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Catalina Amuedo-Dorantes
University of California, Merced and IZA

Chunbei Wang
Virginia Tech

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IZA – Institute of Labor Economics

Schaumburg-Lippe-Straße 5–9
53113 Bonn, Germany

Phone: +49-228-3894-0
Email: publications@iza.org

www.iza.org

ABSTRACT

DACA's Uncertain Path: How Policy Threats Reshape Economic and Social Gains for Recipients*

Since 2012, DACA has provided deportation relief and work authorization to immigrants brought to the U.S. as children. This study examines how legal and political uncertainty, triggered by efforts to terminate the program in 2017, affected recipients' economic and social outcomes. Using difference-in-differences and event study methods, we find that gains in education, health, and geographic mobility largely persisted, while employment and income benefits eroded, particularly in non-sanctuary and high-enforcement states. However, strong local DACA networks helped buffer these losses. The results underscore how policy instability can undermine progress in some areas while resilience emerges in others, especially within supportive local environments.

JEL Classification: J12, J15, J18

Keywords: DACA, undocumented immigrants, employment, education, policy uncertainty, local enforcement

Corresponding author:
Catalina Amuedo-Dorantes
Economics and Business Management
University of California, Merced
5200 N. Lake Rd
Merced, CA 95343
USA

E-mail: camuedo-dorantes@ucmerced.edu

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I. Introduction

Temporary legal protections can transform the lives of undocumented immigrants—but what happens when those protections come under threat? A growing body of work shows that access to legal status, even if provisional, can improve employment, educational attainment, and health outcomes. Yet less is known about how these gains evolve—or unravel—when uncertainty about program continuity intensifies. Understanding this dynamic is critical not only for immigration scholars but also for economists more broadly, as it speaks to how individuals respond to policy instability, shifting incentives, and heightened risk.

The Deferred Action for Childhood Arrivals (DACA) program offers a compelling setting to examine these dynamics. Introduced in 2012, DACA granted undocumented immigrants who arrived as children temporary protection from deportation and access to work authorization. Its attempted termination in 2017, followed by years of litigation and administrative uncertainty, created a prolonged period of legal and political instability. More recently, new enforcement actions and the program's continued suspension of first-time applications have reignited uncertainty in 2025, underscoring the relevance of these questions today.

While extensive research documents DACA's early benefits—including improved employment, educational attainment, and health outcomes (Amuedo-Dorantes and Antman, 2016; Giuntella *et al*., 2021; Pope, 2016; Bae, 2020; Giuntella and Lonsky, 2020; Kuka *et al*., 2020)—less is known about whether those gains endured or eroded in the face of sustained legal threat. We address this gap by tracing the evolution of key outcomes across the Obama and Trump administrations, focusing on whether DACA's initial benefits persisted, diminished, or shifted once the program came under threat. Specifically, we estimate the impact of legal uncertainty on employment, earnings, education, geographic mobility, and health insurance coverage among DACA-eligible immigrants.

DACA has been transformative for many undocumented immigrants who arrived as children. Beyond shielding recipients from deportation, the program expanded labor market access, improved occupational mobility, and bolstered economic and health outcomes—benefits that were both immediate and significant (Amuedo-Dorantes and Antman, 2016; Giuntella *et al*., 2021; Pope, 2016). It may also have reoriented recipients' long-term expectations and investments (Bae, 2020; Giuntella and Lonsky, 2020; Kuka *et al*., 2020).

Yet efforts to dismantle the program introduced uncertainty that may have undermined early gains. Political and legal instability could deter employers, complicate access to public services, and prompt recipients to adopt self-insurance strategies. Still, the program's initial impact may have triggered forward-looking behaviors that endured even as the policy environment deteriorated. This is consistent with behavioral economic research showing that temporary protections can alter time preferences and catalyze durable investment responses (Giuntella and Lonsky, 2020). Our analysis assesses whether such uncertainty disrupted early gains—and whether longer-term behavioral changes persisted.

We use data from the American Community Survey (2008–2022, excluding 2020), applying difference-in-differences and event study methods. We compare DACA-eligible and ineligible migrants across employment, earnings, education, mobility, and insurance coverage.[1] By distinguishing responses during the Obama years from those following the Trump-era rescission attempt—both relative to a common pre-DACA baseline—we are able to assess both the initial impact of DACA and the effects of growing uncertainty

[1] The goal of this study is not to reassess every outcome of DACA previously explored in the literature; instead, it seeks to investigate how political and legal challenges may disrupt the immediate benefits of DACA and to determine whether certain attitudinal and behavioral changes prompted by DACA are enduring.

Our findings confirm many short-run benefits documented in the literature. During the Obama administration, DACA-eligible individuals saw improvements in employment, wage-and-salary work, and employer-sponsored health insurance. However, these gains weakened during the Trump years. Labor market outcomes declined—particularly in non-sanctuary and high-enforcement states—while investments in education, private health insurance, and geographic mobility persisted or increased.

We also document important heterogeneity. Gains were more stable in sanctuary states and in counties with strong local DACA networks, while erosion was more pronounced in environments with greater enforcement or fewer peer supports. These patterns suggest that the resilience of DACA's benefits depends on the broader institutional and social context.

This paper contributes to the literature on immigration, labor markets, and the economics of legal status. First, while prior studies document DACA's short-run effects, we examine outcomes over a full decade, capturing the program's evolution through stability and uncertainty. We show that while early labor market gains receded, investments in education, health, and mobility endured, suggesting durable behavioral shifts even under prolonged instability.

Second, we use a unified empirical framework across outcome domains, relying on a consistent identification strategy and comparison group. This integrated approach improves internal validity and allows for more meaningful cross-outcome comparisons than studies using heterogeneous samples. We further refine the treatment group by excluding likely legal immigrants using the Borjas (2017) methodology.

Third, our findings speak to a broader question: how individuals respond to policy uncertainty. Although DACA has remained formally in place, recurring legal and administrative challenges—including the 2017 rescission attempt and renewed enforcement shifts in 2025—reshaped incentives and risk perceptions. Our results show

that both the benefits of temporary protection and the instability surrounding it influenced behavior. This highlights how policies that remain unchanged on paper can nonetheless have evolving effects, through both expanded opportunity and strategic responses to risk.

II. Background on DACA and Immigration Policy

To interpret the empirical analysis that follows, it is useful to briefly review the institutional context of the Deferred Action for Childhood Arrivals (DACA) program and the broader U.S. immigration system, including eligibility criteria, legal foundations, and key policy developments.

Announced on June 15, 2012, DACA offered certain undocumented immigrants who arrived in the U.S. as children a temporary reprieve from deportation and access to renewable work authorization. To qualify, applicants must have entered the U.S. before age 16, resided continuously since June 15, 2007, and been under age 31 as of June 15, 2012. Additional requirements include current school enrollment, completion of high school or a GED, or honorable discharge from the military, along with the absence of serious criminal convictions.

Although DACA provides important protections, it does not confer lawful immigration status or a path to citizenship. It is an exercise of prosecutorial discretion, meaning that enforcement is deferred on a case-by-case basis rather than permanently resolved. As such, the program has been vulnerable to legal and political challenges since its inception, most notably, the Trump administration's 2017 attempt to rescind it.

While a 2020 Supreme Court decision blocked that rescission on procedural grounds, ongoing litigation has kept DACA's future uncertain. As of 2025, the program remains active only for renewals. New applications are not being accepted. Nearly 600,000 current recipients remain in legal limbo, protected from removal but without a path to permanent status.

III. Literature Review

With this context in place, we now turn to a review of the existing literature on the effects of DACA. The program's multifaceted impact has been studied extensively, particularly in the areas of labor markets, education, and health. Pope (2016) observes an increase in labor force participation and a decrease in unemployment among DACA recipients, while Amuedo-Dorantes and Antman (2016, 2017) report reductions in poverty and improvements in employment rates. Villanueva and Wilson (2023) show that DACA enhances job mobility among young immigrants, facilitating access to higher-paying jobs and licensed professions. These gains, though temporary in legal terms, are immediate and substantial—but also vulnerable to rapid dissipation when legal protections come under threat.

Beyond labor market effects, DACA has also shaped recipients' behavior in other domains. Researchers document increases in health insurance coverage, both through employer-based plans and individual uptake (Bae, 2020; Giuntella and Lonsky, 2020), as well as educational investments (Amuedo-Dorantes and Antman, 2017; Ballis, 2023; Hsin and Ortega, 2018; Kuka *et al*., 2020; Pope, 2016). While the literature consistently finds improved insurance coverage, the effects on education are more mixed. Pope (2016) finds no impact on school attendance, whereas Kuka *et al*. (2020) report increased high school graduation rates. Amuedo-Dorantes and Antman (2017) suggest that more educated recipients may shift toward employment when work becomes available, although those without such opportunities remain in school longer. Similarly, Hsin and Ortega (2018) find that DACA encourages employment over education, particularly among four-year college students, but not among community college attendees, who face more flexible course loads. Taken together, these findings suggest that DACA promotes high school completion and some college attendance, with educational decisions shaped by labor market opportunities and economic constraints.

In addition to labor and schooling effects, DACA appears to shift recipients toward more future-oriented behavior. The increases in health insurance uptake and educational investment reflect this broader behavioral change. Research on state dependence supports this interpretation: current insurance status is strongly influenced by prior coverage (Zimmer, 2010). Baillon *et al*. (2022) show that temporary subsidies in a randomized experiment in the Philippines resulted in persistently higher insurance enrollment three years later. These findings align with insights from behavioral economics: once individuals obtain access to benefits like insurance, familiarity with the system, and recognition of its value may increase long-term take-up.

Other documented effects of DACA include improvements in health outcomes for both recipients and their children (Giuntella and Lonsky, 2020; Hainmueller *et al*., 2017; Hamilton *et al*., 2021), increased homeownership (Wang *et al*., 2022), and greater tendencies toward independent living and residential integration outside of ethnic enclaves (Gihleb *et al*., 2023). However, few studies examine the durability of these gains during periods of political uncertainty. For example, while Gihleb *et al*. (2023) extend their analysis to 2019, they do not focus on policy volatility under the Trump administration. Most studies that address the Trump period focus narrowly on health. Patler *et al*. (2019) document that improvements in health among Hispanic DACA-eligible immigrants and their children faded after 2015. Mallet and Bedolla (2019) find that the 2017 rescission announcement worsened recipient health, and Giuntella *et al*. (2021) report that sleep-related benefits diminished rapidly after 2016. Outside of health, Amuedo-Dorantes and Wang (2024) document behavioral adjustments such as increased marriage to U.S. citizens in response to the perceived fragility of DACA status.

This paper contributes to the literature by evaluating how key DACA-related gains evolved during a period of escalating policy uncertainty, particularly following the 2017 rescission announcement. Using consistent data and identification strategies across multiple outcome domains—including labor market outcomes, education, health

insurance coverage, and geographic mobility—we assess whether early improvements persisted or weakened as the program came under threat. In doing so, we move beyond documenting short-term impacts to distinguish between gains that were temporary and those that proved resilient. We also explore how these effects varied across institutional contexts, providing suggestive evidence on the mechanisms—such as perceived risk, enforcement climate, and local support networks—through which uncertainty shapes behavioral responses. The sharp policy shift between the Obama and Trump administrations offers a unique opportunity to examine how temporary legal protections—and the instability surrounding their continuation—affect both immediate and longer-term immigrant outcomes.

IV. Empirical Approach and Estimation Strategy

We use difference-in-differences (DD) and event-studies methods to examine the effect of DACA on various outcomes through 2022. Our analysis compares DACA-eligible immigrants with a control group of non-citizen immigrants who are ineligible for DACA. In particular, our definition of DACA eligibility follows the methodology used in Pope (2016) and Amuedo-Dorantes and Antman (2016), based on criteria established by DHS. Specifically, we classify immigrants as DACA-eligible if they: (1) are non-citizens who were not lawful immigrants as of June 15, 2012; (2) arrived in the U.S. before the age of 16; (3) were under the age of 31 on June 15, 2012; (4) have continuously resided in the U.S. since at least 2007 (approximated using ACS migration variables); and (5) meet educational requirements—*i.e.*, they are enrolled in school, have completed high school, a GED, or some college. To improve internal validity, we refine this approach by applying the undocumented immigrant filter from Borjas (2017), excluding individuals who receive public benefits, serve in the military, work for the government, or are employed in licensed occupations. This additional refinement helps reduce contamination of the treatment group by likely legal immigrants.

The control group is composed of non-citizen immigrants ineligible for DACA. This group is matched annually by age range to the DACA-eligible immigrants to align demographic profiles. This matching is essential, as one of DACA's eligibility criteria requires immigrants to be younger than 31 as of June 15, 2012. Throughout our analysis period, DACA-eligible individuals aged by 10 years. Therefore, if we do not appropriately match the age range of the control group to that of the treatment group each year, our estimates could inadvertently reflect the aging effect among DACA eligibles. [2]

This control group is carefully chosen to ensure it provides a robust basis for establishing the causal effects of DACA. First, it consists of immigrants who are not eligible for DACA, minimizing any direct influence of the program on this group. Second, like the migrants in the treatment group, the control group members are migrants, making them an appropriate counterfactual for projecting how DACA-eligible migrants might have evolved without the program and the turbulence that followed. This selection helps to account for any policy changes or shocks that could affect all immigrants during the Obama and Trump administrations, while simultaneously isolating from the specific impacts of DACA policy and its associated uncertainties. Third, even though this group may contain both legal and undocumented immigrants, our event-study analyses show that both treatment and control groups exhibited similar trends in various outcomes before the introduction of DACA, supporting the suitability of the control group. In addition, as we explain in greater detail later in this section, we also experiment with alternative control groups derived from the main control group to align specific

[2] Specifically, the treatment group has an age range of 18 to 26 in 2008, 18 to 27 in 2009, and so on. We restrict the control group to the same age range in each year.

characteristics of DACA-eligible and DACA-ineligible migrants by leveraging breakpoints in DACA eligibility requirements.[3]

In addition to the main control group, we explore two alternative control subgroups to align with the characteristics of our treatment group more closely. *First*, we refine the main control group to include only those who are likely undocumented. This adjustment allows us to more effectively isolate changes impacting all undocumented immigrants over time. *Second*, we select subsets of the main control group, *i.e.,* immigrants who just missed any of the observable DACA cutoffs, such as those who arrived after age 16 and before age 20 or arrived within 5 years after 2007.[4] By comparing migrants in the treatment and control groups closely bordering DACA eligibility thresholds, we employ an identification strategy akin to a regression discontinuity design.

Our analysis distinguishes between two distinct political and policy periods in the post-DACA era: 1) the Obama Administration (2013-2016), and 2) the Trump Administration's announcement of DACA termination and beyond (2017-2022), excluding 2020 –the year of the pandemic.[5] To capture heterogeneous policy impacts during drastically different policy environments, we estimate the following DD model which enables us to evaluate the program's impact after its enactment, as well as its impact after President Trump announced the termination of DACA:

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[3] We do not use Hispanic citizen immigrants as an alternative control group due to the risk of employer discrimination following the announcement of DACA's termination. This discrimination potentially affects not only DACA recipients but also Hispanic citizen immigrants with similar profiles. Faced with uncertainty about an individual's legal status, employers may avoid hiring those who resemble DACA recipients to prevent potential complications. This form of discrimination is consistent with findings from Amuedo-Dorantes and Pozo (2019), who observed that the implementation of E-Verify led employers to hesitate in hiring legal Hispanic immigrants to avoid the complexities associated with the verification process.

[4] We do not exploit the age cutoff because the control group's age range is matched to the treatment group.

[5] Given the global nature of the pandemic, it is feasible to disentangle its impacts from those observed during the Trump administration and beyond, as the control group is likely to have been similarly affected by ongoing pandemic-related disruptions. Moreover, this period saw no DACA-related legislative changes, reducing the relevance of isolating pandemic effects for our treated group.

$$(1) \quad Y_{i,s,t} = \alpha + \beta_1 DACA_i * Obama_t + \beta_2 DACA_i * PostTrump_t + \beta_3 DACA_i + \beta_4 Obama_t + \beta_5 PostTrump_t + X_{i,s,t}\gamma + \theta_s + \theta_t + t\theta_s + \varepsilon_{i,s,t}$$

where $Y_{i,s,t}$ is one of the following outcomes for respondent i in state s and year t, including: 1) *labor market outcomes*: whether employed, wage-employed, self-employed, and inverse hyperbolic sine transformed earned income adjusted into 1999 dollars; 2) *schooling outcomes*: whether in school and if the respondent has at least some college education; 3) *health insurance outcomes*: whether has health insurance, if it is employer-sponsored, or if it is privately purchased; and 4) *mobility outcomes*: whether moved in the past year, if the move was in-state, or if the move was out-of-state. We hypothesize that labor market outcomes are immediate but susceptible to erosion under political instability, while schooling, health insurance coverage, and mobility represent behavioral changes that are more enduring. This framework allows us to assess both the immediate and long-term impacts of DACA on these key aspects of life for eligible migrants.

The variable $DACA_i$ is a binary indicator that equals 1 for respondents in the treatment group—namely, likely undocumented immigrants eligible for DACA—and 0 for respondents in the control group. As noted by Pope (2016), using non-citizen immigrants who are eligible for DACA could include some documented immigrants, which would mean that the intent-to-treat estimate might serve as a conservative approximation of the program's true impact despite excluding likely documented immigrants using the criteria outlined by Borjas (2017).[6, 7]

[6] In robustness checks, we also experiment with excluding education as a selection criterion for the treatment group.

[7] While earlier DACA studies did not apply the Borjas (2017) methodology to exclude likely legal migrants from the DACA group, largely due to their earlier publication timelines, this refinement enhances the internal validity of our treatment group. For comparison, Appendix Figure A10 presents results without this exclusion. Although the overall conclusions remain unchanged, the estimates are smaller in magnitude, suggesting that including likely legal migrants leads to an underestimation of DACA's effects. We also tested an alternative specification that applies the Borjas criteria but omits the exclusions for

The binary variable $Obama_t$ is set to 1 for the period between 2013 and 2016, and 0 otherwise. $PostTrump_t$ equals 1 for the period between 2017 and 2022, and 0 otherwise (2020 is not included in the dataset due to the impact of the pandemic). The coefficient β_1 quantifies the impact of DACA on DACA-eligible immigrants during the Obama Administration when compared to the pre-DACA period. The coefficient β_2 evaluates the impact of the heightened uncertainty about DACA's future on DACA-eligible immigrants after Trump's announcement in 2017, also in comparison to the pre-DACA period.[8]

Given that DACA-eligible and ineligible immigrants may differ in characteristics influencing various outcomes, we control for essential demographic variables, $X_{i,s,t}$, including gender, age, age squared, years of education, marital status, race, English ability, years since migration, and country of birth fixed effects.[9] By controlling for these traits, we purge out the effects of demographic characteristics on DACA-eligible immigrants' various outcomes.[10] We also include year fixed effects, θ_t, to account for overarching national trends that might affect all immigrants. Additionally, state fixed effects, θ_s, are included to account for time-invariant state-level heterogeneity as DACA recipients tend to concentrate in a few states. State-specific time trends, $\theta_s t$, are included to account for specific time trends across states.[11] We include state-specific linear time trends in our baseline specification to account for differential pre-existing trajectories across states that may not be fully captured by demographic controls or state fixed effects.

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veterans and licensed occupations, which DACA recipients could plausibly access. Results under this version are very similar.

[8] The estimated coefficients β_4 and β_5 are not reported in the results as they are collinear with the year fixed effects.

[9] When educational outcomes are used as the dependent variable, years of education is excluded from the list of control variables.

[10] In robustness checks, we experiment with excluding potentially endogenous regressors, including education and marital status.

[11] In robustness checks, we also show the results excluding state time trends.

This choice is motivated by the fact that several states enacted policies over this period—such as state-level tuition laws or driver's license access—that could differentially affect undocumented immigrants over time. While DACA is a federal policy, and therefore not subject to state-specific rollouts, local context may influence how its effects unfold. Nevertheless, to ensure that these trends are not absorbing true treatment effects, we present robustness checks excluding state-specific time trends in Appendix Figure A1. The results remain consistent in sign and magnitude, supporting the validity of our main findings. Standard errors are heteroskedasticity-robust and clustered at the state level to allow for arbitrary within-state correlations in the error terms.

It is important to clarify what our estimates capture across these two periods. During the Obama era, our DD estimates reflect the short-run effects of DACA relative to a comparison group of non-citizen immigrants who were ineligible for the program. In contrast, estimates from 2017 onward capture the evolution of outcomes for DACA-eligible individuals after the program was threatened with termination. While the treatment and comparison groups may have diverged by this point, we retain this structure to trace how the benefits of DACA changed in response to mounting legal and political uncertainty. As such, our post-2017 estimates are best interpreted as documenting the erosion—or persistence—of DACA gains under sustained threat, rather than isolating long-term effects in the absence of political instability.

A key assumption for the DD method to capture the causal impact of DACA and the turmoil surrounding it is parallel trends. While treatment and control groups did not need to have similar rates or levels before DACA, they should exhibit similar pre-trends. Additionally, it would be important to show the year-by-year dynamics of how the benefits of DACA changed after Trump's announcement. Hence, we conduct the following event-study analysis, which examines the dynamics up to 4 years before and 13 years after DACA was issued:

$$(2) \qquad Y_{i,s,t} = \alpha + \sum_{\substack{t=2008, \\ t \neq 2011,2020}}^{2019} \lambda_t D_t * DACA_i + \beta DACA_i + X_{i,s,t}\gamma + \theta_s + \theta_t + \theta_s t + \varepsilon_{i,s,t}$$

where the variable D_t is a dummy variable for each year between 2008 and 2022, except for 2011, which is left out as the reference year. We also exclude the year 2020, notably the pandemic year, from the sample.

Our preferred methodological approach is the event-study analysis, which serves a dual purpose. Not only does it assess the parallel trends assumption, but it also facilitates a detailed examination on a year-by-year basis. Initially, we will present findings from the difference-in-differences (DD) estimates to give a comprehensive overview of DACA's impact across various periods. This will be followed by detailed presentations of event-study plots to illustrate these effects over time.

V. Data and Descriptive Statistics

We use data from the American Community Survey (ACS), covering 2008 through 2022 and excluding 2020 (Ruggles *et al*., 2025). The ACS is a large, nationally representative dataset that surveys about 1% of the U.S. population annually. It provides detailed, consistent measures of key outcomes—including employment, education, insurance, and mobility—as well as demographic traits necessary to assess DACA eligibility, such as place of birth, year of arrival, and citizenship status. While the construction of our treatment group is described in Section IV, this section outlines our sample structure and descriptive comparisons across groups and periods.

Table 1 summarizes changes in outcomes for the *treatment* and *control* groups *across three periods*: the pre-DACA period (2008–2012), the Obama-era implementation (2013–2016), and the Trump-era rescission period (2017–2022). Before DACA, eligible individuals had lower rates of employment and self-employment and earned about $3,000 less than their ineligible counterparts. These employment gaps closed following DACA's implementation, but earnings differences remained relatively stable. Health

insurance coverage was also lower among DACA eligibles by 11 percentage points, largely due to differences in private coverage, and this gap widened slightly under both administrations. In terms of education, DACA eligibles were 10 percentage points more likely to be enrolled in school before the program began, but this gap narrowed over time. However, their lower rate of college attainment—8 percentage points pre-DACA—widened to 14 points under Trump. For geographic mobility, DACA eligibles were consistently about 8 percentage points less likely to have moved in the past year, with that gap remaining relatively stable.

To better understand the baseline characteristics driving some of these differences, Table 2 provides descriptive statistics for our treatment and control groups. The treatment group includes non-citizen immigrants aged 18 to 41 who do not live in group quarters and meet DACA eligibility criteria. On average, 55% are male, 74.5% are Hispanic, and 22.9% are married. They have lived in the U.S. for 17 years, report 13 years of education, and nearly 10% speak little or no English. In contrast, our main control group—non-citizen immigrants in the same age range who are not DACA-eligible but are in school or have completed high school—differs across multiple dimensions. These individuals are slightly older (28 years), more likely to be married (40%), less likely to be Hispanic (46%), and more likely to be Asian. They have more years of schooling (14), shorter U.S. residence (6 years), and higher English proficiency.

To assess robustness, we also examine two *additional control subgroups*. The *first* includes only likely undocumented migrants, while the *second* consists of individuals who narrowly miss DACA eligibility based on observable criteria, such as arriving in the U.S. just after the age or year cutoffs. These alternatives allow us to evaluate the sensitivity of our estimates to different assumptions about comparison groups.

Taken together, Tables 1 and 2 highlight substantial differences in both outcomes and baseline characteristics between DACA-eligible and ineligible individuals. While some of these gaps appear to shift over time in ways consistent with DACA's effects,

observed differences may also reflect demographic composition. In the next section, we present our empirical strategy to isolate the causal impact of DACA while accounting for these compositional differences.

VI. DACA Impacts over its First Decade

The estimates in Table 3 present the impact of DACA eligibility on labor market outcomes, health insurance, education, and mobility using a difference-in-differences model. The first coefficient in each panel captures the effect of DACA eligibility during the Obama era relative to the pre-DACA period, while the second reflects the effect during the Trump administration, also relative to the pre-DACA baseline. The results reveal distinct patterns in both the persistence and erosion of impacts across administrations.

As shown in Panel A of Table 3, DACA had strong positive effects on the labor market outcomes of eligible individuals during the Obama era. It increased the likelihood of employment and wage-and-salary work by 5 percentage points, slightly reduced the likelihood of self-employment by 0.4 percentage points, and boosted earnings by 40%. These gains are particularly notable given that, prior to the program, DACA-eligible individuals were 2 percentage points less likely to be employed and earned 11% less than their ineligible peers. However, these labor market advantages diminished under the Trump administration, with only wage-and-salary employment seeing a modest increase of 1.6 percentage points.

This decline may reflect employer hesitation to hire DACA recipients as the program came under threat. Although DACA status is not disclosed explicitly, employment authorization documents bear a visible category code (C33) signaling temporary protection, which may influence hiring decisions. Additionally, employers may engage in statistical discrimination, avoiding candidates perceived as having

uncertain work authorization, consistent with findings from E-Verify mandates (Amuedo-Dorantes and Pozo, 2020).

In contrast, health insurance coverage, education, and geographic mobility all improved for DACA-eligible migrants during both administrations, with gains generally larger during the Trump era. For instance, although DACA-eligible individuals were 10 percentage points less likely to have insurance before the program's launch, they became 3.7 percentage points more likely to be insured during the Trump era relative to the pre-DACA period. Notably, we find no significant improvement in insurance coverage during the Obama administration, suggesting that coverage gains emerged more clearly under conditions of legal uncertainty.

This persistence may reflect state dependence in health insurance take-up, whereby individuals who gain coverage are more likely to retain it over time, even amid shifting external conditions (Card, Dobkin, and Maestas 2008; Baicker, Congdon, and Mullainathan 2012; Zimmer 2010; Baillon *et al*., 2022). In a context of rising political risk, maintaining private insurance may have served as a self-protective strategy, particularly as labor market security declined.

These trends are evident in both employer-sponsored and private insurance coverage. During the Obama and Trump periods, DACA-eligible migrants were 2 and 3.7 percentage points more likely, respectively, to report having employer-sponsored insurance than before the program. For privately purchased insurance, DACA recipients were 3.6 percentage points less likely to be covered pre-DACA but became 2 points more likely during the Obama years and 4.8 points more likely under Trump. Some early gains may reflect contemporaneous coverage expansions under the Affordable Care Act (ACA). While DACA recipients were not eligible for federal Medicaid or ACA marketplace subsidies, several sanctuary states extended coverage through state-funded programs or safety net services. Moreover, many recipients fell into income and age brackets that would have made them eligible for ACA subsidies had they qualified. Still, the continued

rise in private coverage during the Trump years, when employment gains were waning, suggests active self-insurance in response to instability, especially in states with heightened enforcement or limited protections.

As with health insurance, DACA-eligible migrants became more likely to be enrolled in school, to report some college education, and to move in-state relative to their non-eligible counterparts. These effects are especially notable considering that, before the program, DACA-eligible migrants were 3 percentage points less likely to be enrolled in school and were also less mobile. Post-DACA, the size of these gains nearly doubled during the Trump era.

For example, during the Trump years, DACA-eligible migrants were 2 percentage points more likely to be enrolled in school—an effect not present during the Obama era. Similarly, they were 2 percentage points more likely to have some college education under Trump, compared to a 1.5-point gap during the Obama years. For geographic mobility, DACA increased the likelihood of moving by roughly 2 percentage points during the Obama administration and by nearly 4 points during the Trump administration, particularly for in-state moves.

These findings underscore the resilience of certain DACA benefits, particularly in health and education, that not only persisted but grew under adverse political conditions. At the same time, the decline in labor market outcomes highlights the vulnerability of some gains to changes in policy climate. This differential response illustrates a central contribution of our study: while some benefits eroded under uncertainty, others endured and even strengthened, reflecting deeper behavioral shifts toward future-oriented planning.

In the next section, we use an event study framework to validate our control group and test the robustness of our difference-in-differences estimates. This approach allows us to further explore the dynamic effects of DACA and the role of policy uncertainty in shaping life trajectories for undocumented immigrants.

VII. Identification Strategy and Robustness Checks

A key concern in difference-in-differences (DD) designs is whether the estimated effects can be interpreted causally. This requires that the control group be appropriate and that any differences observed post-treatment do not predate the policy's implementation. While we cannot observe counterfactual outcomes for DACA-eligible migrants in the absence of the program, we can assess whether pre-trends differ between those who would become eligible for DACA and their ineligible counterparts. This exercise also informs the suitability of the chosen comparison group.

Figures 1 through 3 report event study estimates based on equation (2), using the three alternative control groups described in the Data section.[12] In all cases, the results are robust to the choice of control group. Most importantly, we do not observe evidence of differential pre-trends across labor market, health insurance, education, or mobility outcomes prior to DACA's introduction. By contrast, a break in these trends is consistently observed after DACA's announcement, supporting the interpretation that the effects estimated in Table 3 reflect the policy's implementation.

Our primary interest lies in the evolution of DACA's impacts over time, particularly across the Obama and Trump administrations. Event studies based on the main control group (Figure 1) reveal a clear shift in labor market trajectories. Under Obama, the likelihood of employment—especially in wage-and-salary jobs—increased by approximately 5 percentage points, and average earnings rose by up to 50 percent. However, these gains gradually eroded during the Trump administration, and by 2019, labor market outcomes for DACA-eligible migrants had returned to pre-policy levels.

In contrast, the impacts on health insurance, schooling, and mobility were more resilient and in some cases grew stronger after 2017. For instance, the likelihood of having

[12] Appendix Table A1 contains the event study estimates corresponding to the event studies displayed in Figure 1 using our main control group.

health insurance rose steadily throughout the program. Under Obama, both employer-sponsored and privately purchased insurance increased. During the Trump years, however, the growth in coverage was driven almost entirely by privately purchased plans. This pattern aligns with the decline in labor market gains and suggests a behavioral shift toward self-insurance under heightened legal uncertainty.

Educational outcomes also show interesting dynamics. While early studies found mixed evidence on school enrollment (Pope, 2016), we observe a significant increase in enrollment during the Trump era—possibly a response to weakened labor market opportunities. At the same time, gains in "some college" attainment were modest, increasing only marginally under Trump despite the rise in enrollment.

Mobility also increased, particularly after 2017. By 2022, DACA-eligible migrants were approximately 4.5 percentage points more likely to move compared to the pre-policy period, with most of this movement occurring in-state.

Together, the event study results across all three control groups (Figures 1–3) underscore that DACA's effects evolved meaningfully over time. Labor market gains and employer-sponsored coverage were most prominent during the Obama era and later diminished. Meanwhile, private insurance take-up, school enrollment, and geographic mobility increased or held steady under the Trump administration. These trends suggest that while some early benefits eroded, others adapted to new constraints, reinforcing the view that DACA recipients developed future-oriented behaviors that persisted under legal and political uncertainty.

We also conduct a battery of robustness checks to assess the stability of our findings under different assumptions and specifications. One concern is that state-specific time trends might over-control for variation, attenuating treatment effects. Another is that certain covariates—such as marital status or education—could be endogenous, especially if they are influenced by DACA itself. A related issue is that education is used to define the treatment group, which may bias results if DACA incentivized further schooling.

Finally, the possibility that effects are driven by demographic-specific business cycle shocks rather than the policy itself must also be addressed.

To evaluate these concerns, we test alternative specifications. Appendix Figures A1 and A2 show estimates excluding state-specific time trends and omitting potentially endogenous variables. Appendix Figure A3 presents results based on a redefined treatment group that does not include education as an eligibility criterion. Appendix Figure A4 incorporates interactions between the state unemployment rate and treatment group indicators to account for macroeconomic variation. Across all these checks, the results remain consistent with our main findings.

Lastly, we address the concern that compositional shifts within the DACA and control groups could explain the observed patterns. This is especially relevant in the later years of the program, when most DACA recipients were renewals rather than new applicants. To test for this, we run a placebo exercise: we regress actual wages on covariates using only the pre-treatment period and use the resulting coefficients to construct a predicted wage index for all individuals. We then rerun the event study using this fixed index as the outcome. Since the wage index holds observables constant, any effects must stem from compositional change. As shown in Appendix Figure A5, the estimates become flat and statistically insignificant, suggesting that our results are not driven by changes in group composition.

VIII. Heterogeneous Impacts by Gender and Ethnicity

The benefits of DACA may vary by gender and ethnicity, reflecting differences in labor market barriers, social networks, and access to resources. We therefore explore how the program's impact differs along these dimensions.

A) By Gender

Given persistent gender disparities in labor market outcomes, it is important to assess whether DACA had differential effects for men and women. Figure 4 presents event study estimates for select outcomes where gender gaps are especially pronounced.[13]

The analysis shows that while employment, self-employment, and earnings followed similar trends across genders, the magnitude of these effects diverged. In particular, the increase in employment and decline in self-employment were nearly twice as large for men, suggesting that DACA's labor market provisions had more immediate effects for male recipients. However, women experienced more sustained earnings gains, indicating that the economic benefits of DACA for women may be more durable.

In contrast, the increase in some college attendance occurred only among men. This disparity may reflect men's lower baseline educational attainment, suggesting that DACA's educational incentives were more salient for male recipients. While DACA broadly encouraged educational investment, its impact on college attainment was more immediate for men.

B) By Ethnicity

Differences in DACA's effectiveness are even more pronounced across ethnic groups. Figure 5 presents event study estimates for the full set of outcomes examined in Table 3 and Figures 1–3.

Non-Hispanic DACA-eligible migrants generally experienced limited benefits from the program. One exception is the uptake of private health insurance, which rose steadily under both the Obama and Trump administrations. In-state mobility also increased modestly, particularly during the Trump years. However, school attendance

[13] The remaining outcomes are included under Appendix Figures A6.

among non-Hispanic DACA recipients declined after the program's announcement and remained below pre-DACA levels.

In contrast, Hispanic DACA-eligible migrants experienced significant gains across several domains—including employment in wage-and-salary jobs, earnings, both forms of health insurance, school enrollment, and in-state mobility. These gains underscore the disproportionate benefits reaped by Hispanic recipients. As observed earlier, some of these advantages, particularly in the labor market, weakened under the Trump administration. Yet gains in school enrollment, health insurance coverage, and mobility persisted—and in some cases, even grew—during this later period.

IX. Understanding the Role of Uncertainty: Policies, Networks, and Enforcement

Thus far, we have documented how the Trump administration's announcement to terminate DACA may have impacted some of the gains accrued to the program beneficiaries until then. Gains in terms of employment, wage-and-salary work, and earnings appear to have mainly eroded a decade after the program was first announced, whereas gains in health insurance coverage, education, and in-state mobility persisted and continued throughout that period. In the Introduction, we hypothesized that these changes may have been driven by the increased uncertainty surrounding the program's future. In what follows, we conduct several checks aimed at gauging the role that uncertainty may have played.

A) Immigration Policy Awareness and Information Exposure

We begin by evaluating whether immigrants' concerns about DACA correlate with the outcomes under investigation. To do so, we collect data from the Google Trends (GT) index, which tracks the relative volume of DACA-related online searches at the state level

throughout the study period.[14] The GT index reflects the relative frequency of searches for a specific topic in a geographic area over time. Since 2009, over 70 percent of U.S. residents have had internet access,[15] and Google has accounted for 89 percent of U.S. web queries.[16] If immigrants had less access to mobile devices or the internet, our estimates may be downward-biased.

We use the "Deferred Action for Childhood Arrivals" topic under the "Interest by subregion" category in Google Trends to collect annual state-level data from 2012 to 2022.[17] This version of the GT index reflects the ratio of DACA-related searches in state *s* at time *t* relative to the state with the highest proportion of searches in that year (Alsan and Yang, 2022; Amuedo-Dorantes and Antman, 2020).[18] As shown in Appendix Figure A7, DACA-related search activity spiked in late 2016, when then-candidate Donald Trump called for the program's termination,[19] and peaked in September 2017 with the formal rescission announcement. High levels of search activity persisted throughout 2018 and 2019

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[14] Social scientists have increasingly relied on search indices to gauge issue salience (Mellon, 2014), public sentiment (Stephens-Davidowitz, 2014), and as indicators of deportation fears among Hispanic communities (Alsan & Yang, 2019). Studies validating these indices show they align with more traditional public opinion surveys (Mellon, 2014) and effectively capture socially sensitive attitudes that conventional surveys often miss (Stephens-Davidowitz, 2014).

[15] See: Computer and Internet Use Data Tables (census.gov).

[16] Figure reflects search engine market share retrieved for the period 2009 (earliest one available) to the end of 2019: https://gs.statcounter.com/search-engine-market-share/all/north-america/#monthly-200901-201912

[17] We begin our analysis in 2012, the year DACA was introduced. Instead of using the "term search," which only returns results that exactly match the given keywords in a specific language, we opt for the "topic search." This broader approach captures a range of related search terms, regardless of the language. This distinction is crucial, as immigrants may seek information about DACA in their native languages.

[18] The index is a relative measure of search interest that ranges from 0 to 100. The state with the highest search volume at time *t* is assigned a value of 100. All other states' values are scaled in relation to this top state. As such, an index value of 25 for a state means that its search volume was 25 percent of the volume in the state with the highest number of queries for that year.

[19] While Figure A7 shows national search intensity over time, our model exploits state-level variation in DACA-related search activity to capture differences in policy salience.

Following Amuedo-Dorantes and Wang (2024), we estimate models that include the log of the GT index, a DACA-eligibility indicator, and their interaction, along with the main control variables. This approach allows us to assess whether the effects of DACA eligibility differ based on policy awareness and perceived uncertainty.

Table 4 presents the results. As DACA-related search volume increased, especially during the Trump administration, DACA-eligible immigrants experienced significantly larger declines in employment, self-employment, and earnings compared to non-eligible peers. In contrast, their investments in education and health coverage increased, likely as precautionary responses to growing policy uncertainty. These patterns suggest that heightened concern about the program's future played a key role in shaping behavioral responses.

One concern is that Google search volume may simply proxy for the size of the DACA-eligible population in a state. However, we include state fixed effects to absorb all time-invariant differences, including population size. Moreover, administrative data from USCIS indicate that the number of active DACA recipients within states remained relatively stable between 2012 and 2017, reducing the likelihood that observed effects are driven by population shifts.[20]

Another concern is that search activity might reflect general public or policy interest rather than recipient-specific concern. Yet the states with the highest DACA-related search intensity in 2017—Arizona, California, Colorado, Nevada, and Texas—also have large DACA populations, suggesting that elevated search volume likely reflects localized concern and perhaps employer uncertainty about program stability.

Finally, although the Google Trends index spans 2012–2022, DACA's initial implementation under the Obama administration triggered only modest search activity.

[20] These data were obtained via a FOIA request and are later used to assess the role of local DACA networks in Part D of this section.

In contrast, the 2017 rescission announcement led to a pronounced and sustained spike. Thus, it is reasonable to interpret the GT index effects as capturing increased uncertainty during the Trump era rather than general interest throughout the program's lifespan.

B) Local Policy Protections: Sanctuary vs. Non-Sanctuary States

To further support our hypothesis, we examine how DACA-eligible individuals fared relative to their non-eligible counterparts in states that adopted policies aimed at fostering a more welcoming environment for immigrants, specifically, statewide sanctuary policies known as Trust Acts. These measures limit cooperation between state and local authorities and federal immigration enforcement, promoting greater protection, safety, and inclusion for undocumented immigrants.[21]

Figure 6 presents the event study results for several key outcomes, revealing notable patterns. First, during the Obama era, DACA-eligible migrants in non-sanctuary states experienced employment and earnings gains that were more than twice as large as those observed in sanctuary states. This suggests that DACA's labor market benefits were especially pronounced in higher-risk environments, possibly due to greater urgency among recipients to take advantage of temporary protections. By contrast, in sanctuary states, labor market gains were smaller, but DACA recipients were more likely to invest in education and private health insurance, likely reflecting a greater sense of stability and longer planning horizons.

Second, during the Trump administration, employment and earnings gains among DACA recipients in non-sanctuary states quickly eroded. In response, we observe a shift

[21] States with statewide Trust Acts, which limit local cooperation with federal immigration enforcement, include California, Colorado, Connecticut, Illinois, Massachusetts, New Jersey, New York, North Dakota, Oregon, Rhode Island, Vermont, Utah, Washington, and Washington D.C. (Source: https://cis.org/Map-Sanctuary-Cities-Counties-and-States). While many of these sanctuary policies expanded in response to intensified interior immigration enforcement, it should be noted that their adoption does not necessarily align with the distribution of enforcement activity, given the broad, nationwide reach of federal enforcement policies, including at the state level.

toward increased investment in education and private health insurance, potentially as a form of self-insurance in the face of heightened uncertainty. These investments were more accessible in sanctuary states, where inclusive policies reduce institutional and financial barriers to schooling and offer state-funded health coverage to undocumented immigrants.

Overall, the results underscore how institutional context shapes behavioral responses to uncertainty. Initially, DACA recipients in states without sanctuary policies saw larger economic gains. But when the program came under threat, these same individuals experienced sharper losses and were more likely to shift toward self-protective behaviors. While we do not examine the geographic distribution of immigration enforcement in detail here, these findings suggest that state policy environments, such as sanctuary protections, play a key role in conditioning the stability and durability of DACA-related benefits.

C) Interior Immigration Enforcement Intensity

We further explore how DACA recipients responded to growing uncertainty about the program's future by examining states with varying levels of interior immigration enforcement. This analysis provides an additional lens on how local enforcement environments shaped the persistence or erosion of DACA-related gains following the 2017 rescission announcement.

To operationalize this, we construct a county-year interior immigration enforcement index ranging from 0 to 4. The index is based on the presence of the following measures: (1) *Secure Communities*, which allows local law enforcement to share fingerprint data with federal immigration authorities; (2) *287(g) agreements*, enabling direct cooperation between local police and ICE; (3) omnibus immigration laws that broadly enhance enforcement and restrict immigrant rights; and (4) employment

verification mandates such as E-Verify.[22] We aggregate the index to the state-year level and classify states as "low enforcement" if they average one or fewer measures per year, and "high enforcement" otherwise.

The event studies in Figure 7 present the results for the same key outcomes shown in Figure 6.[23] As in previous analyses, DACA-eligible immigrants in high-enforcement states experienced sizable employment and earnings gains during the Obama era relative to their non-eligible counterparts, suggesting that the program delivered especially large benefits where immigrants faced greater exposure to enforcement. However, these gains eroded rapidly once the program was threatened under the Trump administration.

In contrast, DACA recipients in low-enforcement states saw more modest labor market improvements but were comparatively better able to increase their investments in health coverage and education as uncertainty grew. These findings mirror those from the sanctuary policy analysis and underscore the importance of institutional context in shaping DACA's longer-term impact.

D) Peer Networks and Local DACA Concentration

Lastly, we explore an alternative mechanism for mitigating uncertainty: the presence of a local network of DACA-eligible individuals. A higher share of DACA holders within a migrant's county can facilitate the spread of information about program eligibility and benefits, creating informal support systems that help individuals navigate periods of instability. We assess heterogeneity by classifying counties into two groups based on whether they fall above or below the median count of DACA recipients, using administrative data on program applications.

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[22] See Amuedo-Dorantes, Arenas-Arroyo, and Wang (2020), Amuedo-Dorantes, Lofstrom, and Wang (2022), and Amuedo-Dorantes and Arenas-Arroyo (2019) for details of the data collection process and enforcement index construction.

[23] The remaining outcomes can be found in Appendix Figure A9.

Figure 8 presents the event studies for the four labor market outcomes that exhibit variation based on DACA network size. The results point to an important protective role of local networks.

Wage-and-salary employment and overall employment gains were faster, more pronounced, and more durable for DACA-eligible migrants in counties with a larger concentration of recipients. By 2022, those in high-network counties had largely preserved their employment gains, in contrast to those in low-network counties, where employment rates had reverted to pre-2012 levels. This suggests that local peer networks may have played a stabilizing role in preserving labor market attachments as policy uncertainty increased.

A similar pattern emerges in self-employment. While DACA eligibility had no measurable effect on self-employment in low-network counties, rates fell by about 1 percentage point in high-network counties during the Trump administration. Given evidence that much Hispanic self-employment is driven by necessity after job loss (Amuedo-Dorantes, Lofstrom, and Wang, 2022), this decline may reflect stronger wage job retention in areas with better network support.

Earnings followed a comparable trend. While average earnings gains were around 5 percent in both sets of counties, the increase was both quicker and more persistent in high-network localities. Migrants in these areas sustained their earnings improvements well beyond the early years of the program.

In summary, the results from Table 4 and Figures 6 through 8 underscore how uncertainty, especially after the 2017 rescission announcement, shaped the trajectory of DACA beneficiaries' economic outcomes. Labor market gains eroded most in states with heightened uncertainty, such as those with high volumes of DACA-related searches, non-sanctuary policies, and aggressive enforcement environments. In contrast, more supportive contexts—such as sanctuary states, low-enforcement states, and counties with

strong DACA networks—helped recipients maintain health coverage, invest in education, and preserve employment and earnings.

These findings point to credible and empirically supported mechanisms—policy environment, local enforcement intensity, information access via Google search behavior, and peer support networks—through which uncertainty is translated into differential outcomes. They also demonstrate that temporary legal protection like DACA can trigger lasting behavioral changes. However, the durability of these gains depends critically on the broader institutional and social context.

X. Conclusion: Persistence, Erosion, and the Role of Uncertainty

More than a decade after its creation, the Deferred Action for Childhood Arrivals (DACA) program continues to shape the socio-economic trajectories of undocumented immigrants brought to the U.S. as children. While early research highlighted short-run improvements in employment, education, and well-being, less is known about whether those gains endured as the program came under legal and political threat, most notably following the Trump administration's 2017 rescission announcement and the continued legal uncertainty that persists today.

This study helps fill that gap by evaluating the evolution of key outcomes for DACA-eligible migrants across contrasting policy environments and periods. Using a consistent difference-in-differences and event study framework applied to ACS data from 2008 to 2022, we examine how labor market outcomes, educational attainment, health insurance coverage, and geographic mobility responded not only to DACA's implementation, but also to the instability that followed. By comparing DACA-eligible and ineligible migrants before and after the program's announcement—under both the Obama and Trump administrations—we distinguish between short-lived benefits and more durable behavioral change.

Our findings confirm sizable early gains in employment and earnings for DACA recipients, particularly during the Obama era. However, those labor market advantages eroded following the rescission announcement. In contrast, investments in private health insurance, school enrollment, and mobility persisted—and in some cases expanded—as recipients responded to rising uncertainty by shifting toward self-protective behaviors. These divergent patterns illustrate that while temporary legal protections like DACA can initiate lasting behavioral changes, the persistence of those benefits often hinges on whether recipients perceive the program as stable and supported by surrounding institutions.

Importantly, we find that the extent of erosion or resilience varied significantly across local contexts. In sanctuary states and low-enforcement environments, where institutional barriers were lower and state-level protections were stronger, DACA recipients were better able to sustain gains in education and health insurance. Conversely, recipients in non-sanctuary and high-enforcement states faced sharper declines in employment and earnings. A dense local network of DACA recipients also served as a critical buffer, mitigating the adverse effects of program instability by providing informal support and access to information.

These findings contribute to the broader literature on immigration, labor markets, and behavioral responses to policy uncertainty. By using a unified estimation strategy across multiple outcomes and heterogeneous settings, we provide new evidence that complements and extends prior studies (*i.e.*, Pope 2016; Amuedo-Dorantes and Antman 2016; Kuka *et al*. 2020). Our approach also reveals how uncertainty, driven by executive action, litigation, and public discourse, can affect policy outcomes even when formal eligibility rules remain unchanged.

As of 2025, DACA continues to operate under legal strain, with federal courts limiting new applications and leaving the program's long-term future unresolved. Our study shows that such legal and political instability has tangible effects on recipients'

economic behavior and well-being. The results underscore the importance not just of granting legal access, but also of ensuring clarity and continuity in status. Moving forward, policy debates around legalization and temporary status must consider not only initial benefits but also the costs of uncertainty for long-term integration and human capital development.

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Table 1: Descriptive Statistics for DACA-Eligible and Non-Eligible Immigrants Across Policy Periods

	Treatment Group			Main Control Group		
	Pre-DACA	**2013-2016**	**2017-2022**	**Pre-DACA**	**2013-2016**	**2017-2022**
Panel A: Labor Market Outcomes						
Employed	0.613	0.719	0.793	0.647	0.667	0.716
Wage-Employed	0.583	0.682	0.737	0.609	0.622	0.651
Self-Employed	0.030	0.0368	0.0558	0.0382	0.0450	0.0655
Earned Income	9593.0	12535.4	17952.6	12301.1	15883.3	22361.7
N	37,139	31,947	35,677	64,582	83,104	155,804
Panel B: Health Insurance Outcomes						
Has Health Insurance	0.360	0.451	0.542	0.474	0.623	0.704
Has Health Insurance through Employer	0.309	0.376	0.471	0.304	0.385	0.452
Has Health Insurance through Purchase	0.0599	0.0793	0.0823	0.106	0.133	0.138
N	37,139	31,947	35,677	64,582	83,104	155,804
Panel C: Education Outcomes						
In School	0.384	0.305	0.196	0.285	0.262	0.202
Has at Least Some College Education	0.448	0.464	0.481	0.532	0.592	0.625
N	37,139	31,947	35,677	64,582	83,104	155,804
Panel D: Mobility Outcomes						
Moved Last Year	0.198	0.180	0.157	0.281	0.248	0.222
Moved In-State	0.178	0.161	0.137	0.242	0.207	0.181
Moved Out-of-State	0.0193	0.0189	0.0194	0.0393	0.0417	0.0413
N	36,923	31,751	35,482	57,231	73,863	142,545

Notes: The treatment group includes likely undocumented immigrants who meet DACA eligibility criteria. The main control group consists of non-citizens who do not meet those criteria, age-matched to treatment individuals as they age through time. Income is reported in 2022 USD. Observations are pooled across three time periods: pre-DACA (pre-2012), early implementation (2013–2016), and heightened uncertainty (2017–2022).

Table 2: Demographic Characteristics of DACA-Eligible and Comparison Groups

	Treatment Group	Main Control Group	Undocumented Control Group	Control Group that Just Missed Criteria Cutoff
Age	24.96	28.33	28.19	27.10
	(4.920)	(5.435)	(5.455)	(5.515)
male	0.550	0.498	0.515	0.513
	(0.497)	(0.500)	(0.500)	(0.500)
Years of Education	13.08	14.30	14.00	13.79
	(1.605)	(2.527)	(2.318)	(2.302)
Years in the United States	17.17	5.910	6.137	7.355
	(6.281)	(4.872)	(4.978)	(5.294)
married	0.229	0.405	0.406	0.347
	(0.420)	(0.491)	(0.491)	(0.476)
Black	0.0653	0.105	0.102	0.0989
	(0.247)	(0.307)	(0.302)	(0.298)
Non-Hispanic White	0.0829	0.156	0.153	0.132
	(0.276)	(0.363)	(0.360)	(0.338)
Asian	0.0946	0.254	0.236	0.240
	(0.293)	(0.435)	(0.425)	(0.427)
Hispanic	0.745	0.460	0.486	0.509
	(0.436)	(0.498)	(0.500)	(0.500)
Other Race	0.0123	0.0245	0.0235	0.0196
	(0.110)	(0.154)	(0.151)	(0.139)
Speaks No English or Not Well	0.0942	0.269	0.281	0.268
	(0.292)	(0.443)	(0.449)	(0.443)
N	104763	303490	216234	164968

Notes: The "just missed" group includes immigrants who arrived slightly older (ages 16–20) or after the cutoff year (2008–2011). We do not apply an age-based cutoff because the control groups are age-matched to the treatment group over time. Means are reported with standard deviations in parentheses.

Table 3: Difference-in-Differences Estimates of DACA Impacts on Key Outcomes

Panel A: Labor Market Outcomes				
Outcome	**Employed**	**Wage and Salary Worker**	**Self-Employed**	**Earned Income**
DACA*(2013-2016)	0.0459***	0.0502***	-0.0043***	0.4044***
	(0.0052)	(0.0060)	(0.0014)	(0.0459)
DACA*(2017-2022)	0.0051	0.0159***	-0.0107***	-0.0481
	(0.0044)	(0.0050)	(0.0023)	(0.0413)
DACA	-0.0173***	-0.0057	-0.0116***	-0.1074**
	(0.0046)	(0.0049)	(0.0021)	(0.0454)
N	408253			

Panel B: Health Insurance			
Outcome	**Health Insurance**	**Employer Health Insurance**	**Private Health Insurance**
DACA*(2013-2016)	0.0102	0.0210***	0.0227***
	(0.0075)	(0.0074)	(0.0041)
DACA*(2017-2022)	0.0370***	0.0371***	0.0477***
	(0.0087)	(0.0105)	(0.0093)
DACA	-0.0968***	0.0319***	-0.0357***
	(0.0143)	(0.0082)	(0.0052)
N	408253		

Panel C: Education & Geographic Mobility					
Outcome	**In School**	**Some College**	**Moved Last Year**	**Moved In-State**	**Moved from Out-of-State**
DACA*(2013-2016)	-0.0022	0.0152***	0.0239***	0.0237***	0.0002
	(0.0064)	(0.0052)	(0.0053)	(0.0045)	(0.0019)
DACA*(2017-2022)	0.0231***	0.0237**	0.0394***	0.0364***	0.0029
	(0.0060)	(0.0093)	(0.0051)	(0.0043)	(0.0020)
DACA	-0.0328***	0.0751***	-0.0337***	-0.0288***	-0.0049***
	(0.0057)	(0.0065)	(0.0046)	(0.0043)	(0.0016)
N	408253			377795	

Notes: Each cell reports the coefficient from a difference-in-differences model comparing DACA-eligible and ineligible non-citizens before and after DACA's implementation, and again following the 2017 rescission announcement. Earned income is transformed using the hyperbolic sine function. All models control for age, age squared, gender, years of education, marital status, race, English proficiency, years since migration, country-of-birth fixed effects, state fixed effects, year fixed effects, and state-specific time trends. Standard errors are clustered at the state level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 4: Effects of DACA Under Uncertainty — Interaction with Google Trends Index

Panel A: Labor Market Outcomes

Outcome	Employed	Wage and Salary Worker	Self-Employed	Earned Income
DACA*GTIndex	-0.0131***	-0.0057	-0.0074***	-0.2016***
	(0.0044)	(0.0050)	(0.0024)	(0.0385)
DACA	0.0572***	0.0479**	0.0093	0.8659***
	(0.0176)	(0.0190)	(0.0107)	(0.1688)
GTIndex	-0.0045	-0.0086	0.0041	-0.0839
	(0.0063)	(0.0067)	(0.0026)	(0.0712)
N	330659			

Panel B: Health Insurance

Outcome	Health Insurance	Employer Health Insurance	Private Health Insurance
DACA*GTIndex	-0.0024	0.0245	0.0243***
	(0.0104)	(0.0203)	(0.0043)
DACA	-0.0721**	-0.0416	-0.1017***
	(0.0308)	(0.0763)	(0.0185)
GTIndex	-0.0180	-0.0173*	-0.0020
	(0.0133)	(0.0102)	(0.0077)
N	330659		

Panel C: Education & Geographic Mobility

Outcome	In School	Some College	Moved Last Year	Moved In-State	Moved from Out-of-State
DACA*GTIndex	0.0298***	0.0425***	-0.0023	-0.0044	0.0020
	(0.0072)	(0.0101)	(0.0050)	(0.0040)	(0.0031)
DACA	-0.1524***	-0.0623	0.0054	0.0174	-0.0120
	(0.0316)	(0.0432)	(0.0206)	(0.0166)	(0.0128)
GTIndex	0.0010	-0.0108	0.0188*	0.0076	0.0112**
	(0.0066)	(0.0085)	(0.0103)	(0.0090)	(0.0044)
N	330659			305967	

Notes: This table interacts DACA eligibility with the Google Trends (GT) index, which measures relative search intensity for the "Deferred Action for Childhood Arrivals" topic across states and years. GTIndex captures information exposure and policy salience, peaking after the 2017 rescission announcement. The sample is restricted to 2012–2022. Earned income is transformed using the hyperbolic sine function. Models include the same controls as in Table 3. Standard errors are clustered at the state level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Figure 1: Event Study Estimates – Main Outcomes for DACA-Eligible vs. Main Control Group

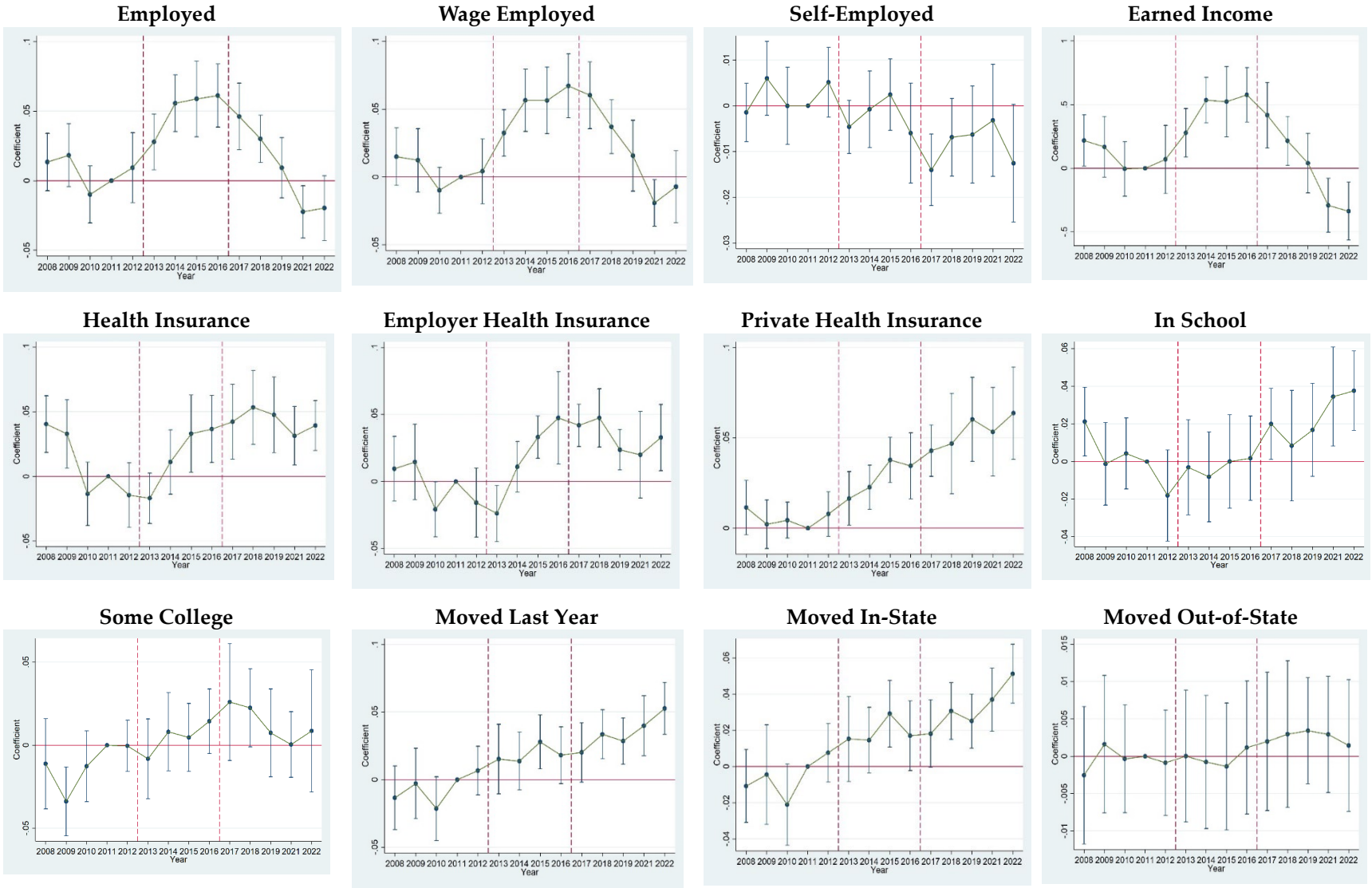


Figure 2: Event Study Estimates – DACA-Eligible vs. Likely Undocumented Control Group

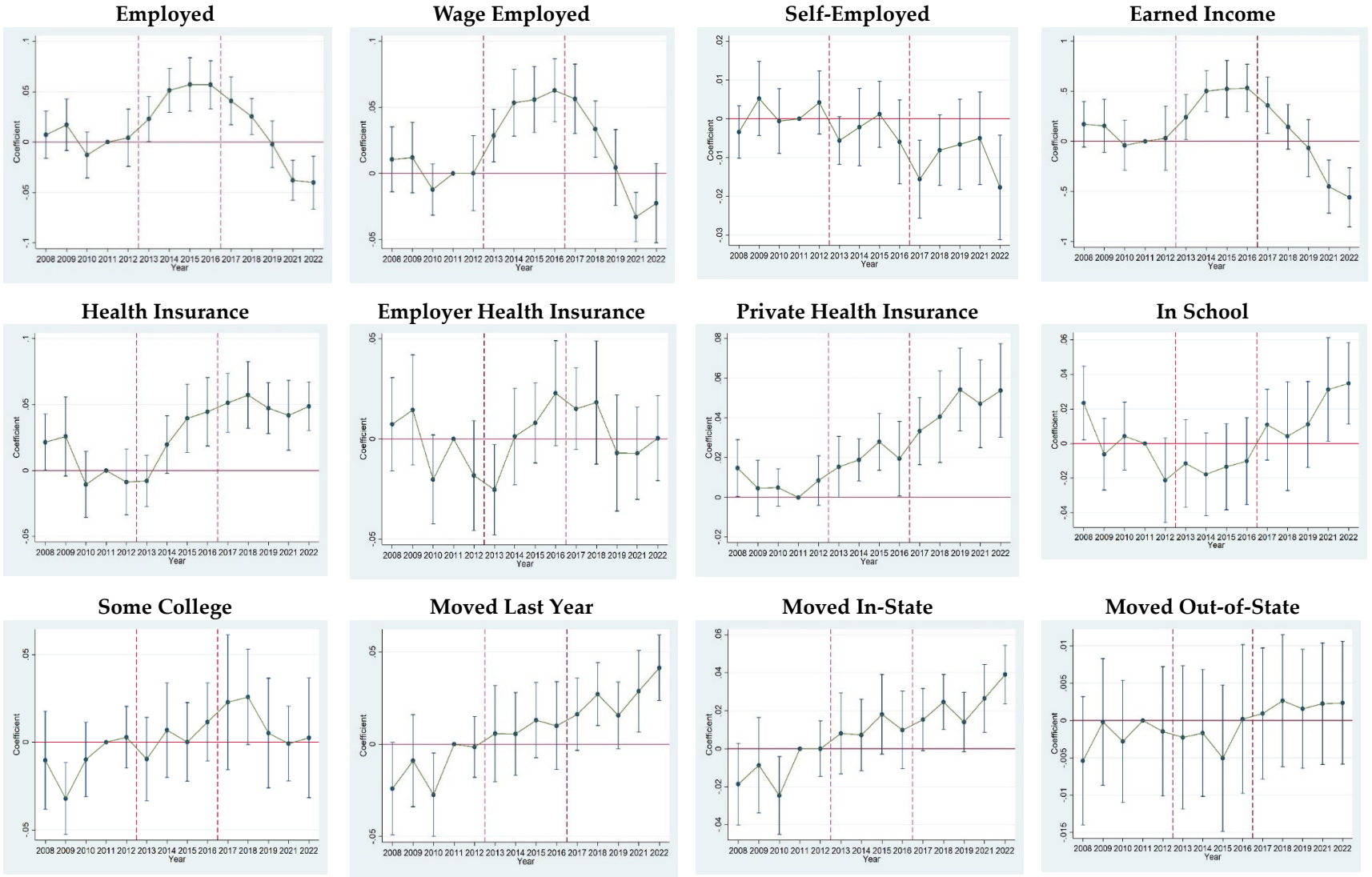


Figure 3: Event Study Estimates – DACA-Eligible vs. Control Group Just Missing Eligibility Cutoffs

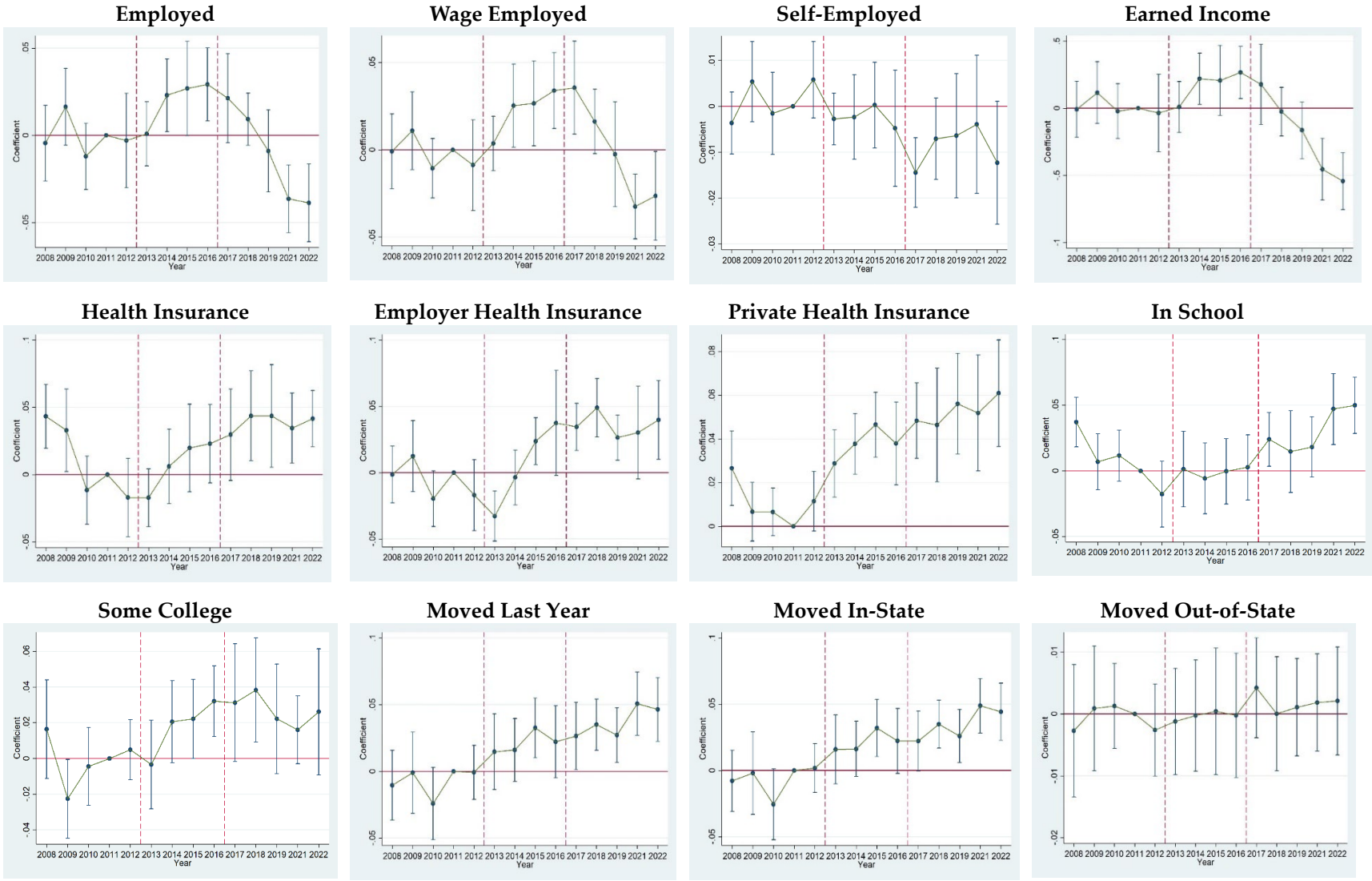
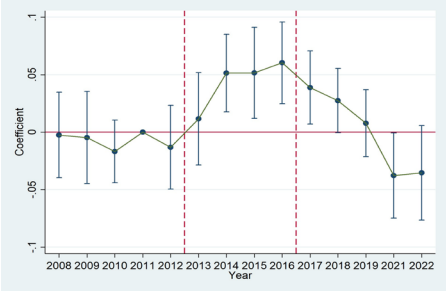
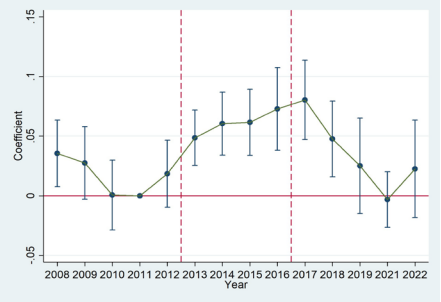


Figure 4: Event Study Estimates – Heterogeneous Impacts of DACA by Gender

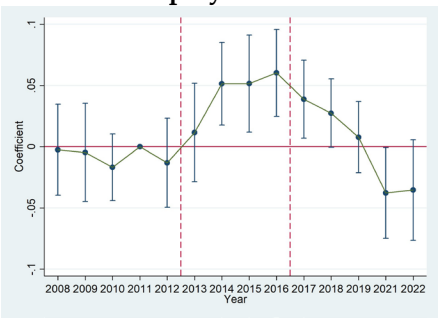
Wage Employed – Female



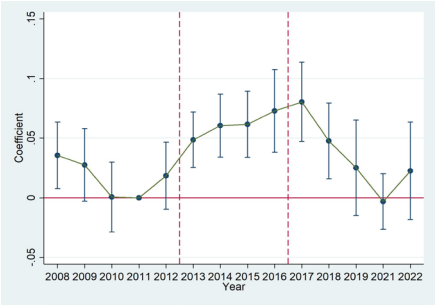
Wage Employed – Male



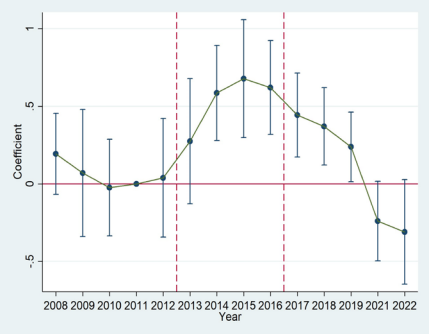
Self-Employed – Female



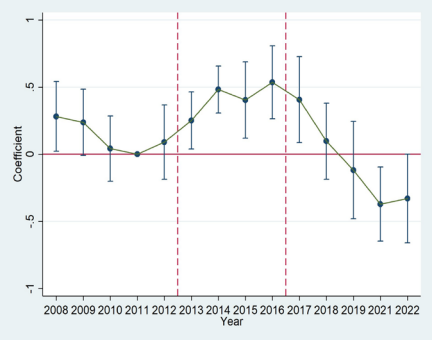
Self-Employed – Male



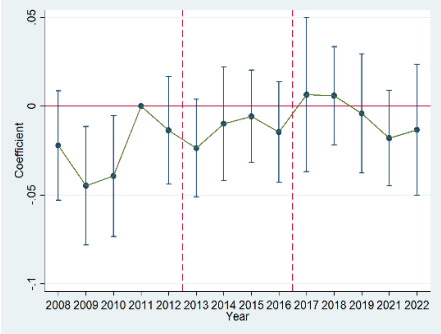
Earned Income - Female



Earned Income - Male



Some College - Female



Some College - Male

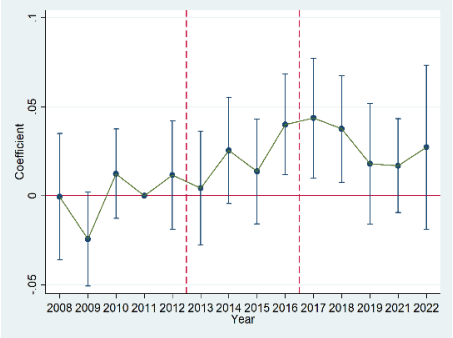
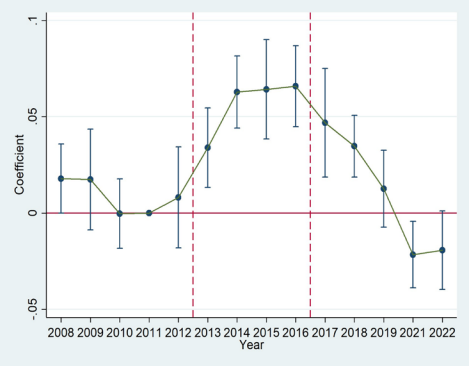
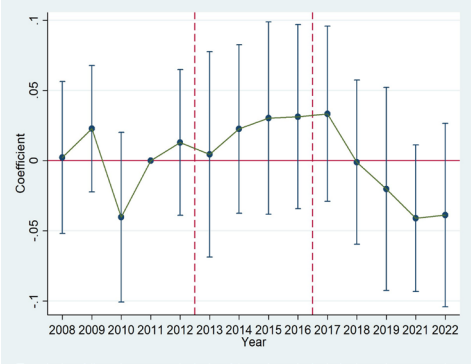


Figure 5: Event Study Estimates – Heterogeneous Impacts of DACA by Hispanic Ethnicity

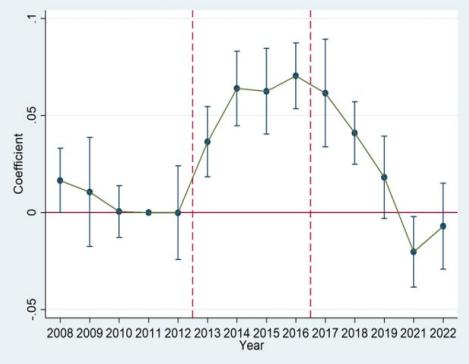
Employed – Hispanic



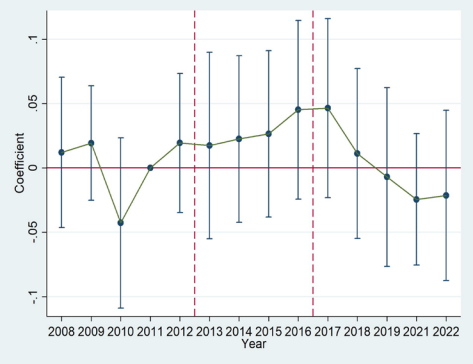
Employed – Non-Hispanic



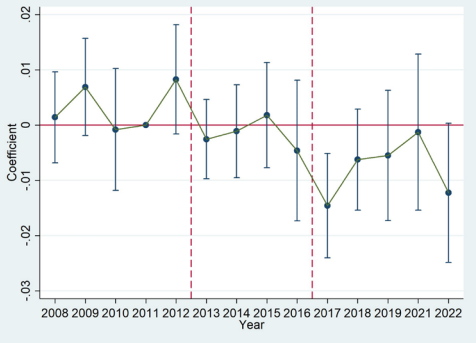
Wage-Employed – Hispanic



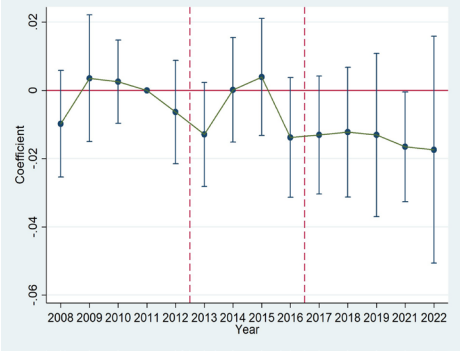
Wage-Employed – Non-Hispanic



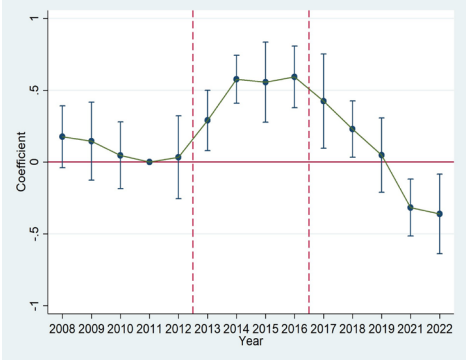
Self-Employed – Hispanic



Self-Employed – Non-Hispanic



Earned Income – Hispanic



Earned Income – Non-Hispanic

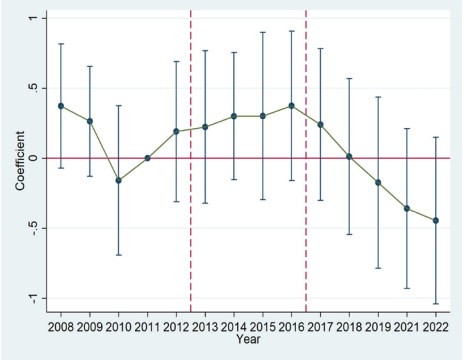
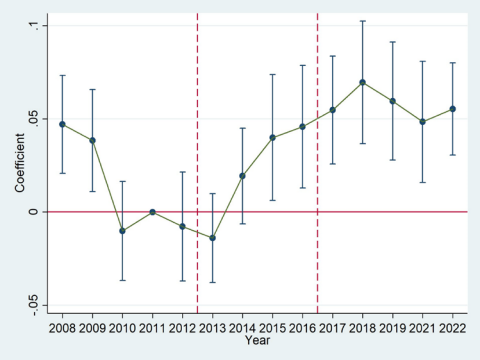
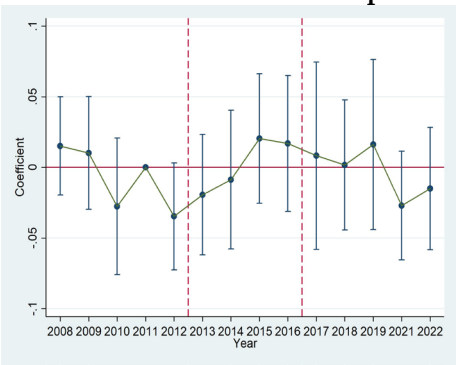


Figure 5: Event Study Estimates – Heterogeneous Impacts of DACA by Hispanic Ethnicity – Continued

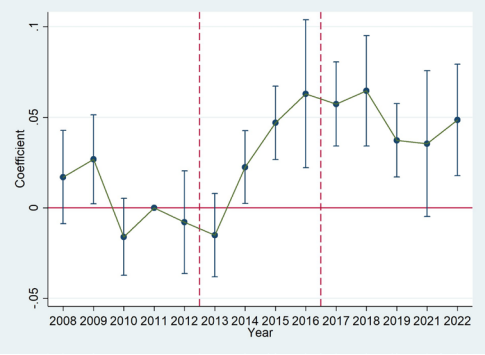
Health Insurance – Hispanic



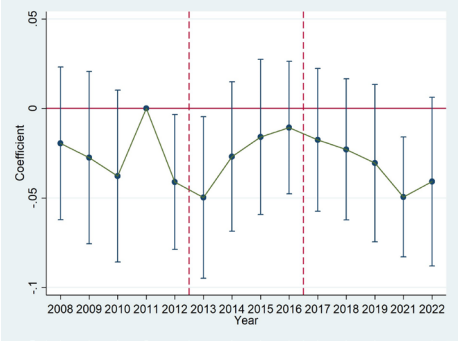
Health Insurance – Non-Hispanic



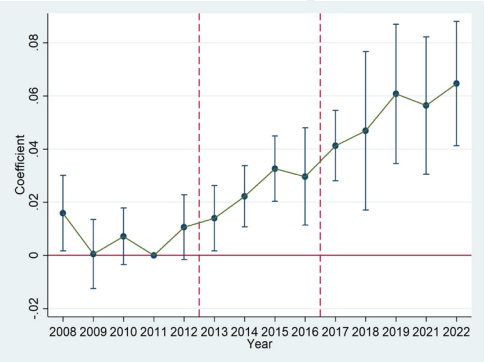
Employed HI – Hispanic



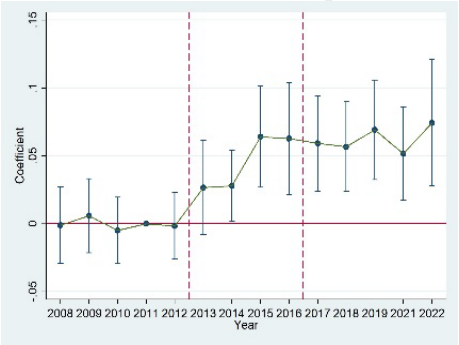
Employer HI – Non-Hispanic



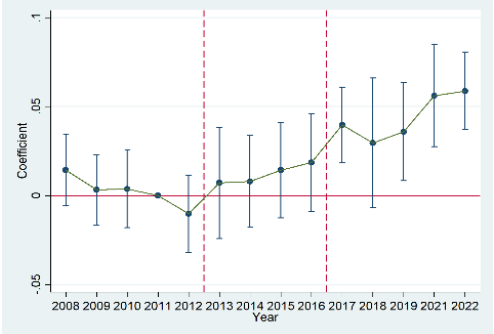
Private HI – Hispanic



Private HI – Non-Hispanic



In School – Hispanic



In School – Non-Hispanic

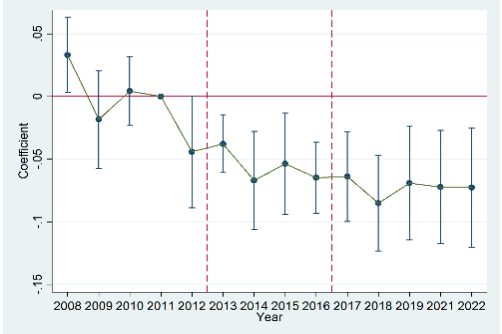
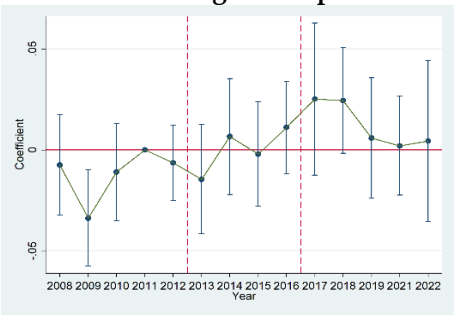
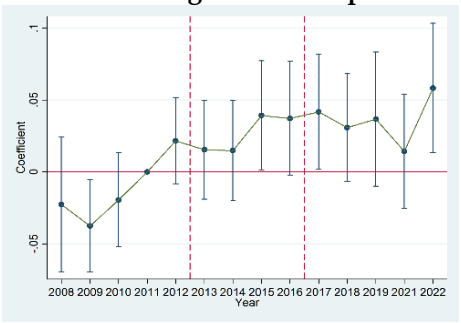


Figure 5: Event Study Estimates – Heterogeneous Impacts of DACA by Hispanic Ethnicity – Continued

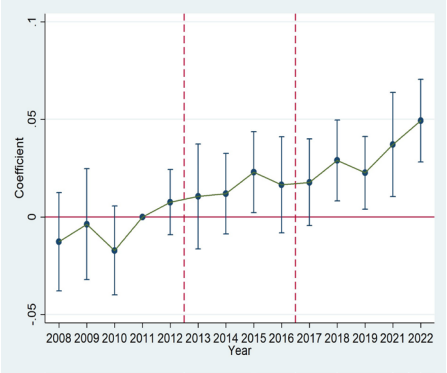
Some College – Hispanic



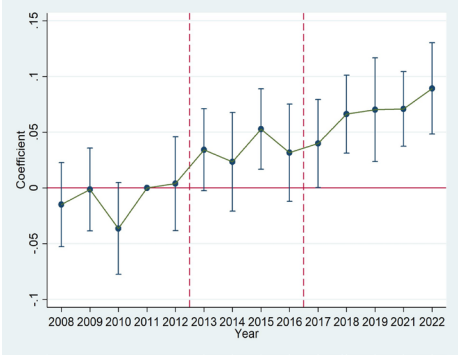
Some College – Non-Hispanic



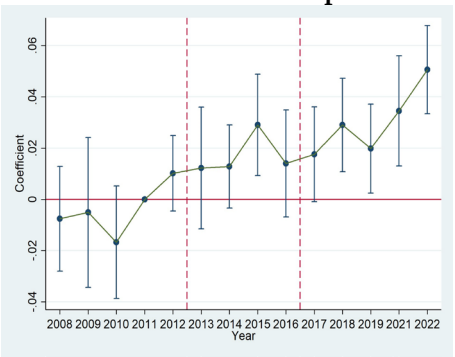
Moved Last Year – Hispanic



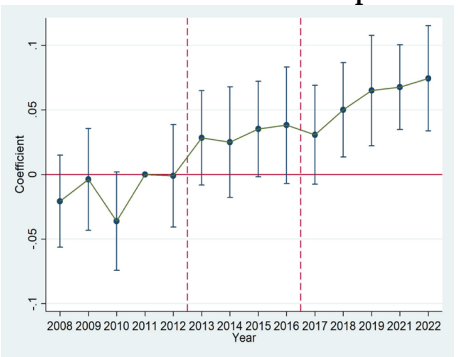
Moved Last Year – Non-Hispanic



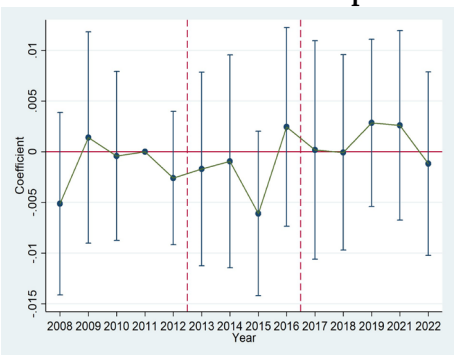
Moved In-State – Hispanic



Moved In-State – Non-Hispanic



Moved Out-of-State – Hispanic



Moved Out-of-State – Non-Hispanic

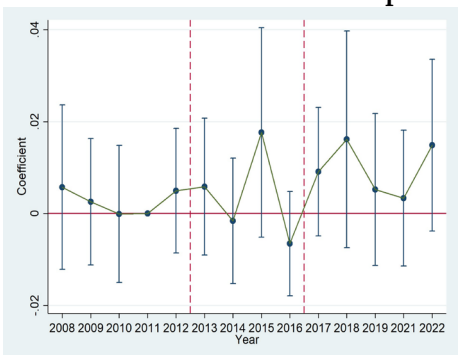
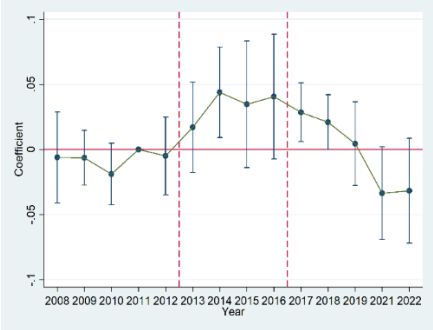
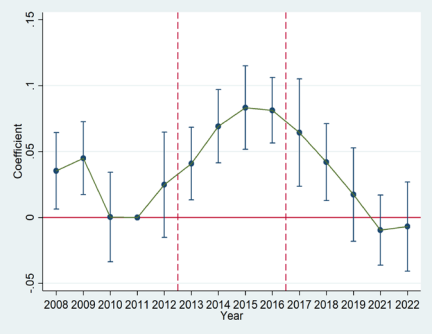


Figure 6: Role of Policy Uncertainty – Sanctuary vs. Non-Sanctuary States

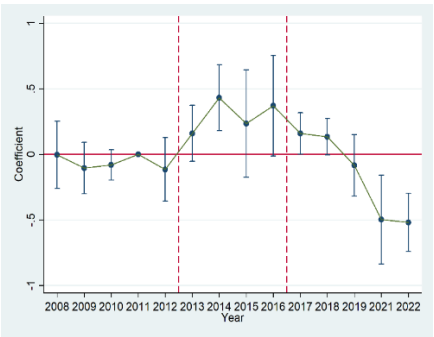
Employed - Sanctuary States



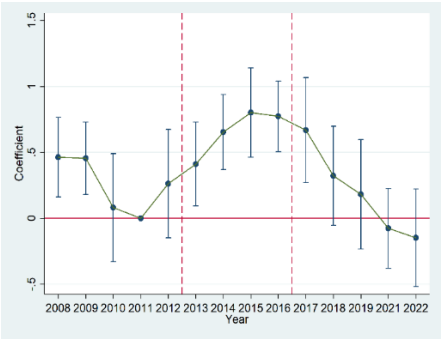
Employed - Non-Sanctuary States



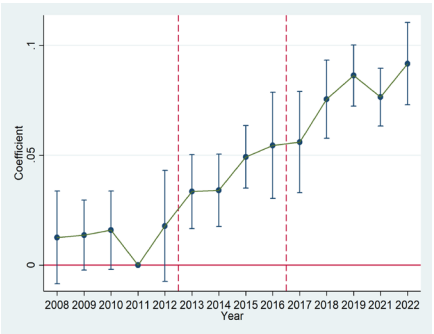
Income - Sanctuary States



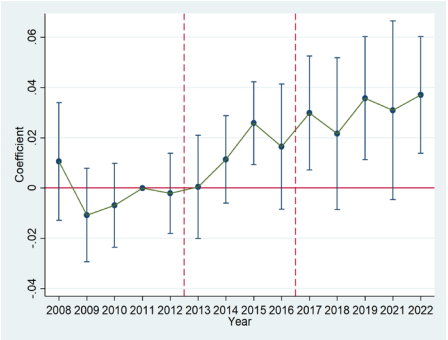
Income - Non-Sanctuary States



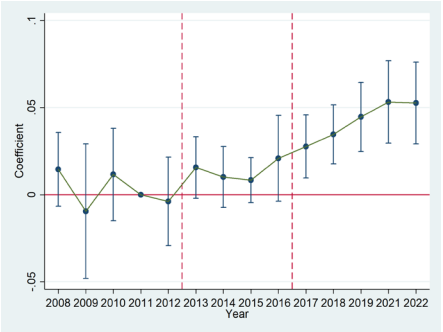
Private HI - Sanctuary States



Private HI - Non-Sanctuary States



In-School - Sanctuary States



In-School - Non-Sanctuary States

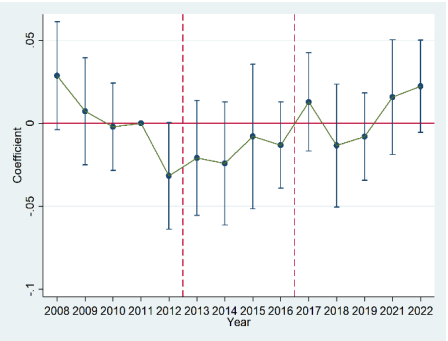
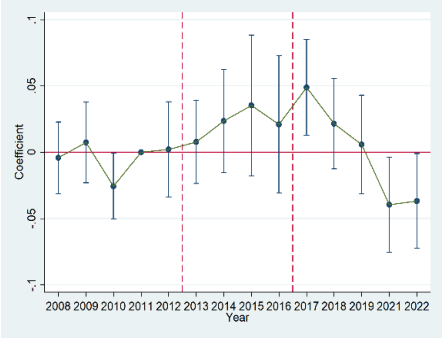
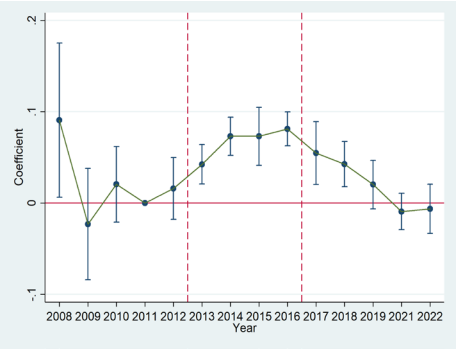


Figure 7: Role of Policy Uncertainty – High vs. Low Enforcement States

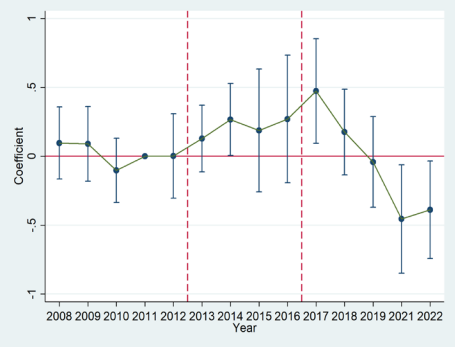
Employed – Low EI States



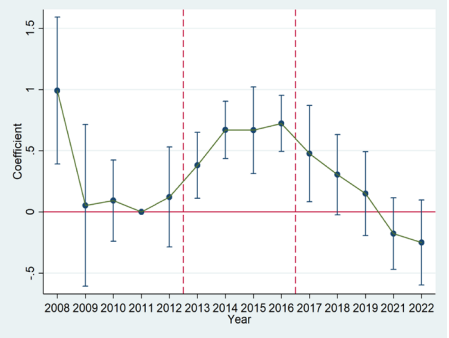
Employed – High EI States



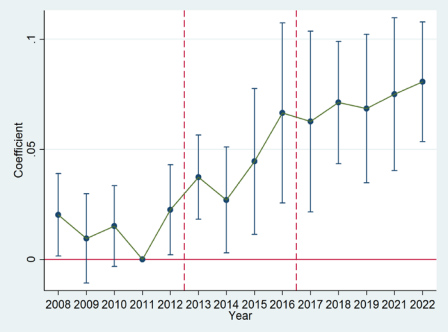
Income - Low EI States



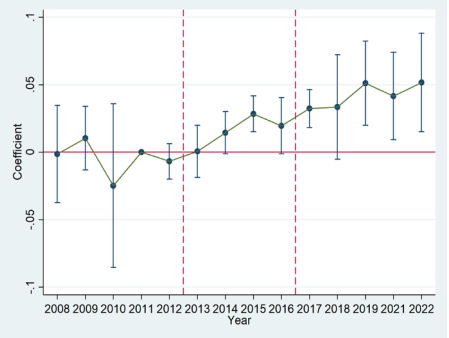
Income - High EI States



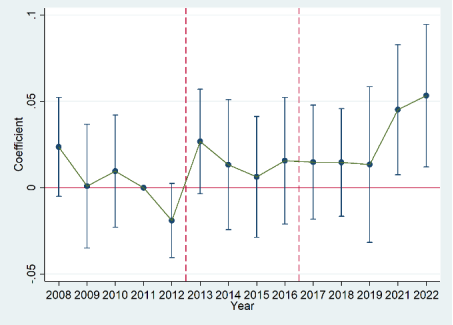
Private HI - Low EI States



Private HI - High EI States



In-School - Low EI States



In-School - High EI States

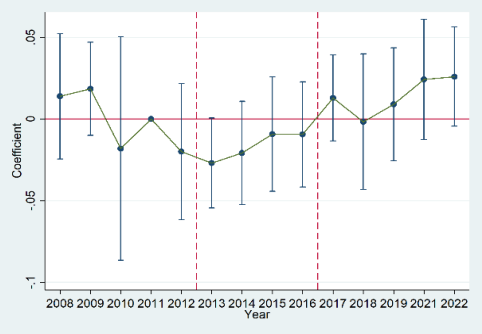
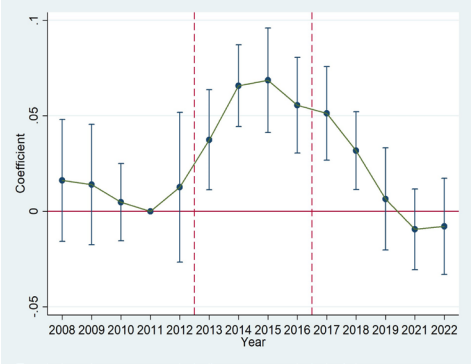
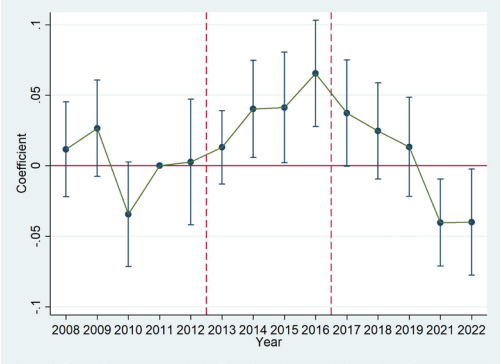


Figure 8: Role of Peer Networks – Counties with Larger vs. Smaller DACA Presence

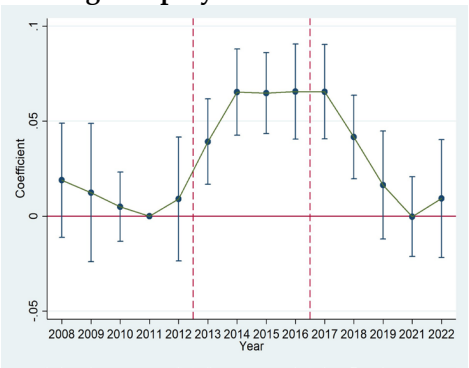
Employed – More DACA



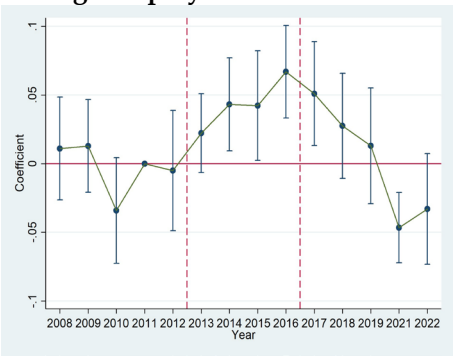
Employed – Fewer DACA



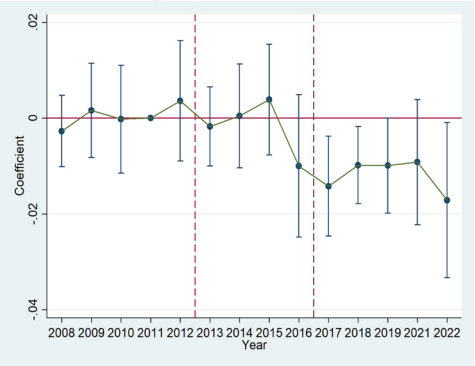
Wage Employed – More DACA



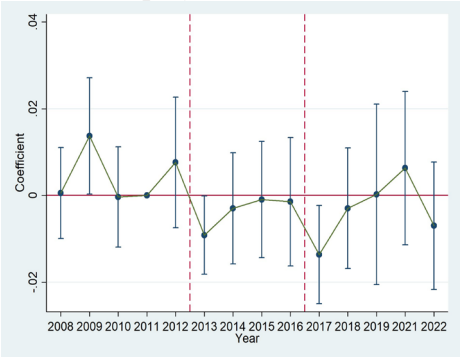
Wage Employed – Fewer DACA



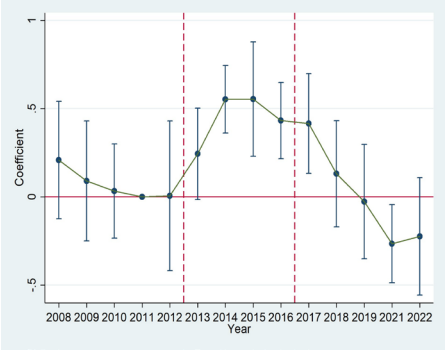
Self-Employed – More DACA



Self-Employed – Fewer DACA



Earned Income – More DACA



Earned Income – Fewer DACA

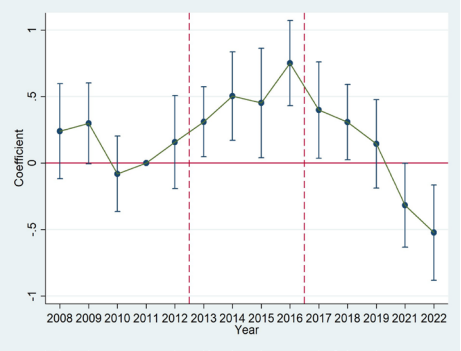


Table A1: Event Study Results – DACA vs. Main Control Group

Outcomes	Employed	Wage-Employed	Self-Employed	Earned Income	Health Insurance	Employer HI	Private HI	In School	Some College	Moved	Moved In-state	Moved Out-of-State
DACA	-0.0231**	-0.0094	-0.0137***	-0.1902*	-0.1027***	0.0361***	-0.0404***	-0.0326***	0.0855***	-0.0280***	-0.0236***	-0.0045
	(0.0091)	(0.0082)	(0.0033)	(0.1049)	(0.0125)	(0.0133)	(0.0062)	(0.0091)	(0.0075)	(0.0092)	(0.0080)	(0.0031)
DACA*2008	0.0135	0.0149	-0.0015	0.2184**	0.0404***	0.0095	0.0114	0.0212**	-0.0112	-0.0133	-0.0108	-0.0025
	(0.0103)	(0.0106)	(0.0032)	(0.1005)	(0.0109)	(0.0120)	(0.0075)	(0.0091)	(0.0135)	(0.0117)	(0.0100)	(0.0046)
DACA*2009	0.0183	0.0124	0.0060	0.1685	0.0328**	0.0146	0.0022	-0.0012	-0.0338***	-0.0029	-0.0045	0.0016
	(0.0113)	(0.0116)	(0.0040)	(0.1192)	(0.0131)	(0.0140)	(0.0067)	(0.0109)	(0.0103)	(0.0130)	(0.0137)	(0.0046)
DACA*2010	-0.0099	-0.0099	-0.0000	-0.0049	-0.0135	-0.0208**	0.0044	0.0044	-0.0126	-0.0214*	-0.0211*	-0.0003
	(0.0102)	(0.0084)	(0.0042)	(0.1069)	(0.0122)	(0.0102)	(0.0049)	(0.0094)	(0.0106)	(0.0118)	(0.0112)	(0.0036)
DACA*2011	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)	(.)
DACA*2012	0.0093	0.0042	0.0051	0.0697	-0.0145	-0.0158	0.0079	-0.0180	-0.0004	0.0067	0.0076	-0.0009
	(0.0126)	(0.0119)	(0.0038)	(0.1333)	(0.0124)	(0.0128)	(0.0062)	(0.0121)	(0.0077)	(0.0090)	(0.0081)	(0.0035)
DACA*2013	0.0279***	0.0325***	-0.0046	0.2790***	-0.0169*	-0.0238**	0.0164**	-0.0030	-0.0082	0.0153	0.0152	0.0000
	(0.0100)	(0.0085)	(0.0029)	(0.0950)	(0.0097)	(0.0104)	(0.0074)	(0.0126)	(0.0120)	(0.0128)	(0.0117)	(0.0044)
DACA*2014	0.0557***	0.0565***	-0.0008	0.5351***	0.0111	0.0109	0.0226***	-0.0081	0.0081	0.0138	0.0145	-0.0008
	(0.0101)	(0.0114)	(0.0042)	(0.0890)	(0.0124)	(0.0094)	(0.0061)	(0.0119)	(0.0117)	(0.0107)	(0.0090)	(0.0044)
DACA*2015	0.0588***	0.0564***	0.0024	0.5231***	0.0330**	0.0331***	0.0378***	0.0000	0.0047	0.0279***	0.0292***	-0.0014
	(0.0135)	(0.0122)	(0.0039)	(0.1374)	(0.0149)	(0.0078)	(0.0063)	(0.0124)	(0.0102)	(0.0099)	(0.0092)	(0.0042)
DACA*2016	0.0612***	0.0672***	-0.0060	0.5763***	0.0366***	0.0474***	0.0345***	0.0018	0.0144	0.0181*	0.0170*	0.0012
	(0.0113)	(0.0118)	(0.0054)	(0.1065)	(0.0129)	(0.0171)	(0.0091)	(0.0112)	(0.0097)	(0.0104)	(0.0096)	(0.0044)
DACA*2017	0.0462***	0.0602***	-0.0140***	0.4172***	0.0423***	0.0419***	0.0429***	0.0200**	0.0260	0.0201*	0.0182*	0.0020
	(0.0119)	(0.0123)	(0.0039)	(0.1281)	(0.0144)	(0.0079)	(0.0071)	(0.0094)	(0.0175)	(0.0109)	(0.0093)	(0.0046)
DACA*2018	0.0301***	0.0370***	-0.0069	0.2157**	0.0533***	0.0475***	0.0468***	0.0084	0.0225*	0.0336***	0.0306***	0.0030
	(0.0085)	(0.0098)	(0.0042)	(0.0957)	(0.0142)	(0.0108)	(0.0138)	(0.0146)	(0.0117)	(0.0090)	(0.0078)	(0.0049)
DACA*2019	0.0093	0.0156	-0.0063	0.0407	0.0475***	0.0237***	0.0602***	0.0168	0.0074	0.0286***	0.0251***	0.0034
	(0.0108)	(0.0130)	(0.0053)	(0.1163)	(0.0146)	(0.0075)	(0.0116)	(0.0123)	(0.0132)	(0.0085)	(0.0075)	(0.0036)
DACA*2021	-0.0224**	-0.0192**	-0.0032	-0.2909***	0.0314***	0.0199	0.0533***	0.0345**	0.0004	0.0399***	0.0370***	0.0029
	(0.0094)	(0.0086)	(0.0061)	(0.1055)	(0.0113)	(0.0161)	(0.0122)	(0.0131)	(0.0098)	(0.0110)	(0.0087)	(0.0039)
DACA*2022	-0.0198*	-0.0072	-0.0126*	-0.3366***	0.0393***	0.0328**	0.0636***	0.0376***	0.0086	0.0527***	0.0513***	0.0014
	(0.0116)	(0.0132)	(0.0064)	(0.1133)	(0.0096)	(0.0123)	(0.0127)	(0.0105)	(0.0184)	(0.0095)	(0.0081)	(0.0044)
N	408253	408253	408253	408253	408253	408253	408253	408253	408253	377795	377795	377795

Figure A1: Robustness Check – Excluding State-Specific Trends

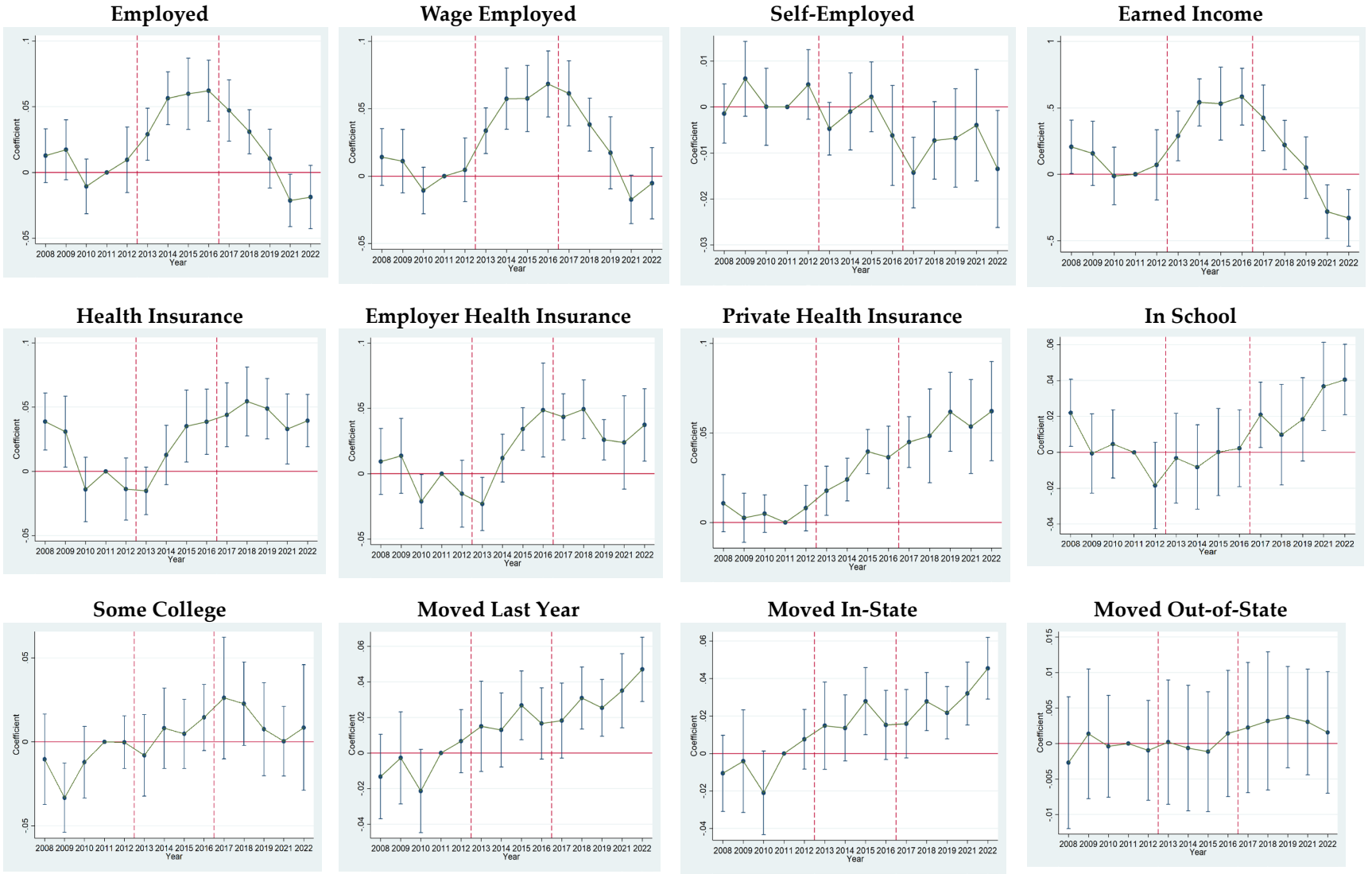


Figure A2: Robustness Check – Exclude Potentially Endogenous Variables: Education and Married

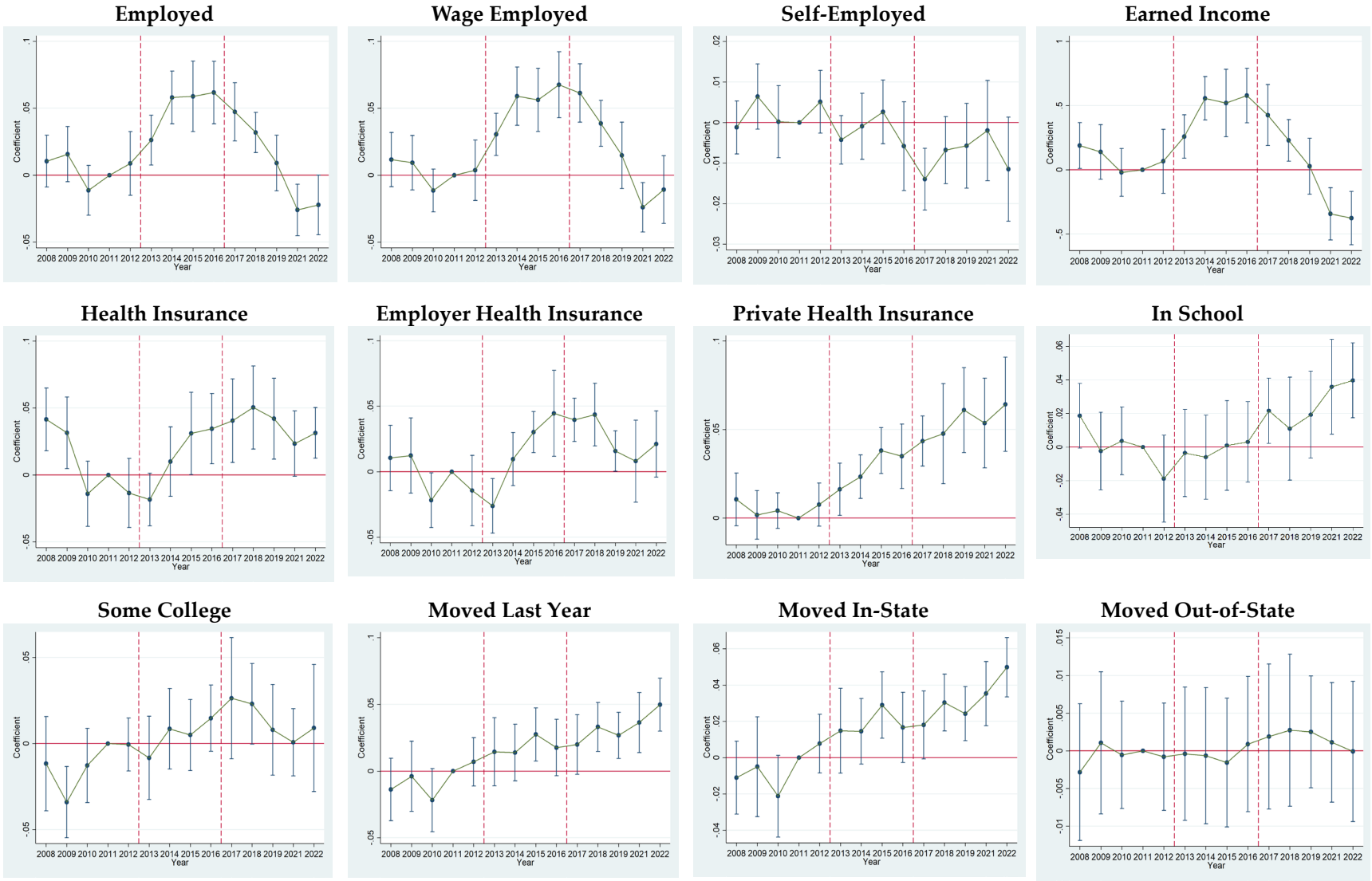


Figure A3: Robustness Check – Excluding Education as a Treatment Group Selection Criterion

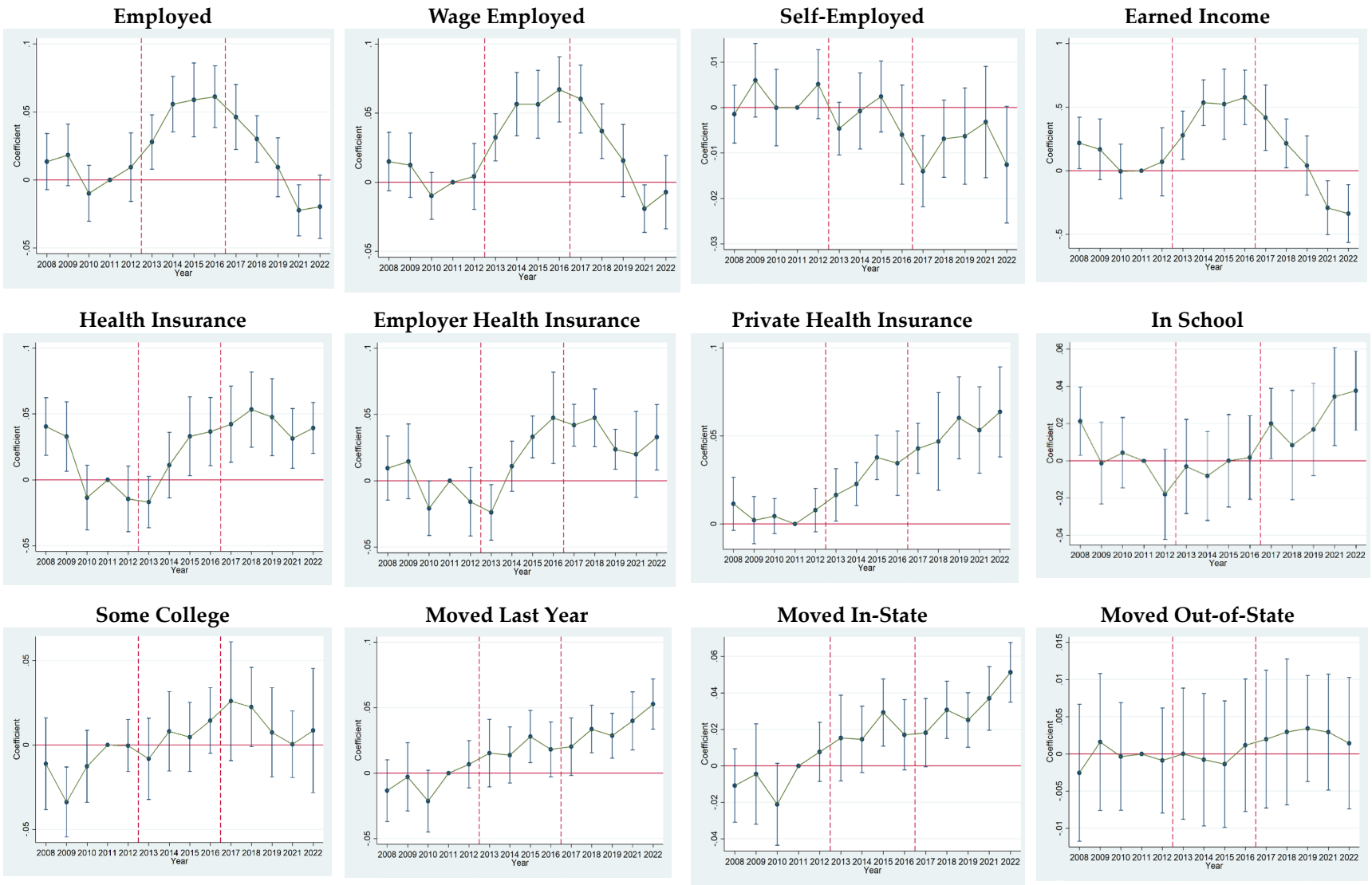


Figure A4: Robustness Check – Controlling for Differential Response to the Business Cycle

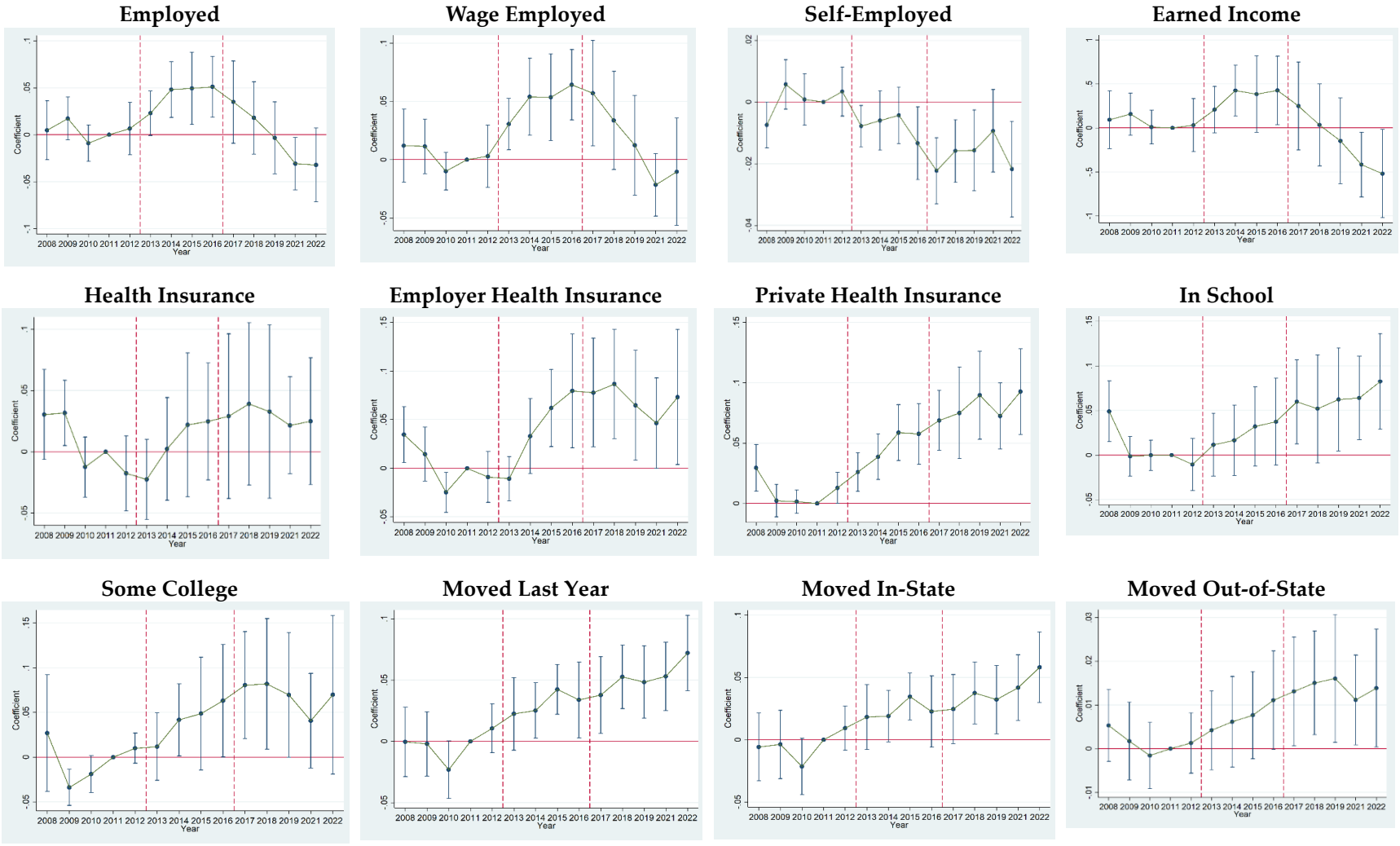
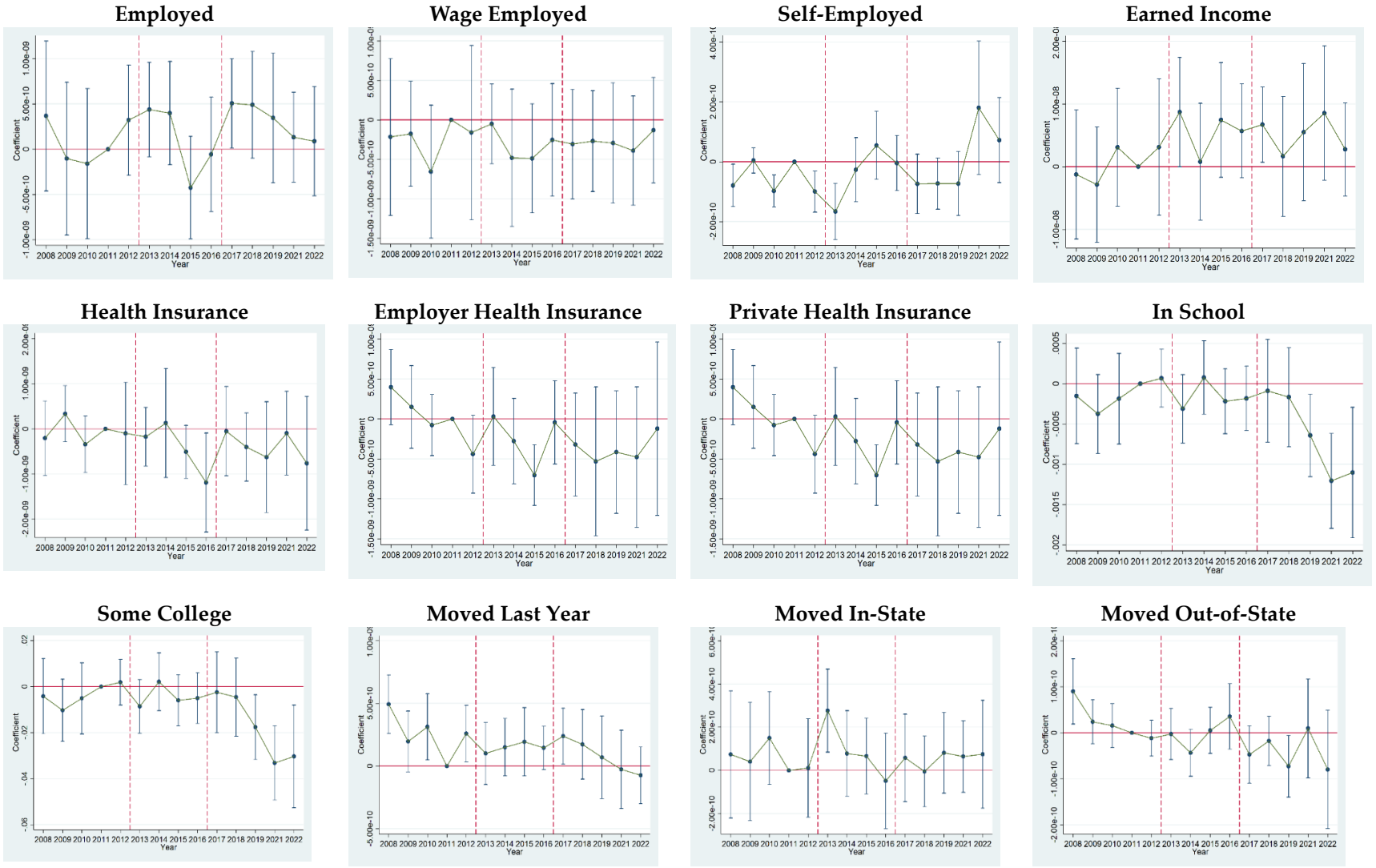


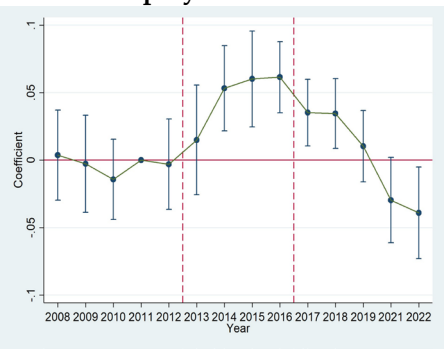
Figure A5: Assessing the Role of Compositional Changes Over Time



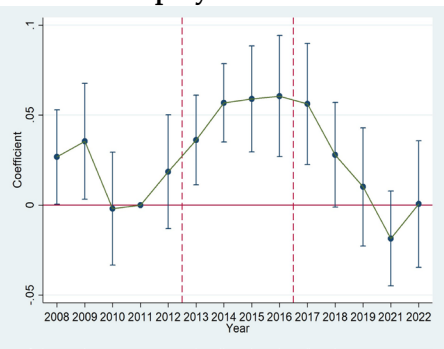
Notes: We isolate whether compositional changes alone can explain the observed patterns by estimating the coefficients of control variables using the pre-treatment period and imposing them onto our model to conduct the event study analysis.

Figure A6: Heterogeneity in DACA Impacts by Gender

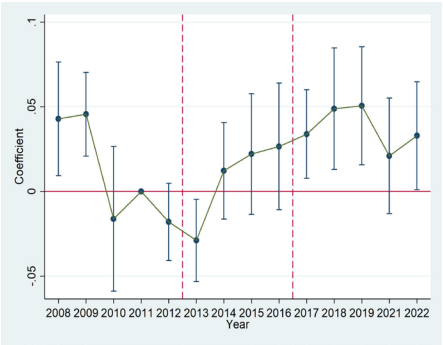
Employed – Female



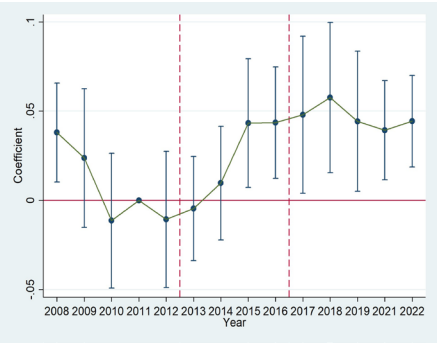
Employed – Male



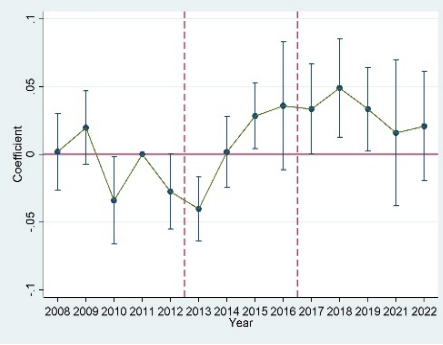
Health Insurance – Female



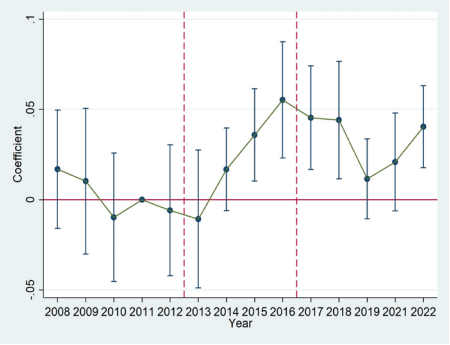
Health Insurance – Male



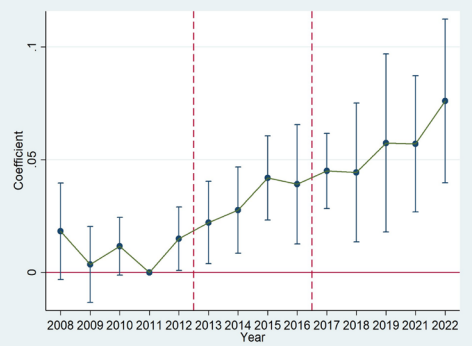
Employed HI - Female



Employed HI - Male



Private HI - Female



Private HI - Male

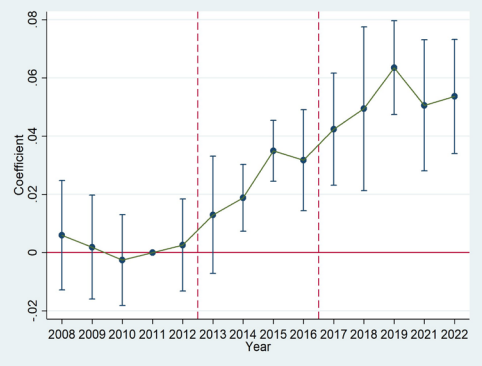
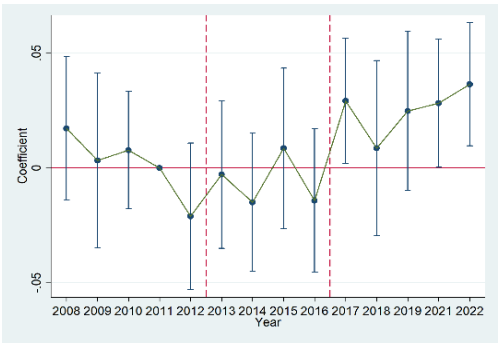
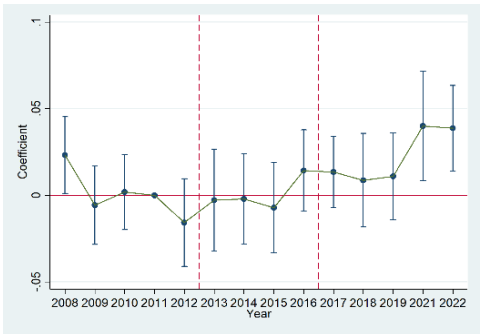


Figure A6: Heterogeneity in DACA Impacts by Gender– Continued

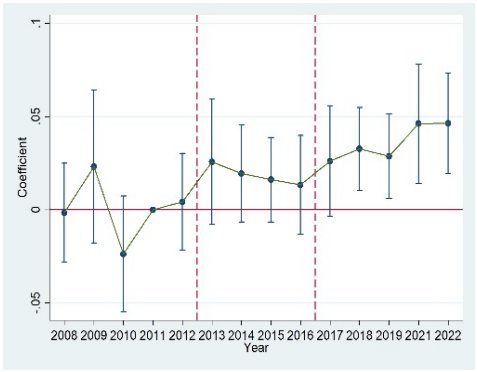
In School – Female



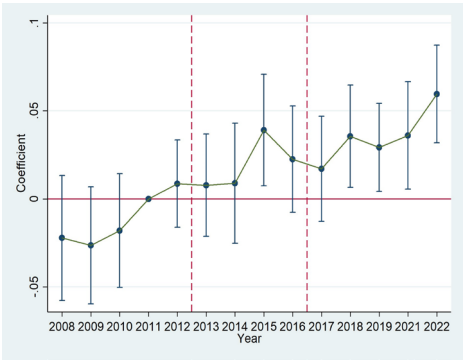
In School – Male



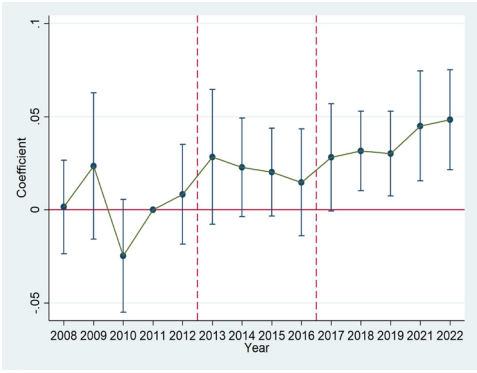
Moved Last Year – Female



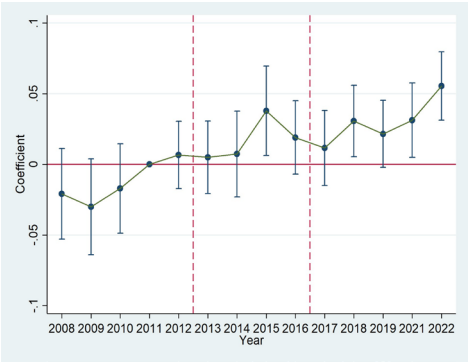
Moved Last Year – Male



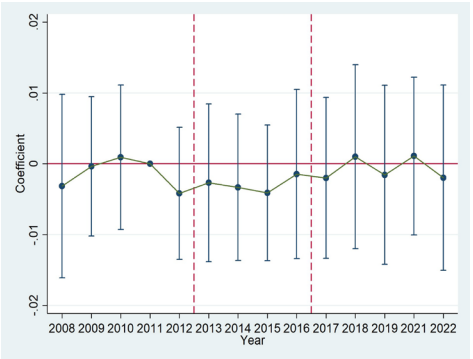
Moved In-State – Female



Moved In-State – Male



Moved Out-of-State – Female



Moved Out-of-State – Male

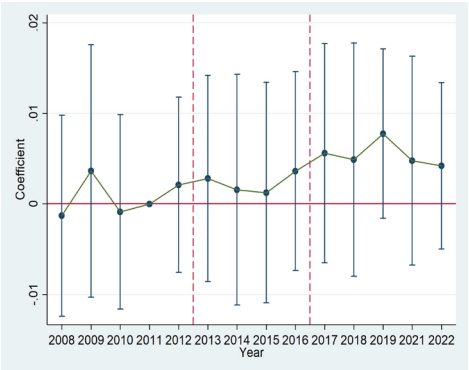


Figure A7: Google Trends Index of DACA Searches Over Time

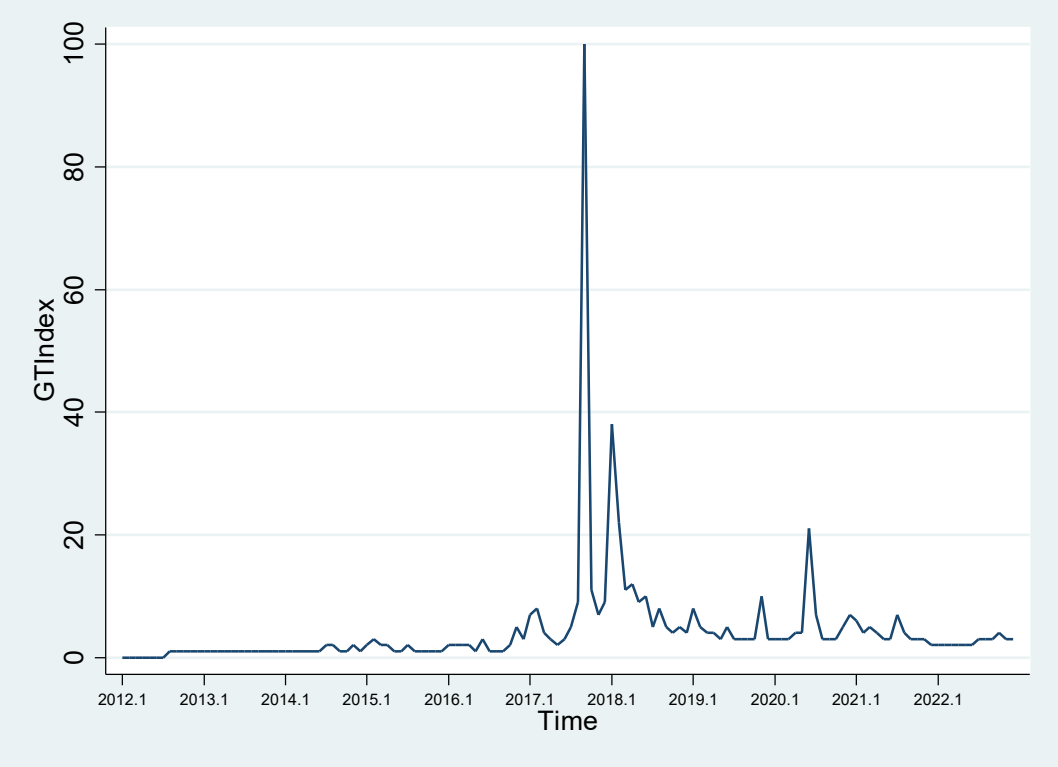
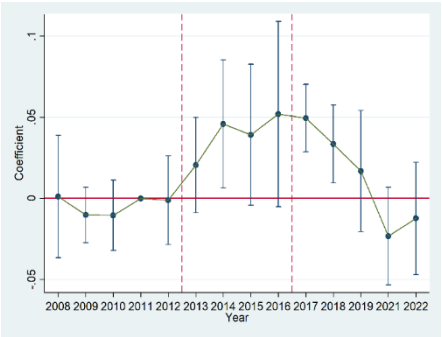
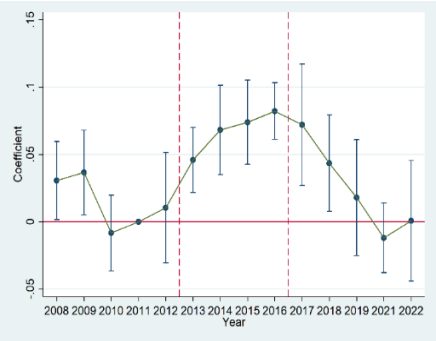


Figure A8: Additional Outcomes for Sanctuary States vs. Non-Sanctuary States

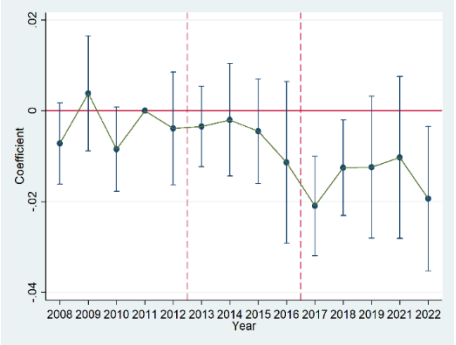
Wage-Employed - Sanctuary States



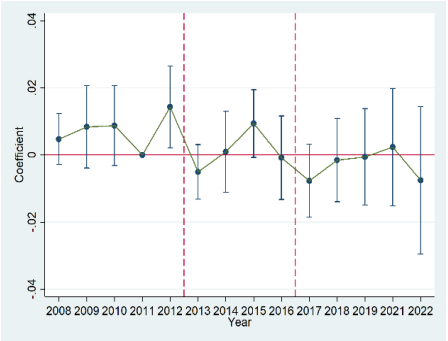
Wage-Employed - Non-Sanctuary States



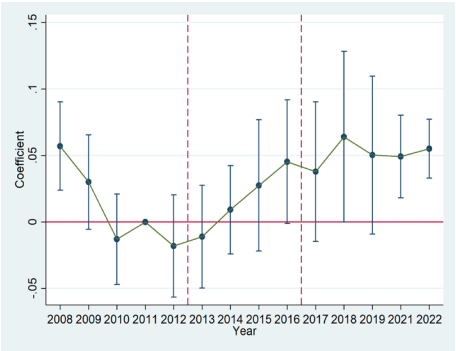
Self-Employed - Sanctuary States



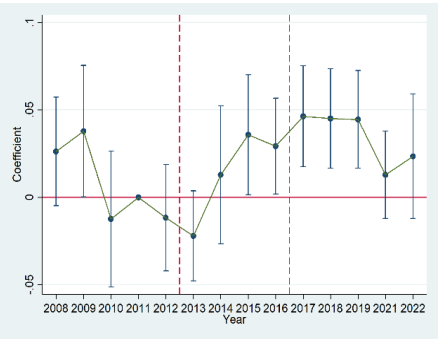
Self-Employed - Non-Sanctuary States



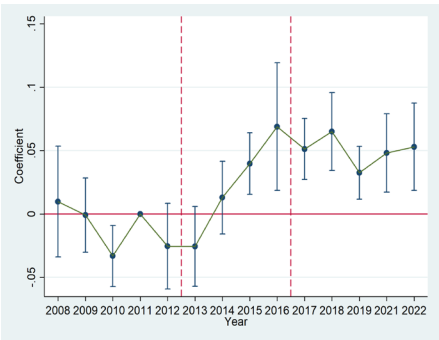
Health Insurance - Sanctuary States



Health Insurance - Non-Sanctuary States



Employed HI - Sanctuary States



Employed HI - Non-Sanctuary States

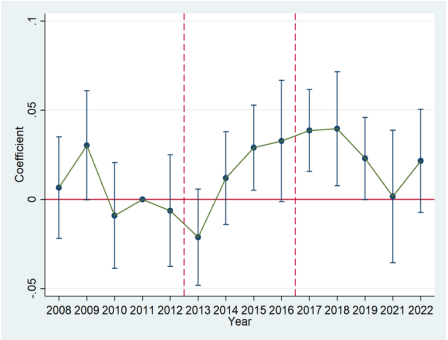
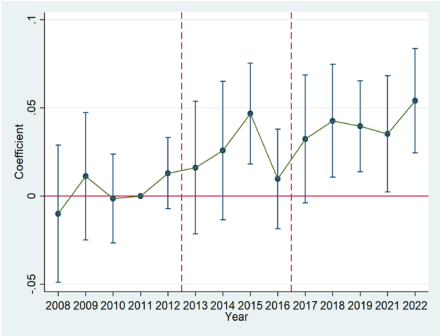


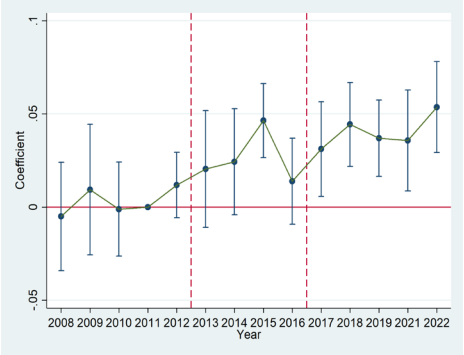
Figure A8: Additional Outcomes for Sanctuary States vs. Non-Sanctuary States – Continued

Moved - Sanctuary States

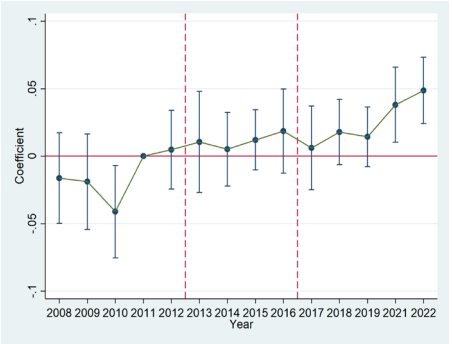


Moved - Non-Sanctuary States

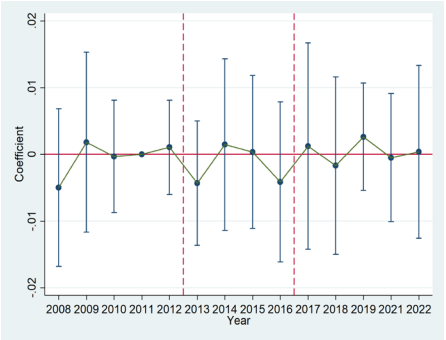
Moved In-State - Sanctuary States



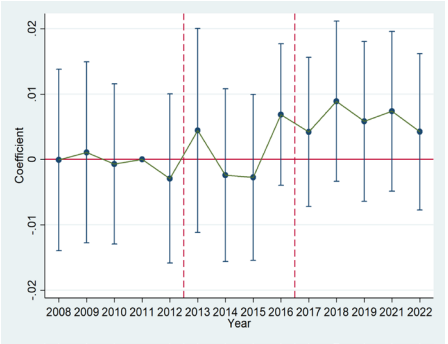
Moved In-State - Non-Sanctuary States



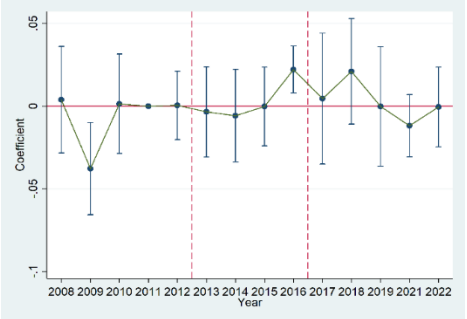
Moved Out-of-State - Sanctuary States



Moved Out-of-State - Non-Sanctuary States



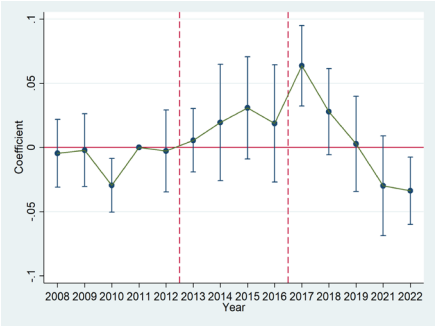
At Least Some College - Sanctuary States



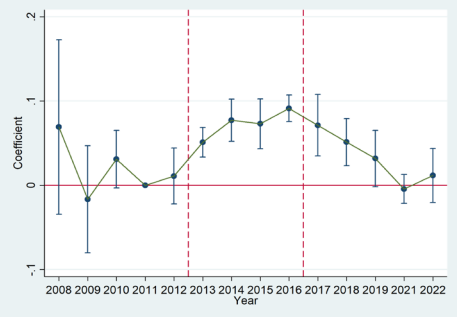
At Least Some College - Non-Sanctuary States

Figure A9: Additional Outcomes by Level of Interior Immigration Enforcement

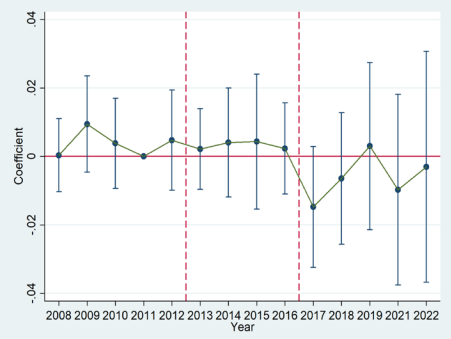
Wage-Employed – Low EI States



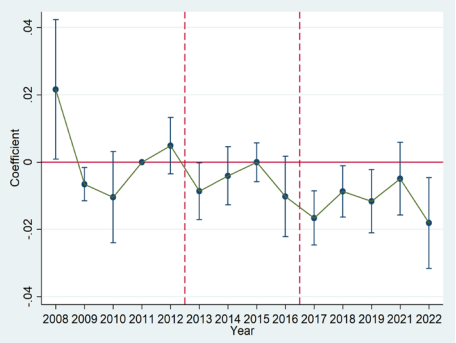
Wage-Employed – High EI States



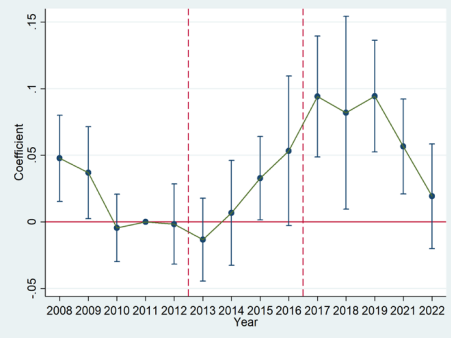
Self-Employed - Low EI States



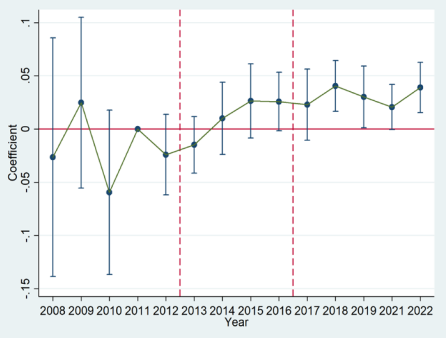
Self-Employed - High EI States



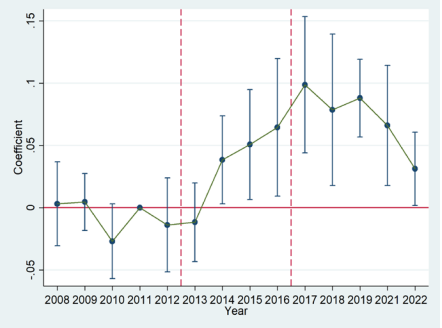
Health Insurance - Low EI States



Health Insurance - High EI States



Employed HI - Low EI States



Employed HI - High EI States

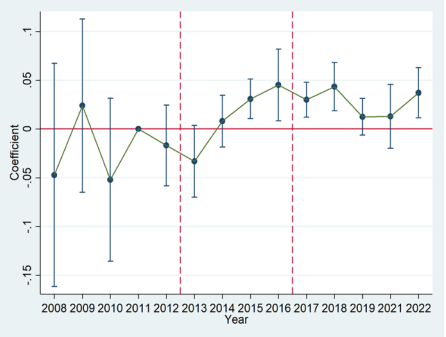
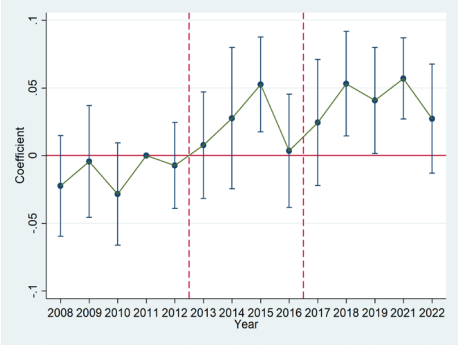
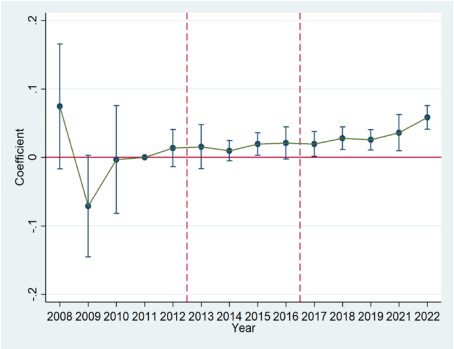


Figure A9: Additional Outcomes by Level of Interior Immigration Enforcement – Continued

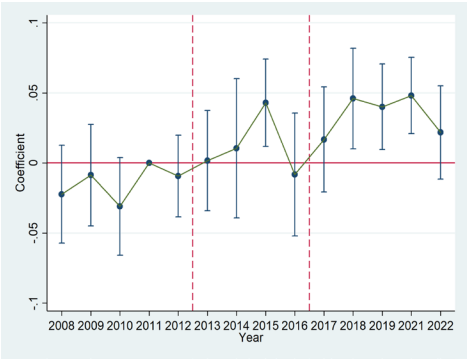
Moved - Low EI States



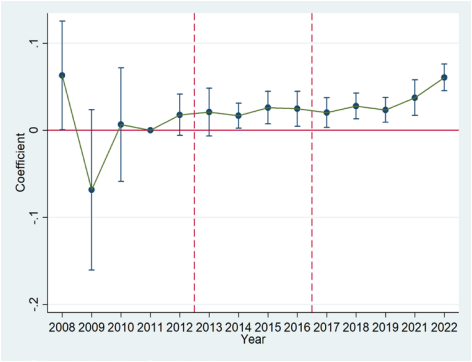
Moved - High EI States



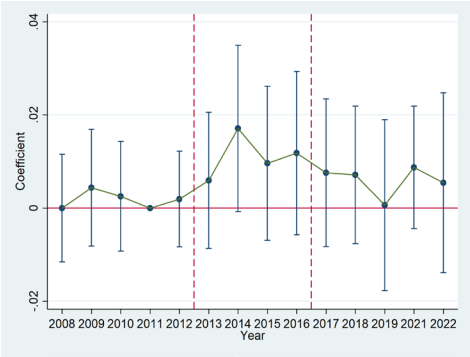
Moved In-State - Low EI States



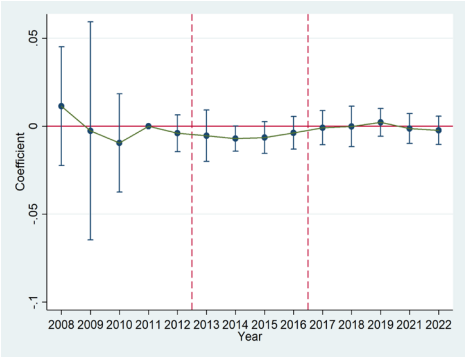
Moved In-State - High EI States



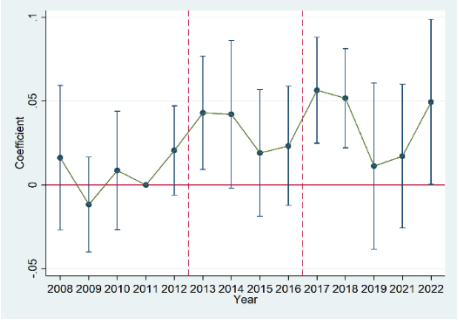
Moved Out-of-State - Low EI States



Moved Out-of-State - High EI States



At Least Some College - Low EI States



At Least Some College - High EI States

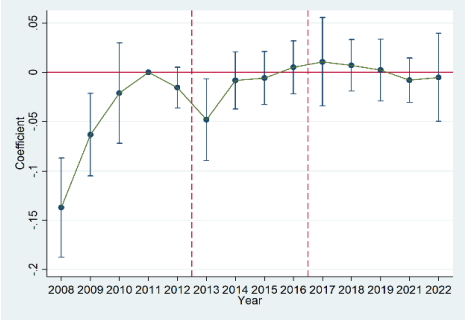


Figure A10: Event Study Estimates Without Borjas Filter (Full Sample)