Health Insurance and Entrepreneurship Lock*

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Abstract

"Entrepreneurship lock" occurs when individuals are constrained from pursuing entrepreneurship due to the limited availability of health insurance for the self-employed. I address the question of whether entrepreneurship lock exists among young adults using the Medical Expenditures Panel Survey (MEPS). Exploiting the dependent coverage mandate of the Affordable Care Act, I find that the self-employment rate for young adults increases by 26% following the mandate. To decompose this effect, I use a mean-variance utility framework to theoretically disentangle the two mechanisms through which the mandate affects occupational choice: the "subsidy effect," driven by the reduction in mean health costs as young adults remain on parental plans, and the "risk-protection value," driven by the reduction in cost variance due to expanded insurance access. Mechanism checks reveal that this increase is driven entirely by risk-averse young adults and those with a high demand for health insurance. Consistent with this behavioral finding, 2SLS results demonstrate that the self-employment response is attributable to the risk-protection value of health insurance in reducing the variance of out-of-pocket health costs, rather than to the subsidy effect. Finally, I document significant distributional effects, showing that the mandate expands self-employment opportunities for young adults with pre-existing conditions (specifically diabetes and cancer) and disproportionately promotes female entrepreneurship.

JEL Codes: **I13** · **L26** · **J23** · **J32**

Keywords: Health Insurance · Health · Entrepreneurship Lock · Self–employment · ACA

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1 Introduction

Nearly half of working-age Americans receive healthcare from their employer, and only 15% of employed workers are uninsured (IPUMS MEPS, 2021). However, nearly a third of self-employed Americans are uninsured. This higher rate of uninsured among self-employed workers is often attributed to the large costs of private individual health plans and can deter potential entrepreneurs from exiting their current employment. This phenomenon is known as "entrepreneurship lock" and extends the idea of "job lock" – where individuals remain in less preferred employment due to the need to retain health insurance, deterring transitions to entrepreneurial activities. While job lock in general is more prevalent, entrepreneurship lock has strong economic costs, as entrepreneurs create positive externalities such as job creation, innovation and economic growth.[1]

Although a substantial empirical literature has documented the existence of job lock (e.g., (Madrian, 1994; Gruber and Madrian, 1994; Hamersma and Kim, 2009; Garthwaite et al., 2014)), evidence on entrepreneurship lock is mixed. Prior research has typically exploited federal policy changes or state-level reforms relative to comparison states to identify the effects of health insurance on entrepreneurial activity (Holtz-Eakin et al., 1996; Wellington, 2001; DeCicca, 2010; Fairlie et al., 2011; Niu, 2014; Heim and Yang, 2017; Bailey, 2017; Yörük and Xu, 2019; Blume-Kohout, 2023, 2024). However, there has been limited discussion and empirical evidence regarding the mechanisms through which policy interventions operate to alleviate entrepreneurship lock, as well as their distributional implications.

The expansion of health insurance coverage typically aims to reduce the uninsured rate by making insurance more affordable and easier to access. For example, the Affordable Care Act's (ACA) dependent coverage mandate allows young adults to remain on their parents' employer-sponsored insurance plans until age 26. As a result, young adults pay no premiums themselves and face significantly lower out–of–pocket healthcare costs due to coverage. Another example is the ACA's premium tax credits for marketplace plans, which directly lower the cost of coverage for individuals purchasing insurance on their own. Such policies effectively reduce the uninsured rate and alleviate individuals'

[1] E.g., Schmitz Jr (1989); Baumol (1990); Murphy et al. (1991); Aghion and Howitt (1992); Acs and Audretsch (1988); Haltiwanger et al. (2013); Glaeser et al. (2015).

concerns about facing substantial medical expenses in the event of health shocks. Consequently, individuals inclined toward self-employment may be more motivated to pursue riskier entrepreneurial ventures rather than remain in their current employment.

These policies may influence self-employment through two primary channels. First, by substantially reducing expected insurance premiums and out–of–pocket medical expenses through coverage (total pay), they effectively increase individuals' disposable income (first–moment effect). This operates as a subsidy effect, as individuals have more free cash to engage in entrepreneurial activity. Second, these policies decrease the variance of total pay by offering coverage (second–moment effect), mitigating background financial risk and enhancing economic security. Together, these mechanisms make self–employment a more attractive option for individuals who might otherwise be reluctant to leave traditional employment.

From a policy perspective, disentangling the subsidy effect and the risk-protection value of health insurance is crucial for understanding how public policies affect self–employment. If reductions in expected costs are the primary driver of increased self–employment, policies that lower premiums and out–of–pocket healthcare costs may be sufficient to encourage self–employment. If risk protection is more important, policies that address inefficiencies in the health insurance market by offering affordable and comprehensive health insurance coverage are essential for encouraging entrepreneurship. This paper examines these mechanisms.

With data from the Medical Expenditure Panel Survey (MEPS), I comprehensively investigate entrepreneurship lock in the context of the dependent coverage mandate, analyze how the mandate mitigates it, identify the mechanisms at work, and assess the associated distributional implications. I employ a difference-in-differences strategy and find strong evidence that entrepreneurship lock not only exists but is also substantial, as the self–employment rate increases by 26% after the mandate takes effect. Mechanism checks show self–employment rate increases among risk-averse young adults and those with a high demand for health insurance, as they concern more about uncertain out-of-pocket medical expenses due to health shocks.

To disentangle the subsidy effect from the risk-reduction value of health insurance in promoting self-employment, I use a two-stage least squares (2SLS) approach with principal component controls. I find evidence that the increase in self-employment is primarily driven by the intrinsic value of health insurance–through reduced financial risk due to

health shocks–rather than by the subsidy effect. These findings suggest that policies aiming to support entrepreneurial activity should prioritize expanding access to comprehensive insurance that protects against large, unpredictable expenses, rather than focusing solely on reducing average out–of–pocket costs.

In order to address equity concerns, I further investigate the differential impacts of the dependent coverage mandate on young adults with pre-existing conditions, including physical limitations, mental limitations, diabetes, cancer, hypertension and cardiovascular diseases. The mandate's effect is notably stronger among individuals with serious long–term health conditions. For young adults with diabetes, the self-employment rate increases by an additional 5 percentage points relative to those without, representing a sixfold amplification of the baseline effect. Similarly, for those with cancer, the rate increases by 4 percentage points, four times the base effect. However, I do not find pronounced treatment effects for young adults with physical limitations, mental limitations, hypertension, and cardiovascular disease due to low power. In general, the mandate generates positive distributional effects for young adults with pre-existing health conditions by increasing their self-employment rate. The mandate also promotes self–employment opportunities for young women.

This study makes several contributions to the literature. First, it adds to the literature on the supply of entrepreneurs by showing that loosening dependence on employer–sponsored insurance can increase self–employment rates among young adults. Second, this paper provides the first empirical evidence distinguishing the risk-protection value of health insurance from its subsidy effect in promoting entrepreneurship. By exploiting the dependent coverage mandate, I show that the treatment effects are driven entirely by risk-averse young adults and those with high demand for insurance. Using a 2SLS approach, I further demonstrate that the increase in self-employment is attributable to the intrinsic value of insurance–specifically its role in mitigating financial risk–rather than the income subsidy provided by lower premiums. Fourth, it contributes to the literature on economic equity by showing that self-employment increases among young adults with pre–existing conditions compared to those without after the implementation of the mandate, leading to positive distributional outcomes. Fifth, it enriches the literature on gender equity by showing that the mandate expands entrepreneurship opportunities for young women.

The impact of entrepreneurship lock among young adults understates the broader effect of health insurance access on self–employment. Older age groups who face higher health risks and greater insurance costs may experience even stronger constraints. These barriers impose substantial economic costs by limiting occupational choice and reducing productive risk–taking. Therefore, expanding health insurance coverage to all age groups is crucial to further support self-employment.

2 Institutional Mechanisms

In the United States, health insurance is primarily tied to employment and most working-age adults obtain health insurance coverage through their employers. This structure imposes substantial barriers on individuals contemplating alternative employment arrangements, including self–employment. Without employer-sponsored health insurance, large medical expenses resulting from unpredictable health shocks create background financial risk, which can adversely affect both consumption and overall well-being. This constraint, known as job lock, limits labor market mobility. When it suppresses entrepreneurial activity specifically, it is referred to as entrepreneurship lock.

The transition from one job to another involves search costs and the risk of gaps in health insurance coverage. However, moving from employment to self-employment entails additional risks. First, self-employment, and especially entrepreneurial activities, are inherently riskier than traditional employment, as individuals cannot fully assess their entrepreneurial abilities in advance (van Praag and Cramer, 2001). Second, without access to group insurance, self-employed individuals often face higher premiums and less comprehensive coverage (Gruber and Madrian, 2002). The uncertainty and potential financial burden of securing private insurance can outweigh the benefits of starting a business. As a result, many capable individuals forgo entrepreneurship, leading to a misallocation of talent.

The effects have broad economic consequences that extend beyond individual decisions. When prospective entrepreneurs are discouraged from launching new ventures, the economy loses valuable opportunities for innovation, job creation, and productivity growth. Moreover, entrepreneurship lock potentially exacerbates inequality, disproportionately impacting individuals with limited resources or greater health risks. As a result, the economic costs associated with entrepreneurship lock may be substantial.

The Affordable Care Act (ACA), enacted in 2010, introduced several major reforms aimed at expanding health insurance coverage, improving access to care, and reducing healthcare costs. One of the earliest provisions to take effect was the dependent coverage mandate, which began in late 2010. The mandate allows young adults until age 26 to remain on their parents' private health insurance plans without paying premiums themselves. Prior to the mandate, most private plans terminated dependent coverage at age 19 or, for full-time students, at age 23 (Cantor et al., 2012). The mandate thus extended coverage to a substantial portion of young adults who would otherwise face gaps in insurance during a key stage of labor market entry.

The mandate led to a sizable increase in insurance coverage among young adults, with estimates suggesting that over three million individuals gained coverage between September 2010 and December 2012 (Sommers et al., 2013). Although certain grandfathered plans were initially exempt, the broad applicability of the mandate created a sharp change in health insurance access for this population, making it a widely studied policy shock. Existing research has documented significant effects on insurance coverage, health related outcomes and labor market outcomes (Chua and Sommers, 2014; Barbaresco et al., 2015; Hahn and Yang, 2016; Bailey, 2017; Yörük and Xu, 2019).

The mandate may have reduced entrepreneurship lock by allowing young adults to remain on their parents' insurance plans. As a result, they could pursue self-employment without the risk of losing health coverage tied to their own employment. This institutional feature creates a quasi-experimental setting that I leverage to examine the effects of expanded health insurance access on self-employment decisions, assess the distributional implications of the mandate, and identify the channels through which these effects operate.

3 Conceptual Framework

The decision to pursue self-employment fundamentally involves weighing uncertain entrepreneurial returns against the stability of wage employment. This trade-off becomes particularly complex when health insurance is tied to traditional employment, creating what the literature terms "entrepreneurship lock," a phenomenon where individuals remain in wage employment primarily to retain health insurance coverage (e.g., Holtz-

Eakin et al., 1996; Madrian and Lefgren, 1998; Wellington, 2001; Fairlie et al., 2011). This section develops a theoretical framework to understand how the Affordable Care Act's dependent coverage mandate alleviates this constraint for young adults.

Consider an individual choosing between wage employment and self-employment. Wage employment provides wage w and employer-sponsored health insurance with an implicit subsidy of $s > 0$. This subsidy represents the tax advantage of employer-provided health benefits and the employer's contribution to premiums, making employer-sponsored insurance effectively cost less than actuarially equivalent individual market coverage. Self-employment yields stochastic profits and requires purchasing health insurance at the full individual market premium π_I.

The occupational choice can be formalized using a mean-variance utility framework. Let utility from occupational choice $j \in \{W, S\}$ (wage employment or self-employment) be given by:

$$U_j = E[Y_j] - \frac{\gamma}{2}\text{Var}(Y_j)$$

where Y_j represents total income net of health expenditures in occupation j, and γ captures attitudes toward income variance. Crucially, we do not restrict γ: it may be positive (risk aversion), zero (risk neutrality), or negative (risk loving).

For wage employment, income net of health costs is deterministic: $Y_W = w - (\pi_I - s)$, where s represents the employer insurance subsidy. Thus $E[Y_W] = w - (\pi_I - s)$ and $\text{Var}(Y_W) = 0$. For self-employment without insurance, net income has two sources of uncertainty: business profits Π and out-of-pocket medical expenditures m. Thus $Y_S = \Pi - m$ with $E[Y_S] = E[\Pi] - \mu_m$ and $\text{Var}(Y_S) = \text{Var}(\Pi) + \text{Var}(m) + 2\text{Cov}(\Pi, m)$.

The occupational choice decision depends on the utility differential:

$$U_S - U_W = [E[\Pi] - \mu_m] - [w - (\pi_I - s)] - \frac{\gamma}{2}[\text{Var}(\Pi) + \text{Var}(m) + 2\text{Cov}(\Pi, m)]$$

This framework generates two distinct channels through which health insurance affects entrepreneurship, without assuming the sign or magnitude of risk preferences. First, through the mean effect: lacking employer-sponsored insurance imposes an additional expected cost $(\pi_I - s) - \mu_m$ on self-employment. This represents the subsidy disadvantage and any difference between insurance premiums and expected out-of-pocket costs.

Second, through the variance effect: uninsured self-employment adds health expenditure variance Var(m) to income uncertainty. The impact of this variance on utility depends entirely on γ.

If $\gamma > 0$ (risk aversion), the variance term reduces utility from self-employment, creating an additional barrier beyond the mean cost. If $\gamma = 0$ (risk neutrality), only the mean cost matters. Intriguingly, if $\gamma < 0$ (risk loving), the additional variance could actually increase the attractiveness of uninsured self-employment. The empirical question is not whether entrepreneurs are risk-averse, but rather how the variance of health expenditures affects their occupational choice.

The ACA dependent coverage mandate fundamentally alters this calculus for eligible young adults aged 19–25. By allowing them to remain on parental insurance plans at minimal or zero additional cost, the mandate effectively eliminates both the mean cost disadvantage and the variance penalty of self-employment. For individuals with $\gamma = 0$, the mandate removes the subsidy barrier: the occupational choice now depends solely on whether $E[\Pi] \geq w$. For those with $\gamma > 0$, access to parental coverage eliminates health expenditure variance, reducing the total income uncertainty they face. Even for risk-loving individuals with $\gamma < 0$, the mean savings from avoiding individual market premiums may dominate any utility loss from reduced variance.

This framework generates several testable predictions that do not require assumptions about entrepreneurs' risk preferences. First, the mandate should increase self-employment rates among young adults relative to slightly older cohorts who are ineligible for parental coverage, regardless of whether the effect operates through the subsidy channel, the risk channel, or both. Second, the magnitude of the effect provides information about which channel dominates. If the effect is primarily driven by the subsidy differential, we should observe similar responses across individuals with different risk profiles. If risk considerations are important, the effect should be concentrated among those with higher health risks or indicators of risk aversion.

Third, the framework predicts heterogeneous effects based on the availability and generosity of employer insurance subsidies. Young adults whose potential employers offer particularly generous health benefits (large subsidy s) should show larger responses to the mandate, as it neutralizes a bigger financial advantage of wage employment. Similarly, those in industries or occupations with limited employer coverage should show smaller effects, as they faced less entrepreneurship lock to begin with.

The model also clarifies why previous estimates of entrepreneurship lock may have been confounded. Without exogenous variation in insurance access, researchers cannot distinguish between selection (less risk-averse individuals choosing self-employment) and treatment effects (insurance access enabling entrepreneurship). The ACA mandate provides precisely this variation, allowing us to identify the causal effect of insurance access on entrepreneurial entry without making assumptions about the risk preferences of potential entrepreneurs.

This theoretical framework directly motivates our difference-in-differences research design, which compares changes in self-employment rates between mandate-eligible young adults (19–25–year-olds) and a slightly older control group (27–34-year-olds). By examining heterogeneous effects across different populations and contexts, we can assess the relative importance of the subsidy and risk channels without assuming that entrepreneurs are inherently more or less risk-averse than wage workers. The results inform not only our understanding of entrepreneurship lock but also the design of policies to promote entrepreneurial activity.

To empirically distinguish between these channels, consider the distribution of health expenditures faced by individuals. Let m denote out-of-pocket medical expenditures, with mean μ_m and variance σ_m^2. Under employer-sponsored insurance, individuals face lower mean expenditures μ_m^E and reduced variance $\sigma_m^{2,E}$ compared to the uninsured state with μ_m^U and $\sigma_m^{2,U}$. The dependent coverage mandate similarly provides young adults with low expenditure mean μ_m^P and variance $\sigma_m^{2,P}$ through parental coverage.

The two theoretical channels map directly to these moments of the expenditure distribution. The subsidy channel operates through the first moment: employer insurance reduces expected out-of-pocket costs by $(s = \mu_m^U - \mu_m^E)$, creating an income advantage for wage employment. Self-employment requires overcoming this cost differential. The risk channel operates through the second moment: insurance reduces expenditure variance from $\sigma_m^{2,U}$ to $\sigma_m^{2,E}$, lowering the financial uncertainty associated with health shocks. For risk-averse individuals, this variance reduction has value beyond the mean savings.

Crucially, examining the effect of both moments simultaneously allows identification of which channel dominates. If the subsidy channel drives entrepreneurship lock, self-employment decisions should respond primarily to changes in mean expenditures (the first moment). Higher average out-of-pocket costs should discourage entrepreneurship linearly. However, if the risk channel dominates, self-employment should be more sen-

sitive to expenditure variance (the second moment). The effect of variance should be negative and potentially non-linear, as risk-averse individuals place increasing weight on avoiding catastrophic health expenses.

To empirically identify these channels within our mean-variance framework, we can exploit the fact that total health payments (premiums plus out-of-pocket costs) affect utility through both their level and their variance. Consider a reduced-form approximation where self-employment probability depends on both moments of total payments:

$$\Pr(\text{Self-employed}) = f(H, H^2)$$

The coefficient on H captures how average health costs affect occupational choice through the budget constraint. The coefficient on H^2 captures the variance effect, as the second moment of a distribution equals variance plus mean-squared: $E[X^2] = \text{Var}(X) + E[X]^2$. When we control for the first moment, the coefficient on the second moment isolates the pure variance effect.

Within our mean-variance utility framework, the sign and magnitude of the coefficient on H^2 directly reveals the parameter γ, which represents individual's revealed preference toward health expenditure risk. A negative coefficient indicates $\gamma > 0$ (risk aversion), meaning that individuals avoid self-employment when it entails greater health expenditure variance. A zero coefficient suggests $\gamma = 0$ (risk neutrality), meaning only mean costs matter. A positive coefficient would imply $\gamma < 0$ (risk loving), where some individuals might actually prefer the uncertainty of uninsured self-employment.

This moment-based decomposition generates testable predictions that our empirical strategy can identify. Under pure income effects, only the level of total health payments (premiums plus out-of-pocket costs) should matter for occupational choice. Under risk considerations, both the mean and variance matter, but the variance effect should dominate for risk-averse individuals. By instrumenting for both the first moment (total payments) and second moment (total payments squared) of health expenditures, we can separately identify these channels and determine their relative importance.

The dependent coverage mandate provides exogenous variation in both moments. Young adults gaining parental coverage experience both a reduction in mean expenditures (from μ_m^U to near zero) and elimination of expenditure variance (from $\sigma_m^{2,U}$ to near zero). If we observe that self-employment responds more strongly to variance reduction

than to mean savings, this would indicate that alleviating health-related financial uncertainty, rather than providing an income transfer, is the primary mechanism through which insurance coverage promotes entrepreneurship.

Importantly, this framework allows the data to reveal preferences rather than imposing them. We need not assume entrepreneurs are more or less risk-averse than wage workers. Instead, the empirical estimates of how self-employment responds to the first and second moments of health expenditures reveal the underlying risk preferences that drive occupational choice. Our finding that the coefficient on H^2 is negative and significant while the coefficient on H is insignificant provides direct evidence that $\gamma > 0$, meaning that individuals exhibit risk aversion with respect to health expenditure uncertainty, and this risk aversion creates a substantial barrier to entrepreneurship.

Understanding which channel dominates has profound implications for economic analysis and policy design. If the subsidy channel were the primary mechanism, the mandate would essentially represent a transfer from taxpayers (or other insurance pool participants) to young entrepreneurs. From an aggregate efficiency perspective, such transfers generate net benefits only if entrepreneurship creates positive externalities that exceed the deadweight loss of financing the subsidy. While evidence suggests such externalities exist, the economic case would rest entirely on these indirect effects.

In contrast, if the risk channel dominates, the mandate generates direct efficiency gains by completing an incomplete insurance market. Young adults face genuine market failures in obtaining affordable individual health insurance due to adverse selection, search costs, and regulatory barriers. By providing access to parental coverage, the mandate allows risk-averse individuals to pursue entrepreneurship without bearing catastrophic health risk, an improvement that enhances economic efficiency even absent any entrepreneurial spillovers. This insurance value represents a real efficiency gain, not merely a transfer.

The distinction also carries important equity implications. A subsidy-based mechanism would disproportionately benefit those with higher expected health costs or those from wealthier families who can afford generous insurance plans. However, a risk-based mechanism provides the greatest value to those facing the highest health uncertainty, including individuals with pre-existing conditions, chronic illnesses, or limited financial

resources to self-insure. Our finding that the effect operates primarily through variance reduction rather than mean savings suggests the mandate particularly helps vulnerable populations who most need protection against catastrophic health expenses.

For policy design, these insights suggest that expanding insurance coverage may be more effective than direct subsidies for promoting entrepreneurship. While cash transfers or tax credits reduce the average cost of self-employment, they do not address the fundamental uncertainty that deters risk-averse individuals from leaving traditional employment. Insurance-based policies that reduce the variance of health-related financial outcomes, such as public options, catastrophic coverage programs, or portable benefits, may unlock entrepreneurial potential more efficiently than equivalent-cost subsidy programs.

Moreover, recognizing the insurance value of health coverage reframes the policy debate. Rather than viewing health insurance mandates solely as costly interventions requiring justification through entrepreneurial externalities, policymakers should recognize their direct economic benefits in enabling occupational choice under uncertainty. The substantial employment spillovers we document represent additional social returns beyond the primary benefit of completing missing insurance markets. This dual benefit of direct efficiency gains from risk reduction plus positive externalities from increased entrepreneurship strengthens the economic case for policies that decouple health insurance from traditional employment.

4 Data

"This study draws on data from the Medical Expenditure Panel Survey (MEPS), specifically linking the Household Component (HC) with the Person Round Plan files. This linkage allows for a precise matching of individual employment transitions with detailed health insurance characteristics at the plan level. The MEPS is a large, nationally representative survey covering the U.S. civilian non-institutionalized population. The survey is conducted by the Agency for Healthcare Research and Quality (AHRQ). It provides rich individual- and household-level information on demographic, socio-economic status, general health, health insurance, health care access, and medical expenditures.

A key feature of the MEPS is its overlapping panel design. Each year, a new panel of households is recruited and interviewed over five rounds spanning two calendar years. This design allows for both cross-sectional and short-run longitudinal analysis, enabling researchers to observe within-person changes in outcomes such as employment and insurance coverage. In this study, the panel structure is utilized to capture dynamic transitions in labor market status, particularly entry into self-employment, around the implementation of the Affordable Care Act's dependent coverage mandate.

The analysis focuses on the 2006–2014 period, which covers the years immediately before and after the implementation of the Affordable Care Act's dependent coverage mandate in 2010. This mandate allowed young adults to remain on their parents' private health insurance plans until age 26. I define the treatment group as individuals aged 19 to 25, and the control group as those aged 27 to 34. 26-year-olds are partially treated.

The final dataset contains 47,125 person-year observations after applying the age restriction and dropping observations with missing values in key variables such as employment status, health insurance coverage, and demographic characteristics. The main outcome variable is an indicator for self-employment, defined in MEPS as being self-employed in either an incorporated or unincorporated entity, including sole proprietorship and partnership. This definition aligns with broader labor economics literature and reflects self-employment status as reported by individuals, regardless of business registration or legal structure.

Table 1 presents summary statistics for main variables in the sample. It shows there are observable differences in baseline characteristics between treated and non-treated groups. The treated group has a lower average self-employment rate compared to the control group as the mean difference is negative 5 percentage points with a t-statistic of 21, suggesting young adults engage in self-employment at lower rates than the control group. Meanwhile, large t-statistics for mean age, gender, educational attainment, marital status, college enrollment, and race indicate significant demographic differences between the treated and control groups. Baseline health characteristics also vary between the two groups. Given that the sample period spans nine years, time-varying macroeconomic factors—such as inflation, minimum wage adjustments, and business cycle fluctuations—could affect self-employment rates independently of the mandate. These potential confounders underscore the necessity of including year fixed effects and region-specific controls in the regression analysis to isolate the causal impact of the policy.

Table 1: Summary Statistics by Treatment

Variable	Full Sample		Treated		Not Treated		Diff. Means	
	Mean	St. Dev.	Mean	St. Dev.	Mean	St. Dev.	Diff.	t
Self-employed	0.062	0.240	0.035	0.185	0.083	0.276	−0.048	−21.200
Year	2010.143	2.530	2010.146	2.662	2010.143	2.536	0.003	0.099
Age	26.680	4.590	22.054	1.997	30.534	2.277	−8.480	−405.472
Sex	0.492	0.500	0.476	0.499	0.506	0.500	−0.030	−6.038
Education	1.976	1.620	1.509	1.297	2.323	1.750	−0.814	−54.817
In College	0.148	0.355	0.350	0.477	0.000	0.000	0.350	97.883
Marital Status	3.484	1.893	4.444	1.365	2.686	1.899	1.757	110.467
Race	0.523	1.006	0.529	1.009	0.515	1.004	0.014	1.442
Hispanic	0.325	0.468	0.334	0.472	0.321	0.467	0.013	2.729
Family Size	3.373	1.776	3.440	1.828	3.370	1.730	0.069	3.940
Diabetes	0.012	0.108	0.005	0.073	0.018	0.131	−0.012	−12.159
PCS	54.484	7.695	54.849	7.278	54.151	8.038	0.698	9.298
MCS	52.040	10.199	52.312	10.286	51.802	10.158	0.510	5.054
Regions	2.834	0.984	2.828	0.984	2.841	0.986	−0.014	−1.413
N	47,125		17,778		24,333		-	

Note: This table presents the summary statistics for the treated and non-treated groups. Since 26-year-olds are partially treated, they are excluded from both the treated and control groups.

5 Methods

To estimate the effect of the dependent coverage mandate on self-employment, I employ a Difference-in-Differences (DiD) approach that compares changes in self-employment rates for young adults eligible for the mandate to slightly older adults who were not eligible. The DiD approach controls for time-invariant differences between treatment and control groups as well as for aggregate time trends, such as the extremely low interest rates that followed the Great Recession. It also accounts for time-invariant unobserved characteristics such as entrepreneurial ability.

The treated group consists of young adults aged 19–25, while adults aged 27–34 serve as the control group. I include 26-year-olds as partially treated, as eligibility for this group depended on both timing and plan enrollment status during the initial implementation period. The key variable is the interaction term $\text{POST}_{it} \cdot \text{TREATED}_{it}$. $\mathbf{X}_{it}$ is a vector of control variables: education attainments, gender, race, family income, family size, region,

and age fixed effects. τ_t is the year fixed effects. The baseline model is as follows:

$$\text{Self-employment rate}_{it} = \beta_1 \cdot \text{Treatment}_{it} + \boldsymbol{\beta_2'}\mathbf{X}_{it} + \tau_t + \epsilon_{it} \tag{1}$$

I then employ an event study design to verify whether the DiD approach captures the treatment effect of the dependent coverage mandate. The event study also allows me to examine the dynamic impact of the mandate over time.

$$\text{Self-employment rate}_{it} = \sum_{k=2006, k\neq 2010}^{2014} \beta_k(\text{Year}_k \times \text{Young adults}_{it}) + \delta'\mathbf{X}_{it} + \tau_t + \epsilon_{it} \tag{2}$$

To distinguish between the subsidy effect and the risk-protection value of health insurance in promoting self-employment, I employ an instrumental variables (IV) approach combined with Principal Component Analysis (PCA). This strategy allows me to flexibly control for individual-level heterogeneity while addressing potential endogeneity in out-of-pocket medical expenditures and insurance premiums.

Specifically, I first apply PCA to a set of eight baseline categorical covariates, including region, marital status, race, Hispanic ethnicity, education, student status, family size, and gender. Let $\mathbf{Z}_i$ denote the vector of these eight baseline covariates for individual i. PCA transforms $\mathbf{Z}_i$ into a smaller set of orthogonal components:

$$\mathbf{PC}_i = \mathbf{W}'\mathbf{Z}_i,$$

where $\mathbf{PC}_i = (PC_{i1}, PC_{i2}, PC_{i3}, PC_{i4})'$ denotes the first four principal components, which explain the majority of the variance in these baseline covariates. These principal components are used to partial out the treatment effect when constructing instruments.

To construct instruments for endogenous combined out-of-pocket medical expenditures and insurance premiums (denoted TotalPay_i), I first center the total pay by substracting the sample mean and then estimate two regressions. The first regression includes the treatment indicator and its interactions with the principal components:

$$\text{TotalPay}_i = \gamma_0 + \gamma_1 T_i + \sum_{k=1}^{4} \gamma_{1+k}\, PC_{ik} + \sum_{k=1}^{4} \gamma_{5+k}\,(T_i \times PC_{ik}) + \alpha_{\text{AGE}(i)} + \delta_{\text{YEAR}(i)} + \epsilon_i. \tag{3}$$

The second regression omits the treatment interactions:

$$\text{TotalPay}_i = \eta_0 + \sum_{k=1}^{4} \eta_{1+k}\, PC_{ik} + \alpha_{\text{AGE}(i)} + \delta_{\text{YEAR}(i)} + \xi_i. \tag{4}$$

Analogous regressions are estimated for TotalPay_i^2.

The instruments are defined as the difference between the fitted values from the unrestricted model (3) and the restricted model (4):

$$\text{TotalPay}_i^{\text{IV}} = \text{TotalPay}_i^{\text{unrestricted}} - \text{TotalPay}_i^{\text{restricted}},$$

and analogously for $\text{TotalPay}_i^{2,\text{IV}}$. By this construction, the instrument isolates variation in spending attributable to heterogeneous treatment responses, net of individual characteristics and fixed effects. For example, among asthma patients, healthcare utilization is relatively steady because treatment involves regular, predictable inhaler use, so insurance coverage has little effect on the variance of spending. In contrast, for pregnancy, healthcare spending is concentrated in a short period with large, one-time costs, and insurance coverage substantially reduces the variance in out-of-pocket expenditures, even if the mean remains similar for women. This contrast illustrates how the instruments capture the heterogeneity in treatment effects necessary to identify the risk channel.

In the first stage of the 2SLS estimation, I regress TotalPay_i and TotalPay_i^2 on these constructed instruments, including the full set of baseline covariates as fixed effects, along with age and year fixed effects. The first-stage regressions are specified as:

$$\text{TotalPay}_i = \pi_0 + \pi_1 \text{TotalPay}_i^{\text{IV}} + \alpha_{\text{AGE}(i)} + \delta_{\text{YEAR}(i)} + \sum_j \phi_j\, \lambda_j(\mathbf{Z}_i) + \varepsilon_i, \tag{5}$$

$$\text{TotalPay}_i^2 = \rho_0 + \rho_1 \text{TotalPay}_i^{2,\text{IV}} + \alpha_{\text{AGE}(i)} + \delta_{\text{YEAR}(i)} + \sum_j \psi_j\, \lambda_j(\mathbf{Z}_i) + \eta_i. \tag{6}$$

where $\lambda_j(\mathbf{Z}_i)$ denotes the fixed effects for the categories of each baseline covariate.

Finally, in the second stage, I estimate the structural equation for self-employment as:

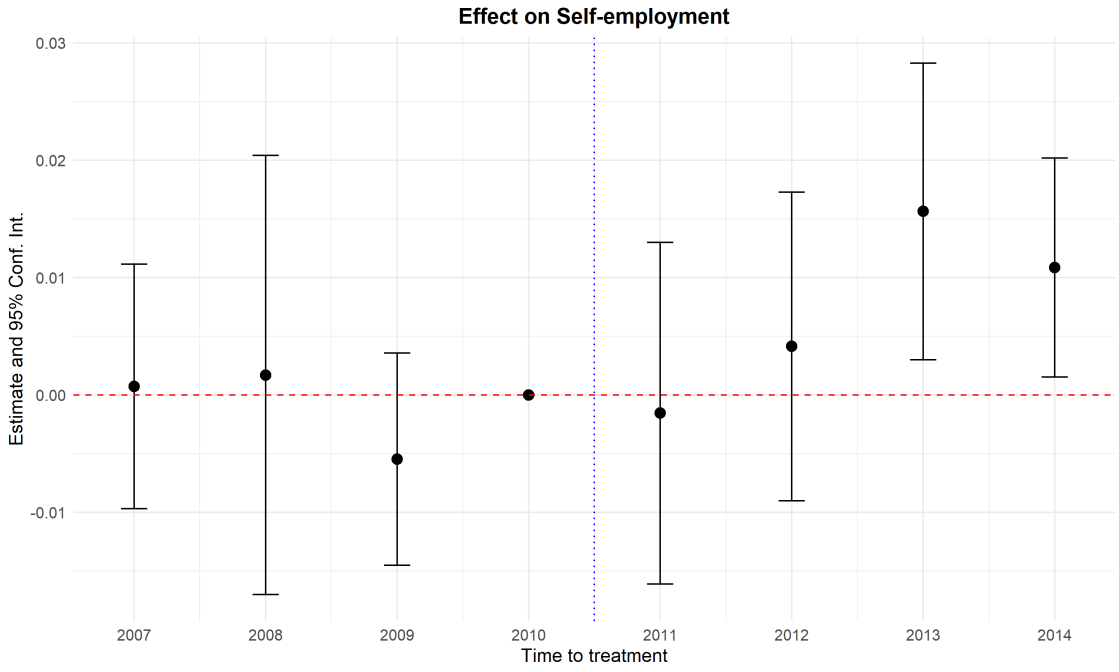
$$\text{Self-Employment}_i = \beta_0 + \beta_1 \widehat{\text{TotalPay}}_i + \beta_2 \widehat{\text{TotalPay}}_i^{\,2} + \alpha_{\text{AGE}(i)} + \delta_{\text{YEAR}(i)} + \sum_j \kappa_j\, \lambda_j(\mathbf{Z}_i) + u_i,$$

where $\widehat{\text{TotalPay}}_i$ and $\widehat{\text{TotalPay}}_i^2$ are the fitted values from equations (5) and (6), respectively.

6 Results

Figure 1 shows the event study plot. For pre-mandate periods, estimates are around zero, with overlapping confidence intervals, suggesting no significant pre-mandate differences between young adults and their older counterparts. Hence, the parallel pre-trend holds and DiD approach is valid. Post-2010, the estimates remain above zero with narrower confidence intervals compared to the pre-mandate period. This indicates a positive effect of the dependent mandate on self-employment rates among young adults. Additionally, there is an upward trend in the estimates post-intervention, suggesting a gradual increase in the effect over time. The marginal significance in 2013 and 2014 ($p < 0.05$) indicates moderate and delayed effects, reflecting the time it takes for young adults to transition into self-employment and for the full impact of the mandate to materialize.

Figure 1: Event Study Plot



For the difference-in-differences estimation, I employ a linear probability model incorporating a range of fixed effects. The baseline specification includes age and year fixed effects. I then create models with different combinations of fixed effects for region, gender, marital status, family size, race, Hispanic ethnicity, educational attainment, and college student status. This process results in a total of 256 distinct model specifications and the benchmark model specification includes all fixed effects.

Table 2 report the results of the difference-in-differences estimation based on the benchmark specification. The estimated DiD coefficient is 0.89 percentage points and is statistically significant at the 1% level. The corresponding implied percentage is 29 percent relative to sample mean of self-employment rate for treated in 2009. This result indicates a significant increase in self-employment rate among young adults after the implementation of the dependent coverage mandate. In other words, entrepreneurship lock exists and is substantial.

Table 2: Difference-in-Differences Estimation

	Dependent Variable:
	Self-employment rate
Treatment	0.892^{***}
	(0.336)
Implied percentage change	25.935
Fixed Effects	Yes
Observations	47,125
Adj. R^2	0.02

Note: *p<0.1; **p<0.05; ***p<0.01
Fixed effects include age, year, region, gender, marital status, family size, race, Hispanic ethnicity, educational attainment, and college student status. Robust standard errors clustered two way by age and year are given in parentheses.

Figure 2 presents the specification curve analysis of the treatment effect estimates across 256 model specifications. The blue line indicates specifications where the estimated treatment effect is statistically significant at the 5% level, while gray lines indicate non-significant estimates. The red dashed vertical line highlights the benchmark model specification. The treatment effect estimates are sorted by effect size. The heat map displayed at the bottom of the figure shows which fixed effects are included in each specification:

black cells indicate that a given fixed effect is included, while white cells indicate exclusion. Overall, the results demonstrate that the estimated effect is consistently positive and robust to alternative modeling choices.

Figure 2: Specification Curve

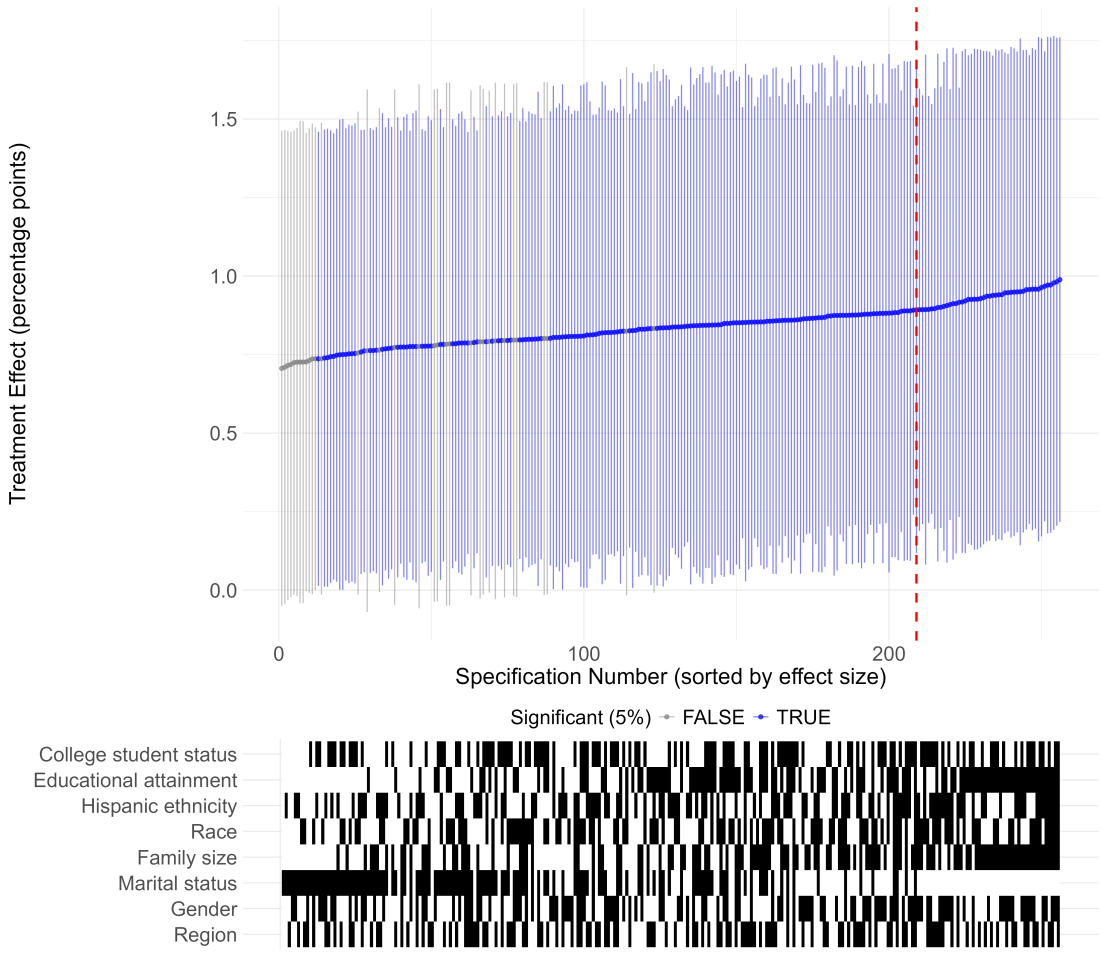


Table A1 presents the results of a placebo test, in which I re-define the treated group as individuals aged 27–34 and the control group as those aged 35–42. Since neither of these age groups was affected by the dependent coverage mandate, any estimated treatment effect in this specification would likely reflect spurious trends rather than the policy itself. Consistent with the identification strategy, the coefficient on the placebo treatment is effectively zero, and the large standard errors indicate substantial noise in the data. These findings support the validity of the main results by showing that no significant changes

in self-employment are detected when comparing age groups that should not have been influenced by the policy. This reinforces the interpretation that the mandate genuinely promotes self-employment among the actual treated population.

Thus far, the evidence suggests that the dependent coverage mandate increased self-employment among young adults. The conceptual framework predicts that if this increase is driven by the risk-protection value of insurance (rather than a simple subsidy), we should observe heterogeneous treatment effects based on individuals' risk preferences. In particular, risk-averse individuals and those with a high demand for health insurance should be the most responsive. In contrast, risk-tolerant individuals may choose entrepreneurship regardless of health insurance coverage (Kihlstrom and Laffont, 1979; Hvide and Panos, 2014; Skriabikova et al., 2014).

Table 3, Columns 1 and 2 present the results of this mechanism analysis. In Column 1, risk-averse individuals are found to be 1.5 percentage points less likely to be self-employed compared to their risk-tolerant counterparts, aligning with previous research indicating that higher risk aversion deters entrepreneurship. Crucially, the interaction term between treatment and risk aversion shows that the treatment effect is 1.6 percentage points higher for risk-averse individuals compared to those who are not risk-averse. In fact, the treatment effects are entirely driven by risk-averse young adults. This suggests that these individuals factor expected out-of-pocket medical expenses into their self-employment decisions; with health insurance coverage reducing financial uncertainty, they are significantly more likely to start a business.

In Column 2, I interact treatment with the demand for health insurance. High demand for health insurance often indicates high health risk and potential medical expenses, serving as a proxy for risk aversion. Similar to the results above, those with high demand for health insurance are 2.5 percentage points less likely to be self-employed than those with low demand. However, the interaction term is positive (1.5 percentage points) and significant, indicating that individuals with high demand are significantly more encouraged to become self-employed post-mandate. The treatment effects are entirely driven by this subgroup. Therefore, the dependent coverage mandate is effective precisely because it mitigates concerns about uncertain medical expenses for those who value insurance most.

Table 3: Heterogeneity Analysis: Behavioral Factors

	Risk Aversion	Health Insurance Demand
	(1)	(2)
Treatment	0.062	0.081
	(0.342)	(0.551)
Behavioral Factor	-1.478***	-2.498***
	(0.210)	(0.408)
Treatment × Factor	1.590***	1.463***
	(0.162)	(0.478)
Fixed Effects	Yes	Yes
Observations	45,937	45,937
Adj. R^2	0.020	0.022

Note: *p<0.1; **p<0.05; ***p<0.01
The dependent variable is the self-employment rate. Risk aversion is coded as 1 for individuals with high risk aversion, and 0 for those with low risk aversion. Health insurance demand is coded as 1 for individuals with high demand, and 0 for those with low demand. Fixed effects include age, year, region, gender, marital status, family size, race, Hispanic ethnicity, educational attainment, and college student status. Coefficients are scaled by 100 and interpreted as percentage points. Robust standard errors clustered two way by age and year are given in parentheses.

These behavioral findings—that the effect is driven by risk-averse agents—strongly point toward the risk-protection channel. To formally test this structural mechanism and distinguish between the subsidy effect and the risk-protection value, I proceed with the 2SLS estimation.

Table 4 reports the results from the two-stage least squares (2SLS) estimation. The first-stage regressions in Columns (1) and (2) yield F-statistics of 42.35 and 11.23, respectively, well above conventional thresholds for instrument relevance. In the second stage (Column 3), the estimated coefficient on instrumented total pay is economically small and statistically indistinguishable from zero, while the coefficient on the squared term is negative and significant at the 1% level. Quantitatively, a one-unit increase in total pay squared is associated with a 1.01 percentage point decline in the probability of self-employment.

These findings map directly onto the predictions of the conceptual framework. It is not subsidy effect per se that drives the increase in self-employment following the mandate. Rather, it is the value of health insurance-particularly its role in reducing financial risk from health shocks—that encourages entrepreneurial entry. Thus, policymakers

should prioritize the expansion of affordable and comprehensive health insurance to encourage entrepreneurial entry. Moreover, it is reasonable to expect that individuals who are more risk averse or who have pre-existing health conditions would exhibit differential responses in total pay and its variance in the first stage. In turn, these differences could lead to varying impacts on self-employment decisions in the second stage. Due to limited statistical power, I do not conduct heterogeneity analysis within the 2SLS framework in this paper.

Table 4: Two-Stage Least Squares (2SLS) Estimates

	Dependent Variable		
	Total Pay	Total Pay^2	Self-Employment Rate
	(1) First Stage	(2) First Stage	(3) Second Stage
Instrument (iv_1 or iv_2)	0.878***	1.050**	
	(0.135)	(0.313)	
Instrumented Total Pay			0.0049
			(0.0377)
Instrumented Total Pay^2			-0.0101***
			(0.0028)
Observations	47,125	47,125	47,125
Fixed Effects	Yes	Yes	Yes
First-Stage F-Statistic	42.35	11.23	

Note: ***p<0.01, **p<0.05, *p<0.1.
Column (1) and (2) report first-stage regressions of total pay and total pay^2 on their respective instruments. Column (3) reports the second-stage 2SLS regression of self-employment on instrumented total pay and its squared term. Fixed effects include age, year, region, gender, marital status, family size, race, Hispanic ethnicity, educational attainment, and college student status. Robust standard errors clustered by age and year pairs are reported in parentheses. Total pay is measured in $1,000s.

For addressing equity concerns, I investigate mandate's differential impact on individuals with pre-existing conditions. Rietveld et al. (2015a) show healthier individuals self-selected into entrepreneurship. Thus, health status plays a crucial role in young adults' self-employment decisions. The dependent coverage mandate expands insurance coverage for young adults, ensuring that those with worse health status do not need to worry about losing insurance when they pursue entrepreneurship. Therefore, less healthy young adults should be more encouraged to create business after introduction

of the mandate. Specifically, I examine heterogeneous treatment effects among young adults with pre-existing conditions, including physical and mental limitations, diabetes, cancer, hypertension, and cardiovascular diseases.

While self-assessed health status is a widely used measure in health economics, it is often considered a biased indicator of an individual's actual health. Li and Stith (2020) show that self-reported health is influenced by behavioral factors, such as the confidence in health status that comes from being insured, and not reflect actual health. Meanwhile, self-assessed health status does not differentiate mental and physical health status. Despite the inconsistency between self-reported health status and lack of separation of physical and mental health status, I use physical component score (PCS) and mental component score (MCS) to measure physical and mental health status.

PCS should be able to provide more precise assessment of one's physical health. MEPS uses Short-Form 12 (SF-12) to ask interviewee about general health, limitations in daily activities and limitations in the past 4 weeks. Physical component score (PCS) measures physical health status and it is computed directly from SF-12. In addition to PCS, MCS measures mental health status more accurately. MCS is also directly computed from SF-12. For both MCS and PCS, higher scores indicate better individual mental or physical health. In this study, I classify individuals with MCS and PCS scores above the median as healthier, while those with scores below the median are considered less healthy.

Table 5, panel A, Column 1 and 2 reports the heterogeneity of treatment effect by physical and mental health. The coefficient on PCS is -0.51 percentage points, indicating that physically healthier individuals are more likely to become self-employed compared to those with physical limitations, which aligns with Rietveld et al. (2015b) and Yoon and Bernell (2013). However, the coefficients for the interaction terms between treatment and PCS, as well as treatment and MCS, are not statistically different from zero. indicating that the mandate's effect on self-employment does not significantly vary by physical or mental health status.

Table 5: Heterogeneity Analysis: Health Conditions

	Panel A: General Health	
	Physical Health	Mental Health
	(1)	(2)
Treatment	0.844***	1.071***
	(0.257)	(0.325)
PCS / MCS	-0.505***	0.027
	(0.189)	(0.092)
Treatment × PCS / MCS	0.14	-0.418
	(0.248)	(0.331)
Fixed Effects	Yes	Yes
Observations	47,125	47,125
Adj. R^2	0.02	0.02

	Panel B: Specific Health Conditions			
	Diabetes	Cancer	Hypertension	Cardiovascular Disease
	(1)	(2)	(3)	(4)
Treatment	0.866***	0.752***	0.699**	0.708**
	(0.328)	(0.28)	(0.319)	(0.359)
Health Condition	-3.794***	-0.815	-1.236***	0.242
	(0.662)	(1.312)	(0.451)	(0.757)
Treatment × Health Condition	4.982**	3.379***	0.523	0.49
	(2.388)	(1.256)	(0.934)	(0.702)
Fixed Effects	Yes	Yes	Yes	Yes
Observations	47,125	37,943	42,368	42,368
Adj. R^2	0.02	0.02	0.02	0.02

Note: ***p<0.01, **p<0.05, *p<0.1.
The dependent variable is the self-employment rate. Diabetes, cancer, hypertension, cardiovascular disease, and smoking are coded as 1 for individuals with the respective condition, and 0 for those without. MCS and PCS variables are encoded as 0 if the score is above the median, and 1 otherwise. Fixed effects include age, year, region, gender, marital status, family size, race, Hispanic ethnicity, educational attainment, and college student status. Coefficients are scaled by 100 and interpreted as percentage points. Robust standard errors clustered two way by age and year are given in parentheses.

Table 5, Panel B reports estimates of the differential impact of the mandate on self-employment by pre-existing conditions. Column (1) and (2) present results for diabetes and cancer, respectively. The coefficient for diabetes suggests that young adults with diabetes are 4 percentage points less likely to pursue entrepreneurship, which is similar to the findings of Tunceli et al. (2005). In contrast, there is no significant difference in

self-employment rates between individuals with and without cancer, as indicated by the coefficient on cancer. The interaction term between treatment and diabetes is positive and statistically significant, with an estimated effect of 5 percentage points. For cancer, the interaction coefficient is also positive and significant, with an estimated effect of 3 percentage points. These results indicate that the introduction of the dependent coverage mandate substantially expands self-employment opportunities for young adults with diabetes and those with cancer, leading to positive distributional results. However, the mandate's effect on self-employment does not differ for individuals with hypertension or cardiovascular disease.

Blume-Kohout (2023) argue that many studies examining the effects of health insurance on entrepreneurship have largely overlooked women. Motivated by this gap, I investigate how the effects of the mandate vary by gender, rather than simply controlling for gender as a fixed effect as in previous specifications. Table 6 reports the differential impacts of the mandate on self-employment rates across gender. The coefficient on Female indicates that, on average prior to 2010, women were 3.2 percentage points less likely than men to engage in entrepreneurship, consistent with existing evidence that women are less likely to pursue self-employment (Cortes and Pan, 2018; Shurchkov and Eckel, 2018). This lower self-employment rate among women is at least partially attributable to higher levels of risk aversion relative to men (Cohen and Einav, 2007).

My earlier results indicate that risk-averse individuals are more likely to enter self-employment after the implementation of the mandate. Since women tend to be more risk-averse, the mandate should lead to a larger increase in self-employment among females compared to males. The coefficient on the interaction term suggests that the mandate's effect on self-employment is substantially larger for young women. Specifically, the estimated additional increase of 2.3 percentage points for females is approximately three times the size of the baseline effect (0.8 percentage points). The mandate has a stronger effect for women, consistent with their greater risk aversion and heightened sensitivity to financial risks associated with health shocks. These findings underscore the role of policies such as the dependent coverage mandate in expanding access to health insurance and, in turn, enhancing economic opportunities for women.

Table 6: Gender Equity Analysis

	Dependent Variable:
	Self-employment rate
Treatment	-0.217
	(0.143)
Female	-3.236***
	(0.329)
Treatment × Female	2.332***
	(0.315)
Fixed Effects	Yes
Observations	47,125
Adj. R^2	0.02

Note: *p<0.1; **p<0.05; ***p<0.01
Fixed effects include age, year, region, gender, marital status, family size, race, Hispanic ethnicity, educational attainment, and college student status. Robust standard errors clustered two way by age and year are given in parentheses.

7 Back-of-the-envelope calculation

To quantify the aggregate economic value of the positive externalities associated with expanding self-employment, I estimate the additional wage income generated through employment spillovers. This approach draws on the methodology of Fairlie et al. (2023). Specifically, each additional self-employed individual is assumed to generate 0.63 additional wage and salary jobs beyond their own employment. According to data from the U.S. Bureau of Labor Statistics, approximately 16.8 million workers were self-employed in June 2025, either as incorporated or unincorporated businesses (U.S. Bureau of Labor Statistics, 2025). I consider a policy intervention—namely, the provision of free health insurance—that is assumed to induce a 26 percent increase in self-employment. This implies an increase of

$$16.846 \text{ million} \times 0.26 = 4.380 \text{ million}$$

newly self-employed individuals.

Applying the estimated employment spillover, the expansion in self-employment is estimated to create an additional

$$4.380 \text{ million} \times 0.63 = 2.759 \text{ million}$$

wage and salary jobs in the local economy. To translate these employment spillovers into economic value, I use the 2023 National Average Wage Index of $66,622 (U.S. Social Security Administration, 2024). The aggregate annual wage income attributable to these spillover jobs is therefore approximately

$$2.759 \text{ million} \times \$66{,}622 \approx \$184 \text{ billion per year}.$$

This figure represents the incremental wage income accruing to other workers as a direct consequence of the policy-induced expansion in self-employment. Because this income does not accrue to the entrepreneurs themselves, it constitutes a positive externality generated by the intervention.

8 Conclusions

This study investigates the impact of the Affordable Care Act's (ACA) dependent coverage mandate on self-employment among young adults, using a difference-in-differences (DiD) approach. The findings demonstrate that the entrepreneurship lock exists and dependent coverage mandate significantly increased self-employment rates among 19–25–year–olds by approximately 26%. These results highlight the importance of decoupling health insurance from employment and ensuring guaranteed access to health insurance in promoting entrepreneurship.

Mechanism checks reveal that these positive effects on self-employment are entirely driven by risk-averse individuals and those with a high demand for health insurance. This behavioral evidence strongly suggests that the policy operates by mitigating the financial uncertainty associated with health shocks. Consistent with this finding, the 2SLS analysis shows that the risk-protection value of health insurance is the dominant mechanism, validating the theoretical prediction that expanding insurance access promotes entrepreneurship by mitigating financial volatility. This distinction carries critical policy

implications: it suggests that policies aiming to promote entrepreneurship should prioritize expanding access to comprehensive health insurance coverage over simple financial transfers.

Further analyses reveal significant distributional effects. The ACA's impact on self-employment is particularly pronounced among young adults with pre-existing conditions, specifically diabetes and cancer. This suggests that the availability of health insurance effectively reduces barriers to entrepreneurship for individuals with higher health risks, leading to positive distributional outcomes. Additionally, the mandate expanded economic opportunities for women, evidenced by a significant rise in female self-employment after its implementation.

In conclusion, the estimates likely understate the full extent of entrepreneurship lock, as substantial effects may also exist for other age groups not captured in the analysis. Given positive externalities associated with entrepreneurial activities, policymakers should consider expanding health insurance coverage across all age groups to further promote business creations.

References

Acs, Z. J. and Audretsch, D. B. (1988). Innovation in large and small firms: An empirical analysis. American Economic Review, 78(4):678–690.

Aghion, P. and Howitt, P. (1992). A model of growth through creative destruction. Econometrica, 60(2):323–351.

Bailey, J. (2017). Health insurance and the supply of entrepreneurs: New evidence from the affordable care act. Small Business Economics, 49(3):627–646.

Barbaresco, S., Courtemanche, C. J., and Qi, Y. (2015). Impacts of the affordable care act dependent coverage provision on health-related outcomes of young adults. Journal of health economics, 40:54–68.

Baumol, W. J. (1990). Entrepreneurship: Productive, unproductive, and destructive. Journal of Political Economy, 98(5):893–921.

Blume-Kohout, M. E. (2023). The affordable care act and women's self-employment in the united states. Feminist Economics, 29(1):174–204.

Blume-Kohout, M. E. (2024). Entrepreneurship lock and the demand for health insurance: Evidence from the us affordable care act. ILR Review, 77(2):199–226.

Cantor, J. C., Monheit, A. C., DeLia, D., and Lloyd, K. (2012). Early impact of the affordable care act on health insurance coverage of young adults. Health Services Research, 47(5):1773–1790.

Chua, K.-P. and Sommers, B. D. (2014). Changes in health and medical spending among young adults under health reform. Jama, 311(23):2437–2439.

Cohen, A. and Einav, L. (2007). Estimating risk preferences from deductible choice. American economic review, 97(3):745–788.

Cortes, P. and Pan, J. (2018). Occupation and gender. The Oxford handbook of women and the economy, pages 425–452.

DeCicca, P. (2010). Health insurance availability and entrepreneurship.

Fairlie, R. W., Kapur, K., and Gates, S. (2011). Is employer-based health insurance a barrier to entrepreneurship? Journal of Health Economics, 30(1):146–162.

Fairlie, R. W., Miranda, J., and Zolas, N. (2023). The Promise and Peril of Entrepreneurship. MIT Press, Cambridge, MA.

Garthwaite, C., Gross, T., and Notowidigdo, M. J. (2014). Public health insurance, labor supply, and employment lock. The Quarterly Journal of Economics, 129(2):653–696.

Glaeser, E. L., Kerr, S. P., and Kerr, W. R. (2015). Entrepreneurship and urban growth: An empirical assessment with historical mines. Review of Economics and Statistics, 97(2):498–520.

Gruber, J. and Madrian, B. C. (1994). Health insurance and job mobility: The effects of public policy on job-lock. ILR Review, 48(1):86–102.

Gruber, J. and Madrian, B. C. (2002). Health insurance, labor supply, and job mobility: A critical review of the literature.

Hahn, Y. and Yang, H.-S. (2016). Do work decisions among young adults respond to extended dependent coverage? ILR Review, 69(3):737–771.

Haltiwanger, J. C., Jarmin, R. S., and Miranda, J. (2013). Who creates jobs? small vs. large vs. young. Review of Economics and Statistics, 95(2):347–361.

Hamersma, S. and Kim, M. (2009). The effect of parental medicaid expansions on job mobility. Journal of health economics, 28(4):761–770.

Heim, B. T. and Yang, L. K. (2017). The impact of the affordable care act on self-employment. Health economics, 26(12):e256–e273.

Holtz-Eakin, D., Penrod, J. R., and Rosen, H. S. (1996). Health insurance and the supply of entrepreneurs. Journal of Public Economics, 62(1-2):209–235.

Hvide, H. and Panos, G. (2014). Risk tolerance and entrepreneurship. Journal of Financial Economics, 111(1):200–223.

IPUMS MEPS (2021). Integrated public use microdata series, medical expenditure panel survey (ipums meps), version 2.1 [data set].

Kihlstrom, R. E. and Laffont, J.-J. (1979). A general equilibrium entrepreneurial theory of firm formation based on risk aversion. Journal of Political Economy, 87(4):719–748.

Li, X. and Stith, S. S. (2020). Health insurance and self-assessed health: New evidence from affordable care act repeal fear. Health Economics, 29(9):1078–1085.

Madrian, B. C. (1994). Employment-based health insurance and job mobility: Is there evidence of job-lock? The Quarterly Journal of Economics, 109(1):27–54.

Madrian, B. C. and Lefgren, L. (1998). The effect of health insurance on transitions to self-employment. American Economic Review, 88(2):286–290.

Murphy, K. M., Shleifer, A., and Vishny, R. W. (1991). The allocation of talent: Implications for growth. Quarterly Journal of Economics, 106(2):503–530.

Niu, X. (2014). Health insurance and self-employment: Evidence from massachusetts. ILR Review, 67(4):1235–1273.

Rietveld, C. A., van Kippersluis, H., and Thurik, A. R. (2015a). Self-employment and health: Barriers or benefits? Health Economics, 24(10):1302–1313.

Rietveld, C. A., van Kippersluis, H., and Thurik, A. R. (2015b). Self-employment and health: Barriers or benefits? Health economics, 24(10):1302–1313.

Schmitz Jr, J. A. (1989). Imitation, entrepreneurship, and long-run growth. Journal of Political Economy, 97(3):721–739.

Shurchkov, O. and Eckel, C. C. (2018). Gender differences in behavioral traits and labor market outcomes. The Oxford handbook of women and the economy, pages 480–512.

Skriabikova, O. J., Dohmen, T., and Kriechel, B. (2014). New evidence on the relationship between risk attitudes and self-employment. Labour Economics, 30:176–184. Special Section articles on "What determined the dynamics of labour economics research in

the past 25 years? edited by Joop Hartog and and European Association of Labour Economists 25th Annual Conference, Turin, Italy, 19-21 September 2013 Edited by Michele Pellizzari.

Sommers, B. D., Buchmueller, T., Decker, S. L., Carey, C., and Kronick, R. (2013). The affordable care act has led to significant gains in health insurance and access to care for young adults. Health affairs, 32(1):165–174.

Tunceli, K., Bradley, C. J., Nerenz, D., Williams, L. K., Pladevall, M., and Elston Lafata, J. (2005). The Impact of Diabetes on Employment and Work Productivity. Diabetes Care, 28(11):2662–2667.

U.S. Bureau of Labor Statistics (2025). Table a-9. selected employment indicators. Employment Situation News Release, June 2025.

U.S. Social Security Administration (2024). National average wage index. Available at: https://www.ssa.gov/oact/cola/AWI.html.

van Praag, C. M. and Cramer, J. S. (2001). The roots of entrepreneurship and labour demand: Individual ability and low risk aversion. Economica, 68(269):45–62.

Wellington, A. J. (2001). Health insurance coverage and entrepreneurship. Contemporary Economic Policy, 19(4):465–478.

Yoon, J. and Bernell, S. L. (2013). The effect of self-employment on health, access to care, and health behavior. Health, 2013.

Yörük, B. K. and Xu, L. (2019). Impact of the ACA's Dependent Coverage Mandate on Health Insurance and Labor Market Outcomes Among Young Adults: Evidence from Regression Discontinuity Design. Eastern Economic Journal, 45(1):58–86.

A Appendix

Table A1: Placebo Test

	Outcome Variable:
	Self-employment rate
Placebo Treatment	-0.058
	(0.613)
Age FEs	Yes
Year FEs	Yes
Region FEs	Yes
Marital Status FEs	Yes
Race FEs	Yes
Hispanic Ethnicity FEs	Yes
Educational Attainment FEs	Yes
In College FEs	Yes
Family Size FEs	Yes
Observations	49,076
R^2	0.009

Notes: This table presents the results of a placebo test using 27–34-year-olds as the treated group and 35–42-year-olds as the control group. Standard errors are in parentheses.