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Abstract

This paper explores the role of public health insurance in small business ownership among immigrants, a group with high rates of entrepreneurship. The Personal Responsibility and Work Opportunity Reconciliation Act of 1996 created a five-year "waiting period" for legal immigrants to receive federal benefits. However, when the State Child Health Insurance Program was passed in the following year, 15 states chose to insure newly-arrived immigrant children with local funds. Using a triple-difference identification strategy, I show that these policies made families with foreign-born members 21% less likely to have uninsured children compared to the pre-policy baseline. These households were also 20% more likely to be self-employed and 28% more likely to own an incorporated business. The increase operates mainly through increases in firm birth rates but survival rates are also higher. The increase in firm ownership comes mostly from families whose children were already insured, suggesting public health insurance increases business ownership by reducing the risks of losing coverage.

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1 Introduction

Economists have long recognized the importance of entrepreneurship to the success of immigrants, and non-native households often have significantly higher rates of self-employment than the native-born population (Borjas, 1986). Immigrants are 30% more likely to start a business than non-immigrants, accounting for nearly 17% of business starts despite making up only 12% of the labor force (Fairlie, 2008), and high-skill immigrants are a particularly important component of the labor force (Pekkala Kerr et al., forthcoming). Self-employed immigrants are more financially successful than their wage-earning counterparts (Lofstrom, 2004), making business ownership an important pathway to economic security. Immigrants also often use social safety net programs at higher rates than the native-born, particularly prior to immigration and welfare reform in the 1990s (Lofstrom and Bean, 2001).

However, no research has explored whether these two facts are related. Safety net programs provide security against income shocks and relax budget constraints for recipients, affecting a household's exposure to risk and asset accumulation. Both of these issues are central concerns for business owners, particularly for entrepreneurs at the low end of the income distribution, which is where most immigrant businesses are located (Lofstrom, 2011). This paper tests whether public health insurance benefits for immigrants encourage business ownership.

To understand how public programs affect immigrant entrepreneurship, I examine the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA). The law restricted access to the safety net by creating a "five-year ban" for newly-arrived legal immigrants to receive federal benefits. When Congress created the State Child Health Insurance program in the following year, 15 states chose to use their own funds to extended child health insurance coverage to new immigrants. Using a triple-difference identification strategy that controls for underlying differences between immigrant and native-born households, pre-existing insurance rates and differences between states, I show that state programs enacted in response to PRWORA reduced the proportion of immigrant children who lack health insurance by 21% (6 percentage points lower than the pre-policy baseline). I also demonstrate that these households were 20% more likely to be self-employed as a result of the policies (an increase of nearly 3 percentage points) and 28% more likely to own an incorporated business (a 1 percentage point increase).

The increase in business ownership is driven mainly by firm survival rates, which increased by 25 percentage points as a result of the policy (a 43% increase from the baseline for immigrant-owned businesses). The self-employment estimates are signifi-

cant mainly for families who had an insured child in the previous year; since there is no evidence that households select out of private coverage—meaning there is no evidence of insurance crowd-out—the results suggest access to public health benefits reduces the risks that immigrant families face when they consider becoming entrepreneurs. There is also some limited evidence that health benefits alleviate credit constraints and allow immigrant households to accumulate collateral for loans.

Finally, there is no evidence that observable characteristics differ between treatment and control groups. The research design also passes a number of falsification tests, including estimation on unaffected populations and in different time periods.

The rest of the paper is organized as follows. Section 2 reviews the literature on immigrant entrepreneurship, details the history of PRWORA, SCHIP and the state immigration programs, and describes the data. Sections 3 and 4 describe the identification strategy and present the results. Section 5 conducts a series of falsification tests on unaffected populations and time periods, and section 6 concludes.

2 Background

Immigrants have high rates of entrepreneurship relative to native-born citizens. Among households with foreign-born members, 12.4% report some self-employment, compared to 11.7% for native-born households. The gap is particularly large at the low end of the income distribution: for households in the bottom two quintiles, self-employment rates are 6.7% for native households and 8.2% for those with foreign-born members. Immigrants-owned businesses also make up a disproportionately amount of the total number of firms. Though families with foreign-born members make up 15.8% of households, they comprise 16.5% of those that are self-employed.[1]

Households with foreign-born members also tend to have higher rates of public program enrollment, even when controlling for income differences. For example, among households in the bottom two quintiles, immigrants are 30% more likely to use Medicaid and 18% more likely to receive unemployment insurance than native-born families, though they are equally as likely to use SNAP (previously known as Food Stamps) and TANF (often called "welfare"). This paper tries to understand if these two stylized facts are related: do public benefits encourage immigrants to become entrepreneurs?

[1] Author's calculations using CPS data from 1994-2010.

Previous literature.

No previous studies have examined this question directly, though there is a growing literature on immigrant and minority entrepreneurs. In an early seminal contribution, Borjas (1986) finds that self-employment rates among immigrants are higher than for native-born individuals and are increasing over time. He also finds that immigrant entrepreneurs often have higher income than native-born business owners, and that migrant groups are more likely to become self-employed over time as they assimilate and accumulate savings. These increases may be driven in part by enclave effects, in which self-employment is more likely among immigrants when they live in in communities of other migrants from their country.

Lofstrom (2004) finds that self-employed immigrants have better labor market outcomes and higher incomes than wage-earning immigrants, even when controlling for selection into entrepreneurship. Lofstrom (2011) demonstrates that self-employment is particularly high for immigrants at the lower end of the income distribution. Fairlie and Woodruff (2010) find that low entrepreneurship rates among Mexican-born immigrants is almost entirely attributable to lower levels of human capital accumulation and barriers to financial access. Without these differences, they predict self-employment rates among Mexican immigrants would be higher than the native-born population.

There is also a literature related to immigrant welfare receipt. Lofstrom and Bean (2001) find that welfare enrollment rates are higher for immigrants than native-born households, but that the gap narrowed following welfare reform in 1996. However, they also argue that the majority of the drop is explained by improving labor market conditions and the greater sensitivity of immigrant businesses to macroeconomic conditions. Borjas (2001) argues that much of welfare reform's impact on immigrant enrollment in federal programs was undone by a combination of state policies and higher rates of naturalization.

Finally, there are several papers on other types of minority business owners that do not focus exclusively on immigrants. For example, Fairlie and Robb (2007) examine the role of self-employment experience and human capital in black-owned businesses as an explanation for differential success. Addressing the role of public policy in promoting entrepreneurship, Chatterji et al. (Forthcoming) estimate the effect of contract reservations for minority-owned businesses in the 1980s and finds a significant increase in black self-employment rates.

PRWORA and SCHIP.

When Congress passed the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) in 1996, immigrants arriving later than August of that year were barred from receiving federally-funded benefits. This restriction is lifted for naturalized citizens, but federal law requires a minimum residence of five years before an immigrant can apply for naturalization, so PRWORA essentially created a five-year "waiting period" for receipt of federal benefits. Though PRWORA only discontinued eligibility for a relatively small subset of the immigrant population, there is some evidence of discouragement from program participation as a result of the law. These so-called "chilling effects" can reduce immigrant enrollment in public programs beyond what would be predicted by changes in eligibility (Fix and Passel, 1999).

In 1997 Congress passed the State Child Health Insurance Program (SCHIP) with the aim of expanding healthcare coverage among uninsured children. Because the program was structured similarly to Medicaid, state funds were matched by federal dollars, which in turn could not be used to provide insurance to newly-arrived immigrants. However, 15 states chose to dip into their own coffers in order to extend coverage to immigrants, whereas the remaining states allowed only native-born families and past immigrants to enroll.

The implementation of SCHIP was rapid, with all states establishing plans within three years and several million enrollees by 1999. The program now insures around 7 million children, but only in 15 of the states were new migrants included in their ranks. The ban on federal funding for children and pregnant women was lifted in 2009, but between 1997 and 2009 immigrants were barred from enrolling in SCHIP except in states that explicitly funded this coverage.

Data.

The data for this analysis come from non-farm households in the Current Population Survey (CPS) March supplement files. Variables are aggregated to the household level, and cover data collected between 1994 and 2009. The CPS only began asking questions about immigrant status in 1994, so earlier years cannot be included in the analysis. I also do not include data from later than 2009 because starting in that year the federal rules were amended to allow pregnant women and children who had been in the country less than five years to receive healthcare benefits. Finally, the analysis is confined to households with children.

Information on immigrant access to state SCHIP initiatives comes from Fortuny and

Chaudry (2011).[2] Data on the threshold levels and implementation years for state SCHIP programs comes from Rosenbach et al. (2001), Mathematica Policy Research's first annual report to the US Department of Health and Human Services on SCHIP implementation.[3] Seventeen states adopted both a Medicaid expansion and a separate state health insurance program, so I use the threshold levels and enrollment dates from the separate program since the Medicaid expansions tended to be much smaller and more restrictive.

3 Identification Strategy

In order to isolate the effect of the state policies, I implement a triple-difference identification strategy that allows for (i) differences between states that adopted the immigrant policy and those that did not, (ii) differences in households over time, and (iii) differences between households with foreign-born members and those without any. Econometrically this means estimating

$$Y_{ist} = \beta_0 + \beta_1 \cdot Policy_s Post_{st} Foreign_{ist} + \beta_2 \cdot Policy_s Post_{st} + \beta_3 \cdot Policy_s Foreign_{ist} + \beta_4 \cdot Post_{st} Foreign_{ist} + \beta_5 \cdot Policy_s + \beta_6 \cdot Post_{st} + \beta_7 \cdot Foreign_{ist} + \nu_s + \eta_t + \gamma \cdot t\nu_s + \varepsilon_{ist} \quad (1)$$

where $Policy_s$ is an indicator for whether the state is one of the 15 that allowed newly-arrived immigrants to receive child healthcare benefits; $Post_{st}$ is an indicator for whether the year is after the date SCHIP was enacted;[4] and $Foreign_{ist}$ is an indicator for the household having a foreign-born individual. The variables ν_s, η_t and $\gamma \cdot t\nu_s$ are state and year fixed effects and state-specific time trends, respectively. The set of outcomes variables that stand in for Y_{ist} include several measures of a household's child healthcare coverage and self-employment status.

The coefficient on the triple-interaction term $Policy_s Post_{st} Foreign_{ist}$ represents changes in the outcome variable during the post-policy period among households with foreign-born members who reside in the policy states, net of any changes in native-born households and any underlying differences between states. If household characteristics would have followed the time path of families with native-born children in non-policy states in the ab-

[2]The fifteen states that funded child health insurance for new immigrants are Alaska, California, Delaware, District Of Columbia, Hawaii, Illinois, Massachusetts, Minnesota, Nebraska, New Jersey, New Mexico, New York, Pennsylvania, Virginia and Washington.

[3]The report is available at http://www.mathematica-mpr.com/PDFs/schip1.pdf.

[4]This is defined for all 50 states and the District of Columbia, since each of them developed some form of SCHIP or Medicaid expansion during the late 1990s.

sence of the policies, β_1 also identifies the causal treatment effect of the program.

Visualization.

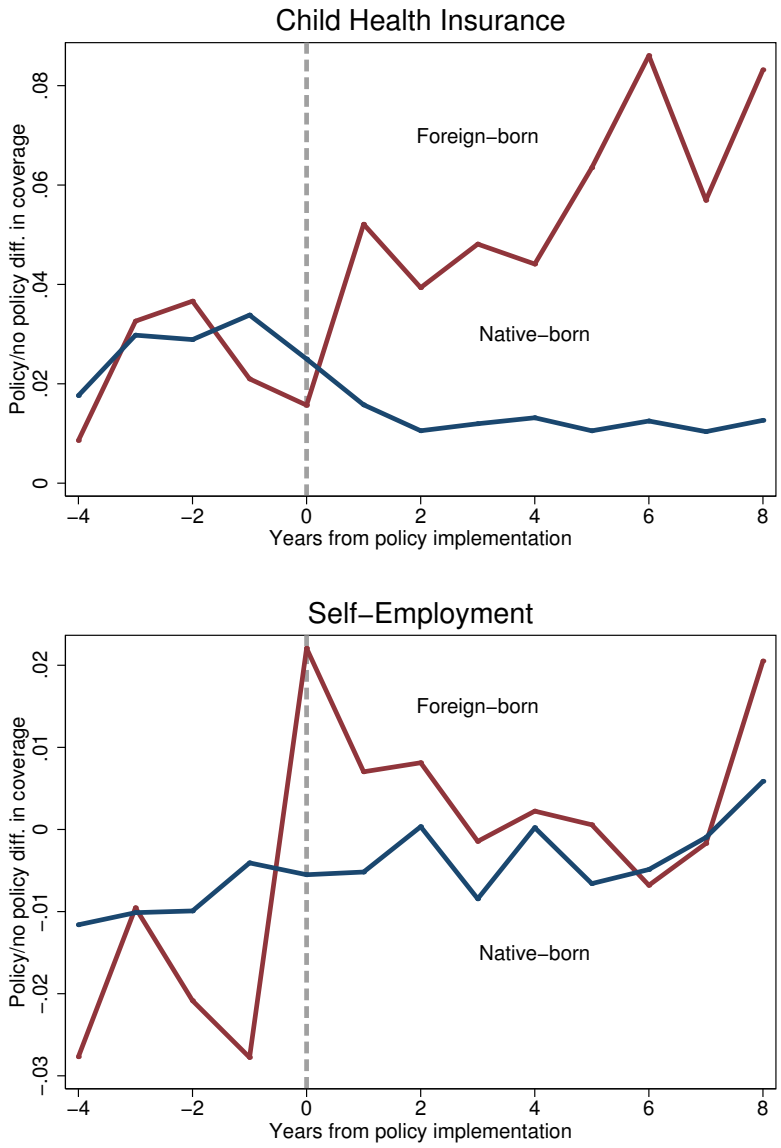
It is difficult to visualize the way triple-difference approaches use the data to identify treatment effects because there are three dimensions of comparison. Figure 1 tries to provide some intuition by plotting the average differences in child health insurance status between states that adopted policies to give immigrants access and those that did not, separately for households with foreign-born members and those without any. These average differences are computed for each year with respect to the date the child healthcare policy was enacted, with years greater than or equal to zero representing post-policy data. This method removes one of the three comparisons, effectively projecting the data into a two-dimensional space. Flattening the data in this way makes visual inspection easier, since the result is closer to a basic difference-in-differences set-up: the outcomes can be plotted separately for the "treated" (foreign-born) households and the "control" (native-born) households over time.

The upper panel of Figure 1 shows the results for child health insurance status. Starting in the first year after the policy was adopted, the gap in healthcare coverage between states that adopted the policies for immigrants and those that did not begins to rise, but only in foreign-born households. These households much higher rates of child health insurance coverage relative to those that did in states with the immigrant policy during the decade following SCHIP's creation, whereas coverage for native-born households is the same in policy and non-policy states, both before and after the program began.

The lower panel in Figure 1 does the same for self-employment status of households, and the patterns are similar. Starting in the year of policy adoption, self-employment rates increased in states with immigrant healthcare policies relative to those without, and this increase was confined to families with foreign-born members. This increase seems only to hold for the first six years after the policy, after which the gap between the two groups of states seems to have stabilized, though the foreign-born level is still higher relative to its level before the policy was enacted while the native-born level is not.

There are several reasons that the self-employment rate among families with non-citizen children began increasing in the year that SCHIP was enacted whereas health insurance coverage only began rising the following year. First, there is some evidence of recall bias with health insurance variables in the CPS: responses to questions on income and employment tend to reflect household experiences in the previous calendar year, whereas health insurance coverage is much closer to a point-in-time measure (Davern et

Figure 1: Raw Data



al., 2007). This would cause a one-year mismatch in responses for a given household, since the reported self-employment status should be matched with the health insurance response in the previous year. Using lagged health insurance status produces a picture very similar to the lower panel of Figure 1, with the increase in healthcare coverage occurring at zero (not shown). In addition, all of the empirical results presented in Section 4 are robust to using lagged health insurance as the outcome variable, although the results are noisier since the sample size is restricted to households with records that can be matched over time.

Second, it is possible that labor market decisions are made in anticipation of future healthcare benefits, in which case self-employment might increase even before insurance status had changed. This is particularly relevant when the primary channel through which public insurance affects employment is by reducing the risks of medical debt rather than alleviating credit constraints. Households who are eligible for the program may have higher self-employment rates because they consider public insurance to be a backup option rather than because they anticipate enrolling in the near future. If this were the case, the program's implementation would change the level of risk a household faces when owning a business, which may induce entry into self-employment even when insurance status does not change. Section 4 talks about the potential mechanisms in more detail.

Overall Figure 1 tells a story in which both child health insurance status and self-employment increased in states that allowed immigrants to receive child healthcare benefits relative to those that did not, and this increase occurred only after SCHIP was implemented and only in foreign-born households.

4 Results

This section implements the triple-difference strategy described in Equation (1), which essentially translates the effects shown in Figure 1 into point estimates. Table 1 shows the results for two measures of child health insurance coverage. Columns (1)-(3) use the presence of a child who has health insurance as the outcome variable, with and without state and year fixed effects, state-specific time trends, and a list of demographic and economic covariates (see Table 5 for a complete list). The estimates suggest that state policies allowing newly-arrived legal immigrants to receive healthcare benefits increase child healthcare coverage by around 5 percentage points. Twenty-three percent of households with foreign-born members lacked health insurance coverage for all of their children, so the effect represents a 21% drop in the number of uninsured immigrant children.

Table 1: Health Insurance

Dependent Variable:	Child Health Insurance			Child Medicaid Coverage		
	(1)	(2)	(3)	(4)	(5)	(6)
$Policy \cdot Post \cdot Foreign$	0.0535**	0.0496**	0.0477**	0.0332*	0.0256+	0.0381**
	(0.0116)	(0.0125)	(0.0121)	(0.0134)	(0.0148)	(0.0140)
Fixed Effects/Trends	No	Yes	Yes	No	Yes	Yes
Covariates	No	No	Yes	No	No	Yes
Observations	448,300	448,300	444,751	448,300	448,300	444,751
R-squared	0.023	0.036	0.090	0.006	0.026	0.331

OLS, triple-difference estimation. Fixed effects/trends include time and state FE and state-specific linear trends. See Table 5 for a list of covariates. Data: CPS 1994-2010. ** 0.01, * 0.05, + 0.1.
Robust standard errors clustered at the state level in parentheses.

Using changes in SCHIP enrollment directly is not an option for this identification strategy, since all outcome variables must be defined before the policy was enacted. However, since many states chose to expand their Medicaid enrollment instead of (or in addition to) creating separate SCHIP programs, changes in the pool of Medicaid beneficiaries may provide additional evidence of the policy's effect. Columns (4)-(6) in Table 1 repeat the specifications from before using child Medicaid coverage as the dependent variable. The estimates imply an increase in Medicaid coverage for children of 3.8%, which is a 16% increase from the pre-policy coverage rate of 24% among families with foreign-born members.

Table 2 repeats the specifications using different measures of entrepreneurship as the outcome variables. Columns (1)-(3) uses and indicator for whether the household has a self-employed member, and the estimates suggest an increase in business ownership of nearly three percentage points. Around 13% of families with foreign-born members report having a self-employed person, so the point estimates represent a 20% increase in the number of immigrant entrepreneurs.

Recent research draws a distinction between "entrepreneurs" and the "self-employed" in terms of tolerance for risk, potential for expansion and likelihood of success (Levine and Rubinstein, 2013). Entrepreneurs are much more likely to be incorporated than the self-employed, and incorporation is often used as a measure of a venture's quality. Columns (4)-(6) address these concerns by using an indicator for incorporated business ownership as the outcome variable. The results are all significant, and the estimates imply a 28% increase in the number of incorporated businesses (from a pre-policy baseline of

Table 2: Self-Employment

Dependent Variable:	Self-Employed			Incorporated		
	(1)	(2)	(3)	(4)	(5)	(6)
$Policy \cdot Post \cdot Foreign$	0.0272**	0.0258**	0.0230**	0.0111*	0.0114*	0.0108*
	(0.0086)	(0.0085)	(0.0083)	(0.0050)	(0.0048)	(0.0047)
Fixed Effects/Trends	No	Yes	Yes	No	Yes	Yes
Covariates	No	No	Yes	No	No	Yes
Observations	448,300	448,300	444,751	448,300	448,300	444,751
R-squared	0.000	0.005	0.050	0.001	0.006	0.049

OLS, triple-difference estimation. Fixed effects/trends include time and state FE and state-specific linear trends. See Table 5 for a list of covariates. Data: CPS 1994-2010. ** 0.01, * 0.05, + 0.1.
Robust standard errors clustered at the state level in parentheses.

4%). These marginal effects are larger than the average treatment effect for all businesses, meaning the policy also shifted the distribution of immigrant-owned businesses toward incorporated firms. One interpretation of this shift is that the policy increased the average quality of immigrant businesses, and that new entrants were disproportionately high-quality entrepreneurs.

Mechanisms.

One way to understand the mechanism through which public benefits influence immigrant business ownership is to identify which households are most affected by the policy. Table 3 separates the treatment effect on self-employment by a variety of lagged household characteristics, using the specification from column (2) in Table 2. Columns (1) and (2) split the sample by whether the household previously owned a business. The point estimates indicate a 2.9 percentage point increase in the yearly firm birth rate, a 47% increase from the pre-policy baseline of 6.2% per year. Firm survival rates also increased by 4 percentage points, though this result is not statistically significant and is a smaller marginal effect (an increase of around 6%). While these are generally new firms, most of these businesses are in families who already had employed members rather than unemployed households, as shown in columns (3) and (4).

The two primary channels through which a health insurance program might affect self-employment are risk and credit. Eligibility for public health insurance reduces a household's exposure to consumption shocks, since these programs reduce the probability of

Table 3: Business Source

	New Business		Employed in $t-1$		Kids insured in $t-1$	
	No	Yes	No	Yes	No	Yes
Panel A	(1)	(2)	(3)	(4)	(5)	(6)
$Policy \cdot Post \cdot Foreign$	0.0404	0.0291+	-0.0698	0.0519**	0.0387	0.0586**
	(0.0495)	(0.0146)	(0.0503)	(0.0177)	(0.0412)	(0.0181)
Observations	13,908	76,834	4,361	86,381	8,912	81,830
R-squared	0.015	0.003	0.031	0.007	0.023	0.007

	Income Quintile				
	1st	2nd	3rd	4th	5th
Panel B	(7)	(8)	(9)	(10)	(11)
$Policy \cdot Post \cdot Foreign$	0.0143	0.0337*	0.0368*	-0.00119	0.0284
	(0.0108)	(0.0126)	(0.0161)	(0.0174)	(0.0353)
Observations	89,660	89,664	89,774	89,561	89,641
R-squared	0.008	0.009	0.007	0.006	0.011

Dependent variable is presence of self-employed member. OLS, triple-difference estimation.
Data: CPS 1994-2010. ** 0.01, * 0.05, + 0.1. Time/state FE and state trends included.
Robust standard errors clustered at the state level in parentheses.

accruing medical debts (Baicker et al., 2013). This reduction is particularly acute for households considering self-employment, since starting a business may force a family to leave employer-sponsored coverage. Eligibility for benefits reduces the risk associated with leaving wage employment, which may induce some households to enter self-employment when they would otherwise not. The credit channel, on the other hand, refers to the change in a household's asset holdings once it begins to receive benefits. Public coverage reduces out-of-pocket medical expenditures, which increases a household's disposable income may allow it to accrue collateral to be used for business loans. By relaxing a credit constraint, public programs may facilitate entry into entrepreneurship.

Columns (5) and (6) in Table 3 try to isolate the risk channel by allowing the treatment effect to vary by previous insurance status. Previously uninsured families receive both a change in their exposure to risk and a shock to their budget constraint, conflating the two effects. However, families that already had insured children experience only a change in risk, since they do not receive healthcare benefits. The large and significant coefficient in column (6) suggests the risk channel is important: even foreign-born families who already had health insurance experienced an increase in business ownership if they lived in states that made them eligible for coverage.

In order to interpret this result as arising from the risk channel, it is important that households not selectively leave private plans in order to obtain public insurance. Some amount of turn-over is expected, since families may lose coverage for reasons outside of their control. This would only mean that some portion of the effect in column (6) should be attributed to the credit channel, but the large coefficient for the insured relatively to the uninsured cannot be explained without an independent risk channel. More concerning is insurance *crowd-out*, meaning privately-insured families select into SCHIP coverage. If this were the case, the large effect in column (6) could be explained by an influx into public healthcare accompanied by changing budget constraints, so that separately identifying the risk channel would be impossible. However, I find no evidence that foreign-born households are less likely to be on private plans as a result of the program; that is, there does not appear to be any insurance crowd-out (see Table A3.2 in the appendix).[5]

Finally, the lower panel of Table 3 tries to understand the importance of the credit channel. Credit constraints are more likely to bind at lower incomes, so heterogeneity by household income might shed light on their presence. Columns (7)-(11) break down the population by income quintiles; the treatment effects are largest and significant for the 2nd and 3rd quintiles. However, the lowest quintile results are insignificant (though positive),

[5]This contrasts with a large literature that finds insurance crowd-out to be very large; for example, see Cutler and Gruber (1996), Sasso and Buchmueller (2004) and Gruber and Simon (2008).

and the effects are positively related to income for the bottom three groups rather than the negatively relationship predicted by credit constraints. Overall the results are weakly consistent with a credit channel but the findings are mixed.

5 Falsification Tests

An important consideration for causal inference is the match between treatment and control groups. Does the triple-difference strategy pick up only changes related to the policy, or are there other differences in the population that move with treatment status?

One way to check for these differences is to examine the sensitivity of the results to the inclusion of covariates. If the inclusion of demographic controls explains much of the variance in the outcome variable but leaves the treatment effect unchanged, it is more likely that treatment is orthogonal to household characteristics, which provides a more convincingly causal picture. If, on the other hand, covariates induce wild swings in the size or significance of estimates, treatment status cannot be considered exogenous and differences between treated and control households could reflect either causal effects or underlying differences between the groups. First, note that the estimates in Tables 1 and 2 do not vary by much. The health insurance results change by 11% between columns (1) and (3), and the child Medicaid results change by 15%. Similarly, the self-employment and incorporation coefficients change by 11% and 5%, respectively. Second, including covariates leads to a large increase in the amount of variance explained by the model. Even conditional on state and year fixed effects and state-specific time trends, adding covariates increases the R-squared in the health insurance and Medicaid results by 3-fold and 13-fold, respectively. The self-employment and incorporation estimates account for 10 times and 6 times more of the data, respectively, when including covariates.

Another natural way check covariate balance between treatment and control groups is to repeat the estimation procedure using demographic characteristics as the outcome variables. These characteristics could not have changed as a result of the policy (or are very unlikely to differ), so significant estimates would indicate important differences between treatment and control groups and a potential source of bias. Table 5 carries out this procedure using each of the 21 household-level observable characteristics used as controls in the earlier results. Only two of the 21 variables (9.5%) are significant at the 5% level and only three (14.3%) are significant at 10%, which is fairly close to the levels predicted by random assignment. While this procedure cannot rule out selection on unobservables, it is a stronger finding than robustness to observables, since it directly tests selection on observables. Rather than relying on the assumption that assignment

Table 4: Covariate Balance

Dependent Variable:	*Black*	*Hispanic*	*Household Size*	*Age*	*Married*	*Moved*	*Urban*
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
$Treat \cdot Post \cdot Foreign$	-0.00969	0.000484	-0.0166	0.281	0.00687	-0.00532	-0.0182
	(0.00902)	(0.0248)	(0.0730)	(0.288)	(0.00976)	(0.00738)	(0.0163)
Observations	448,300	448,300	448,300	448,300	448,300	448,300	445,079
R-squared	0.096	0.331	0.034	0.013	0.070	0.063	0.218
Dependent Variable:	*Renter*	*High School Degree*	*Bachelor's Degree*	*Graduate Degree*	*Unemployment Insurance*	*Disability Benefits*	*Veteran's Benefits*
	(8)	(9)	(10)	(11)	(12)	(13)	(14)
$Treat \cdot Post \cdot Foreign$	-0.0158	0.0395+	0.0174	0.00825	-0.00769	-0.0009	-0.00141
	(0.0141)	(0.0212)	(0.0119)	(0.00679)	(0.00697)	(0.00337)	(0.00226)
Observations	448,300	447,972	447,972	447,972	448,300	448,300	448,300
R-squared	0.040	0.112	0.034	0.015	0.013	0.001	0.003
Dependent Variable:	*Child Support*	*Social Security*	*Welfare (TANF)*	*Medicare*	*Elderly*	*Children*	*Income*
	(15)	(16)	(17)	(18)	(19)	(20)	(21)
$Treat \cdot Post$	0.00439	0.0127*	-0.00685	0.00986	0.0143*	-0.0258	-1,025
	(0.00706)	(0.00585)	(0.0103)	(0.00713)	(0.00541)	(0.0567)	(2,175)
Observations	448,300	448,300	448,300	448,300	448,300	448,300	448,300
R-squared	0.015	0.005	0.026	0.006	0.009	0.011	0.056

OLS, triple-difference estimation. Time/state FE and state trends included. Data: CPS 1994-2010. Column name is dependent variable.
** 0.01, * 0.05, + 0.1. Robust standard errors clustered at the state level in parentheses.

is random conditional on observables—meaning that conditioning on observables is sufficient to control for selection—the implicit assumption here is that a research design that produces no evidence for selection on observables should also produce no selection on unobservables—meaning the absence of observable selection is informative about selection on unobservables.

Another set of falsification tests relies on the policy's timing. If the changes in health insurance and self-employment are being driven by the policy, there should be no changes in these outcomes for other time periods during which no policy was enacted. Figure 2 explores these falsification checks in more detail by plotting the significance of "treatment effects" for policies in which post-policy status is incremented one year at a time from the true value. Each estimate uses a two-year rolling bandwidth to see when the most significant jump in the outcome variables occurred; the upper panel plots the t-statistics on $Policy \cdot Post \cdot Foreign$ for child health insurance, and the lower panel does the same for self-employment status. The health insurance results are only significant for the year after the policy was enacted, with the t-statistic fluctuating around zero for all other years. Similarly, the self-employment results peak only once and fall off into insignificance in both directions. The fact that self-employment increased most noticeably one year before the increase in healthcare coverage is consistent with either a risk channel that encourages business ownership by promising the security of future benefits, or with simple recall bias that causes households to report point-in-time coverage rather than insurance status in the previous year (Davern et al., 2007).

If the self-employment effect is actually being driven by differential access to the child health insurance program for newly-arrived immigrant families, restricting the sample to households who were unaffected by the policy should produce no effects on business ownership. In certain circumstances particular subsets of the immigrant population are afforded access to Medicaid regardless of length of stay (refugees and asylum-seekers, for example); these households should be relatively unaffected by the policy because they already have access to public programs. Column (1) in Table 5 restricts the sample to households who previously received any Medicaid benefits, and the results are insignificant and much smaller than the earlier estimates. Immigrants who are veterans, on active duty or dependents of a service-member also have access to public healthcare through the TRICARE program (formerly called CHAMPUS), so military families should be unaffected by the policy since their insurance situation does not change. Column (2) restricts the sample to households receiving veterans' benefits, and the negative and insignificant result is consistent with the falsification check.

Finally, defining "foreign-born" households in such a way that excludes criteria im-

Figure 2: Falsification Tests

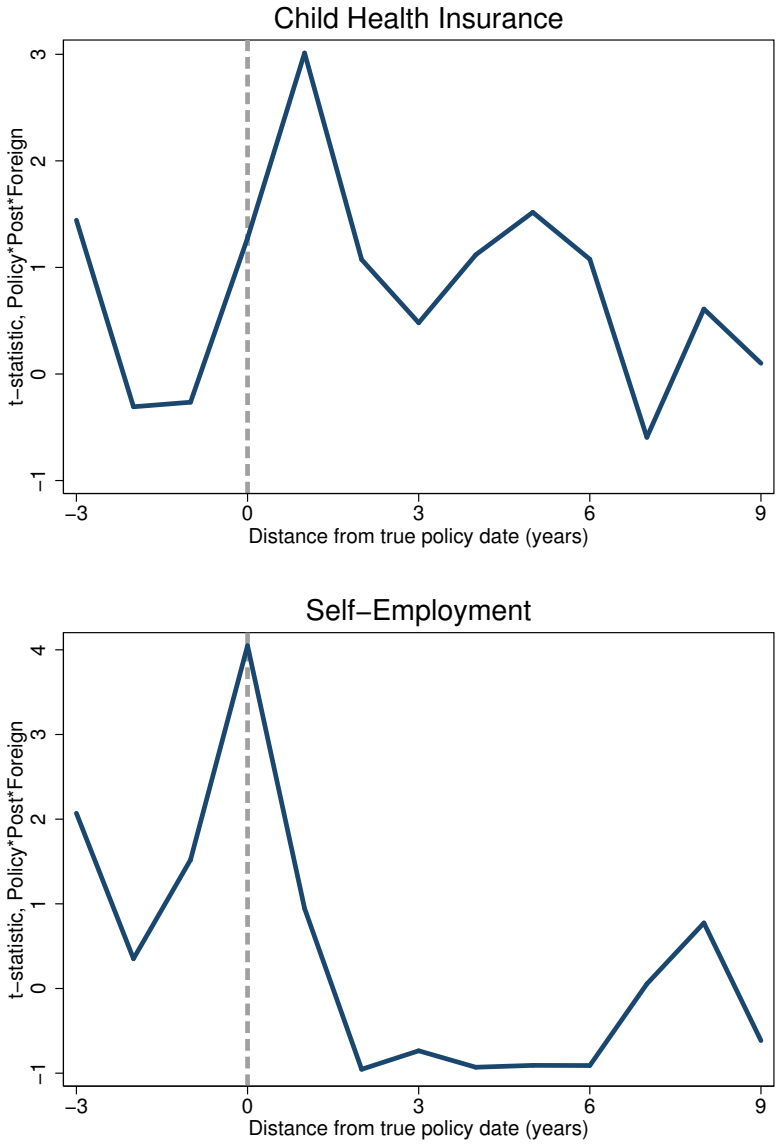


Table 5: Falsification Tests

	Sample Restriction		Definition of "Foreign"			
	Medicaid in $t-1$	Vet. Ins. in $t-1$	Foreign, citizen	Foreign, citizen kid	Non-citizen >5 years	Non-citizen without kids
	(1)	(2)	(3)	(4)	(5)	(6)
$Policy \cdot Post$	0.00887	-0.0917	0.0222	0.0151	0.0133	0.00547
$\cdot Foreign$	(0.0289)	(0.0613)	(0.0141)	(0.0452)	(0.0107)	(0.00606)
Observations	20,557	3,590	448,300	448,300	448,300	1,081,439
R-squared	0.015	0.038	0.006	0.005	0.005	0.004

Dependent variable is presence of self-employed member. OLS, triple-difference estimation.
All specifications include time and state FE and state-specific linear trends. Data: CPS 1994-2010.
** 0.01, * 0.05, + 0.1. Robust standard errors clustered at the state level in parentheses.
Column (1) restricts the sample to households with children on Medicaid in the previous year.
Column (2) restricts the sample to households with children previously on veteran's insurance (TRICARE/CHAMPUS).
Column (3) defines foreign-born status as having a foreign-born member in the household but no non-citizens.
Column (4) defines foreign-born status as having a foreign-born child in the household but no non-citizen children.
Column (5) defines foreign-born status as having a non-citizen in the household but no migrants newer than five years.
Column (6) defines foreign-born status as having a non-citizen in the household but no children.

portant for the causal mechanism should also produce no change in self-employment. Column (3) in Table 5 defines foreign-born status as an indicator for having a foreign-born household member but no non-citizens; since citizens are eligible for public health insurance in all states, there is no reason to expect a change in self-employment for this group, and the estimate supports this conclusion. Column (4) defines foreign-born as an indicator for having a foreign-born child in the household but non non-citizens, and the results are similar. Column (5) uses an indicator for having non-citizens in the household but no individuals who have been in the country fewer than five years; since these families are not subject to the five-year ban, they should not experience any change in eligibility and no increase in self-employment. The point estimates are also insignificant for this group. Finally, column (6) uses the full sample of households from the CPS—including those without children—and defines foreign-born households as those with a non-native member but no children. Since the policies allowing immigrants to receive benefits is specific to the State Child Health Insurance Program, childless households should be unaffected by state-level funding during the five-year ban. As expected, the estimates are very small and insignificant, even with the increased power of a larger dataset. Even the largest point estimates of these four columns is lower than the smallest estimate in Table 2, and most of values are less than half of the earlier estimates.

6 Discussion

This paper examines the role that public health insurance plays in small business ownership among immigrants. I use state-level policy variation in immigrant access to public programs created in response to the Personal Responsibility and Work Opportunity Reconciliation Act's five-year ban on federal benefits, as well as the State Child Health Insurance Program, a large-scale healthcare initiative. I show that families with foreign-born members are 21% less likely to have uninsured children compared to the pre-policy baseline in states where new migrants had access to public benefits relative to those that did not. These households were also 20% more likely to be self-employed and 28% more likely to own an incorporated business as a result of SCHIP and the state immigration policies. The increase operates mainly through increases in firm birth rates, though survival rates are also higher.

The triple-difference identification strategy strongly balances treatment and control groups, and there is no evidence that observables differ between these groups or that there was selection on observables. The results also survive a number of falsification tests, including fake policies created at different dates, sample restrictions to unaffected

populations and tests using foreign-born households who do not benefit directly from the program. Finally, there is no evidence that public insurance access crowded-out private coverage for households with foreign-born members.

The effects are most significant among families whose children were already insured; since there is no evidence of insurance crowd-out, this result suggests access to public health insurance increases business ownership by reducing the risks of entering entrepreneurship. There is also some limited evidence that the policies relaxed credit constraints for immigrant households and allowed would-be entrepreneurs to accumulate savings and collateral.

Entrepreneurship is a key path to financial success for immigrants: foreign-born households are more likely to own a business than their native-born counterparts, and immigrant-owned businesses make up a disproportionately large number of firms. Public programs can encourage firm formation by reducing the risks of leaving wage employment, and this paper demonstrates that access to public healthcare benefits encourages business creation among immigrants. These findings highlight an important component of immigrant entrepreneurship and suggest a new set of considerations when designing immigration policy.

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Appendix

Table A3.1: Summary Statistics

Variable	Description	Obs.	Mean	Std. Dev.
Child Health Insurance	Has insured child	448,300	.8932701	.3087698
Child Medicaid Coverage	Has child covered by Medicaid	448,300	.2392505	.4266264
Self-Employed	Has self-employed member	448,300	.1429355	.3500075
Incorporated	Has an incorporated business	448,300	.0486661	.2151692
Income	Total household income ($)	448,300	66,635.02	65,936.89
Black	Has black family member	448,300	.1336761	.3403044
Hispanic	Has Hispanic family member	448,300	.1972318	.3979092
Household Size	Household size	448,300	3.99257	1.268085
Age	Household average age	448,300	24.34562	7.529006
Married	Has married members	448,300	.6871822	.4456469
Moved	Moved in the last year	448,300	.1599504	.3571447
Urban	Lives in urban area	445,079	.7852583	.4106435
Renter	Rents domicile	448,300	.3196743	.4663509
High School	Has member with high school degree	447,972	.8539317	.3072115
Bachelor's Degree	Has member with college degree	447,972	.3393851	.4119552
Graduate Degree	Has member with graduate degree	447,972	.081141	.2263708
Unemployment	Receives unemployment insurance	448,300	.0788824	.2695555
Disabled	Receives disability benefits	448,300	.010832	.1035119
Veteran	Receives veterans benefits	448,300	.0128374	.1125727
Child Support	Receives child support payments	448,300	.1209926	.3261191
Social Security	Receives Social Security benefits	448,300	.0824069	.2749839
Welfare (TANF)	Receives welfare (TANF) benefits	448,300	.0530248	.2240831
Medicare	Receives Medicare benefits	448,300	.0662503	.2487194
Elderly	Has elderly (>65) member	448,300	.0428418	.2025007
Children	Number of children (<18)	448,300	1.897644	.9961742
Year	Reference year for household	448,300	2001.997	4.752416
Policy Year	Year SCHIP was enacted	448,300	1998.224	.6420324
Policy	State provided child health ins.	448,300	.3867946	.4870165
Post	Post-policy (Year $\geq$ Policy Year)	448,300	.7728998	.4189583
Foreign	Household has foreign-born member	448,300	.1989761	.3992305

Table A3.2: Crowd-out

Dependent Variable:	Child Private Health Insurance			Any Private Health Insurance		
	(1)	(2)	(3)	(4)	(5)	(6)
$Policy \cdot Post \cdot Foreign$	0.0380+	0.0399	0.0140	0.0271+	-0.0537	0.0431*
	(0.0193)	(0.0610)	(0.0310)	(0.0138)	(0.0412)	(0.0178)
Y_{t-1} value	—	0	1	—	0	1
Observations	139,383	5,963	16,916	448,300	19,133	71,609
R-squared	0.060	0.060	0.028	0.038	0.023	0.016

Dependent variable is presence of self-employed member. OLS, triple-difference estimation.
All specifications include time and state FE and state-specific linear trends. Data: CPS 1994-2010.
** 0.01, * 0.05, + 0.1. Robust standard errors clustered at the state level in parentheses.