E-Verify Mandates and Immigrant Health Insurance[*]

Brandyn F. Churchill[a]
Vanderbilt University
Department of Economics

November 2019

[*] The author thanks Christopher S. Carpenter, Timothy M. Diette, Andrew Goodman-Bacon, Michelle Marcus, Andrea Moro, and seminar participants at Vanderbilt University and the APPAM CA Regional Conference for useful comments and suggestions on an earlier draft of this manuscript. The author does not have any funding source to disclose. All remaining errors are my own.
[a] Corresponding author: brandyn.f.churchill@vanderbilt.edu, 540.817.9499. Department of Economics, Vanderbilt University, VU Station B #351819, 2301 Vanderbilt Place, Nashville, TN, 37235-1819.

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Abstract

President Trump wants to deny entry to immigrants who cannot prove that they will obtain health insurance within their first 30 days in the US, citing concerns that immigrants are less likely to be insured and, consequently, increase costs for American citizens. At the same time, the administration is exploring policies likely to impede immigrants' access to health insurance, such as mandating all employers use an electronic work eligibility verification system. In this paper, I show that state E-Verify mandates reduce the probability that likely-unauthorized immigrants have private health insurance by 2 percentage points. Meanwhile, naturalized citizens are shifted from public to private insurance, though only if they do not reside in a mixed-status household. However, imposing additional costs on unauthorized immigration may be seen as a feature and not a bug by those favoring more stringent immigration enforcement, regardless of who ultimately pays the bill.

Keywords: Health Insurance; E-Verify; Immigrant Policy
JEL: I130; I180; J610

1 INTRODUCTION

On October 4th, 2019, President Trump issued a proclamation denying entry to immigrants who are unable to prove that they will obtain health insurance within 30 days of arriving in the US. In the proclamation, the administration argues that immigrants are less likely than natives to be insured and will therefore drive up costs for American citizens (White House 2019). The immigrant population is indeed large; in 2017, there were 44.5 million immigrants in the United States, nearly a quarter of whom are estimated to be unauthorized (Migration Policy Institute 2019). Additionally, nearly a quarter of lawful permanent residents and over 40 percent of unauthorized immigrants lack health insurance (KFF 2017). While the Trump administration works to reduce the number of uninsured individuals entering the country, it is important to consider how other immigration policies supported by the administration may drive up health care costs.

Immigrants disproportionately rely on the labor market for health insurance, due to restrictions on public insurance for new authorized arrivals and unauthorized immigrants (Borjas 2003). Yet the Trump administration is considering a nationwide mandate compelling the use of an electronic work eligibility verification system (White House 2017; White House 2018). By damaging unauthorized immigrants' labor market prospects—and access to their only source of insurance—this policy would likely exacerbate an already critical problem.

In this paper, I show that state-level E-Verify mandates reduce the probability that likely-unauthorized immigrants have private health insurance, a result driven by a reduction in employer-sponsored insurance. I also find evidence that naturalized citizens in mixed-status households are less likely to have insurance. At the same time, there is no change in overall coverage for naturalized citizens not residing in mixed status households, though they appear to

shit off of public insurance and onto private insurance. Finally, I find evidence that E-Verify mandates are associated with reductions in the self-reported health of likely-unauthorized immigrants.

This paper contributes to the literature on immigrants' access to health insurance (Borjas 2003; Buchmueller et al. 2008; Bronchetti 2014; Dillender 2017), as well as a growing body of work on how E-Verify mandates affect likely-unauthorized immigrants (Amuedo-Dorantes and Bansak 2014; Bohn et al. 2014; Orrenius and Zavodny 2015; Orrenius and Zavodny 2016). It also contributes to a broader literature on the relationship between immigration enforcement and public benefit programs (Fix and Passel 1999; Borjas 2001; Borjas 2003; Kandula et al. 2004; Bitler and Hoynes 2011; Watson 2014; Amuedo-Dorantes, Arenas-Arroyo, and Sevilla 2018; East 2019).

The rest of this paper proceeds as follows: Section 2 discusses existing work on E-Verify, as well as the literature on immigrants and health insurance. The data, methods, and summary statistics are discussed in Section 3. Section 4 then presents results, considering the three channels through which E-Verify mandates may affect the probability that likely-unauthorized immigrants have health insurance. Finally, Section 5 discusses broad conclusions and opportunities for future work.

2 EXISTING LITERATURE

Since 2007, nine states have implemented laws requiring all employers to utilize E-Verify, and an additional fourteen states require public employees or contractors to be screened through E-Verify. Proponents argue that these mandates can reduce the flow of unauthorized immigrants (or induce return migration), while also benefitting citizen workers. For instance, Congressman

Lamar Smith (R-Texas) stated, "E-Verify is the most effective deterrent to illegal immigration because it shuts off the jobs magnet and saves jobs for hardworking Americans" (CNN 2018).

2.1 E-Verify and Employment

The Immigration Reform and Control Act of 1986 barred firms from knowingly hiring or employing unauthorized immigrants. However, uneven enforcement (Reyes et al. 2002) did little to stem the flow of unauthorized labor into the United States (Amuedo-Dorantes and Bansak 2014). A decade later, the Illegal Immigration Reform and Immigrant Responsibility Act of 1996 established the Basic Pilot program. Now known as E-Verify, this program compares information from a new hire's Form I-9 against databases maintained by the Social Security Administration and Department of Homeland Security, helping employers assure they hire authorized workers (Stumpf 2012). E-Verify was made available to select states beginning in 1997, with all states having access by 2003 (Orrenius and Zavodny 2015).

Growing evidence indicates that E-Verify mandates are harmful to unauthorized immigrants. Bohn, Lofstrom, and Raphael (2014) found that the 2007 Legal Arizona Workers Act reduced the fraction of the state's population comprised of Hispanic non-citizens, while several other authors have found that E-Verify mandates damage the employment and wage prospects for likely-unauthorized workers. For instance, Amuedo-Dorantes and Bansak (2014) found that E-Verify mandates reduced the employment rate of likely-unauthorized immigrants and improved the job prospects of those competing with unauthorized labor. Bohn and Lofstrom (2013) found reductions in wage-and-salary employment for non-citizen Hispanics, but did not find evidence of positive spillovers for US natives. In contrast to these papers, Orrenius and Zavodny (2015) did not find evidence of employment reductions. They did, however, find that

E-Verify mandates reduced hourly earnings for likely-unauthorized immigrants while improving labor market outcomes for some US citizens.

2.2 Immigrants and Health Insurance

The 1996 Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) barred lawful permanent residents (LPRs) from most means-tested programs during their first five years in the US. Borjas (2003) found that the PRWORA eligibility changes did reduce Medicaid participation, though affected immigrants compensated by increasing their labor supply to gain employer-sponsored insurance. However, a number of papers suggest that there is less crowd-out for immigrant children (Currie 2000; Kaushal and Kaestner 2005, 2007; Lurie 2008). Royer (2005) found that PRWORA-related eligibility changes led to reductions in prenatal care among pregnant immigrant women without affecting birth outcomes.

Under PRWORA, states had the option to offer these LPRs public insurance, though they could not use federal money until 2002. After this point, limited funds were available for prenatal care through the SCHIP "unborn child" option, and these funds were expanded in 2009 through the SCHIP reauthorization bill (Bitler and Hoynes 2011). Bronchetti (2014) examined these state actions to restore access to public health insurance. She found that expanded eligibility increased take-up of public insurance among immigrant children, resulting in greater health care utilization and improved health.

In addition to reductions expected mechanically from changes in eligibility, there is a growing awareness that hostile policy environments may exacerbate reductions in program take-up (Fix and Passel 1999; Borjas 2001; Kandula et al. 2004). For example, the PRWORA-induced reductions in Medicaid participation could not be entirely explained by eligibility changes,

leading Borjas (2003) to attribute disproportionate response to chilling effects. Sommers (2010) found that the Deficit Reduction Act (DRA) of 2005, which imposed citizenship documentation requirements on Medicaid applicants, reduced the share of adult immigrants enrolled in Medicaid, though the overall adult insurance rate was not affected.

There is also evidence that some unauthorized immigrants forgo health care visits due to fears of interacting with law enforcement officers (Núñez and Heyman 2007; Heyman et al. 2009). Watson (2014) found that increased federal immigration enforcement lowered Medicaid participation among children with immigrant mothers, while also decreasing (increasing) the probability that these children were reported to be in *Very Good Health* (*Poor Health*). Similarly, Alsan and Yang (2018) found that county participation in the Secure Communities program reduced the probability that a Hispanic citizen utilized means-tested benefit programs, such as SNAP and SSI.

3 DATA, MEASURES, AND METHODS

Because unauthorized immigrants are unlikely to disclose their status, I follow the literature and use a series of characteristics to identify those who are "likely-unauthorized." Using a difference-in-differences framework, I first find that the implementation of an E-Verify mandate is associated with a reduction in the probability of having private insurance. I then examine all non-citizen immigrants and interact the mandate indicators with an indicator for being likely-unauthorized. Doing so, I am able to test whether E-Verify mandates help likely-authorized immigrants at the expense of their likely-unauthorized counterparts. I also examine naturalized citizens and white non-Hispanic natives.

3.1 Data and Measures

I obtain information on health insurance coverage from the 2008-2016 American Community Surveys (ACS) and the 2000-2016 Current Population Survey's Annual Social and Economic Supplement (ASEC), both extracted from the IPUMS-USA database (Ruggles et al. 2018; Flood et al. 2018). To determine state E-Verify legislation, I first consulted the National Council of State Legislatures (2015) and Urban Institute (2017). I then determined specific implementation dates from examining each piece of legislation. These bills and dates are listed in Table 1, while Figure 1 shows the 9 states which have ever implemented a universal E-Verify mandate (darker color) and the 14 states which have implemented at most a public mandate (lighter color). Two indicator variables, $UNIVERSAL_{st}$ and $PUBLIC_{st}$, are constructed from monthly data. First, a state-year-month indicator takes on the value of 1 if a mandate was implemented for at least half the month. If a state has a mandate for at least 6 months, it is coded as having a mandate in year *t*.

In Table 2, I present summary statistics for E-Verify coverage and the main dependent variables.[1] While the ACS does not contain information on authorization status, 71 percent of unauthorized immigrants come from Mexico or Central America and almost all have low educational attainment (Migration Policy 2015). Moreover, they are primarily prime-age (Passel and Cohn 2010) and are prohibited from receiving government benefits (Warren 2014; Borjas 2017; Borjas and Cassidy 2019). Therefore, this paper considers a person "likely-unauthorized" if s/he is between the ages of 18 and 45, has at most a high school degree, was born in Mexico or Central America, does not report receiving public health insurance, and is not currently a citizen. All remaining non-citizen immigrants are considered "likely-authorized." Using this

[1] Summary statistics for the additional covariates are reported in Table A1.

classification, approximately 30 percent of adult non-citizen immigrants are likely-unauthorized. I also present descriptive statistics for naturalized citizens and white non-Hispanic natives.

Nearly 10 percent of likely-unauthorized immigrants reside in a state with a universal E-Verify mandate compared to only 6 percent of likely-authorized individuals, though they are equally likely to reside in a state implementing a public E-Verify mandate. This suggests that states may implement universal E-Verify mandates in response to large unauthorized populations. Consistent with prior work, likely-unauthorized immigrants are far less likely to be insured than the other groups; only 22 percent of likely-unauthorized immigrants have health insurance, compared to over 60 percent of both likely-authorized non-citizens and naturalized citizens. This difference is somewhat by construction; a likely-unauthorized immigrant cannot receive public health insurance, while over 15 percent of likely-authorized non-citizens and naturalized citizens receive public health insurance.

3.2 Potential Channels

An E-Verify mandate may directly reduce the probability that an unauthorized immigrant has health insurance through the *employment channel*. The literature has identified a negative relationship between the implementation of an E-Verify mandate and likely-unauthorized immigrants' labor market outcomes. If the affected individuals would have otherwise enrolled in employer-sponsored insurance, the overall coverage rate will fall. This is especially true for the population targeted by E-Verify, since unauthorized immigrants are generally ineligible for public insurance. However, the employment channel can also affect naturalized citizens and native-born children residing in mixed-status households.

As a highly visible form of immigration enforcement, E-Verify may also chill the take-up

of public insurance. A hostile policy environment may discourage individuals in mixed-status households from applying for public benefits, to avoid drawing attention to their unauthorized loved ones. Similarly, unauthorized mothers may be less inclined to enroll their native-born citizen children in public health insurance. Therefore, the *chilling effect* of an E-Verify mandate may reduce the probabilities that likely-authorized immigrants and native-born children have public insurance.

Finally, E-Verify mandates may affect the *composition* of a state. Faced with diminished labor market outcomes and a hostile policy environment, unauthorized immigrants may simply choose to leave a state (Bohn et al. 2014; Orrenius and Zavodny 2016). If these individuals would otherwise have lost insurance due to the implementation of a mandate, any estimated reductions in the probability of having insurance will be attenuated.

3.3 Empirical Strategy

I begin by implementing the following event-study specification on the sample of likely-unauthorized immigrants:

$$\text{Insurance}_{ist} = \alpha + \sum_{j=-4, j\neq -1}^{j=4} \beta_j D_{st}^{j} + \mu \text{PUBLIC}_{st} + \eta_{Pre} + \eta_{Post} + \theta_s + \tau_t + \varepsilon_{ist} \quad (1)$$

where Insurance_{ist} is an indicator for whether person, *i*, in state, *s*, had insurance in year, *t*. D_{st}^{j} is an indicator for whether state, *s*, had adopted a universal E-Verify mandate *j* periods from year *t*. Similarly, η_{Pre} and η_{Post} are indicators for observations occurring outside the balanced sample window. Equation (1) also includes an indicator for whether a state had implemented public E-Verify mandate, time-invariant state fixed effects, θ_s, and state-invariant year fixed effects, τ_t. Robust standard errors are clustered at the state level (Bertrand et al. 2004).

Using an event-study specification allows me to examine whether the probability that

likely-unauthorized immigrants were insured was trending prior to the implementation of an E-Verify mandate. Though less efficient than the traditional difference-in-differences estimator, it imposes no assumptions about how the treatment effect varies over time. This is especially important in light of recent work on the mechanics of difference-in-differences. Goodman-Bacon (2018) showed that the difference-in-differences estimator with variation in treatment timing can be decomposed into a weighted average of all two-group/two-period difference-in-differences estimators. Because states treated in one period serve as control states in the subsequent period, the difference-in-differences estimate will be biased if the effect size increases over time. Critically, the author also demonstrated that identification is not entirely due to the treatment, but is also driven by covariate variation.

Following the event-study results, I next utilize the standard difference-in-differences framework, shown in equation (2), where $UNIVERSAL_{st}$ indicates whether the state had implemented a universal E-Verify mandate in a given year, while $PUBLIC_{st}$ indicates whether a state had implemented a public mandate.

$$Insurance_{ist} = \alpha + \beta_1 UNIVERSAL_{st} + \beta_2 PUBLIC_{st} + \mathbf{H'_{st}\phi} + \mathbf{E'_{st}\rho} + \mathbf{B'_{st}\pi} + \mathbf{X'_{ist}\gamma} + \theta_s + \tau_t + \varepsilon_{ist} \quad (2)$$

The sample is restricted to likely-unauthorized immigrants, so that β_1 identifies the relationship between insurance and the implementation of a universal mandate and β_2 does the same for the implementation of a public mandate. As mentioned above, recent work cautions against the inclusion of unnecessary covariates, because they inadvertently contribute to identification (Goodman-Bacon 2018). Mindful of this fact, I explore the sensitivity of my estimates to a variety policy, business cycle, and demographic controls (Gelbach 2016).

Because a number of states were concurrently expanding immigrant access to public health insurance, $\mathbf{H'_{st}}$ includes several immigrant-related health policy controls. For instance, in

2016, 18 states allowed unauthorized pregnant women access to Medicaid, while 32 states extended these benefits to newly arrived pregnant lawful permanent residents who would otherwise have been ineligible. Equation (2) also controls for whether states offered Medicaid to lawful permanent resident children during the five-year ban, public health insurance for all lawful permanent residents during the five-year ban, or public health insurance to unauthorized immigrant children. Finally, $\mathbf{H'}_{st}$ includes controls for whether a state offered food assistance for lawful permanent resident children during the five-year ban, as well for whether a state expanded Medicaid as part of the Affordable Care Act (Urban Institute 2017).

$\mathbf{E'}_{st}$ includes controls for additional state-level enforcement measures implemented over the same period. These include whether some or all of the counties with the highest immigrant population had entered into 287(g) agreements with the Department of Homeland Security. Under this program, local law enforcement officers are deputized and charged with arresting and detaining those suspected of immigration violations (Capps et al. 2011). $\mathbf{E'}_{st}$ also controls for whether the state had begun participating in the Secure Communities program, through which biometric information of arrestees is checked against a DHS database of legal immigrants (Miles and Cox 2014). These policy measures were obtained from the Urban Institute's Immigration Policy Resource (2017).

The vector $\mathbf{B'}_{st}$ controls for state-level business cycle characteristics, including the natural log of the number of initial unemployment claims in the state during the year, the natural log of the real value of residential building permits in the state, and the natural log of the real value of state product per capita. Given that many immigrants work in low-wage occupations, $\mathbf{B'}_{st}$ also includes the real value of the effective state minimum wage (Orrenius and Zavodny 2008; Churchill and Sabia 2019). Finally, equation (2) also controls for individual level demographic

characteristics, $\mathbf{X'_{ist}}$, including whether an individual is of Hispanic origin, male, proficient in English, or married, as well as indicator variables for each age between 18 and 64 (Dillender 2017).

4 Results

I begin by plotting the event-study coefficients from equation (1) in Figure 2, while the exact coefficients and tests of joint-significance are reported in Table 3.[2] As shown in panel (a), the probability that a likely-unauthorized immigrant was employed was not trending downward prior to the implementation of a universal E-Verify mandate. However, once the mandate was implemented, this probability fell by approximately 3 percentage points.

Similarly, panel (b) shows that the probability that a likely-unauthorized immigrant had private health insurance was unrelated to whether a state eventually implemented a universal E-Verify mandate. Indeed, it is not possible to reject the null hypothesis that the pre-implementation coefficients are jointly equal to zero. However, after implementation of a universal E-Verify mandate, this probability falls by 3-5 percentage points, and we can reject the null hypothesis that the post-implementation coefficients are jointly equal to zero at the 1 percent level. Moreover, we can reject the null hypothesis that the pre-implementation coefficients are equal to the post-implementation coefficients.

4.1 Difference-in-Difference Estimates

[2] Because the ACS data begins in 2008, it is impossible to identify the leading terms for Arizona, Mississippi, and Utah. In order to have a balanced panel and assure that the effects are not driven by the entry of these three states at j=0, these states are excluded.

In Table 4, I assume that the relationship between the implementation of an E-Verify mandate and likely-unauthorized immigrants' private health insurance coverage is time invariant. Using a traditional difference-in-differences framework, I find that the implementation of a universal mandate is associated with a 2.5 percentage point reduction in the probably that likely-unauthorized immigrants have private insurance, while the public mandate coefficient is smaller in magnitude and less significant (column 1). This is consistent with evidence that universal mandates are more detrimental than public mandates to the labor market prospects of unauthorized immigrants (Amuedo-Dorantes and Bansak 2012).

I next test how the inclusion of a variety of covariates affects these estimated relationships. While only 80 percent as large as the estimate from the prior column (-0.020** vs. -0.025**), the universal mandate coefficient remains large and statistically significant; the implementation of a universal mandate is associated with a 2 percentage point reduction in the probability that likely-unauthorized immigrants have private insurance (column 2). Meanwhile, the public mandate coefficient is halved and loses statistical significance (-0.007 vs. -0.014*). Using the order invariant conditional decomposition proposed by Gelbach (2016), I show that these differences are not due to controlling additional immigration enforcement measures or business cycle characteristics. [3] Instead, the differences are driven by policies improving likely-unauthorized immigrants' access to public health insurance (column 3).

This point is interesting because unauthorized immigrants are generally ineligible for public health insurance. During this sample period, only D.C. broadly permitted unauthorized

[3] The Gelbach decomposition demonstrates which covariates are responsible for the reduction in the coefficient of interest between the two specifications. For example, including the full set of controls reduces the estimated magnitude of the universal mandate coefficient by 0.5 percentage points. Correcting for business cycle characteristics explains 0.2 percentage points, and would change the coefficient from -0.025 to -0.023. However, adjusting for demographic characteristics would raise the estimate from -0.025 to -0.027. Due to rounding error, the sum of the differences explained by each component differs slightly from the full difference (-0.006 vs. -0.005).

immigrants to apply for public insurance, while some states made allowances for pregnant women. Indeed, in adapting the residual methodology of Warren and Passel (1987)—which underpins the official DHS estimates of the unauthorized population—Warren (2014) and Borjas and Cassidy (2019) classify an immigrant as legal if s/he receives "Social Security benefits, SSI, Medicaid, Medicare, or Military Insurance." [4] Similarly, Passel and Cohn (2014) presume that individuals receiving government benefits requiring citizenship or legal residency are authorized immigrants. In Table A2, I utilize this residual algorithm and continue to find a 2 percentage point reduction in the probability that a likely-unauthorized immigrant has private insurance.[5]

In Table A3, I present a more granular version of the decomposition and show that 80 percent of the gap explained by the health policy covariates is attributed to whether a state offered public health insurance to unauthorized immigrant children, a policy unlikely to directly affect likely-unauthorized adults. However, in Figure A1 I drop all observations where an unauthorized immigrant child is able to obtain public health insurance, and then I iteratively exclude every observation from the states (CA, DC, IL, MA, NY, WA) which ever permit this to occur. I continue to find that a universal mandate is associated with a 1.5-2 percentage point reduction in the probability that likely-unauthorized immigrants have private health insurance.[6]

[4] The code used by Borjas and Cassidy (2019) is generously available on Borjas's website. The authors construct an algorithm to identify unauthorized individuals using the same methodology utilized by the Department of Homeland Security. They classify foreign-born persons as legal immigrants if they (a) arrived before 1980; (b) are citizens; (c) receive Social Security benefits, SSI, Medicaid, Medicare, or Military Insurance; (d) are veterans, or currently in the Armed Forces; (e) work in the government sector; (f) reside in public housing or receive rental subsidies, or are the spouse of a person who resides in public housing or receives rental subsidies; (g) were born in Cuba; (h) work in an occupation requiring some form of licensing (such as physicians, registered nurses, air traffic controllers, and lawyers); and (i) are married to a legal immigrant or citizen.

[5] Similarly, in Table A4 I adopt an alternative specification which interacts the E-Verify variables with an indicator for being likely-unauthorized when using a sample of non-citizen immigrants, and I test an additional likely-unauthorized criterion which excludes the public health insurance restriction. I continue to find a 2-5 percentage point reduction in the probability of having private insurance.

[6] In Table A5, I explore how the estimates change using alternative specifications, such as failing to control for the implementation of a public mandate (column 1), including indicators for birthplace (column 2), and the inclusion of region-specific linear time trends (column 3). I also focus solely on states ever implementing any E-Verify mandate (column 4) and implementing a universal mandate (column 5). In Table A6, I test whether the effects vary by sex

I next conduct a series of falsification tests on groups unlikely to be negatively affected by the implementation of an E-Verify mandate.[7] In Table 5, I begin by examining the entire sample of non-citizen immigrants. I do not find any evidence that E-Verify mandates are associated with changes to the probability that non-citizen immigrants have private health insurance (column 1). The result is unique to likely-unauthorized immigrants (column 2).[8] I next consider how E-Verify mandates affect naturalized citizens comparable to likely-unauthorized immigrants. Specifically, I examine individuals born in Mexico or Central America, who are between 18 and 45 years old, have at most a high school degree, and report being naturalized citizens. Though insignificant, the point estimates suggest E-Verify mandates may benefit this group (column 4). Reassuringly, the estimates for white non-Hispanic natives are small and insignificant (column 5).

To assuage concerns that the results are driven by a particular state, I plot the universal and public mandate coefficients obtained after the iterative exclusion of each of the treatment states in Figure 3. I continue to find that the implementation of a universal mandate results in a 2 percentage point reduction in the probability that a likely-unauthorized immigrant has private

and marital status. Using equation (1) both married and unmarried men experience a 2-3 percentage point reduction in the probability of having private insurance after the implementation of a universal mandate, though the estimates are insignificant for unmarried men. Similarly, married women are 3 percentage points less likely to have private insurance after the implementation of a mandate, while the point estimate for unmarried women is large, positive, and insignificant. One explanation is that married women are more likely to receive health insurance through their husband's work, and that E-Verify mandates are more likely to affect the employment outcomes of likely-unauthorized men (Amuedo-Dorantes and Bansak 2012).

[7] E-Verify mandates may improve outcomes for those competing with unauthorized labor, so that the falsification tests could generate non-zero outcomes. In any event, these estimates should not be negative.

[8] In Table A7, I test how the results change with the inclusion of state-specific time trends. These state-specific linear time trends multiply the state fixed effects with a variable TREND which takes on the value of 1 in 2008, 2 in 2009, up through 9 in the year 2016. The point estimates are smaller in magnitude and the standard error for the universal coefficient is 30 percent larger. However, recent work cautions against the inclusion of state specific trends. By decomposing the difference-in-differences framework with variation in treatment timing into a weighted average of all two-group/two-period difference-in-differences estimators, Goodman-Bacon (2019) shows that state specific trends increase the weight placed on states treated at the panel's extremes. Importantly, they underestimate the treatment effect if it varies over time.

insurance, while the public mandate coefficients are smaller in magnitude and statistically insignificant.

4.2 Employment Effects

Having shown that E-Verify mandates reduce the probability that likely-unauthorized immigrants have health insurance, I explore the mechanism in Table 6. I find that the implementation of an E-Verify mandate reduces the probability that a likely-unauthorized is employed by approximately 2 percentage points (Panel I column 1). The results suggest a reduction in household income (Panel I column 2) and an increase in the probability of living below 150 percent of the Federal Poverty Level (Panel I column 3), though they are not precisely estimated. At the same time, I find that the implementation of a universal E-Verify mandate reduces the probability that a likely-unauthorized immigrant has employer-sponsored insurance by approximately 2 percentage points, without affecting insurance purchased directly (Panel I column 3).

In Figure 4, I show that the probability that a likely-unauthorized had employer-sponsored health insurance was unrelated to whether a state eventually implemented an E-Verify mandate. Again, it is impossible to reject the null hypothesis that the pre-implementation coefficients are jointly equal to zero. However, this probability fell by approximately 4 percentage points after the implementation of a mandate, and it is possible to reject (i) the null hypothesis that the post-implementation coefficients are jointly equal to zero and (ii) the hypothesis that the pre- and post-implementation coefficients are equal.

That the event-studies do not identify a relationship between the dependent variables and the eventual decision to implement an E-Verify mandate suggests limited value in adding

additional covariates to correct for omitted variable bias. However, I show in the second panel of Table 6 that the results are robust to the additional covariates, though the estimates are muted. In Table A8, I again use the Gelbach decomposition to show that the difference in the employment estimates between these panels is largely due to correcting for demographic characteristics.

4.3 Chilling Effects and Mixed Status Households

E-Verify mandates may also affect naturalized citizens who live in mixed status households.[9] For one, these individuals may be directly affected by E-Verify mandates if they received their private health insurance through an unauthorized household member's employment. Additionally, E-Verify mandates may chill participation in public programs by increasing confusion about eligibility, generating a perception that a state is hostile towards immigrants, and reducing their willingness to draw attention to their unauthorized household members.

In Table 7, I first show that the implementation of an E-Verify mandate does not affect the probability that a naturalized citizen has any health insurance (Panel I column 1). However, it does appear to change the composition of insurance coverage; naturalized citizens are more likely to have private insurance (Panel I column 2) and less likely to have public insurance (Panel I column 3) after the implementation of an E-Verify mandate. After including the full set of covariates, the estimates continue to indicate that E-Verify mandates reduce the probability that naturalized citizens have public insurance by 2-3 percentage points (Panel II column 3).

In the remaining three columns, I show that the effect varies by household composition. For naturalized citizens who do not reside in mixed-status households, I again find that E-Verify mandates do not change the overall probability of having health insurance (Panels I and II

[9] I choose to focus on naturalized citizens—instead of non-citizen immigrants not classified as likely-unauthorized—in order to minimize the possibility that the estimates are driven by mis-measured legal status.

column 4). However, these individuals are between 2-5 percentage points more likely to have private insurance after the implementation of an E-Verify mandate (Panels I and II column 5) and there is a corresponding reduction in the probability of having public insurance (Panels I and II column 6). On the other hand, naturalized citizens who live with likely-unauthorized immigrants are less likely to have insurance after the implementation of an E-Verify mandate (Panels I and II column 4). This change is entirely driven by a reduction in the probability of having private insurance (Panels I and II column 5), while public insurance is unaffected (Panels I and II column 6).

Table A9 tests whether native-born children with likely-unauthorized mothers are differentially affected relative to those whose immigrant mothers are not classified as likely-unauthorized. There is suggestive evidence that those with likely-unauthorized mothers are less likely to have private health insurance, though are shifted onto public insurance. As a whole, the evidence indicates that E-Verify mandates do affect naturalized citizens, though not through a chilling effect. Instead, individuals in mixed-status households are directly affected through the loss of private health insurance. This is consistent with evidence that immigration enforcement measures can have negative consequences for non-targeted individuals (Amuedo-Dorantes, Arenas-Arroyo, and Sevilla 2018).

4.4 Composition Effects

Thus far, the evidence indicates that state E-Verify mandates reduce the probability that likely-unauthorized immigrants have health insurance. However, the implementation of an E-Verify mandate may also affect the number of immigrants in a state (Bohn et al. 2014; Orrenius and Zavodny 2016). If the immigrants who would have otherwise become uninsured instead leave

the state, this selective outmigration would attenuate the prior estimates. In Table 8, I do not find any evidence that the implementation of an E-Verify mandate reduces the number of likely-unauthorized immigrants in a state (column 1).

This is a surprising result. Bohn et al. (2014) found evidence that Arizona's universal E-Verify mandate induced likely-unauthorized immigrants to leave the state. Utilizing the multi-state variation employed in this paper, Orrenius and Zavodny (2016) found that the implementation of a mandate reduced the size of the likely-unauthorized population by 6 percent.[10] In order to better match their specification, I show how my results change with the use of lagged business cycle controls (excising my additional controls) and the inclusion of state-specific linear time trends. It is only after the inclusion of state-specific linear time trends that the universal mandate coefficient becomes negative and statistically significant (column 3).

In Table A10, I explore the migration results using the event-study framework. In specifications which do not include state-specific linear time trends, I cannot reject the null hypothesis that the pre-implementation coefficients are jointly equal to zero, though the point-estimates suggest that states may implement E-Verify mandates to counteract growing unauthorized populations. Nor do I find evidence in these specifications that E-Verify mandates reduce the number of likely-unauthorized immigrants in a state. When I include state-specific linear time trends, I find a strong relationship between the size of the likely-unauthorized population and the eventual decision to implement an E-Verify mandate; after the inclusion of unit-specific trends it appears the number of likely-unauthorized immigrants was already falling prior to implementation. Regardless, correcting for selective outmigration would likely magnify the identified reductions in the probability of having private insurance, and in Table A11 I show

[10] Table 2, row 2, column 1.

that the estimates are approximately 10 percentage points larger in absolute magnitude when I restrict the sample to likely-unauthorized immigrants who did not move within the last year.[11]

4.5 ASEC Estimates and Self-Reported Health

In Table 9, I test whether the effects detected in the ACS are also present in the ASEC. In the context of this paper, there are two benefits of the ASEC. For one, its insurance questions extend back further than 2008. As a result, it is possible to leverage all 27 policy changes whereas the ACS sample can only utilize 20 changes. Additionally, the ASEC contains information on self-reported health, making it possible to examine whether changes in insurance coverage translate into changes in self-reported health. Specifically, it asks respondents to classify their health as *Poor*, *Fair*, *Good*, *Very Good*, or *Excellent*.

However, there are two considerable downsides to the ASEC. For one, it contains substantially fewer likely-unauthorized immigrants; there are 65,366 in the 17 years of ASEC data and 340,111 in the 9 years of ACS data. Additionally, the ASEC does not ask respondents about their current insurance status, but instead asks respondents about their insurance coverage during the prior calendar year, though there are concerns that respondents may respond with current coverage (Royer 2005). As such, this question scheme introduces measurement error. At the same time, the ASEC reports contemporaneous employment and all respondents are interviewed in March. As such, I can more precisely determine whether respondents reside in a state with an E-Verify mandate.

I show that the implementation of a universal E-Verify mandate is associated with a 5-7

[11] In Table A12, I test whether there are any other changes in state composition associated with being unauthorized or uninsured (fraction with less than a high school degree or a high school degree, as well as average age, the percent Hispanic, the fraction proficient in English, and share married). Following Bohn et al. (2014) I focus on the composition of the prime-age population (18-45). I do not identify any systematic change.

percentage point reduction in the probability that a likely-unauthorized immigrant is employed (column 1), and the point-estimates continue to indicate that the implementation of an E-Verify mandate reduces the probability that a likely-unauthorized immigrant has private health insurance (column 2). However, the smaller sample size and structure of the insurance question prevents precise estimation; the standard errors on the universal mandate coefficients are over twice as large as those in the ACS (0.029 vs. 0.012 in the base specification and 0.021 vs. 0.009 when including the full set of controls).[12] Again, these results are driven by reduction in the probability that likely-unauthorized immigrants report having employer-sponsored health insurance (column 3).

Finally, I examine whether the implementation of an E-Verify mandate affects the self-reported health of likely-unauthorized immigrants. In Table 10, the dependent variables are indicators for being in *Poor* health, having at most *Fair* health, at most *Good* health, or at most *Very Good* health, where the final omitted category is reporting *Excellent* health. The baseline specification indicates that likely-unauthorized immigrants are nearly 1 percentage point more likely to report being in *Poor Health* after the implementation of a universal E-Verify mandate (Panel I column 1), though this estimate is sensitive to the inclusion of the additional covariates (Panel II column 1). Similarly, likely-unauthorized immigrants are 3-6 percentage points more likely to report being in at most *Good Health.* relative to being in *Very Good* or *Excellent Health* (Panels I and II column 3). Overall, the estimates suggest a general reduction in the self-reported health of likely-unauthorized immigrants.

[12] Figure A2 presents the event-study estimates using equation (1) and the ASEC. As with the difference-in-differences coefficients, the estimates are noisier though indicate reductions in the probability of being employed and having private insurance in the period after implementation of a universal mandate.

5 DISCUSSION

The United States is currently debating the future of immigration policy. Despite receiving significant attention from policymakers and the popular press, the full implications of many proposed policies remain under-studied. In this paper, I show that that E-Verify mandates reduce the probability that a likely-unauthorized immigrant has health insurance by approximately 2 percentage points. This is due to reductions in the probability of being employed and, consequently, the probability of having private health insurance. Additionally, I find evidence that E-Verify mandates have negative affect naturalized citizens living in mixed-status households, though the remaining naturalized citizens are shifted from public to private health insurance.

As President Trump acknowledged in his October 2019 proclamation, immigration and health policy are not two distinct issues, and attempts to address one will invariably have spillovers onto the other. While his administration is currently developing plans to limit the number of uninsured immigrants in the US, its support for a nationwide E-Verify mandate runs counter to these goals. Indeed, such a proposal would cut off the primary avenue available to unauthorized immigrants for obtaining health insurance, which would likely drive up health care costs for US citizens. However, imposing additional costs on unauthorized immigration may be seen as a feature and not a bug by those favoring more stringent immigration enforcement, regardless of who ultimately pays the bill.

6 REFERENCES

Alsan, Marcella and Crystal Yang. (2018). Fear and the safety net: Evidence from Secure Communities. National Bureau of Economic Research Working Paper 24731.

Amuedo - Dorantes, Catalina and Cynthia Bansak. (2012). The labor market impact of mandated employment verification systems. *American Economic Review Papers and Proceedings* 102(3): 543-548.

Amuedo-Dorantes, Catalina and Cynthia Bansak. (2014). Employment verification mandates and the labor market of likely unauthorized and native workers. *Contemporary Economic Policy* 32 (3): 671-680.

Amuedo-Dorantes, Catalina, Esther Arenas-Arroyo, and Almudena Sevilla. (2018). Immigration enforcement and economic resources of children with likely unauthorized parents. *Journal of Public Economics* 158 (1): 63-78.

Berk, Marc L., Claudia L. Schur, Leo R. Chavez, and Martin Frankel. (2000). Health care use among undocumented Latino ethnic subgroups. *Social Science Quarterly* 86 (1): 1279-1298.

Bertrand, Marianne, Esther Duflo, and Sendhil Mullainathan. (2004). How much should we trust differences-in-differences estimates? *Quarterly Journal of Economics* 119 (1): 249-275.

Bitler, Marianne and Hilary W. Hoynes. (2013). Immigrants, welfare reform, and the U.S. safety net. in Immigration, Poverty, and Socioeconomic Inequality, edited by David Card and Steven Raphael. Russell Sage Foundation, New York, NY.

Bohn, Sarah, Magnus Lofstrom, and Steven Raphael. (2014). Did the 2007 Legal Arizona Workers Act reduce the state's unauthorized immigrant population? *The Review of Economics and Statistics* 96 (2): 258-269.

Bohn, Sarah and Magnus Lofstrom. (2013). Employment effects of state legislation. In Immigration, Poverty, and Socioeconomic Inequality. Edited by David Card and Steven Raphael. New York, NY: Russell Sage Foundation. 282-314.

Borjas, George J. (2001). Welfare reform and immigration. In Blank, R., Haskins, R. (Eds), The New World of Welfare: An agenda for reauthorization and beyond. Brookings Press, Washington D.C. 369-385.

Borjas, George J. (2003). Welfare reform, labor supply, and health insurance in the immigrant population." *Journal of Health Economics* 22 (6): 933-958.

Borjas, George J. (2017). The earnings of undocumented immigrants. National Bureau of Economic Research Working Paper 23236.

Bronchetti, Erin Todd. (2014). Public insurance expansions and the health of immigrant and native children. *Journal of Public Economics* 120: 205-219.

Buchmueller, Thomas, Anthony Lo Sasso, Kathleen Wong. (2008). How did SCHIP affect the insurance coverage of immigrant children? *The B.E. Journal of Economic Analysis and Policy* 8(2): Article 3.

Capps, Randy, Rosa Maria Castaneda, Ajay Chaudry, and Robert Santos. (2007). Paying the price: The impact of immigration raids on America's children. Washington, D.C. National Council of La Raza. Accessed at: https://www.urban.org/sites/default/files /publication /46811/411566-Paying-the-Price-The-Impact-of-Immigration-Raids-on-America-s-Children.PDF. (January 2019).

Capps, Randy, Marc R. Rosenblum, Cristina Rodríquez, and Muzaffar Chishti. (2011). Delegation and divergence: A Study of 287(g) State and local immigration enforcement. Migration Policy Institute. Accessed at: https://www.migrationpolicy.org/pubs/287g-divergence.pdf
(January 2019).

Churchill, Brandyn F. and Joseph J. Sabia. (2019). The effect of minimum wages on low-skilled immigrants' wages, employment, and poverty. *Industrial Relations* 58 (2): 275-314.

CNN. (2018). Once a cornerstone of Trump Campaign, E-Verify makes a DACA deal far more complicated. Accessed at: https://www.cnn.com/2018/01/12/politics/daca-e-verify-internal-enforcement/index.html (January 2019).

Currie, Janet. (2000). Do children of immigrants make differential use of public health insurance? In: George J. Borjas (Ed.), Issues in the Economics of Immigration. University of Chicago Press, Chicago 271-308.

Dillender, Marcus. (2017). English skills and the health insurance coverage of immigrants. *American Journal of Health Economics* 3 (3): 312-345.

East, Chloe N. *Forthcoming*. The effect of food stamps on children's health: Evidence from immigrants' changing eligibility. *Journal of Human Resources*.

Fix, Michael E. and Jeffrey S. Passel. (1999). Trends in noncitizens' and citizens' use of public benefits following welfare reform, 1994-1997. Washington, D.C.: Urban Institute. Accessed at: https://www.urban.org/research/publication/trends-noncitizens-and-citizens-use-public-benefits-following-welfare-reform (January 2019).

Flood, Sarah, Miriam King, Renae Rogers, Steven Rogers, and J. Robert Warren. IPUMS CPS: Version 6.0 [dataset]. Minneaoplis, MN: IPUMS, 2018.

Gelbach, Jonah B. (2016). When do covariates matter? And which ones, and how much? *Journal*

of Labor Economics 34(2): 509-543.

Goodman-Bacon, Andrew. (2019). Difference-in-differences with variation in treatment timing. NBER Working Paper No. 25018.

Heyman, Josiah McC., Guillermina Gina Núñez, and Victor Talavera. (2009). Healthcare access and barriers for unauthorized immigrants in El Paso County, Texas. *Family and Community Health* 32 (1): 4-21.

Kandula, Namratha R., Colleen M. Grogan, Paul J. Rathouz, and Diane S. Lauderdale. (2004). The unintended impact of welfare reform on the Medicaid enrollment of eligible immigrants. *Health Services Research* 39 (5): 1509-1526.

Kaushal, Neeraj and Robert Kaestner. (2005). Welfare reform and health insurance of immigrants. *Health Services Research* 39 (5): 1509-1526.

Kaushal, Neeraj and Robert Keastner. (2007). Welfare reform and the health of immigrant women and their children. *Journal for Immigrant and Minority Health* 9 (2): 61-74.

Kaiser Family Foundation. (2017). Health Coverage of Immigrants. Accessed at: https://www.kff.org/disparities-policy/fact-sheet/health-coverage-of-immigrants/ (January 2019).

Lee, Jin Y. and Gary Solon. (2011). The fragility of estimated effects of unilateral divorce laws on divorce rates. *The B.E. Journal of Economic Analysis & Policy* 11(1): 1-11.

Lofstrom, Magnus, Sarah Bohn, and Steven Raphael. (2011). Lessons from the 2007 Legal Arizona Workers Act. Public Policy Institute of California. Accessed at: https://www.ppic.org/publication/lessons-from-the-2007-legal-arizona-workers-act/ (January 2019).

Loue, Sana, Marlene Cooper, and Linda S. Lloyd. (2005). Welfare and immigration reform and use of prenatal care among women of Mexican ethnicity in San Diego, California. *Journal of Immigrant Health* 7 (1): 37-44.

Lurie, Ithai Z. (2008). Welfare reform and the decline in the health insurance coverage of children of non-permanent residents. *Journal of Health Economics* 27 (3): 786-793.

Migration Policy Institute. (2016). Unauthorized immigrant population profiles. Accessed at http://www.migrationpolicy.org/programs/us-immigration-policy-program-data-hub/unauthorized-immigrant-population-profiles (January 2019).

Miles, Thomas J. and Adam B. Cox. (2014). Does immigration enforcement reduce crime? Evidence from Secure Communities. *Journal of Law and Economics* 57 (5): 937-973.

National Council of State Legislatures. (2015). State E-Verify action. Accessed at: http://www.ncsl.org/research/immigration/state-e-verify-action.aspx (January 2019).

Neumark, David J., M. Ian Salas, and William Wascher. (2014). Revisiting the minimum wage—debate: Throwing out the baby with the bathwater? *Industrial Labor Relations Review* 67(3): 608-648.

Núñez, Guillermina Gina and Josiah McC. Heyman. (2007). Entrapment processes and immigrant communities in a time of heightened border vigilance." *Human Organization* 66 (4): 354-365.

Orrenius, Pia M. and Madeline Zavodny. (2008). The effect of minimum wages on immigrants' employment and earnings. *Industrial and Labor Relations Review* 61 (4): 544-563.

Orrenius, Pia M. and Madeline Zavodny. (2015). The impact of E-Verify mandates on labor market outcomes. *Southern Economic Journal* 81 (4): 947-959.

Orrenius, Pia M. and Madeline Zavodny. (2016). Do state work eligibility verification laws reduce unauthorized immigration. *IZA Journal of Migration* 5: 1-17.

Passel, Jeffrey and D'Vera Cohn. (2010). US unauthorized immigrant flows are down sharply since mid-decade. Washington, D.C.: Pew Hispanic Center. Accessed at: https:// www.pewhispanic.org/2010/09/01/us-unauthorized-immigration-flows-are-down-sharply-since-mid-decade/ (July 2019).

Passel, Jeffrey and D'Vera Cohn. (2014). Unauthorized mmigrant totals rise in 7 States, fall in 14 states: Decline in those from Mexico fuels most state decreases. Washington, DC: Pew Research Center

Reyes, Belinda I., Hans P. Johnson, and Richard Van Swearingen. (2002). Holding the line? The effect of the recent border build-up on unauthorized immigration. Public Policy Institute of California. Accessed at: https://www.ppic.org/content/pubs/report/ R_702BRR.pdf (January 2019).

Royer, Heather. (2005). The response to a loss in Medicaid eligibility: Pregnant immigrant mothers in the wake of welfare reform. Unpublished manuscript.

Ruggles, Steven, Sarah Flood, Ronald Goeken, Josiah Grover, Erin Meyer, Jose Pacas, and Matthew Sobek. IPUMS USA: Version 8.0 [dataset]. Minneaoplis, MN: IPUMS, 2018.

Sommers, Benjamin D. (2010). Targeting in Medicaid: The costs and enrollment effects of Medicaid's citizenship documentation requirement. *Journal of Public Economics* 94 (1-2): 174-182.

Stumpf, Juliet P. (2012). Getting to work: Why nobody cares about E-Verify (and why they should)." *U.C. Irvine Law Review* 381 (2): 381-414.

Urban Institute. (2017). State immigration policy resource. Accessed at: https://www.urban.org

/features/state-immigration-policy-resource (January 2019).

Warren, Robert. (2014). Democratizing data about unauthorized residents in the United States: Estimates and public-use data, 2010 to 2013. *Journal on Migration and Human Security* 2 (4): 305-328.

Warren, Robert, and Jeffrey Passel. (1987). A count of the uncountable: Estimates of undocumented aliens counted in the 1980 United States census. *Demography* 24 (3): 375-393.

Watson, Tara. (2014). Inside the refrigerator: Immigration enforcement and chilling effects in Medicaid participation. *American Economic Journal: Economic Policy* 6 (3): 313-338.

White House. (2017). Trump administration immigration policy priorities. Accessed at: https://www.whitehouse.gov/briefings-statements/trump-administration-immigration-policy-priorities/ (January 2019).

White House. (2018). An American budget (fiscal year 2019). Accessed at: https://www.white house.gov/wp-content/uploads/2018/02/budget-fy2019.pdf (January 2019).

White House. (2019). Presidential proclamation on the suspension of entry of immigrants who will financially burden the United States healthcare system. Accessed at: https://www.whitehouse.gov/presidential-actions/presidential-proclamation-suspension-entry-immigrants-will-financially-burden-united-states-healthcare-system/ (October 2019).

Table 1: States implementing E-Verify mandates

State	Bill	Type	Passage Date	Implementation Date
Alabama	HB 56	Universal	06/09/2011	04/01/2012
Arizona	HB 2779	Universal	07/02/2007	12/31/2007
Colorado	HB 1343	Public	06/09/2006	08/07/2006
Florida	EO 11-02	Public	01/04/2011	01/04/2011
Georgia	SB 529	Public	04/17/2006	07/01/2007
Georgia	HB 87	Universal	05/13/2011	01/01/2012
Idaho	EO 09-10	Public	05/29/2009	07/01/2009
Indiana	SB 590	Public	05/10/2011	07/01/2011
Louisiana	HB 646	Universal	07/01/2011	08/18/2011
Michigan	HB 5365	Public	06/26/2012	03/01/2013
Minnesota	EO 08-01	Public	01/01/2008	01/01/2008
Mississippi	SB 2988	Universal	03/17/2008	07/01/2008
Missouri	HB 1549	Public	07/07/2008	01/01/2009
Nebraska	L 403	Public	04/08/2009	10/01/2009
North Carolina	SB 1523	Public	08/23/2006	01/01/2007
North Carolina	HB 36	Universal	06/23/2011	10/01/2012
Oklahoma	HB 1804	Public	05/08/2007	02/02/2010
Pennsylvania	SB 637	Public	07/05/2012	01/01/2013
Rhode Island	EO 08/01	Public	03/27/2008	10/17/2008
South Carolina	HB 4400	Public	06/04/2008	01/01/2009
South Carolina	SB 20	Universal	06/27/2011	01/01/2012
Tennessee	HB 1378	Universal	06/07/2011	10/01/2011
Texas	SB 372	Public	06/10/2015	09/01/2015
Utah	SB 81	Public	03/13/2008	07/01/2009
Utah	SB 251	Universal	03/31/2010	07/01/2010
Virginia	HB 737	Public	04/11/2010	12/01/2012
West Virginia	SB 659	Public	03/16/2012	06/24/2012

Source: National Conference of State Legislatures (2015); Urban Institute (2017).
Note: Louisiana and Tennessee originally had exceptions to E-Verify, whereby employers could instead just retain work authorization documentation. The results are not sensitive to excluding these states from those imposing universal mandates. Minnesota dropped E-Verify in April of 2008, though it was reinstated legislatively in July of that year. Rhode Island abandoned its E-Verify requirement in January 2011. Bolded states provide identification over the 2008-2016 sample period.

Table 2: Summary statistics of primary variables

	Non-Citizen Immigrants			Naturalized Citizens	White Non-Hispanic Natives
	Total	Likely-Unauthorized	Likely-Authorized		
Universal Mandate	0.072	0.097	0.062	0.078	0.106
	(0.259)	(0.296)	(0.241)	(0.268)	(0.307)
Public Mandate	0.181	0.179	0.182	0.152	0.247
	(0.385)	(0.383)	(0.386)	(0.359)	(0.431)
Insurance					
Any	0.535	0.219	0.666	0.642	0.870
	(0.499)	(0.414)	(0.471)	(0.479)	(0.336)
Private	0.422	0.219	0.507	0.505	0.775
	(0.494)	(0.414)	(0.500)	(0.500)	(0.417)
Public	0.122	-	0.173	0.156	0.122
	(0.327)		(0.378)	(0.363)	(0.327)
Employer-Sponsored	0.349	0.199	0.412	0.460	0.670
	(0.477)	(0.399)	(0.492)	(0.498)	(0.470)
Purchased Directly	0.083	0.025	0.107	0.057	0.115
	(0.276)	(0.155)	(0.309)	(0.232)	(0.319)
Medicaid	0.114	-	0.162	0.149	0.092
	(0.318)		(0.369)	(0.357)	(0.290)
Medicare	0.011	-	0.016	0.011	0.039
	(0.104)		(0.124)	(0.105)	(0.194)
Observations	1,301,507	340,111	961,396	68,236	11,004,729

Sources: American Community Survey 2008-2016, National Council of State Legislatures (2015); Urban Institute (2017).
Note: An individual is likely-unauthorized if s/he is between the ages of 18 and 45, has at most a high school degree, was born in Mexico or Central America, does not report receiving public health insurance, and is not a citizen. The sample is restricted to individuals between the ages of 18 and 64 and summary statistics utilize the sample weights. Additional summary statistics are reported in Table A1.

Table 3: E-Verify and insurance event-study coefficients

	(1) Employment	(2) Private Insurance	(3) Employer-Sponsored Insurance
Pre-Implementation			
-4	0.003	-0.017	-0.011
	(0.016)	(0.012)	(0.012)
-3	-0.008	-0.018	-0.014
	(0.015)	(0.012)	(0.011)
-2	-0.001	-0.012	-0.009
	(0.011)	(0.008)	(0.008)
Jointly Equal Zero?			
F-Stat	0.990	0.880	0.690
Prob>F	0.407	0.457	0.565
Post-Implementation			
0	-0.031***	-0.015	-0.017
	(0.004)	(0.010)	(0.012)
1	-0.003	-0.028**	-0.025**
	(0.010)	(0.013)	(0.012)
2	-0.024**	-0.049***	-0.037**
	(0.010)	(0.016)	(0.015)
3	-0.032***	-0.023	-0.018
	(0.010)	(0.023)	(0.020)
Jointly Equal Zero?			
F-Stat	16.710	25.520	14.720
Prob>F	0.000	0.000	0.000
Pre=Post?			
F-Stat	13.120	17.700	14.970
Prob>F	0.000	0.000	0.000
Observations	324,267	324,267	324,267

Source: American Community Survey, 2008-2016

Note: The dependent variable is an indicator for being employed (column 1), having private health insurance (column 2), or having employer-sponsored health insurance (column 3). The independent variables are indicators for being *t* periods before/after the implementation of a universal E-Verify mandate. In order to maintain a balanced panel, the sample excludes Arizona, Mississippi, and Utah. An individual is considered likely-unauthorized if s/he is between the ages of 18 and 45, has at most a high school degree, was born in Mexico or Central America, does not receive public health insurance, and is not currently a citizen. The estimates control for whether a state implemented a public E-Verify mandate, state fixed effects, and year fixed effects. Each column utilizes the sample weights. Standard errors, shown in parentheses, are clustered at the state level.

*** p<0.01, ** p<0.05, * p<0.1

Table 4: E-Verify and the probability that likely-unauthorized immigrants have private health insurance after accounting for covariates

	(1)	(2)	(3)
	Specification		
	Base	Full	Explained
Universal Mandate	-0.025**	-0.020**	-0.005
	(0.012)	(0.009)	
Health Policies	N	Y	-0.005
Immigration Enforcement	N	Y	-0.001
Business Cycle Controls	N	Y	-0.002
Demographic Characteristics	N	Y	0.002
Public Mandate	-0.014*	-0.007	-0.007
	(0.008)	(0.005)	
Health Policies	N	Y	-0.003
Immigration Enforcement	N	Y	-0.000
Business Cycle Controls	N	Y	-0.002
Demographic Characteristics	N	Y	-0.002

Source: American Community Survey, 2008-2016.
Note: The dependent variable is an indicator for having private insurance. The independent variables are state-level indicators for having implemented a universal E-Verify mandate for at least half the year or a public E-Verify mandate for at least half the year. The coefficients in the first column are from a regression which includes state and year fixed effects, while those in the second column are from a regression including controls for health policies, immigration enforcement, business cycle characteristics, and demographic controls. Standard errors, shown in parentheses, are clustered at the state level. Each estimate utilizes the sample weights. The final column uses the order invariant conditional decomposition proposed by Gelbach (2016) to analyze how the covariates affect the estimates of interest. The sum of these numbers then explains the difference in the coefficients between columns (1) and (2) with any differences attributed to rounding error. The sample is 340,111 likely-unauthorized immigrants. An individual is considered likely-unauthorized if s/he is between the ages of 18 and 45, has at most a high school degree, was born in Mexico or Central America, does not receive public health insurance, and is not currently a citizen.
*** p<0.01, ** p<0.05, * p<0.10

Table 5: E-Verify and the probability of having private health insurance

	(1)	(2)	(3)	(4)	(5)
	Non-Citizen Immigrants			Comparable Naturalized Citizens	White Non-Hispanic Natives
	Overall	Likely-Unauthorized Immigrants	Remaining Non-Citizen Immigrants		
Universal Mandate	-0.008	-0.020**	0.003	0.018	-0.001
	(0.012)	(0.009)	(0.016)	(0.018)	(0.003)
Public Mandate	0.001	-0.007	0.002	0.015	0.002
	(0.005)	(0.005)	(0.007)	(0.010)	(0.002)
Observations	1,301,507	340,111	961,396	68,236	11,004,678

Source: American Community Survey, 2008-2016.

Note: The dependent variable is an indicator for having private insurance. The independent variables are state-level indicators for having implemented a universal E-Verify mandate for at least half the year or a public E-Verify mandate for at least half the year. Each estimate controls for time-invariant state fixed effects, state-invariant year fixed effects, business cycle characteristics, immigration enforcement policies, health care policies, and demographics. Standard errors, shown in parentheses, are clustered at the state level. Each estimate utilizes the sample weights.

*** p<0.01, ** p<0.05, * p<0.10

Table 6: E-Verify mandates and the labor market and insurance outcomes of likely-unauthorized immigrants

	(1)	(2)	(3)	(4)	(5)
	Employed	ln(HH Income)	Income ≤ 150% FPL	Employer-Sponsored	Insurance Purchased Directly
	Panel I: State and Year Fixed Effects				
Universal Mandate	-0.021**	-0.057	0.014	-0.024**	0.001
	(0.008)	(0.040)	(0.016)	(0.012)	(0.003)
Public Mandate	-0.017***	-0.026*	0.006	-0.017**	0.004
	(0.005)	(0.015)	(0.006)	(0.007)	(0.003)
	Panel II: Full Set of Controls				
Universal Mandate	-0.012	-0.056	0.023	-0.017*	-0.001
	(0.009)	(0.044)	(0.016)	(0.010)	(0.005)
Public Mandate	-0.009**	-0.032	0.010	-0.010**	0.004*
	(0.004)	(0.023)	(0.008)	(0.005)	(0.002)

Source: American Community Survey, 2008-2016.
Note: The dependent variable in column (1) is an indicator for being employed. The dependent variable in column (2) is the natural log of the real value of household income; in column (3) an indicator for being at or below 150% of the federal poverty level. In columns (4) and (5) the dependent variable is an indicator for having employer-sponsored health insurance or having purchased insurance directly. Panel I includes only state and year fixed effects, while Panel II uses the full set of controls from Table 4. The independent variables are indicators for whether the state implemented a universal or public E-Verify mandate for at least half the year. The 340,111 likely-unauthorized immigrants, though there are only 326,980 likely-unauthorized observations for household income. Standard errors, shown in parentheses, are clustered at the state level. Each estimate utilizes the sample weights.
*** p<0.01, ** p<0.05, * p<0.1

Table 7: E-Verify mandates and insurance coverage of naturalized citizens by household composition

	(1) Any Insurance	(2) Private Insurance	(3) Public Insurance	(4) Any Insurance	(5) Private Insurance	(6) Public Insurance
	Panel I: State and Year Fixed Effects					
Universal Mandate	-0.001	0.054***	-0.055***	0.001	0.057***	-0.055***
	(0.016)	(0.016)	(0.015)	(0.015)	(0.016)	(0.015)
Public Mandate	0.002	0.032**	-0.030**	0.004	0.033***	-0.029**
	(0.009)	(0.012)	(0.012)	(0.009)	(0.011)	(0.012)
Universal * Mixed Status				-0.038	-0.040	-0.003
				(0.028)	(0.025)	(0.006)
Public * Mixed Status				-0.033	-0.023	-0.012
				(0.020)	(0.023)	(0.008)
	Panel II: Full Set of Controls					
Universal Mandate	-0.008	0.018	-0.027**	-0.006	0.021	-0.027**
	(0.012)	(0.018)	(0.0120	(0.012)	(0.018)	(0.012)
Public Mandate	0.001	0.015	-0.013	0.003	0.016	-0.013
	(0.0050	(0.010)	(0.009)	(0.004)	(0.010)	(0.009)
Universal * Mixed Status				-0.041*	-0.047***	0.000
				(0.021)	(0.015)	(0.012)
Public * Mixed Status				-0.035*	-0.025	-0.011
				(0.019)	(0.020)	(0.009)

Source: American Community Survey, 2008-2016.

Note: The dependent variable is an indicator for having any, private, or public health insurance. The sample is 1,150,887 naturalized citizens, of whom 41,426 reside in mixed-status households. The independent variables are indicators for if the state implemented a universal or public E-Verify mandate. Panel I includes only state and year fixed-effects, while Panel II includes the full set of controls from Table 4. Standard errors, shown in parentheses, are clustered at the state level. Each estimate utilizes the sample weights.

Table 8: E-Verify mandates and changes to state composition

	(1) ln(Population Likely-Unauthorized)	(2) ln(Population Likely-Unauthorized)	(3) ln(Population Likely-Unauthorized)
Universal Mandate	0.011	0.120	-0.078**
	(0.054)	(0.075)	(0.034)
Public Mandate	-0.006	0.053	0.002
	(0.026)	(0.040)	(0.029)
Mean	368,707	368,707	368,707
Standard Deviation	(524,363)	(524,363)	(524,363)
Full Set of Covariates	X		
Lagged Business Cycle Controls		X	X
State Specific LTT			X

Source: American Community Survey, 2008-2016.

Note: The dependent variable is the natural log of the size of the state's likely-unauthorized population. An individual is likely-unauthorized if s/he has at most a high school degree, is between the ages of 18 and 45, does not receive public health insurance, was born in Mexico or Central America, and is not currently a citizen. Column (1) includes all of the covariates from Table 4. Column (2) uses only the state fixed effects, year fixed effects, and lagged business cycle controls. Column (3) includes state specific linear time trends. Yearly state population counts are generated from the ACS microdata utilizing the sample weights, while the regressions are then weighted using the sum of the sample weights for the state-year. The sample is 459 state-year cells. Standard errors, shown in parentheses, are clustered at the state level.

*** p<0.01, ** p<0.05, * p<0.1

Table 9: E-Verify and the probability that likely-unauthorized immigrants have health insurance using the ASEC

	(1) Employed	(2) Private Insurance	(3) Employer-Sponsored Insurance	(3) Insurance Purchased Directly	(4) Income ≤ 150% FPL
	Panel I: State and Year Fixed Effects				
Universal Mandate	-0.067***	-0.040	-0.031	-0.012	0.057**
	(0.014)	(0.029)	(0.019)	(0.014)	(0.023)
Public Mandate	-0.010	-0.032**	-0.028***	-0.005	0.032
	(0.009)	(0.014)	(0.010)	(0.009)	(0.024)
	Panel II: Full Set of Controls				
Universal Mandate	-0.049***	-0.013	-0.005	-0.012	-0.009
	(0.013)	(0.021)	(0.016)	(0.012)	(0.035)
Public Mandate	-0.000	-0.017	-0.017	-0.002	0.003
	(0.010)	(0.016)	(0.013)	(0.007)	(0.015)
Observations	65,366	65,040	65,040	65,040	65,040

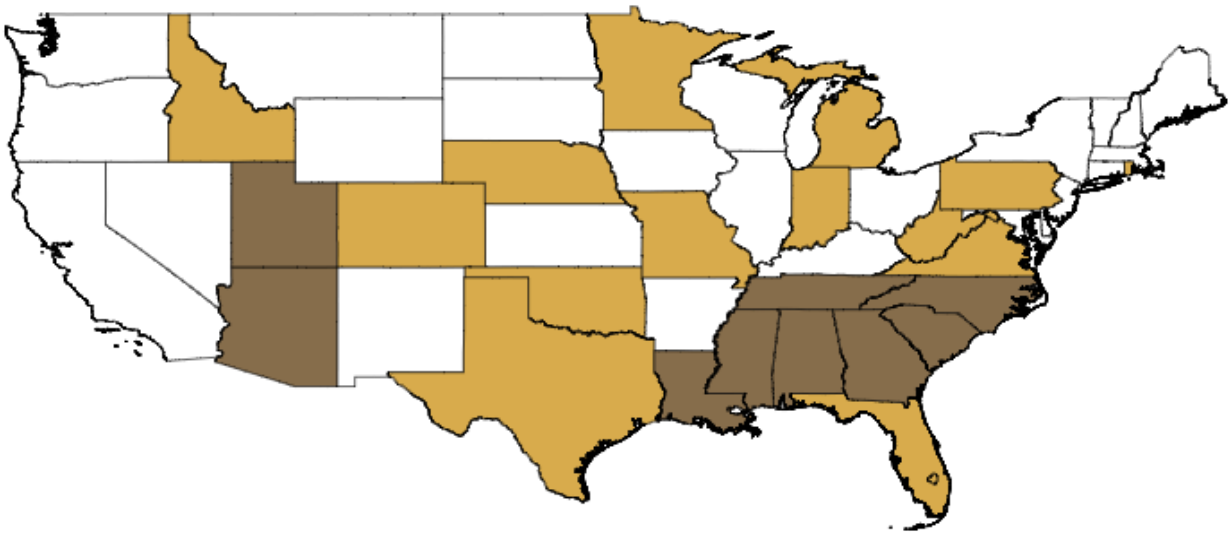
Source: Current Population Survey Annual Social and Economic Supplement, 2000-2016.
Note: The dependent variable is an indicator for being employed, having private insurance, having employer-sponsored insurance, having insurance purchased directly, or having income less than 150 percent of the federal poverty level. The independent variables are state-level indicators for having implemented a universal or public E-Verify mandate. The employment question is measured contemporaneously, while the insurance and poverty questions refer to the prior calendar year. An individual is considered likely-unauthorized if s/he is between the ages of 18 and 45, has at most a high school degree, was born in Mexico or Central America, does not receive public insurance, and is not currently a citizen. Standard errors, shown in parentheses, are clustered at the state level. Each estimate utilizes the sample weights.
*** p<0.01, ** p<0.05, * p<0.10

Table 10: E-Verify mandates and the self-reported health of likely-unauthorized immigrants

	(1) Health ≤ Poor	(2) Health ≤ Fair	(3) Health ≤ Good	(4) Health ≤ Very Good
	Panel I: State and Year Fixed Effects			
Universal Mandate	0.007**	0.015	0.062***	0.055***
	(0.003)	(0.011)	(0.020)	(0.020)
Public Mandate	0.004*	0.001	-0.004	0.003
	(0.002)	(0.007)	(0.028)	(0.018)
	Panel II: Full Set of Controls			
Universal Mandate	0.003	0.009	0.028	0.036
	(0.003)	(0.012)	(0.024)	(0.023)
Public Mandate	0.003	-0.003	-0.018	-0.006
	(0.002)	(0.007)	(0.028)	(0.016)

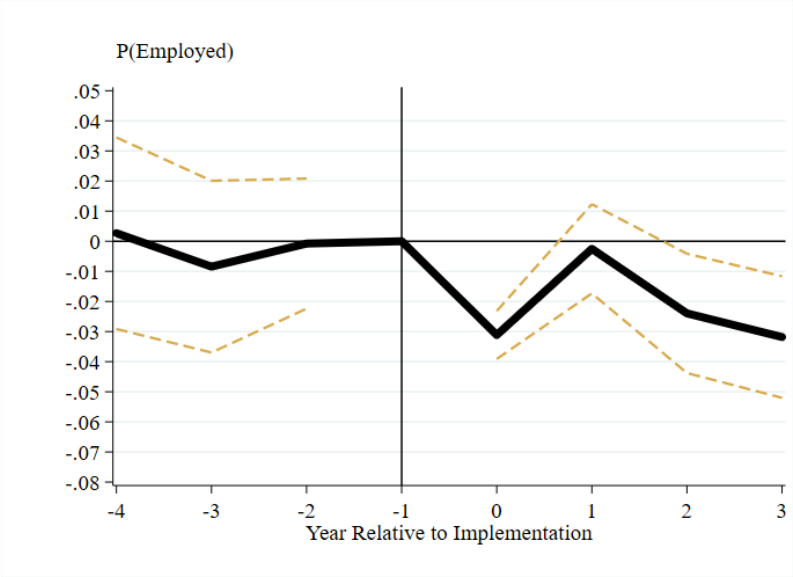
Source: Current Population Survey Annual Social and Economic Supplement, 2000-2016.
Note: The dependent variable is an indicator for reporting *Poor* health, at most *Fair* health, at most *Good* health, or at most *Very Good* health. The omitted category is *Excellent* health. Panel I includes for time-invariant state fixed effects and state-invariant year fixed effects. Panel II also includes controls business cycle characteristics, immigration enforcement policies, health care policies, and demographics. An individual is likely-unauthorized if s/he is between the ages of 18 and 45, has at most a high school degree, was born in Mexico or Central America, does not report receiving public insurance, and is not a citizen. Standard errors, shown in parentheses, are clustered at the state level. Each estimate utilizes the sample weights.
*** p<0.01, ** p<0.05, * p<0.10

Figure 1: States that have ever implemented an E-Verify mandate

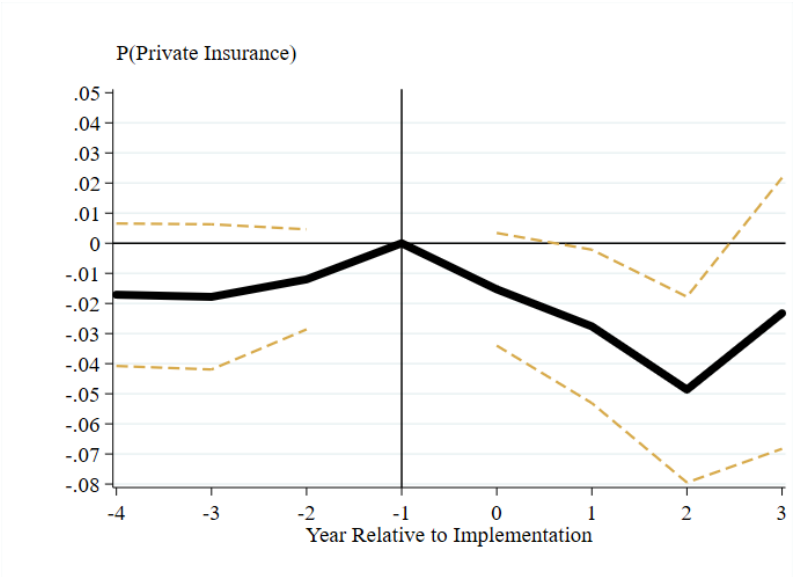


Source: National Conference of State Legislatures (2015); Urban Institute (2017)
Note: The lighter color indicates states which have implemented at most a public E-Verify mandate, while the darker color indicates states which have implemented a universal E-Verify mandate.

Figure 2: E-Verify mandates, employment, and private health insurance



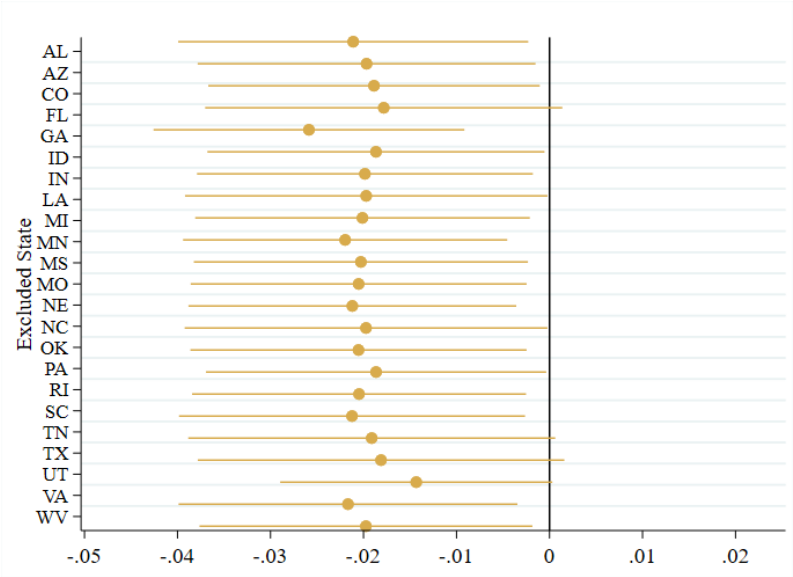
(a)



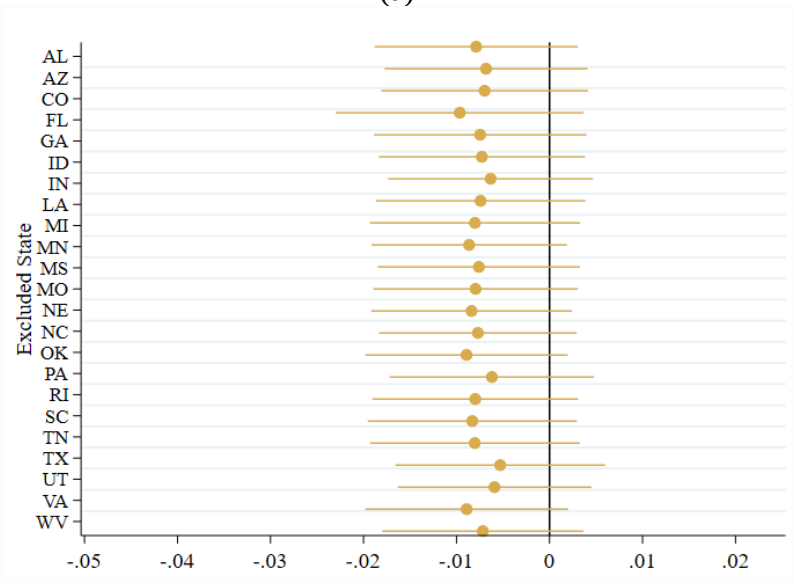
(b)

Source: American Community Survey, 2008-2016.
Note: The plotted coefficients indicate how an E-Verify mandate affects the probability of being employed or having private health insurance. The independent variables are indicators for the periods prior to the implementation of a universal mandate, while controlling for the presence of a public E-Verify mandate, state fixed effects, and year fixed effects. The sample is restricted to likely-unauthorized immigrants. The lighter long-dashed lines correspond to 95 percent confidence intervals. Exact coefficients and tests of joint significance are reported in columns (1) and (2) of Table 3.

Figure 3: E-Verify mandates and the probability the likely-unauthorized immigrants have private health insurance after excluding each treatment state



(a)

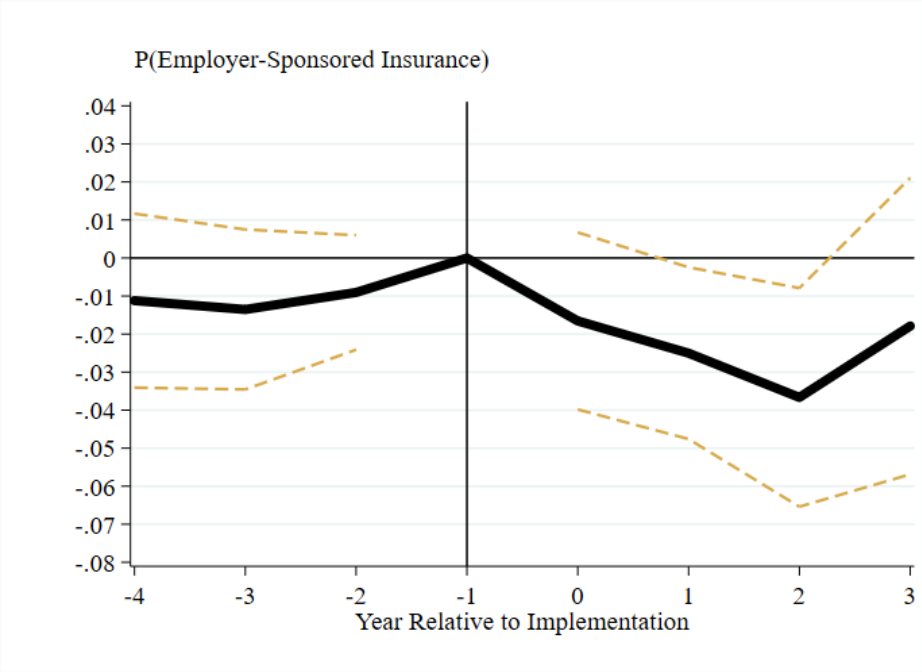


(b)

Source: American Community Survey, 2008-2016.

Note: The dependent variable is an indicator for having private insurance. The specification follows column (2) of Table 4. Panel (a) shows how the estimated coefficient for a universal E-Verify mandate changes after the iterative exclusion of each of the treatment states. Panel (b) does the same for the public mandate coefficient, and the coefficients in panels (a) and (b) are from the same regression. Each estimate utilizes the sample weights.

Figure 4: E-Verify mandates and employer-sponsored health insurance



Source: American Community Survey, 2008-2016.
Note: The plotted coefficients indicate how an E-Verify mandate affects the probability of having employer-sponsored health insurance. The independent variables are indicators for the periods prior to the implementation of a universal mandate, while controlling for the presence of a public E-Verify mandate, state fixed effects, and year fixed effects. The sample is restricted to likely-unauthorized immigrants. The lighter long-dashed lines correspond to 95 percent confidence intervals. Exact coefficients and tests of joint significance are reported in column (3) of Table 3.

Table A1: Additional summary statistics

	Non-Citizen Immigrants			Naturalized Citizens	White Non-Hispanic Natives
	Total	Likely-Unauthorized	Likely-Authorized		
Authorization					
Likely-Unauthorized	0.295	1.000	0.000	-	-
	(0.456)	(0.000)	(0.000)		
Years in US > 5	0.747	0.838	0.709	0.970	-
	(0.435)	(0.368)	(0.454)	(0.171)	
Education					
< High School	0.377	0.667	0.257	0.479	0.072
	(0.485)	(0.472)	(0.437)	(0.500)	(0.259)
High School Diploma	0.240	0.334	0.201	0.521	0.272
	(0.427)	(0.472)	(0.400)	(0.500)	(0.445)
Some College	0.168	-	0.239	-	0.344
	(0.374)		(0.426)		(0.475)
College Diploma	0.124	-	0.176	-	0.207
	(0.330)		(0.381)		(0.405)
Advanced Degree	0.090	-	0.128	-	0.105
	(0.286)		(0.334)		(0.307)
Demographics					
Age	37.87	32.73	40.02	35.95	41.76
	(11.45)	(7.21)	(12.19)	(7.17)	(13.60)
English Proficiency	0.592	0.410	0.668	0.778	0.999
	(0.491)	(0.492)	(0.471)	(0.416)	(0.035)
Hispanic	0.597	0.989	0.433	0.986	-
	(0.491)	(0.102)	(0.495)	(0.119)	
Male	0.524	0.598	0.493	0.529	0.500
	(0.499)	(0.490)	(0.500)	(0.499)	(0.500)
Married	0.570	0.524	0.589	0.653	0.537
	(0.495)	(0.499)	(0.492)	(0.476)	(0.499)
Business Cycle Controls					
ln(Real Value of Residential Building Permits)	15.700	15.791	15.661	15.855	15.123
	(0.986)	(0.975)	(0.987)	(0.990)	(0.969)
ln(No. of Initial Unemployment Claims)	13.619	13.643	13.610	13.753	13.091
	(1.008)	(1.036)	(0.995)	(1.100)	(0.977)

ln(Real State Product Per Capita)	10.935	10.914	10.944	10.927	10.870
	(0.163)	(0.142)	(0.170)	(0.139)	(0.168)
State Unemployment Rate	7.54	7.646	7.497	7.726	7.17
	(2.28)	(2.356)	(2.240)	(2.407)	(2.16)
Real Value of the Effective	8.12	8.076	8.144	8.188	7.94
State Minimum Wage	(0.67)	(0.658)	(0.674)	(0.691)	(0.61)
% Covered by Enforcement Policies					
287(g)	0.629	0.714	0.593	0.724	0.409
	(0.483)	(0.452)	(0.491)	(0.447)	(0.492)
Secure Communities	0.625	0.671	0.606	0.657	0.597
	(0.484)	(0.470)	(0.489)	(0.475)	(0.490)
% Covered by Health Policies					
Medicaid for Unauthorized	0.659	0.669	0.655	0.713	0.467
Pregnant Women	(0.474)	(0.470)	(0.476)	(0.452)	(0.499)
Public Insurance for LPR w/ in	0.389	0.336	0.411	0.410	0.204
5-year ban	(0.487)	(0.472)	(0.492)	(0.492)	(0.403)
Medicaid for LPR	0.768	0.769	0.767	0.793	0.641
Pregnant Women	(0.422)	(0.422)	(0.423)	(0.405)	(0.480)
Medicaid for LPR Kids	0.750	0.739	0.755	0.772	0.576
	(0.433)	(0.439)	(0.430)	(0.419)	(0.494)
Public Insurance for	0.210	0.136	0.240	0.151	0.154
Unauthorized Kids	(0.407)	(0.342)	(0.427)	(0.358)	(0.361)
Food Assistance for LPR	0.292	0.310	0.284	0.391	0.151
Adults w/ in 5-year ban	(0.455)	(0.462)	(0.451)	(0.488)	(0.358)
ACA Medicaid Expansion	0.327	0.277	0.347	0.343	0.246
	(0.469)	(0.448)	(0.476)	(0.475)	(0.430)
Observations	1,301,507	340,111	961,396	68,236	11,004,729

Sources: American Community Survey 2008-2016, National Council of State Legislatures (2015); Urban Institute (2017).
Note: An individual is likely-unauthorized if s/he is between the ages of 18 and 45, has at most a high school degree, was born in Mexico or Central America, does not receive public health insurance, and is not a citizen. An individual is considered proficient in English if he or she speaks it well, very well, or only speaks English. The sample is restricted to individuals between the ages of 18 and 64 and summary statistics utilize the sample weights.

Table A2: E-Verify mandates, employment, and private health insurance using a residual likely-unauthorized criterion

	(1) Private Insurance	(2) Private Insurance	(3) Employment	(4) Employment
Universal Mandate	-0.027*	-0.022**	-0.015**	-0.008
	(0.015)	(0.011)	(0.007)	(0.007)
Public Mandate	-0.016	-0.009	-0.010***	-0.007***
	(0.010)	(0.005)	(0.003)	(0.002)
State and Year FE	Y	Y	Y	Y
Additional Covariates	N	Y	N	Y

Source: American Community Survey, 2008-2016.

Note: Each column indicates a separate regression. The dependent variable is an indicator for having private health insurance coverage. The independent variable is whether a state implemented a universal or public E-Verify mandate for at least half the year. The likely-unauthorized criterion is detailed in footnote 4. The odd numbered columns include only state and year fixed effects, while the even number columns include the full set of controls from Table 4. Standard errors, shown in parentheses, are clustered at the state level. The estimates utilize the sample weights.

*** p<0.01, ** p<0.05, * p<0.10

Table A3: E-Verify and the probability that likely-unauthorized immigrants have private health insurance after accounting for covariates

	(1)	(2)	(3)
	Specification		
	Base	Full	Explained
Universal Mandate	-0.025**	-0.020**	-0.005
	(0.012)	(0.009)	
Health Policies	N	Y	-0.005
Medicaid for unauth. pregnant women	N	Y	0.000
Public insurance for LPR adults	N	Y	0.000
Medicaid for LPR pregnant women	N	Y	-0.001
Medicaid for LPR children	N	Y	-0.000
Public insurance for unauth. children	N	Y	-0.004
Food assistance for LPR adults	N	Y	0.000
ACA Medicaid expansion	N	Y	0.000
Immigration Enforcement	N	Y	-0.001
Business Cycle Controls	N	Y	-0.002
Demographic Characteristics	N	Y	0.002
Public Mandate	-0.014*	-0.007	-0.007
	(0.008)	(0.005)	
Health Policies	N	Y	-0.003
Medicaid for unauth. pregnant women	N	Y	0.000
Public insurance for LPR adults	N	Y	0.000
Medicaid for LPR pregnant women	N	Y	-0.000
Medicaid for LPR children	N	Y	0.000
Public insurance for unauth. children	N	Y	-0.003
Food assistance for LPR adults	N	Y	0.000
ACA Medicaid expansion	N	Y	-0.000
Immigration Enforcement	N	Y	-0.000
Business Cycle Controls	N	Y	-0.002
Demographic Characteristics	N	Y	-0.002

Source: American Community Survey, 2008-2016.

Note: The dependent variable is an indicator for having private insurance. The independent variables are state-level indicators for having implemented a universal E-Verify mandate for at least half the year or a public E-Verify mandate for at least half the year. The coefficients in the first column are from a regression which includes state and year fixed effects, while those in the second column are from a regression including controls for health policies, immigration enforcement, business cycle characteristics, and demographic controls. Standard errors, shown in parentheses, are clustered at the state level. Each estimate utilizes the sample weights. The final column uses the order invariant conditional decomposition proposed by Gelbach (2016) to analyze how the covariates affect the estimates of interest. The sum of these numbers then explains the difference in the coefficients between columns (1) and (2) with any differences attributed to rounding error. The sample is 340,111 likely-unauthorized immigrants. An individual is considered likely-unauthorized if s/he is between the ages of 18 and 45, has at most a high school degree, was born in Mexico or Central America, does not receive public health insurance, and is not currently a citizen.

*** p<0.01, ** p<0.05, * p<0.10

Table A4: E-Verify mandates and private insurance using an alternative specification which interacts various likely-unauthorized indicators with the explanatory variables

	(1)	(2)	(3)	(4)
Universal Mandate	0.053**	0.021	0.042***	0.016
	(0.023)	(0.016)	(0.015)	(0.013)
Public Mandate	0.033***	0.016*	0.021***	0.010
	(0.012)	(0.008)	(0.008)	(0.006)
Universal Mandate * LU	-0.081	-0.075**	-0.058**	-0.057***
	(0.052)	(0.028)	(0.028)	(0.011)
Public Mandate * LU	-0.070**	-0.059**	0.038**	-0.036***
	(0.034)	(0.023)	(0.016)	(0.010)
Public Insurance Restriction	N	N	Y	Y
State and Year FE	Y	Y	Y	Y
Additional Covariates	N	Y	N	Y

Source: American Community Survey, 2008-2016.

Note: Each column indicates a separate regression. The dependent variable is an indicator for having private health insurance coverage. The independent variable is whether a state implemented a universal or public E-Verify mandate for at least half the year. Columns (1) and (2) consider an individual likely-unauthorized if s/he is 18-45, has at most a high school degree, was born in Mexico or Central America, is not currently a citizen, and does not receive public health insurance. Columns (3) and (4) exclude this latter public health insurance restriction. The odd numbered columns include only state and year fixed effects, while the even number columns include the full set of controls from Table 4. Standard errors, shown in parentheses, are clustered at the state level. The estimates utilize the sample weights.

*** p<0.01, ** p<0.05, * p<0.10

Table A5: Robustness of the estimates to alternative specifications

	(1) Only Universal Mandates	(2) Birthplace Control	(3) Region Specific LTT	(4) Ever Treated Either	(5) Ever Treated Universal
Universal Mandate	-0.013*	-0.020**	-0.017*	-0.008	-0.028
	(0.007)	(0.009)	(0.010)	(0.011)	(0.023)
Public Mandate		-0.008	-0.005	0.003	-0.011
		(0.005)	(0.005)	(0.005)	(0.012)
Observations	340,111	340,111	340,111	160,792	49,964

Source: American Community Survey, 2008-2016.
Note: Each column indicates a separate regression. The dependent variable is an indicator for having private insurance coverage. The independent variables are indicators for whether a state implemented a universal E-Verify mandate or a public mandate for at least half the year. Column (1) excludes the public mandate control, (2) adds on indicator variables for place of birth, column (3) adds on region-specific linear time trends, column (4) only considers treated states, column (5) only considers states treated with a universal mandate, and column (6) uses an alternative definition of likely-unauthorized. The alternative criteria for being likely-unauthorized is being a non-citizen, 18 to 45, with at most a high school degree, who was born in Mexico or Central America. Standard errors, shown in parentheses, are clustered at the state level. The estimates utilize the sample weights.
*** p<0.01, ** p<0.05, * p<0.10

Table A6: E-Verify mandates and likely-unauthorized immigrants private insurance coverage by sex and marital status

	(1) Married Men	(2) Unmarried Men	(3) Married Women	(4) Unmarried Women
Universal Mandate	-0.031**	-0.023	-0.031**	0.013
	(0.013)	(0.015)	(0.015)	(0.012)
Public Mandate	-0.020**	-0.005	-0.010	0.006
	(0.008)	(0.010)	(0.009)	(0.007)
Mean	0.270	0.173	0.259	0.161
Standard Deviation	(0.444)	(0.378)	(0.438)	(0.367)
Observations	100,822	97,016	87,113	55,160

Source: American Community Survey, 2008-2016.

Note: Each column indicates a separate regression. The dependent variable is an indicator for having private insurance. The independent variables of interest are indicators for whether a state implemented a universal or public E-Verify mandate. Each column uses the controls from Table 4. Column (1) examines married men, (2) unmarried men, (3) married women, and (4) unmarried women. Standard errors, shown in parentheses, are clustered at the state level. The estimates utilize the sample weights.

*** p<0.01, ** p<0.05, * p<0.10

Table A7: E-Verify mandates and the probability that likely-unauthorized immigrants have private health insurance after the inclusion of state-specific time trends

	(1) State Specific Linear Time Trends	(2) 2nd Order State Specific Time Trends	(3) 3rd Order State Specific Time Trends	(4) 4th Order State Specific Time Trends	(5) 5th Order State Specific Time Trends
Universal Mandate	-0.011	-0.000	-0.012	-0.013	-0.005
	(0.013)	(0.008)	(0.009)	(0.014)	(0.016)
Public Mandate	-0.005	0.000	-0.005	-0.015*	-0.013
	(0.007)	(0.007)	(0.007)	(0.009)	(0.013)

Source: American Community Survey, 2008-2016.

Note: Each column indicates a separate regression. The dependent variable is an indicator for having any form of insurance coverage. The independent variable is whether a state implemented a universal E-Verify mandate for at least half the year. Each column uses the full set of controls from column (2) of Table 4, while also including the designated order of state specific time trends. The sample is 340,111 likely-unauthorized immigrants. Standard errors, shown in parentheses, are clustered at the state level. The estimates utilize the sample weights.

*** p<0.01, ** p<0.05, * p<0.10

Table A8: E-Verify and the probability that likely-unauthorized immigrants are employed after accounting for covariates

	(1)	(2)	(3)
	Specification		
	Base	Full	Explained
Universal Mandate	-0.021**	-0.012	-0.009
	(0.008)	(0.009)	
Health Policies	N	Y	-0.003
Immigration Enforcement	N	Y	-0.000
Business Cycle Controls	N	Y	0.009
Demographic Characteristics	N	Y	-0.015
Public Mandate	-0.017***	-0.009**	-0.008
	(0.005)	(0.004)	
Health Policies	N	Y	-0.002
Immigration Enforcement	N	Y	-0.001
Business Cycle Controls	N	Y	-0.002
Demographic Characteristics	N	Y	-0.003

Source: American Community Survey, 2008-2016.

Note: The dependent variable is an indicator for being employed. The independent variables are state-level indicators for having implemented a universal E-Verify mandate for at least half the year or a public E-Verify mandate for at least half the year. The coefficients in the first column are from a regression which includes state and year fixed effects, while those in the second column are from a regression including controls for health policies, immigration enforcement, business cycle characteristics, and demographic controls. Standard errors, shown in parentheses, are clustered at the state level. Each estimate utilizes the sample weights. The final column uses the order invariant conditional decomposition proposed by Gelbach (2016) to analyze how the covariates affect the estimates of interest. The sum of these numbers then explains the difference in the coefficients between columns (1) and (2) with any differences attributed to rounding error. The sample is 340,111 likely-unauthorized immigrants. An individual is considered likely-unauthorized if s/he is between the ages of 18 and 45, has at most a high school degree, was born in Mexico or Central America, does not receive public health insurance, and is not currently a citizen.

*** p<0.01, ** p<0.05, * p<0.10

Table A9: E-Verify mandates and insurance coverage of native born children with immigrant mothers

	(1) Any Insurance	(2) Private Insurance	(3) Public Insurance	(4) Any Insurance	(5) Private Insurance	(6) Public Insurance
	Panel I: State and Year Fixed Effects					
Universal Mandate	0.020	0.012	0.010	0.029	0.059	-0.024
	(0.014)	(0.012)	(0.020)	(0.018)	(0.048)	(0.059)
Public Mandate	0.008	0.009	-0.002	0.013	0.051	-0.038
	(0.011)	(0.012)	(0.022)	(0.012)	(0.026)	(0.036)
Universal * Mixed Status				-0.012	-0.059	0.042
				(0.018)	(0.068)	(0.082)
Public * Mixed Status				-0.007	-0.063	0.054
				(0.009)	(0.041)	(0.045)
	Panel II: Full Set of Covariates					
Universal Mandate	0.017	0.017	0.005	0.024	0.044**	-0.012
	(0.011)	(0.012)	(0.013)	(0.017)	(0.022)	(0.030)
Public Mandate	0.004	0.007	0.000	0.006	0.023*	-0.012
	(0.006)	(0.007)	(0.009)	(0.006)	(0.012)	(0.015)
Universal * Mixed Status				-0.011	-0.049*	0.032
				(0.021)	(0.026)	(0.043)
Public * Mixed Status				-0.003	-0.032*	0.027
				(0.009)	(0.017)	(0.023)

Source: American Community Survey, 2008-2016.

Note: The dependent variable is an indicator for having any, private, or public health insurance. The sample 408,167 native born children with immigrant mothers, of whom 185,335 have likely-unauthorized mothers. The independent variables are indicators for if the state implemented a universal or public E-Verify mandate. Panel I includes only state and year fixed-effects, while Panel II includes the full set of controls from Table 4. Standard errors, shown in parentheses, are clustered at the state level. Each estimate utilizes the sample weights.

Table A10: E-Verify mandates and state composition

	(1)	(2)	(3)	(4)	(5)
Pre-Implementation					
-4	-0.222**	-0.135	2.347***	-0.181*	2.167***
	(0.102)	(0.086)	(0.247)	(0.105)	(0.186)
-3	-0.138*	-0.022	1.631***	-0.123	1.456***
	(0.077)	(0.078)	(0.162)	(0.078)	(0.131)
-2	0.016	0.042	0.839***	0.016	0.816***
	(0.032)	(0.055)	(0.106)	(0.042)	(0.083)
Jointly Equal Zero?					
F-Stat	2.190	1.810	34.220	1.030	47.760
Prob>F	0.101	0.159	0.000	0.389	0.000
Post-Implementation					
0	-0.013	-0.035	-0.869***	0.003	-0.873***
	(0.047)	(0.040)	(0.085)	(0.051)	(0.050)
1	0.034	0.029	-1.672***	0.057	-1.625***
	(0.050)	(0.057)	(0.173)	(0.045)	(0.111)
2	0.049	0.006	-2.511***	0.085	-2.401***
	(0.085)	(0.087)	(0.273)	(0.085)	(0.182)
3	0.031	-0.027	-3.336	0.081	-3.233***
	(0.093)	(0.111)	(0.348)	(0.089)	(0.241)
Jointly Equal Zero?					
F-Stat	2.720	1.690	27.420	1.730	89.450
Prob>F	0.041	0.167	0.000	0.159	0.000
Pre=Post?					
F-Stat	3.430	3.430	26.610	1.930	44.980
Prob>F	0.007	0.007	0.000	0.095	0.000
State and Year Fixed Effects	Y	Y	Y	Y	Y
Additional Covariates	N	Y	Y	N	N
Lagged Business Cycle Controls	N	N	N	Y	Y
State-Specific LTT	N	N	Y	N	Y
Observations	432	432	432	432	432

Source: American Community Survey, 2008-2016

Note: The dependent variable is the natural log of the number of likely-unauthorized immigrants in a state. The independent variables are indicators for being *t* periods before/after the implementation of universal E-Verify mandate. In order to maintain a balanced panel, the sample excludes Arizona, Mississippi, and Utah. An individual is considered likely-unauthorized if s/he is between the ages of 18 and 45, has at most a high school degree, was born in Mexico or Central America, does not receive public health insurance, and is not currently a citizen. The totals are constructed from microdata and weighted by the sum of the sample weights. Standard errors, shown in parentheses, are clustered at the state level.

*** p<0.01, ** p<0.05, * p<0.1

Table A11: E-Verify and the probability of having private health insurance among likely-unauthorized immigrants who did not move within the last year

	(1) State and Year Fixed Effects	(2) + Additional Covariates
Universal Mandate	-0.027*	-0.022**
	(0.015)	(0.010)
Public Mandate	-0.018*	-0.010
	(0.009)	(0.006)
Observations	278,811	278,811

Source: American Community Survey, 2008-2016.
Note: The dependent variable is an indicator for having private insurance. The independent variables are state-level indicators for having implemented a universal E-Verify mandate for at least half the year or a public E-Verify mandate for at least half the year. The sample is restricted to likely-unauthorized immigrants who report that they did not move within the last year. Standard errors, shown in parentheses, are clustered at the state level. Each estimate utilizes the sample weights.
*** p<0.01, ** p<0.05, * p<0.10

Table A12: E-Verify mandates and changes to state composition of prime-age individuals

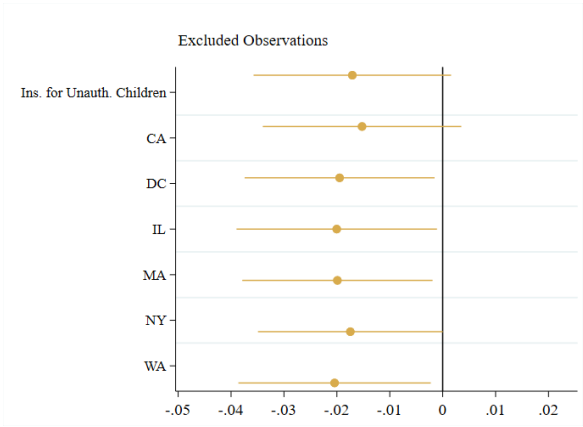
	(1) Likely-Unauthorized	(2) < HS Degree	(3) HS Degree	(4) Hispanic	(5) English Ability	(6) Age	(7) Marital Status
Universal Mandate	0.002*	-0.003*	-0.001	-0.003	-0.004**	0.061	-0.005*
	(0.001)	(0.002)	(0.003)	(0.002)	(0.002)	(0.056)	(0.003)
Public Mandate	-0.000	-0.002**	-0.000	0.001	-0.003***	0.011	-0.003**
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.026)	(0.001)
Mean	0.046	0.129	0.261	0.196	0.948	31.290	0.409
Standard Deviation	(0.034)	(0.031)	(0.030)	(0.141)	(0.032)	(0.251)	(0.036)

Source: American Community Survey, 2008-2016.

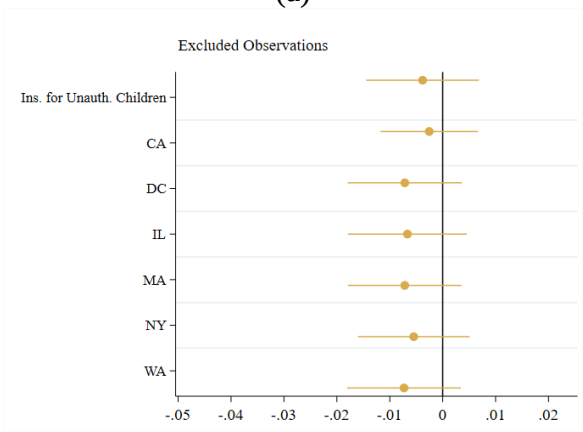
Note: The dependent variable in column (1) is the fraction of the state's population which is likely-unauthorized, in column (2) the fraction with less than a high school degree, while the dependent variable in column (3) is the fraction with a high school degree. In column (4) it is the fraction which is Hispanic, in column (5) the fraction proficient in English. The dependent variable in column (6) is the average age, while in column (7) the fraction which is married. Each column uses the full set of controls from Table 6 excluding those directly related to the dependent variable. Yearly state level counts are generated from the ACS microdata utilizing the sample weights, while the regressions are then weighted using the sum of the sample weights for the state-year. The sample is 459 state-year cells. Standard errors, shown in parentheses, are clustered at the state level.

*** p<0.01, ** p<0.05, * p<0.1

Figure A1: E-Verify mandates and the probability the likely-unauthorized immigrants have private health insurance after excluding states allowing unauthorized children to receive public health insurance



(a)

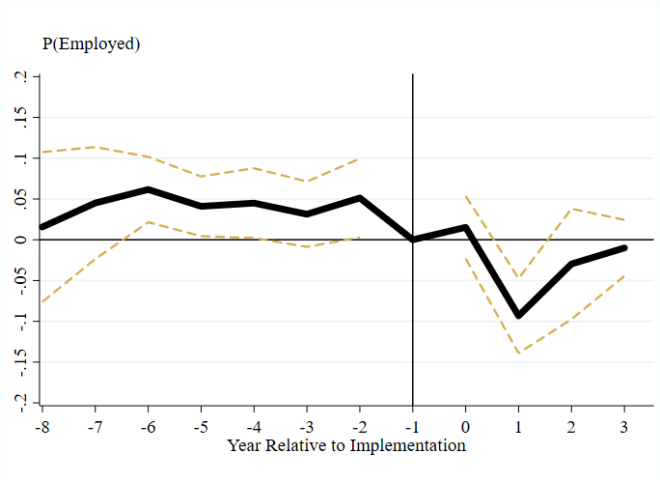


(b)

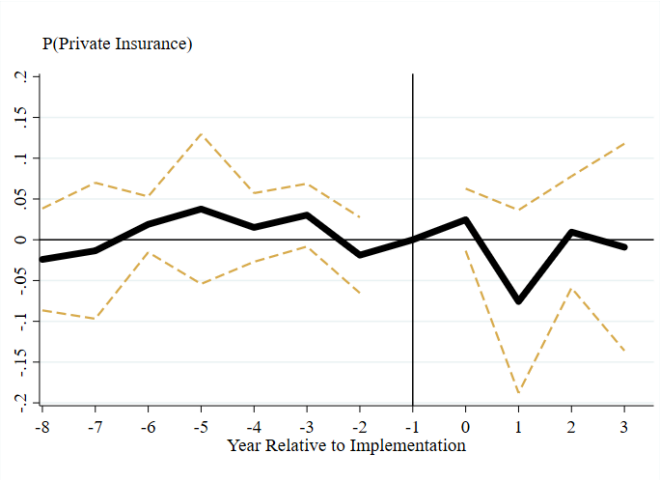
Source: American Community Survey, 2008-2016.

Note: The dependent variable is an indicator for having private insurance. The specification follows column (2) of Table 4. Panel (a) shows how the estimated coefficient for a universal E-Verify mandate changes after the iterative exclusion of each of the treatment states. Panel (b) does the same for the public mandate coefficient, and panels (a) and (b) are from the same regression. Each estimate utilizes the sample weights. The yellow bars indicate 95 percent confidence intervals.

Figure A2: E-Verify mandates, employment, and private health insurance using the ASEC



(a)



(b)

Source: Current Population Survey Annual Social and Economic Supplement, 2000-2016.

Note: The plotted coefficients indicate how an E-Verify mandate affects the probability of having private health insurance. The independent variables are indicators for the periods prior to the implementation of a universal mandate, while controlling for the presence of a public E-Verify mandate, state fixed effects, and year fixed effects. The sample is restricted to likely-unauthorized immigrants (non-citizens, 18-45, with at most a high school degree, born in Mexico or Central America). The lighter long-dashed lines correspond to 95 percent confidence intervals.