responsabilidades de cuidado que enfrentaram durante a crise sanitária. Utilizando regressões com dados da Current Population Survey (CPS), exploramos a variação no fechamento de escolas e creches em diferentes regiões entre 2020 e 2022. Usamos o fechamento generalizado dessas instituições como uma medida do aumento da carga de cuidado enfrentada pelos pais. Nossos resultados mostram que o acesso reduzido ao ensino presencial e aos serviços de cuidado infantil está associado a uma menor

probabilidade de ser conta-própria sem empresa registrada entre os pais. Além disso, as mães que não estavam trabalhando apresentaram menor probabilidade de iniciar um negócio próprio quando as responsabilidades de cuidado aumentaram. As evidências indicam que muitos pais priorizaram o trabalho doméstico não remunerado em detrimento do trabalho de conta-própria durante a pandemia, destacando a necessidade de políticas que apoiem iniciativas empreendedoras de pais — especialmente de mães que precisam conciliar demandas de cuidado.

**Palavras-chave:** Trabalho de cuidado. Empreendedorismo feminino. Covid-19. Trabalho Conta-própria dos pais. Estados Unidos.

### ABSTRACT

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During the COVID-19 pandemic, the United States experienced a surge in business applications. In this study, we examine parents' entrepreneurial activity in relation to the caregiving responsibilities they faced during the health crisis. In regressions with the Current Population Survey, we explore the variation in school and daycare closures across areas from 2020 to 2022. We use widespread closures as a measure of extra care burden for parents. Our findings show that reduced access to in-person instruction and childcare is linked to a lower probability of unincorporated self-employment among parents. Also, mothers who are not working are less likely to start self-employment when caregiving responsibilities increase. Findings indicate that many parents prioritized unpaid household work over self-employment during the pandemic, highlighting the need for policies that support entrepreneurial pursuits for parents, particularly mothers balancing caregiving demands.

**Keywords:** Care work. Female entrepreneurship. Covid-19. Parent's self-employment. United States

**JEL Classification:** J16 Economics of Gender • Non-labor Discrimination, L26 Entrepreneurship, J22 Time Allocation and Labor Supply

## 1 INTRODUCTION

The COVID-19-related pandemic was the largest shock to impact the US economy since the Great Recession. The need for social isolation and the consequent shutdown of businesses was pervasive in the economy. As expected, responses to the pandemic shock were heterogeneous across the board, and current research has already assessed the disproportionate impact of the health crisis on women (Alon et al., 2020, 2022) and small businesses (Fairlie, 2020; Belitski et al., 2022).

During the pandemic, there was a surge in business applications in the US. The number of applications increased sharply in 2020 and has not returned to pre-crisis levels (Haltiwanger, 2022). Business applications are a common first step for entrepreneurs who want to operate with an Employer Identification Number. A substantial fraction of the recent increase was due to requests to operate in non-store retail trade, construction, trucking and warehousing, accommodation and food services, health care and social assistance, and professional services (Figure 1). The extent to which the new applications indicate a structural shift in the economy remains an open research question. Still, the early evidence suggested that the pandemic had strong reallocation effects across businesses (Barrero, Bloom and Davis, 2020; Haltiwanger, 2022).

The share of self-employment in the U.S. has remained relatively stable over recent decades, but the nature of self-employment has shifted toward businesses requiring lower startup capital, such as personal services, construction, childcare, and health services (Colaiacovo et al., 2022). Against this backdrop, the Covid-19 pandemic was also a reallocation shock poised to affect self-employment. In this study, we examine parents' entrepreneurial activity in relation to the caregiving responsibilities they faced during the health crisis. The pandemic period is particularly relevant because it created an unprecedented demand for caregiving within households, especially for parents of school-age children.

Historically, women in the U.S. have turned to self-employment as a way to achieve more flexible work arrangements during their peak childrearing years (Lim, 2019; Wellington, 2006). We compare the entrepreneurial outcomes of women and men, with and without children, leveraging the variation in school and daycare closures across regions during the first two years of the pandemic. The lack of in-person

instruction and childcare is a proxy for the additional caregiving burden on parents. While school and daycare closures were correlated with other local determinants of self-employment, the absence of these services had a distinctly different impact on men and women with children in the household.

We use the dataset of school and daycare closures compiled by Parolin and Lee (2021) and Lee and Parolin (2021). The authors leveraged Safegraph mobile phone information to track in-person visits to K-12 schools and daycare facilities between 2020 and 2022. The Safegraph data have been widely used in economic studies to assess topics such as stay-at-home mandates, business activity, or parents' labor supply during the pandemic (Garcia and Cowan, 2024; Hansen, Sabia and Schaller, 2024; Cronin and Evans, 2021; Goolsbee and Syverson, 2021; Allcott et al., 2020). We link Parolin and Lee's data to information from the Current Population Survey (CPS), a standard household survey with demographic and labor market information. We use the CPS as the most up-to-date and common source of information to measure our outcome of interest: self-employment and new entrepreneurship activity (Figure 2).

There are distinct channels for the pandemic shock to induce or discourage workers from starting self-employment. On one side, self-employment in sectors such as online retail, professional services, and personal services offered flexibility, enabling individuals to balance paid work with household responsibilities. Given that most caregiving duties historically fall on women, female workers may particularly value the flexibility that self-employment provides in these fields. Data from the American Time Use Survey (2021) reveal that 26 percent of women engaged in caregiving for household members, compared to 17 percent of men participating in similar activities.

Conversely, the widespread shift to remote working, which began in 2020, allowed firms and employees to recognize the benefits of alternative work arrangements and become more informed about productivity outside traditional office settings. The proportion of individuals in the U.S. commuting or engaging in work-related travel remained below pre-pandemic levels in 2021. The rise in remote work may offer female employees greater flexibility, enabling them to better manage unpaid care responsibilities and potentially drawing them back into employee positions rather than self-employment. The relationship we study is ultimately an empirical question. While self-employment provides flexibility that can accommodate increased time demands, a

significant rise in caregiving responsibilities may deter individuals from dedicating time and resources to launching new businesses.

There is a large literature on the impact of the health crisis on labor market outcomes in the US and it indicates a negative impact of the pandemic on women and parents (Albanesi and Kim, 2021; Alon et al., 2022, 2020; Goldin, 2022; Couch, Fairlie and Xu, 2022; Kalenkoski and Pabilonia, 2022). Recent studies have specifically highlighted how school and daycare closures during the pandemic reduced the labor force participation, working hours, and earnings of parents (Lim and Zabek, 2023; Heggeness, 2020; Garcia and Cowan, 2024; Hansen, Sabia and Schaller, 2024).

Our study contributes to the literature by examining entrepreneurial activity during the pandemic, with a focus on parents of young children — a demographic group with high rates of entrepreneurship in the US. Through regression analysis, we provide a sequence of findings. First, we observe that the absence of in-person schooling and childcare is associated with a lower probability of unincorporated self-employment for mothers and fathers. Second, among mothers who are not working, school and daycare closures are associated with a lower probability of transition into self-employment.

Our findings indicate that parents were likely to forego paid work in unincorporated businesses during the pandemic in favor of unpaid household work. Additionally, mothers often delayed or abandoned plans for self-employment due to increased caregiving responsibilities, while married fathers running incorporated businesses were less responsive to the demands of care work. Overall, the evidence indicates that the demands of caregiving outweighed the potential benefits of entrepreneurial activity for some parents during the health crisis.

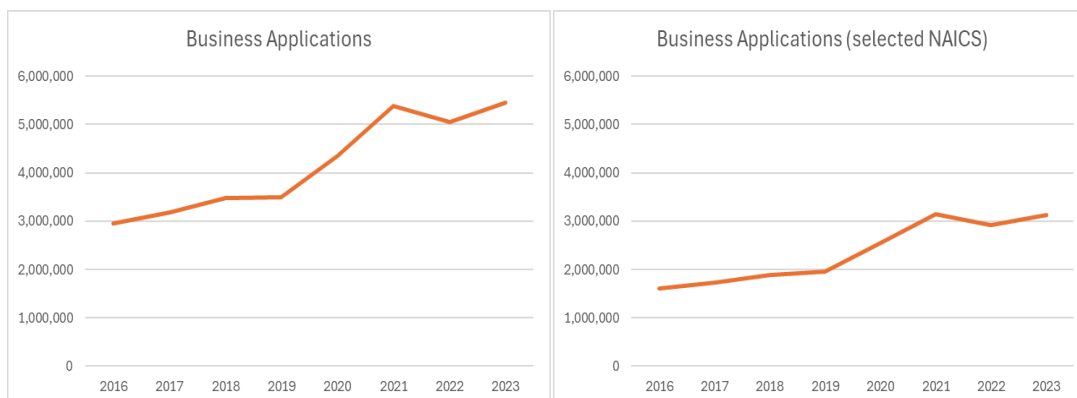
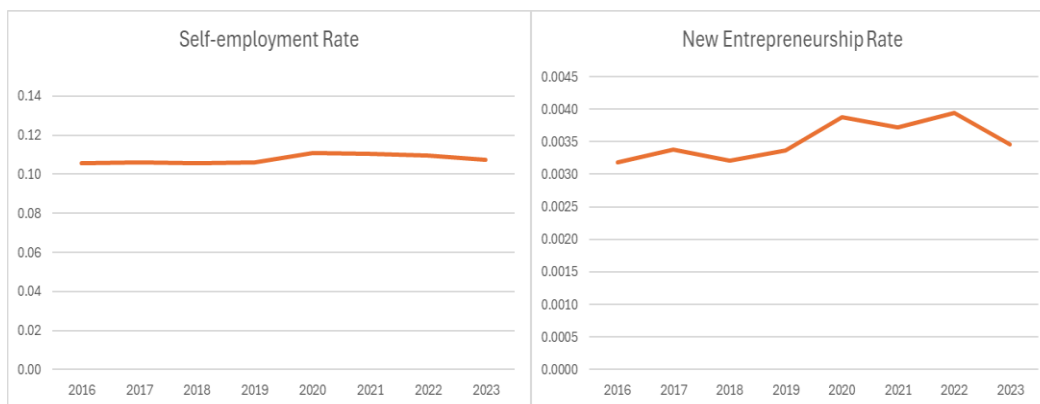


Figure 1. Business Applications

Note: US Census Bureau data. The left-side panel has the series of business applications for tax IDs, as indicated by applications for an employer identification number (EIN), filed through IRS Form SS4. The right-hand side panel has the series of Business Applications for specific NAICS sectors (Construction, Nonstore Retailers, Truck Transportation, Warehousing and Storage, Health Care and Social Assistance, Accommodation and Food Services, and other Services except Public Administration).



**Figure 2. Self-employment and New Entrepreneurship**

Note: Calculated from the Current Population Survey (CPS) data using adults 21 years old or older. The left-side panel has the share of workers classified as self-employed, either unincorporated or incorporated. The sample has all adults classified as employed in the previous week. The right-side panel has the rate of new entrepreneurship. The data from the Basic Monthly Survey are matched across two consecutive months. A new entrepreneur works as self-employed for at least 15 hours per week in the second month of the matched panel. The sample has all adults classified as unemployed, not in the labor force, or working as employees in the first month of the matched panel. CPS sample weights applied.

## 2 RELATED LITERATURE AND EXISTING EVIDENCE

The health crisis spawned a variety of economic studies. While a comprehensive review of the pandemic’s broader impact is beyond the scope of our study, we concentrate on literature examining how the pandemic changed female employment status and entrepreneurship rates. Alon et al. (2020) were among the first to predict the gendered outcomes of the crisis, emphasizing the unique nature of the 2020 recession compared to previous downturns. In contrast to earlier recessions, the sectors most affected by social distancing measures had a higher proportion of female employees. Furthermore, closure of daycare centers and schools was expected to disproportionately increase women’s unpaid caregiving responsibilities and impact the well-being of parents. In a follow-up study, Alon et al. (2022) found that women working from home faced greater productivity declines due to childcare demands, underscoring the persistent challenges of gender inequality in the post-pandemic labor market.

Using data from the Current Population Survey (CPS), Fairlie (2020) quantified the pandemic's immediate effects on business ownership between February and April 2020, recording a loss of 3.3 million active business owners (22 percent). This was the largest drop in the number of active business owners in U.S. history. Female business owners decreased by 25 percent, largely due to their concentration in non-essential sectors. Kalenkoski and Pabilonia (2022) also explored the initial impact of the pandemic on self-employed workers using CPS data from February to May 2020, showing that married mothers in unincorporated self-employment were less likely to remain employed and worked fewer hours than married fathers.

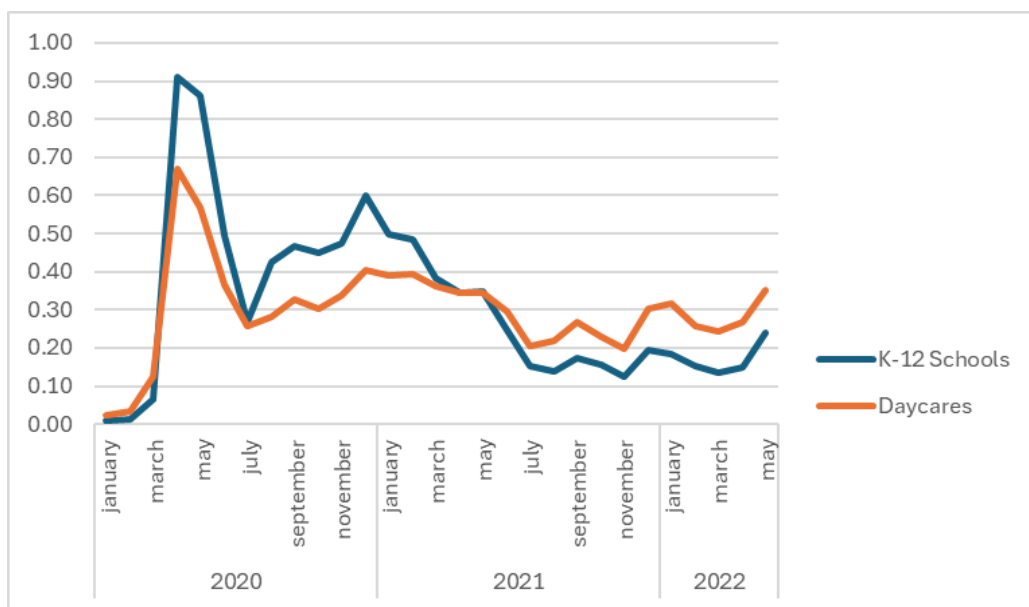
Utilizing data from the Diana International Research Institute, Manolova et al. (2020) examined the impact of the pandemic on women-led businesses, finding that two-thirds of women entrepreneurs reported revenue declines, with fewer than 10 percent experiencing revenue growth. To cope, women would often defer executive pay, reduce their hours, work remotely, or introduce new products or services. However, women entrepreneurs faced additional burdens. They had to balance caregiving responsibilities with business operations and work in hard-hit sectors such as retail.

Couch, Fairlie and Xu (2022) look at the differential impact of the crises on female employment to population ratio and hours worked, showing that gender gaps widened in 2020, especially with mothers of school-age children. Women were more likely to work remotely and had higher educational achievement than male workers, which reduced the pandemic's impact on their employment. study how supply and demand factors affected women's labor market outcomes in 2020. The authors evaluate the employment loss and the gross flows from employment to unemployment or nonparticipation. Their findings suggest the importance of supply-side factors, as indicated by the larger flows of women with children who transitioned out of the labor force.

Goldin (2022) reassess the evidence for the impact of the pandemic on different demographic groups. The author reports that the largest divide happened between the less-educated and more-educated workers. More educated workers, including women who worked from home, were less severely impacted by the shutdown of businesses or schools and daycare facilities in 2020. Changing the access to in-person instruction

during the pandemic was expected to impact parents’ labor supply in the US and their division of paid and unpaid work. Previous evidence from other countries indicates that lengthening school hours can help women work outside the household (Padilla-Romo and Cabrera-Hernandez, 2019; Shure, 2019). Lyttelton, Zang and Musick (2023), using information from the American Time-Use Survey (ATUS), measured time use for parents. Their data showed no overall increases in primary childcare time among working parents. However, parents working from home spent more time in the presence of children and supervising children, often in combination with paid work.

Our paper is most closely related to Garcia and Cowan (2024) and Hansen, Sabia and Schaller (2024) who leverage Safegraph data to proxy for school attendance during the pandemic. Garcia and Cowan (2024) find that parents had a reduction in the likelihood of working and the number of hours worked during school and daycare closures. Hansen, Sabia and Schaller (2024) show that K-12 reopenings were associated with increased employment and hours among married women with school-aged children. The evidence from previous papers suggests that parents were responsive to the time demands of household care during the pandemic. Our work fills a gap in the gender inequality literature by assessing their entrepreneurship activity during the crisis.



**Figure 3. Average School and Daycare Closure Rates**

Note: The graph shows the share of schools and daycare facilities with reduced in-person activity during the pandemic. The series were calculated using Lee and Parolin (2021) and Parolin and Lee (2021) data. The authors compiled monthly data describing year-over-year changes in in-person visits to schools and daycare facilities compared to same-month 2019 levels. Their information is based on cell phone records provided by SafeGraph from over 100,000 K-12 schools and daycare facilities across the country. We use

their definition of reduced activity or closure as a drop of at least 50 percent in cell phone foot traffic in the facility. The graph shows average closure rates in large Metropolitan Statistical Areas.

### 3 EMPIRICAL EXERCISE

#### 3.1 Data

The data for our empirical exercises come from several sources. The Current Population Survey is extracted from the Integrated Public User Microdata Service (Flood et al., 2022). The CPS provides a monthly snapshot of the U.S. labor market. Due to its 4-8-4 rotation pattern, it is possible to use the Basic Monthly Survey (BMS) to match individuals across two consecutive months (Madrian and Lefgren, 2000). We use the CPS to create the variables representing the total entrepreneurship (self-employment) and the new business ownership (new self-employed workers) each month.

We are measuring early or nascent entrepreneurship: a new business owner is defined as an individual who is not self-employed in the initial survey month of the two-month panel but is a self-employed (incorporated or unincorporated) worker in the second month. We use observations from individuals who live in a Metropolitan Statistical Area (MSA). It is possible to retrieve information on MSA location in the CPS for approximately 75 percent of the sample or 260 MSAs. To avoid counting a second job as a new business creation, we only consider a new entrepreneur someone who works at least 15 hours in a new self-employment position. On average, men become new entrepreneurs more than women (0.57 percent versus 0.37 percent, respectively).<sup>1</sup>

From May 2020 to September 2022, the CPS included a battery of additional questions related to the respondent's employment situation and ability to work. In our sample, individuals who reported teleworking or working from home for pay due to the pandemic during the previous four weeks are less likely to become self-employed than those who did not get remote paid work (0.19 percent new entrepreneurship rate versus 0.35 percent, respectively). Also, the respondents who reported being unable to work during the previous four weeks because their employer closed or lost business due to the pandemic are likelier to become self-employed in the following month, with a 1.55

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<sup>1</sup> See Fairlie and Fossen (2020) for an analysis of nascent entrepreneurship with the matched CPS data.

percent entrepreneurship rate. These differences suggest that business ownership could have been a route for those unable to work in their usual job and that remote working was valued by employees.<sup>2</sup>

The Table 1 shows sample statistics of employed adults in early 2020. The share of self-employment is higher among men, reflecting partly the well-known barriers to female business ownership (Robichaud, Cachon and McGraw, 2015; Fossen, 2012; Ughetto et al., 2020). Men are also more likely to work in construction, manufacturing, transportation, and professional and technical services, while women are concentrated in service jobs. As identified previously, women were more likely to be in frontline and teleworkable jobs (Couch, Fairlie and Xu, 2022).<sup>3</sup> Table 2 shows sample statistics for the entire period. The share of men (women) who report having a job and being at work the previous week is 77 percent (63 percent). Among those employed, 12 percent of men and 9 percent of women reported being self-employed. Columns (2) and (4) repeat the information for adults who have at least one child under 18 years old living in the household, while columns (5) and (6) show statistics for the remaining sample. Parents of school-age or daycare-age children are, on average, younger, more likely to be married, and have higher self-employment and new entrepreneurship rates.

The literature on entrepreneurship often uses the *gold standard* measure of firm creation with the US Census Bureau's Business Dynamic Statistics (BDS), which is derived from the Longitudinal Business Database (LBD). One advantage of our measure with the CPS over administrative data is that the CPS is publicly available, displays a wide range of demographic characteristics of business owners, and includes the marginal new owners without employees and the unincorporated self-employed in the count. More recently, Fazio et al. (2021) analyzed state-level business registration records to measure startup activity in 2020. Using data from eight states, the authors find a decline in entrepreneurship in the first months of the pandemic followed by a strong rebound.

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<sup>2</sup> Our calculations using the American Time Use Survey show that the time spent on commuting or work-related travel was down by 8 percentage points for men and 7 percentage points for women when comparing 2021 to 2019. In effect, surveys worldwide indicate that professionals value working from home (Aksoy et al., 2022; Barrero, Bloom and Davis, 2021).

<sup>3</sup> Jobs were defined as teleworkable according to Dingel and Neiman (2020) classification. The frontline workers have jobs in grocery, convenience stores, drug stores, public transit, trucking, warehouse, postal service, building cleaning, healthcare, childcare, and social services.

Due to the health toll of the pandemic on the population, local authorities opted for Non-Pharmaceutical Interventions (NPIs) before and after vaccination was available. The NPIs involved measures of social distancing and lockdown, which were bound to impact the economy. The information on policies used to mitigate the pandemic was organized by the University of Oxford and available for the US at the state and national levels along with the number of confirmed cases and deaths by Covid-19. We choose to include in the dataset state-level information on restrictions on workplace closing, canceling public events, restrictions on gatherings, closing public transportation, and stay-at-home requirements, confirmed cases and deaths by Covid-19.<sup>4</sup>

Lastly, we merge to the CPS sample the information on school and daycare closures from Parolin and Lee (2021) and Lee and Parolin (2021). The authors compiled monthly data from January 2020 to May 2022 describing year-over-year changes in in-person visits to schools and daycare facilities compared to same month 2019 levels. Their information is based on cell phone records provided by SafeGraph from over 100,000 K-12 schools and daycare facilities across the country. We use their definition of limited activity or closure, which is a drop of at least 50 percent in cell phone foot traffic in the facility. Figure 3 shows the share of schools and daycare places with reduced in-person activity in the period studied. The closure rates were highest in Spring 2020 and declined over time. We average the county-level data at the MSA level using the number of students for schools and the number of facilities for daycares as weights. This approach allows us to retain the bulk of the CPS sample with MSA identifiers. Hence, our empirical exercises cover large metropolitan areas with high entrepreneurship activity.

### 3.2 Model and results

We begin with a sample of men and women aged 24 to 65 years old, interviewed in the CPS from January 2020 to May 2022 and matched across consecutive two-month

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<sup>4</sup> See Hale et al. (2021) and <https://www.bsg.ox.ac.uk/research/covid-19-government-response-tracker>. We use the information reported on the 12th day of each month, during the week when the CPS interviews are fielded. Covid-19 cases and deaths are measured by 100,000 persons according to the population estimates available from the Census Website <https://www.census.gov/programs-surveys/popest.html>

panels. We estimate the following linear probability model using Ordinary Least Squares (OLS):

$$Y_{it} = \beta_1 \text{Closure}_{jt} + \beta_2 \text{ChildrenHH}_{it} + \beta_3 \text{Closure}_{jt} \text{ChildrenHH}_{it} + \text{MSA}_j + \mu_t + X_{it}, \alpha + \varepsilon_{it} \quad (1)$$

where  $i$  represents the individual and  $t$  the time period. The regressions are estimated separately for men and women, with three different outcomes for  $Y_{it}$ : being at work, being self-employed, and becoming a new entrepreneur. The vector  $X_{it}$  includes variables for marital status, number of children, age, age squared, race, foreign-born status, Hispanic ethnicity, veteran status, educational attainment, broad industry and occupation categories, and measures for state-level non-pharmaceutical interventions (NPIs), COVID-19 cases, and deaths. The variable  $\text{ChildrenHH}_{it}$  is a dummy equal to one if individual  $i$  has a child under 18 living in the household, and  $\text{Closure}_{jt}$  represents the average of school and daycare closure measures in location  $j$  during period  $t$ . The vector  $\mu_t$  includes time dummies,  $\text{MSA}_j$  includes area dummies, and  $\varepsilon_{it}$  is the error term. We chose to estimate the model using OLS instead of Logit or Probit for two main reasons. First, our estimates with OLS are more directly comparable to the literature on the topic such as Garcia and Cowan (2024). Second, linear probability models tend to approximate well non-linear models and provide a clear interpretation of coefficients.

The coefficient of interest,  $\beta_3$ , captures the interaction between average daycare and school closures in the area and the presence of children under 18 in the household. We hypothesize that reduced access to in-person instruction and childcare shifted a significant portion of caregiving responsibilities onto parents, particularly mothers. We expect that school and daycare closures were correlated with other determinants of entrepreneurship during the pandemic, but had a distinct impact on parents compared to adults without children in the household.

Our sample includes self-employed individuals in both incorporated and unincorporated businesses. In the case of unincorporated businesses, individuals work for profit or fees in their business, profession, or trade without establishing a separate legal entity. Meanwhile, incorporated businesses are legally distinct, with owners paid as employees of their corporation. This difference is important, as prior research has shown that owners of unincorporated businesses were more affected by the pandemic.

Individuals not currently self-employed may transition to self-employment from employee positions, unemployment, or outside the labor force. The literature suggests that current employment status plays a crucial role in entrepreneurship decisions, as motivations for business ownership differ depending on whether individuals are driven by necessity, such as unemployment, or by discovering a better business opportunity. This distinction is particularly relevant given the pandemic recession and the high unemployment rates in 2020. In our sample, the average new entrepreneurship rate among non-employed people is higher than among employees (0.84 percent versus 0.31 percent, respectively).

Tables 3 and 4 present the regression results. First, we investigate employment status in Table 3, where the outcome is a dummy variable equal to one if the individual is employed and at work. Separate regressions are run for women in column (1) and men in column (5). A second outcome variable captures self-employment status, with regressions using the sample of employed women in column (2) and employed men in column (6). Self-employment is further categorized into incorporated and unincorporated forms, as shown in columns (3) and (4) for women and columns (7) and (8) for men.

We do not find a statistically significant difference in the probability of working for women with children during school and daycare closures. Nevertheless, employed mothers are less likely to be unincorporated self-employed when in-person instruction and daycare are unavailable. Among men, working fathers with young children are also less likely to engage in unincorporated self-employment. The effect is non-negligible: the average closure rate of 0.32 corresponds to a 0.35 percentage point decline for mothers and a 0.34 percentage point decline for fathers in unincorporated self-employment.

Table 4 presents the regression results for the probability of becoming a new entrepreneur. In columns (1) and (4), the analysis includes all individuals who are not entrepreneurs. The results show a negative relationship between new entrepreneurship and local school and daycare closures for mothers (column 1), while no statistically significant effect is found for fathers (column 4). Going from fully open to fully closed facilities corresponds to a 0.30 basis point decline in new entrepreneurship for mothers. We further analyze the probability of new entrepreneurship by labor force status,

separating employed individuals from those not working. We do not find that parents who work as employees are more likely to become entrepreneurs during widespread closures. Nevertheless, mothers who are not working are less likely to begin entrepreneurship when in-person instruction and daycare are unavailable.

In summary, school and daycare closures are associated with parents' decreased probability of working as unincorporated self-employed. Additionally, school and daycare closures are negatively associated with new entrepreneurship rates, particularly among mothers. For mothers not currently employed, closures are associated with a reduced probability of transitioning into entrepreneurship, whereas no statistically significant effect is observed for fathers. These findings align with the broader literature on the negative impact of the pandemic on unincorporated self-employment and school closures on mothers' labor supply. Our results suggest that parents may have shifted from paid work in unincorporated businesses to unpaid household work during the pandemic. Also, mothers may have delayed or abandoned plans for new entrepreneurial ventures due to increased childcare responsibilities.

#### **4 FINAL REMARKS**

During the pandemic, there was a surge in business applications in the United States. This study provides new insights into the role of caregiving responsibilities in self-employment and entrepreneurship, with a particular focus on parents' care work. Using regression analyses, we explore variations in school and daycare closures across regions during the first two years of the pandemic. We use widespread closures as a measure of extra care burden for parents. We find that the lack of in-person school and daycare services is associated with a lower probability of parents engaging in unincorporated self-employment. Mothers who are not working are less likely to start a business when caregiving responsibilities increase. This difference is especially important for white and married mothers residing in nuclear families.

Our results suggest that the extensive demands from care work during the pandemic overwhelmed some of the benefits of self-employment for parents. These findings align with previous literature that found a negative impact of the pandemic on

unincorporated self-employment and school closures on mothers' labor supply. We posit that parents may have shifted from paid work in unincorporated businesses to unpaid household work during the pandemic.

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Table 1—Sample Statistics of Employed Adults in Early 2020

	All	Wome	Men
		n	n
Self-employed	0.10	0.08	0.12
Self-employed Incorporated	0.04	0.03	0.06
Self-employed Unincorporated	0.06	0.05	0.07
Frontline	0.20	0.27	0.13
Teleworkable	0.46	0.52	0.41
Average school and daycare closure	0.02	0.02	0.02
Agriculture	0.01	0.00	0.01
Mining	0.00	0.00	0.01
Construction	0.07	0.02	0.12
Manufacturing	0.09	0.06	0.13
Wholesale trade	0.02	0.02	0.03
Retail trade	0.10	0.10	0.10
Transportation	0.05	0.03	0.07
Utilities	0.01	0.00	0.01
Information	0.02	0.02	0.02
Finance, Insurance, and Real Estate	0.08	0.09	0.07
Professional and Technical services	0.10	0.08	0.11
Health Care and Social Assistance	0.13	0.21	0.06
Food and Accommodation Services	0.06	0.06	0.05
Personal services	0.05	0.05	0.04
Other services	0.17	0.22	0.12
Public administration	0.05	0.05	0.05
Observations	68,507	32,967	35,540

Note: Calculated with Current Population Survey (CPS) data from the January and February 2020 sample. Sample of people 21 or older who were employed and not in the Armed Forces. CPS sample weights applied. Average school and daycare closure rates were calculated with Lee and Parolin (2021) and Parolin and Lee (2021) data.

Table 2—Sample Statistics

	All adults		With children		Without children	
	Male	Female	Male	Female	Male	Female
	(1)	(2)	(3)	(4)	(5)	(6)
At work	0.65	0.50	0.86	0.62	0.58	0.46
Self-employed	0.13	0.09	0.13	0.10	0.13	0.09
Incorporated self-employed	0.06	0.03	0.06	0.04	0.06	0.03
Unincorporated self-employed	0.07	0.06	0.07	0.06	0.07	0.06
New Entrepreneurship rate	0.0046	0.0028	0.0057	0.0035	0.0043	0.0025
Has child under 18 in the HH	0.25	0.27	1.00	1.00	0.00	0.00

Married	0.56	0.51	0.85	0.69	0.46	0.44
Number of Children	0.65	0.72	2.07	2.05	0.18	0.23
Age	48.57	50.14	41.96	39.12	50.76	54.20
No High-school	0.09	0.08	0.10	0.09	0.08	0.08
High-school	0.28	0.26	0.25	0.23	0.29	0.27
Some college	0.16	0.16	0.14	0.15	0.17	0.17
Associate or Bachelor	0.33	0.36	0.35	0.38	0.33	0.36
More than Associate or Bachelor	0.14	0.14	0.17	0.16	0.13	0.13
White	0.77	0.75	0.76	0.72	0.78	0.76
Black	0.13	0.14	0.11	0.15	0.13	0.14
Veteran	0.13	0.01	0.07	0.01	0.15	0.01
Foreign	0.21	0.21	0.30	0.29	0.18	0.19
Hispanic	0.18	0.17	0.24	0.25	0.16	0.15
Average school and daycare closure	0.32	0.32	0.32	0.32	0.32	0.32
Covid-19 Confirmed cases	9306	9268	9253	9295	9323	9258
Covid-19 Confirmed deaths	145	145	143	144	146	146
Workplace closing	0.92	0.93	0.93	0.92	0.92	0.93
Cancel public events	0.91	0.92	0.92	0.92	0.91	0.91
Restrictions on gatherings	1.65	1.65	1.66	1.65	1.65	1.65
Close public transportation	0.26	0.26	0.25	0.25	0.26	0.26
Stay at-home requirements	0.60	0.60	0.60	0.60	0.60	0.60
Observations	699,945	740,413	167,087	190,238	532,858	550,175

Note: Calculated with CPS data from January 2020 to May 2022. Sample of adults 21 years old or older. Columns (1) and (2) have all adults. Columns (3) and (4) have adults with children under 18 years old living in the household. Columns (5) and (6) have adults without children under 18 years old living in the household. The sample excludes people in the Armed Forces or employed in elementary or secondary schools and child daycare services (Census Industry codes 8470 and 7860). The information on policy restrictions, Covid-19 confirmed cases, and confirmed deaths are measured at the state-month level during the entire sample period and the data were obtained from Hale et al. (2021). Covid-19 cases and deaths are measured by 100,000 people (normalized by the 2019 state-level population). The average school and daycare closure rates were calculated with Lee and Parolin (2021) and Parolin and Lee (2021) data. CPS sample weights applied.

Table 3—Regression results: Work and Self-employment

VARIABLES	WOMEN			
	(1) At work	(2) Self- employed	(3) Self- employed Incorporated	(4) Self-employed Unincorporated
Average School and Daycare Closure	-0.0127** (0.006)	0.0066 (0.009)	-0.0042 (0.006)	0.0109 (0.007)
Has Child in the Household X Average Closure	- 0.0216*** (0.006)	-0.0087 (0.007)	0.0048 (0.005)	-0.0135** (0.006)
Has Child in the Household	-0.0065** (0.003)	0.0178*** (0.004)	0.0029 (0.002)	0.0149*** (0.004)
Observations	740,413	381,065	381,065	381,065
VARIABLES	MEN			
	(5) At work	(6) Self- employed	(7) Self- employed Incorporated	(8) Self-employed Unincorporated
Average School and Daycare Closure	-0.0056	-0.0057	-0.0069	0.0013

	(0.008)	(0.010)	(0.007)	(0.008)
Has Child in the Household X Average Closure	-0.0069	-0.0093	0.0070	-0.0162***
	(0.006)	(0.007)	(0.006)	(0.006)
Has Child in the Household	0.0097***	0.0128***	0.0023	0.0105***
	(0.004)	(0.004)	(0.003)	(0.003)
Observations	699,945	457,802	457,802	457,802

Note: Regression results for equation 1 using CPS data from January 2020 to May 2022. The dependent variable in column (1) is a dummy equal to one if the person had a job and was at work, and the sample corresponds to all women 21 years old or older. The dependent variable in column (2) is a dummy equal to one if the person worked as self-employed, and the sample corresponds to all employed women 21 years old or older. The dependent variable in column (3) is a dummy equal to one if the person worked as self-employed incorporated, and the sample corresponds to all employed women 21 years old or older. The dependent variable in column (4) is a dummy equal to one if the person worked as self-employed unincorporated, and the sample corresponds to all employed women 21 years old or older. Columns (5) to (8) repeat the regression estimates for the sample of men. The sample excludes people in the Armed Forces or employed in elementary or secondary schools and child daycare services (Census Industry codes 8470 and 7860). Robust standard errors in parentheses clustered at the MSA level

Table 4—Regression results: New entrepreneurship

VARIABLES	WOMEN			
	(1) All non-entrepreneurs	(2) Employee	(3) Not in LF	(4) Unemployed
Average School and Daycare Closure	0.0015 (0.001)	0.0004 (0.002)	0.0015 (0.002)	0.0130 (0.018)
Has Child in the Household X Average Closure	-0.0020* (0.001)	-0.0007 (0.001)	- 0.0047*** (0.002)	-0.0035 (0.013)
Has Child in the Household	0.0006 (0.000)	0.0000 (0.000)	0.0023*** (0.001)	0.0018 (0.006)
Observations	481,518	232,095	234,440	14,983
VARIABLES	MEN			
	(5) All non-entrepreneurs	(6) Employee	(7) Not in LF	(8) Unemployed
Average School and Daycare Closure	-0.0005 (0.002)	-0.0020 (0.002)	0.0021 (0.004)	0.0069 (0.018)
Has Child in the Household X Average Closure	-0.0000 (0.002)	-0.0016 (0.001)	0.0064 (0.008)	-0.0103 (0.014)
Has Child in the Household	-0.0001 (0.001)	0.0006 (0.001)	0.0077*** (0.003)	-0.0044 (0.007)
Observations	436,431	268,738	150,353	17,340

Note: Regression results for equation 1 using CPS data from January 2020 to May 2022. The dependent variable in column (1) is a dummy equal to one if the person is self-employed on the second month of the two-month CPS panel. The sample includes all women who are not self-employed in the first month of the panel. In columns (2) to (4), we break the sample into 3 groups: employees, individuals not in the labor force, and unemployed workers, respectively. The sample excludes people in the Armed Forces or

employed in elementary or secondary schools and child daycare services (Census Industry codes 8470 and 7860). Robust standard errors in parentheses clustered at the MSA level.