Labor Shocks and Local Economies: The Cost of ICE Enforcement Actions*

Abstract

We study the economic impact of immigration enforcement based on U.S. Immigration and Customs Enforcement (ICE) operations from 2009–2024. Enforcement actions trigger negative stock returns for firms in counties with high undocumented immigrant concentrations and reduce employment, especially in low-skill industries. These firms also reduce labor force relative to firms in neighboring counties. Municipal bond yields rise in affected counties, indicating broader fiscal ramifications. Our results suggest that undocumented immigrants contribute positively to local economies and that enforcement-induced labor shocks impose costs on both firms and public finance.

I. Introduction

Undocumented immigration is among the most divisive economic and political issues in the U.S. While economists broadly agree that immigration benefits host countries, the net effect of *undocumented* immigrants remains contested. Nearly one in four foreign-born individuals in the U.S. lacks legal status.[1] This large population has spurred increasingly aggressive enforcement measures, including mass arrests and deportations, rejected asylum claims, and high-profile efforts to build a wall along the southern border.

Anecdotal evidence suggests that immigration crackdowns disrupt local economies and communities. In Omaha, Nebraska, a single U.S. Immigration and Customs Enforcement (ICE) raid at Glenn Valley Foods resulted in the arrest of over 70 workers—nearly half the production line—and a reported 70% collapse in output.[2] In Florida, the sudden appearance of ICE agents on a construction site allegedly removed 60% of the workforce in a single morning, delaying a major housing project.[3] In San Diego, a popular local restaurant chain shut down all seven of its locations after a wave of ICE arrests caused workers to flee.[4] The crackdowns have drawn opposition from business leaders, particularly in industries reliant on low-skill labor such as agriculture, hospitality, and construction.[5]

In this study, we examine the financial market responses to ICE enforcement actions. Using an event-study design, we estimate the causal effect of these actions on both the private sector and public finance, as reflected in the stock prices of publicly traded firms and the yields of municipal

[1] *https://www.pewresearch.org/short-reads/2024/07/22/what-we-know-about-unauthorized-immigrants-living-in-the-us/*.
[2] *https://www.nytimes.com/2025/07/27/us/ice-glenn-valley-foods.html*.
[3] *https://www.wsj.com/us-news/deportations-raids-business-farms-630a917e*.
[4] *https://www.wsj.com/us-news/deportations-raids-business-farms-630a917e*.
[5] *https://www.reuters.com/world/us/trump-promises-immigration-order-soon-farm-leisure-workers-2025-06-12/*.

bonds. Because ICE operates within the Department of Homeland Security (DHS), we hypothesize that enforcement actions spook undocumented immigrants even in distant locations, so we measure spillovers to firms and counties not directly targeted. From these market-based reactions, we infer the net economic contribution of undocumented immigrants to local economies.

We compile a dataset of ICE arrests of undocumented immigrants spanning 2009–2024, covering three presidential administrations. ICE enforcement includes identifying, apprehending, and deporting individuals who violate immigration laws. On average, there are 18 enforcement actions per year, but this number varies substantially with shifts in the political climate and policy priorities. Because the timing of these actions is plausibly exogenous to contemporaneous financial-market conditions, our approach mitigates endogeneity concerns.

The undocumented immigrant population is unevenly distributed, with concentrations along the southern border and in coastal states. The geographic patterns allow us to compare counties with high versus low densities of undocumented residents, isolating enforcement effects from other local economic conditions. Using county-level estimates from the Migration Policy Institute, we define high-density counties as "treated" and others as "control" areas.

We first examine the effect on public firms. Although public firms employ a much smaller fraction of undocumented immigrants than enterprises like farmers, restaurants, and household services, they compete for the same labor pool, particularly for low-skill jobs. Thus, ICE raids could affect public firms both directly and indirectly. We find that firms headquartered in treated counties experience significantly more negative cumulative abnormal returns (CARs) over the five-day window surrounding ICE actions compared with firms in control counties, with an average difference of –0.04%. Based on the total market capitalization of treated firms and the average number of ICE events per year in our sample, this effect corresponds to an annual market

value loss of about $82 million for all treated firms combined, relative to untreated firms (i.e., firms located in areas with a low density of undocumented immigrants). Additional tests show that the effect is limited to firms in low-skills industries in which undocumented immigrants are likely to work. Our results suggests that the stock market views undocumented immigrants as having a net positive effect on public firms that employ low-skilled workers.

We also examine the effect on employment decisions. Our regression analysis suggests that each enforcement action leads to a reduction of 0.048% in the number of employees. Given that the median treated firm employs 1,376 individuals, this translates to a reduction of approximately 0.66 employees per firm per ICE enforcement event. The negative effect is more pronounced in low-skill industries, where firms are especially vulnerable to cost increases stemming from labor shortages.

To further examine the heterogeneity of the stock market response, we identify a subset of firms with high volatility in their quarterly sales. These firms are more likely to depend on seasonal labor and are therefore more vulnerable to disruption to seasonal labor supply. Consistent with this conjecture, these firms exhibit more negative stock price reactions and larger employment reductions in response to ICE enforcement actions.

We next turn to municipal bond markets to assess effects on public finance. Municipal bonds are a vital source of funding for local governments to support essential services and infrastructure. We find that ICE enforcement actions depress the value of bonds issued by counties with higher densities of undocumented immigrants experience, especially in counties with a higher proportion of low-skilled workers. The evidence suggests that ICE enforcement actions weaken local governments' financial health in areas with many undocumented residents, contradicting claims that undocumented immigrants primarily burden public resources.

Finally, we examine whether political environment influences financial market reactions to immigration enforcement. We divide the sample into subperiods with three different presidents: Obama (2009–2016), Trump (2017–2020), and Biden (2021–2024). Our results indicate that the negative effect of ICE enforcement on stock returns (CAR) and employment in low-skill industries, as well as on municipal bond returns for areas with high concentrations of undocumented immigrants, are most pronounced during Trump's presidency. The effects weaken or become statistically insignificant under the Obama and Biden administrations. These findings are consistent with the view that the Trump administration has had the most stringent policies against undocumented immigration. Interestingly, we find similar stock price reactions to the 2024 presidential election outcome—firms that are in low-skill industry and located in areas with high undocumented immigration have significantly negative returns.

We contribute to the extant literature in four ways. First, we move beyond cross-sectional or long-run designs by leveraging plausibly exogenous enforcement shocks—ICE operations—as natural experiments, enabling a more direct assessment of causal impacts. Second, we provide market-based evidence of the positive economic contribution of undocumented immigrants to local economies, challenging arguments portraying such immigrants as a social and financial burden. Third, by integrating methodologies from labor economics, public finance, and asset pricing, we offer a comprehensive perspective on the societal and financial trade-offs inherent in immigration enforcement, complementing work on immigrants' role in productivity, labor supply, and the shadow economy. Fourth, we identify labor market tightening as a key mechanism by showing that the effects are more pronounced in areas that rely on low-skill labor and that firms in those areas reduce their labor force. Together, our findings clarify how enforcement-induced labor supply shocks propagate through firms and local public finance.

II. Political Background and Literature Review

Undocumented immigration in the U.S. over the past two decades has been a complex and contentious issue, reflecting a range of political, economic, social, and legal intricacies. The issue remains a significant challenge for policymakers, with ongoing debates over the appropriate balance between border security, humanitarian concerns, and the rights of immigrants.

The issue gained attention during Obama's administration, as the US-Mexican border faced a surge in immigration, prompting the proposal of Deferred Action for Childhood Arrivals (DACA) to address the humanitarian crisis.[6] The debate intensified during Donald Trump first term, when strict immigration policies were implemented, including efforts to build the border wall along the U.S.-Mexico border,[7] increased deportations, travel bans,[8] and end of DACA.[9] After assuming office in January 2021, Biden's administration took steps to reverse many of Trump's policies. However, with Trump's second term, the country has reversed course once again, returning to more hardline immigration measures.

[6] President Obama establishes DACA in 2012, providing temporary relief from deportation and work permits to certain undocumented immigrants who arrived in the U.S. as children.

[7] The 2016 Donald Trump's campaign for the presidency prominently features a promise to build a wall along the U.S.-Mexico border to curb illegal immigration. On January 25, 2017, President Trump signs an executive order directing the Department of Homeland Security to begin construction of the border wall. Since then, there had been a standoff between Trump and Congress over funding for the border wall, which leads to a partial government. Despite legal challenges and funding issues, some sections of the border wall are constructed using allocated funds and redirected resources.

[8] In January 2017, Trump signed an executive order titled "Protecting the Nation from Foreign Terrorist Entry into the United States." banning entry into the United States for citizens of seven predominantly Muslim-majority countries: Iran, Iraq, Libya, Somalia, Sudan, Syria, and Yemen. It also halted the U.S. refugee resettlement program for 120 days and indefinitely suspended the entry of Syrian refugees. In March 2017, Trump signed a revised executive order ("Travel Ban 2.0.") to removed Iraq from the list of banned countries and to exempt the green card holders and individuals with valid visas. In September 2017, the Trump administration issued a presidential proclamation (commonly known as "Travel Ban 3.0" or "Muslim Ban 3.0.") expending the list of banned countries to include Chad, North Korea, and Venezuela. In June 2018, the U.S. Supreme Court upheld the legality of "Travel Ban 3.0" in a 5-4 decision, ruling that the president has broad authority to regulate immigration and national security matters. The court's decision effectively allowed the travel ban to remain in place.

[9] In September 2017, the Trump administration announced its decision to end the Deferred Action for Childhood Arrivals (DACA) program. Following the announcement, multiple lawsuits were filed challenging the decision to end DACA. In June 2020, The Supreme Court rules against the Trump administration's attempt to end DACA, stating that the administration's actions were "arbitrary and capricious" and in violation of administrative law.

As the country experienced fluctuating immigration policies, a notable aspect was the varying intensity of Immigration and Customs Enforcement (ICE) enforcement actions. During Trump's first term, there is a significant increase in ICE activities, including arrests, deportations, and workplace raids, compared to Obama and Biden periods. A key policy that contributed to this surge was the 2018 "zero tolerance" policy at the southern border. While this policy was primarily implemented by the Department of Justice to prosecute individuals crossing the border illegally, it also coincided with heightened scrutiny and enforcement actions by ICE. Importantly, ICE operations are sometimes deliberately publicized to maximize their deterrent effect—a feature that is particularly relevant to our study of how news about such actions influences the prices of publicly traded securities.

This paper makes several contributions to the literature on immigration, enforcement policy, and financial markets. A broad literature has examined how immigration affects the domestic labor market, emphasizing the role of skill composition (Borjas, 1995; Ottaviano and Peri, 2012; Dustmann, Schönberg, and Stuhler, 2017). Low-skilled immigrants are often found to complement native high-skilled labor (East, Luck, Mansour, and Velasquez, 2018), promote unskilled technologies (Peri, 2012), and increase total factor productivity by prompting firms to adjust capital and technology in response to changes in labor supply (Peri, 2012; Lewis, 2011). While most of this literature focuses on legal immigration, the economic role of undocumented immigrants remains far less understood. Empirical studies on this issue have been constrained by data limitations. A few notable exceptions include Allen, Dobbin, and Morten (2018), who find that physical border barriers shift labor market outcomes by reducing competition for low-skill workers, and Piyapromdee (2021), who evaluates the social welfare trade-offs of border enforcement policies. Hanson, Robertson, and Spilimbergo (2002) document asymmetric wage

effects of enforcement along the U.S.–Mexico border, while Nadadur (2009) argues that illegal immigration reallocates public resources efficiently despite imposing fiscal burdens.

Our paper complements and extends this literature by providing new empirical evidence on the causal and indirect economic effects of undocumented immigration. Unlike prior studies that rely on cross-sectional comparisons or long-run labor outcomes, we exploit exogenous enforcement shocks—specifically, ICE operations—as natural experiments. These enforcement actions are politically salient, temporally concentrated, and largely orthogonal to financial market conditions. This design allows us to estimate short-run market responses to immigration enforcement with high precision.

In doing so, we contribute to a growing literature that uses financial markets to study immigration policy. For instance, Baker and Blau (2019) find that stock prices of firms in agriculture, construction, and manufacturing respond positively to protective immigration policies, while Bahar, Choudhury, and Glennon (2020) show that suspending high-skill work visas under Trump caused substantial losses in Fortune 500 valuations. Most closely related to our analysis of public finance, Cornaggia, Cornaggia, and Israelsen (2024) and Zimmerschied (2025) study the effect of immigration on municipal bond yields. Both papers use Bartik-style instruments to construct exogenous measures of immigration. Zimmerschied (2025) finds that legal immigration lowers municipal borrowing costs, suggesting improvements in fiscal outlook, whereas Cornaggia et al. (2024) show that unauthorized immigration has heterogeneous effects—beneficial in some labor markets, but disruptive in others.

We depart from these studies in several ways. First, while Cornaggia et al. (2024) and Zimmerschied (2025) examine immigration as a slow-moving demographic shift, our focus is on discrete enforcement events that provide cleaner identification of investor expectations and

immediate economic costs. Second, we examine both equity markets and municipal bonds, allowing us to assess the impact of immigration enforcement on both private-sector firms and local governments. Third, we bring in firm-level heterogeneity, showing that stock price reactions are significantly more negative for firms in low-skill industries or with high sales volatility—characteristics that make them more dependent on flexible, often informal labor. This dimension of vulnerability is absent in bond-yield-focused studies.

III. Hypotheses Development

Undocumented immigration plays a significant but often overlooked role in shaping the local labor market and, in turn, influencing firm outcomes and broader economic indicators. While policy debates center on the legal, ethical, and social dimensions of undocumented immigration, firms operating in regions with a high density of undocumented workers may derive economic advantages from access to flexible and lower-cost labor. These advantages, however, are susceptible to disruption when federal immigration enforcement intensifies.

Assessing the economic benefits and costs of undocumented workers presents several challenges. First, it is difficult to isolate the effects of undocumented immigration from overall immigration, as the two are often correlated. Second, there are significant confounding factors—immigration patterns are influenced by regional economic conditions, making causal inference difficult. Third, the economic impact of immigration may unfold over a long horizon. This has been documented in the literature, which shows considerable differences between short-term and long-term economic outcomes.

To address these econometric challenges, we adopt a stimulus–response framework. Specifically, we use enforcement actions by ICE as the stimulus and financial market reactions as the response. ICE enforcement offers several advantages: these actions occur repeatedly over the

sample period, are staggered in timing, and appear quasi-random—characteristics that help mitigate confounding concerns and improve statistical power. Additionally, because ICE enforcement specifically targets undocumented immigrants, it allows us to more cleanly separate the effects of undocumented immigration from those of legal immigration.

We focus on financial market responses because market data are readily observable and forward-looking. Prices aggregate expectations about future outcomes, providing a timely aggregated signal of the anticipated long-term economic impact.

Enforcement actions by U.S. Immigration and Customs Enforcement (ICE) raise labor costs by either reducing the supply of undocumented workers or increasing firms' expected compliance and recruitment costs. These effects are particularly salient for firms headquartered in regions where undocumented workers constitute a significant portion of the labor force. When ICE actions signal intensified enforcement, investors may anticipate higher labor costs, operational disruptions, or delays in production—concerns that are quickly reflected in firms' equity valuations. A central premise of our analysis is that undocumented immigrants are disproportionately concentrated in low-skill labor markets, where firms benefit from lower wage pressures and greater flexibility in workforce management. Disruptions in this segment of the labor market are thus expected to have a disproportionate impact on firm performance and valuation. For firms more reliant on low-skill labor, these disruptions are more consequential and, in turn, are more sharply priced in by the stock market following immigration enforcement actions.

H1: *ICE enforcement actions have a negative impact on the stock prices of firms located in counties with higher densities of undocumented immigrants. The negative effect is more pronounced for firms in low-skill industries.*

If firms anticipate the loss of undocumented labor or rising compliance risks, they may respond by adjusting their workforce preemptively. This labor contraction can reflect precautionary cost management or concerns over operational disruptions. Such employment responses may serve as evidence that ICE enforcement affects firm value through labor market disruption.

H2.A: *ICE enforcement actions lead to larger employment reductions in firms located in counties with higher undocumented immigrant densities, especially in low-skill sectors.*

Labor flexibility plays an important role in shaping how firms absorb external shocks. Firms with high sales volatility often rely on more adaptable labor inputs to manage demand uncertainty. In these cases, undocumented workers may provide valuable labor flexibility. Consequently, the removal of undocumented labor could have disproportionately negative effects for firms with volatile product demand.

H2.B: *The negative effect of ICE enforcement actions on firm value is more pronounced for firms with higher sales volatility, particularly in counties with high undocumented immigrant densities.*

Beyond the firm-level effects, undocumented immigrants also contribute to local economies through consumption, housing demand, and informal labor markets. When enforcement actions remove workers or generate economic uncertainty, the broader county-level economic activity may also decline. Municipal bond markets offer a lens through which to assess this broader economic impact. Because bond yields reflect the perceived fiscal health of local governments, enforcement-induced economic disruption may lead to increased risk premiums on local debt.

H3: *Municipal bond performance are more negatively affected by ICE enforcement actions in counties with higher undocumented immigrant densities, particularly in areas with greater concentrations of low-skill workers.*

The financial market's sensitivity to ICE enforcement is not uniform across time. The Trump administration marked a period of intensified immigration enforcement and greater regulatory uncertainty. Investors may have perceived enforcement during this period as more credible, more far-reaching, or more politically entrenched, magnifying market reactions.

H4: *The negative impact of ICE enforcement actions on firm stock returns and local bond returns is strongest during the Trump administration, comparing to Obama and Biden administrations.*

Together, these hypotheses enable us to investigate the economic consequences of undocumented immigration and immigration enforcement actions. They also provide insight into the ways that informal labor market structures intersect with formal financial markets and firm behavior.

IV. Data

IV.1 Undocumented Immigrants

We employ an event-study strategy to examine how the price response of financial securities to immigration policy news is moderated by the regional immigrant density. We construct variables capture regional immigrant density and immigration policy news.

We construct the dataset on county-level density of undocumented immigrants by relying primarily on the *Unauthorized Immigrant Population Profiles* provided by the Migration Policy

Institute (MPI).[10] The estimates of unauthorized immigrants are based on a "residual method,"[11] wherein the total number of undocumented immigrants is derived by subtracting the count of legally documented immigrants from the self-reported foreign-born resident population.[12] The dataset comprises demographic profiles for 130 counties with the highest population of unauthorized immigrants. MPI also provides the profile of the unauthorized population, including the labor force participation.

To determine the density of undocumented immigrants in each county, we divide the employed unauthorized immigrants in the labor force by the total employed population of the county. We calculate the average total employed population from 2015 to 2019 using Census Bureau data to ensure consistency with the time frame utilized by MPI for estimating the undocumented immigrants.

Figure 1 displays the geographical distribution of the undocumented immigrant density by county. Overall, the undocumented immigrants are concentrated in counties of east and west coast, as well as the southern border. Panel A of Table 1 presents data on 20 counties with the highest undocumented immigrant density. The counties with the highest illegal employment ratios are

[10] Further details are available at *https://www.migrationpolicy.org/programs/us-immigration-policy-program-data-hub/unauthorized-immigrant-population*-profiles. For insights into the methodology, refer to "MPI Methodology for Assigning Legal Status to Noncitizen Respondents in U.S. Census Bureau Survey Data" (*https://www.migrationpolicy.org/about/mpi-methodology-assigning-legal-status-noncitizens-census-dat*).

[11] A similar approach is employed by the US Department of Homeland Security, the Pew Hispanic Center, the Center for Immigration Studies, and the U.S. Census Bureau.

[12] It is widely acknowledged that estimates derived from the residual method tend to underestimate the undocumented immigrant population. This population includes legal immigrants such as a) naturalized citizens, b) individuals with permanent resident status, and c) refugees. The Department of Homeland Security (DHS) maintains meticulous records of the first two categories, while the Department of Health and Human Services tracks the third. Further information on the "residual method" can be found at *https://www.pewresearch.org/fact-tank/2019/07/12/how-pew-research-center-counts-unauthorized-immigrants-in-us/*. Surveys or censuses specifically targeting undocumented immigrants are limited in scope. Additionally, undocumented immigrants may be disinclined to truthfully participate in such surveys. The Pew Research Center conducts its own specialized surveys aimed at Mexican immigrants, estimating that the undercount relative to the actual undocumented immigrant population ranges from 5\% to 15\%. Citing operational data on deportations and visa overstays, as well as demographic data including death rates and immigration rates, Fazel-Zarandi, Feinstein, and Kaplan (2018) contends that the long-standing underestimation could be double the size of the documented undocumented immigrant population.

predominantly located in California, New York/New Jersey, and Texas, with San Benito, California (18.9%) showing the highest ratio, followed by Dallas, Texas (14.6%), Santa Barbara, California (14.1%), and Hudson and Queens, New Jersey/New York (13.7%). Nine out of the 20 listed counties are in California. Additionally, counties such as Gwinnett, Georgia, and Prince George's, Maryland also exhibit a high density of illegal immigrant employment. The data suggests that regions with high illegal immigrant labor are typically urbanized areas, likely offering substantial employment opportunities for illegal immigrants.

In our empirical analysis, the legal immigrant population is frequently used as a control variable. We collect the employed legal immigrants from US Census Bureau and construct the county-level legal immigrant density variable as the ratio of employed legal immigrant population to the total employment in the county. In accordance with undocumented immigrant density measure, we construct the ratio as the average number of employed legal immigrants from 2015 to 2019 divided by the average of total employment from 2015 to 2019.

Figure 2 displays the geographical distribution of the legal immigrant density by county, and Panel B of Table 1 reports the top 20 highest density counties. Both distributions show high concentrations in broad regions, particularly in California, New York/New Jersey, and Florida, with major urban centers such as Los Angeles and Queens appearing in both tables. However, notable differences emerge at the county level. For instance, San Benito, California (18.9% undocumented) showing a high concentration of undocumented immigrant employment, while counties like Miami-Dade, Florida (63.39% legal) have a significantly higher proportion of legal immigrant labor. Areas such as Hudson, New Jersey and Santa Clara, California appear on both lists, though their illegal and legal employment ratios differ substantially. Overall, the data indicate a broad trend in which urban areas attract both legal and undocumented workers, but employment

opportunities and legal frameworks in specific regions likely shape the composition of the workforce in distinct ways.

In our dataset, the correlation between legal and undocumented immigrant density is 0.75, with a rank correlation of 0.71. For robustness, we conduct most of the empirical analyses both with and without the legal immigrant controls and present the results for both specifications.

For county-level control, we construct a set of county characteristic variables. We calculate 1) the growth rate of GDP with county-level GDP data collected from U.S. Bureau of Economic Analysis (BEA), 2) the population growth with data from Census Bureau, and 3) the employment growth rate with employment data from U.S. Bureau of Labor Statistics (BLS). Moreover, we control the work force participation of legal immigrants and the impact on firms' valuation. To this end, we collect the legal immigrant population at county level from American Community Survey (ACS) on U.S. Census Bureau, and calculate the proxy for the employed legal immigrants as the legal immigrants at working age between 15 and 64. The legal density (*LegalDensity*) is therefore computed as the ratio of legal immigrants at working age to the total employment of the county.

IV.2 Exogenous Shocks to Undocumented Immigrants Labor Participation

We use ICE enforcement actions from 2009 to 2024 as plausibly exogenous shocks to the labor market participation of undocumented immigrants. The ICE enforcement actions are based on announcements published on the U.S. ICE newsroom website.[13] Our identification strategy rests on the premise that such enforcement actions have a direct chilling effect on local undocumented communities, discouraging individuals from seeking or maintaining employment due to heightened risk of detection and deportation. In addition, these actions may signal shifts in

[13] The ICE enforcement action announcements are available at https://www.ice.gov/newsroom.

federal policy priorities, reflecting changes in government attention and resource allocation toward immigration enforcement. Finally, by drawing media coverage and public attention, enforcement actions may refocus investor attention on the policy risks associated with undocumented labor, potentially affecting firm valuation and the pricing of local government securities. To complement our analysis, we also incorporate the county-level activation data of the Automated Biometric Identification System (IDENT)/Integrated Automated Fingerprint Identification System (IAFIS), which provide further granularity on enforcement intensity and local exposure.

IV.3 ICE Enforcement Actions

U.S. Immigration and Customs Enforcement (ICE) is a federal agency of the U.S. Department of Homeland Security (DHS) with tasks of enforcing immigration laws, investigating criminal activities related to immigration, and overseeing the removal (deportation) of individuals who are unlawfully residing in the U.S. ICE enforcement actions are primarily carried out by Enforcement and Removal Operations (ERO). The Enforcement and Removal Operations (ERO) section on the U.S. Immigration and Customs Enforcement (ICE) website[14] primarily features news releases and statements related to ICE's activities in enforcing U.S. immigration laws, particularly those involving the detention and deportation of individuals who are unlawfully in the country. Among several topics in ICE News releases related to Enforcement and Removal, we focus on the targeted enforcement operations. ICE will report on large-scale enforcement operations or raids involving the detention of undocumented immigrants who are working illegally or have criminal records. Each release typically follows a consistent format that specifies the dates, number of arrested individuals, and the scope of the operation. Most releases provide geographical

[14] *https://www.ice.gov/newsroom*

information, including cities or states where arrests were made. There are also some releases covering nationwide raids.

We collect all the news releases related to targeted enforcement operations in the category of "Enforcement and Removal" on ICE Newsroom site from 2009 to 2024.[15] There are 255 reported enforcement actions in our sample period. Figure 3 plots the frequency of the total actions by ICE fiscal year from 2009 to 2024. Overall, there are on average 29 annual reported actions with waves over years over our sample period. The number of actions peaks during Trump presidency from 2017 to 2019. Before Trump's presidency up to year 2016, the average reported arrests are 24. The average number jumps to 52 during the first three years of Trump's presidency. The actions drop in the year of 2020, mainly due to COVID, then remain relatively low during the first three years of Biden's presidency, then bounce back to the level in pre-Trump era.

IV.4 Firm Stock and Municipal Bond Data

For US public firms, we examine how firm's stock return and employment react to the shocks of undocumented immigrants. We collect the stock daily return data from CRSP, and firm's total number of employees from COMPUSTAT.[16] We also collect the firms' headquarter with zip code from COMPUSTAT, match them with the county-level UID and LID using the FIPS-ZIP identifiers. We also collect firm's market capitalization, ROE, sales, and initial public trading date (for firm's age calculation purposes) from COMPUSTAT to construct the control variables. We calculate the average skill of firm's industry following Belo, Li, Lin, and Zhao (2017). We collect industry-level Occupational Employment and Wage Statistics data by year from US Bureau of

[15] The fiscal year for U.S. Immigration and Customs Enforcement (ICE) is from October 1 of the previous year to September 30 of the current year. The news releases on ICE Newsroom date back to 2008. But due to news quality and quantity concerns, we use the data from 2009 and onward. We also remove the regional actions with less than 10 arrested individuals, as the impact is limited. The fiscal year for U.S. Immigration and Customs Enforcement (ICE) is from October 1 of the previous year to September 30 of the current year.

[16] We remove the firms with missing zip code or with headquarter outside the US.

Labor Statistics, and the skill of occupations from ONET Online.[17] The Occupational Employment and Wage Statistics data records the number of employees in each occupation within an industry in a specific year, which allows us to calculate the skill at the industry-year level as the weighted average of the occupation skill with weights as the occupation employees in the industry.

For county-level municipal bond data, we collect municipal bond issuance and trading data from The Mergent Municipal Bond database and the MSRB EMMA database. We identify the county of each issuer from the name of the bond and drop the observation with no explicit county issuer name, or bond issued by the state. For each new bond issue, we retain the issuer type and collect issue characteristics including sale date, offer yield, duration, issuance size, coupon rate, whether the bond is callable, insured, refunding, and whether the bond is a General Obligation or a Revenue bond. In our main analysis, we only focus on the General Obligation bond. ONET also provides total employment by occupation at metropolitan statistical area (MSA) level. We calculate the county-level occupation skill as the weighted average of the occupation skill with weights being the total employment share of the occupation. Table 2 documents the summary statistics of the main variables. Panel A lists the main variables of our US public firm sample, and Panel B lists the main variables of the municipal bond sample. The variables are all within a reasonable range with no extremely high variance.

V. Empirical Analysis

V.1 Stock Market Reactions to ICE Enforcement Actions

We begin by documenting the baseline effect of undocumented immigrants on US public firms, based on the stock cumulative abnormal returns (CAR) in response to ICE enforcement

[17] *https://www.onetonline.org*

actions. The abnormal return AR_{i,t_k} of a firm i on a date $t_k$is the difference between the actual return $R_{i,t}$ and the expected return $\widehat{R_{\iota,t_k}}$, $AR_{i,t_k} = R_{i,t_k} - \widehat{R_{\iota,t_k}}$. Our measure of the expected return R_{i,t_k} is the value-weighted average return of the stocks within the Fama-French 30%–40%–30% three size groups. We adopt a five-day window (−2, −1, 0, 1, 2) to calculate the cumulative abnormal return around the event t

$$CAR_{i,t} = \sum_{k=-2}^{k=+2} AR_{i,t+k}.$$

As described in Section III, our event set includes ICE enforcement actions from 2009 to 2024.We run the following regression to examine the relationship between undocumented immigrants and stock returns:

$$CAR_{i,t} = High\ Undocumented\ Immigrants_{i,t} + High\ Legal\ Immigrants_{i,t} + Control_{i,t} + Control_{c,t} + \theta_t + \epsilon_{i,j,c,t},$$

where $CAR_{i,t}$ is the cumulative abnormal return (CAR, in percent, %) of stock i around the ICE enforcement action event t. $High\ Undocumented\ Immigrants_{i,t} = \{0,1\}$ is an indicator that equals 1 if the firm's county-level undocumented immigrant density is above the median for firms in the same fiscal year. $Control_{i,t}$ are firm-level control variables, including $Ln(Size)$, $Ln(Age)$, $lag(ROE)$ and $SalesGrowth$. $Control_{c,t}$ are county- level control variables, including $Ln(Pop)$, $Ln(GDP)$, and $\Delta Unemployment$. $\theta_t$are year fixed effects.

Column (1) of Table 3 presents the results. The coefficient on $High\ Undocumented\ Immigrants_{i,t}$ is –0.04%, significantly negative. This suggests that firms located in counties with higher undocumented immigrant densities experience significantly lower stock returns during ICE enforcement actions. The impact is economically sizeable. The estimated coefficient suggests that a single ICE enforcement announcement is associated with an aggregated

loss of $4.58 million of market value to the treated firms, or equivalently an annual loss of $82 million based on an average of 18 enforcement actions per year.

In subsequent analyses, we refine our identification by incorporating measures of firms' reliance on low-skilled labor and their sales volatility. These refinements allow us to more precisely capture the firms most exposed to enforcement risk. As expected, the estimated return effects become more pronounced, consistent with a stronger impact among firms in low-skill-intensive sectors and those with greater exposure to demand fluctuations.

In Column (2), we control for legal immigrants, where $High\ Legal\ Immigrants_{i,t} = \{0,1\}$ equals 1 if the firm's county-level legal immigrant density is above the median for firms in the same fiscal year. The effect of undocumented immigrants remains to be significant. Overall, our results suggest that the ICE enforcement actions targeting undocumented immigrants in a firm's location are perceived as detrimental to firm value.

Our analysis does not depend on whether the firm directly employs undocumented immigrant labor. Instead, we argue that firms are impacted by the local labor market through labor expenses and bargaining power. Competition between undocumented and legal workers generally reduces, average labor costs in the local market. Public firms benefit from increased bargaining power over employees, which helps to lower labor expenses. However, when negative shocks like ICE enforcement threatens the presence of undocumented immigrants, firms may face higher labor costs and reduced bargaining power. If our hypothesis holds, the effects should be more pronounced for firms in low-skill industries, as these industries are more sensitive to changes in the labor market, especially regarding low-skill workers. Moreover, competition is more intense between undocumented and low-skill legal workers in these industries.

To test this hypothesis, we run the following regression:

$$CAR_{i,t} = High\ Undocumented\ Immigrants_{i,t} \times Low\ Skill_{i,t} + High\ Legal\ Immigrants_{i,t} \times Low\ Skill_{i,t} + Low\ Skill_{i,t} + Control_{i,t} + Control_{c,t} + \theta_t + \epsilon_{i,j,c,t},$$

where $Low\ Skill$ is an indicator variable that equals 1 if the firm's industry-level skill is below the median across all firms within the same fiscal year. In Columns (3) and (4) of Table 3, we find that low-skill firms in high undocumented immigrant density counties experience a significantly negative CAR. This negative effect on CAR is more pronounced for these firms compared to the full sample, which is likely due to the perceived ICE- enforcement-induced labor market disruptions in industries heavily reliant on low-skilled labor.

V.2 Labor Market Reactions to ICE Enforcement Actions

To sharpen causal identification, we follow the literature of using border-based comparisons to control for unobserved local conditions that vary smoothly across space. Holmes (1998) shows that comparing manufacturing activity on either side of state borders provides credible identification because neighboring border areas share similar economic fundamentals but face different policy environments. Similarly, Card and Krueger (1994) use New Jersey–Pennsylvania border counties to construct treatment-control pairs when studying minimum wage changes.

In the spirit of these studies, we match firms located in counties with a high concentration of undocumented immigrants ("center counties") to firms located in adjacent counties with relatively low immigrant presence ("neighbor counties"). We also include county-pair fixed effects that absorb all time-invariant differences within each matched border pair, such as industrial composition, demographic structure, or long-run labor market conditions. Formally, we estimate a firm-level regression of the following form:

$$\Delta Ln(Employment)_{i,t} = High\ Undocumented\ Immigrants_{i,t-1} \times \#\ Enforcement_{t-1} + High\ Legal\ Immigrants_{i,t-1} \times \#\ Enforcement_{t-1} + \#\ Enforcement_{t-1} + High\ Undocumented\ Immigrants_{i,t-1} + High\ Legal\ Immigrants_{i,t-1} + Ln(Employment)_{i,t-1} + Control_{i,t} + Control_{c,t} + \epsilon_{i,j,c,t}$$

where $\Delta Ln(Employment)$ is the change in the log of total employees in firm i, $\#\ Enforcement$ is one-year lagged log of the total numbers of reported ICE enforcement action in the previous fiscal year.

Table 4 presents the results. In Columns (1) and (2), the coefficient for the interaction term between $High\ Undocumented\ Immigrants$ and $Enforcement$ is statistically negative, with and without controls for legal immigrants. This suggests that intensified ICE enforcement leads to a reduction in employment at firms located in areas with high undocumented immigrant density, supporting our hypothesis. As enforcement intensifies, firms anticipate higher labor costs due to the potential loss of undocumented workers. To mitigate these anticipated costs, firms reduce their workforce as a precautionary measure. The estimated coefficient is –0.0082 and statistically significant, meaning that each additional enforcement action results in a 0.0482% decrease in employment for an average treated firm.[18] Given that the median number of employees among treated firms in our sample is 1,376, this corresponds to an average reduction of approximately 0.66 employees per ICE enforcement event.[19]

We next explore how ICE enforcement impacts high- versus low-skill firms. In Columns (3) and (4) of Table 4, the triple interaction term among $\#\ Enforcement$, $Low\ Skill$ and $High\ Undocumented\ Immigrants$ is significantly negative, with a larger magnitude compared

[18] In the table we scaled the estimated coefficient by 100.

[19] We also find that firms located in high–undocumented-immigrant counties cut employment significantly when using the full firm-level sample without restricting to matched neighboring counties. But we do not find systematically stronger effects for low-skill firms.

to the results in Columns (1) and (2). This indicates that labor cuts are more pronounced in low-skill firms. These firms are particularly vulnerable to increased labor costs related to low-skill labor, which drives them to reduce their workforce more aggressively in response to the heightened threat of ICE enforcement.

V.3 Firms' Reactions to ICE Enforcement: The Role of Sales Variability

In this section, we build on our earlier findings by examining the impact of ICE enforcement actions on firms with varying levels of sales volatility. The relationship between undocumented immigration and business outcomes can differ significantly across firms based on their operational characteristics. Firms with high sales volatility are more exposed to unpredictable demand fluctuations and require flexible labor strategies to adjust their workforce in response to business needs. Undocumented immigrant workers, often employed in lower-wage and flexible jobs, play a crucial role in enabling these firms to adapt to periods of high variability. In contrast, firms with low sales volatility experience more stable staffing needs, making the role of undocumented workers less central to their operations.

In this context, disruptions to the availability of this flexible labor force—such as stricter immigration enforcement—can have a particularly strong impact on firms with high sales volatility. These firms are more reliant on part-time or temporary labor force, and any reduction in labor supply can exacerbate operational challenges, leading to significant declines in employment and stock returns during enforcement periods. Therefore, understanding how immigration enforcement affects firms differently based on their sales volatility is crucial for comprehending broader labor market dynamics and the economic consequences of immigration policies.

Table 5 examines the relationship between undocumented immigration and firms' cumulative abnormal returns (CAR) in response to ICE enforcement actions, with a specific focus

on the workforce skill levels and sales volatility. For low-skilled firms located in high undocumented immigrant density areas, those with higher sales variability experience more pronounced negative effects on CAR in response to ICE enforcement actions. The coefficient for the triple interaction term $High\ Undocumented\ Immigrants$, $Low\ Skill$, and $High\ Sales\ Variability$) is significantly negative, both with and without legal controls. These results suggest that for firms facing high sales volatility, disruptions to the undocumented immigrant workforce—more likely to occupy lower-skill, flexible labor roles—lead to significant reductions in stock performance during enforcement actions.

Table 6 presents the impact of ICE enforcement actions on changes in total employment for firms with high versus low sales variability. The four-way interaction term $High\ Undocumented\ Immigrants \times High\ Sales\ Variability \times Low\ Skill \times Log(\#\ Enforcement)$ shows robust and significantly negative coefficients with legal controls, indicating that firms relying heavily on low-skill labor in high-sales-variability sectors face more severe consequences from enforcement actions in terms of employment reductions.

Overall, the results emphasize that ICE enforcement actions had particularly significant employment and stock market impacts, especially for firms located in areas with high undocumented immigrant density, high sales volatility, and a high reliance on low-skilled labor.

V.4 Municipal Bond Reactions to ICE Enforcement Actions

In this section, we examine the impact of undocumented immigrants on local economies by analyzing the effect on municipal bond returns. Municipal bonds are key financial instruments that local governments use to fund essential services and infrastructure. The performance of these bonds is sensitive to various economic and social factors, such as labor market conditions, tax revenues, and public expenditure obligations, all of which influence the perceived fiscal health of

local jurisdictions. We explore whether undocumented immigrants have a significant effect on the local economy and, consequently, municipal bond returns.

Undocumented immigrant labor plays a complex role in local economies. On the one hand, undocumented workers fill labor gaps in critical industries—particularly those that native-born workers may avoid due to low wages, long hours, seasonal employment, or physically demanding tasks. Their participation sustains local production capacity, supports business growth, and generates consumer demand through spending on housing, food, transportation, and other essentials. In this view, undocumented immigrants play a stabilizing role in the local economy. If this is the case, ICE enforcement actions that restrict access to this labor pool may lead to economic disruptions—particularly in regions or sectors heavily reliant on such workers—and could thus negatively affect municipal bond valuations by undermining local fiscal outlooks.

On the other hand, concerns exist that undocumented immigrants may impose financial burdens on local governments. Although they are generally ineligible for most federal benefits, they may still utilize locally funded public services, including emergency healthcare, education, and law enforcement. In areas with limited fiscal capacity, these costs can contribute to financial strain. From this perspective, ICE enforcement actions that reduce the undocumented population could alleviate some of these pressures, potentially stabilizing the local economy and improving municipal bond performance.

To identify the causal impact of undocumented immigrants on municipal bond returns, we leverage ICE enforcement actions as plausibly exogenous shocks. These actions target undocumented immigrant populations and lead to both real economic adjustments and shifts in investor perceptions of local risk. By examining the bond market response, we aim to better

understand how immigration status influences local economic outcomes in ways that traditional labor market analyses may overlook.

Column (1) and (2) of Table 7 report the results based on the following regression:

$$Return_{i,t} = High\ Undocumented\ Immigrants_{i,t-1} + High\ Legal\ Immigrants_{i,t-1} + Control_{i,t} + Control_{c,t} + \epsilon_{i,j,c,t}$$

where $Return_{i,t}$ is the bond return, defined as the return of the municipal bond minus the return of the Bloomberg US Municipal Index within a [–2,+2] week window surrounding the enforcement events. The analysis is limited to bonds with at least two trades within the event window: one occurring before the event date and one after. To calculate the bond returns, we use the prices of the trades closest to the event window boundaries. Similarly, the Bloomberg US Municipal Index return is calculated using the same two trading days, and the bond return is adjusted by subtracting the index return.

The coefficient for $High\ Undocumented\ Immigrants$ is significantly negative in both Columns (1) and (2), indicating that bonds issued by counties with higher undocumented immigrant densities experience lower returns around ICE enforcement actions. This suggests that the presence of undocumented immigrants supports economic activity by sustaining local businesses, consumer spending, and essential services. Disruptions to the undocumented labor force due to ICE enforcement actions may raise concerns about local economic stability, including reduced tax revenue and diminished business activity, which explain the negative municipal bond returns.

To further test this hypothesis, we examine whether the effect is more pronounced in low-skill counties. In Columns (3) and (4), we include an interaction between $High\ Undocumented\ Immigrants$ and $Low\ Skill$. The interaction term is significantly

negative in both Columns (3) and (4), indicating that counties with both high concentrations of undocumented immigrants and a larger proportion of low-skill workers experience a greater negative impact on municipal bond returns during ICE enforcement actions. This suggests that the combined effect of undocumented immigration and workforce skill levels makes these regions more vulnerable to disruptions in local labor markets and public services.

Together, these results suggest that higher concentrations of undocumented immigrants – particularly in regions with a larger low-skill workforce – have a stabilizing effect on local economies. However, ICE enforcement actions disrupt this stability, leading to negative fiscal outcomes for local governments, as reflected in lower municipal bond returns.

V.5 Additional Results

We have performed the following analyses, with results discussed in the Appendix. First, in a subperiod analysis, we show that during the three administrations—Obama, Trump, and Biden—there are marked differences in impact of ICE enforcement actions. Second, we perform an event study on the stock market reaction to the 2024 presidential election outcome, an episode where the two presidential candidates propagate drastically different immigration policies.

VI. Conclusion

This paper examines the economic effects of immigration enforcement policies on U.S. public firms and local economies. Using ICE enforcement actions as plausibly exogenous shocks, we estimate their impact on firm performance and municipal bond markets. In regions with a high concentration of undocumented immigrants, firms experience negative cumulative abnormal returns and reduce employment following immigration enforcement. The effects are more pronounced among firms relying on low-skilled workforce and with high sales variability.

Turning to the municipal bond market, we find that bonds issued by counties with a larger undocumented immigrant population reacts negatively to ICE enforcement. The negative response is particularly evident in counties with a higher share of low-skill labor force. It implies that the undocumented immigrants in general support local economic activity.

Overall, our findings indicate that stricter immigration enforcement can have meaningful negative economic consequences for both firms and local governments, particularly in areas with a strong reliance on undocumented labor. By analyzing both equity and bond markets, this study offers a broader view of how immigration enforcement policies shape local economic dynamics. These findings contribute to ongoing policy discussions by highlighting the complex interplay between immigration policy, labor markets, and financial outcomes at the local level.

References

Allen, Treb, Cauê de Castro Dobbin, and Melanie Morten, 2018, Border walls, Working paper, National Bureau of Economic Research.

Aydemir, Abdurrahman, and George J Borjas, 2011, Attenuation bias in measuring the wage impact of immigration, *Journal of Labor Economics* 29, 69–112.

Bahar, Dany, Prithwiraj Choudhury, and Britta Glennon, 2020, An Executive Order Worth $100 Billion: The Impact of an Immigration Ban's Announcement on Fortune 500 Firms' Valuation, Working paper, National Bureau of Economic Research.

Baker, Jesse, and Benjamin M Blau, 2019, Immigration and the Stock Market: How Immigration Policy Affects the Stock Prices of Firms That Employ Low-Skilled Workers, Working Paper 2019.011, Utah State University.

Baker, Scott R, 2015, Effects of immigrant legalization on crime, *American Economic Review* 105, 210–13.

Bazzi, Samuel, Gordon Hanson, Sarah John, Bryan Roberts, and John Whitley, 2021, Deterring illegal entry: Migrant sanctions and recidivism in border apprehensions, *American Economic Journal: Economic Policy* 13, 1–27.

Belo, Frederico, Jun Li, Xiaoji Lin, and Xiaofei Zhao, 2017, Labor-force heterogeneity and asset prices: The importance of skilled labor, *The Review of Financial Studies* 30, 3669–3709.

Belo, Frederico, Xiaoji Lin, and Santiago Bazdresch, 2014, Labor hiring, investment, and stock return predictability in the cross section, *Journal of Political Economy* 122, 129–177.

Borjas, George J, 1995, The economic benefits from immigration, *Journal of Economic Perspectives* 9, 3–22.

Camacho, Carmen, Fabio Mariani, and Luca Pensieroso, 2017, Illegal immigration and the shadow economy, *International Tax and Public Finance* 24, 1050–1080.

Chassamboulli, Andri, and Giovanni Peri, 2015, The labor market effects of reducing the number of illegal immigrants, *Review of Economic Dynamics* 18, 792–821.

Chen, Huafeng (Jason), Marcin Kacperczyk, and Hernan Ortiz-Molina, 2011, Labor unions, operating flexibility, and the cost of equity, *Journal of Financial and Quantitative Analysis* pp. 25–58.

Clemens, Michael A, Ethan G Lewis, and Hannah M Postel, 2018, Immigration restrictions as active labor market policy: Evidence from the Mexican bracero exclusion, *American Economic Review* 108, 1468–87.

Cornaggia, Jess, Kimberly Cornaggia, and Ryan Israelsen, 2024, Unauthorized immigration and local government finances, Working Paper, Pennsylvania State University.

Cortes, Patricia, 2008, The effect of low-skilled immigration on US prices: evidence from CPI data, *Journal of Political Economy* 116, 381–422.

Donangelo, Andres, 2014, Labor mobility: Implications for asset pricing, *The Journal of Finance* 69, 1321–1346.

Donangelo, Andres, Francois Gourio, Matthias Kehrig, and Miguel Palacios, 2019, The cross-section of labor leverage and equity returns, *Journal of Financial Economics* 132, 497–518.

Dougal, Casey, Christopher A Parsons, and Sheridan Titman, 2022, The geography of value creation, *The Review of Financial Studies* 35, 4201–4248.

Dustmann, Christian, Tommaso Frattini, and Ian P Preston, 2013, The effect of immigration along the distribution of wages, *Review of Economic Studies* 80, 145–173.

Dustmann, Christian, Uta Schönberg, and Jan Stuhler, 2017, Labor supply shocks, native wages, and the adjustment of local employment, *The Quarterly Journal of Economics* 132, 435–483.

East, Chloe, Philip Luck, Hani Mansour, and Andrea Velasquez, 2018, The labor market effects of immigration enforcement, Working paper, IZA Discussion Paper.

Ethier, Wilfred J, 1986, Illegal immigration: The host-country problem, *American Economic Review* 76, 56–71.

Fazel-Zarandi, Mohammad M, Jonathan S Feinstein, and Edward H Kaplan, 2018, The number of undocumented immigrants in the United States: Estimates based on demographic modeling with data from 1990 to 2016, *PloS one* 13, e0201193.

Hanson, Gordon H, Raymond Robertson, and Antonio Spilimbergo, 2002, Does border enforcement protect US workers from illegal immigration?, *Review of Economics and Statistics* 84, 73–92.

Hanson, Gordon H, and Antonio Spilimbergo, 1999, Illegal immigration, border enforcement, and relative wages: Evidence from apprehensions at the US-Mexico border, *American Economic Review* 89, 1337–1357.

Lessem, Rebecca, 2018, Mexico–US Immigration: Effects of Wages and Border Enforcement, *The Review of Economic Studies* 85, 2353–2388.

Lewis, Ethan, 2011, Immigration, skill mix, and capital skill complementarity, *The Quarterly Journal of Economics* 126, 1029–1069.

Mayda, Anna Maria, Giovanni Peri, and Walter Steingress, 2022, The political impact of immigration: Evidence from the United States, *American Economic Journal: Applied Economics* 14, 358–389.

Monras, Joan, 2020, Immigration and wage dynamics: Evidence from the Mexican peso crisis, *Journal of Political Economy* 128, 3017–3089.

Nadadur, Ramanujan, 2009, Illegal immigration: A positive economic contribution to the United States, *Journal of Ethnic and Migration Studies* 35, 1037–1052.

Ottaviano, Gianmarco IP, and Giovanni Peri, 2012, Rethinking the effect of immigration on wages, *Journal of the European Economic Association* 10, 152–197.

Ouimet, Paige, Elena Simintzi, and Kailei Ye, 2025, The impact of the opioid crisis on firm value and investment, *The Review of Financial Studies* 38, 1291–1332.

Peri, Giovanni, 2012, The effect of immigration on productivity: Evidence from US states, *Review of Economics and Statistics* 94, 348–358.

Piyapromdee, Suphanit, 2021, The Impact of Immigration on Wages, Internal Migration, and Welfare, *The Review of Economic Studies* 88, 406–453.

Roca, Jorge De La, and Diego Puga, 2017, Learning by working in big cities, *The Review of Economic Studies* 84, 106–142.

Simintzi, Elena, Vikrant Vig, and Paolo Volpin, 2015, Labor protection and leverage, *The Review of Financial Studies* 28, 561–591.

Smith, Christopher L, 2012, The impact of low-skilled immigration on the youth labor market, *Journal of Labor Economics* 30, 55–89.

Zimmerschied, Kyle E., 2025, Should they stay or should they go? Immigration and municipal bonds, Working paper, University of Missouri.

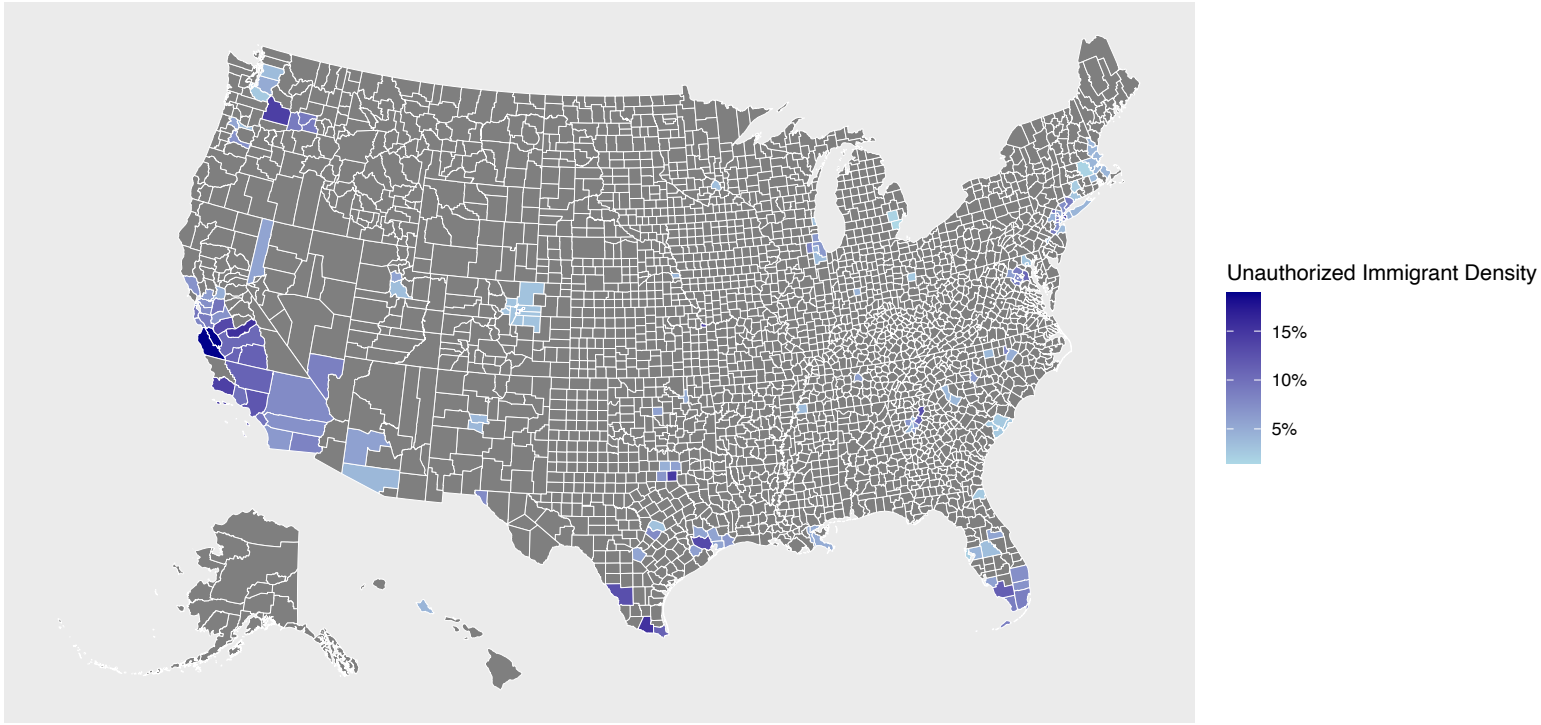


Figure 1. Undocumented Immigrant Employment Density by County

This figure plots the undocumented immigrant density by county. The undocumented immigrant density of each county is defined as the ratio of employed unauthorized immigrants (estimated from the IPUMS census data from 2015 to 2019[17]) to the average of total employment of the county from 2015 to 2019. For counties with missing estimates of unauthorized immigrant employment, we set the density to zero.

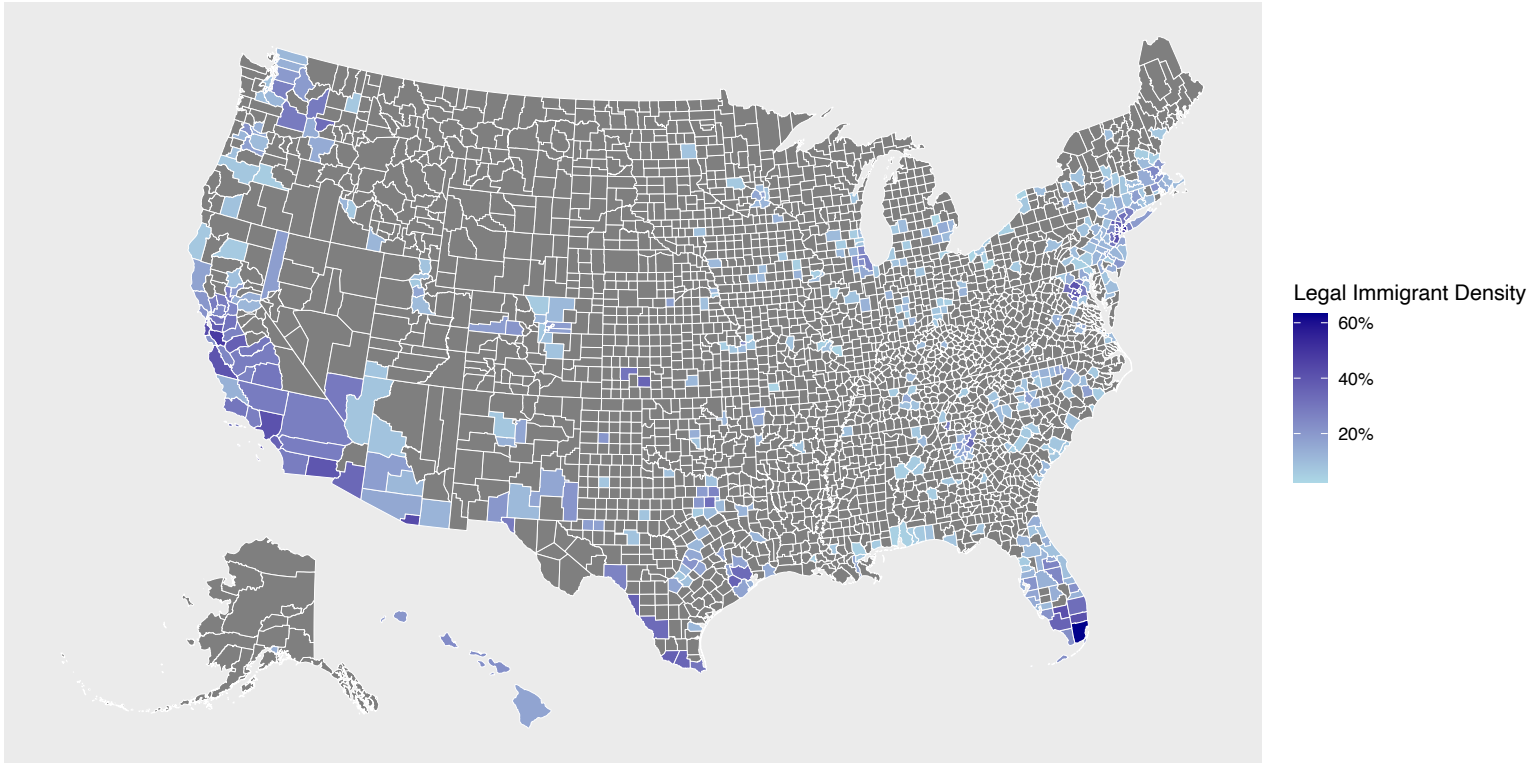


Figure 2. Legal Immigrant Employment Density by County

This figure plots the legal immigrant density by county. The legal immigrant density of each county is defined as the ratio of employed legal immigrants to the average of total employment of the county from 2015 to 2019. For counties with missing estimates of legal immigrant employment, we set the density to zero.

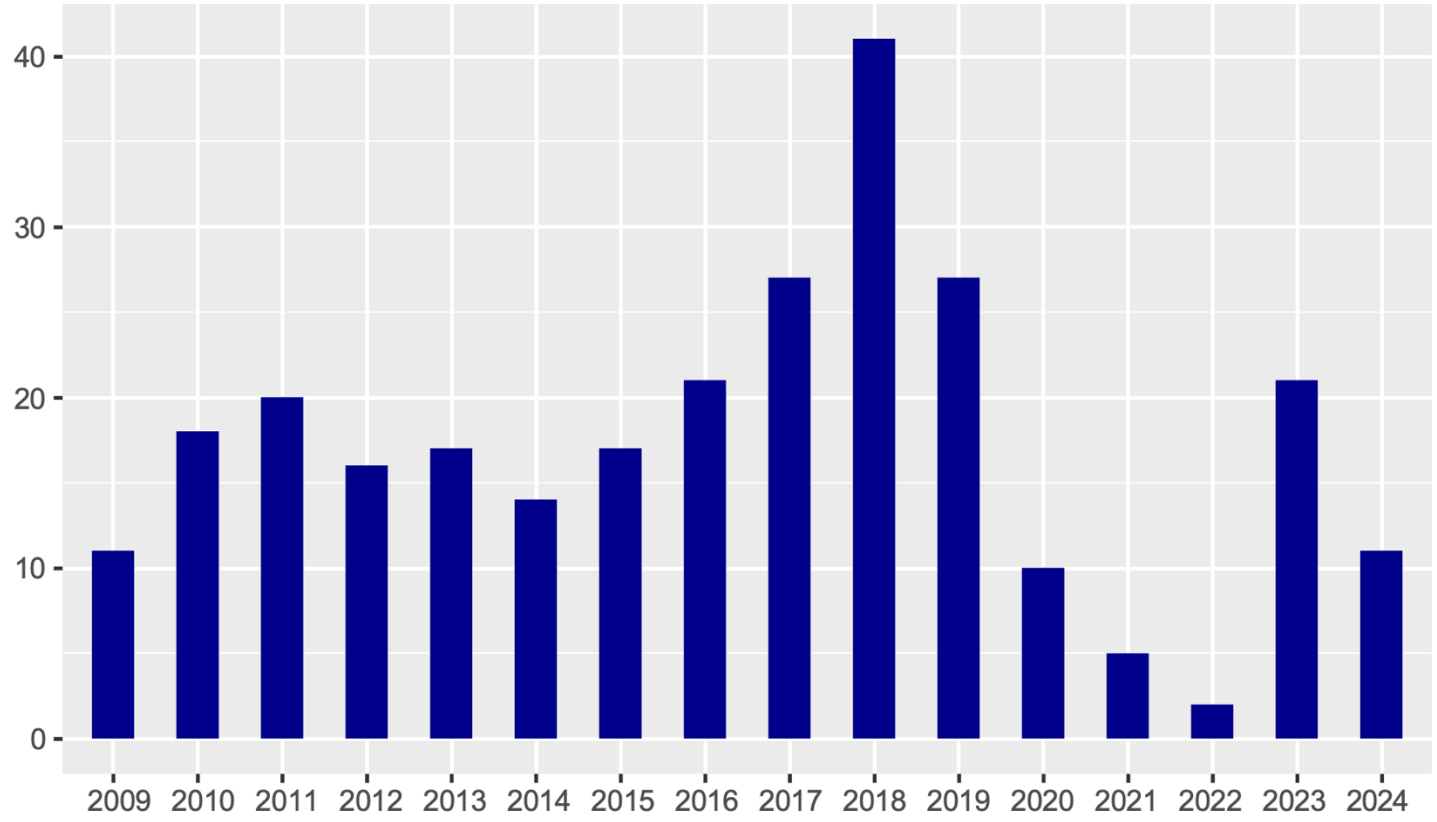


Figure 3. Frequency of ICE Enforcement Actions by Fiscal Year

This figure plots the number of ICE enforcement actions reported in the News Releases and Statements of US Immigration and Customs Enforcement website https://www.ice.gov/newsroom. We limit the news topic as *Enforcement and Removal* and filter out the unique news with arrests of multiple illegal immigrant offenders. We count the number of such reported enforcement actions within ICE fiscal years (from October 1 to September 30).

Table 1. Top 20 Counties with the Highest Immigrant Density

This table reports the top 20 counties with the highest immigrant density in the sample. Panel A presents the top 20 counties with the highest employed undocumented immigrant density, which is calculated as the estimated number of employed unauthorized immigrants (collected from MPI) scaled by the total employment of the same county. Panel B presents the top 20 counties with the highest employed legal immigrant density, which is calculated as the estimated number of employed legal immigrants scaled by the total employment of the same county. We use the average population from 2015 to 2019 from ACS to keep consistent with the period that MPI uses for undocumented immigrant estimations. We report FIPS code, the state name, the county name, the affiliated metropolitan area, undocumented immigrant density, legal immigrant density, and the average number of firms for which the headquarter locates in the county during the sample years.

Panel A – Top 20 Counties with the Highest Employed Undocumented Immigrant Density

ID	FIPS	State	County	Metropolitan Statistical Area	Undocumented Density (%)	Legal Density (%)
1	6069	California	San Benito	San Jose-San Francisco-Oakland, CA	18.9	25.6
2	48113	Texas	Dallas	Dallas-Fort Worth, TX-OK	14.6	32.3
3	6083	California	Santa Barbara	Santa Maria-Santa Barbara, CA	14.1	30.3
4	34017	New Jersey	Hudson	New York-Newark, NY-NJ-CT-PA	13.7	50.4
5	36081	New York	Queens	New York-Newark, NY-NJ-CT-PA	13.5	57.2
6	48201	Texas	Harris	Houston-Pasadena, TX	13.2	33.5
7	6037	California	Los Angeles	Los Angeles-Long Beach, CA	12.2	41.1
8	12021	Florida	Collier	Cape Coral-Fort Myers-Naples, FL	11.4	35.8
9	34039	New Jersey	Union	New York-Newark, NY-NJ-CT-PA	11.4	39.0
10	6029	California	Kern	Bakersfield, CA	11.1	28.6
11	13135	Georgia	Gwinnett	Atlanta–Athens-Clarke County–Sandy Springs, GA-AL	10.9	33.5
12	24033	Maryland	Prince Georges	Washington-Baltimore-Arlington, DC-MD-VA-WV-PA	10.7	29.5
13	34031	New Jersey	Passaic	New York-Newark, NY-NJ-CT-PA	9.9	39.3
14	6111	California	Ventura	Los Angeles-Long Beach, CA	9.9	27.5
15	6077	California	San Joaquin	San Jose-San Francisco-Oakland, CA	9.6	31.2
16	6059	California	Orange	Los Angeles-Long Beach, CA	9.5	36.1
17	6081	California	San Mateo	San Jose-San Francisco-Oakland, CA	9.4	42.7
18	6085	California	Santa Clara	San Jose-San Francisco-Oakland, CA	9.0	48.0

19	53071	Washington	Walla Walla	Kennewick-Richland-Walla Walla, WA	9.0	–
20	24031	Maryland	Montgomery	Washington-Baltimore-Arlington, DC-MD-VA-WV-PA	8.9	40.3

Panel B – Top 20 Counties with the Highest Employed Legal Immigrant Density

ID	FIPS	State	County	Metropolitan Statistical Area	Undocumented Density (%)	Legal Density (%)
1	12086	Florida	Miami-Dade	Miami-Port St. Lucie-Fort Lauderdale, FL	8.74	63.39
2	36081	New York	Queens	New York-Newark, NY-NJ-CT-PA	13.48	57.15
3	34017	New Jersey	Hudson	New York-Newark, NY-NJ-CT-PA	13.72	50.36
4	6085	California	Santa Clara	San Jose-San Francisco-Oakland, CA	9.01	47.99
5	36047	New York	Kings	New York-Newark, NY-NJ-CT-PA	7.74	44.45
6	6081	California	San Mateo	San Jose-San Francisco-Oakland, CA	9.40	42.71
7	12011	Florida	Broward	Miami-Port St. Lucie-Fort Lauderdale, FL	7.04	41.61
8	34023	New Jersey	Middlesex	New York-Newark, NY-NJ-CT-PA	7.37	41.56
9	6037	California	Los Angeles	Los Angeles-Long Beach, CA	12.19	41.08
10	24031	Maryland	Montgomery	Washington-Baltimore-Arlington, DC-MD-VA-WV-PA	8.91	40.27
11	34031	New Jersey	Passaic	New York-Newark, NY-NJ-CT-PA	9.86	39.26
12	34039	New Jersey	Union	New York-Newark, NY-NJ-CT-PA	11.36	38.96
13	51059	Virginia	Fairfax	Washington-Baltimore-Arlington, DC-MD-VA-WV-PA	7.88	38.78
14	6001	California	Alameda	San Jose-San Francisco-Oakland, CA	7.65	38.63
15	34003	New Jersey	Bergen	New York-Newark, NY-NJ-CT-PA	5.62	37.82
16	48157	Texas	Fort Bend	Houston-Pasadena, TX	5.99	36.34
17	34013	New Jersey	Essex	New York-Newark, NY-NJ-CT-PA	8.72	36.11
18	6059	California	Orange	Los Angeles-Long Beach, CA	9.55	36.07
19	12021	Florida	Collier	Cape Coral-Fort Myers-Naples, FL	11.36	35.77
20	6075	California	San Francisco	San Jose-San Francisco-Oakland, CA	5.73	34.88

Table 2. Summary Statistics of the Main Variables

Panel A documents the summary statistics of the main variables of the US public firm sample in our paper. *Undocumented Immigrants Density* is the density of the undocumented immigrant at the county level, which is calculated as the ratio of employed unauthorized immigrants to the total employment in the county of the firm's headquarter; the value is set to be 0 for the county with no undocumented immigrant estimates. *Legal Immigrants Density* is the density of the legal immigrant at the county level, which is calculated as the ratio of employed legal immigrants to the total employment in the county of the firm's headquarter. *CAR* is the cumulative abnormal return in percent, which is calculated as the stock return minus the value-weighted market return of [–2,+2] days around the event. *# of Employees* is the total number of employees in thousands. *# Enforcement* is the number of reported ICE enforcement action within the ICE fiscal year. Panel B presents the summary statistics for the key variables in our U.S. municipal bond sample. *Return* represents the bond's return relative to the Bloomberg U.S. Municipal Index return, calculated using prices from the two trading days closest to the [–2, +2] week window. *Coupon* refers to the bond's coupon rate. *Ln (Total Offering Amount)* is the natural logarithm of the bond's issue size, measured in millions of dollars. *Duration* denotes the bond's duration in years. Callable is a binary variable equal to one if the bond is callable and zero otherwise. *Insured* is a binary variable equal to one if the bond carries third-party insurance and zero otherwise. *Refunding* is a binary variable equal to one if the bond is issued to refinance an existing bond and zero otherwise. The sample includes bonds where the source of repayment is classified as general obligation. The sample covers ICE fiscal years from 2009 to 2024.

Panel A – Summary Statistics of the US Public Firms Sample

Variable	Obs.	1st Quarter	Median	Mean	3rd Quarter	Std. Dev.
Undocumented Immigrants Density (%)	129	3.77	5.59	6.1	7.66	3.05
Legal Immigrants Density (%)	334	8.34	11.98	15.37	19.11	10.01
Cumulative Abnormal Return (%)	7,979,653	–9.05	1.02	0	8.22	9.23
Average # of ICE Enforcements Per Year	16	13.25	17.5	18.125	21.5	9.3
# of Employees (*Thousand*)	46,882	0.22	1.40	9.91	6.70	25.95
Ln(*Age*)	46,882	2.20	2.94	2.79	3.43	0.88
Ln(*Size*)	46,882	4.96	6.71	6.58	8.18	2.35
Sales Growth (%)	46,882	–0.05	0.06	0.91	0.19	61.51
Return On Equity (%)	46,882	–0.12	0.06	–0.05	0.16	1.46
Ln(*GDP)*	5,882	11.78	12.61	12.51	13.36	1.22
Ln(*Population*)	5,882	15.67	16.62	16.56	17.51	1.38
Δ*Unemployment* (%)	5,882	–0.15	–0.07	0.05	0.05	0.41

Panel B – Summary Statistics of the Municipal Bond Sample

Variable	Obs.	1st Quarter	Median	Mean	3rd Quarter	Std. Dev.
Return (%)	401,663	–0.57	0.05	0.15	0.76	1.22
Offering Yield (%)	401,663	1.96	2.61	2.73	3.41	1.10
Coupon (%)	401,663	4	5	4.31	5	0.95
Total Offering Amount (*Million*)	401,663	17.29	18.24	18.24	19.29	1.41
Duration (*Year*)	401,663	2	4	4.06	6	2.93
Callable	401,663	0	1	0.58	1	0.49
Insured	401,663	0	0	0.14	0	0.34
Refunding	401,663	0	1	0.52	1	0.5

Table 3. Cumulative Abnormal Return (CAR) of US Public Firms in Response to ICE Enforcement Actions

This table reports the panel regression results of the effect of the undocumented immigrants on firm's cumulative abnormal return (*CAR*, expressed in percentage points, %) in response to ICE enforcement actions. The dependent variable is the size-adjusted cumulative abnormal return (CAR), which is calculated as the firm's stock return minus the value-weighted market return over a [–2,+2] day window around the event, then further adjusted by subtracting the equal-weighted cumulative abnormal return of stocks within the same size group. The key explanatory variables include the following. *High Undocumented Immigrants* is an indicator variable that equals 1 if the firm's county-level undocumented immigrant density is above the median for all firms in the same fiscal year. *Low Skill* is an indicator variable that equals 1 if the firm is in an industry with below-median skill levels across all industries. We also include the interaction term between *High Undocumented Immigrants* and *Low Skill* in the regression. The control variables include the following. *Ln (Population*), *Ln (GDP)* and Δ*Unemployment* are county-level control variables. *Ln (Size*), *Ln (Age*), *Lag (ROE*), *Sales Growth* are firm-level control variables. Column (2) and (4) also control for the legal immigrants, where *High Legal Immigrants* is an indicator that equals 1 if the firm's county-level legal immigrant density is above the median for all firms in the same fiscal year. The regression also includes industry and year fixed effects. T-statistics reported in parentheses are based on double-clustered standard errors. The sample covers ICE fiscal years from 2009 to 2024.

	(1)	(2)	(3)	(4)
High Undocumented Immigrants	**–0.04****	**–0.03***	–0.01	–0.01
	(–2.34)	**(–1.84)**	(–0.35)	(–0.40)
High Legal Immigrants		–0.01		0.00
		(–0.33)		(0.09)
High Undocumented Immigrants × Low Skill			**–0.14*****	**–0.12*****
			(–5.03)	**(–2.77)**
High Legal Immigrants × Low Skill				–0.04
				(–0.89)
Observations	797,963	797,963	797,963	797,963
Adj. R^2	0.002	0.002	0.002	0.002

Table 4. Employment Change in Response to ICE Enforcement Actions

This table reports the panel regression results examining the interactive effect of the undocumented immigrants and the intensity of the ICE enforcement on firm's employment. The dependent variable is the change in *Ln*(*Employees*), which is calculated as the difference of log of the total employees from Year $t-1$ to Year t. The key explanatory variables include the following. *High Undocumented Immigrants* is an indicator that equals 1 if the firm's county-level undocumented immigrant density is above the median for all firms in the same fiscal year. *Enforcement* is the one-year lagged log of the total number of ICE enforcement actions reported within the ICE fiscal year. *Low Skill* is an indicator that equals 1 if the firm's industry-level skill is below median for all firms in the same fiscal year. We also include the interaction between *High Undocumented Immigrants*, *Enforcement* in Column (1) and (2). In Column (3) and (4), we additionally add the triple interaction terms among *High Undocumented Immigrants*, *Enforcement*, and *Low Skill*. The control variables include the following. *Ln*(*Population*), *Ln*(*GDP)* and Δ*Unemployment* are county-level control variables. *Ln*(*Size*), *Ln*(*Age*), *Lag*(*ROE*), *Sales Growth* are firm-level control variables. Column (2) and (4) also control for the legal immigrants, where *High Legal Immigrants* is an indicator that equals 1 if the firm's county-level legal immigrant density is above the median for all firms in the same fiscal year. The estimates reported in the table are scaled by 100. The regression also includes county-pair fixed effects. Standard errors are clustered at the county-pair level. T-statistics are in parentheses. The sample covers the ICE fiscal years from 2009 to 2024.

	(1)	(2)	(3)	(4)
Enforcement	-0.37	-0.32	-0.87	-0.33
	(-1.30)	(-1.21)	(-1.45)	(-0.63)
High Undocumented Immigrants	2.09	0.54	-1.42	-6.23**
	(1.35)	(0.29)	(-0.58)	(-2.03)
High Undocumented Immigrants × Enforcement	**-0.81****	**-0.82***	-0.33	0.45
	(-2.14)	**(-1.68)**	(-0.47)	(0.58)
High Legal Immigrants		4.17**		10.49***
		(2.37)		(4.07)
High Legal Immigrants × Enforcement		-0.10		-1.69**
		(-0.19)		(-2.56)
Low Skill			-4.67*	-1.40
			(-1.91)	(-0.77)
Low Skill × Enforcement			0.74	-0.03
			(1.01)	(-0.04)
High Legal Immigrants × Low Skill			5.96**	11.61***
			(2.02)	(3.23)
High Undocumented Immigrants × Enforcement × Low Skill			**-1.65***	**-1.91***
			(-1.72)	**(-1.73)**
High Legal Immigrants × Low Skill				-11.07***
				(-3.52)
High Legal Immigrants × Enforcement × Low Skill				2.55***
				(2.70)
Observations	19,067	19,067	19,067	19,067
Adj. R^2	0.075	0.076	0.077	0.079

Table 5. Cumulative Abnormal Return (CAR) of US Public Firms in Response to ICE Enforcement Actions – High Sales Volatility

This table reports the panel regression results of the effect of the undocumented immigrants on firm's cumulative abnormal return (*CAR*, expressed in percentage points, %) in response to ICE enforcement actions. The dependent variable is the size-adjusted cumulative abnormal return (CAR), which is calculated as the firm's stock return minus the value-weighted market return over a [–2,+2] day window around the event, then further adjusted by subtracting the equal-weighted cumulative abnormal return of stocks within the same size group. The key explanatory variables include the following. *High Undocumented Immigrants* is an indicator variable that equals 1 if the firm's county-level undocumented immigrant density is above the median for all firms in the same fiscal year. *Low Skill* is an indicator variable that equals 1 if the firm is in an industry with below-median skill levels across all industries. *High Sales Variability* is an indicator variable that equals 1 if the firm's quarterly sales variability over the past 4 quarters are higher than the median of all firms within the same fiscal year. Sales variability is defined as the standard deviation of firm sales scaled by the average sales over the past four quarters. We also include the two-way and triple interaction terms among *High Undocumented Immigrants*, *Low Skill*, and *High Sales Variability* in the regression. The control variables include the following. *Ln (Population*), *Ln (GDP)* and Δ*Unemployment* are county-level control variables. *Ln (Size*), *Ln (Age*), *Lag (ROE*), *Sales Growth* are firm-level control variables. Column (1) and (2) cover the ICE fiscal years from 2009 to 2024. Column (2) also controls for the legal immigrants, where *High Legal Immigrants* is an indicator that equals 1 if the firm's county-level legal immigrant density is above the median for all firms in the same fiscal year. The regression also includes industry and year fixed effects. T-statistics reported in parentheses are based on double-clustered standard errors.

	(1)	(2)
High Undocumented Immigrants	–0.02 (–1.10)	–0.03 (–1.31)
High Undocumented Immigrants × Low Skill	–0.03 (–0.70)	0.03 (0.51)
High Sales Variability	–0.22*** (–10.03)	–0.22*** (–9.49)
High Undocumented Immigrants × High Sales Variability	0.04 (1.51)	0.05 (1.21)
Low Skill × High Sales Variability	0.28*** (7.41)	0.28*** (7.21)
High Undocumented Immigrants × Low Skill × High Sales Variability	**–0.26***** **(–4.57)**	**–0.28***** **(–3.32)**
High Legal Immigrants		0.02 (0.67)
High Legal Immigrants × Low Skill		–0.07 (–1.25)
High Legal Immigrants × High Sales Variability		–0.01 (–0.13)
High Legal Immigrants × Low Skill × High Sales Variability		0.02 (0.19)
Observations	797,953	797,953
Adj. R^2	0.002	0.002

Table 6. Change in Total Employment in Response to ICE Enforcement Actions – High Sales Volatility

This table reports the panel regression results examining the interactive effect of the undocumented immigrants and the intensity of the ICE enforcement on firm's employment. The dependent variable is the change in *Ln (Employees*), which is calculated as the difference of the log of the total employees from Year $t-1$ to Year t. The key explanatory variables include the following. *High Undocumented Immigrants* is an indicator that equals 1 if the firm's county-level undocumented immigrant density is above the median for all firms in the same fiscal year. *Enforcement* is the one-year lagged log of the total number of ICE enforcement actions reported within the ICE fiscal year. *Low Skill* is an indicator that equals 1 if the firm's industry-level skill is below median for all firms in the same fiscal year. *High Sales Variability* is an indicator variable that equals 1 if the firm's quarterly sales variability over the past 4 quarters are higher than the median of all firms within the same fiscal year. Sales variability is defined as the standard deviation of firm sales scaled by the average sales over the past four quarters. We also include the two-way and triple interaction terms among *High Undocumented Immigrants*, *Low Skill*, and *High Sales Variability* in the regression. The control variables include the following. *Ln (Population*), *Ln (GDP)* and Δ*Unemployment* are county-level control variables. *Ln (Size*), *Ln (Age*), *Lag (ROE*), *Sales Growth* are firm-level control variables. Column (1) and (2) cover the ICE fiscal years from 2009 to 2024. Column (2) also controls for the legal immigrants, where *High Legal Immigrants* is an indicator that equals 1 if the firm's county-level legal immigrant density is above the median for all firms in the same fiscal year. The estimates reported in the table are scaled by 100. Standard errors are clustered at the county-pair level. The regression also includes county-pair fixed effects. T-statistics are in parentheses. The sample covers the ICE fiscal years from 2009 to 2024.

	(1)	(2)
Enforcement	0.59	0.61
	(0.91)	(0.94)
High Undocumented Immigrants	2.66	0.11
	(1.21)	(0.04)
High Undocumented Immigrants	-1.92***	-1.75*
× Enforcement	(-2.80)	(-1.88)
Low Skill	-1.30	-0.30
	(-0.66)	(-0.15)
Low Skill × Enforcement	-0.71	-0.89
	(-1.12)	(-1.49)
High Undocumented Immigrants	-1.51	1.56
× Low Skill	(-0.69)	(0.43)
High Undocumented Immigrants	2.02**	1.60
× Enforcement× Low Skill	(2.54)	(1.15)
High Sales Variability	6.43*	3.19
	(1.95)	(1.15)
High Sales Variability	-2.21**	-1.40
× Enforcement	(-2.27)	(-1.60)
High Undocumented Immigrants	-6.32*	-9.13**
× High Sales Variability	(-1.70)	(-2.08)
High Undocumented Immigrants	2.42**	3.18**
× High Sales Variability× Enforcement	(2.20)	(2.24)
Low Skill × High Sales Variability	-5.18	-1.68

	(-1.06)	(-0.41)
Low Skill × High Sales Variability	2.21	1.30
× Enforcement	(1.59)	(1.12)
High Undocumented Immigrants	11.08**	14.26**
× Low Skill × High Sales Variability	(2.07)	(2.04)
High Undocumented Immigrants× Enforcement	**-3.95****	**-5.05****
× Low Skill × High Sales Variability	**(-2.58)**	**(-2.21)**
Observations	19,067	19,067
Adj. R^2	0.077	0.080

Table 7. Municipal Bond Return in Response to ICE Enforcement Actions

This table reports the panel regression results of the effect of the undocumented immigrants on municipal bond returns around the ICE enforcement actions. The dependent variable is the bond return calculated as the municipal bond return minus the return of the Bloomberg US Municipal Index of [–2,+2] weeks around the events. The key independent variables are as follows. *High Undocumented Immigrants* is an indicator that equals 1 if the bond county-level undocumented immigrant density is above the median for all the bonds in the same event window. *Low Skill County* is an indicator that equals 1 if the bond county-level skill is below the median for all the bond in the same event window. We calculate the county-level skill as the weighted average of occupation skills, with weights determined by the employment share of each occupation within the county. We include the interaction between *High Undocumented Immigrants* and *Low Skill County* in Column (3) and (4). The control variables include the following. *Ln*(*Population*), *Ln*(*GDP)* and Δ*Unemployment* are county-level control variables. *Offering Yield*, *Duration*, *Coupon*, *Ln*(*Total Offering Amount*), *Callable*, *Insured*, *Refunding* are bond-level control variables. Column (2) and (4) control for legal immigrants, where *High Legal Immigrants* is an indicator that equals 1 if the firm's county-level legal immigrant density is above the median for all the bonds in the same event window. We keep the bond with the source of repayment being classified as general obligation. The regression also includes year fixed effects. T-statistics reported in parentheses are based on double-clustered standard errors.

	(1)	(2)	(3)	(4)
High Undocumented Immigrants	**–0.024****	**–0.038*****	0.010	–0.008
	(–2.08)	**(–3.12)**	(0.65)	(–0.48)
Low Skill			0.043***	0.043***
			(3.08)	(3.12)
High Undocumented Immigrants × Low Skill			**–0.060*****	**–0.053*****
			(–3.89)	**(–3.24)**
High Legal Immigrants		0.037***		0.038***
		(4.55)		(3.59)
High Legal Immigrants × Low Skill				–0.006
				(–0.46)
Observations	401,663	401,663	401,663	401,663
Adj. R^2	0.075	0.075	0.075	0.075

Appendix: Additional Analysis

A. Subperiod Analysis

To gain a deeper understanding of the impact of undocumented immigrants on U.S. public firms and local economies, we conduct a sub-period analysis by dividing the entire sample period into three distinct time frames: the Obama presidency (2009–2016), the Trump presidency (2017–2020), and the Biden presidency (2021–2024).

Immigration policies under each administration varied significantly, likely leading to differing effects on labor markets and local economies. During the Obama administration, immigration policy aimed to balance enforcement with reform. While prioritizing the deportation of criminals, Obama also introduced initiatives such as the Deferred Action for Childhood Arrivals (DACA) program, which provided protections for certain undocumented individuals. In contrast, the Trump administration adopted a more hardline stance, marked by the construction of a border wall, efforts to end DACA, and a more aggressive ICE enforcement strategy, including widespread deportations and workplace raids. Under the Biden administration, immigration policies shifted toward moderation, halting the border wall construction and reinstating DACA protections. However, the Biden administration also faced challenges related to migrant arrival surges, which sparked debates on how to balance immigration control with national security concerns.

To capture the potential influence of these varying political environments, we conduct sub-period analyses to examine how the economic consequences of immigration enforcement may have differed across the three administrations.

Table A1 presents the results of cumulative abnormal returns (CAR) for U.S. public firms in response to ICE enforcement actions, based on Models (2) and (3) across the three presidencies.

Panel A shows that the effect of $High\ Undocumented\ Immigrants$ on CAR is significantly negative during the Trump presidency. The average decrease in CAR is –0.12% and –0.10% with or without legal controls. These results suggest that under Trump's hardline policies and intensified ICE enforcement, firms located in areas with high density of undocumented immigrants experienced substantial negative abnormal returns. In contrast, the effect of $High\ Undocumented\ Immigrants$ on CAR is not statistically significant during the Obama or Biden presidencies.

Panel B examines the interaction between $High\ Undocumented\ Immigrants$ and $Low\ Skill$. The interaction term is significantly negative in Columns (3) and (4), indicating that low-skill industries, which are more reliant on undocumented labor, are particularly vulnerable to disruptions caused by ICE enforcement during the Trump presidency. Consistent with the findings in Panel A, this suggests that the negative impact of ICE enforcement on CAR was more pronounced for low-skilled firms under Trump. However, the effects are not significant during the Obama or Biden presidencies.

Table A2 presents the impact of ICE enforcement actions on changes in total employment for firms with high versus low sales variability. The four-way interaction term $High\ Undocumented\ Immigrants \times \#\ Enforcement\ \times High\ Sales\ Variability \times Low\ Skill$ shows robust and significantly negative coefficients during the Trump presidency, indicating that firms relying heavily on low-skill labor in high-sales-variability sectors face more severe consequences from enforcement actions in terms of employment reductions.

Results in Table A3 and Table A4 emphasize that Trump-era enforcement actions had particularly significant stock market and employment impacts, especially for firms located in areas with high undocumented immigrant density, high sales volatility, and a high reliance on low-

skilled labor. These findings suggest that the combination of stricter immigration enforcement and firm-level vulnerability led to amplified disruptions during this subperiod.

Table A5 examines the impact of undocumented immigration and workforce skill levels on municipal bond returns in response to ICE enforcement actions across the three presidencies. During the Obama presidency, the effect of high undocumented immigrant density on bond returns was minimal, with no significant disruptions observed. Under the Trump administration, however, the negative impact on bond returns was notably stronger, especially in regions with high undocumented immigrant populations and a greater reliance on low-skill workers. This suggests that ICE enforcement caused more substantial economic disruptions during Trump's presidency. Under the Biden administration, the effects of immigration enforcement on bond returns are negligible, indicating either a shift in enforcement policies or a stabilization of local economies in response to policy changes. Overall, the analysis reveals that the economic consequences of ICE enforcement on municipal bond returns are most severe during the Trump presidency.

Our findings highlight how the dynamics of immigration enforcement are shaped by the political climate, with varying impacts on local economies and public services across different presidential administrations. The effects are most pronounced during the Trump administration, particularly in regions with high concentrations of undocumented immigrants and low-skilled workers, while the impacts diminished or are not significant under the Obama and Biden administrations.

B. Stock CAR and Bond Return in Response to the 2024 Election Result

To further investigate the broader implications of immigration policies on U.S. public firms and local economies, we extend our analysis by examining the effects of the 2024 U.S. presidential election results. With Donald Trump securing a second term in office, this event signals a

continuation of his previous hardline stance on immigration enforcement. Given the significant impact of Trump's first administration on labor markets, firm performance, and local economies, the re-election outcome may lead to further intensification of immigration policies, including expanded ICE enforcement, stricter border controls, and potentially more aggressive workplace immigration raids. By testing the market reactions—specifically cumulative abnormal returns (CAR) and municipal bond returns—around the 2024 election, we aim to capture how public firms and local economies respond to potentially renewed commitment to stricter immigration policies. This out-of-sample event provides a unique opportunity to assess the potential impact of Trump's re-election on business outcomes and municipal finances, building on our previous findings and offering insight into how firms and local governments might react to the continuity of his immigration agenda.

We calculate the cumulative abnormal return during the [–2,+2] day window of November 6, 2024, when the presidential election result was projected by the media. For municipal bonds, we collect all the general obligation bonds with two tradings covering the election result projection day and within the [–2,+2] week window, calculate the bond return based on the price of the two trades closest to the event window boundaries, minus the Bloomberg US Municipal Index return of the same trading windows.

In Panel A of Table A6, the interaction term between $Low\ Skill$ and $High\ Undocumented\ Immigrants$ is significant and negative. This suggests that firms located in regions with a high concentration of undocumented immigrant labor in low-skill industries face greater uncertainty regarding labor supply and potential disruptions due to anticipated immigration enforcement actions, which in turn leads to a decline in stock prices. In Panel B, we do not observe a statistically significant impact on bond returns in response to the election results. This lack of

significance may stem from a limited number of observations for the single event, reducing statistical power. Alternatively, it is possible that the effect is dominated by other factors that bond investors prioritize, such as credit risk, debt servicing capacity, and regional economic performance.

Table A1. Cumulative Abnormal Return (CAR) of US Public Firms in Response to ICE Enforcement Actions – Subperiod Analysis

This table reports the panel regression results of the effect of the undocumented immigrants on firm's cumulative abnormal return (*CAR*, expressed in percentage points, %) in response to ICE enforcement actions. The dependent variable is the size-adjusted cumulative abnormal return (CAR), which is calculated as the firm's stock return minus the value- weighted market return over a [–2,+2] day window around the event, then further adjusted by subtracting the equal-weighted cumulative abnormal return of stocks within the same size group. The key explanatory variables include the following. *High Undocumented Immigrants* is an indicator variable that equals 1 if the firm's county-level undocumented immigrant density is above the median for all firms in the same fiscal year. *Low Skill* is an indicator variable that equals 1 if the firm is in an industry with below-median skill levels across all industries. We also include the interaction term between *High Undocumented Immigrants* and *Low Skill* in the regression. The control variables include the following. *Ln (Population*), *Ln (GDP)* and Δ*Unemployment* are county-level control variables. *Ln (Size*), *Ln (Age*), *Lag (ROE*), *Sales Growth* are firm-level control variables. Column (1) and (2) report the results based on the period of Obama's presidency (before Jan 20, 2017); Column (3) and (4) are based on the period of Trump's presidency (between Jan 20, 2017, and Jan 19, 2021); Column (5) and (6) cover the period of Biden's presidency (after Jan 19, 2021). Column (2), (4), and (6) also control for the legal immigrants, where *High Legal Immigrants* is an indicator that equals 1 if the firm's county-level legal immigrant density is above the median for all firms in the same fiscal year. The regression also includes industry and year fixed effects. T-statistics reported in parentheses are based on double-clustered standard errors.

Panel A

	Obama		Trump		Biden	
	(1)	(2)	(3)	(4)	(5)	(6)
High Undocumented Immigrants	**–0.04***	**–0.03**	**–0.06*****	**–0.06****	**0.01**	**0.01**
	(–1.68)	**(–1.16)**	**(–2.59)**	**(–2.26)**	**(0.28)**	**(0.23)**
High Legal Immigrants		–0.02		0.00		0.00
		(–0.55)		(0.09)		(0.01)
Obs.	397,717	397,717	297,784	297,784	102,462	102,462
Adj. R^2	0.001	0.001	0.006	0.006	0.002	0.002

Panel B

	Obama		Trump		Biden	
	(1)	(2)	(3)	(4)	(5)	(6)
High Undocumented Immigrants	–0.00	–0.01	–0.03	–0.04	0.03	0.04
	(–0.02)	(–0.24)	(–1.34)	(–1.14)	(0.62)	(0.64)
High Legal Immigrants		0.01		0.00		–0.01
		(0.20)		(0.06)		(–0.20)
High Undocumented Immigrants × Low Skill	**–0.17*** **	**–0.10**	**–0.12*** **	**–0.12** **	**–0.10**	**–0.15**
	(–4.13)	**(–1.62)**	**(–2.98)**	**(–2.03)**	**(–1.10)**	**(–1.17)**
High Legal Immigrants × Low Skill		–0.10		–0.00		0.08
		(–1.58)		(–0.02)		(0.57)
Obs.	397,717	397,717	297,784	297,784	102,462	102,462
Adj. R^2	0.001	0.001	0.006	0.006	0.002	0.002

Table A2. Employment Change in Response to ICE Enforcement Actions – Subperiod Analysis

This table reports the panel regression results examining the interactive effect of the undocumented immigrants and the intensity of the ICE enforcement on firm's employment. The dependent variable is the change in *Ln (Employees*), which is calculated as the difference of the log of the total employees from Year $t-1$ to Year t. The key explanatory variables include the following. *High Undocumented Immigrants* is an indicator that equals 1 if the firm's county-level undocumented immigrant density is above the median for all firms in the same fiscal year. *Enforcement* is the one-year lagged log of the total number of ICE enforcement actions reported within the ICE fiscal year. *Low Skill* is an indicator that equals 1 if the firm's industry-level skill is below median for all firms in the same fiscal year. We also include the interaction between *High Undocumented Immigrants*, *Enforcement* in Column (1) and (2). In Column (3) and (4), we additionally add the triple interaction terms among *High Undocumented Immigrants*, *Enforcement*, and *Low Skill*. The control variables include the following. *Ln (Population*), *Ln (GDP)* and Δ*Unemployment* are county-level control variables. *Ln (Size*), *Ln (Age*), *Lag (ROE*), *Sales Growth* are firm-level control variables. Column (2), (4), and (6) also control for the legal immigrants, where *High Legal Immigrants* is an indicator that equals 1 if the firm's county-level legal immigrant density is above the median for all firms in the same fiscal year. The estimates reported in the table are scaled by 100. Standard errors are clustered at the county-pair level. The regression also includes county-pair fixed effects. T-statistics are in parentheses. Column (1) and (2) report the results based on the period of Obama's presidency in our sample; Column (3) and (4) are based on the period of Trump's presidency; Column (5) and (6) cover the period of Biden's presidency.

	Obama		Trump		Biden	
	(1)	(2)	(3)	(4)	(5)	(6)
Enforcement	-2.64*	-1.85	-2.80	-1.97	-1.39***	-1.13*
	(-2.02)	(-1.47)	(-1.66)	(-1.09)	(-2.91)	(-1.96)
High Undocumented Immigrants	-7.09	-11.11**	1.06	-7.57	0.87	-1.77
	(-1.47)	(-2.06)	(0.16)	(-1.39)	(0.35)	(-0.49)
High Undocumented Immigrants × Enforcement	0.95	1.44	-0.00	1.98	-0.57	-0.06
	(0.60)	(0.86)	(-0.00)	(1.15)	(-0.88)	(-0.06)
Low Skill	-8.87**	-4.04	-13.60***	-9.51*	-1.52	0.43
	(-2.15)	(-1.06)	(-3.13)	(-2.00)	(-0.84)	(0.27)
Low Skill × Enforcement	2.20	0.96	3.43**	2.30	0.56	-0.00
	(1.51)	(0.69)	(2.57)	(1.60)	(0.91)	(-0.01)
High Undocumented Immigrants × Low Skill	7.58	15.31**	18.57***	29.34***	1.10	5.02
	(1.38)	(2.09)	(3.48)	(5.06)	(0.44)	(1.68)
High Undocumented Immigrants ×Enforcement	-0.58	-2.55	**-5.38*** **	**-8.32*** **	-0.51	-1.61
× Low Skill	(-0.33)	(-1.07)	**(-2.93)**	**(-4.59)**	(-0.55)	(-1.37)
High Legal Immigrants		10.40**		15.61***		5.49
		(2.43)		(3.22)		(1.52)
High Legal Immigrants × Enforcement		-1.64		-3.38**		-0.98
		(-1.19)		(-2.39)		(-1.00)
High Legal Immigrants × Low Skill		-15.54**		-18.15***		-7.39**
		(-2.31)		(-2.75)		(-2.67)
High Undocumented Immigrants ×Enforcement		4.00*		5.00**		2.10*
× Low Skill		(1.91)		(2.57)		(1.76)
Observations	10,810	10,810	4,946	4,946	3,310	3,310
Adj. R^2	0.086	0.089	0.089	0.090	0.081	0.082

Table A3. Cumulative Abnormal Return (CAR) of US Public Firms in Response to ICE Enforcement Actions – High Sales Volatility

This table reports the panel regression results of the effect of the undocumented immigrants on firm's cumulative abnormal return (*CAR*, expressed in percentage points, %) in response to ICE enforcement actions. The dependent variable is the size-adjusted cumulative abnormal return (CAR), which is calculated as the firm's stock return minus the value-weighted market return over a [–2,+2] day window around the event, then further adjusted by subtracting the equal-weighted cumulative abnormal return of stocks within the same size group. The key explanatory variables include the following. *High Undocumented Immigrants* is an indicator variable that equals 1 if the firm's county-level undocumented immigrant density is above the median for all firms in the same fiscal year. *Low Skill* is an indicator variable that equals 1 if the firm is in an industry with below-median skill levels across all industries. *High Sales Variability* is an indicator variable that equals 1 if the firm's quarterly sales variability over the past 4 quarters are higher than the median of all firms within the same fiscal year. Sales variability is defined as the standard deviation of firms sales scaled by the average sales over the past four quarters. We also include the two-way and triple interaction terms among *High Undocumented Immigrants*, *Low Skill*, and *High Sales Variability* in the regression. The control variables include the following. *Ln (Population*), *Ln (GDP)* and Δ*Unemployment* are county-level control variables. *Ln (Size*), *Ln (Age*), *Lag (ROE*), *Sales Growth* are firm-level control variables. Column (1) and (2) cover the ICE fiscal years from 2009 to 2024. Column (3) and (4) report the results based on the period of Obama's presidency (before Jan 20, 2017); Column (5) and (6) are based on the period of Trump's presidency (between Jan 20, 2017, and Jan 19, 2021); Column (7) and (8) cover the period of Biden's presidency (after Jan 19, 2021). Column (2), (4), (6), and (8) also control for the legal immigrants, where *High Legal Immigrants* is an indicator that equals 1 if the firm's county-level legal immigrant density is above the median for all firms in the same fiscal year. The regression also includes industry and year fixed effects. T-statistics reported in parentheses are based on double-clustered standard errors.

	Obama		Trump		Biden	
	(1)	(2)	(3)	(4)	(5)	(6)
High Undocumented Immigrants	0.02 (0.65)	–0.00 (–0.10)	–0.05* (–1.90)	–0.05 (–1.40)	–0.10 (–1.62)	–0.08 (–0.93)
High Undocumented Immigrants × *Low Skill*	–0.09* (–1.71)	0.01 (0.11)	0.00 (0.01)	0.09 (1.09)	0.11 (0.99)	–0.15 (–0.82)
High Sales Variability	–0.14*** (–4.18)	–0.13*** (–3.80)	–0.28*** (–8.80)	–0.29*** (–8.59)	–0.25*** (–3.47)	–0.26*** (–3.44)
High Undocumented Immigrants × *High Sales Variability*	–0.03 (–0.68)	–0.01 (–0.14)	0.05 (1.18)	0.03 (0.45)	0.28*** (2.99)	0.25* (1.88)
Low Skill × *High Sales Variability*	0.18*** (3.24)	0.18*** (3.07)	0.32*** (5.95)	0.32*** (5.75)	0.34*** (2.91)	0.38*** (3.13)
High Undocumented Immigrants × *Low Skill* × *High Sales Variability*	**–0.17**** **(–2.04)**	**–0.20** **(–1.63)**	**–0.28***** **(–3.35)**	**–0.39***** **(–3.22)**	**–0.44**** **(–2.47)**	**–0.09** **(–0.33)**
High Legal Immigrants		0.03 (0.79)		–0.00 (–0.02)		–0.03 (–0.38)
High Legal Immigrants × *Low Skill*		–0.14 (–1.58)		–0.11 (–1.36)		0.34* (1.77)
High Legal Immigrants × *High Sales Variability*		–0.03 (–0.53)		0.04 (0.65)		0.04 (0.34)
High Legal Immigrants × *Low Skill* × *High Sales Variability*		0.04 (0.30)		0.14 (1.16)		–0.50* (–1.84)
Observations	397,707	397,707	297,784	297,784	102,462	102,462
Adj. R^2	0.001	0.001	0.007	0.007	0.002	0.002

Table A4. Change in Total Employment in Response to ICE Enforcement Actions – High Sales Volatility

This table reports the panel regression results examining the interactive effect of the undocumented immigrants and the intensity of the ICE enforcement on firm's employment. The dependent variable is the change in *Ln (Employees*), which is calculated as the difference of the log of the total employees from Year $t-1$ to Year t. The key explanatory variables include the following. *High Undocumented Immigrants* is an indicator that equals 1 if the firm's county-level undocumented immigrant density is above the median for all firms in the same fiscal year. *Enforcement* is the one-year lagged log of the total number of ICE enforcement actions reported within the ICE fiscal year. *Low Skill* is an indicator that equals 1 if the firm's industry-level skill is below median for all firms in the same fiscal year. *High Sales Variability* is an indicator variable that equals 1 if the firm's quarterly sales variability over the past 4 quarters are higher than the median of all firms within the same fiscal year. Sales variability is defined as the standard deviation of a firm's sales scaled by the average sales over the past four quarters. We also include the two-way and triple interaction terms among *High Undocumented Immigrants*, *Low Skill*, and *High Sales Variability* in the regression. The control variables include the following. *Ln (Population*), *Ln (GDP)* and Δ*Unemployment* are county-level control variables. *Ln (Size*), *Ln (Age*), *Lag (ROE*), *Sales Growth* are firm-level control variables. Column (1) and (2) cover the ICE fiscal years from 2009 to 2024. Column (3) and (4) report the results based on the period of Obama's presidency in our sample; Column (5) and (6) are based on the period of Trump's presidency; Column (7) and (8) cover the period of Biden's presidency in our sample. Column (2), (4), (6) and (8) also control for the legal immigrants, where *High Legal Immigrants* is an indicator that equals 1 if the firm's county-level legal immigrant density is above the median for all firms in the same fiscal year. The estimates reported in the table are scaled by 100. The regression also includes county-pair fixed effects. T-statistics reported in parentheses are based on double-clustered standard errors.

	Obama		Trump		Biden	
	(1)	(2)	(3)	(4)	(5)	(6)
Enforcement	1.02	1.80	0.07	-0.03	-1.60**	-1.66**
	(0.57)	(1.03)	(0.03)	(-0.01)	(-2.27)	(-2.24)
High Undocumented Immigrants	5.02	-4.05	-1.24	-0.04	1.99	0.76
	(0.84)	(-0.63)	(-0.21)	(-0.00)	(0.97)	(0.33)
High Undocumented Immigrants	-3.42*	-0.89	-0.30	-1.97	0.05	0.10
× Enforcement	(-1.72)	(-0.39)	(-0.15)	(-0.60)	(0.06)	(0.13)
Low Skill	-0.01	3.11	-10.60	-9.90	-0.45	1.19
	(-0.00)	(0.69)	(-1.62)	(-1.44)	(-0.21)	(0.51)
Low Skill × Enforcement	-1.15	-2.19	1.53	1.66	0.21	-0.05
	(-0.68)	(-1.39)	(0.75)	(0.78)	(0.21)	(-0.04)
High Undocumented Immigrants	-3.00	6.43	1.56	1.32	-3.04	1.01
× Low Skill	(-0.58)	(0.84)	(0.22)	(0.11)	(-1.19)	(0.25)

High Undocumented Immigrants	3.12	0.03	0.89	2.64	0.36	-0.30
× Enforcement× Low Skill	(1.60)	(0.01)	(0.38)	(0.62)	(0.28)	(-0.17)
High Sales Variability	13.82*	13.30*	10.79	5.23	2.90	1.35
	(1.81)	(1.91)	(1.17)	(0.51)	(1.24)	(0.67)
High Sales Variability	-4.92*	-5.17*	-4.28	-2.46	0.48	0.97
× Enforcement	(-1.86)	(-2.01)	(-1.52)	(-0.81)	(0.38)	(0.76)
High Undocumented Immigrants	-16.38*	-9.40	2.27	-11.96	-1.94	-3.96
× High Sales Variability	(-1.90)	(-0.96)	(0.20)	(-0.85)	(-0.57)	(-1.03)
High Undocumented Immigrants	5.93*	3.14	0.71	5.85	-1.10	-0.48
× High Sales Variability× Enforcement	(1.96)	(0.90)	(0.20)	(1.17)	(-0.72)	(-0.28)
Low Skill × High Sales Variability	-11.68	-9.86	-5.21	0.19	-1.82	-1.26
	(-1.43)	(-1.47)	(-0.48)	(0.02)	(-0.51)	(-0.33)
Low Skill × High Sales Variability	4.49	4.45*	3.00	1.02	0.41	-0.06
× Enforcement	(1.66)	(1.84)	(0.91)	(0.31)	(0.23)	(-0.03)
High Undocumented Immigrants	13.98	11.54	24.58*	39.99**	6.17	5.99
× Low Skill × High Sales Variability	(1.34)	(0.85)	(1.91)	(2.22)	(1.34)	(1.07)
High Undocumented Immigrants× Enforcement	-4.91	-3.37	**-9.07****	**-15.54****	-1.17	-1.70
× Low Skill × High Sales Variability	(-1.33)	(-0.69)	**(-2.24)**	**(-2.57)**	(-0.57)	(-0.70)
Observations	10,810	10,810	4,946	4,946	3,310	3,310
Adj. R^2	0.086	0.089	0.094	0.096	0.082	0.083

Table A5. Municipal Bond Return in Response to ICE Enforcement Actions – Subperiod Analysis

This table reports the panel regression results of the effect of the undocumented immigrants on municipal bond returns around the ICE enforcement actions. The dependent variable is the bond return calculated as the municipal bond return minus the return of the Bloomberg US Municipal Index of [–2,+2] weeks around the events. The key independent variables are as follows. *High Undocumented Immigrants* is an indicator that equals 1 if the bond county-level undocumented immigrant density is above the median for all the bonds in the same event window. In Panel B, *Low Skill* is an indicator that equals 1 if the bond county-level skill is below the median for all the bond in the same event window. We calculate the county-level skill as the weighted average of occupation skills, with weights determined by the employment share of each occupation within the county. We include the interaction between *High Undocumented Immigrants* and *Low Skill*. The control variables include the following. *Ln (Population*), *Ln (GDP)* and Δ*Unemployment* are county-level control variables. *Offering Yield*, *Duration*, *Coupon*, *Ln (Total Offering Amount*), *Callable*, *Insured*, *Refunding* are bond-level control variables. Column (1) and (2) report the results based on the period of Obama's presidency (before Jan 20, 2017); Column (3) and (4) are based on the period of Trump's presidency (between Jan 20, 2017, and Jan 19, 2021); Column (5) and (6) cover the period of Biden's presidency (after Jan 19, 2021). Column (2), (4) and (6) in both panels control for legal immigrants, where *High Legal Immigrants* is an indicator that equals 1 if the firm's county-level legal immigrant density is above the median for all the bonds in the same event window. In both panels, we keep the bond with the source of repayment being classified as general obligation. The regression also includes year fixed effects. T-statistics reported in parentheses are based on double-clustered standard errors.

Panel A

	Obama		Trump		Biden	
	(1)	(2)	(3)	(4)	(5)	(6)
High Undocumented Immigrants	**–0.015**	**–0.013**	**–0.051*** **	**–0.069*** **	**0.002**	**–0.009**
	(–0.90)	**(–0.70)**	**(–3.44)**	**(–4.50)**	**(0.04)**	**(–0.17)**
High Legal Immigrants		–0.004		0.049***		0.031
		(–0.26)		(5.55)		(1.58)
Observations	107,230	107,230	185,345	185,345	109,088	109,088
Adj. R^2	0.072	0.072	0.090	0.090	0.064	0.064

Panel B

	Obama		Trump		Biden	
	(1)	(2)	(3)	(4)	(5)	(6)
High Undocumented Immigrants	0.041**	0.045*	–0.025	–0.046**	–0.024	–0.038
	(1.98)	(1.65)	(–1.37)	(–2.39)	(–0.35)	(–0.54)
Low Skill	0.057***	0.058***	0.042**	0.042**	–0.041	–0.045
	(2.99)	(2.99)	(2.33)	(2.32)	(–0.69)	(–0.74)
High Undocumented Immigrants × Low Skill	**–0.104*** **	**–0.100*** **	**–0.046** **	**–0.042** **	**0.047**	**0.052**
	(–4.37)	**(–3.26)**	**(–2.38)**	**(–2.07)**	**(0.76)**	**(0.83)**
High Legal Immigrants		–0.009		0.049***		0.032
		(–0.37)		(4.47)		(1.25)
High Legal Immigrants × Low Skill		–0.013		–0.002		0.002
		(–0.41)		(–0.11)		(0.06)
Observations	107,230	107,230	185,345	185,345	109,088	109,088
Adj. R^2	0.072	0.072	0.090	0.090	0.064	0.064

Table A6. Stock and Bond Returns in Response to 2024 Presidential Election Results

Panel A of the table reports the stock market reaction to the 2024 presidential election results. The dependent variable of the panel regression is the cumulative abnormal return (CAR) calculated as the stock return minus the value-weighted market return of [–2,+2] days around November 6, 2024 (the day when Trump's winning was projected). The dependent variable is the size-adjusted cumulative abnormal return (CAR), which is calculated as the firm's stock return minus the value-weighted market return over a [–2,+2] day window around the event, then further adjusted by subtracting the equal-weighted cumulative abnormal return of stocks within the same size group. The key explanatory variables include the following. *High Undocumented Immigrants* is an indicator variable that equals 1 if the firm's county-level undocumented immigrant density is above the median for all firms in the same fiscal year. *Low Skill* is an indicator variable that equals 1 if the firm is in an industry with below-median skill levels across all industries. We also include the interaction term between *High Undocumented Immigrants* and *Low Skill* in the regression. The control variables include the following. *Ln (Population*), *Ln (GDP)* and Δ*Unemployment* are county- level control variables. *Ln (Size*), *Ln (Age*), *Lag (ROE*), *Sales Growth* are firm-level control variables. Column (2) and (4) also control for the legal immigrants, where *High Legal Immigrants* is an indicator that equals 1 if the firm's county-level legal immigrant density is above the median for all firms in the same fiscal year. T-statistics reported in parentheses are based on double-clustered standard errors.

Panel B of the table reports the municipal bond market reaction to the 2024 presidential election results. The dependent variable of the panel regression is the bond return calculated as the municipal bond return minus the return of the Bloomberg US Municipal Index of [–2,+2] weeks around the events. The key independent variables are as follows. *High Undocumented Immigrants* is an indicator that equals 1 if the bond county-level undocumented immigrant density is above the median for all the bonds in the same event window. *Low Skill* is an indicator that equals 1 if the bond county-level skill is below the median for all the bond in the same event window. We calculate the county-level skill as the weighted average of occupation skills, with weights determined by the employment share of each occupation within the county. We include the interaction between *High Undocumented Immigrants* and *Low Skill* in Column (3) and (4). The control variables include the following. *Ln (Population*), *Ln (GDP)* and Δ*Unemployment* are county-level control variables. *Offering Yield*, *Duration*, *Coupon*, *Ln (Total Offering Amount*), *Callable*, *Insured*, *Refunding* are bond-level control variables. Column (2) and (4) control for legal immigrants, where *High Legal Immigrants* is an indicator that equals 1 if the firm's county-level legal immigrant density is above the median for all the bonds in the same event window. We keep the bond with the source of repayment being classified as general obligation. T-statistics reported in parentheses are based on double-clustered standard errors.

Panel A – Cumulative Abnormal Return of US Public Firms

	(1)	(2)
High Undocumented Immigrants	0.37	0.53
	(0.79)	(1.03)
Low Skill	1.01	0.08
	(1.34)	(1.00)
High Undocumented Immigrants × Low Skill	**–0.58***	**–1.23****
	(–1.64)	**(–2.11)**
High Legal Immigrants		–0.08
		(–0.18)
High Legal Immigrants × Low Skill		1.05*
		(1.70)
Observations	2,942	2,942
Adj. R^2	0.066	0.066

Panel B – Municipal Bond Return

	(1)	(2)	(3)	(4)
High Undocumented Immigrants	**0.024**	**–0.010**	0.001	0.030
	(0.56)	**(–0.20)**	(0.02)	(0.36)
High Legal Immigrants		0.048		–0.035
		(1.02)		(–0.43)
Low Skill County			–0.001	–0.015
			(–0.02)	(–0.34)
High Undocumented Immigrants × Low Skill County			**0.044**	**–0.063**
			(0.66)	**(–0.64)**
High Legal Immigrants × Low Skill County				0.149
				(1.50)
Observations	3,762	3,762	3,762	3,762
Adj. R^2	0.105	0.105	0.105	0.106