

E-Verify mandates and unauthorized immigrants' health insurance coverage

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Abstract

Over the last two decades, state and local governments have adopted policies requiring employers to electronically verify (E-Verify) the work eligibility of their new hires to disrupt unauthorized immigrants' access to the formal labor market. These E-Verify mandates previously enjoyed bipartisan support and are likely to be included in comprehensive immigration reform discussions between the Biden administration and GOP. I show in this paper that state E-Verify mandates are associated with a 5-percentage point reduction in the probability that likely unauthorized immigrants are employed and a 2-percentage point reduction in the probability that they have employer-sponsored insurance. However, these changes are limited to one period after implementation. In all remaining periods, the relationships are not distinguishable from zero. I show that this pattern can be explained by selective outmigration of otherwise unemployed and uninsured likely unauthorized immigrants. By preventing unauthorized immigrants from moving to a more favorable policy environment, a nationwide E-Verify mandate would likely further limit unauthorized immigrants' access to private health insurance.

KEYWORDS

E-Verify, health insurance, immigrant policy

JEL CLASSIFICATION

I13, I18, J61

1 | INTRODUCTION

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). Nearly a quarter of lawful permanent residents and over 40% of unauthorized immigrants lack health insurance (KFF, 2017), and over the last two decades state and local governments have experimented with policies intended to disrupt unauthorized immigrants' access to the formal labor market. One such policy is the requirement that at least some employers electronically verify (E-Verify) that their new hires are eligible to work in the United States.

E-Verify mandates previously enjoyed bipartisan support (Politico, 2013), and several high-profile GOP leaders have expressed optimism about achieving a comprehensive immigration reform package with the Biden administration (The Hill, 2020). Because E-Verify mandates remain popular throughout the Republican party (Romney, 2019; White House, 2017, 2018) a nationwide mandate is almost certain to be a part of these discussions. Indeed, a nationwide E-Verify mandate was included in proposed legislation from Senators Mitt Romney (R-UT) and Tom Cotton (R-AR) to increase the federal minimum wage to \$10 an hour (Vox, 2021). Yet President Biden has simultaneously called for expanding unauthorized immigrants' access to health insurance, going so far as to propose allowing unauthorized immigrants to enroll in public health insurance plans (Washington Post, 2019). In absence of such a proposal, barring unauthorized immigrants from the formal labor market through a nationwide E-Verify mandate could eliminate their only option for health insurance coverage.

In this paper, I show that state-level E-Verify mandates reduced the probability that likely unauthorized immigrants had health insurance coverage, a relationship driven by a reduction in the likelihood of having employer-sponsored insurance. Event study estimates demonstrate the reduction only occurred after the mandate was implemented, and in a series of falsification tests I show that naturalized citizens, Hispanic natives, and white non-Hispanic natives did not experience a similar change. Interestingly, the effect for likely unauthorized immigrants was limited to the period immediately after implementation. In all subsequent periods, the relationship between E-Verify mandates and health insurance coverage was near zero. I show that this pattern can be explained by selective outmigration of otherwise unemployed and subsequently uninsured likely unauthorized immigrants.

This paper contributes to the literature on immigrants' access to insurance by demonstrating a plausibly causal link between E-Verify mandates and health insurance coverage (Borjas, 2003; Bronchetti, 2014; Buchmueller et al., 2008; Dillender, 2017). Additionally, it adds to a growing body of work on the effect of E-Verify mandates on likely unauthorized immigrants which has thus far focused primarily on employment outcomes and migration decisions (Amuedo-Dorantes & Bansak, 2014; Bohn et al., 2014; Orrenius & Zavodny, 2015; Orrenius & Zavodny, 2016). It also contributes to a broader literature on the spillover effects of immigration policy (Amuedo-Dorantes et al., 2018; 2020; Bitler & Hoynes, 2011; East, 2020; Watson, 2014) by showing suggestive evidence that children with likely unauthorized parents and native adults in mixed-status households lost access to health insurance.

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, discussing how unauthorized immigrants can obtain insurance coverage. The data, methods, and summary statistics are discussed in Section 3. Section 4 starts by showing that E-Verify mandates reduced likely unauthorized immigrants' employment prospects, an effect which was driven by reduction in wage-employment and employment at larger firms. I then show that this effect was limited to one period

post-implementation, after which point unauthorized immigrants opted to leave the state. I then present the main insurance results. 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 14 states require public employees or contractors to be screened through E-Verify (Figure 1). Proponents argue that these mandates can reduce the flow of unauthorized immigrants (or induce return migration), while also benefitting citizen workers. For instance, then-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 & 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 & Zavodny, 2015).

There is mixed evidence on the relationship between E-Verify mandates and unauthorized immigrants' labor market outcomes. Focusing on Arizona's E-Verify mandate, Bohn and Lofstrom (2013) found reductions in wage-and-salary employment for non-citizen Hispanics. Examining a broader set of universal and public E-Verify mandates with the 2004–2011 Current Population Survey (CPS) data, Amuedo-Dorantes and Bansak (2014) also found employment reductions for likely unauthorized immigrants and improved job prospects for those competing with unauthorized labor. However, when using the 2002–2012 CPS data, Orrenius and Zavodny (2015) failed to detect a negative employment effect; indeed, their point estimate was positive and statistically insignificant.

E-Verify mandates may also affect state composition by (i) inducing unauthorized immigrants to leave the state and/or (ii) discouraging future unauthorized immigrants from settling. Bohn et al. (2014) found Arizona's E-Verify mandate reduced the fraction of the state's population comprised of Hispanic non-citizens. Looking at a broader group of states, Orrenius and Zavodny (2016) found that universal E-Verify mandates reduced the number of likely unauthorized immigrants in a state. While they found evidence that unauthorized immigrants settled in other states in response to E-Verify laws, they also posited that some unauthorized individuals may have opted to return to their native countries. On the other hand, using administrative data from the Department of Homeland Security on the usage of E-Verify systems, Ayromloo et al. (2020) did not find evidence that these mandates induced work-ineligible individuals to relocate.

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 5 years in the United States. Borjas (2003) found that the PRWORA eligibility changes did reduce Medicaid participation, although affected immigrants compensated by increasing their labor supply to gain employer-sponsored insurance, indicating the existence of crowd-out. However, several papers suggest that there is less crowd-out for immigrant children (Currie, 2000; Kaushal & Kaestner, 2005, 2007; Lurie, 2008).

Under PRWORA, states had the option to offer LPRs public insurance, although they were barred from using federal money for this purpose 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 & Hoynes, 2011). Bronchetti (2014) examined these state actions to restore access to public health insurance and found that expanded eligibility increased take-up of public insurance among immigrant children.

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 (Borjas, 2003; Fix & Passel, 1999; 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 the 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, although 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 (Heyman et al., 2009; Núñez & Heyman, 2007). 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.

Given these restrictions on public insurance, immigrants must largely rely on private health insurance. However, immigrants are less likely to have private insurance relative to their native counterparts, in part because they are less likely to be employed by firms offering health insurance coverage. Indeed, Buchmueller et al. (2008) found that the citizen/noncitizen coverage gap could largely be explained by noncitizens working at firms which did not offer employer-sponsored health insurance. Among those working at firms offering health insurance, noncitizens were only slightly less likely to be eligible for coverage and, among that group, only slightly less likely to take up coverage. Building off this finding, Dillender (2017) showed that immigrants possessing stronger English ability were more likely to have employer-sponsored health insurance. These barriers are especially acute for unauthorized immigrants. Unauthorized immigrants are barred from receiving the Affordable Care Act's private insurance subsidies. While it is possible to obtain coverage outside the Marketplace or through an employer without providing a Social Security Number, the cost is often prohibitive (KFF, 2017).

While these results are applicable to noncitizen immigrants, there is little generalized evidence on whether unauthorized immigrants enroll in employer-sponsored health insurance, in part because most data sets do not contain information on authorization status. Indeed, the best evidence comes from public health researchers conducting surveys and interviews within

unauthorized communities. For example, using the 2000 Los Angeles Family and Neighborhood Survey (LAFANS), Goldman et al. (2005) found that 22% of unauthorized immigrants reported being covered by employer-sponsored health insurance. This amounted to nearly 70% of their total health insurance coverage, given that few unauthorized immigrants purchase insurance directly and many are barred from public insurance.¹ Analyzing the 2001 California Health Interview Survey, Brown et al. (2002) found that noncitizens without “green cards” had the lowest offer rate of employer-sponsored health insurance (50.4%) of all sociodemographic groups analyzed. However, they found that—conditional on working for a firm that offered coverage—these immigrants “experience[ed] no significant disadvantage in eligibility, and they accept[ed] coverage at rates comparable to U.S.-born workers.” The authors found the 29.8% of these immigrants had job-based coverage. Therefore, it appears that at least some unauthorized immigrants do opt to enroll in employer-sponsored insurance.

Given unauthorized immigrants’ low rate of health insurance coverage, it is perhaps unsurprising that they appear more likely to use emergency departments as their primary source of health care (Chan et al., 1996; Ku & Matani, 2001). Interviewing 66 unauthorized immigrants in Charlotte, North Carolina, Coffman et al. (2007) found that most participants reported using hospital emergency rooms to meet their needs—in part because they lacked health insurance.² Goldman et al. (2006) found that the unauthorized immigrants in the LAFANS data used proportionally fewer medical services than natives in part because they lacked health insurance. However, while they may use proportionally less care overall, Stimpson et al. (2010) found that noncitizen immigrants were more likely to have uncompensated care than U.S. natives. Unauthorized immigrants comprised 27% of the increase in the number of uninsured individuals in the United States prior to the passage of the Affordable Care Act (Zuckerman et al., 2011) yet are notably barred from Medicaid and receiving the ACA insurance subsidies.

By curtailing unauthorized immigrants’ primary option for obtaining health insurance, E-Verify mandates may increase the amount of uncompensated care eventually paid for by U.S. citizens. In Figure 2, I descriptively examine the relationship between the more stringent universal E-Verify mandates and the share of likely unauthorized immigrants acting as policyholders for employer-sponsored health insurance. The horizontal axis plots the share covered prior to a universal E-Verify mandate, and the vertical axis plots the corresponding share following the mandate. Points plotted below (above) the 45° line indicate a decrease (increase) in health insurance coverage. Figure 2 shows that likely unauthorized immigrants were systematically less likely to be the policyholders for employer-sponsored health insurance after the enactment of a universal E-Verify mandate.

3 | DATA, MEASURES, AND METHODS

I first obtained preliminary information on state E-Verify mandates from the National Council of State Legislatures (2015) and Urban Institute (2017). I then determined specific

¹The authors considered individuals “undocumented” if they responded that they were (i) not U.S. citizens, (ii) not permanent residents, and (iii) had not been granted asylum, refugee status, temporary protected immigrant status, a student or tourist visa, or another document permitting them to remain in the United States for a limited period.

²The immigrants were recruited through two social service agencies and advertisements placed in Spanish-language newspapers. The finding that the majority of participants reported using hospital emergency rooms to meet their most utilized medical need includes the 33 noncitizen immigrants who were not unauthorized; the authors did not separately reported the statistic by authorization status.

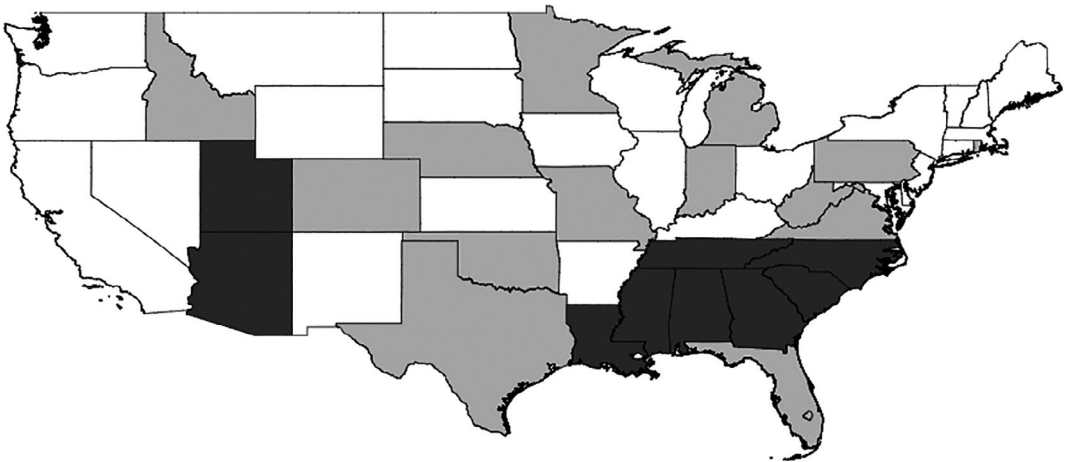


FIGURE 1 State E-Verify mandates. Nonshaded states did not adopt an E-Verify mandate between 2000 and 2016. The lighter color indicates states which implemented at most a public E-Verify mandate, while the darker color indicates states which implemented a universal E-Verify mandate. *Source:* National Conference of State Legislatures (2015); Urban Institute (2017)

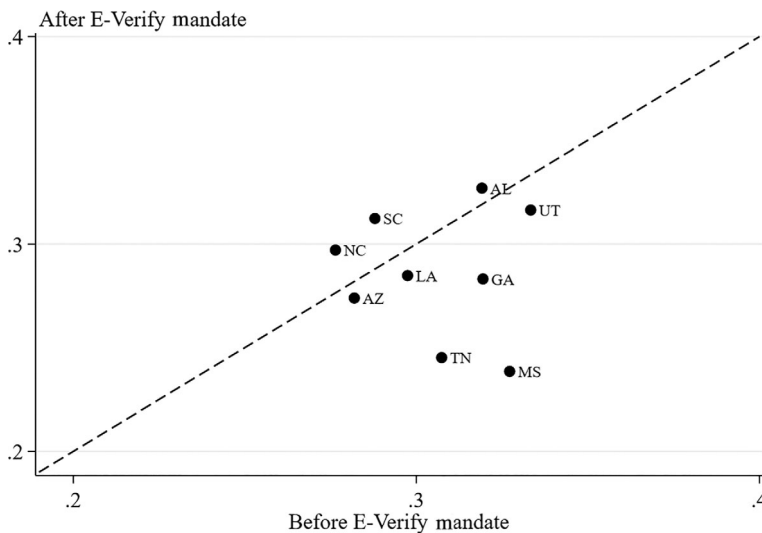


FIGURE 2 Shares of likely unauthorized policyholders of employer-sponsored health insurance before and after the implementation of a universal E-Verify mandate. The figure plots the share of likely unauthorized immigrants serving as the policyholder for an employer-sponsored health insurance plan. Summary statistics utilize the sample weights. *Source:* Current Population Survey Annual Social and Economic Supplement (ASEC) 2000–2016

implementation dates by examining each piece of legislation. Table 1 lists these bills and dates, while Figure 1 shows the nine states which had implemented a universal E-Verify mandate (darker color) and the 14 states which had implemented at most a public mandate

(lighter color) by 2016.³ Two indicator variables, $UNIVERSAL_{st}$ and $PUBLIC_{st}$, were constructed from these dates. When a state with a public E-Verify mandate later implemented a universal E-Verify mandate, the public indicator is set equal to 0.

3.1 | Data and measures

I obtained information on health insurance coverage from the 2000 to 2016 Current Population Survey's Annual Social and Economic Supplement (ASEC), extracted from the IPUMS-CPS database (Flood et al., 2018). In Table 2, I present summary statistics for E-Verify coverage and the main dependent variables.⁴ Because the ASEC does not contain information on authorization status, I identify likely unauthorized immigrants using the residual imputation strategy described by Borjas (2017). I start with a sample of all 18- to 64-year-old foreign-born individuals, and then I consider each respondent a legal immigrant if s/he (i) arrived before 1980, (ii) reports being a citizen, (iii) receives Social Security benefits, (iv) is a veteran or currently in the Armed Forces, (v) works in the government sector, (vi) resides in public housing or receives rental subsidies, or is the spouse of a person who resides in public housing or receives rental subsidies, (vii) was born in Cuba, (viii) works in an occupation requiring licensing, or (ix) is the spouse of a legal immigrant or citizen. The remaining foreign-born individuals are classified as likely unauthorized.⁵

I make one notable adjustment to Borjas's (2017) procedure. While the author considers anyone receiving Medicaid, Medicare, or Military Insurance as being likely authorized, I drop this restriction to avoid selecting treatment status (authorization) using a variant of the dependent variable (health insurance). However, I show in my analysis that my results are robust to including this restriction, as well as to using other commonly accepted definitions of likely unauthorized. Using Borjas's (2017) procedure, I estimate approximately 12 million unauthorized immigrants were in the United States in 2016.

Over the full sample period, nearly 5% of likely unauthorized immigrants resided in a state with a universal E-Verify mandate compared to 10% who resided in a state with a public E-Verify mandate. Likely unauthorized immigrants were less likely than naturalized immigrants (0.33 vs. 0.62), Hispanic natives (0.33 vs. 0.53), and white non-Hispanic natives (0.33 vs. 0.69) to be covered by employer-sponsored insurance. Notably, the share of unauthorized immigrants covered by employer-sponsored insurance is generally in line with Goldman et al.'s (2005) estimated share using the 2000 Los Angeles Family and Neighborhood Survey and Brown et al.'s (2002) estimated share from the 2001 California Health Interview Survey.

³It is worth noting that Louisiana and Tennessee both originally had exceptions to E-Verify, whereby employers could instead just retain work authorization documentation. Because these states required a form of employment-verification, I classify them as universal mandate states throughout the analysis. However, the results are robust to (i) classifying them as untreated, (ii) classifying them as a new category called PARTIAL for partially treated states, and (iii) excluding them from the analysis entirely. Minnesota dropped E-Verify in April of 2008, although it was reinstated legislatively in July of that year. Rhode Island abandoned its E-Verify requirement in January 2011.

⁴Summary statistics for the additional covariates are reported in Table A1.

⁵The code for this procedure is graciously provided on Borjas's website: <https://scholar.harvard.edu/files/gborjas/files/le2020archive.zip>.

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, although it was reinstated legislatively in July of that year. Rhode Island abandoned its E-Verify requirement in January 2011.

3.2 | Potential channels

E-Verify mandates may directly reduce the probability that an unauthorized immigrant has health insurance through the *employment channel*. If E-Verify mandates reduce unauthorized immigrants' labor market prospects—and these individuals would have otherwise obtained employer-sponsored insurance—overall coverage will fall. When a low-income U.S. citizen loses her job, she does not necessarily lose health insurance coverage. Although she may lose

TABLE 2 Summary statistics of primary variables

	Likely unauthorized immigrants	Naturalized immigrants	Hispanic natives	White non-Hispanic natives
Universal mandate	0.048 (0.214)	0.036 (0.187)	0.050 (0.218)	0.059 (0.236)
Public mandate	0.102 (0.302)	0.115 (0.319)	0.109 (0.312)	0.141 (0.348)
Employed	0.668 (0.471)	0.722 (0.478)	0.653 (0.476)	0.714 (0.452)
Employer-sponsored insurance				
Any	0.327 (0.469)	0.618 (0.486)	0.528 (0.479)	0.692 (0.462)
Policyholder	0.231 (0.422)	0.432 (0.495)	0.356 (0.479)	0.470 (0.499)
Dependent	0.110 (0.303)	0.224 (0.417)	0.199 (0.399)	0.260 (0.439)
Observations	131,978	134,410	151,679	1,273,252

Source: Current Population Survey Annual Social and Economic Supplement (ASEC) 2000–2016, National Council of State Legislatures (2015); Urban Institute (2017).

Note: Authorization status is assigned using the residual imputation method proposed by Borjas (2017). Specifically, a foreign-born person is considered to be authorized if s/he (a) arrived before 1980, (b) is a citizen, (c) receives Social Security benefits or SSI, (d) is a veteran or is currently in the Armed Forces, (e) works in the government sector, (f) resides in public housing or receives rental subsidies, or is the spouse of someone who resides in public housing or receives rental subsidies, (g) was born in Cuba, (h) works in an occupation requiring some form of licensing, (i) is the spouse of a legal immigrant or citizen. All remaining foreign-born persons are classified as likely unauthorized. The sample is restricted to individuals between the ages of 18 and 64 and summary statistics utilize the sample weights. The employment observations include 129,211 likely unauthorized immigrants, 129,948 naturalized citizens, 146,679 Hispanic natives, and 1,264,158 white non-Hispanic natives. Additional summary statistics are reported in Table A1.

her employer-sponsored health insurance, she will qualify for a special enrollment period allowing her to directly purchase health insurance through the Marketplace with potential ACA subsidies. Additionally, the most economically disadvantaged citizens qualify for public health insurance. In contrast, unauthorized immigrants are ineligible for the ACA health insurance subsidies and are generally ineligible for public health insurance. For these individuals, losing a job is tantamount to losing insurance coverage.

In addition to affecting *whether* an unauthorized immigrant is employed, state E-Verify mandates may affect unauthorized immigrants' health insurance coverage by altering the *types* of jobs available to these individuals. In 2008—the year of the first universal E-Verify mandate—87% of employees were offered employer-sponsored health insurance (Vistnes et al., 2012). Yet this statistic masks substantial variation by firm size. While over 95% of employees at large firms were offered health insurance, the share among smaller firms varied between 44 (<10 employees) and 84% (25–99 employees). Only 25% of unauthorized immigrants were employed by large firms throughout my sample period, compared to 21% employed at firms with fewer than 10 employees. Because Ayromloo et al. (2020) found that larger firms were more likely to comply with E-Verify mandates, E-Verify mandates may induce

unauthorized immigrants to work for smaller firms which are less likely to offer employer-sponsored health insurance. Moreover, E-Verify mandates may shift unauthorized immigrants from full-time to part-time jobs, and part-time workers are less likely to qualify for employer-sponsored health insurance (Farber & Levy, 2000).

E-Verify mandates may also 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 & 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 employing an event study specification on the sample of likely unauthorized immigrants to examine whether the probability that likely unauthorized immigrants were insured was differentially trending in states which eventually implemented E-Verify mandates. Although less efficient than the traditional difference-in-differences estimator, it imposes no assumptions about how the treatment effect varies over time (Goodman-Bacon, 2021).⁶ This specification is shown in Equation (1):

$$Y_{isrt} = \alpha + \sum_{j=-8, j \neq -1}^3 \beta_j D_{st}^j + \mu \text{PUBLIC}_{srt} + \eta_{\text{Pre}} + \eta_{\text{Post}} + \mathbf{H}'_{srt} \boldsymbol{\phi} + \mathbf{E}'_{srt} \boldsymbol{\rho} + \mathbf{B}'_{srt} \boldsymbol{\pi} + \mathbf{X}'_{isrt} \boldsymbol{\gamma} + \theta_s + \tau_{rt} + \epsilon_{ist} \quad (1)$$

where Y_{isrt} is an indicator for whether person, i , in state, s , and census region, r , was employed or 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, and I control for whether the state had implemented a public E-Verify mandate.

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. Because states may have been concurrently expanding immigrant access to public health insurance while others adopted E-Verify mandates, $\mathbf{H}$ includes several immigrant-related health policy controls. These include indicators for whether the state offered Medicaid to lawful permanent resident children during the 5-year ban, public health insurance for all lawful permanent residents during the 5-year ban, or public health insurance to unauthorized immigrant children. The vector also includes indicators for whether a state offered food assistance for lawful permanent resident children during the 5-year ban, as well for whether a state expanded Medicaid as part of the Affordable Care Act (Urban Institute, 2017).

The vector $\mathbf{E}$ includes controls for local-level police-based enforcement measures implemented over the same period. For example, under the 287(g) program, local law enforcement officers are deputized and charged with arresting and detaining those suspected of

⁶The ASEC is collected in March but the health insurance questions refer to insurance coverage during the prior year. Therefore, when examining health insurance outcomes, I match observations to treatment status in March of the prior year.

immigration violations (Capps et al., 2011). Additionally, under the county-level Secure Communities program, biometric information of arrestees is checked against a DHS database of legal immigrants (Miles & Cox, 2014). I obtain both measures from the Urban Institute's Immigration Policy Resource (2017). Because the 287(g) program and Secure Communities programs were implemented at the local level, I utilize the Urban Institute's coding which considers a state treated if some or all of the counties with the highest immigrant population had adopted the relevant measure.

The vector $\mathbf{B}$ controls for state-level business cycle characteristics, including the natural log of real value of residential building permits in the state and the state unemployment rate. Equation (1) also controls for individual level demographic characteristics, $\mathbf{X}$, including whether an individual is of Hispanic origin, white, black, male, proficient in English, or married, as well as indicator variables for each age between 18 and 64 (Dillender, 2017).⁷

Equation (1) includes a full set of time-invariant state fixed effects, θ_s . As shown in Figure 1, the states implementing universal E-Verify mandates from 2000 to 2016 were largely concentrated in the southeast. Notably, these states were also less likely to expand Medicaid as part of the Affordable Care Act and may have been differentially affected by the Great Recession. To account for these possibilities, I also include a full set of census region-by-year fixed effects, τ_{rt} . Robust standard errors are clustered at the state level (Bertrand et al., 2004). However, given the small number of states implementing E-Verify mandates, I conduct inference using a wild cluster bootstrap technique (Cameron et al., 2008; Cameron & Miller, 2015).

Following the event study results, I next utilize a standard two-way fixed effects framework, shown in Equation (2), where UNIVERSAL indicates whether the state had implemented a universal E-Verify mandate and PUBLIC indicates whether a state had implemented a public mandate.

$$Y_{isrt} = \alpha + \beta_1 \text{UNIVERSAL}_{srt} + \beta_2 \text{PUBLIC}_{srt} + \mathbf{H}'_{srt} \boldsymbol{\phi} + \mathbf{E}'_{srt} \boldsymbol{\rho} + \mathbf{B}'_{srt} \boldsymbol{\pi} + \mathbf{X}'_{isrt} \boldsymbol{\gamma} + \theta_s + \tau_{rt} + \varepsilon_{ist} \quad (2)$$

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.

4 | RESULTS

I begin by examining the relationship between E-Verify mandates and likely unauthorized immigrants' employment prospects. After demonstrating that E-Verify mandates reduced the likelihood that these individuals were employed, especially at larger firms, I show that likely unauthorized individuals may have engaged in compensatory behavior by leaving the state. As a result, the employment effects are largely limited to one period post-implementation. Next, I document a similar pattern with regards to health insurance coverage, and I show that this

⁷When estimating the relationship between E-Verify mandates and the likelihood of having health insurance, I do not control for whether the individual was employed to avoid conditioning on an endogenous variable.

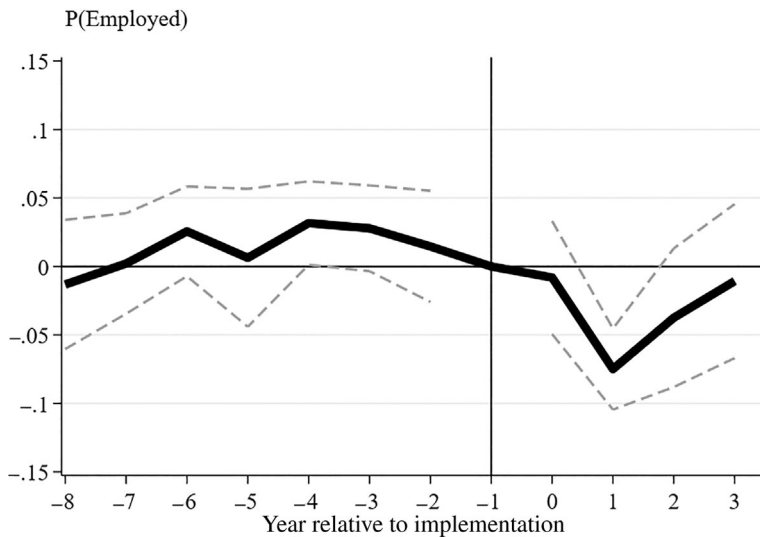


FIGURE 3 Event study estimates on state E-Verify mandates and likely unauthorized Immigrants' employment. The dependent variable is an indicator for whether the individual was employed. The figure plots the coefficients obtained from estimating Equation (1) which captures how the relationship between universal E-Verify mandates and the dependent variables evolved over time. Exact coefficients and tests of joint significance are shown in Table A2. The estimates utilize the sample weights. *Source:* Current Population Survey Annual Social and Economic Supplement (ASEC) 2000–2016

result is robust to several robustness exercises. Interestingly, I show that E-Verify mandates may also harm U.S. citizens, including native-born children with likely unauthorized parents and native adults residing in mixed-status households.

4.1 | E-Verify mandates, employment, and migration

Using the event study specification from Equation (1), I show in Figure 3 that likely unauthorized immigrants were 7.5-percentage points less likely to be employed following the implementation of a universal E-Verify mandate. However, this reduction is short-lived. Within 3 years of implementation, E-Verify mandates no longer appear to have affected likely unauthorized immigrants' employment prospects. Indeed, the last point estimate is small (-0.01) and statistically indistinguishable from zero.

In Table 3, I use the two-way fixed effects specification from Equation (2) to measure the average post-period change in labor market outcomes.⁸ First, I find that universal E-Verify mandates reduced likely unauthorized immigrants' employment by 4.7-percentage points (column 1 row 1). Interestingly, I also find that likely unauthorized immigrants were 1.6-percentage points less likely to be employed after the implementation of a public E-Verify mandate (column 1 row 2).

⁸I report the control variables' coefficients for the primary specifications in Table A3.

TABLE 3 E-Verify mandates and unauthorized immigrants' employment prospects

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Employed	Works for wages	Self- employed	Full-time status	Part-time status	Employed at a larger firm	Employed at a smaller firm
Universal mandate	−0.047** (0.010) [0.019]	−0.060** (0.013) [0.014]	0.009 (0.005) [0.169]	−0.031 (0.013) [0.145]	−0.013 (0.008) [0.204]	−0.055*** (0.008) [0.001]	0.007 (0.010) [0.584]
Public mandate	−0.016* (0.006) [0.055]	−0.015** (0.006) [0.035]	0.003 (0.005) [0.518]	−0.018** (0.006) [0.038]	0.005 (0.006) [0.548]	−0.023** (0.007) [0.024]	0.015 (0.011) [0.227]
Dependent variable mean	0.668	0.680	0.058	0.567	0.116	0.252	0.439
Observations	129,211	129,211	129,211	129,211	129,211	131,978	131,978

Source: Current Population Survey Annual Social and Economic Supplement (ASEC) 2000–2016.

Note: The dependent variable in column (1) is an indicator for whether the person was employed. The dependent variable in column (2) is an indicator for whether the individual typically works for wages, while the dependent variable in column (3) is an indicator for whether the individual is self-employed. The dependent variable in column (4) is an indicator for whether the individual is a full-time worker, while the dependent variable in column (5) is an indicator for whether the individual is a part-time worker. The dependent variable in column (6) is an indicator for whether the individual was employed at a firm with at least 100 employees, while the dependent variable in column (7) is an indicator for whether the individual was employed at a firm with between 1 and 99 employees. The dependent variables in columns (1)–(5) are measured contemporaneously, while the dependent variables in columns (6) and (7) refer to employment during the prior year. Accordingly, observations in columns (6) and (7) are matched to covariates during the prior year. The independent variables of interest are state-level indicators for having implemented a universal E-Verify mandate or a public E-Verify mandate. Each estimate includes the full set of controls from Equation (2). Standard errors, shown in parentheses, are clustered at the state level. Wild bootstrap p values are reported in brackets. Estimates utilize the sample weights.

* $p < .10$; ** $p < .05$; *** $p < .01$.

These estimates are consistent with Amuedo-Dorantes and Bansak (2014), who found that universal (public) E-Verify mandates reduced likely unauthorized immigrants' probability of being employed by 4.6 (2.0) percentage points. Yet they stand in contrast to Orrenius and Zavodny (2015), who did not detect statistically significant reductions in employment using a near identical data set and identification strategy but longer time window than Amuedo-Dorantes and Bansak (2014). From the event study in Figure 3, one possible explanation is that the difference-in-differences estimates over a longer time horizon may be attenuated because the treatment effect was short-lived.⁹

Next, I show that likely unauthorized immigrants were 6-percentage points less likely to be employed for wages after the implementation of a universal E-Verify mandate (column 2 row 1) and 1.5-percentage points less likely to be employed for wages after the implementation of a public E-Verify mandate (column 2 row 2). I also find suggestive evidence that universal E-Verify mandates increased the probability that likely unauthorized immigrants were classified

⁹In a later analysis using an instrumental variables identification strategy, Orrenius and Zavodny (2020) found that universal E-Verify mandates led to a 3-percentage point reduction in the probability that likely unauthorized men were employed. They did not detect a statistically significant change in employment for likely unauthorized women.

as self-employed (column 3 row 1), consistent with a compensatory response to reduced access to formal employment.¹⁰ Next, I show that E-Verify mandates appear to have reduced the probability that likely unauthorized immigrants were full-time employees (column 4), while the point estimates for part-time status are smaller and statistically insignificant (column 5).

In the final two columns, I show that universal E-Verify mandates were most effective at curbing unauthorized immigrants' employment at larger firms (column 6 row 1); the point estimate for smaller firms is almost 90% smaller in absolute magnitude, opposite signed, and statistically insignificant (column 7 row 1). This pattern is consistent with statutory language requiring larger firms to be the earliest adopters of the E-Verify system.¹¹ Additionally, in a working paper, Ayromloo et al. (2020) showed that larger firms were more likely to comply with E-Verify mandates. Perhaps surprisingly, I also find evidence that public E-Verify mandates reduced the probability that likely unauthorized immigrants were employed by larger firms (column 6 row 2). One possible explanation is that these firms were more likely to be awarded government contracts. Alternatively, it may be that larger firms preemptively began using E-Verify in anticipation that a public sector mandate would later be expanded to all firms.

The event study estimates from Figure 3 indicate that E-Verify's relationship with employment was largely limited to the year following implementation. One explanation is that likely unauthorized immigrants who would have otherwise been unemployed because of the mandate opted to leave the state. To test this possibility, I examine the relationship between E-Verify mandates and the share of the foreign-born population comprised of likely unauthorized immigrants.¹² First, I show in Figure 4 that there was no statistical relationship between this share and the eventual implementation of a universal mandate; the pre-implementation coefficients are not jointly different from zero ($p = .585$). However, this share fell by approximately 9-percentage points 2 years after the implementation of a universal E-Verify mandate—the exact period in which E-Verify ceased to affect likely unauthorized immigrants' employment prospects. This post-period reduction was statistically different from zero ($p = .015$).¹³

Outmigration in response to E-Verify mandates is consistent with Bohn et al. (2014), who found that Arizona's universal E-Verify mandate led to meaningful reduction in the share of population comprised of prime-aged non-citizen Hispanics with at most a high school degree. Similarly, Orrenius and Zavodny (2016) found that universal E-Verify mandates led to a reduction in the number of new and recent likely unauthorized immigrants residing in a state. They estimate that some individuals moved to other states, while others left the country entirely. However, this finding contrasts Ayromloo et al. (2020), who found no evidence that work-ineligible individuals relocated in response to E-Verify mandates.

¹⁰It is worth noting that worker class is defined even for individuals who are unemployed at the time of the survey. Therefore, the indicator variable takes on the value of one if a person reports being a wage/salary employee, even if the individual is not presently employed. The estimates are robust in both size and statistical significance to recoding unemployed individuals as zero.

¹¹For example, Georgia's universal mandate took effect on January 1, 2012 for firms with at least 500 employees. Firms with 100–499 employees were required to be using E-Verify on July 1, 2012, and firms with 10–100 employees were required to use E-Verify starting July 1, 2013.

¹²In Figure A1, I replicate this analysis replacing the dependent variable with the natural log of the number of likely unauthorized immigrants. Although less precisely estimated, Figure A1 is consistent with a net reduction in likely unauthorized immigrants occurring two periods after the implementation of a universal E-Verify mandate.

¹³Using the two-way fixed effects specification from Equation (2), I estimated a statistically insignificant 2.9 percentage point reduction in the share of foreign-born individuals comprised of likely unauthorized immigrants ($p = .20$). It is worth noting that it takes years for this migration to occur. Moreover, Goodman-Bacon (2021) showed that when the treatment effect increases over time, as is the case in Figure 3, difference-in-differences estimates will be biased toward zero.

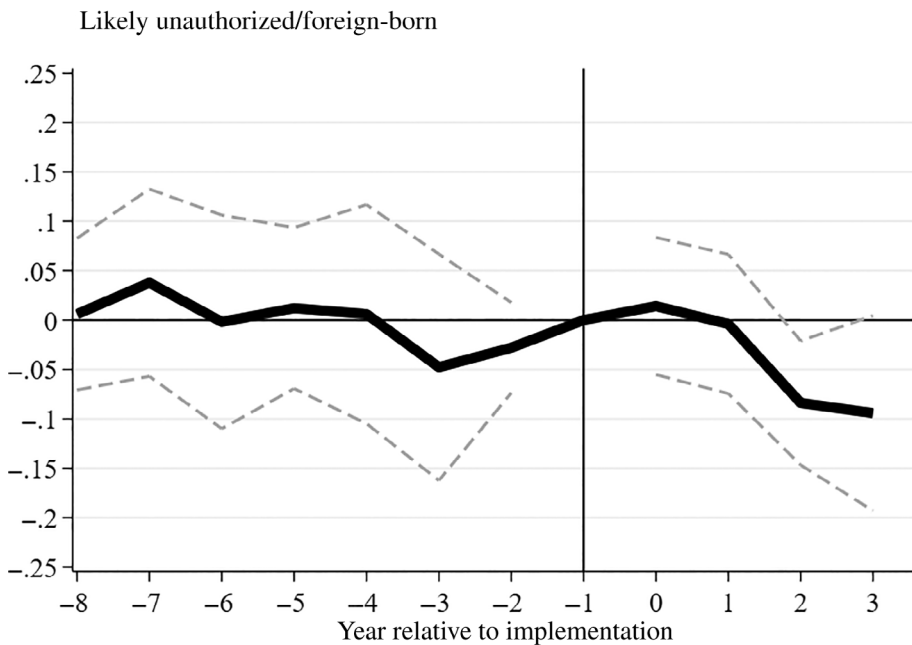


FIGURE 4 Event study estimates on state E-Verify mandates and foreign-born composition. The dependent variable is the share of the foreign-born population comprised of likely unauthorized immigrants. The figure plots the coefficients obtained from estimating Equation (1) capturing how the relationship between universal E-Verify mandates and the dependent variable evolved over time. Exact coefficients and tests of joint significance are shown in Table A2. The estimates utilize the sample weights. *Source:* Current Population Survey Annual Social and Economic Supplement (ASEC) 2000–2016

4.2 | E-Verify mandates and health insurance

In the prior section, I showed that E-Verify mandates reduced likely unauthorized immigrants' employment prospects, especially at larger firms. I now explore how these mandates may have affected likely unauthorized immigrants' access to health insurance. In Table 4, I show that universal E-Verify mandates were associated with a 4.4-percentage point reduction in the probability that likely unauthorized immigrants had health insurance (column 1 row 1), while public mandates were associated with a 3.7-percentage point reduction (column 1 row 2).¹⁴ To test the generalizability of these estimates, I follow the literature and show in Figure 5 that the estimate

¹⁴In Table A4, I show that the estimates are robust to using a probit estimation framework (column 1), including an indicator for place of birth (column 2), and limiting the sample only to states which ever implemented an E-Verify mandate (column 3). I also show that my results are robust to excluding the census region-by-year fixed effects (column 4), as well as to following Dube (2019) and replacing them with state-by-Great Recession year fixed effects. I continue to find a 4–5-percentage point reduction in the probability that likely unauthorized immigrants had health insurance (column 5). I also show that the results are robust to excluding observations from states which had expanded Medicaid as part of the Affordable Care Act (column 6). I show that the effect sizes are unchanged if I restrict the sample to the years prior to when the ACA employer-mandate was supposed to be implemented (column 7). Finally, in Table A4 I instead perform the analysis at the household level. I find that universal E-Verify mandates reduced the likelihood that at least one person in a household possessing unauthorized immigrants had any health insurance by 6% relative to the sample mean (column 8).

TABLE 4 E-Verify mandates and unauthorized immigrants' health insurance coverage

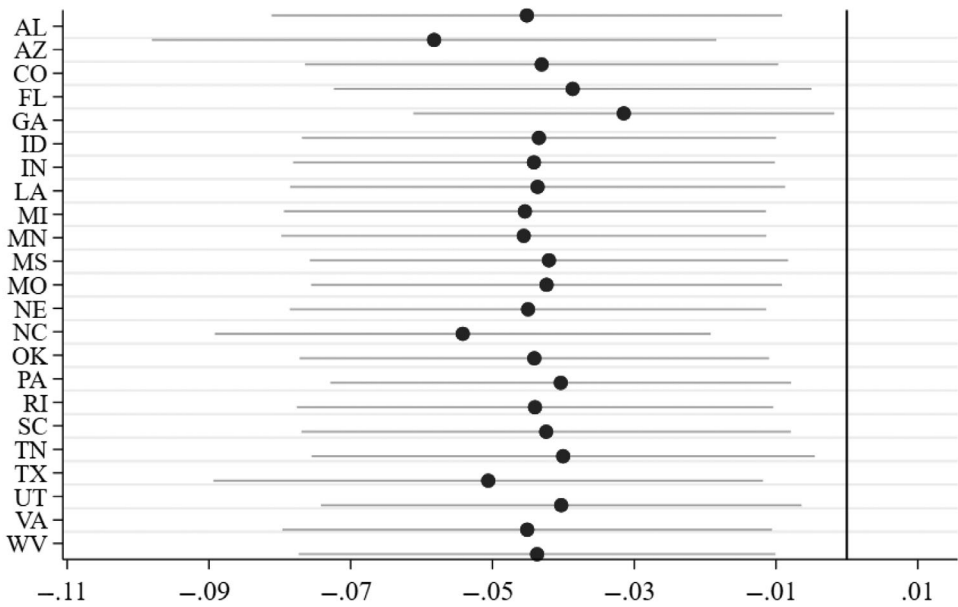
(1)	(2) Private health insurance			(3)		(4)		(5)		(6) Public health insurance		(7)		(8)	
	Any health insurance	Any private insurance	Employer-sponsored insurance policyholder	Employer-sponsored insurance dependent	Non-employer sponsored private insurance	Any public insurance	Medicaid	Medicare							
Universal mandate	−0.044** (0.017) [0.021]	−0.035* (0.012) [0.055]	−0.028** (0.008) [0.029]	0.002 (0.008) [0.797]	−0.006 (0.007) [0.421]	−0.010 (0.011) [0.476]	−0.010 (0.012) [0.493]	−0.001 (0.002) [0.788]							
Public mandate	−0.037** (0.012) [0.035]	−0.027 (0.013) [0.130]	−0.022** (0.007) [0.015]	−0.000 (0.005) [0.985]	−0.005 (0.008) [0.627]	−0.011 (0.006) [0.138]	−0.012 (0.006) [0.104]	0.000 (0.001) [0.900]							
Dependent mean	0.480	0.389	0.231	0.110	0.063	0.1088	0.104	0.004							
Observations	131,978	131,978	131,978	131,978	131,978	131,978	131,978	131,978							

Source: Current Population Survey Annual Social and Economic Supplement (ASEC) 2000–2016.

Note: The dependent variable in column (1) is an indicator for whether the individual had any health insurance coverage (private insurance, medicaid, or medicare). The dependent variables in columns (2)–(5) refer to private insurance. The dependent variable in column (2) is an indicator for any private insurance coverage, in column (3) an indicator for being the policyholder for employer-sponsored health insurance, in column (4) an indicator for being a dependent on an employer-sponsored health insurance plan, and in column (5) an indicator for having non-employer-sponsored private insurance. The dependent variables in columns (6)–(8) reference public insurance. The dependent variable in column (6) is an indicator for having any public health insurance, in column (7) an indicator for Medicaid coverage, and in column (8) an indicator for Medicare coverage. The independent variables of interest are state-level indicators for having implemented a universal E-Verify mandate or a public E-Verify mandate. Each estimate includes the full set of controls from Equation (2). Standard errors, shown in parentheses, are clustered at the state level. Wild bootstrap p values are reported in brackets. Estimates utilize the sample weights.

* $p < .10$; ** $p < .05$; *** $p < .01$

(a) Excluded state: universal mandata



(b) Excluded state: public mandata

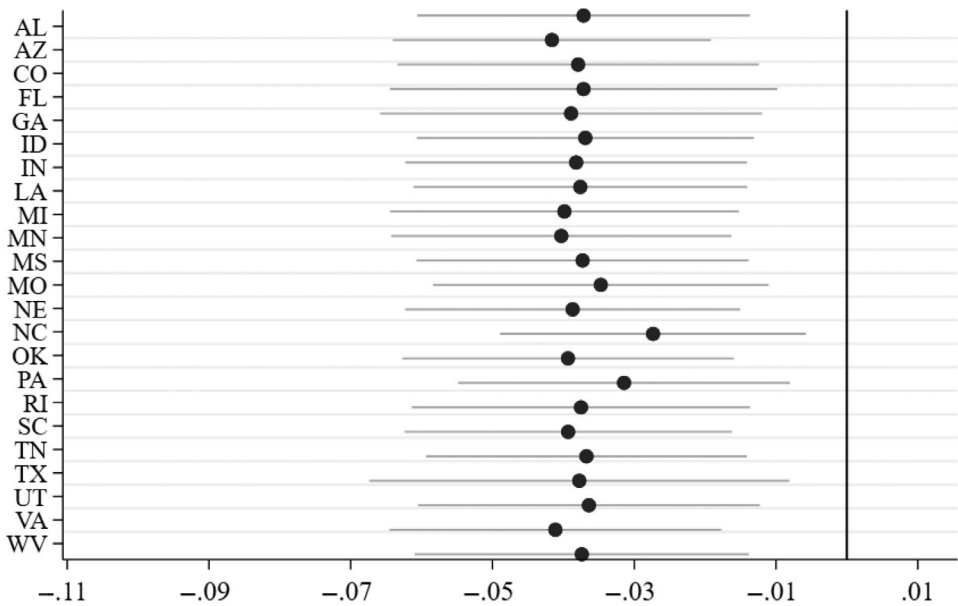


FIGURE 5 Robustness of the E-Verify/health insurance relationship to Iteratively excluding each treated state. The dependent variable is an indicator for whether the individual had health insurance. Both figures plot the estimated coefficients for the universal and public E-Verify mandate indicators from Equation (2) after iteratively excluding each of the treated states. Panel (a) plots the universal mandate coefficient, while Panel (b) plots the public mandate coefficient. The dark circles indicate each point estimate, and the lighter lines denote 95% confidence intervals. The estimates utilize the sample weights. *Source:* Current Population Survey Annual Social and Economic Supplement (ASEC) 2000–2016

is robust to iteratively excluding each state which ever adopted an E-Verify mandate (Amuedo-Dorantes et al., 2020; Orrenius & Zavodny, 2016). This is especially important because Orrenius and Zavodny (2015) argued that while Arizona's E-Verify mandate was particularly detrimental to likely unauthorized immigrants, other states' mandates were less salient.¹⁵

Consistent with E-Verify mandates harming the labor market prospects of likely unauthorized immigrants, I show in Table 4 that E-Verify's relationship with health insurance coverage is driven by a reduction in the probability of having private insurance (column 2). In contrast, the point estimate for public insurance is one-third the size and statistically insignificant (column 6).¹⁶ This change is driven by a nearly 3-percentage point reduction in the probability that a likely unauthorized immigrant was the policyholder for an employer-sponsored health insurance plan following the implementation of a universal E-Verify mandate (column 3 row 1).¹⁷ I also document a 2.2-percentage point reduction in the probability of being the policyholder after the implementation of a public E-Verify mandate (column 3 row 2).¹⁸

Using the event study specification from Equation (1), I show in Figure 6 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 ($p = .216$). However, one period after implementation this probability fell by over 7-percentage points. Although the effect decreased in absolute magnitude after another year, I can reject the null hypothesis that the post-implementation coefficients are jointly equal to zero ($p = .002$). Consistent with the employment event study, the effect is near zero three periods post-implementation.

¹⁵The event study coefficients in Figure 3 indicate that likely unauthorized immigrants opted to leave a state in response to universal E-Verify mandates. If these individuals moved to neighboring states, the control states would be indirectly treated. However, Orrenius and Zavodny (2016) showed that most individuals moving in response to E-Verify mandates appear to have left the country altogether. In Table A5, I explore whether neighboring state E-Verify mandates affect the probability that unauthorized immigrants have health insurance. I define a "neighbor" as the states sharing a border. For example, California is bordered by Arizona, Nevada, and Oregon, while Nevada is bordered by Arizona, California, Idaho, Oregon, and Utah. I do not detect any statistically significant effects.

¹⁶It is worth noting that while the relationship between E-Verify and private insurance coverage is perhaps more obvious, E-Verify mandates *could* reduce take-up of public health insurance by discouraging participation in public programs (Watson, 2014). While generally ineligible for public insurance, some states have expanded public insurance coverage for select unauthorized immigrants (Bronchetti, 2014).

¹⁷When studying the mechanics of difference-in-differences, Goodman-Bacon (2021) showed that covariates can contribute to identification when there is variation in treatment timing. In Table A6, I use the order-invariant decomposition proposed by Gelbach (2016) to test the sensitivity of these results to the various covariates relative to a sparse baseline model containing only state and year fixed effects. My results are not being driven by the control variables.

¹⁸Amuedo-Dorantes and Bansak (2014) found statistically significant employment reductions for both sexes, but the point estimates were larger for likely unauthorized men. In contrast, Orrenius and Zavodny (2015) did not uncover any negative employment effects for men or women. More recently, Orrenius and Zavodny (2020) found negative employment effects for men and positive employment effects for women. In Table A7, I test whether the employment and insurance effects vary by sex. I find that universal mandates are associated with a 4.5-percentage point reduction in the probability of employment for likely unauthorized men (column 1 row 1) and a 4-percentage point reduction for likely unauthorized women (column 2 row 1). However, the triple-difference specification does not indicate that these values are statistically different from each other (column 3). Similarly, I find that universal mandates were associated with a 3.1-percentage point reduction in the probability of being the policyholder for employer-sponsored health insurance for likely unauthorized men (column 4 row 1) and a 2.6-percentage point reduction for likely unauthorized women (column 5 row 1). Again, the triple-difference specification does not indicate that these values are statistically different from each other.

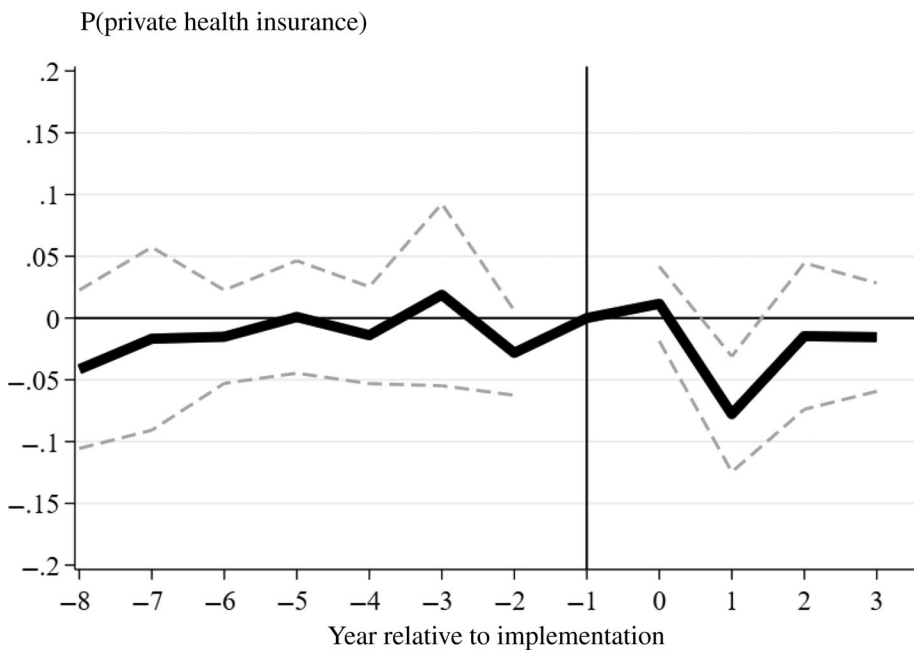


FIGURE 6 Event study estimates on state E-Verify mandates and likely unauthorized Immigrants' access to private health insurance. The dependent variable is an indicator for whether the individual is covered by private health insurance. The figure plots the coefficients obtained from estimating Equation (1) capturing how the relationship between universal E-Verify mandates and the dependent variable evolved over time. Exact coefficients and tests of joint significance are shown in Table A2. The estimates utilize the sample weights. *Source:* Current Population Survey Annual Social and Economic Supplement (ASEC) 2000–2016

4.3 | Falsification tests and sensitivity to likely unauthorized definition

In Table 5, I conduct falsification tests on groups less likely to have been affected by E-Verify mandates, including naturalized citizens (column 2), native-born Hispanics (column 3), and white non-Hispanic natives (column 4).¹⁹ However, it is worth noting that E-Verify mandates could conceivably affect these groups' insurance coverage. For example, it is possible that E-Verify mandates *improve* the labor market prospects of those competing against unauthorized immigrants (Churchill et al., 2019; Orrenius & Zaodny 2015), thereby increasing their access to health insurance. Moreover, naturalized citizens and natives in mixed-status households may receive health insurance through an unauthorized family member.

¹⁹In Table A8, I employ a triple-difference specification by pooling the sample of likely unauthorized immigrants with each respective falsification group. I then repeat the analysis but fully interact the likely unauthorized indicator with the all the covariates (the independent variables of interest, demographic characteristics, business cycle controls, enforcement measures, health policy controls, state fixed effects, and census region-by-year fixed effects). I continue to find an approximate 2–3-percentage point reduction in the likelihood of being the policyholder for employer-sponsored health insurance.

TABLE 5 E-Verify mandates and the likelihood of being the policyholder for employer-sponsored health insurance

	(1) Likely unauthorized immigrants	(2) Naturalized citizens	(3) Hispanic natives	(4) White non-Hispanic Natives
Universal mandate	−0.028** (0.008) [0.029]	0.006 (0.008) [0.531]	−0.003 (0.011) [0.826]	0.001 (0.008) [0.902]
Public mandate	−0.022** (0.007) [0.015]	−0.006 (0.006) [0.354]	−0.004 (0.008) [0.718]	0.005 (0.004) [0.698]
Dependent variable mean	0.231	0.432	0.356	0.471
Observations	131,978	134,410	151,679	1,273,252

Source: Current Population Survey Annual Social and Economic Supplement (ASEC) 2000–2016.

Note: The dependent variable is an indicator for being the policyholder for employer-sponsored health insurance. The independent variables of interest are state-level indicators for having implemented a universal E-Verify mandate or a public E-Verify mandate. Each estimate includes the full set of controls from Equation (2). The sample in column (1) includes likely unauthorized immigrants, the sample in column (2) naturalized citizens, the sample in column (3) Hispanic natives, and the sample in column (4) white non-Hispanic natives. Standard errors, shown in parentheses, are clustered at the state level. Wild bootstrap *p* values are reported in brackets. Estimates utilize the sample weights.

* $p < 0.10$; ** $p < .05$; *** $p < .01$.

However, I find no evidence that E-Verify mandates affected these groups' access to employer-sponsored health insurance.²⁰

Next, I test the sensitivity of my estimates to how I assign likely authorization status. As mentioned previously, the ASEC does not contain information on legal status, and I instead classify an individual as likely unauthorized using a modified version of the residual imputation scheme proposed by Borjas (2017). Alternatively, authors have classified individuals as likely unauthorized based on a combination of citizenship, education, and ethnicity. For example, Amuedo-Dorantes and Bansak (2014) consider a person likely unauthorized if s/he is a non-citizen Hispanic between the ages of 18 and 45 with at most a high school degree. Similarly, Orrenius and Zavodny (2015) classify people as likely unauthorized if they are non-citizen immigrants with at most a high school degree who were born in Mexico.

While most people in Amuedo-Dorantes and Bansak (2014) and Orrenius and Zavodny's (2015) samples are probably unauthorized, these authors likely misclassify some unauthorized immigrants as authorized. In contrast, Borjas's (2017) specification scheme probably captures most of the unauthorized population, while also misclassifying some authorized immigrants as likely unauthorized. Indeed, I show in Table 6 that the correlation between these schemes is surprisingly small.

Fortunately, I show in Table 7 that each definition produces a qualitatively similar conclusion. Regardless of whether I include the public health insurance restriction from Borjas's (2017)

²⁰I present the event study coefficients for each of these four groups in Figure A2. For likely unauthorized immigrants, I document a large reduction in the probability of being the policyholder for employer-sponsored health insurance one period after the implementation of a universal E-Verify mandate (Panel a). There is no systematic relationship for naturalized citizens (Panel b), native Hispanics (Panel c), or white non-Hispanic natives (Panel d).

TABLE 6 Correlation in alternative criteria for likely unauthorized classification

	(1) Borjas (2017) w/o public health insurance restriction	(2) Borjas (2017) w/ public health insurance restriction	(3) Amuedo-Dorantes and Bansak (2014)	(4) Orrenius and Zavodny (2015)
Borjas (2017) w/o public health insurance restriction	1.000			
Borjas (2017) w/ public health insurance restriction	0.912	1.000		
Amuedo-Dorantes and Bansak (2014)	0.433	0.394	1.000	
Orrenius and Zavodny (2015)	0.372	0.335	0.682	1.000

Source: Current Population Survey Annual Social and Economic Supplement (ASEC) 2000–2016.

Note: The table shows the correlation in foreign-born individuals classified as likely unauthorized using various strategies from the literature. The strategy used in this paper mimics Borjas (2017) but excludes the restriction on public health insurance. Specifically, a foreign-born person is considered to be authorized if s/he (a) arrived before 1980, (b) is a citizen, (c) receives Social Security benefits or SSI, (d) is a veteran or is currently in the Armed Forces, (e) works in the government sector, (f) resides in public housing or receives rental subsidies, or is the spouse of someone who resides in public housing or receives rental subsidies, (g) was born in Cuba, (h) works in an occupation requiring some form of licensing, (i) is the spouse of a legal immigrant or citizen. All remaining foreign-born persons are classified as likely unauthorized. Borjas (2017)—shown in column (2)—classifies an immigrant who receives public health insurance as being authorized. Amuedo-Dorantes and Bansak (2014) classify non-citizen Hispanic immigrants between 18 and 45 with at most a high school degree as being likely unauthorized. Orrenius and Zavodny (2015) consider an immigrant likely unauthorized if s/he is a non-citizen with at most a high school degree who was born in Mexico. The correlations utilize the sample weights.

residual imputation method, I estimate that universal E-Verify mandates reduced the probability that likely unauthorized immigrants were policyholders of employer-sponsored insurance by 3-percentage points (columns 1 and 2 row 1). This amounts to a 12%–13% reduction relative to the sample mean. When using the classification employed by Amuedo-Dorantes and Bansak (2014), I estimate a near 13% reduction relative to the sample mean (column 3 row 1). Finally, when using Orrenius and Zavodny's (2015) classification, I estimate that an 18% relative to the sample mean (column 4 row 1).

In contrast to the universal E-Verify mandate estimates, the relationship between public E-Verify mandates and access to health insurance is sensitive to how I assign likely authorization status. Using both Borjas's (2017) and Amuedo-Dorantes and Bansak's (2014) methods, I estimate that public E-Verify mandates result in an 8%–10% reduction in the probability that likely unauthorized immigrants were policyholders of employer-sponsored health insurance relative to the sample mean (columns 1–3 row 2). Meanwhile, the estimate using Orrenius and Zavodny's (2015) definition implies a statistically insignificant 1.2% reduction. In Table 7, I show that public mandates yield negative employment effects using both Borjas's (2017) and Amuedo-Dorantes and Bansak's (2014) methods, while the point estimate from Orrenius and Zavodny's (2015) method is small and positive. One interpretation of these patterns is Orrenius and Zavodny's (2015) definition better captures the unauthorized population, although another possibility is that the smaller sample size

TABLE 7 Robustness to alternative criteria for likely unauthorized classification

	(1) Borjas (2017) w/o public health insurance restriction	(2) Borjas (2017) w/ public health insurance restriction	(3) Amuedo-Dorantes and Bansak (2014)	(4) Orrenius and Zavodny (2015)
<i>Panel A: Employed</i>				
Universal mandate	−0.047** (0.010) [0.019]	−0.047*** (0.010) [0.009]	−0.053** (0.012) [0.030]	−0.041** (0.010) [0.017]
Public mandate	−0.016* (0.006) [0.055]	−0.016* (0.007) [0.078]	−0.012 (0.008) [0.236]	0.000 (0.012) [0.976]
Dependent mean	0.668	0.689	0.673	0.645
Observations	129,211	115,936	81,384	74,510
<i>Panel B: Employer-sponsored health insurance policyholder</i>				
Universal mandate	−0.028** (0.008) [0.029]	−0.033** (0.007) [0.012]	−0.020 (0.009) [0.124]	−0.030** (0.009) [0.032]
Public mandate	−0.022** (0.007) [0.015]	−0.026*** (0.007) [0.009]	−0.013 (0.007) [0.135]	−0.002 (0.009) [0.807]
Dependent mean	0.231	0.249	0.156	0.166
Observations	131,978	117,514	81,388	75,404

Source: Current Population Survey Annual Social and Economic Supplement (ASEC) 2000–2016.

Note: The dependent variable in Panel (A) is an indicator for whether the individual was employed, while the dependent variable in Panel (B) is an indicator for being the policyholder for employer-sponsored health insurance. Each column employs a different set of criteria for being classified as a likely unauthorized immigrant, with the specific restrictions being detailed in Table 6. The independent variables of interest are state-level indicators for having implemented a universal E-Verify mandate or a public E-Verify mandate. Each estimate includes the full set of controls from Equation (2). Standard errors, shown in parentheses, are clustered at the state level. Wild bootstrap p values are reported in brackets. Estimates utilize the sample weights.

* $p < .10$; ** $p < .05$; *** $p < .01$.

(75,510 vs. 129,211) leaves me underpowered to detect an effect. Indeed, the standard error using the Orrenius and Zavodny (2015) definition is two times larger than using the Borjas (2017) definition (0.012 vs. 0.006).

4.4 | Spillovers onto U.S. citizens

There is growing evidence that interior immigration enforcement measures can harm U.S. citizens, including children with unauthorized parents and spouses with unauthorized partners (Amuedo-Dorantes et al., 2018, 2020; East, 2020; Torche & Sirois, 2019; Novak

TABLE 8 E-Verify mandates and child health insurance coverage

	(1) Children with likely unauthorized parents	(2)	(3)	(4) Children with White non-Hispanic parents	(5)	(6)
	Any insurance	Private insurance	Public insurance	Any insurance	Private insurance	Public insurance
Universal mandate	−0.027 (0.016) [0.329]	−0.045* (0.015) [0.069]	0.006 (0.015) [0.674]	−0.005 (0.005) [0.400]	−0.009 (0.011) [0.482]	−0.006 (0.012) [0.688]
Public mandate	−0.020 (0.018) [0.410]	−0.051* (0.019) [0.074]	0.038 (0.024) [0.203]	−0.003 (0.004) [0.522]	0.005 (0.006) [0.474]	−0.011 (0.007) [0.216]
Dependent mean	0.785	0.300	0.533	0.932	0.817	0.168
Observations	65,487	65,487	65,487	364,783	364,783	364,783

Source: Current Population Survey Annual Social and Economic Supplement (ASEC) 2000–2016.

Note: The dependent variable in columns (1) and (4) is an indicator for whether the child has any (private or public) health insurance coverage. The dependent variable in columns (2) and (5) is an indicator for whether the child has private health insurance, while the dependent variable in columns (3) and (6) is an indicator for whether the child has public (Medicaid or SCHIP) coverage. The sample is limited to children 14 years of age or younger. The independent variables of interest are state-level indicators for having implemented a universal E-Verify mandate or a public E-Verify mandate. 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. The demographic controls include indicators for the child's age, the child's race/ethnicity (white, black, Hispanic, with other omitted), the child's citizenship (U.S. citizen and naturalized citizen with non-citizen omitted), and indicators for parental education (less than high school, high school, some college, or college graduate, beyond college omitted, with missing information omitted). Columns (1)–(3) examine children that have either a likely unauthorized mother or a likely unauthorized father. Columns (4)–(6) examine children with white non-Hispanic citizen parents. Standard errors, shown in parentheses, are clustered at the state level. Wild bootstrap *p* values are reported in brackets. Estimates utilize the sample weights.

p* < .10; *p* < .05; ****p* < .01.

et al., 2017; Vu, 2020; Watson, 2014). In Table 8, I present suggestive evidence that E-Verify mandates reduced the probability that children with at least one likely unauthorized parent had health insurance coverage.²¹

First, I show in Table 8 that universal E-Verify mandates reduced the probability that citizen children with at least one likely unauthorized parent had health insurance coverage by almost 3-percentage points, although the estimate is not statistically significant after adjusting for the small number of treated clusters (column 1). Next, I show large and statistically significant reductions in the probability that children were covered by private health insurance (column 2) without corresponding statistically significant increases in public insurance coverage (column 4). Together, these results suggest an overall reduction in insurance coverage for children with likely unauthorized parents. As a falsification test, I show that E-Verify mandates were unrelated to insurance coverage for children with native-born white non-Hispanic parents (columns 4–6).

²¹The demographic controls include indicators for the child's age, citizenship status, and race/ethnicity, as well as indicators for mother's education, father's education, whether the mother was not present, and whether the father was not present. The results are robust to excluding the demographic controls, only focusing on children with likely unauthorized mothers, or only focusing on children with likely unauthorized fathers.

TABLE 9 E-Verify mandates and health insurance coverage of U.S. adult citizens

	(1) Adult citizens with a likely unauthorized immigrant in the household	(2)	(3)	(4) White non-Hispanic adult citizens without an immigrant in the household	(5)	(6)
	Any insurance	Private insurance	Public insurance	Any insurance	Private insurance	Public insurance
Universal mandate	−0.077 (0.040) [0.257]	−0.046 (0.045) [0.619]	−0.037 (0.025) [0.225]	−0.009 (0.006) [0.181]	−0.006 (0.006) [0.371]	−0.004 (0.005) [0.419]
Public mandate	−0.034** (0.015) [0.042]	0.005 (0.019) [0.825]	−0.036*** (0.010) [0.004]	−0.003 (0.003) [0.414]	−0.003 (0.003) [0.469]	−0.001 (0.003) [0.660]
Dependent mean	0.785	0.300	0.533	0.932	0.817	0.168
Observations	20,753	20,753	20,753	1,229,901	1,229,901	1,229,901

Source: Current Population Survey Annual Social and Economic Supplement (ASEC) 2000–2016.

Note: The dependent variable in columns (1) and (4) is an indicator for whether the child has any (private or public) health insurance coverage. The dependent variable in columns (2) and (5) is an indicator for whether the child has private health insurance, while the dependent variable in columns (3) and (6) is an indicator for whether the child has public (Medicaid or SCHIP) coverage. The sample is limited to children 14 years of age or younger. The independent variables of interest are state-level indicators for having implemented a universal E-Verify mandate or a public E-Verify mandate. 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. The demographic controls include indicators for the child's age, the child's race/ethnicity (white, black, Hispanic, with other omitted), the child's citizenship (US citizen and naturalized citizen with non-citizen omitted), and indicators for parental education (less than high school, high school, some college, or college graduate, beyond college omitted, with missing information omitted). Columns (1)–(3) examine children that have either a likely unauthorized mother or a likely unauthorized father. Columns (4)–(6) examine children with white non-Hispanic citizen parents. Standard errors, shown in parentheses, are clustered at the state level. Wild bootstrap *p* values are reported in brackets. Estimates utilize the sample weights.

p* < .10; *p* < .05; ****p* < .01.

In Table 9, I examine how E-Verify mandates affected the likelihood that adult native-born citizens in mixed-status households (i.e., residing with a likely unauthorized individual) had health insurance. First, I show that both universal and public E-Verify mandates reduced the likelihood that natives in mixed-status households had any form of health insurance (column 1). Next, I find that universal E-Verify mandates were associated with a nearly 5-percentage point reduction in the likelihood of private insurance coverage, although the estimate is statistically insignificant (column 2 row 1). I also find that both private and public E-Verify mandates were associated with a nearly 4-percentage point reduction in the probability that native-born citizens in mixed-status households had public insurance, and I do not document any meaningful relationship among white non-Hispanic adult citizens without immigrants in the household (columns 4–6).

Table 9 suggests that E-Verify mandates reduced the likelihood that native-born adult citizens in mixed-status households were enrolled in public health insurance. This pattern is consistent with prior work finding that intensified immigration enforcement affects native safety net participation. For example, Watson (2014) found that intensified immigration enforcement reduced the likelihood that children of noncitizen immigrants were enrolled in Medicaid, and Alsan and Yang (2019) found that police-based immigration enforcement reduced the probability that Hispanic citizens in mixed-status households participated in SNAP and SSI.

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 first show that E-Verify mandates reduced the probability that likely unauthorized immigrants were employed by 2–5-percentage points. This change is driven by a reduction in the likelihood of being employed for wages as opposed to being self-employed, working full-time as opposed to part-time, and working for large firms as opposed to smaller firms. However, I show that these changes were limited to one period after implementation of a universal E-Verify mandate. After that point, the estimated effect is smaller and statistically insignificant. I then show that these dynamics can be explained by likely unauthorized immigrants having exited the state.

Next, I show that E-Verify mandates reduced the probability that likely unauthorized immigrants had health insurance by 2–4-percentage points, a reduction attributable to reduced access to employer-sponsored health insurance. Consistent with the employment and migration patterns, I show that this change was limited to one period after implementation. Additionally, I find suggestive evidence that E-Verify mandates reduced health insurance coverage among children with likely unauthorized parents and native adults living in mixed-status households. For this latter group, I uncover evidence that E-Verify mandates reduced the probability that they enrolled in public health insurance. This finding adds to prior work showing that immigration enforcement affects native-born citizens' engagement with the U.S. social safety net (Alsan & Yang, 2019; Watson, 2014).

Although President Trump made immigration reform a central issue of his presidential campaign, his administration failed in delivering a comprehensive immigration reform plan. However, both Senators Cornyn (R-TX) and Graham (R-SC) have expressed optimism about working with the Biden administration on such a bill (The Hill, 2020), and E-Verify mandates will likely be a part of this conversation. For one, Senator Romney (R-UT) has called for instituting a nationwide E-Verify mandate (Romney, 2019). Moreover, Senators Romney and Cotton (R-AR) recently introduced legislation instituting a nationwide E-Verify mandate as part of a proposal to raise the federal minimum wage to \$10 an hour (Vox, 2021). Yet President Biden has also called for expanding unauthorized immigrants' access to health insurance, including allowing them to receive public insurance (Washington Post, 2019). In this paper, I show that immigration and health policy are not two distinct issues and attempts to address one will invariably have spillovers onto the other.

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APPENDIX A.

TABLE A1 Additional summary statistics

	Likely unauthorized immigrants	Naturalized citizens	Hispanic natives	White non-Hispanic natives
<i>Education</i>				
<High school	0.424 (0.494)	0.155 (0.362)	0.179 (0.383)	0.073 (0.260)
High school diploma	0.256 (0.436)	0.247 (0.431)	0.333 (0.471)	0.295 (0.456)

TABLE A1 (Continued)

	Likely unauthorized immigrants	Naturalized citizens	Hispanic natives	White non-Hispanic natives
Some college	0.130 (0.336)	0.233 (0.423)	0.340 (0.474)	0.313 (0.464)
College diploma	0.118 (0.322)	0.232 (0.4220)	0.108 (0.311)	0.215 (0.411)
Advanced degree	0.072 (0.259)	0.133 (0.339)	0.039 (0.195)	0.105 (0.307)
<i>Demographics</i>				
Age	35.508 (10.828)	44.252 (11.680)	34.173 (12.570)	41.525 (13.301)
Hispanic	0.640 (0.480)	0.342 (0.475)	1.000	-
White	0.114 (0.318)	0.229 (0.420)	-	1.000
Black	0.058 (0.233)	0.099 (0.299)	-	-
Male	0.558 (0.497)	0.475 (0.499)	0.493 (0.500)	0.497 (0.500)
Married	0.534 (0.497)	0.687 (0.464)	0.393 (0.488)	0.578 (0.494)
<i>Business cycle controls</i>				
ln (real value of residential building permits)	16.013 (1.040)	15.962 (1.030)	16.178 (1.039)	15.442 (1.034)
State unemployment rate	6.524 (2.167)	6.727 (2.228)	6.713 (2.158)	6.227 (2.053)
<i>% Covered by enforcement policies</i>				
287 (g)	0.446 (0.497)	0.446 (0.497)	0.531 (0.499)	0.270 (0.444)
Secure communities	0.379 (0.485)	0.410 (0.492)	0.450 (0.498)	0.353 (0.478)
<i>% Covered by health policies</i>				
Medicaid for unauthorized pregnant women	0.617 (0.486)	0.649 (0.477)	0.629 (0.483)	0.411 (0.492)
Public insurance for LPR w/ in 5-year ban	0.425 (0.494)	0.484 (0.500)	0.387 (0.487)	0.249 (0.433)
Medicaid for LPR pregnant women	0.710 (0.454)	0.743 (0.437)	0.715 (0.452)	0.557 (0.497)

(Continues)

TABLE A1 (Continued)

	Likely unauthorized immigrants	Naturalized citizens	Hispanic natives	White non-Hispanic natives
Medicaid for LPR kids	0.740 (0.438)	0.758 (0.428)	0.764 (0.424)	0.526 (0.499)
Public insurance for unauthorized kids	0.180 (0.384)	0.226 (0.418)	0.130 (0.336)	0.140 (0.347)
Food assistance for LPR adults w/ in 5-year ban	0.306 (0.461)	0.325 (0.468)	0.320 (0.466)	0.168 (0.374)
ACA medicaid expansion	0.190 (0.392)	0.234 (0.423)	0.233 (0.423)	0.134 (0.340)
Observations	131,978	134,410	151,679	1,273,252

Source: Current Population Survey Annual Social and Economic Supplement (ASEC) 2000–2016, National Council of State Legislatures (2015); Urban Institute (2017).

Note: The sample is restricted to individuals between the ages of 18 and 64 and summary statistics utilize the sample weights.

TABLE A2 Event-study coefficients

	(1) Employed	(2) Any	(3) Policyholder	(4) Dependent	(5) Likely unauthorized/ foreign-born population
<i>Pre-implementation</i>					
–8	–0.005 (0.029)	–0.019 (0.030)	–0.037 (0.025)	0.010 (0.018)	–0.032 (0.058)
–7	0.001 (0.017)	–0.013 (0.042)	–0.022 (0.036)	0.008 (0.017)	0.012 (0.073)
–6	0.047** (0.020)	0.017 (0.022)	0.025 (0.025)	–0.006 (0.014)	0.017 (0.069)
–5	0.030 (0.031)	0.020 (0.034)	0.016 (0.032)	0.001 (0.017)	0.008 (0.057)
–4	0.038* (0.023)	–0.004 (0.016)	–0.006 (0.012)	–0.006 (0.015)	0.009 (0.038)
–3	0.019 (0.015)	0.024 (0.034)	0.003 (0.028)	0.018 (0.017)	–0.008 (0.035)
–2	0.025 (0.020)	–0.022* (0.013)	–0.027** (0.013)	–0.004 (0.015)	0.002 (0.018)
<i>Jointly equal zero?</i>					
F-stat	2.01	0.780	15.420	2.860	1.400
Prob > F	0.072	0.605	0.000	0.014	0.227
<i>Post-implementation</i>					

TABLE A2 (Continued)

	(1)	(2)	(3)	(4)	(5)
		Employer-sponsored health insurance			Likely unauthorized/ foreign-born population
	Employed	Any	Policyholder	Dependent	
0	0.000 (0.026)	−0.022 (0.021)	−0.024 (0.018)	0.001 (0.018)	−0.011 (0.044)
1	−0.083*** (0.011)	−0.078 (0.051)	−0.052 (0.032)	−0.025 (0.028)	0.023 (0.058)
2	−0.024 (0.027)	0.056 (0.037)	0.018 (0.021)	0.052* (0.030)	−0.039 (0.036)
3	−0.018 (0.024)	0.037 (0.036)	0.002 (0.032)	0.034** (0.015)	−0.041 (0.053)
Jointly equal zero?					
F-stat	22.120	15.810	5.510	16.220	5.250
Prob > F	0.000	0.000	0.000	0.000	0.001
Pre = post?					
F-stat	16.820	32.990	32.990	49.350	11.350
Prob > F	0.000	0.000	0.000	0.000	0.000
Observations	129,211	131,978	131,978	131,978	867

Source: Current Population Survey Annual Social and Economic Supplement (ASEC) 2000–2016.

Note: The dependent variable in column (1) is an indicator for being employed, while the dependent variable in column (2) is an indicator for being the policyholder of employer-sponsored health insurance. The dependent variable in column (3) is the share of the foreign-born population comprised of likely unauthorized immigrants. This share is calculated from the ASEC microdata using the sample weights, and the regression is weighted by the sum of these weights, while columns (1) and (2) retain the microdata structure and utilize the sample weights. The independent variables are indicators for being *j* periods away from the implementation of a universal E-Verify mandate. Each estimate controls for time-invariant state fixed effects, state-invariant year fixed effects, business cycle characteristics, immigration enforcement policies, and health care policies. Columns (1) and (2) also control for demographic characteristics. Column (3) does not include these controls because they are selected on the dependent variable.

p* < .10; *p* < .05; ****p* < .01.

TABLE A3 E-Verify mandates and unauthorized Immigrants' employment and health insurance coverage

	(1)	(3) Health insurance			(4)
	Employed	Any	Private	Public	
Universal mandate	−0.050*** (0.009)	−0.050* (0.025)	−0.032** (0.016)	−0.021 (0.018)	
Public mandate	−0.017*** (0.006)	−0.051*** (0.014)	−0.027* (0.014)	−0.027*** (0.009)	
Unemployment rate	−0.006* (0.003)	−0.011** (0.004)	−0.005 (0.004)	−0.010** (0.004)	
ln(building permit value)	0.014 (0.010)	0.009 (0.016)	0.012 (0.015)	−0.009 (0.012)	
287(g)	−0.003 (0.005)	−0.012 (0.011)	−0.013** (0.005)	0.000 (0.009)	
Secure communities	−0.004 (0.008)	0.016 (0.011)	0.013 (0.011)	0.005 (0.006)	
Medicaid for unauthorized	0.002 (0.018)	−0.058*** (0.021)	−0.040** (0.016)	−0.022 (0.014)	
Pregnant women					
Public insurance for LPR	0.018* (0.009)	0.048*** (0.010)	0.018* (0.009)	0.039*** (0.011)	
Adults					
Medicaid for LPR	−0.001 (0.014)	0.004 (0.017)	0.019 (0.016)	−0.019** (0.009)	
Pregnant women					
Medicaid for LPR	−0.004 (0.015)	0.008 (0.024)	0.018 (0.023)	−0.012 (0.010)	
Children					
Public insurance for unauthorized children	0.005 (0.007)	0.024 (0.020)	−0.010 (0.011)	0.043* (0.025)	
Food assistance for LPR	0.042 (0.029)	−0.016 (0.025)	0.021 (0.024)	−0.043 (0.031)	
Adults					
ACA medicaid expansion	−0.004 (0.008)	0.043*** (0.011)	0.010 (0.010)	0.045*** (0.011)	
Male	0.321*** (0.017)	−0.035*** (0.008)	0.014** (0.005)	−0.049*** (0.008)	
Hispanic	0.072*** (0.008)	−0.185*** (0.017)	−0.190*** (0.016)	0.003 (0.011)	
White	0.033*** (0.009)	−0.005 (0.017)	−0.020 (0.015)	0.012 (0.014)	
Black	0.034*** (0.007)	−0.043** (0.017)	−0.070*** (0.017)	0.032* (0.016)	
Less than high school	−0.081*** (0.017)	−0.318*** (0.013)	−0.408*** (0.014)	0.099*** (0.020)	

TABLE A3 (Continued)

	(1)	(2)	(3)	(4)
		Health insurance		
	Employed	Any	Private	Public
High school diploma	−0.026* (0.013)	−0.265*** (0.012)	−0.335*** (0.012)	0.082*** (0.015)
Some college	−0.068*** (0.010)	−0.176*** (0.016)	−0.231*** (0.017)	0.066*** (0.013)
College degree	−0.045*** (0.007)	−0.113*** (0.013)	−0.136*** (0.014)	0.029*** (0.005)
Married	−0.075*** (0.005)	0.072*** (0.011)	0.050*** (0.006)	0.030*** (0.008)
Dependent mean	0.668	0.480	0.389	0.107
Observations	129,211	131,978	131,978	131,978

Source: Current Population Survey Annual Social and Economic Supplement (ASEC) 2000–2016.

Note: The dependent variable in column (1) is an indicator for being employed. The dependent variables in columns (2)–(4) relate to health insurance coverage. The dependent variable in column (2) is an indicator for having any health insurance coverage (private insurance, Medicaid, or Medicare). The dependent variable in column (3) is an indicator for private insurance coverage, while the dependent variable in column (4) is an indicator for public insurance (Medicaid or Medicare). The independent variables of interest are state-level indicators for having implemented a universal E-Verify mandate or a public E-Verify mandate. 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. Although not reported, the regressions also include indicators for each age, each state, and each year. Standard errors, shown in parentheses, are clustered at the state level. Each estimate utilizes the sample weights.

* $p < .10$; ** $p < .05$; *** $p < .01$.

TABLE A4 Robustness tests

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Probit estimation	Birthplace control	Ever treated	Excluding census region-by-year FE	State-by-great recession fixed effects	Excluding states which had expanded medicaid via ACA	Years before the ACA employer-mandate was supposed to be implemented	Household level analysis
Universal mandate	−0.046*** (0.016) [0.007]	−0.047 (0.024) [0.112]	−0.050** (0.014) [0.015]	−0.050* (0.025) [0.079]	−0.041 (0.029) [0.303]	−0.046* (0.019) [0.085]	−0.041** (0.019) [0.043]
Public mandate	−0.038** (0.012) [0.016]	−0.049*** (0.014) [0.007]	−0.042** (0.010) [0.030]	−0.051*** (0.025) [0.005]	−0.047** (0.015) [0.012]	−0.044* (0.016) [0.057]	−0.019 (0.012) [0.189]
Mean	0.480	0.480	0.480	0.480	0.480	0.446	0.651
Observations	131,978	131,978	131,978	131,978	131,978	109,280	79,180

Source: Current Population Survey Annual Social and Economic Supplement (ASEC) 2000–2016.

Note: Each column indicates a separate regression. The dependent variable is an indicator for having health insurance. The independent variables of interest are indicators for whether the state had implemented a universal or public E-Verify mandate. 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. Column (1) utilizes a probit estimation framework and reports the marginal effects. Column (2) includes indicators for birthplace. Column (3) restricts the sample to states which ever enacted an E-Verify mandate. Column (4) excludes the census region-by-year fixed effects. Column (5) replaces the census region-by-year fixed effects with state-by-Great Recession years fixed effects, while column (6) excludes all state-years where the state had expanded Medicaid as part of the Affordable Care Act. Column (7) restricts the sample to 2000–2013 prior to when the ACA employer-mandate was supposed to be implemented. Column (8) analyzes households of individuals ages 18–64 possessing at least one likely unauthorized immigrant. The dependent variable is an indicator for whether at least one person in the household had health insurance. Standard errors, shown in parentheses, are clustered at the state level. Wild bootstrap *p* values are reported in brackets, except for column (1) the *p* values are obtained using a score bootstrap. Estimates utilize the sample weights.

p* > .10; *p* < .05; ****p* < .01.

TABLE A5 Cross-state spillovers

	(1)	(2)
Neighbor universal mandate	0.004 (0.018) [0.865]	0.001 (0.018) [0.970]
Neighbor public mandate	0.016 (0.011) [0.239]	0.012 (0.012) [0.393]
Universal mandate		−0.041** (0.016) [0.031]
Public mandate		−0.037** (0.012) [0.024]
Mean	0.480	0.480
Observations	131,978	131,978

Source: Current Population Survey Annual Social and Economic Supplement (ASEC) 2000–2016.

Note: Each column indicates a separate regression. The dependent variable is an indicator for having health insurance. The independent variables of interest are indicators for whether the neighboring state had implemented a universal or public E-Verify mandate, as well as indicators for whether the individual’s state had implemented a universal or public E-Verify mandate. 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. Wild bootstrap *p* values are reported in brackets. Estimates utilize the sample weights.

p* < .10; *p* < .05; ****p* < .01.

TABLE A6 Sensitivity of the estimates to the covariates

	(1)	(2)	(3)	(4)	(5)	(6)
	Employed			Policyholder for employer-sponsored insurance		
	Specification			Specification		
	Base	Full	Explained	Base	Full	Explained
Universal mandate	−0.055*** (0.009) [0.004]	−0.047** (0.010) [0.019]	−0.020 (0.008)	−0.026 (0.014) [0.135]	−0.028** (0.008) [0.029]	0.002 (0.012)
Health policies	N	Y	0.001	N	Y	0.001
Immigration enforcement	N	Y	0.001	N	Y	−0.001
Business cycle controls	N	Y	−0.008	N	Y	−0.010
Demographic characteristics	N	Y	−0.003	N	Y	0.006
Region-by-year fixed effects	N	Y	−0.012	N	Y	0.006
Public mandate	−0.012*	−0.016*	−0.004	−0.026**	−0.022**	−0.004

(Continues)

TABLE A6 (Continued)

	(1)	(2)	(3)	(4)	(5)	(6)
	Employed			Policyholder for employer-sponsored insurance		
	Specification			Specification		
	Base	Full	Explained	Base	Full	Explained
	(0.007)	(0.006)	(0.007)	(0.009)	(0.007)	(0.011)
	[0.099]	[0.055]		[0.019]	[0.015]	
Health policies	N	Y	0.001	N	Y	−0.000
Immigration enforcement	N	Y	0.000	N	Y	−0.000
Business cycle controls	N	Y	−0.004	N	Y	−0.005
Demographic characteristics	N	Y	0.006	N	Y	0.004
Region-by-year fixed effects	N	Y	−0.008	N	Y	−0.004

Source: Current Population Survey Annual Social and Economic Supplement (ASEC) 2000–2016.

Note: The dependent variable in columns (1) and (2) is an indicator for being employed, while the dependent variable in columns (4) and (5) is an indicator for having being the policyholder for employer-sponsored health 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 columns (1) and (4) are from a regression which includes state and year fixed effects, while those in columns (2) and (5) are from a regression including controls for health policies, immigration enforcement, business cycle characteristics, demographic controls, and census-region by year fixed effects. Standard errors, shown in parentheses, are clustered at the state level. Each estimate utilizes the sample weights. Columns (3) and (6) are from an 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 in columns (1) and (2) is 129,211 likely unauthorized immigrants, while the sample size in columns (4) and (5) is 131,978 likely unauthorized immigrants.

* $p < .10$; ** $p < .05$; *** $p < .01$.

TABLE A7 Estimates stratified by sex

	(1)	(2)	(3)	(4)	(5)	(6)
	Male employment	Female employment	Full sample employment	Male employer-sponsored insurance coverage	Female employer-sponsored insurance coverage	Full Sample employer-sponsored insurance coverage
Universal mandate	−0.045** (0.013) [0.045]	−0.040** (0.012) [0.031]	−0.040** (0.012) [0.030]	−0.031** (0.011) [0.042]	−0.026 (0.011) [0.132]	−0.026 (0.011) [0.114]
Public mandate	−0.016 (0.011) [0.304]	−0.012 (0.013) [0.369]	−0.012 (0.013) [0.394]	−0.021 (0.010) [0.112]	−0.024* (0.010) [0.076]	−0.024* (0.010) [0.077]
Universal mandate × male			−0.005 (0.015) [0.718]			−0.005 (0.016) [0.755]
Public mandate × male			−0.003 (0.020) [0.892]			0.003 (0.015) [0.858]
Mean				0.453	0.513	0.480
Observations	69,151	60,060	129,211	70,412	61,566	131,978

Source: Current Population Survey Annual Social and Economic Supplement (ASEC) 2000–2016.

Note: Each column indicates a separate regression. The dependent variable in columns (1)–(3) is an indicator for being employed. The dependent variable in columns (4)–(6) is an indicator for being the policyholder for employer-sponsored health insurance. 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. 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. Columns (1) and (4) examine only men, columns (2) and (5) only women, and columns (3) and (6) employ a triple-difference specification whereby the full sample is analyzed, and the male indicator is interacted with all the covariates. Standard errors, shown in parentheses, are clustered at the state level. Wild bootstrap *p* values are reported in brackets, except for column (1) the *p* values are obtained using a score bootstrap. The estimates utilize the sample weights.

p* < .10; ** *p* < .05; **p* < .01.

TABLE A8 Triple-difference specification relating E-Verify mandates to likely unauthorized immigrants health insurance coverage

	(1)	(2)	(3)
	Comparison group		
	Naturalized citizens	Hispanic natives	White non-Hispanic natives
Universal mandate	0.006 (0.008) [0.532]	−0.003 (0.011) [0.832]	0.001 (0.006) [0.893]
Public mandate	−0.006 (0.006) [0.329]	−0.004 (0.008) [0.729]	0.002 (0.004) [0.752]
Universal mandate × comparison group	−0.034** (0.008) [0.011]	−0.025 (0.010) [0.182]	−0.029** (0.009) [0.047]
Public mandate × comparison group	−0.016* (0.008) [0.091]	−0.018 (0.011) [0.141]	−0.024** (0.009) [0.024]
Dependent variable mean	0.333	0.296	0.448
Observations	266,388	283,657	1,405,230

Source: Current Population Survey Annual Social and Economic Supplement (ASEC) 2000–2016.

Note: The dependent variable is an indicator for being the policyholder for employer-sponsored health insurance. The independent variables of interest are state-level indicators for having implemented a universal E-Verify mandate or a public E-Verify mandate, as well as the interaction of these indicators with an indicator for being likely unauthorized. Each estimate includes the full set of controls from Equation (2) and all of these covariates (including the state, year, and region-by-year fixed effects) are interacted with an indicator for being likely unauthorized. The sample in column (1) includes likely unauthorized immigrants and naturalized citizens. The sample in column (2) includes likely unauthorized immigrants and Hispanic natives. The sample in column (3) includes likely unauthorized immigrants and white non-Hispanic natives. Standard errors, shown in parentheses, are clustered at the state level. Wild bootstrap p values are reported in brackets. Estimates utilize the sample weights.

* $p < .10$; ** $p < .05$; *** $p < .01$

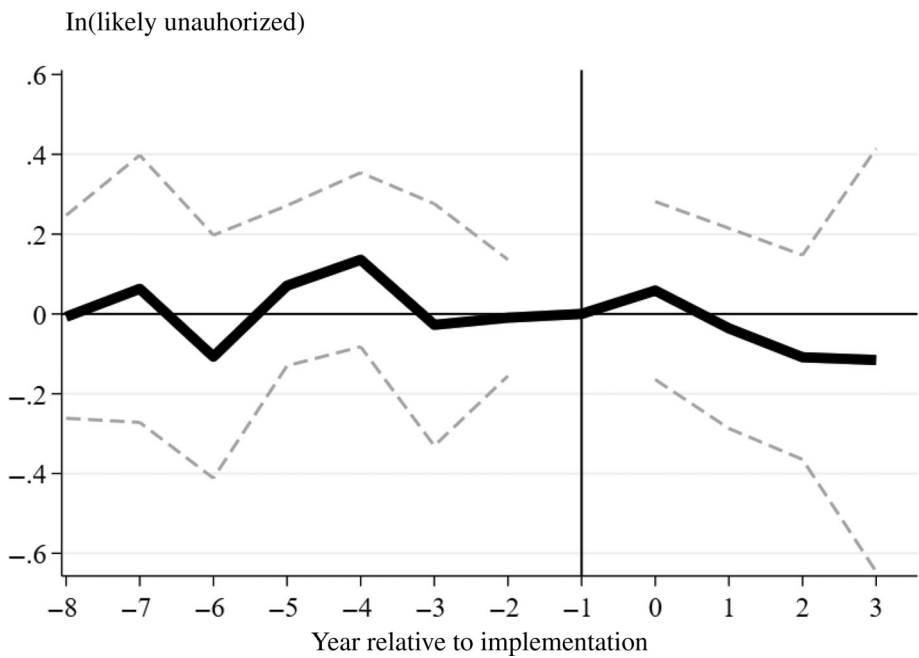


FIGURE A1 Event study estimates on state E-Verify mandates and likely unauthorized immigrant mobility. The dependent variable is the natural log of the number of likely unauthorized immigrants in the state. The figure plots the coefficients obtained from estimating Equation (1) which captures how the relationship between universal E-Verify mandates and the dependent variables evolved over time. The estimates utilize the sample weights. *Source:* Current Population Survey Annual Social and Economic Supplement (ASEC) 2000–2016

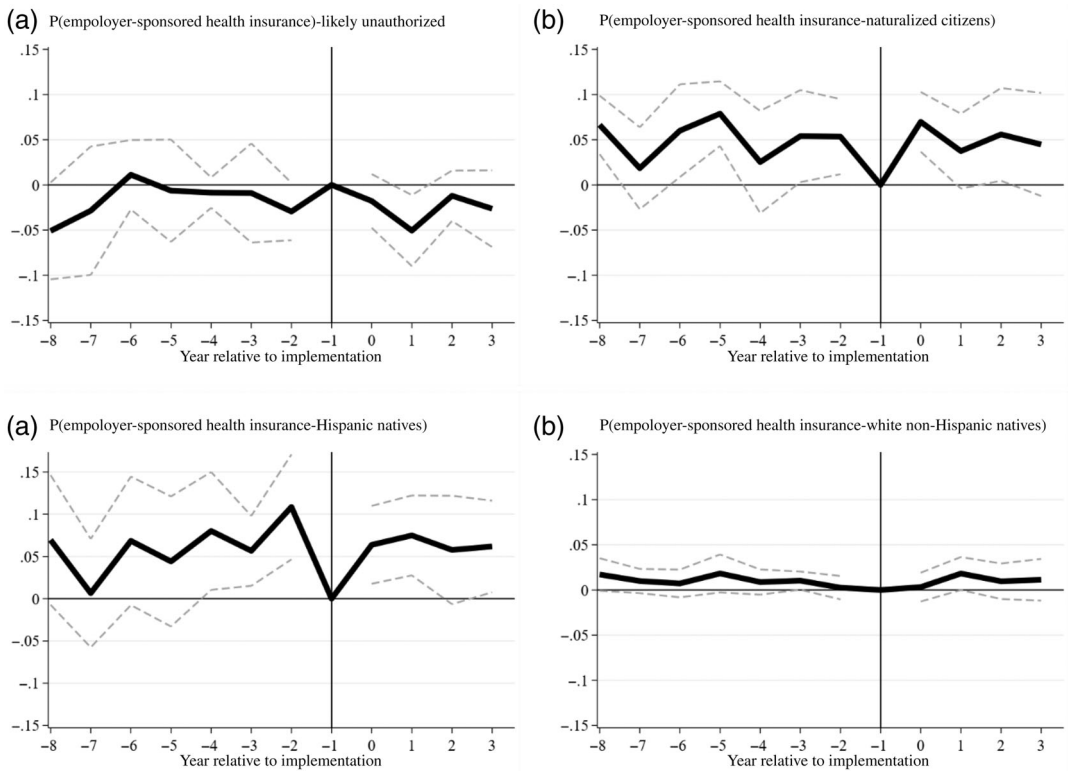


FIGURE A2 Event study estimates for employer-sponsored health insurance and placebo groups. The dependent variable is an indicator for being the policyholder for employer-sponsored health insurance. Panel (a) restricts the sample to likely unauthorized immigrants, Panel (b) naturalized citizens, Panel (c) Hispanic natives, and Panel (d) white non-Hispanic natives. The figure plots the coefficients obtained from estimating Equation (1) which captures how the relationship between universal E-Verify mandates and the dependent variables evolved over time. The estimates utilize the sample weights. *Source:* Current Population Survey Annual Social and Economic Supplement (ASEC) 2000–2016