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Abstract

Hiring someone who is not authorized to work in the United States is illegal, and employers who knowingly hire unauthorized immigrant workers may face civil and criminal penalties. The federal government uses a variety of actions, including worksite raids and paperwork audits, to enforce the prohibition on hiring unauthorized workers. Compliance costs and the possibility of becoming the target of an immigration enforcement action may affect U.S. businesses' decisions about whom to hire as well as how many workers to employ and how much to pay them, but little previous research has studied such potential impacts. We find that increases in worksite enforcement actions in an industry raise employment but reduce the average wage. Enforcement also boosts both hires and separations, so worker turnover rises. Actions that target employers – audits, investigations, fines, and criminal charges – have larger effects than raids, which target workers. The results are consistent with businesses shifting to on-the-books or legal workers when immigration enforcement activity increases. However, tougher enforcement does not lead to an increase in business sign-ups in E-Verify or IMAGE, which are two federal government programs that can help businesses determine whether workers are authorized. This suggests that, even in the face of tougher enforcement, employers find it costly to use programs that check workers' employment eligibility.

Keywords: unauthorized immigration, immigration enforcement, raids, audits, E-Verify

JEL Classification: J15, J61, J63, K37

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Introduction

Immigration enforcement actions by the U.S. government that occur at places of business, such as worksite raids and audits, have increased over time as the country has devoted more funding and personnel to enforcement in the U.S. interior as well as along its borders in an effort to discourage unauthorized immigration.[1] Businesses, after all, are the source of the jobs magnet that encourages and sustains most unauthorized immigration.[2] Immigration enforcement actions that occur at businesses can be aimed either directly at unauthorized immigrant workers or at their employers. In either case, little is known about the labor market impacts of such actions and whether they differ from one another. This study aims to help fill that gap by examining the impact of workplace immigration enforcement actions on industry-level employment, wages, and worker turnover, as well as on employer enrollment in government programs that help businesses comply with immigration laws.

Historically, U.S. policymakers were reluctant to interfere with business practices regarding the hiring of unauthorized workers because of the risk of resultant economic disruptions.[3] Although the 1986 Immigration Reform and Control Act (IRCA) outlawed hiring unauthorized immigrants and required new hires to provide employers with documentation of their employment eligibility, there were few worksite enforcement actions for the first 15 years after the law's passage.[4] Instead, the federal government focused on increased enforcement at

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[1] *See* Doris Meissner et al., *Immigration Enforcement in the United States: The Rise of a Formidable Machinery*, MIGRATION POLICY INSTITUTE (Jan. 2013), https://www.migrationpolicy.org/research/immigration-enforcement-united-states-rise-formidable-machinery.

[2] *See* Walter A. Ewing, *Beyond Border Enforcement: Enhancing National Security through Immigration Reform*, 5 GEO. J.L. & PUB. POL'Y 427, 430-431 (2007).

[3] *See* Gordon H. Hanson, *Illegal Migration from Mexico to the United States*, 44 J. OF ECONOMIC LITERATURE 869, 912, 917 (2006).

[4] *See* Margaret H. McCormick, *What the Immigration Conundrum Portends: ICE in the Workplace*, 13 PUB. INT. L. REP. 228, 229 (2008).

key parts of the country's border with Mexico.[5] It was not until after the 9/11 terrorist attacks that policymakers dedicated more resources to cracking down at businesses.[6] The newly-formed Immigration and Customs Enforcement (ICE) agency within the new Department of Homeland Security (DHS) was charged with carrying out interior immigration enforcement, including at worksites.[7]

How worksite immigration enforcement is carried out has tended to change across administrations. Under the Bush administration, high-profile worksite raids surged in the mid-2000s, while employer-focused enforcement actions received less emphasis, particularly during Bush's first term.[8] The Bush administration oversaw the creation of E-Verify and IMAGE, two programs administered by ICE that help employers determine whether their workers are legally eligible to work in the United States.[9] The Obama administration shifted ICE's main focus away

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[5] *See* Wayne A. Cornelius, *Controlling 'Unwanted' Immigration: Lessons from the United States, 1993–2004*, 31 JOURNAL OF ETHNIC AND MIGRATION STUDIES 775, 777-778 (2005).

[6] *See* McCormick *supra* note 4 at 229; Pia M. Orrenius & Madeline Zavodny, *The Effects of Tougher Enforcement on the Job Prospects of Recent Latin American Immigrants*, 28 JOURNAL OF POLICY ANALYSIS & MANAGEMENT 239, 239-240 (2009).

[7] *See* McCormick *supra* note 4 at 229.

[8] *See* Camille Marienbach & Andrew Wroe, *Continuity and Change: Immigration Worksite Enforcement in the Bush and Obama Administrations*, THE OBAMA PRESIDENCY AND THE POLITICS OF CHANGE 99, 104 (Edward Ashbee & John Dumbrell, ed., 2017) ("for the most part, worksite enforcement was characterized by high-profile workplace raids results in the arrest and detention of hundreds, even thousands, of undocumented workers, but not the owners or managers of the businesses that employed them").

[9] E-Verify allows participating employers to verify workers' employment eligibility online by entering information from documents that workers must present when being hired. E-Verify checks that information against federal databases and notifies employers if a worker is not eligible to be employed. E-Verify is not foolproof — unauthorized workers can pass E-Verify by committing identity fraud and submitting valid documents that are not their own. The IMAGE (ICE Mutual Agreement between Government and Employers) program extends further. Participating employers not only use E-Verify but also undergo an ICE inspection of their hiring records and then internally audit their hiring records at least once a year. As discussed later in the paper, some states require some or all employers to participate in E-Verify. Most federal contractors have been required to participate in E-Verify since mid-2009. No state requires employers to participate in IMAGE. For additional background on E-Verify, *see*, *e.g.*, Pia M. Orrenius & Madeline Zavodny, *Digital Enforcement: Effects of E-Verify on Unauthorized Immigrant Employment and Population*, FEDERAL RESERVE BANK OF DALLAS (Sep. 2017), https://www.dallasfed.org/research/pubs/everify; and David J. Bier, *The Facts About E-Verify: Use Rates, Errors, and Effects on Illegal Employment*, CATO INSTITUTE (Feb. 2019), https://policycommons.net/artifacts/1320016/the-facts-about-e-verify/1923306/. For additional background on IMAGE, see Daniel E. Chand, *Explaining ICE's Problematic IMAGE: A Public-Private-Partnership in Immigration Policy*, CENTER FOR GROWTH AND OPPORTUNITY, UTAH STATE UNIVERSITY (Dec. 2021), https://www.thecgo.org/research/explaining-ices-problematic-image/.

from raids to employer audits, specifically Employment Eligibility Verification Form I-9 audits, which check whether businesses comply with employment-eligibility paperwork requirements.[10] The Trump administration renewed the use of worksite raids, which usually result in arrests and ultimately deportations of undocumented workers, while continuing to pursue audits as well.[11] The Biden administration pledged to end worksite raids and instead focus on "unscrupulous employers who exploit unauthorized workers, conduct illegal activities, or impose unsafe working conditions."[12]

Despite the increased emphasis on immigration enforcement actions at businesses, it is not known whether those actions have any impact on employers' hiring, retention, and compensation decisions. In particular, it is unclear whether worksite raids, which have primarily occurred during recent Republican administrations, have a different impact than audits, investigations, and other strategies that target employers instead of workers, the major strategies pursued by recent Democratic administrations. Lack of publicly available data on ICE enforcement actions at businesses may be a major reason why few studies have addressed this question. The little research on this question to date indicates that Form I-9 audits may have a positive impact on formal-sector employment, suggesting that audits compel employers to hire workers on the books instead of under the table.[13] A case study of the meat-packing and poultry

[10] *See* Kati L. Griffith, *Undocumented Workers: Crossing the Borders of Immigration and Workplace Law*, 21 CORNELL J. L. & PUB. POL'Y 611, 619 (2012). IRCA required employers to fill out and keep a copy of Form I-9 when hiring workers. Hires must present documentation of their employment eligibility, such as a U.S. passport, a permanent resident card, or a state driver's license and a Social Security card, and employers record the details of those documents on Form I-9. For an explanation of documentation requirements, *see* Sejal Zota, *Immigration Enforcement in the Workplace: A Review of Past and Current Law and Policy*, 74 POPULAR GOVERNMENT 1 (2009).

[11] See Kati L. Griffith and Shannon Gleeson, *Trump's 'Immployment' Law Agenda: Intensifying Employment-Based Enforcement and Un-authorizing the Authorized*. 48 SOUTHWESTERN LAW REVIEW 475, 480-481 (2019).

[12] U.S. Department of Homeland Security (Oct. 12, 2021), https://www.dhs.gov/news/2021/10/12/dhs-releases-worksite-enforcement-strategy-protect-american-labor-market-workers-and.

[13] Neil Bennett, *Understanding Establishment-Level ICE Audits*, Mimeo (2019), https://nmbennett.github.io/assets/JMPDraft.pdf (finding a positive (but not robust) relationship between the number of taxed jobs and the number of undocumented workers found in audits).

processing sector concludes that worker turnover increased in the wake of a series of worksite raids that occurred during 2006-2008, but on-the-books employment and wages did not change significantly.[14]

To examine the impacts of worker- and employer-directed immigration enforcement, we created an industry-level dataset of enforcement actions reported in major U.S. newspapers or announced in ICE press releases during the period 2004 to 2016. We distinguish between actions that focus on workers, namely raids, and those that focus on employers, namely audits, investigations, fines, and criminal charges filed. Newspaper coverage and press releases are a proxy for how prevalent these enforcement actions are within an industry and how much attention they receive in the media. The more enforcement actions in an industry and the more attention they receive, the more likely businesses are to perceive that immigration enforcement is rising in their industry and to respond to that perception by changing their employment practices.

We examine several ways in which businesses' labor practices might respond to an increase in enforcement actions in their industry. First, we examine whether businesses change the number of workers they employ on the books and how much they pay their workers. Second, we look at whether worker turnover changes to gain additional insight into the observed changes in employment and average wages. Third, we examine changes in business enrollment rates in

[14] *See* Pia M. Orrenius & Madeline Zavodny, *Put on ICE? Effects of Immigration Raids in the Animal Slaughtering and Processing Industry*, 112 AEA PAPERS & PROCEEDINGS 386, 389 (2022). Case studies also suggest that raids lead to increased stress and worse health outcomes among the Latino population (*see*, *e.g.*, Carolyn Heinrich, Monica Hernandez & Mason Shero, *Repercussions of a Raid: Health and Education Outcomes of Children Entangled in Immigration Enforcement*, 42 JOURNAL OF POLICY ANALYSIS & MANAGEMENT 350 (2022). Raids led to a drop in the number of Hispanic children enrolled in Head Start programs that is not fully accounted for by an increase in Hispanic outmigration (*see* Robert Santillano, Stephanie Potochnick & Jade Jenkins, *Do Immigration Raids Deter Head Start Enrollment*, 110 AEA PAPERS & PROCEEDINGS 419, 422 (2020)). This finding suggests that raids cause some undocumented immigrants to move into the shadows. A major workplace raid in Texas in 2018 led to a drop in the number of Latino students there (*see* J. Jacob Kirksey & Carolyn Sattin-Bajaj*, Immigration and Customs Enforcement Raids the Pillar of a Community: Student Achievement, Absenteeism, and Mobility Following a Large Worksite Enforcement Operation in North Texas,* AMERICAN BEHAVIORAL SCIENTIST (2023), finding "sharp increases in the number of students leaving their school districts").

the federal E-Verify or IMAGE programs, which enable employers to screen workers' employment eligibility.

To preview our results, we find that employment increases when an industry experiences more enforcement actions. This result is consistent with employers shifting to employing workers on the books as enforcement increases or with employers needing to increase worker headcounts if they lose more-productive unauthorized workers when immigration enforcement intensifies. We find that average wages fall when enforcement increases, particularly employer-directed enforcement. This drop in wages is again consistent with employers bringing lower-wage workers onto the books or with employers shifting to less-productive, but presumably legal, workers when enforcement intensifies. Employers also could be passing along to workers an expected increase in costs when enforcement rises. In addition, we find an increase in both hires and separations. This higher turnover is consistent with employers shifting to legal workers who are less-suited to these jobs. Throughout, employer-targeted actions appear to be more disruptive to business operations, with larger marginal effects than worker-targeted raids. Our results indicate that worker-targeted actions had a significant impact only during the Obama administration, while employer-targeted actions tended to have larger impacts during the second Bush administration than during the Obama administration. Lastly, businesses' enrollment in E-Verify or IMAGE does not change or may actually fall when their industry experiences an uptick in enforcement.

The next section further develops why workplace immigration enforcement might affect businesses' labor-related decisions and summarizes the related literature on immigration enforcement. The study then explains the data and empirical methods used in this analysis and presents the results. The final section concludes with a discussion of policy implications.

Conceptual Framework and Background

Worksite immigration enforcement actions are a form of workplace regulation that imposes costs on businesses. These costs range from the personnel time required to comply with a Form I-9 audit to the fines imposed if a business is caught breaking the law by knowingly employing undocumented immigrants. Businesses' costs may also rise if wages rise because labor supply decreases when worksite immigration enforcement intensifies. In addition, businesses' profits may fall if higher turnover or compositional changes in their workforce as a result of enforcement actions lead to lower output per worker.

We hypothesize that when employers observe an increase in immigration enforcement actions in their industry, they may become concerned that they, too, will be targeted by ICE. If so, they may change their employment practices in several ways. First, employers may try to shift their workforce towards legal workers when they see increased enforcement activity in their industry. This could involve actions like conducting an internal audit and then requiring undocumented workers to "clean up" their paperwork, firing those who cannot, and replacing them with workers who can supply documents. The resultant turnover is likely to costly to employers, at least in the short run. If some workers move from off-the-books to on-the-books employment as a result, either within the same employer or at a new employer, employment as measured by administrative data may increase even if actual employment remains unchanged. Meanwhile, average reported wages may fall if those workers who move onto the books earn less than other workers who were already on the books. A burst of new hires may also reduce average wages if less-experienced and less-productive legal workers replace more-productive,

experienced unauthorized workers. And if those new hires are poor fits, they may quickly separate from their new jobs, generating more turnover.

There are several additional reasons why average wages might fall when immigration enforcement intensifies. Employers that face higher compliance costs or tougher potential sanctions may pass along those costs to workers in the form of lower wages.[15] Employer penalties effectively create a tax wedge between employer labor costs and workers' wages, and some of the incidence may fall on workers, particularly those who are unauthorized and supply labor relatively inelastically.[16] When employer sanctions were first implemented under IRCA, average wages of Latino and Mexican-born workers in the U.S. fell.[17] Enforcement actions may instill fear among undocumented workers and make them more reluctant to push for higher wages or better working conditions.[18] Unauthorized workers who lose their jobs when enforcement intensifies may have to take wage cuts to find new jobs, and employers may use the threat of immigration enforcement as a way to keep unauthorized workers' demands in check.[19]

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[15] *See* Deborah A. Cobb-Clark, Clinton R. Shiells & B. Lindsay Lowell, *Immigration Reform: The Effects of Employer Sanctions and Legalization on Wages*, 13 JOURNAL OF LABOR ECONOMICS 472 (1995).

[16] *See* Cobb-Clark, Shiells & Lowell supra note 15 at 473; Julie L. Hotchkiss & Myriam Quispe-Agnoli, *The Expected Impact of State Immigration Legislation on Labor Market Outcomes*, 32 JOURNAL OF POLICY ANALYSIS & MANAGEMENT 34 (reporting a smaller elasticity of labor supply among undocumented workers than among documented workers in Table 2, columns 1 and 2); George J. Borjas, *The labor supply of undocumented immigrants*, 46 LABOUR ECONOMICS 1, 10 (2017) ("it seems that the labor supply of undocumented immigrant men is very inelastic").

[17] *See* Cynthia Bansak & Steven Raphael, *Immigration Reform and the Earnings of Latino Workers: Do Employer Sanctions Cause Discrimination?* 54 INDUSTRIAL & LABOR RELATIONS REVIEW 275, 292 (2001) (concluding that their analysis is "consistent with a negative effect of employer sanctions on the average hourly earnings of Latino workers"); Cynthia Bansak, *The Differential Wage Impact of the Immigration Reform and Control Act on Latino Ethnic Subgroups*, 86 SOCIAL SCIENCE QUARTERLY 1279 (2005) ("The majority of evidence is consistent with the contention that employer sanctions adversely affected the earnings of Mexican workers").

[18] *See*, *e.g.*, Alvaro Jose Corral, *Raids at Work: Latinx Immigrant Labor Precarity and the Spectacle of ICE Worksite Enforcement Raids*, 76 POLITICAL RESEARCH QUARTERLY 1529, 1535 (2023) ("These hostile and dangerous workplaces persist because the threat of ICE raids pressures workers to acquiesce to such conditions lest they invite unwelcome scrutiny from employers").

[19] *See* Hiroshi Motomura, *Immigration Outside the Law*, 108 COLUMBIA LAW REVIEW 2037, 2069 (2008) ("Even if an employer never calls in federal immigration authorities, its constant threat can make workers' lives precarious—always reminding them that they are powerless"); Shannon Gleeson, *Labor Rights for All? The Role of Undocumented Immigrant Status for Worker Claims Making*, 35 LAW & SOCIAL INQUIRY 561, 563 (2010)

Employers may try to forestall an ICE action at their own worksites by enrolling in E-Verify or IMAGE to help screen out unauthorized workers. Further, participating in those programs may buttress an affirmative defense of good compliance with the law if a business is charged with knowingly employing unauthorized immigrant workers.[20] On the other hand, employers may become more reluctant to call attention to themselves by signing up for those programs when their industry is being targeted. In addition, although E-Verify and IMAGE are free to use, using them takes up personnel time. And if those programs successfully screen out unauthorized workers, who comprise 4 to 5 percent of the U.S. workforce,[21] employers may have to pay more in order to hire and retain legal workers.

As noted earlier, little prior work examines the response of businesses to immigration enforcement policies. Most research has studied the impact of immigration enforcement policies from workers' perspective using household surveys. Such studies tend to find that more stringent immigration policies result in lower earnings among likely undocumented workers and workers whom employers may suspect are undocumented. Wages fell among "undocumented-appearing" Hispanic workers after IRCA made it illegal to knowingly hire or continue to employ an undocumented worker.[22] State-level requirements that employers use E-Verify reduced wages among likely unauthorized Mexican immigrants.[23] Legalization programs have the opposite

("advocates continue to uncover egregious instances of employer intimidation in which the immigration status of a worker is often wielded as an overt threat against would-be claimants").

[20] *See* Emily Sitton, *Challenging State and Local anti-Immigrant Employment Laws: An Evaluation of Preemption, Equal Protection, and Judicial Awareness Tactics*, 91 OR. L. REV. 961, 970 (2013).

[21] *See* Jeffrey S. Passel and Jens Manuel Krogstad, *What we know about unauthorized immigrants living in the U.S.*, PEW RESEARCH CENTER (Jul. 22, 2024), https://www.pewresearch.org/short-reads/2024/07/22/what-we-know-about-unauthorized-immigrants-living-in-the-us/.

[22] *See* Alberto Davila, Jose A. Pagan & Montserrat Viladrich Grau, *The Impact of IRCA on the Job Opportunities and Earnings of Mexican-American and Hispanic-American Workers*, 32 INTERNATIONAL MIGRATION REVIEW 79, 80 (1998).

[23] *See* Pia M. Orrenius & Madeline Zavodny, *The Impact of E-Verify Mandates on Labor Market Outcomes*, 81 SOUTHERN ECONOMIC JOURNAL 947 (2015).

effect. Immigrants able to legalize their status under IRCA's amnesty provisions saw their earnings increase.[24] The 1997 Nicaraguan Adjustment and Central American Relief Act (NACARA) likewise raised earnings among men eligible for its amnesty provisions.[25]

The impact of worksite immigration enforcement actions may extend beyond unauthorized immigrants. Workers who are complements in production to unauthorized immigrants may be harmed by increased enforcement, while those who are substitutes may benefit. Evidence on how employer-based enforcement policies affect legal workers or workers as a whole is mixed. After IRCA introduced sanctions for employing unauthorized immigrants, average wages fell among U.S. manufacturing workers,[26] and fines for not complying with IRCA paperwork requirements reduced average wages across areas.[27] However, wages rose among U.S.-born Hispanic men who had at most completed high school in states that began requiring employers to use E-Verify.[28] More broadly, research suggests that unauthorized immigrants are complements to other workers, on average. An increase in the share of undocumented workers within firms and within county-by-industry cells boosted the wages of legal workers,[29] and implementation of Secure Communities, which reduced the number of unauthorized immigrants in an area, led to lower wages among skilled U.S. natives.[30]

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[24] *See* Sherrie A. Kossoudji & Deborah A. Cobb-Clark, *Coming out of the Shadows: Learning about Legal Status and Wages from the Legalized Population*, 20 JOURNAL OF LABOR ECONOMICS 598 (2002) (finding a 6% increase in wages).
[25] *See* Neeraj Kaushal, *Amnesty Programs and the Labor Market Outcomes of Undocumented Workers*, 41 JOURNAL OF HUMAN RESOURCES 631 (2006) (finding a 3% increase in real wages and 4% increase in weekly earnings).
[26] *See* Cobb-Clark, Shiells & Lowell supra note 15 at 495.
[27] *See* Richard Fry, B. Lindsay Lowell & Elhum Haghighat, *The Impact of Employer Sanctions on Metropolitan Wage Rates*, 34 INDUSTRIAL RELATIONS 464 (1995).
[28] Orrenius & Zavodny *supra* note 23.
[29] *See* Julie L. Hotchkiss, Myriam Quispe-Agnoli & Fernando Rios-Avila, *The Wage Impact of Undocumented Workers: Evidence from Administrative Data*, 81 SOUTHERN ECONOMIC JOURNAL 874 (2015).
[30] *See* Chloe N. East *et al*., *The Labor Market Effects of Immigration Enforcement*, 41 JOURNAL OF LABOR ECONOMICS 957 (2023). Secure Communities involves cooperation between state and local law enforcement, the FBI, and DHS to check the immigration status of people who have been arrested. If an arrestee has an immigration violation, ICE can request they be held until ICE can assume custody of them for potential deportation. See https://www.ice.gov/secure-communities.

Data and Methods

This study combines data from several sources to examine how immigration enforcement actions affected employment, average wages, worker turnover, and enrollment rates in two programs that help businesses determine whether workers have employment authorization.

Enforcement Actions

We created a dataset of ICE enforcement actions based on searches of the top 15 newspapers by circulation in the U.S. and official DHS ICE news releases during 2004-2016.[31] We used the articles and news releases to create a database of ICE workplace enforcement actions that included the date of the enforcement action, names of firms involved, their location and industry, and the type of enforcement action (a raid, audit, or investigation, and a fine or criminal charges that followed a worksite enforcement action). From this, we constructed a dataset of enforcement actions where each action is an observation.[32] We assigned each action to

[31] We searched Factiva.com, a comprehensive news resource from Dow Jones, for all articles in those newspapers that included the following terms: Immigration and Customs Enforcement or ICE; audit, inspect, raid, sweep, crackdown, enforcement surge, workplace enforcement, or worksite enforcement; workplace, worksite, employer, company, companies, work place, or work site; and undocumented or illegal and worker, immigrant, immigration, alien, hire, or employee. The newspapers included: USA Today, The Wall Street Journal, The New York Times, Los Angeles Times, New York Post, Newsday, Chicago Tribune, New York Daily News, Washington Post, The Denver Post, Houston Chronicle, The Dallas Morning News, Boston Globe, The Seattle Times, and Tampa Bay Times (called St. Petersburg Times prior to 2012). Only a limited number of news releases from the study period were still posted on the DHS ICE website in 2021 and 2022 when we compiled those data. We therefore used two additional sources to find ICE news releases for 2004-2016: News releases from 2004-2008 were accessed via the ICE website on the Wayback Machine (www.web.archive.org), and news releases from 2008-2016 were also accessed via the Lexis Plus legal database. Across all three sources of ICE news releases, we looked only at news releases tagged under the "Worksite" or "Labor Exploitation" topics.

[32] Some enforcement actions were mentioned in multiple news releases or articles. In the dataset we created, an action is included as a single observation, regardless of how much coverage it received. If an article mentioned multiple actions, such as a raid and a criminal charge, each action is coded as a unique observation. Additionally, if one company was raided at multiple locations, each location constitutes its own observation. For example, the Swift raids in 2006 were coded as six actions since six plants were raided on the same day.

an industry based on results from Google searches of the firm(s) involved in the action. We then collapsed the data by action, industry, and quarter.

The resulting dataset does not include all ICE workplace enforcement actions that occurred during 2004-2016, but it does capture actions that merited a DHS press release or coverage in a major newspaper. Our goal is to measure actions that might have caused employers to change their labor-related practices because of concerns about ICE enforcement actions in their industry. Smaller actions that received less coverage and therefore are not included in our dataset are presumably less likely to have caused a response among businesses other than those directly involved.

Actions that targeted workers included 285 raids across all of our sources during 2004-2016. During a typical raid, ICE arrives at a worksite unannounced and conducts background checks on all employees present that day. Workers who are determined to be legal are released, and workers who are not determined to be legal are typically arrested and taken into ICE custody and the deportation process begins.[33] Several worker-focused actions during 2004-2016 received considerable news coverage. In 2006, ICE raided six Swift & Co. meatpacking plants and arrested almost 1,300 workers, or about 10 percent of the company's workforce.[34] That same year, ICE also raided at least 40 plants across 26 states owned by IFCO systems, a pallet manufacturer.[35] In 2008, ICE raided an Agriprocessors, Inc., slaughterhouse and meatpacking plant in Postville, Iowa, and arrested nearly 400 employees.[36]

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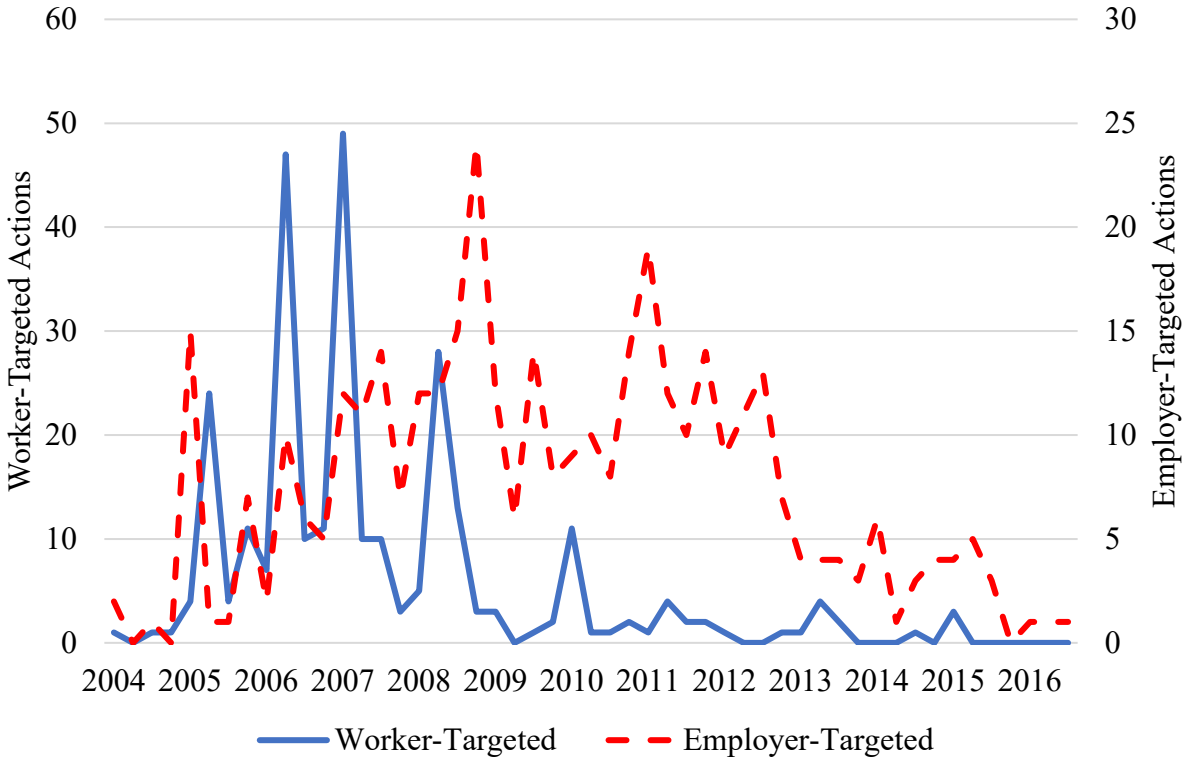
[33] National Immigration Law Center, *Worksite Immigration Raids* (Jan. 2020), https://www.nilc.org/issues/workersrights/worksite-raids/.
[34] Lynn Waltz, *The price of cheap meat? Raided slaughterhouses and upended communities*, WASHINGTON POST (Apr. 11, 2018), https://www.washingtonpost.com/news/posteverything/wp/2018/04/11/the-price-of-cheap-meat-raided-slaughterhouses-and-upended-communities/.
[35] Nicole Gaouette, *What Was Behind the Big Raid*, L.A. TIMES (Apr. 22, 2006), https://www.latimes.com/archives/la-xpm-2006-apr-22-na-immig22-story.html.
[36] Miriam Jordan, *Immigration Arrests Ex-Head of Meatpacking Plant*, WALL STREET JOURNAL (Oct. 31, 2008), https://www.wsj.com/articles/SB122540155357885623.

Actions that directly targeted the employer rather than the unauthorized workers in our dataset included 58 audits, 48 investigations, 136 instances of financial penalties stemming from worksite actions, and 135 instances of charges filed against either the company or an owner/manager of the company. During an audit, ICE requires a business to turn over I-9 forms and supporting documentation, such as payroll records and lists of current and former employees.[37] ICE then inspects those documents to determine whether there are any discrepancies, suspect documents, or technical or procedural failures.[38] If ICE determines that an employer knowingly hired or continued to employ workers who are unauthorized, such as those whose documents had discrepancies or were not confirmed by E-Verify, the employer may then face penalties. Although raids were typically more sensational and received more media attention, there was one audit that was heavily covered in the news: Chipotle was audited in 2010, and the company fired at least 450 employees in the wake of the audit.[39]

Figure 1 shows the total number of worker-targeted raids and employer-targeted actions (audits, investigations, fines, and charges) by quarter in our dataset. The surges in worker-targeted actions in 2006 and 2008 are immediately evident, as is the near-cessation of worker-targeted actions when the Obama administration began in 2009. The first Obama administration (2009-2012) continued to pursue employer-targeted actions at levels similar to the second Bush administration (2005-2008), but employer-targeted actions dwindled during the second Obama administration (2013-2016).

[37] U.S. Immigration and Customs Enforcement, *Form I-9 Inspection* (Aug. 7, 2023), https://www.ice.gov/factsheets/i9-inspection.
[38] *Id*.
[39] Lisa Baertlein, *Chipotle workers quit ahead of immigration audits*, REUTERS (Mar. 8, 2011), https://www.reuters.com/article/us-chipotle/chipotle-workers-quit-ahead-of-immigration-audits-idUSTRE72752P20110308/.

Figure 1: Number of Worker- and Employer-Targeted Immigration Enforcement Actions, 2004-2016



Notes: This figure shows the quarterly number of worker-targeted (left vertical axis) and employer-targeted (right vertical axis) immigration enforcement actions covered by major newspapers and ICE press releases.

Labor-Related Variables

To examine the impact of enforcement actions on industry employment, average wages, and worker turnover, we use data from the Census Bureau's Quarterly Workforce Indicators (QWI) program, which merges Quarterly Census of Employment and Wages (QCEW) data with data from Unemployment Insurance Earnings Records, Business Dynamics Statistics, and other Census surveys.[40] Specifically, we use seasonally adjusted quarterly data on employment and

[40] QWI data are publicly available at https://qwiexplorer.ces.census.gov/.

monthly average wages at private firms at the 3-digit NAICS classification level.[41] We examine employment, measured as the number of jobs in an industry on the last day of the quarter, and real average monthly wages, created as average monthly payroll during the quarter divided by employment at the beginning of the quarter and deflated using the consumer price index for urban wage earners (CPI-W).[42] We also use data available in the QWI on the number of hires and separations. Hires are the number of workers hired (either new or returning) during the quarter, and separations are the number of workers whose job with a given employer ended during the quarter. The data do not distinguish between voluntary and involuntary separations (quits versus fires and layoffs).

To examine the impact of ICE enforcement actions on E-Verify enrollment, we use confidential data on E-Verify enrollment from DHS. The DHS data, explained in detail elsewhere (Orrenius et al., 2020), were aggregated into the number of employers that enrolled in E-Verify in a given quarter by 2-digit NAICS industry (the most detailed industry that DHS provided). The E-Verify sign-up data are only available through the third quarter of 2015. To examine the impact on IMAGE enrollment, we created a dataset of when companies enrolled in IMAGE as announced in DHS news releases.[43] For comparability to the E-Verify sign-ups data, we assigned those companies to 2-digit NAICS industries based on information in the news releases about their line of business and Google searches. The IMAGE program was created in July 2006, so our IMAGE sign-up data are only available beginning in the third quarter of

[41] North American Industry Classification System (NAICS) assigns a code that classifies businesses or workers to an industry. The highest level of aggregation is 2-digit codes, and 3-digit codes are more disaggregated. *See* https://www.census.gov/naics/.
[42] CPI data are publicly available at https://www.bls.gov/cpi/.
[43] We exclude news releases from the Puerto Rican office of ICE about Puerto Rican companies that joined IMAGE, which account for a sizable share of IMAGE sign-ups. Excluding those sign-ups does not affect the estimated relationships between enforcement actions and IMAGE sign-up rates. There are no enforcement actions that occurred in Puerto Rico in our dataset of worksite enforcement actions.

2006.[44] For both E-Verify and IMAGE, we created employer enrollment rates by dividing the number of sign-ups in an industry by the number of establishments in that industry using QCEW data.[45]

Empirical Methodology

We examine the impact of immigration enforcement actions on businesses at the industry level using the basic OLS regression model

$$\text{Outcome}_{it} = \alpha + \beta\text{Enforcement action}_{it} + \gamma\text{Controls}_{it} + \text{Industry}_i + \text{Time}_t + \text{Trend}_{it} + \varepsilon_{it}, \quad (1)$$

where *i* indexes industry and *t* indexes time in quarterly data. We examine several *Outcome* variables for industry *i* at time *t*: employment, real average monthly wages, the number of workers hired during that quarter, the number of workers who separated during that quarter, the E-Verify sign-up rate, and the IMAGE sign-up rate. Employment, wages, hires, and separations are expressed as the natural log, which means the estimated coefficient on enforcement actions in those specifications is interpreted as a semi-elasticity (the percentage change in the dependent variable for a one-unit change in the independent variable).

The regressions include one measure of workplace immigration enforcement actions at a time. Some of these measures are indicator variables for our dataset includes a given type of enforcement action in an industry during that quarter, and other measures are the number of a given type of enforcement action in our dataset for a given industry and quarter. For example, we include either a dummy variable for whether any raids occurred in that industry that quarter or a linear variable of the number of raids. We examine both indicators and continuous variables in

[44] See https://www.ice.gov/doclib/image/pdf/image-hsi-ppt.pdf.
[45] The QCEW data are publicly available at https://www.bls.gov/cew/.

order to determine whether having any enforcement action appears to lead to changes in an industry and whether a greater number of actions appears to matter.

The regression model controls for business-cycle fluctuations at the industry level using the natural log of quarterly real GDP (gross domestic product, or value added) for that industry in all regressions.[46] The sign-up rate regressions also control for employment in the industry using the QWI data. All regressions also include a proxy for the share of workers in an industry who are unauthorized in order to control for the possibility that enforcement actions target industries that employ large numbers of unauthorized workers; previous research similarly controls for the unauthorized share of workers in an industry when examining labor market outcomes.[47] This share is proxied using the share of workers in an industry who are non-U.S. citizens from Central America or Mexico and have at most a high school education. We constructed this measure using data from the Current Population Survey.[48] The results are robust to instead using a proxy based that classifies as undocumented any non-U.S. citizen who arrived in the U.S. after 1980; was not a veteran, active-duty military, or a government employee; was not born in Cuba; and was not in an occupation requiring state or professional certification.[49]

The regression model also controls for industry fixed effects and quarter-by-year (time) fixed effects. The industry fixed effects control for time-invariant industry-specific factors, while the time fixed effects control for shared business cycle effects. The time fixed effects also capture the average effect of immigration enforcement actions across all industries in a given quarter. We include industry-specific linear time trends; the results shown here are robust to

[46] The real GDP by industry data are publicly available at https://www.bea.gov/data/gdp/gdp-industry.
[47] Hotchkiss & Quispe-Agnoli *supra* note 16 at 44.
[48] Current Population Survey data are publicly available from IPUMS at https://cps.ipums.org/cps/.
[49] We also constructed this proxy using CPS data from IPUMS. Use of a proxy like this was popularized by Borjas *supra* note 16.

omitting the trends. Our estimated coefficients on the measure of immigration enforcement actions thus give the average effect of an enforcement action within the industry in which it occurs, controlling for the average effect across all industries and for smooth trends within industries. The regression model estimates the impact of enforcement actions during the quarter that those actions occur. Standard errors are clustered at the industry level to control for unobserved industry-level heterogeneity.

Table 1 shows means for our entire sample of industries. Means for the enforcement action measures are shown at both the 2- and 3-digit NAICS levels since the E-Verify and IMAGE sign-up rate analysis is conducted at the 2-digit level whereas the employment, wages, and turnover-related analysis is conducted at the 3-digit level. The sample means for worker-targeted actions, for example, indicate that 9 percent of 2-digit industries had at least one raid during our sample period in a randomly chosen quarter. The average quarterly number of raids is 0.24 across all industries at the 2-digit level. (Sample means for the measures of enforcement actions are smaller at the 3-digit level than at the 2-digit level since there are more industry-by-quarter observations equal to 0 when industry is less aggregated.) An industry was more likely to experience an employer-targeted action than a worker-targeted action. This is not surprising since almost two-thirds of our sample period is during the Obama administration, when raids were infrequent. There is considerable variation in our measures of enforcement actions.

Results

Worksite enforcement actions appear to increase employment. As the estimates in column 1 of Table 2 show, employment rose by about 0.4 to 0.5 percent, on average, above the industry trend during the quarter in which an industry experienced any enforcement action. The estimated

magnitude of the effect of experiencing any enforcement action is fairly similar across all of the types of enforcement actions we examine. In results not shown here, the results are also similar when limiting the data to just industries that experienced an enforcement action during our sample period.

The continuous variables that measure the number of enforcement actions also point to positive employment effects, with employer-targeted actions having considerably larger marginal employment effects than worker-targeted actions (column 2 of Table 2). The point estimate indicates that a raid raised industry employment by about 0.001 percent during that quarter relative to its trend. Each audit raised industry employment by about 0.28 percent, in contrast. Investigations, fines, and charges also have considerably larger marginal effects than raids.

Enforcement actions appear to have reduced average wages. Average wages fell relative to the industry trend if an industry experienced an enforcement action during a given quarter (column 3 of Table 2). The marginal effect of a raid is again much smaller than the marginal effect of an employer-targeted action (column 4).

Enforcement actions boosted worker turnover, with positive effects on both the number of workers hired and the number of workers who separated from their job. As columns 1 and 3 of Table 3 show, hires and separations rose within industries during quarters in which any enforcement action occurred. Hires and separations were about 0.5 to 0.8 percent higher during a quarter in which an industry experienced an enforcement action. The marginal effect of employer-targeted actions is again considerably larger than the marginal effect of worker-targeted actions (columns 2 and 4). Each raid boosted hires and separations by about 0.001 percent, whereas each audit or investigation boosted hires and separations by about 0.4 to 0.5 percent. Each fine or charge boosted hires and separations by about 0.3 percent.

Results by Presidential Administration

Different political administrations have different priorities. We therefore examine whether the impact of enforcement actions differs between the Bush and Obama administrations. To do this, we ran the regressions using data for only 2004-2008 or only 2009-2016. The first period, which encompasses roughly the second half of the Bush administration, was characterized by a surge in worker- and employer-targeted enforcement actions, some of them high-profile. The Obama administration scaled back raids considerably; it initially maintained a level of employer-targeted actions similar to the Bush administration, and then reduced those during Obama's second term.

As Tables 4 and 5 show, the general pattern of the results in both administrations is similar to our main results: enforcement raised employment and worker turnover, and it reduced wages. Overall, employer-targeted actions continue to appear to be more effective than worker-targeted actions, with larger estimated coefficients on employer-targeted actions than on worker-targeted actions in most specifications. That said, the results point to some interesting variation across administrations. Employer-targeted actions generally had larger effects during the Bush administration, whereas worker-targeted action had effects only during the Obama administration. For example, experiencing any employer-targeted action is associated with a 0.6 percent increase in employment during 2004-2008, compared with a roughly 0.4 percent increase in 2009-2016 (Table 4, columns 1 and 2). None of the results in Tables 4 and 5 show a significant impact of worker-targeted actions during 2004-2008 even though that period was marked by high-profile worksite raids, like those at Swift and Agriprocessors.

Interpretation

Taken all together, the results indicate that employment rose slightly when an industry experienced enforcement actions, while wages fell slightly. Worker turnover rose, with both hires and separations up. Employer-targeted actions tended to have larger impacts than worker-targeted actions. There are several possibilities consistent with these results. First, as enforcement increased in their industry, some employers may have fired some unauthorized workers who were already on the books and hired legal workers to replace them. This would be consistent with the increase in separations and hires. If those new legal workers are less productive than the more-experienced unauthorized workers, employers would need to increase their head count in order to maintain the same level of production. Commensurate with their lower productivity, those legal workers should earn less than the more-experienced unauthorized workers they replace. This would push down average wages.

A second possibility is that some employers moved some unauthorized workers onto the books when they saw enforcement increase in their industry. Those unauthorized workers might have submitted fraudulent documents to satisfy E-Verify or IMAGE, if needed. Moving some unauthorized workers onto the books would cause employment as recorded in the QWI data to rise. Recorded hires and separations would rise as well if those unauthorized workers have higher turnover than other workers and are now included in the QWI data. Meanwhile, average wages would fall if unauthorized workers are paid less than other workers and more unauthorized workers get included in the QWI data when enforcement intensifies.

A third possibility is that some employers engaged in "labor hoarding" when they saw enforcement activity increase. Employers that feared they were going to lose workers because of stepped-up enforcement may have tried to maintain higher staffing levels so that they could

continue their operations if they were raided or audited. The increase in employment and hiring is consistent with this; the increase in separations also makes sense if labor hoarding ended within the same quarter. The drop in average wages is then likely a compositional effect since newly hired workers typically earn less than more-experienced workers.

The most likely scenario seems a combination of the first two scenarios: in response to tougher enforcement, some employers dismissed unauthorized workers who were employed off the books and hired legal workers on the books. Recorded employment then increased slightly. Those new, legal workers earned less than existing workers who are already on the books, so average wages fell slightly. Some of the new, legal workers were poor fits, so worker turnover increased slightly. Importantly, although the estimated impacts here are fairly small, they are too large to be solely due to losing undocumented immigrant workers who were arrested during a raid or dismissed after an audit at firms that directly experienced an enforcement action. Our results point to indirect effects, or spillovers, with businesses changing their practices when they see enforcement intensify within their industry.

Our results by administration indicate that worker-targeted actions had a significant impact only during the Obama administration, while employer-targeted actions tended to have larger impacts during the second Bush administration than during the Obama administration. This pattern suggests that actions that deviate from expectations—that a Republican administration will be employer-friendly and a Democratic administration will be worker-friendly—may have larger impacts.

E-Verify and IMAGE Sign-ups

We find little evidence that enforcement actions affect whether businesses enroll in E-Verify or IMAGE. As column 1 of Table 6 shows, whether an industry experienced any type of enforcement action that quarter is not significantly related to the E-Verify sign-up rate. Looking at the continuous measures of enforcement actions in column 2, an increase in the number of investigations appears to reduce the E-Verify sign-up rate, but the number of other actions is not significantly related to the E-Verify sign-up rate. The number of enforcement actions is also not significantly related to the IMAGE sign-up rate for any of the actions we examine (columns 3 and 4).

Our failure to find that enforcement actions within an industry increase E-Verify or IMAGE sign-up rates is somewhat surprising given that participating in these programs can reduce businesses' risk of being charged with hiring unauthorized workers. In particular, ICE has pledged to not penalize IMAGE participants that discover they have unauthorized workers when businesses engage in the ICE I-9 form audit that is required when they join IMAGE.[50] Of course, participants must fire those workers. This may discourage some businesses from signing up for the program. Our results are consistent with businesses either not changing their practices or, if anything, becoming more reluctant to call attention to themselves by signing up for E-Verify or IMAGE when their industry is experiencing enforcement actions. We also note that the predominance of null effects in the sign-up results may be due to the fact that those results are at the 2-digit NAICS level because of data limitations with the sign-ups data.

[50] *See* https://www.ice.gov/outreach-programs/image.

Conclusion

Little is known about the impact of immigration enforcement on businesses, partly as a result of the dearth of data on enforcement at the firm level. This study helps fill this gap in the literature by with a novel dataset of enforcement actions reported in major newspapers and ICE news releases. Although ICE enforcement actions directly affect very few businesses, those actions can receive considerable attention and may have industry-wide effects. Businesses that hear about raids, audits, and investigations and the fines and criminal charges that eventually result from enforcement actions may respond by trying to change their practices related to hiring unauthorized workers.

We find that employment, hires, and separations all rise slightly when enforcement activity increases in an industry, while average monthly wages fall slightly. A potential explanation for this pattern is that employers fired their unauthorized workers or shifted some of them onto the books when enforcement intensified in their industry. A compositional change among workers may account for the drop in average wages. Alternatively, employers may have been able to pass along to workers some of the higher costs they incur as a result of immigration enforcement. Micro data that links employees and employers is necessary to better determine what happened to existing unauthorized workers and their employers in the wake of enforcement actions.

We also find that businesses tended to be more responsive to measures that targeted employers. Worker-targeted raids elicited smaller effects than audits, fines, investigations, and charges on employment, wages, and turnover. Although the results suggest employer-targeted enforcement have larger effects, there may be impacts that are outside of the scope of this study. For example, enforcement actions that target workers may spread fear among immigrants and act

as a deterrent to working or migrating to the U.S. in the first place. In any case, the effects we measure tend to be small, suggesting that worksite enforcement when deployed at the intensity used by the Bush or Obama administrations had little impact on the overall economy even though it did have a measurable impact within targeted industries.

Our results suggest that businesses do not respond to enforcement actions by signing up for E-Verify or IMAGE. Since participating in those programs can protect employers from penalties for hiring unauthorized workers, this result may be surprising. However, participating employers may have more difficulty hiring workers and have to pay higher wages to get workers, as well as incur personnel costs associated with screening workers. We show that employers did not sign up for those programs in greater numbers when they had more incentive to do so. Employers' reluctance to participate in those programs suggests that doing so is costly. This finding, combined with the likelihood that many unauthorized workers are able to circumvent the programs by using fraudulent documents,[51] may give policymakers pause about requiring all employers to use those programs.

[51] *See* Zota *supra* note 4.

Table 1: Descriptive Statistics

	2-digit NAICS Level		3-digit NAICS Level	
Enforcement Action	Mean	S.D.	Mean	S.D.
Worker-Targeted Actions (raids)				
Any Action	0.090	(0.287)	0.026	(0.160)
Number of Actions	0.239	(1.761)	2.406	(36.602)
Employer-Targeted Actions (audits, investigations, fines, and charges)				
Any Action	0.153	(0.360)	0.048	(0.214)
Number of Actions	0.356	(1.114)	0.089	(0.529)
Audits				
Any Action	0.036	(0.186)	0.011	(0.104)
Number of Actions	0.048	(0.297)	0.012	(0.129)
Investigations				
Any Action	0.041	(0.199)	0.009	(0.095)
Number of Actions	0.049	(0.266)	0.011	(0.125)
Fines				
Any Action	0.080	(0.271)	0.021	(0.144)
Number of Actions	0.136	(0.558)	0.034	(0.322)
Charges				
Any Action	0.080	(0.271)	0.021	(0.137)
Number of Actions	0.124	(0.601)	0.322	(0.287)
Employment			1,336.1	(1,818.4)
Wages			4,019.1	(2,003.0)
Hires			254.8	(548.7)
Separations			251.4	(540.1)
E-Verify Sign-up Rate	1.403	(1.560)		
IMAGE Sign-up Rate	0.060	(0.428)		
Share of Workers Undocumented	0.042	(0.048)	0.039	(0.045)
Industry Real GDP	595.9	(476.9)	520.1	(1,016.1)
Observations	752		3,548	

Note: Wages is real average monthly earnings per worker, deflated using the CPI-W. Employment, hires, and separations are expressed in thousands. E-Verify and IMAGE sign-up rates are the number of sign-ups per 1,000 firms. S.D. is the standard deviation. The number of observations for IMAGE is 642.

Table 2: Effect of Enforcement Actions on Wages and Employment

	Employment		Wages	
	Any Action	# of Actions	Any Action	# of Actions
	(1)	(2)	(3)	(4)
Worker-Targeted Actions	0.481**	0.001*	-0.159**	-0.001**
	(0.221)	(0.000)	(0.060)	(0.000)
Employer-Targeted Actions	0.463**	0.177***	-0.179**	-0.066***
	(0.181)	(0.054)	(0.058)	(0.016)
Audits	0.341***	0.279**	-0.092**	-0.083**
	(0.162)	(0.122)	(0.042)	(0.029)
Investigations	0.492*	0.354**	-0.213***	-0.146***
	(0.268)	(0.166)	(0.069)	(0.048)
Fines	0.461***	0.246***	-0.179***	-0.097***
	(0.153)	(0.075)	(0.057)	(0.018)
Charges	0.545***	0.186***	-0.214***	-0.067*
	(0.239)	(0.072)	(0.055)	(0.025)

Note: Shown are estimated coefficients on the indicated enforcement variable. Each entry is from a separate regression and the dependent variable is expressed in natural logs. Regressions include industry and time fixed effects, industry linear time trends, a proxy for the share of workers who are undocumented in an industry, and industry real GDP. Standard errors clustered on industry are in parentheses. Significance indicated at the *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.1$ levels. The number of observations is 3,548.

Table 3: Effect of Enforcement Actions on Hires and Separations

	Hires		Separations	
	Any Action	# of Actions	Any Action	# of Actions
	(1)	(2)	(3)	(4)
Worker-Targeted Actions	0.662**	0.001**	0.659**	0.001**
	(0.299)	(0.001)	(0.303)	(0.001)
Employer-Targeted Actions	0.641**	0.243***	0.634**	0.239***
	(0.244)	(0.071)	(0.248)	(0.074)
Audits	0.478**	0.386**	0.459***	0.376**
	(0.215)	(0.165)	(0.213)	(0.161)
Investigations	0.707*	0.506**	0.679*	0.487**
	(0.347)	(0.209)	(0.353)	(0.212)
Fines	0.593***	0.323***	0.584***	0.315***
	(0.213)	(0.010)	(0.219)	(0.104)
Charges	0.767***	0.260***	0.773***	0.259***
	(0.219)	(0.059)	(0.221)	(0.063)

Note: Shown are estimated coefficients on the indicated enforcement variable. Each entry is from a separate regression and the dependent variable is expressed in natural logs. Regressions include industry and time fixed effects, industry linear time trends, a proxy for the share of workers who are undocumented in an industry, and industry real GDP. Standard errors clustered on industry are in parentheses. Significance indicated at the *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.1$ levels. The number of observations is 3,548.

Table 4: Effect of Enforcement Actions on Wages and Employment, by Time Period

	Employment				Wages			
	Any Action		# of Actions		Any Action		# of Actions	
	2004-08	2009-16	2004-08	2009-16	2004-08	2009-16	2004-08	2009-16
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Worker-Targeted Actions	0.416	0.567**	0.001	0.004	-0.083	-0.212**	-0.000	-0.001
	(0.294)	(0.195)	(0.000)	(0.004)	(0.076)	(0.087)	(0.000)	(0.002)
Employer-Targeted Actions	0.609**	0.386**	0.182**	0.173**	-0.209***	-0.136**	-0.053*	-0.064***
	(0.276)	(0.168)	(0.067)	(0.067)	(0.068)	(0.062)	(0.026)	(0.016)
Audits	0.403	0.289*	0.403	0.231**	-0.085	-0.066	-0.085	-0.061**
	(0.254)	(0.143)	(0.254)	(0.099)	(0.068)	(0.043)	(0.068)	(0.028)
Investigations	0.824**	0.259	0.562***	0.277	-0.255***	-0.170**	-0.153***	-0.136**
	(0.327)	(0.266)	(0.073)	(0.263)	(0.068)	(0.078)	(0.049)	(0.054)
Fines	0.553***	0.435**	0.335***	0.235**	-0.231***	-0.140**	-0.138**	-0.079***
	(0.098)	(0.182)	(0.061)	(0.087)	(0.061)	(0.059)	(0.050)	(0.021)
Charges	0.669**	0.440***	0.151**	0.262***	-0.228***	-0.171**	-0.041	-0.103***
	(0.288)	(0.144)	(0.054)	(0.079)	(0.075)	(0.066)	(0.024)	(0.032)

Note: Shown are estimated coefficients on the indicated enforcement variable. Each entry is from a separate regression and the dependent variable is expressed in natural logs. Regressions include industry and time fixed effects, industry linear time trends, a proxy for the share of workers who are undocumented in an industry, and industry real GDP. Standard errors clustered on industry are in parentheses. Significance indicated at the *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.1$ levels.The number of observations is 1,080 for 2004-08 and 1,740 for 2009-16.

Table 5: Effect of Enforcement Actions on Hires and Separations, by Time Period

	Hires				Separations			
	Any Action		# of Actions		Any Action		# of Actions	
	2004-08	2009-16	2004-08	2009-16	2004-08	2009-16	2004-08	2009-16
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Worker-Targeted Actions	0.563	0.733**	0.001	0.006	0.550	0.737**	0.001	0.006
	(0.401)	(0.258)	(0.001)	(0.005)	(0.409)	(0.263)	(0.001)	(0.006)
Employer-Targeted Actions	0.891**	0.483*	0.261***	0.214**	0.873**	0.477*	0.253**	0.212**
	(0.355)	(0.232)	(0.087)	(0.090)	(0.365)	(0.236)	(0.095)	(0.090)
Audits	0.597*	0.359**	0.597*	0.287*	0.570	0.352*	1.136***	0.288**
	(0.327)	(0.197)	(0.327)	(0.136)	(0.335)	(0.193)	(0.205)	(0.132)
Investigations	1.171**	0.357	0.788***	0.368	1.130**	0.335	0.764***	0.349
	(0.419)	(0.338)	(0.087)	(0.315)	(0.446)	(0.332)	(0.103)	(0.304)
Fines	0.737***	0.514*	0.457***	0.287**	0.751***	0.504*	0.471***	0.278**
	(0.162)	(0.252)	(0.088)	(0.114)	(0.169)	(0.259)	(0.097)	(0.118)
Charges	0.981**	0.562**	0.220***	0.318**	0.957**	0.578**	0.210***	0.329**
	(0.366)	(0.206)	(0.072)	(0.116)	(0.381)	(0.201)	(0.079)	(0.113)

Note: Shown are estimated coefficients on the indicated enforcement variable. Each entry is from a separate regression and the dependent variable is expressed in natural logs. Regressions include industry and time fixed effects, industry linear time trends, a proxy for the share of workers who are undocumented in an industry, and industry real GDP. Standard errors clustered on industry are in parentheses. Significance indicated at the *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.1$ levels. The number of observations is 1,080 for 2004-08 and 1,740 for 2009-16.

Table 6: Effect of Enforcement Actions on E-Verify and IMAGE Sign-Up Rates

	E-Verify		IMAGE	
	Any Action	# of Actions	Any Action	# of Actions
	(1)	(2)	(3)	(4)
Worker-Targeted Actions	0.019	0.007	-0.053	-0.001
	(0.097)	(0.008)	(0.031)	(0.001)
Employer-Targeted Actions	-0.168	-0.010	0.016	0.009
	(0.029)	(0.018)	(0.028)	(0.008)
Audits	-0.098	-0.060	-0.001	0.000
	(0.083)	(0.049)	(0.025)	(0.014)
Investigations	-0.223	-0.157**	0.015	0.014
	(0.130)	(0.073)	(0.032)	(0.022)
Fines	-0.041	-0.017	0.035	0.023
	(0.109)	(0.029)	(0.036)	(0.015)
Charges	-0.081	0.027	-0.023	-0.012
	(0.070)	(0.026)	(0.024)	(0.014)

Note: Shown are estimated coefficients on the indicated enforcement variable. Each entry is from a separate regression. Regressions include industry and time fixed effects, industry linear time trends, a proxy for the share of workers who are undocumented in an industry, and industry real GDP and employment. Standard errors clustered on industry are in parentheses. Significance indicated at the *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.1$ levels. The number observations is 752 for E-Verify specifications, and 642 for IMAGE specifications.