

HUSTLING FROM HOME? WORK FROM HOME FLEXIBILITY AND ENTREPRENEURIAL ENTRY*

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We study how the expansion of work-from-home (WFH) affects entrepreneurial entry using the COVID-19 pandemic as a natural experiment. Widespread adoption of WFH increases overall entrepreneurial entry but generates a clear substitution effect: areas with higher ex ante telework potential experienced notably smaller increases in new businesses. We propose and test a conceptual framework that emphasizes the substitution between employer-provided flexibility and entrepreneurship's traditional advantage in offering autonomy and flexibility. We find empirical evidence consistent with the model, with effects larger for those primarily motivated by flexibility, such as women. Survey evidence further confirms that employer-provided flexibility reduces entrepreneurial intent.

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1. INTRODUCTION

Labor markets have undergone transformative changes in recent years. Work-from-home (WFH) has emerged as a pivotal feature in contemporary workplace dynamics, with the potential to fundamentally reshape employment and business practices (Barrero, Bloom, and Davis, 2023). Although the concept of WFH is not entirely new, technological advancements coupled with the COVID-19 pandemic have dramatically accelerated its adoption across industries and regions (Hansen et al., 2023). Importantly, WFH arrangements offer workers a higher level of flexibility, which may not only affect traditional business models and workforce management, but may also have potential implications for entrepreneurial entry, particularly among individuals for whom autonomy and control over their work schedules are primary motivations for starting their own business (Hurst & Pugsley, 2011).

Ex ante predictions of how the availability of WFH in traditional employment will affect motivations for entrepreneurial entry point in multiple directions. On one hand, increased flexibility in traditional employment afforded by WFH might stimulate entrepreneurial activity. Prior studies such as Chen, Rossi, and Chevalier (2019) and Barrios et al. (2022) suggest that greater control over work schedules may allow potential entrepreneurs to dedicate time to developing new business ideas while maintaining the security of employment, and may also support “side hustle” entrepreneurial endeavors, empowering individuals to test new ventures without fully exiting traditional employment. At the same time, increased access to WFH could diminish entrepreneurial entry by reducing the comparative advantage in flexibility and autonomy traditionally held by that entrepreneurship. Historically, a major motivation for entrepreneurship has been its promise of enhanced control over work schedules and environments (Hurst & Pugsley, 2011). Widespread availability of WFH in traditional employment settings may offer similar flexibility, reducing one of the core non-pecuniary benefits of entrepreneurship. Consistent with this, hybrid working conditions which allow for WFH have been shown to significantly enhance job satisfaction and reduce quit rates, particularly among non-managers, women, and those with long commutes (Bloom, Han, & Liang, 2024). The increased satisfaction and decreased attrition rates observed in hybrid and WFH scenarios might discourage employees from leaving stable positions to start their own businesses in pursuit of autonomy and flexibility.

How has the increased workplace flexibility resulting from the broad adoption of WFH influenced new business formation? The widespread realization of WFH driven by the COVID-19

pandemic and associated stay-at-home mandates serve as a unique natural experiment (Barrero, Bloom, and Davis, 2023b). We use this shock to investigate how the rapid transition to remote work triggered by the pandemic affected entrepreneurial entry, emphasizing how these effects differ across regions based on their pre-pandemic WFH potential (“telework potential,” Dingel and Neiman, 2020; Gupta, Mittal, Peeters, and Van Nieuwerburgh (2022)). To capture new business formation, we utilize a detailed, census-like database of new business registrations across the US, sourced from the Startup Cartography Project (Guzman and Stern, 2020). Critically, the vast majority of businesses started in the US are small, traditional businesses with localized customer bases and limited growth intentions, and only a small percentage are characterized by innovation or high-growth intentions. Our data reflects the complete set of new businesses, many of which may not be captured by data approaches that utilize titles more often associated with innovation-driven, high-growth oriented entrepreneurship (such as “founder” or co-founder) to capture new venture starts. The Startup Cartography Project data allows us to capture the broad, diverse spectrum of entrepreneurial activity. At the same time, the nature of overall US business starts means that our main analysis primarily speaks to the effects of WFH on small, traditional, business entrepreneurship—the vast majority of US entrepreneurial activity—as opposed to innovation-driven startups.

Our empirical analysis proceeds in three interrelated steps, each shedding light on a distinct aspect of the relationship between WFH and entrepreneurial entry. First, we establish a baseline by examining the association between pre-pandemic telework potential in local labor markets and rates of entrepreneurial activity prior to the widespread adoption of remote work. We leverage measures of pre-pandemic telework potential developed by Dingel and Neiman (2020) and further disaggregated by Gupta, Mittal, Peeters, and Van Nieuwerburgh (2022), which classifies the feasibility of teleworking across various occupations and merges this classification with occupational employment counts in different US regions. Using zip-code-level data, we find that areas with a higher proportion of employment in telework-compatible occupations exhibited systematically higher rates of entrepreneurial entry even before the pandemic, consistent with the notion that the inherent flexibility embedded within local labor markets plays an important role in facilitating entrepreneurial activity.¹

¹ Consistent with this, prior evidence that self-employed individuals are three times more likely than employees to engage in fully remote work arrangements before the pandemic (Bick, Blandin, and Mertens, 2023)

We then examine how the sudden, widespread adoption of remote work following the COVID-19 pandemic altered entrepreneurial entry patterns. Specifically, we leverage the exogenous shock of stay-at-home mandates as a natural experiment to analyze whether areas with greater pre-pandemic telework potential experienced differential changes in new business formation. Overall, we observe a general nationwide increase in entrepreneurial entry during the pandemic, consistent with prior work (e.g. Decker and Haltiwanger, 2023). At the same time, we find a significant negative interaction effect: regions with greater pre-pandemic telework potential experienced comparatively smaller increases in new business registrations. In other words, while entrepreneurship increased overall in response to pandemic disruptions, this rise was notably muted in places where the shift toward remote work was easier to implement, and therefore more likely to have been realized. While stay-at-home mandates likely increased necessity-based entrepreneurial entry in locations without the latent potential for WFH, in locations where WFH was feasible, the increase in new business launches is reduced, consistent with the available flexibility through WFH substituting for flexibility that previously would have been obtained through leaving employment for entrepreneurship.

Since effective remote work often critically depends on reliable internet infrastructure, we further examine whether local internet connectivity, in the form of download speeds, amplifies this substitution effect. Using local average internet download speeds from the Federal Communications Commission's (FCC) as an indicator of effective remote-work feasibility, we find robust evidence of a significant negative triple interaction between the pandemic period, telework potential, and internet connectivity. Specifically, regions characterized by both high telework potential and better internet infrastructure experienced even more pronounced declines in entrepreneurial entry following the onset of stay-at-home mandates, further consistent with our conceptual framework.

Why do we observe this substitution pattern? To help us interpret these results, we propose a simple conceptual framework focused on one particular potential mechanism: the emergence of flexibility within traditional employment, which reduces incentives to leave employment for entrepreneurship in search of autonomy and flexibility. Our conceptual model describes the occupational choice between traditional employment and entrepreneurship as follows. Individuals derive utility from both monetary compensation and job flexibility. Entrepreneurship involves a fixed entry cost, capturing startup-related barriers such as financial uncertainty, liquidity

constraints, and effort requirements. Latent telework potential can reduce these effective entrepreneurial entry costs, given it may facilitate experimentation without full exit from traditional employment. As WFH is broadly realized, flexibility within traditional employment increases significantly, diminishing entrepreneurship’s comparative advantage as a source of non-pecuniary benefits. The framework then predicts a substitution effect, where enhanced flexibility in traditional employment reduces entrepreneurial entry, especially among individuals who primarily seek autonomy and flexibility.

Our conceptual framework generates a number of core empirical predictions. First, the *realization* of WFH following stay-at-home mandates during the pandemic should attenuate the rise in new small business formation in high-WFH areas, as traditional employment increasingly replicates the flexibility once unique to self-employment and traditional small business ventures. To capture actual WFH during the pandemic, we also adopt a direct measure of realized remote work adoption, leveraging city-level data from Hansen et al. (2023), who quantify the actual share of new job postings explicitly offering remote or hybrid work arrangements. We implement a two-stage least squares strategy (2SLS) that instruments for realized WFH using pre-pandemic WFH potential and its interaction with the onset of stay-at-home mandates. The 2SLS estimates reinforce our interpretation: regions with greater actual shifts into remote work at traditional employers saw markedly smaller increases in new business formation during the pandemic.

Second, our conceptual framework predicts a stronger substitution effect in regions where the financial returns to entrepreneurship are relatively low, as individuals in these contexts may be more sensitive to non-pecuniary benefits when making occupational choices. We confirm this prediction empirically, finding significantly larger reductions in entrepreneurial entry in areas characterized by lower pre-pandemic average incomes, weaker labor market growth, and higher out-migration. Specifically, in these economically disadvantaged regions, a one standard deviation increase in telework potential corresponds to an additional 1-4% decline in new business registrations following pandemic-induced shifts to remote work. We interpret this as a “double deterrent” mechanism: when both pecuniary incentives and autonomy-driven motivations for entrepreneurship are simultaneously weak, individuals will be more likely to prefer flexibility offered by traditional employment to flexibility obtained through entrepreneurial entry. Thus, enhanced workplace flexibility within existing jobs may inadvertently suppress entrepreneurial dynamism precisely in the regions that might otherwise benefit most from new business creation.

Finally, our conceptual model also predicts that the substitution effects should be stronger for groups that face higher demand for flexibility. To examine this, we turn our attention to entrepreneur gender. A substantial literature documents that women disproportionately shoulder household and caregiving responsibilities (Lachance-Grzela and Bouchard, 2010; Bertrand et al., 2015; Kleven et al., 2019). This burden became particularly pronounced during the COVID-19 pandemic, as school closures and increased caregiving demands placed further pressures on working women (Hutchinson et al., 2023). For many women, entrepreneurship has historically offered an attractive avenue for achieving flexibility and autonomy in managing the competing responsibilities of work and family. Once traditional employment provides comparable flexibility through expanded remote-work arrangements, however, entrepreneurship's distinct advantage in offering flexibility may diminish. Analyzing data from five states where we can infer founder gender, we find that areas with higher WFH potential experienced significantly larger declines in women-led business formation, relative to business formation led by men. These gender-differential effects are not present in the pre-pandemic period, pointing to the pandemic-era WFH shift as the key inflection point. Our results are consistent with current day media discussion of how return-to-office policies may be leading women to drop out of the work force because of the loss of flexibility.

While we find support for the particular substitution mechanism described by our conceptual model, we note that this is unlikely to be the only force shaping entrepreneurial entry in the wake of pandemic WFH. Remote work likely altered entry decisions along multiple dimensions, including different types of entrepreneurial entry. As highlighted by Schoar (2010) and Botelho, Fehder, and Hochberg (2025), entrepreneurial ventures differ markedly in their objectives and structures. For small business entrepreneurs, non-pecuniary factors such as autonomy, work-life balance, and control over working conditions often represent the main incentives for entrepreneurship (Hurst and Pugsley, 2011), while innovation-driven, high-growth potential startups typically pursue novel opportunities with substantial economic potential. Notably, the vast majority of new business starts in the US are traditional and small businesses, rather than innovation-driven, high-growth oriented ventures. For these individuals, increased WFH flexibility in traditional employment could substantially reduce entrepreneurial entry by providing similar non-pecuniary benefits. In contrast, for aspiring transformational entrepreneurs seeking to launch innovative or high-risk ventures, enhanced employment flexibility may act as a “safety

net,” enabling them to experiment with entrepreneurial ideas while maintaining the security of traditional employment, potentially increasing their entry into entrepreneurship.

We therefore turn next to an examination of how remote work affects entry by different types of entrepreneurial ventures. While most of our analysis focuses on traditional small businesses, which are often driven by non-pecuniary motivations like flexibility and autonomy, we separately look at more growth-oriented entrepreneurship, proxied by the share of new businesses formally incorporated as C corporations, as such form is usually adopted by entrepreneurial ventures with a desire for scalability and external investment. In contrast to the substitution effect we observe for small business entry, we find that areas with higher telework potential saw increases in the share of growth-oriented registrations after the onset of the pandemic. This is consistent with the notion that remote work can lower the opportunity cost of early-stage experimentation for more ambitious ventures. Taken together with our main analysis, the results reinforce that the substitution mechanism we document in our full sample is most relevant for small business type entrepreneurial entry, while flexibility from remote work may positively support growth-oriented entrepreneurship at the same time.

Finally, to provide direct individual-level support for the mechanism proposed in our conceptual model, we complement our aggregate analyses with a nationally representative survey conducted through the Prolific platform. The survey explicitly measures individuals’ preferences for flexibility, perceived availability of flexibility in their current employment, and their entrepreneurial intentions. Consistent with the hypothesized substitution mechanism, we find that respondents who highly value workplace flexibility exhibit substantially stronger entrepreneurial aspirations—but critically, only if their current employment does not already offer that flexibility. Among respondents whose existing jobs provide flexible working conditions, the relationship between valuing flexibility and entrepreneurial intent is significantly diminished. These survey results reinforce our empirical findings, confirming that WFH in traditional employment can serve as a powerful substitute for entrepreneurship, particularly for those motivated primarily motivated by non-monetary benefits.

Our study makes a number of contributions to the literature. First, our findings contribute to the ongoing discussion on modern work dynamics, especially in terms of the evolving relationship between traditional employment and entrepreneurship. Entrepreneurial activity has long been recognized as a central driver of economic dynamism, employment creation, and innovation

(Davis and Haltiwanger, 1992, Jovanovic and MacDonald, 1994, Haltiwanger, Jarmin, and Miranda, 2013, and Guzman and Stern, 2020). Yet, the factors motivating individuals to choose entrepreneurship, particularly the role of non-pecuniary incentives such as flexibility and autonomy, remain less understood and difficult to disentangle empirically. Our analysis, which explicitly connects occupational flexibility to entrepreneurial entry at both regional and individual levels, provides clear evidence supporting the hypothesis that employer-provided flexibility substitutes for key non-pecuniary advantages historically associated with entrepreneurship.

Importantly, our findings speak particularly to our understanding of entry into traditional, small business entrepreneurship. While we observe overall higher levels of entrepreneurship overall with the onset of the pandemic, this increase is muted in locations that afforded more WFH opportunities for those in traditional employment, while at the same time, the share of new businesses structured to enable growth and institutional funding goes up. This is consistent with both of the common intuitions as to the effect of flexibility of new business entry: flexibility reduces the non-pecuniary motivations to start a new small business, while at the same time enabling the experimentation inherent in starting an innovative, growth-oriented venture. In closely related contemporaneous work, Kwan et al. (2024) provide complementary evidence suggesting that remote work can actively encourage high quality, innovation-driven entrepreneurial entry, primarily by offering younger and more educated workers additional time and reduced risk to experiment with innovative, technology ventures. While their study highlights the positive impact of remote work on entrepreneurial experimentation among high-growth oriented founders, our research emphasizes how this flexibility may at the same time inadvertently suppress a significant segment of small business entrepreneurial activity motivated by non-pecuniary motives such as flexibility in work arrangements. Given the importance of small business entrepreneurship, our study offers essential insights into the complex labor-market implications and unintended consequences of flexible work arrangements.

Our study also contributes valuable insights into important heterogeneities in the entrepreneurial impacts of the pandemic-induced shift toward remote work. Crucially, we demonstrate that the effects of increased workplace flexibility are not uniform across regional economic conditions or demographic groups, with significant implications for policymakers. Specifically, we show that the expansion of flexibility within traditional employment disproportionately suppresses entrepreneurship in economically disadvantaged regions, potentially

exacerbating existing geographic disparities in entrepreneurial activity and economic vitality. Furthermore, our findings underscore a distinct gender dimension: increased access to remote work flexibility disproportionately reduces entrepreneurial entry among women, who traditionally shoulder a larger share of household and caregiving responsibilities (Lachance-Grzela and Bouchard, 2010; Allen and Curington, 2014; Ewens, 2022). These differential impacts highlight critical considerations for policymakers and stakeholders interested either in supporting inclusive economic growth and entrepreneurial diversity or in providing support to women within traditional employment frameworks.

Beyond these immediate contributions, our study opens avenues for future research and policy development. By highlighting the nuanced tradeoff between flexibility in traditional employment and different types of entrepreneurial entry, we underscore the complexity of motivations behind starting new ventures. Future research might further disentangle these mechanisms by examining longer-term effects of workplace flexibility, sector-specific entrepreneurial outcomes, or how policy interventions aimed at entrepreneurship interact with broader trends in labor-market flexibility. Additionally, our findings on the heterogeneous regional and demographic responses to remote-work flexibility suggest the importance of localized policy approaches, tailored to specific community characteristics and needs.

2. SAMPLE AND DATA

Our primary dependent variables of interest are measures of new entrepreneurial activity at the local level. More specifically, we are interested in the quantity of new businesses launched at the zip code level over time.

2.1. *New Business Formation*

Our first outcome variable is the quantity of new business launches, measured using business registrations by location and time period. For this purpose, we utilize data on new for-profit business registrations from the Startup Cartography Project (SCP, Guzman and Stern, 2020).² The SCP leverages business registration records, which are public records created when an individual registers a new business as a corporation, LLC or partnership. Importantly, as noted by Guzman and Stern (2020), while it is possible to found a new business without business registration (e.g.,

² See <http://www.startupcartography.com>.

a sole proprietorship), the benefits of registration are substantial, and include limited liability, various tax benefits, the ability to issue and trade ownership shares, and credibility with potential customers. Furthermore, all corporations, partnerships, and limited liability companies must register with a Secretary of State or equivalent to take advantage of these benefits. The act of registering the firm triggers the company's legal creation. As such, these records reflect the population of incorporated businesses operating in a location that take a form that is a practical prerequisite for growth.

The SCP dataset provided to us includes records on the complete population of firms satisfying one of the following two conditions: (i) a for-profit firm physically located in the local jurisdiction, or (ii) a for-profit firm whose jurisdiction is in Delaware but whose principal office address is in the local state. The SCP dataset provides a number of variables of interest to entrepreneurship researchers. We focus here on the primary measure: the quantity of new business registrations in a zip code in a given year-quarter, which we designate as New Business Registration ($NBR_{l,t}$). We focus our sample on the set of zip codes with non-zero business registrations. We additionally utilize the share of new businesses that specifically incorporate as a C corporation ($SHCorp_{l,t}$), the form most associated with intentions for external fundraising and growth.

The SCP data is available starting from the year 1988. Our analysis utilizes quarterly data collected from 2011 to 2018 for 42 available U.S. states and the District of Columbia, and monthly data collected from January 2019 to February 2021 for seven available US states (FL, GA, KY, NY, TN, TX, and WA). Only limited data has been collected and processed to date by SCP for the period from April 2021 onwards, and as such, we end our sample in March 2021.

2.2. *Remote Work Measures*

We use two measures of remote work. First, we use the measure of zip-level share of potentially teleworkable workforce constructed in Gupta, Mittal, Peeters, and Van Nieuwerburgh (2022).³ This measure is cross-sectional, and combines the occupational composition of the zip code and the occupation-specific potential for remote work measured by Dingle and Neiman (2020). Second, we use the measure of prevalence of remote work provided by Hansen, et. al. (2023). The monthly time series measure is generated as the share of new job vacancy postings

³ The measure is reproduced using codes downloaded from <https://data.mendeley.com/datasets/jjckss4mn/1> (accessed October 2022).

explicitly offering hybrid or fully remote options in large US cities. Their method quantifies hybrid and remote work opportunities by using natural language processing techniques to categorize and classify over 250 million job vacancy postings based on the extent to which these jobs can be performed in a hybrid or fully remote manner. We manually look up the list of zip codes located within each city to create a city-to-zip mapping.⁴ The resulting sample covers January 2019 to March 2021 and includes monthly new business registration data from seven U.S. states for which the Hansen, et. al. (2023) measure of realized prevalence of remote work is available.

2.3. *Other Data*

To classify founder's genders, we use the raw business registration data underlying SCP for five available states during the Covid-19 pandemic for which founder names are available to classify gender: FL, GA, KY, TN, and TX. We use the Social Security Administration (SSA)'s Baby Names dataset to identify the frequency at which a certain name is given to male versus female children. We then sum over the period spanning 1940 through 2005 to calculate name frequency by gender. We focus on founder names that are "strongly gendered", which means that above 90% of the occurrences of those names are associated with a single gender. Among the founder names that we match to the SSA database, 94% are "strongly gendered". Using this classification, we then calculate two measures: the proportion of newly registered businesses containing exclusively women founders, and the proportion containing at least one female founder. Because we are calculating shares of businesses in a zip code that have women founders, we require our zip code-month observations to contain at least ten newly registered businesses for which the founders' gender can be classified.⁵

We also obtain annual data on the population and average adjusted gross income (AGI) by zip code from the IRS Statistics of Income (SOI) database from 2011 to 2021. We use the same database to collect data on the number of tax filings with unemployment compensation, and calculate the unemployed share in a given year. From IRS, we also obtain data on county-to-county migration patterns and use them to construct measures of net migration rates. We supplement the IRS tax return data with data on the unemployment rate and labor force taken from the BLS.

⁴ We looked up city names on www.zip-codes.com.

⁵ The threshold alleviates concerns of extreme and unrepresentative ratios, such as 0% or 100%, which are more likely to arise in areas with very few businesses. We confirm that our findings hold with higher thresholds (e.g. 20 businesses) as well as lower ones (e.g. no minimum requirement).

Additionally, we obtain data on county-level new Covid-19 case rates from the New York Times, and the implementation of state and local stay-at-home mandates from the Goolsbee et al. (2020) updated database.

To assign zip codes to counties, we use the combination of a zip-to-ZCTA crosswalk and a ZCTA-to-county crosswalk provided by the Census. In cases where a zip code spans multiple counties, we map it to the county containing the largest population share of that zip code. For the vast majority (~97%) of the zip codes in the sample, stay-at-home mandates were implemented in March 2020. The remaining 3% implemented stay-at-home mandates in April 2020. Accordingly, we define our $POST_{i,t}$ variable as taking a value of zero prior to March 2020 and one thereafter.

Finally, we utilize data on Internet download speeds. The log average download speed ($Log\ Avg\ Download\ Speed_l$) variable represents the natural logarithm of the pre-COVID mean maximum downstream broadband speed (in kilobits per second, kbps), averaged across all providers and block groups within each ZIP Code Tabulation Area (ZCTA) from 2014 to 2019, based on the FCC's Broadband Deployment Data (FCC Form 477).

2.4. Descriptive Statistics

Panel A of Table 1 presents descriptive statistics for our pre-pandemic sample. We utilize the quarterly SCP data from 2011 to 2018, in order to leverage the larger number of states covered. The merged sample includes all states with available data on the measure of telework potential, and consists of 248,409 observations covering 9,029 zip codes in the United States from 2011 to 2018. Our COVID-19 pandemic sample consists of the seven states for which SCP collected comprehensive new business registration data during the pandemic. This yields a robust sample of 63,434 observations across 2,666 zip codes from January 2019 through March 2021. Summary statistics for the sample are presented in Panel B of Table 1.

2.5. Survey Data

In addition to the administrative data, we conducted a survey through Prolific to capture individual-level insights regarding the influence of work flexibility on employment and entrepreneurial decisions.⁶ The survey, titled “Work-From-Home and Job Flexibility,” was

⁶ The survey was determined to be exempt by the Rice University IRB (IRB-FY2024-412).

designed to understand how the availability of WFH options and flexible work arrangements impact individuals' choices to remain in traditional employment or pursue self-employment.

Our survey was administered during July 2024 and targeted individuals who were currently employed or considering changes in employment status, with a focus on flexibility in work schedules. A total of 1,000 participants completed the survey. Approximately 60% of respondents rated job flexibility as “important” or “very important” in their employment decisions. The survey addressed topics such as the importance of flexibility in choosing a job, the likelihood of leaving a current job for one with greater flexibility, and the likelihood of starting a new business. 35% of respondents expressed a high likelihood of leaving their current job for one offering greater flexibility, while 25% indicated a high interest in starting a new business to achieve greater autonomy. Respondents ranked their reasons for valuing flexibility, with work-life balance and reduced commute time emerging as the most significant factors (cited by 72% and 65% of respondents, respectively). Family responsibilities were particularly prominent for female respondents. 40% of female respondents identified family responsibilities as a major driver of their need for flexibility, compared to 25% of male respondents.

Summary statistics for the survey data are presented in Panel C of Table 1.

3. WORK FROM HOME AND ENTRY

3.1. Baseline: Teleworkable Potential and New Business Entry

We begin our analysis by examining the relation between the pre-pandemic potential for remote work and rates of new business formation at the local level. This initial analysis provides a baseline, capturing how occupational flexibility shapes entrepreneurial activity before remote-work arrangements were broadly adopted within traditional work during the COVID-19 pandemic. Areas with higher potential teleworkability may offer greater latent flexibility, effectively lowering the general opportunity cost or barriers to entrepreneurial experimentation. The types of workers in these regions may be able to more easily pursue entrepreneurial “side hustles” without fully exiting traditional employment, making entrepreneurship relatively more attractive even when the full transition to entrepreneurship might otherwise entail considerable risks or financial costs, or may simply work in industries and occupations that have more entrepreneurship potential. Regions with a mix of occupations that have high potential for telework may boast a more advanced technological infrastructure and/or a workforce that is more tech-savvy, adaptable, or highly

educated. The types of occupations in these areas could also potentially foster a supportive culture for innovation and entrepreneurial risk-taking. Moreover, these areas may already have higher shares of realized WFH, potentially enabling more “side hustle” entrepreneurial experimentation.

We illustrate the baseline relationship in Figure 1, which graphs the association between the share of teleworkable jobs in a zip code and the number of new business registrations. Panel A displays the raw correlation, while Panel B controls for key factors such as time trends, population, income levels, net out-migration, and unemployment. In both panels we observe a positive correlation between the share of potential teleworkable workers in a ZIP code and the number of new business registrations in that zip code, supporting the view that overall, the latent flexibility provided by telework potential correlates with higher entrepreneurial entry. The persistence of this relationship with and without controls suggests that the effect is not simply a result of regional economic trends.

In Table 2, we formally quantify the baseline relationship between the pre-pandemic potential for remote work and the rate of new business activity at the local level. Specifically, we estimate OLS regressions where the dependent variable is the natural logarithm of the number of new business registrations at the zip-code-quarter level. Our primary explanatory variable is the standardized share of teleworkable workforce within the zip code. Standardizing this variable allows for a straightforward interpretation, as the coefficient directly represents the percent change in new business registrations associated with a one standard deviation increase in telework potential. We also include controls for local population, average income levels, net out migration, and unemployment, in order to capture potential confounding effects from local market size and economic demand which may independently influence entrepreneurial entry. We cluster standard errors at the zip code level to account for correlations within zip codes over time.

Column (1) presents estimates from the unconditional regression of log new business registrations on the standardized teleworkable share. Column (2) includes our control variables, and Column (3) provides the strictest specification, adding state-by-year fixed effects to control for state-level temporal shocks, policy differences, and macroeconomic fluctuations. Across all three specifications, zip codes with a higher proportion of teleworkable occupations observe more entrepreneurial entry in the pre-pandemic environment. Using the strictest specification (Column 3), we find that a one standard deviation increase in the share of teleworkable employment is associated with approximately 14% more business registrations. To contextualize this economic

magnitude, consider that the average zip code in our sample has approximately 44 new business registrations per quarter (as shown in Table 1, Panel A). Thus, a 14% increase corresponds to about 6.4 additional businesses each quarter in the typical zip code. Aggregating this effect across the 9,029 zip codes in our sample translates into approximately 57,785 additional new businesses per quarter at a national level, highlighting the strong association between teleworkable occupations and entrepreneurial entry writ large. Overall, the empirical findings in Figure 1 and Table 2 align closely with the predictions of our conceptual framework at baseline.

3.2. *The COVID-19 Pandemic: Realized Work from Home Potential*

Having established a robust pre-pandemic baseline relationship between telework potential and entrepreneurial entry, we now turn to examine how the realization of this latent flexibility during the COVID-19 pandemic influenced entrepreneurial dynamics. The sudden onset of the COVID-19 pandemic and the resulting stay-at-home mandates provide an exogenous shock that sharply transitioned latent occupational flexibility into broadly realized remote-work arrangements. We next explore what occurs once remote work flexibility is broadly realized within traditional employment. Our expectation is that this realization, which brings about improved work-life flexibility in traditional jobs in teleworkable occupations, should diminish the comparative advantage of entrepreneurship as a source of flexibility and autonomy.

Figure 2 provides preliminary descriptive evidence by plotting monthly trends in new business registrations immediately before and during the pandemic. Consistent with prior literature (Decker and Haltiwanger, 2023), entrepreneurial activity in Figure 2 exhibits a clear increase immediately following pandemic onset, reflecting both economic disruptions and opportunities associated with the pandemic. While jobs that could be completed via telework likely shifted to remote WFH, other jobs which could not be done remotely resulted in furloughs that may have contributed to forced entrepreneurial entry. Remote work leads to flexibility that may have encouraged experimentation and side hustles, while simultaneously providing the flexibility and autonomy that previously may have motivated additional entrepreneurial entry, which may be muted as a result. Stay-at-home mandates (and the pandemic more generally) affected local economic conditions in numerous ways beyond telework realization; these mandates also altered consumer demand patterns, employment stability, and overall economic activity (Goolsbee and Syverson, 2021). Additionally, COVID-19 case rates varied substantially across regions, independently affecting entrepreneurial incentives.

Our primary interest is whether these trends differ systematically based on the zip code's pre-pandemic telework potential. Formally, we estimate a difference-in-differences model specified as follows:

$$\log(NBR_{i,t}) = \beta POST_t * TWShare_i + X_{i,t} + \gamma_t + \theta_i + \varepsilon_{i,t}, \quad (1)$$

where $Post_t$ is an indicator variable taking a value of one from March 2020 onwards. $TWShare_i$ is the share of potentially teleworkable workforce in the zip code from Gupta et al. (2022), standardized to have a mean of zero and standard deviation of one for ease of interpretation. $X_{i,t}$ is a vector of time-varying controls including income, population, unemployment, net outmigration, and new COVID case rates, intended to control for consumer activity factors previously identified by the literature (Goolsbee and Syverson, 2021). γ_t are year-month fixed effects, and θ_i are zip code fixed effects. Standard errors are clustered at the zip code level. The lower order terms for $Post_t$ and $TWShare_i$ are absorbed in the fixed effects structure.

Table 3 presents our main difference-in-differences estimates. Column (1) shows the estimates for a basic interaction without fixed effects. The positive coefficient on $POST_t$ suggests that the onset of the pandemic and stay-at-home mandates are associated with a meaningful increase in new business registrations. At the same time, the negative and statistically significant loading on the interaction term suggests that zip codes with higher telework potential saw relatively smaller increases in entrepreneurial activity after the implementation of stay-at-home mandates. Put differently, while new business creation surged on average during the COVID period, this surge was diminished in areas where realized remote work was more prevalent. Columns (2) and (3) progressively add fixed effects to control for state-level and zip code-specific heterogeneity. Finally, column (4) incorporates state-by-year-month fixed effects, further controlling for unobserved time-varying state-level characteristics such as economic fluctuations, pandemic policies, fiscal conditions, and demographic trends.

Across these specifications, we consistently find a negative and statistically significant relationship between new business entry and the interaction of $POST_t$ with pre-pandemic teleworkable share of occupations in the zip code. The economic magnitude of the estimates ranges from 7 to 10%, and is relatively stable across specifications. Under the strictest specification (Column 4), a one standard deviation increase in the pre-pandemic telework potential is associated with an approximately 7.2% smaller increase in new business registrations following the

implementation of stay-at-home mandates. To put this in context, consider the average pre-pandemic quarterly new business registrations of 44 per zip code. The 7.2% reduction we document in Column (4) translates into roughly three fewer businesses per zip code each quarter than would otherwise be expected during the pandemic period. Aggregating across the 2,666 zip codes in the sample yields roughly 8,000 fewer new businesses per quarter during the pandemic attributable to higher telework capacity in the local employment mix.⁷

Figure 3 visualizes the dynamic effects by plotting the monthly differential impact of telework potential on new business registrations over the full sample period around the pandemic. Specifically, we estimate the coefficient loadings on the interactions between zip code-level teleworkability and year-month indicators, using February 2020—the month immediately preceding the widespread implementation of stay-at-home mandates—as the baseline month. The plot allows us to evaluate whether and how trends in new business registrations differed systematically based on teleworkability before and after the pandemic’s onset. Prior to the pandemic (pre-March 2020), zip codes characterized by varying degrees of teleworkability exhibit no meaningful differences in entrepreneurial trends, supporting the validity of our empirical strategy and the parallel trends assumption. Beginning in March 2020, however, zip codes with higher telework potential experienced a relatively smaller increase (i.e. a relative decline) in new business registrations compared to areas with lower teleworkability.

This divergence is consistent with our *ex ante* expectations. First, in areas with low teleworkability, stay-at-home mandates likely resulted in substantial disruptions to traditional employment, including layoffs and forced leave, thereby increasing economic incentives and/or available time to pursue entrepreneurial activities. Thus, overall, we observe a positive increase in new business entry with the onset of the pandemic. At the same time, in high-teleworkability areas, stay-at-home mandates enabled workers to transition more smoothly into remote work at their existing jobs, thereby substantially increasing motives to pursue entrepreneurship in pursuit of flexibility or autonomy. This realized flexibility may reduce the relative attractiveness of entrepreneurship particularly for workers motivated primarily by the non-pecuniary benefits of autonomy and work flexibility, leading to a relatively smaller increase in new businesses in high-teleworkability areas following the pandemic’s onset.

⁷ We note that because we are dealing with new business entry, pandemic relief programs such as the PPP are not of relevance, as businesses needed to have an established wage history to access them.

We further bolster our interpretation of this finding by incorporating local internet connectivity quality, measured by average download speeds, as a factor that likely enhances the realization of remote work potential. In Table 4, we present the estimates from a model that incorporates the interaction between telework potential and internet connectivity, using standardized average download speed as a proxy for effective remote-work feasibility. Across specifications, we find robust evidence of a negative and statistically significant triple interaction term ($Post \times Teleworkable\ Share \times Log\ Avg\ Download\ Speed$), suggesting higher internet speeds magnify the substitution effect. In our most stringent specification (Column 4), for a one standard deviation increase in teleworkability of occupations, we observe a baseline 7.2% decrease in the number of new businesses formed, similar to that obtained in our specifications in Table 3. Areas with higher telework potential and stronger internet infrastructure experience an even greater relative reduction in entrepreneurial entry post-pandemic, with an additional and economically meaningful 1% decrease in new business formation, for a total 8.2% reduction, reinforcing the notion that areas that experienced more WFH realization during the pandemic experienced a smaller increase in entrepreneurial entry.

Taken together, Tables 3 and 4 support the substitution mechanism illustrated in our conceptual framework. Specifically, the results highlight a flexibility tradeoff channel: as work-from-home arrangements became widely realized during the pandemic, traditional employment began providing workers with substantial flexibility that was previously attainable primarily through entrepreneurship. Consequently, individuals who would have otherwise pursued entrepreneurship predominantly for non-pecuniary benefits—such as autonomy, flexibility, and control over work schedules—may opt instead to remain in the security and stability of their existing employment arrangements.

3.3. *Compositional Effects: Growth Oriented Vs. Small Business Entrepreneurship*

Given the overall nature of entrepreneurial activity in the US, which the SCP data represents, our analysis thus far has been driven primarily by small, traditional businesses—those typically driven by non-pecuniary motivations such as flexibility or autonomy, rather than with the goal of aggressive growth or innovation. Innovation-driven, high growth oriented entrepreneurial ventures, however, differ significantly from smaller, more traditional businesses, and the goals in launching them also may differ greatly from the goal of small business entrepreneurs. As a result, the realization of remote WFH flexibility in traditional employment may have different effects on

the likelihood of starting such businesses than they do on the vast majority of new businesses registered, which are smaller and generally not innovation-oriented. While the SCP data does not distinguish between types of businesses in this manner, growth-oriented ventures often incorporate as C corporations (rather than as LLCs, S Corps, or partnerships) in order to better position themselves to raise external equity capital, facilitate scalability, and enhance legal protections. The SCP data allows us to identify the share of businesses in a given zip code and time period that are incorporated as C corporations, which we leverage to examine such heterogeneous effects.

Table 5 presents the results from a difference-in-differences analysis that focuses explicitly on the share of C corporation business registrations as a proxy for growth-oriented entrepreneurial activity. Columns (1) through (4) utilize the raw share, while Columns (5) through (8) utilize the log share (at the expense of dropping counties with a zero share). The interaction of telework potential with the post-pandemic indicator is positive and significant across all specifications. In our strictest specification, which includes both zip-code and state-by-month fixed effects, a one standard deviation increase in telework potential corresponds to roughly a 1.2 percentage point increase in the share of business registrations that are C corporations post-pandemic. For context, the unconditional mean share is 18.7%, so the effects correspond to approximately a 6-7% increase in C corporation share. The magnitude of the effect is similar when we employ the log share instead.

These results contrast with the negative substitution effect observed in overall (primarily small business) entrepreneurial activity. Rather than diminishing growth-oriented entrepreneurial entry, remote work flexibility appears to have provided complementary benefits, potentially reducing experimentation costs or enabling founders to pursue high-risk ventures without fully leaving stable employment. Consistent with contemporaneous evidence from Kwan et al. (2025), our findings suggest an important nuance: while increased remote-work flexibility may substitute for entry into traditional small businesses, it may simultaneously promote entrepreneurial activity within the high-growth, innovation-driven segment, underscoring the potential for WFH to lead to potential shifts in entrepreneurial composition, with implications for long-term economic dynamism.

4. CONCEPTUAL FRAMEWORK

To better interpret the empirical patterns we describe above, we develop a simple conceptual framework. Our framework illustrates one particular mechanism for WFH to affect entry into entrepreneurial activity: flexibility in the current workplace that reduces the non-pecuniary motives to pursue entrepreneurship in search of flexibility and autonomy. The core intuition is that WFH shifts the relative attractiveness of small business entrepreneurship by eroding one of its defining non-pecuniary advantages: autonomy, flexibility, and control over one's schedule. Our model assumes entry into the typical US entrepreneurial venture, which represents the vast majority of business in the SCP data: a small business (as opposed to a growth oriented startup.)

We consider a representative individual choosing between two occupational choices: remaining in traditional employment (J) or starting a new small business as an entrepreneur (E). The individual derives utility from monetary compensation and non-monetary job characteristics, with a particular emphasis on workplace flexibility, which we denote as f . Utility from each option is given by:

$$U^J = w^J + \gamma f^J, \quad U^E = w^E + \gamma f^E - c,$$

where w^J and w^E represent the expected pecuniary returns from employment and entrepreneurship, respectively. f^J and f^E denote the flexibility or autonomy associated with each choice. The parameter $\gamma > 0$ captures the heterogeneity in individual preferences for flexibility. Entrepreneurship entails a fixed cost $c > 0$, which we take to capture liquidity constraints, uncertainty, or effort.

An individual chooses entrepreneurship if the expected utility from entrepreneurship exceeds the utility from traditional employment:

$$U^E > U^J \Leftrightarrow w^E + \gamma f^E - c > w^J + \gamma f^J.$$

This condition simplifies clearly to:

$$(w^E - w^J) + \gamma(f^E - f^J) > c.$$

In the pre-pandemic period, flexibility is largely exclusive to entrepreneurship: $f^E \gg f^J$. Individuals with high γ —who place a large value on non-pecuniary aspects of work—may find entrepreneurship attractive even when $w^E < w^J$. This captures a well-documented feature of

small-business entrepreneurship in the US: that many founders are motivated by autonomy, lifestyle preferences, or the desire to control work conditions rather than by income maximization when deciding to set up a new small business (Hurst and Pugsley 2011).

This substitution mechanism is most pronounced under three conditions. First, when the pecuniary returns to entrepreneurship are relatively low—due to modest self-employment earnings or stable, higher wages in traditional employment—non-monetary factors like flexibility play a larger role in the entry decision. Second, individuals with a strong preference for autonomy and control over their work schedules, captured by a high γ , are especially sensitive to changes in workplace flexibility. Third, when the fixed cost of entrepreneurial entry, c , is non-trivial and not fully compensated by income gains, the desire to enter will be reduced. In such settings, even modest increases in flexibility offered by traditional employment can shift the utility differential in favor of remaining employed.⁸

A key implication of our conceptual framework is that the entrepreneurial response to the pandemic depends not on remote work per se, but on the predictable component of realized WFH, namely, the portion mechanically implied by the pre-pandemic occupational structure of each local labor market. Teleworkability, as defined before the pandemic, captures the latent capacity of each region to convert its employment mix into remote work when the pandemic shock arrived. Our model predicts that it is precisely this component of realized flexibility—not endogenous firm decisions or contemporaneous labor-market shocks—that should weaken the relative attractiveness of entrepreneurship.

5. MECHANISM TESTS

Our conceptual framework generates a number of core empirical predictions. First, prior to the pandemic, areas with greater potential for WFH, as proxied by the share of teleworkable occupations, should exhibit higher rates of entrepreneurial small business activity, as latent flexibility enables experimentation or side ventures and reduces the effective entry cost into entrepreneurship. Second, the *realization* of WFH following stay-at-home mandates during the pandemic should attenuate the rise in new small business formation in high-WFH areas, as

⁸ In contrast, consider entrepreneurship that is driven by desire for pecuniary rewards, such as a chance of a large jackpot payout, as is the case for innovation-driven, high-growth startup ventures. While we do not model the entry decision for such entrepreneurial types explicitly, for such entrepreneurs, an increase in f^J allows the individual the flexibility to experiment so as to obtain a higher w^E , which then may encourage entry.

traditional employment increasingly replicates the flexibility once unique to self-employment and traditional small business ventures. Both of these predictions are consistent with the baseline empirical patterns we established in the prior section.

Finally, and more specifically, our model implies where this substitution effect should be strongest: (a) where financial incentives to pursue entrepreneurship are weakest; and (b) among populations that highly value flexibility, such as women with caregiving responsibilities. These predictions guide our mechanism tests below.

5.1. Realized Prevalence of Remote Work: Testing the Model's Main Prediction

To more directly test the proposed mechanism of the conceptual model, we look at whether the *predictable* occupationally-determined component of realized prevalence of remote work, rather than the idiosyncratic adoption of remote work by individual firms, drives the empirical effects we documented in Section 3. To do this, we estimate a two-stage least squares (2SLS) specification that uses pre-pandemic telework potential, interacted with the onset of stay-at-home mandates, as an instrument for realized prevalence of remote work during the pandemic. We emphasize up front that the goal of this exercise is not to claim that the instrument satisfies a textbook exclusion restriction or to elevate the 2SLS coefficient to interpretation as a structural causal parameter. Rather, the instrument serves as a constructed structural lens, with the goal of isolating the variation in realized remote work that flows mechanically from the occupational structure highlighted in the conceptual model. In this sense, the setup functions as a filter: it extracts the part of realized prevalence of remote work that is predictable from first principles and therefore aligned with the mechanism we propose.

Table 6 presents the estimates from this exercise. In Columns (1) and (2) we present baseline OLS regressions of new business registrations on realized remote work share. The estimates indicate that higher levels of realized remote work correlate negatively with new business registrations, consistent with our posited substitution effect; specifically, a one standard deviation increase in the realized remote work share is associated with roughly 2.5% fewer new business registrations. In columns (3) and (4), we observe that the first stage aligns closely with the structure implied by the model: regions with greater pre-pandemic teleworkability saw markedly larger increases in realized WFH following the pandemic shock, with first-stage F-statistics well above conventional thresholds (165 and 141 respectively).

The second stage then uses this predicted variation to pose a straightforward economic question: When local labor markets experience increases in realized job flexibility of the magnitude implied by their pre-pandemic occupational structure, how strongly does entrepreneurial entry respond? This approach enables us to isolate the margin of realized flexibility most tightly linked to the mechanism, and to quantify the extent to which shifts in traditional employment conditions translate into changes in new business formation. The second-stage results in Columns (5) and (6), consistent with our proposed substitution mechanism, demonstrate a substantial effect of realized WFH: an increase in instrumented realized remote work share leads to fewer new business registrations post-pandemic, underscoring a very large substitution effect. While the estimated effect is quantitatively large, this should not be read as a structural elasticity. The IV isolates the sharp, model-predicted shift in flexibility that teleworkable occupations experienced, and entrepreneurship responds strongly to that specific margin. The point is the mechanism: when traditional employment suddenly acquires the flexibility entrepreneurship used to provide, entry falls—exactly as the model predicts. The result is directionally consistent with our main findings across the full sample in Tables 3 and 4, though we caveat that the variation is at the city (rather than zip code) level and can only be estimated for a small set of states.

5.2. *Heterogeneity in Economic Opportunity: Testing the Outside Option Mechanism*

Our conceptual framework predicts that the substitution effect induced by widespread realized WFH flexibility should be particularly pronounced in regions where the pecuniary (financial) returns to entrepreneurship are already limited. In other words, if entrepreneurial ventures are less lucrative, any increase in the flexibility of traditional employment would have a disproportionately large deterrent effect on entrepreneurial entry, as the incremental value of non-pecuniary benefits provided by entrepreneurship diminishes. To evaluate this, we leverage heterogeneity in the local economic opportunities that existed before the pandemic. Specifically, we interact our main variable of interest from equation (1)—telework potential and its interaction with the post-pandemic indicator—with three proxies for local economic conditions: the pre-pandemic average AGI, labor force growth, and out-migration rate. Areas characterized by lower AGI, weaker labor force growth, or higher out-migration represent regions with relatively limited, or declining, economic opportunities and demand, where the pecuniary incentives for entrepreneurship should be weaker.

The resulting estimates are presented in Table 7. Each model uses the most saturated specifications from Table 3, and includes state-by-year-month and zip code fixed effects. As predicted by the model, in areas with more limited economic opportunities, the negative relationship between telework potential and entrepreneurial entry is stronger. Estimates in Columns (1) and (2) suggest that a one standard deviation decline in log average AGI and labor force growth is associated with additional declines of 0.7% and 3.3% in new business formation, respectively. Column (3) shows that a one standard deviation increase in net out-migration is associated with a 3.6% decline. To put these estimates into context, recall that the average zip code pre-pandemic has roughly 44 new business registrations per month. A 0.7-3.6% additional reduction translates into approximately 0.3-1.6 fewer new businesses per month, or roughly 4-19 fewer businesses annually per zip code. Importantly, these additional declines concentrate in economically weaker zip codes where small business could otherwise play a critical role in local economic revitalization.

Overall, our cross-sectional results underscore how local economic conditions shape entrepreneurial incentives, particularly when traditional employment increasingly provides flexibility historically associated with entrepreneurship. Our findings reveal an important economic consequence: widespread remote work adoption may disproportionately suppress entrepreneurial activity in regions most in need of entrepreneurship-driven economic renewal.

5.3. *Gender Differences: Testing the Flexibility Demand and Substitution Mechanism*

A second prediction of the model is that the substitution effect should be stronger for groups that place a higher value on flexibility. Given the well-documented gender disparities in household responsibilities and caregiving roles, women often disproportionately value flexibility when making occupational decisions. A significant body of literature highlights that such non-pecuniary factors differentially influence entrepreneurial decisions across demographic groups, especially between genders (Lachance-Grzela and Bouchard, 2010; Bertrand et al., 2015; Kleven et al., 2019). For many women, small-business entrepreneurship serves as a vehicle for achieving schedule control and work-family balance. The COVID-19 pandemic magnified these gender differences, with women shouldering a larger share of increased childcare and household duties due to school closures and disruptions to caregiving services (Hutchinson et al., 2023). Consequently, the increased realization of WFH flexibility during the pandemic could have offered

women an alternative pathway to flexibility within traditional employment, reducing the comparative benefit from pursuing entrepreneurial ventures. As a result, we expect the substitution effect of realized WFH flexibility might be particularly pronounced among women entrepreneurs.

To empirically test this prediction, we re-estimate our baseline difference-in-differences specification for the subset of states where SCP data allows us to identify founder gender. We replace the dependent variable with two distinct measures that capture the share of women-led new business registrations at the zip code-month level: (i) the proportion of newly registered businesses containing exclusively female founders, and (ii) the proportion containing at least one woman as a founder. In this analysis we use the strictest main specification (the same as Table 3 Column (4)), in which state-by-month fixed effects are included to control for unobserved time-varying regional economic, demographic, and cultural trends around the pandemic that might have affected the relative share of female entrepreneurship.

The estimates from the analysis are presented in Table 8. Column (1) reports estimates using the percentage of newly registered businesses founded exclusively by women, while Column (2) uses the broader measure of businesses with at least one woman founder. Across both measures, we find consistent and significant evidence of a disproportionate decline in women-led entrepreneurial activity in response to the pandemic-driven realization of telework potential. Specifically, following the implementation of stay-at-home mandates, a one standard deviation increase in the share of teleworkable workforce within a zip code is associated with a decline of approximately 0.9 percentage points in the share of businesses founded exclusively by women, and a decline of approximately 1.6 percentage points in the share of businesses with at least one woman founder. To provide context, the unconditional average share of businesses founded exclusively by women in our sample is 29.6%, while the share with at least one female founder is 65.7%. Thus, our estimated effects translate into economically meaningful declines in the share women-led new business registrations of approximately 3% and 2.4%, respectively.

Figure 4 graphically demonstrates the dynamic effects on the share of women-led businesses using our two founder gender measures. In Panel A, we interact the teleworkable share with year-month indicators, tracing the coefficient evolution over time. Similar to in our main analyses, we use February 2020—the month prior to widespread stay-at-home mandates—as the baseline. Prior to the pandemic, the plot confirms no statistically discernible trend differences across zip codes with varying telework potential, supporting the validity of our empirical strategy. Post-March

2020, however, zip codes with greater telework potential exhibit a marked relative decline in both measures of women-led entrepreneurial activity. The timing and magnitude of these declines closely align with our conceptual prediction: increased flexibility provided by traditional employment reduces the relative attractiveness of entrepreneurship among women seeking non-pecuniary benefits such as flexibility and autonomy.

Panel B presents dynamic difference-in-differences estimates where we directly compare the impact of telework potential separately on women-founded and men-founded businesses. Prior to the pandemic, entrepreneurial entry trends for both genders were statistically indistinguishable regardless of teleworkability. After pandemic onset, entrepreneurial entry declines more sharply for women-founded businesses relative to men-founded businesses in zip codes characterized by higher telework potential. This differential impact explicitly highlights the gendered dimension of the flexibility substitution mechanism identified by our conceptual framework.

Overall, these findings reinforce the mechanism outlined in the conceptual model: when flexibility advantages become available in traditional wage employment, they replicate many of the benefits of entrepreneurship that have historically been particularly valuable to women, reducing their entry into entrepreneurship. Our results highlight a potential tradeoff: providing greater workplace flexibility through traditional employment may inadvertently decrease women's entrepreneurial activity.

6. SURVEY RESULTS

To further reinforce and provide additional depth to our empirical findings, we complement our archival analysis with individual-level survey evidence. Specifically, we conducted a survey titled “Work-From-Home and Job Flexibility,” administered through the Prolific platform in July 2024. This survey directly probes individual preferences and decision-making processes, allowing us to examine the hypothesized flexibility-entrepreneurship substitution channel at the micro-level. The use of survey data provides us with the distinct value of capturing subjective motivations and individual decision-making nuances that aggregate administrative data alone cannot fully reveal. Importantly, our conceptual framework hinges critically on individual perceptions of flexibility—specifically, the value that individuals place on flexibility and autonomy—and how these perceptions influence their choices between stable employment and entrepreneurial ventures. By directly measuring individuals' preferences for flexibility, perceived availability of flexibility

in their current jobs, and their entrepreneurial aspirations, our survey enables a more granular investigation of the conceptual mechanisms underpinning our primary empirical findings.

A total of 1,000 participants completed our survey, representing a nationally representative sample of employed individuals and individuals actively considering changes in employment. Participants in our survey were specifically asked about the importance they place on job flexibility in their employment choices, their likelihood of pursuing entrepreneurship explicitly to achieve greater flexibility, and whether their current job already provided sufficient flexibility. This allows us to more directly assess whether flexibility indeed serves as a primary driver of entrepreneurial entry, and, critically, whether availability of flexibility in existing jobs mitigates this incentive.

Panel A of Figure 5 presents initial descriptive evidence, clearly illustrating a strong positive relationship between the importance individuals assign to job flexibility and their reported likelihood of pursuing entrepreneurship. Respondents who rated flexibility as “very important” (score of 5) were over three times more likely to express high entrepreneurial interest compared to those assigning flexibility a low importance rating. The predicted probabilities in the figure highlight a sharp gradient: as the perceived importance of flexibility increases, so does the share of individuals with a high likelihood of leaving their current job to pursue a business venture. These findings, which are consistent with our conceptual framework, underscore the centrality of flexibility as a driver of entrepreneurial aspirations.

To test the substitution effect at the heart of our conceptual model, we explicitly asked survey participants whether their current employment already provided flexibility. The results in Table 9 show that the availability of flexibility in current employment substantially reduces respondents’ stated entrepreneurial intent, consistently dampening the pull toward entrepreneurial entry across specifications. Columns (1), (2), and (3) present estimates of regressing the likelihood of leaving current employment to pursue entrepreneurial activity on indicators for the individual placing high importance on flexibility in their work schedule and the indicator for whether their current job offers flexibility. Column (4) adds controls, and Column (5) adds state and household income decile fixed effects. Columns (6, all participants) and (7, participants in full employment) add the interaction of high importance of flexibility and current job flexibility. We observe a consistent, positive association between placing high importance on flexibility and the likelihood of leaving to start a new business, and a negative association between current job flexibility and such likelihood.

When we add the interaction term in Columns (6) and (7), the estimates reveals the critical nuance at the heart of our analysis: the availability of flexibility in current jobs substantially weakens the positive relationship between valuing flexibility and entrepreneurial intent. In Column (7), the negative and statistically significant interaction coefficient of -0.204 suggests that when individuals perceive their current jobs as already meeting their flexibility needs, the marginal benefit of leaving for entrepreneurship diminishes sharply. This finding is consistent with our conceptual framework's prediction that traditional employment can substitute for the autonomy traditionally associated with entrepreneurship by providing similar non-pecuniary benefits. Panel B of Figure 5 visually reinforces this substitution effect. Individuals whose current jobs already provide flexibility are markedly less likely to report strong entrepreneurial intent relative to those without flexible arrangements, even among respondents who place a very high importance on flexibility. These patterns closely align with the theoretical view that flexibility represents a critical form of autonomy motivating entrepreneurial entry (Hamilton, 2000).

Overall, the individual-level evidence from our survey reinforces our primary archival findings. The survey results provide direct evidence that flexibility serves as a crucial non-pecuniary benefit motivating entrepreneurial activity. At the same time, the survey results clearly demonstrate that greater flexibility within traditional employment significantly substitutes for entrepreneurship, consistent with our broader empirical results. This substitution effect suggests that the recent proliferation of flexible work arrangements—accelerated by widespread remote-work adoption during the COVID-19 pandemic—may fundamentally alter who chooses entrepreneurship, ultimately shaping the composition of entrepreneurs and the nature of innovation in the economy.

7. CONCLUSION

Our study examines the nuanced relationship between WFH arrangements and entrepreneurial activity, leveraging the unique context provided by the COVID-19 pandemic to explore how widespread remote-work adoption reshapes entrepreneurial incentives. Drawing on a simple conceptual framework, we propose that increased flexibility in traditional employment reduces entrepreneurial entry by eroding entrepreneurship's comparative advantage in providing non-pecuniary benefits such as autonomy and flexible work arrangements.

Empirically, our findings validate this theoretical prediction across several dimensions. Before the pandemic, regions characterized by higher telework potential, which reflects greater latent workplace flexibility, experienced systematically higher rates of new business formation. This baseline relationship suggests that teleworkable occupations reduce the effective barriers to entrepreneurial experimentation, allowing potential entrepreneurs to explore business ideas without fully exiting traditional employment.

However, the widespread adoption of remote-work practices during the COVID-19 pandemic exposed a significant substitution effect. Post-pandemic, regions with greater telework potential experienced notably smaller increases in entrepreneurial entry relative to regions with less capacity for remote work. Using detailed archival data, instrumental variable methods, and direct measures of realized remote work adoption, we demonstrate that the flexibility provided by traditional employment substantially diminished the incentive to start new small business ventures. Specifically, areas experiencing larger increases in realized remote-work flexibility observed 7-10% smaller rises in entrepreneurial activity compared to areas with lower realized WFH adoption. This robust evidence aligns closely with our conceptual framework, confirming that traditional employment's growing ability to replicate non-pecuniary entrepreneurial benefits meaningfully reduces entrepreneurial incentives.

Survey results reinforce this interpretation, highlighting how flexibility in traditional employment settings diminishes the comparative advantage of entrepreneurship for workers seeking work-life balance or autonomy. Respondents who highly value flexibility expressed strong entrepreneurial interest, but this interest waned when flexibility was already provided in their current jobs. These findings underscore the evolving competition between traditional employment and entrepreneurship as employers adapt to meet workers' non-pecuniary demands.

A particularly salient aspect of our findings lies in highlighting significant heterogeneity in entrepreneurial responses. Notably, we document that the substitution effect is stronger in economically disadvantaged regions, where limited financial incentives make non-pecuniary benefits especially critical in entrepreneurial decisions. Additionally, we observe pronounced gender-based differences: the shift to remote work disproportionately decreased entrepreneurial entry among women. Given the increased caregiving responsibilities women disproportionately faced during the pandemic, expanded flexibility within traditional employment likely provided an attractive alternative to the uncertainties of entrepreneurship. These findings have important

implications for equity and inclusivity, emphasizing the need for targeted support to maintain entrepreneurial opportunities for women and economically vulnerable regions.

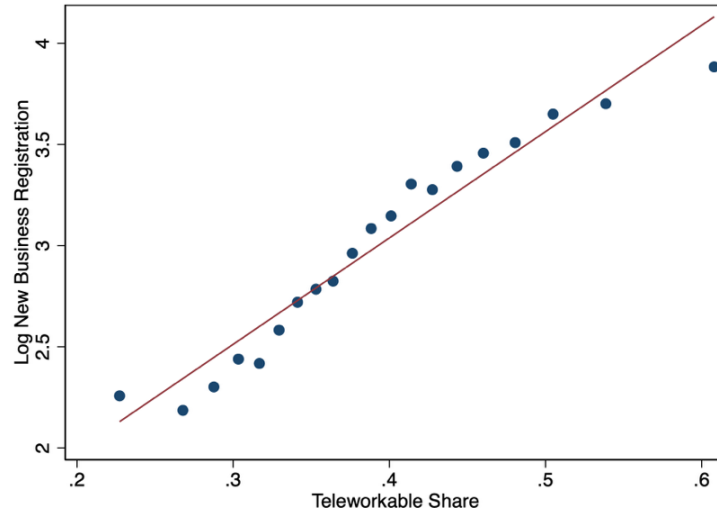
Overall, our results offer critical insights into how broad-based shifts in labor-market flexibility reshape entrepreneurial dynamics, emphasizing that remote-work adoption in traditional employment, while beneficial in many respects, may inadvertently reduce incentives for new business formation—particularly in sectors and demographics historically driven by non-pecuniary motivations. These findings have substantial implications for policymakers, suggesting the necessity of balancing efforts to increase employment flexibility with initiatives explicitly supporting entrepreneurial activity, particularly in small-business sectors that are essential to local economic resilience and growth. More broadly, our paper advances understanding of the nuanced motivations underlying entrepreneurship in modern labor markets. As labor markets continue to evolve toward greater flexibility, understanding these tradeoffs will be crucial for designing policies that foster robust entrepreneurial ecosystems, maintain equitable opportunities across demographic groups, and ultimately sustain economic dynamism.

REFERENCES

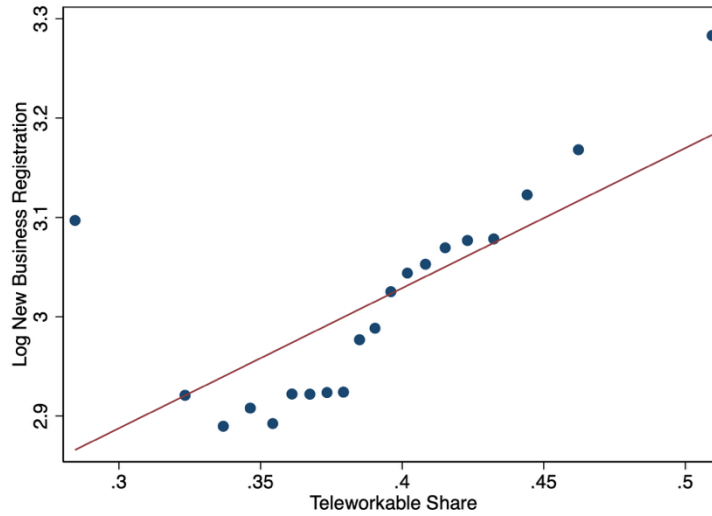
- Akerlof, G. A., & Kranton, R. E. (2000). Economics and identity. *The Quarterly Journal of Economics*, 115(3), 715-753.
- Allen, W. D., & Curington, W. P. (2014). The self-employment of men and women: What are their motivations?. *Journal of Labor Research*, 35, 143-161.
- Barrero, J. M., Bloom, N., & Davis, S. J. (2023a). Long social distancing. *Journal of Labor Economics*, 41(S1), S129-S172.
- Barrero, J. M., Bloom, N., & Davis, S. J. (2023b). The evolution of work from home. *Journal of Economic Perspectives*, 37(4), 23-49.
- Barrios, J. M., Hochberg, Y. V., & Yi, H. (2022). Launching with a parachute: The gig economy and new business formation. *Journal of Financial Economics*, 144(1), 22-43.
- Bertrand, M., Kamenica, E., & Pan, J. (2015). Gender identity and relative income within households. *The Quarterly Journal of Economics*, 130(2), 571-614.
- Bick, A., Blandin, A., & Mertens, K. (2023). Work from home before and after the COVID-19 outbreak. *American Economic Journal: Macroeconomics*, 15(4), 1-39.
- Chen, M. K., Rossi, P. E., Chevalier, J. A., & Oehlsen, E. (2019). The value of flexible work: Evidence from Uber drivers. *Journal of political economy*, 127(6), 2735-2794.
- Davis, S. J., & Haltiwanger, J. (1992). Gross job creation, gross job destruction, and employment reallocation. *The Quarterly Journal of Economics*, 107(3), 819-863.
- Decker, R., & Haltiwanger, J. (2023). Surging Business Formation in the Pandemic: Causes and Consequences?. *Brookings Papers on Economic Activity*, 3-24.
- Dingel, J. I., & Neiman, B. (2020). How many jobs can be done at home?. *Journal of public economics*, 189, 104235.
- Ewens, M. (2022). Race and gender in entrepreneurial finance (No. w30444). National Bureau of Economic Research.
- Fazio, C., Stern, S., Guzman, J., Liu, Y., & Andrews, R. J. (2019). The startup cartography project: measuring and mapping entrepreneurial ecosystems. *Research Policy*.
- Fazio, C. E., Guzman, J., Liu, Y., & Stern, S. (2021). How is COVID changing the geography of entrepreneurship? Evidence from the Startup Cartography Project (No. w28787). *National Bureau of Economic Research*.

- Glaeser, E. L., & Kerr, W. R. (2009). Local industrial conditions and entrepreneurship: how much of the spatial distribution can we explain?. *Journal of Economics & Management Strategy*, 18(3), 623-663.
- Glaeser, E. L., Kerr, S. P., & Kerr, W. R. (2015). Entrepreneurship and urban growth: An empirical assessment with historical mines. *Review of Economics and Statistics*, 97(2), 498-520.
- Glaeser, E. L., Rosenthal, S. S., & Strange, W. C. (2010). Urban economics and entrepreneurship. *Journal of urban economics*, 67(1), 1-14.
- Goolsbee, A., Luo, N. B., Nesbitt, R., & Syverson, C. (2020). COVID-19 lockdown policies at the state and local level. *University of Chicago, Becker Friedman Institute for Economics Working Paper*, (2020-116).
- Goolsbee, A., & Syverson, C. (2021). Fear, lockdown, and diversion: Comparing drivers of pandemic economic decline 2020. *Journal of Public Economics*, 193, 104311.
- Gupta, A., Mittal, V., Peeters, J., & Van Nieuwerburgh, S. (2022). Flattening the curve: pandemic-induced revaluation of urban real estate. *Journal of Financial Economics*, 146(2), 594-636.
- Guzman, J., & Stern, S. (2020). The state of American entrepreneurship: New estimates of the quantity and quality of entrepreneurship for 32 US States, 1988–2014. *American Economic Journal: Economic Policy*, 12(4), 212-243.
- Haltiwanger, J., Jarmin, R. S., & Miranda, J. (2013). Who creates jobs? Small versus large versus young. *Review of Economics and Statistics*, 95(2), 347-361.
- Hamilton, B. H. (2000). Does entrepreneurship pay? An empirical analysis of the returns to self-employment. *Journal of Political Economy*, 108(3), 604–631.
- Hansen, S., Lambert, P. J., Bloom, N., Davis, S. J., Sadun, R., & Taska, B. (2023). Remote Work across Jobs, Companies, and Space (No. 31007). *National Bureau of Economic Research*. <https://doi.org/10.3386/w31007>
- Hessels, J., Van Gelderen, M., & Thurik, R. (2008). Entrepreneurial aspirations, motivations, and their drivers. *Small business economics*, 31, 323-339.
- Hurst, E. & Pugsley, B. W. (2011). What do small businesses do?. *Brookings Papers on Economic Activity*, 43(2), 73-142.
- Hutchinson, A., Khan, S., & Matfess, H. (2023). Childcare, Work, and Household Labor During a Pandemic: Evidence on Parents' Preferences in the United States. *Journal of Experimental Political Science*, 10(2), 155-173.

- Jovanovic, B., & MacDonald, G. M. (1994). The life cycle of a competitive industry. *Journal of Political Economy*, 102(2), 322-347.
- Kleven, H., Landais, C., & Søgaaard, J. E. (2019). Children and gender inequality: Evidence from Denmark. *American Economic Journal: Applied Economics*, 11(4), 181-209.
- Lachance-Grzela, M., & Bouchard, G. (2010). Why do women do the lion's share of housework? A decade of research. *Sex roles*, 63, 767-780.



Panel A: Raw Data



Panel B: Controlling for Time Trends and Covariates

Figure 1. Pre-Pandemic Relation between Teleworkable Share and New Business Registration

This figure displays the binscatter plot of the teleworkable share and the natural logarithm of the number of new business registrations. The sample period spans 2011Q1-2018Q4 and include 42 available U.S. states and the District of Columbia. The level of observation is a zip code-quarter. In Panel A, no control variables are included. In Panel B, we control for year-quarter fixed effects and time-varying zip code characteristics, including the natural logarithm of population, AGI, unemployment rate (tax return share reporting unemployment compensation and BLS unemployment rate), and net outmigration.

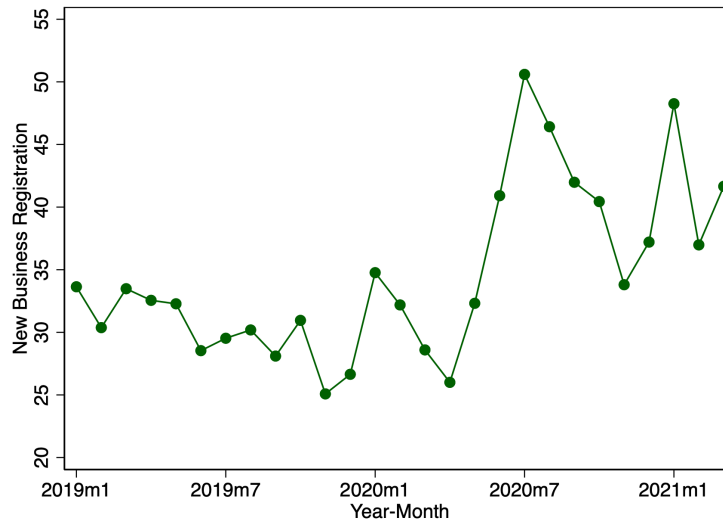


Figure 2. Trends in New Business Registration Surrounding the Covid-19 Pandemic

Notes: This figure displays average monthly number of new business registrations over time from January 2019 to March 2021. The sample include the seven U.S. states: FL, GA, KY, NY, TN, TX, and WA. The number of new business registrations is measured at the zip code level.

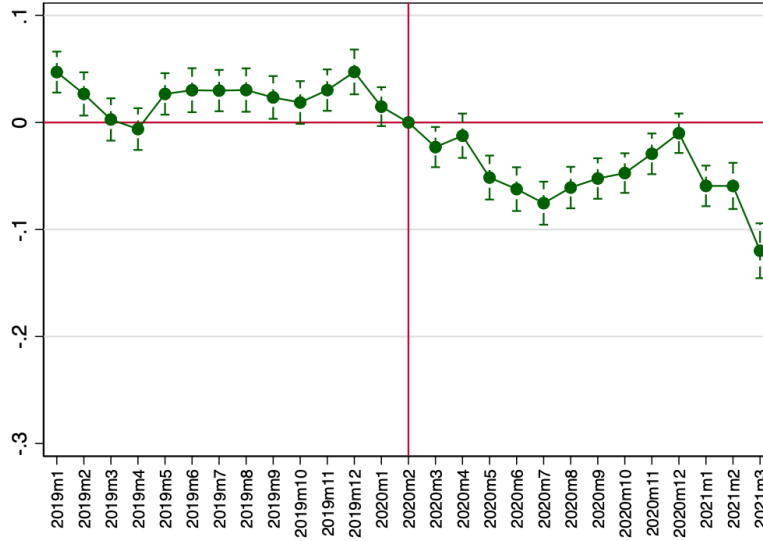
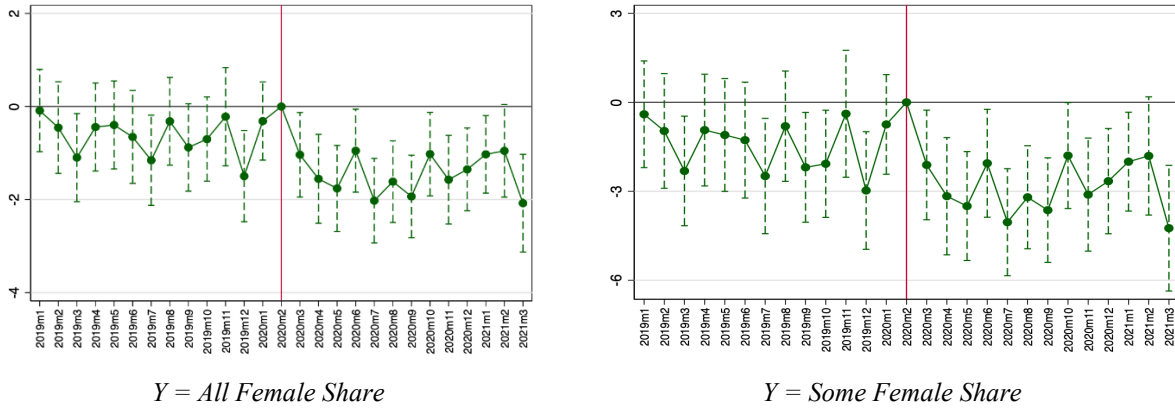
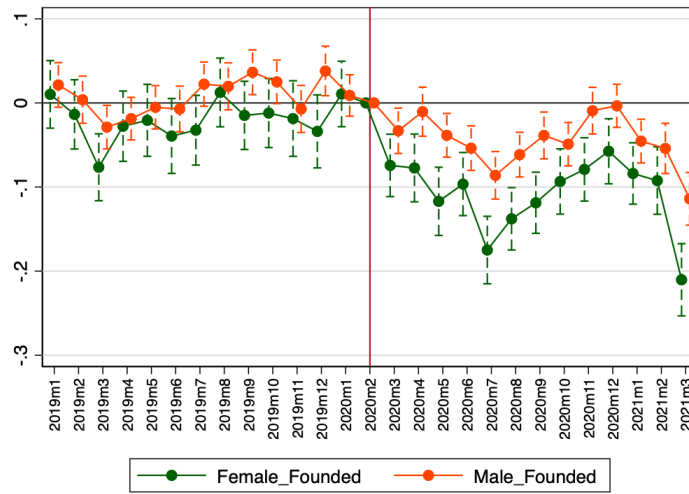


Figure 3. Dynamic Difference-in-Difference Estimates of the Effect of Telework on Entrepreneurship During the Pandemic

Notes: This figure displays the dynamic difference-in-difference coefficient estimates on the interaction of year-month indicators and *Teleworkable Share*, and their 95% confidence intervals. *Teleworkable Share* is standardized to have a mean of zero and a standard deviation of one. The sample period includes months from January 2019 to March 2021. The sample include the seven U.S. states: FL, GA, KY, NY, TN, TX, and WA. Given that the vast majority of the sample implemented stay-at-home mandates in March 2020, February 2020 is used as the baseline year in all estimations. The level of observation is a zip code-month. The regression controls for the natural logarithm of population, AGI, unemployment rate (tax return share reporting unemployment compensation and BLS unemployment rate), net outmigration, new Covid case rate, zip code fixed effects, and state-by-month fixed effects.



Panel A: Share of Newly Registered Businesses with All and Some Female Founders

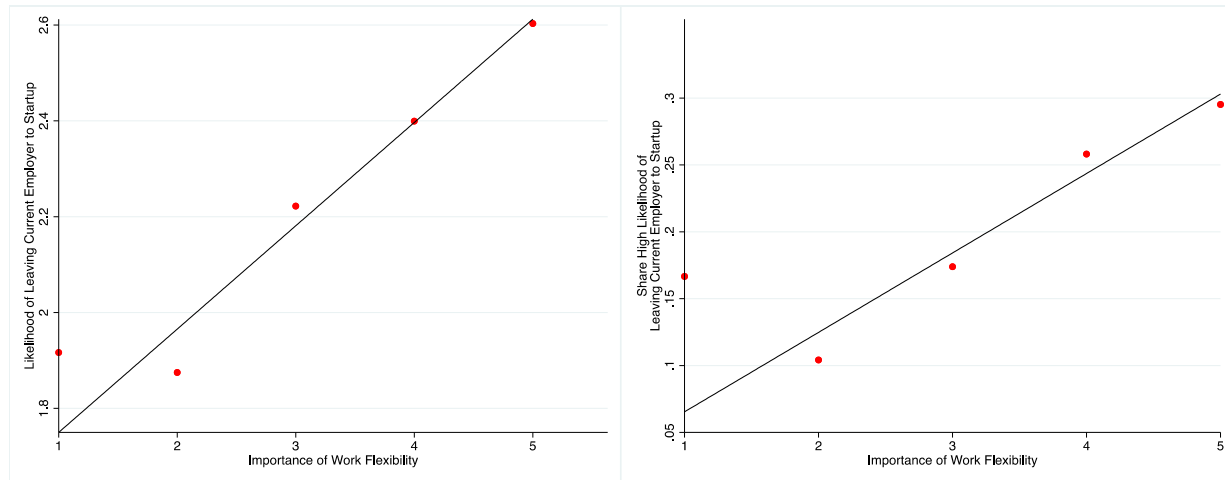


Panel B: Log New Business Registration with Female and Male Founders

Figure 4. Dynamic Difference-in-Difference Estimates of the Effect of Telework on the Founder Gender Composition During the Pandemic

Notes: This figure displays the dynamic difference-in-difference coefficient estimates on the interaction of year-month indicators and *Teleworkable Share*, and their 95% confidence intervals. The outcome variable for the left graph of Panel A is *All Female Share*, share of newly registered businesses with exclusively female founders. The outcome variable for the right graph of Panel A is *Some Female Share*, the share of newly registered businesses with at least one female co-founder. The outcome variable in Panel B is the natural logarithm of new business registrations with exclusively female (green line) and male (orange line) founders. *Teleworkable Share* is standardized to have a mean of zero and a standard deviation of one. The sample covers January 2019 to March 2021 and includes monthly new business registration data from five U.S. states for which we have the underlying raw data: FL, GA, KY, TN, and TX. Given that the vast majority of the sample implemented stay-at-home mandates in March 2020, February 2020 is used as the baseline year in all estimations. The level of observation is a zip code-month. The regression controls for the natural logarithm of population, AGI, unemployment rate (tax return share reporting unemployment compensation and BLS unemployment rate), net outmigration, new Covid case rate, zip code fixed effects, and state-by-month fixed effects.

Panel A: The Influence of Flexibility Preferences on the Likelihood of Leaving a Job to Start a Business



Panel B: The Impact of Current Job Flexibility on Entrepreneurial Intent as a Function of the Perceived Importance of Flexibility

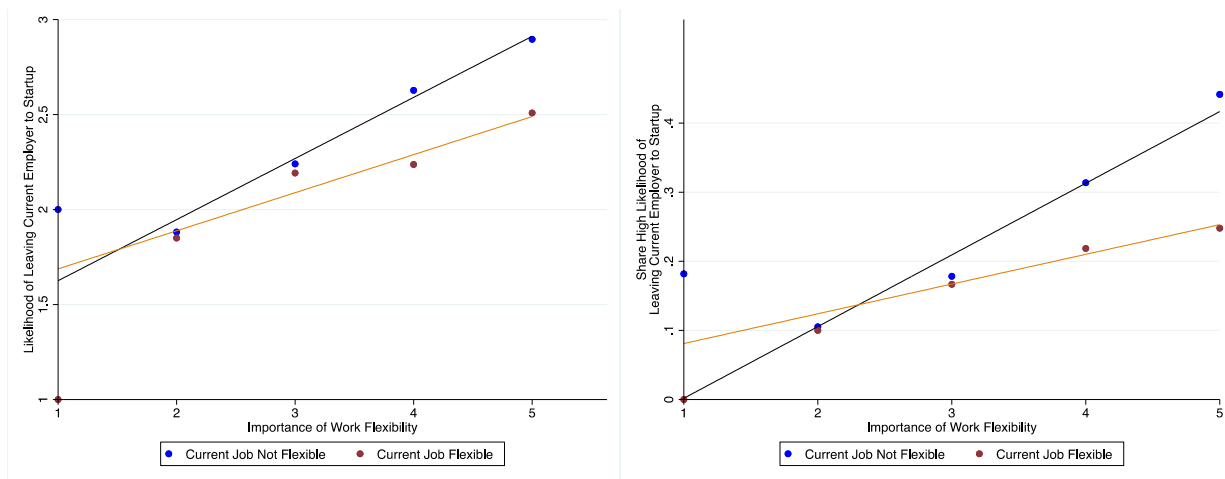


Figure 5. The Role of Work Flexibility in Entrepreneurial Intent

Notes: This figure illustrates the role of work flexibility in shaping entrepreneurial intent. Panel A examines how the perceived importance of work flexibility influences the likelihood of leaving a current job to start a business, with the left subplot showing predicted probabilities and the right subplot depicting the share of individuals with a high likelihood of leaving. Panel B explores how current job flexibility interacts with these preferences, comparing the likelihood of leaving for individuals in flexible versus non-flexible jobs. The x-axis represents the importance of flexibility (low to high), and the y-axis captures measures of entrepreneurial intent, demonstrating how flexibility preferences and job conditions jointly drive entrepreneurial transitions.

Table 1. Summary Statistics

Panel A: Pre-Covid Sample, Q1 2011-Q42018, 43 states, Quarterly					
Variable	Mean	SD	P5	Median	P95
Teleworkable Share	39.17	9.4	25.51	38.19	56.15
New Business Registrations	44.32	59.66	1	25	150
Population	20372.85	17001.09	1330	16620	52590
Average AGI	42.99	44.36	14.92	32.36	102.23
% Tax Return w/ Unemp Compensation	5.2	3.52	1	4.51	11.73
Unemp Rate	6.25	2.37	3.3	5.7	10.7
Net Out Migration Rate	-0.07	0.94	-1.68	0.06	1.1
Panel B: Covid Sample, Jan. 2019-Mar. 2021, 8 states, Monthly					
Variable	Mean	SD	P5	Median	P95
Teleworkable Share	38.41	9.16	25.28	37.47	55.7
New Business Registrations	34.62	44.18	1	20	117
Population	24630.86	18473.29	2320	21570	60790
Average AGI	55.46	80.93	17.84	37.37	150.14
New Case Rate	346.07	614.64	0	0	1699.3
% Tax Return w/ Unemp Compensation	9.53	8.4	0.79	7.5	24.39
Unemp Rate	5.83	3.61	2.7	4.3	13.4
Net Out Migration Rate	-0.17	1.42	-2.76	0.12	1.59
WFH Share	6.41	3.73	2.11	5.09	14.14
All Female Share	32.39	11.4	14.29	31.91	51.52
Some Female Share	70.37	21.94	36.07	69.44	107.96
Panel C: Survey Sample					
Variable	Mean	SD	P5	Median	P95
Interest in starting own new company	2.97	1.42	1.00	3.00	5.00
Very interested in entrepreneurship	0.16	0.36	0.00	0.00	1.00
Likelihood of Pursuing Entrepreneurship	2.37	1.30	1.00	2.00	5.00
Likelihood of leaving for a startup	0.24	0.43	0.00	0.00	1.00
Women	0.55	0.50	0.00	1.00	1.00
Age	36.46	9.91	22.00	35.00	55.00

This table reports summary statistics of the variables used in the paper. In Panel A, the sample spans years 2011 through 2018 and covers 42 available U.S. states and the District of Columbia. The level of observation is a zip code-quarter. In Panel B, the sample covers January 2019 to March 2021 and includes monthly new business registration data from seven U.S. states: FL, GA, KY, NY, TN, TX, and WA. The level of observation is a zip code-month. We exclude months on and after April 2021 due to missing data from several large states after that, such as NY and TX. *Teleworkable Share* measures the share of jobs amenable to remote work in a zip code, produced in Gupta, et. al. (2022). *New Business Registrations* is the number of new business registrations in a zip code measured in the SCP database. *Population* is the number of individuals in the zip. *Average AGI* is the average individual adjusted gross income in the zip code. *New Case rate* is the number of new Covid cases per 100,000 population. *Post* is an indicator variable that takes the value of one from March 2020 onwards. *% Tax Return w/ Unemp Compensation* is the share of tax returns in the zip code reporting unemployment compensation. *Unemp Rate* is the unemployment rate. *New Out Migration Rate* is the net outmigration rate from the zip code in the last six months of 2019. *WFH share* is the percent of remote or hybrid workforce measured constructed in Hansen, et. al. (2024). *All Female Share* is the share of newly registered businesses with exclusively female founders. *Some Female Share* is the share of newly registered businesses with one or more female co-founders. Panel C presents summary statistics from a July 2024 survey of 998 employed individuals considering changes in their employment status. Key variables include interest in entrepreneurship, measured on a 5-point scale, and a binary indicator for being very interested in entrepreneurship. The likelihood of leaving for a startup is captured as a binary variable. Preferences for job flexibility are represented by a binary variable (defined as a response of “3” or higher to a question about the importance of flexibility), and current job flexibility is indicated by a binary variable (where “1” represents jobs that offer flexibility). Demographic variables include gender and age.

Table 2. Relation between Telework Potential and New Business Entry before the Pandemic

	(1) Log New Business Registration	(2) Log New Business Registration	(3) Log New Business Registration
Teleworkable Share (std)	0.494*** (0.013)	0.146*** (0.014)	0.140*** (0.014)
Controls	N	Y	Y
State-by-Quarter FE	N	N	Y
Observations	248,409	248,409	248,373
R-squared	0.120	0.694	0.819

This table presents the results from panel OLS regressions of log new business registration on teleworkable share. Teleworkable Share is standardized to have a mean of zero and a standard deviation of one. The sample spans years 2011 through 2018 and covers 42 available U.S. states and the District of Columbia. The level of observation is a zip code-quarter. In Column (1), no control variables or fixed effects are included. In Column (2), we control for the natural logarithm of population, AGI, unemployment rate (tax return share reporting unemployment compensation and BLS unemployment rate), and net outmigration. In Column (3), we additionally control for state-by-year quarter fixed effects. Other variable definitions can be found in Table 1 legend. Standard errors are reported in parenthesis and are clustered at the zip code level.

Table 3. Difference-in-Difference Estimates of the Effects of Telework and Stay-at-Home Mandates on Entrepreneurship during the Pandemic

	(1) Log New Business Registration	(2) Log New Business Registration	(3) Log New Business Registration	(4) Log New Business Registration
Post X Teleworkable Share (std)	-0.103*** (0.006)	-0.100*** (0.006)	-0.093*** (0.005)	-0.072*** (0.005)
Post	0.160*** (0.020)			
Teleworkable Share (std)	0.078*** (0.024)	0.163*** (0.019)		
Controls	Y	Y	Y	Y
State FE	N	Y	N	N
Year-Month FE	N	Y	Y	N
Zip FE	N	N	Y	Y
State-by-Month FE	N	N	N	Y
Observations	63,434	63,434	63,429	63,429
R-squared	0.625	0.757	0.904	0.935

This table presents the results from Difference-in-Difference regressions. *Teleworkable Share* measures the share of jobs amenable to remote work in a zip code, produced in Gupta, et. al. (2022). *Teleworkable Share* is standardized to have a mean of zero and a standard deviation of one. *Post* is an indicator variable that takes the value of one from March 2020 onwards. The sample covers January 2019 to March 2021 and includes monthly new business registration data from seven U.S. states: FL, GA, KY, NY, TN, TX, and WA. Controls include the natural logarithm of population, AGI, unemployment rate (tax return share reporting unemployment compensation and BLS unemployment rate), net outmigration, and new Covid case rate. The level of observation is a zip code-month. We exclude months on and after April 2021 due to missing data from several large states after that. We vary the type of fixed effects included in the columns, as indicated at the bottom of the table. Other variable definitions can be found in Table 1 legend. Standard errors are reported in parenthesis and are clustered at the zip code level.

Table 4. Interaction of Telework Potential and Internet Speed on New Business Formation

	(1)	(2)	(3)	(4)
	Log New Business Registration	Log New Business Registration	Log New Business Registration	Log New Business Registration
Post X Teleworkable Share (std)	-0.088*** (0.006)	-0.082*** (0.006)	-0.079*** (0.005)	-0.072*** (0.005)
Post X Teleworkable Share (std) X Log Avg Download Speed (std)	-0.029*** (0.006)	-0.037*** (0.006)	-0.029*** (0.006)	-0.010** (0.005)
Lower Order Terms	Y	Y	Y	Y
Controls	Y	Y	Y	Y
State FE	N	Y	N	N
Year-Month FE	N	Y	Y	N
Zip FE	N	N	Y	Y
State-by-Month FE	N	N	N	Y
Observations	63,434	63,434	63,429	63,429
R-squared	0.629	0.758	0.904	0.935

This table presents results from difference-in-differences regressions examining how the relationship between telework potential and new business registrations varies with local internet connectivity during the COVID-19 pandemic. The dependent variable in all columns is the natural logarithm of new business registrations at the zip code-month level. Teleworkable Share measures the share of jobs amenable to remote work in a zip code, as defined by Gupta et al. (2022), standardized to have a mean of zero and a standard deviation of one. Log Avg Download Speed measures the average local internet download speed (standardized) at the zip code level. Post is an indicator variable that takes the value of one from March 2020 onwards. The focal coefficient is the triple interaction $\text{Post} \times \text{Teleworkable Share} \times \text{Log Avg Download Speed}$, which examines whether local internet connectivity further influences the effect of telework potential on entrepreneurial entry post-pandemic. Controls include the natural logarithm of population, AGI, unemployment rate (tax return share reporting unemployment compensation and BLS unemployment rate), net outmigration, and new Covid case rate. The sample covers January 2019 to March 2021 and includes monthly new business registration data from seven U.S. states: FL, GA, KY, NY, TN, TX, and WA. We exclude months after March 2021 due to incomplete data availability. Each specification progressively adds fixed effects as indicated at the bottom of the table. Standard errors, clustered at the zip code level, are reported in parentheses.

Table 5. Compositional Effects: Growth Oriented Vs. Small Business Entrepreneurship

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Share of Corp Business Registration				Log Share of Corp New Business Registration			
Post X Teleworkable Share (std)	0.004** (0.002)	0.011*** (0.001)	0.011*** (0.001)	0.012*** (0.001)	0.043*** (0.007)	0.068*** (0.005)	0.066*** (0.005)	0.053*** (0.005)
Lower Order Terms	Y	Y	Y	Y	Y	Y	Y	Y
Controls	Y	Y	Y	Y	Y	Y	Y	Y
State FE	N	Y	N	N	N	Y	N	N
Year-Month FE	N	Y	Y	N	N	Y	Y	N
Zip FE	N	N	Y	Y	N	N	Y	Y
State-by-Month FE	N	N	N	Y	N	N	N	Y
Observations	63,434	63,434	63,429	63,429	49,365	49,365	49,289	49,289
R-squared	0.016	0.400	0.562	0.564	0.084	0.575	0.727	0.736

This table presents the results from Difference-in-Difference regressions examining the impact of telework potential on the composition of new business registrations during the COVID-19 pandemic. The dependent variables are (1) the raw share of newly registered businesses incorporated as corporations (Columns 1–4) and (2) the natural logarithm of the share of newly registered businesses incorporated as corporations (Columns 5–8). *Teleworkable Share* measures the share of jobs amenable to remote work in a zip code produced in Gupta, et. al. (2022). *Teleworkable Share* is standardized to have a mean of zero and a standard deviation of one. *Post* is an indicator variable that takes the value of one from March 2020 onwards. Controls include the natural logarithm of population, AGI, unemployment rate (tax return share reporting unemployment compensation and BLS unemployment rate), net outmigration, and new Covid case rate. The sample covers January 2019 to March 2021 and includes monthly new business registration data from five U.S. states for which we have the underlying raw data: FL, GA, KY, TN, and TX. The level of observation is a zip code-month. Other variable definitions can be found in Table 1 legend. Standard errors are reported in parenthesis and are clustered at the zip code level.

Table 6. Realized Prevalence of Remote Work: Testing the Model's Main Prediction

	OLS		2SLS: First Stage		2SLS: Second Stage	
	(1)	(2)	(3)	(4)	(5)	(6)
	Log New Business Registration	Log New Business Registration	WFH Share (std)	WFH Share (std)	Log New Business Registration	Log New Business Registration
WFH Share (std)	-0.075*** (0.015)	-0.025** (0.010)			-0.518*** (0.062)	-0.664*** (0.075)
Post X Teleworkable Share (std)			0.148*** (0.012)	0.137*** (0.012)		
Controls	Y	Y	Y	Y	Y	Y
Year-Month FE	Y	N	Y	N	Y	N
Zip FE	Y	Y	Y	Y	Y	Y
State-by-Month FE	N	Y	N	Y	N	Y
Observations	30,403	30,403	25,326	25,326	24,910	24,910
R-squared	0.881	0.929	0.912	0.931		

This table presents the results from panel 2SLS regressions of the effects of telework on entrepreneurship during the Pandemic. The sample covers January 2019 to March 2021 and includes monthly new business registration data from seven U.S. states for which the Hansen, et. al. (2023) measure of WFH is available. The level of observation is a zip code-month. *WFH share* is the percent of remote or hybrid workforce measured constructed in Hansen, et. al. (2024). *Teleworkable Share* measures the share of jobs amenable to remote work in a zip code produced in Gupta, et. al. (2022). Both *WFH share* and *Teleworkable Share* are standardized to have a mean of zero and a standard deviation of one. *Post* is an indicator variable that takes the value of one from March 2020 onwards. Controls include the natural logarithm of population, AGI, unemployment rate (tax return share reporting unemployment compensation and BLS unemployment rate), net outmigration, and new Covid case rate. Columns (1) and (2) report estimates from OLS regressions to test the relationship between WFH Share and new business registrations during the Pandemic. Columns (3) and (4) report estimates from the first stage of two-stage least square (2SLS) regressions, where we use telework potential and its interaction with stay-at-home mandates to instrument for the share of remote workforce. Column (5) and (6) report second stage estimates from 2SLS. Other variable definitions can be found in Table 1 legend. Standard errors are reported in parenthesis and are clustered at the zip code level.

Table 7. Heterogeneity in Economic Opportunity

	(1) Log New Business Registration	(2) Log New Business Registration	(3) Log New Business Registration
Post X Teleworkable Share (std)	-0.014* (0.007)	-0.070*** (0.005)	-0.066*** (0.005)
Post X Teleworkable Share (std) X Log Average AGI (std)	0.007** (0.003)		
Post X Teleworkable Share (std) X Labor Force Growth (std)		0.033*** (0.004)	
Post X Teleworkable Share (std) X Net Out Migration Rate (std)			-0.036*** (0.004)
Controls and Other Lower Order Terms	Y	Y	Y
Zip FE	Y	Y	Y
State-by-Month FE	Y	Y	Y
Observations	63,409	63,427	63,427
R-squared	0.936	0.936	0.936

This table estimates heterogeneous effects of the effect of telework potential during the Pandemic. *Teleworkable Share* measures the share of jobs amenable to remote work in a zip code produced in Gupta, et. al. (2022). *Post* is an indicator variable that takes the value of one from March 2020 onwards. *Log Average AGI* is the natural logarithm of the average individual adjusted gross income in the zip code. *Labor Force Growth* is the BLS reported past 12-month labor force growth rate in the county. *Net Out Migration Rate* is the IRS reported out migration rate minus in migration rate in the county. *Teleworkable Share*, *Log Average AGI*, *Labor Force Growth*, and *Net Out Migration Rate* are standardized to have a mean of zero and a standard deviation of one. The sample covers January 2019 to March 2021 and includes monthly new business registration data from seven U.S. states: FL, GA, KY, NY, TN, TX, and WA. The level of observation is a zip code-month. We exclude months on and after April 2021 due to missing data from several large states after that. Standard errors are reported in parenthesis and are clustered at the zip code level.

Table 8. Gender Differences: Testing the Flexibility Demand and Substitution Mechanism

	(1)	(2)
	All Female Share	Some Female Share
Post X Teleworkable Share (std)	-0.892*** (0.152)	-1.589*** (0.307)
Controls	Y	Y
Zip FE	Y	Y
State-by-Month FE	Y	Y
Observations	26,687	26,687
R-squared	0.376	0.339

This table presents the results from Difference-in-Difference regressions. *All Female Share* is the share of newly registered businesses with exclusively female founders. *Some Female Share* is the share of newly registered businesses with one or more female co-founders. *Teleworkable Share* measures the share of jobs amenable to remote work in a zip code produced in Gupta, et. al. (2022). *Teleworkable Share* is standardized to have a mean of zero and a standard deviation of one. *Post* is an indicator variable that takes the value of one from March 2020 onwards. Controls include the natural logarithm of population, AGI, unemployment rate (tax return share reporting unemployment compensation and BLS unemployment rate), net outmigration, and new Covid case rate. The sample covers January 2019 to March 2021 and includes monthly new business registration data from five U.S. states for which we have the underlying raw data: FL, GA, KY, TN, and TX. The level of observation is a zip code-month. Other variable definitions can be found in Table 1 legend. Standard errors are reported in parenthesis and are clustered at the zip code level.

Table 9. Survey Results: Flexibility Preferences, Current Job Flexibility, and the Likelihood of Leaving to Start a Business

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Likelihood of Leaving to do a Startup						
High Importance of flexibility in work schedule	0.086** (0.030)		0.105*** (0.031)	0.102** (0.032)	0.092** (0.033)	0.210*** (0.063)	0.216** (0.069)
Current Job Offers flexibility		-0.039 (0.027)	-0.066* (0.028)	-0.065* (0.029)	-0.053 (0.030)	-0.008 (0.033)	-0.001 (0.037)
High Importance of flexibility in work schedule X Current Job Offers flexibility						-0.174* (0.074)	-0.204* (0.082)
Controls	N	N	N	Y	Y	Y	Y
State FE	N	N	N	N	Y	Y	Y
Household Income Decile FE	N	N	N	N	Y	Y	Y
Observations	998	998	998	998	994	994	758
Adjusted R-squared	0.008	0.001	0.012	0.012	0.015	0.021	0.025

This table presents regression results examining how preferences for work flexibility and current job flexibility influence the likelihood of leaving a current job to start a business. The sample is drawn from a survey conducted in July 2024, targeting employed individuals considering changes in their employment status with a focus on job flexibility and entrepreneurial intent. Columns (1) to (3) progressively include flexibility preferences and current job flexibility as predictors. Column (4) adds controls for gender and age (log-transformed). Columns (5) and (6) incorporate fixed effects for state of residence and income level, with Column (6) including interaction terms between flexibility preferences and current job flexibility. Column (7) restricts the sample to full-time employees with fixed effects included. Robust standard errors are reported in parentheses. Interaction terms and control variables are noted where applicable.