

THE SPILLOVER OF MEXICAN-BORN IMMIGRANTS ON SOUTHWEST STATES  
DUE TO THE LEGAL ARIZONA WORKERS ACT

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**Abstract**

At the start of 2008, in Arizona, undocumented workers were faced with a complicated decision of whether or not to emigrate out of the state or to stay and face harsher labor laws. The Legal Arizona Workers Act was put in effect on January 1, 2008. This law made it necessary for all employers to verify their worker's authorization status using E-Verify. As a result, there was a significant amount of emigration out of Arizona by unauthorized workers. Similar to the self-selection process narrowed down by Chiquiar and Hanson (2002), the sets of decisions made by this leaver group can be made clearer by studying where they moved. Building on Liou and Halliday (2015), this paper continues to focus on populations of Mexican-born workers living in the southwest in order to model an estimated movement of the leaver group. Ultimately, the model estimates that Texas and New Mexico are the states most likely to have had spillovers. Colorado and Nevada were the least likely to see spillovers. These results are in line with what is known about the movements of undocumented workers in current research; that workers leaving Arizona as a result of LAWA were focused on a move towards the state with, the highest share of their occupation, coupled with the least risk, and the highest population of undocumented immigrants.

KEYWORDS: (Geographic Labor Mobility, Immigration law, Immigrant Workers, LAWA)

JEL CODES: (J61, K37, F66)

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## TABLE OF CONTENTS

### ABSTRACT

1	INTRODUCTION.....	5
	LITERATURE REVIEW.....	5
	1.1 General Impacts of Immigration.....	5
	1.2 The Immigration Reform and Control Act (1986).....	8
	1.3 IRCA Effects.....	10
	1.4 The Legal Arizona Workers Act (2008).....	13
	1.5 Impacts of LAWA.....	15
	1.6 Former Research on Spillovers.....	16
2	THEORY.....	21
	2.1 BASE MODEL.....	21
	2.2 MODIFICATIONS.....	21
	2.2.1 Empirical Model.....	22
	2.2.2 Variables.....	23
	2.3 DISCUSSION OF CONFOUNDING EFFECTS.....	23
3	DATA.....	26
	3.1 SUMMARY STATISTICS.....	27
	3.2 ADVANTAGES AND LIMITATIONS.....	27
	Unauthorized Workers vs. Mexican-Born Immigrants.....	28
4	RESULTS.....	29
	REGRESSION ANALYSIS.....	34
	4.1 Discussion of Results.....	37
5	CONCLUSION.....	39
	REFERENCES.....	43

## Introduction

### General impacts of immigration

Economically, the benefits of immigration on a host country are long term and widely distributed. These benefits can often be lost in the negatives which, despite being short-term, are strenuous on people at a local level.<sup>1</sup> These negatives are a strong driver for legislation that bars economic migrants from moving to a new host country. More often than not, negative social effects of immigration can drive legislation faster than benefits can be realized. While a percentage of the population will switch jobs and take different pay in the short-term, in the long term, it has been shown that there is no effect on wages and a somewhat drastically good effect on output. Up until recently, it has been hard to take these conclusions as factual due to the lack of an explanation. Three key studies, David Card (1990), Giovanni Peri (2014), and Bodvarsson, Van den Berg, and Lewer (2008), will begin to illuminate these assertions as truths.

David Card, in his 1990 study, “The impact of the Mariel Boatlift on the Miami labor market,” finds little to no effect on wages of the labor market. Card observes through a difference-in-difference study that the Mariel Boatlift induced an increase to the overall labor force by 7%. Card compares Miami to a like city in order to observe two differences: how the two cities compared before the boatlift, and how they both compared after. Card proposes a few explanations as to why there was a 7% increase with no adverse effects. One hypothesis is that the Marielitos could have displaced other immigrants that were going to move to Miami. A second hypothesis, and one that certainly holds true in more up to date research is that there was a shuffling of jobs between the new migrants and low skilled natives. While there was growth in

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<sup>1</sup>This includes research by Örn B. Bodvarsson, Hendrik F. Van den Berg, and Joshua J. Lewer in their study, “Measuring immigration's effects on labor demand: A reexamination of the Mariel Boatlift.” Another is Giovanni Peri’s paper, “Do Immigrant Workers Depress the Wages of Native Workers?”

industries that require low-skilled labor, natives most likely took different jobs, for example, in communications, that required more human capital and left their past jobs open. He notes one reason the effect may have been so minimal was that Miami is more accustomed to irregularly big influxes of immigrants. In later studies, there is even more evidence and elaborate reasoning as to why there was no long-term negative effects from the Mariel Boatlift.

Giovanni Peri (2014), offers more explanation as to why former research gives no evidence of wage-depressing effects due to immigration. Peri explains that immigrants are absorbed into the receiving economy through a series of adjustments by firms and other workers. Peri states, “Once these adjustments are accounted for, the wages of native workers, even workers with skills similar to those of immigrants, do not change much in response to immigration.”<sup>2</sup> Peri continues to note two key findings that should palliate the minimal adverse labor effects. Firstly, while some studies find a negative effect, most do not. Secondly, tying in with Card; the negative effects hit the recent immigrants harder than the native population. To continue with this fact, the most adverse effects to be noted, specifically, are the effect of wages on earlier immigrants. Peri concludes that there was a 6.7% reduction in the wages of earlier immigrants between 1990 and 2006. This is entirely attributed to the fact that newcomers are more likely to be substitutes for earlier immigrants.<sup>3</sup> In this work Peri reaffirms and builds on Card’s hypotheses.

Bodvarsson, Van den Berg, and Lewer (2008) do the same in revisiting the Mariel Boatlift, however, this time offer more evidence as to why David Card’s conclusions are correct. The most prominently used explanation for the absence of negative long-term effects is that the demand effect outweighs the supply effect. An increase in consumption from the influx of

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<sup>2</sup> Peri, Giovanni. "Do immigrant workers depress the wages of native workers?." *IZA world of Labor* (2014), 2.

<sup>3</sup> Bansak, Cynthia, Nicole B. Simpson, and Madeline Zavodny. *The economics of immigration*. Routledge, 2015, 188.

immigrants causes an increase in overall demand. This demand effect consequently increases employment in the economy to the extent that the supply of labor is absorbed. Additionally, employment increases due to more freedom for natives to pursue jobs than before. This is due to the higher supply of low-skill labor that comes with a large influx of migrants. For example, this labor can increase the prevalence of child care and decrease the price.<sup>4</sup> In turn, higher-skilled natives are freed up to pursue work. In their concluding remarks, Bodvarsson, Van der Berg, and Lewer note, in fact, “the effect of immigration on native white wages is positive and significant.” More than wages, fiscally, the worry is that migrants stressing the welfare/ health and medical recourses while not contributing. However, there is a consensus among scholars that high-skilled migrants make a substantial fiscal contribution to their host countries.<sup>5</sup> In addition low skilled migrants that settle permanently impose a negligible impact on tax payers. Incredibly, the labor force participation among foreign-born men exceeds that of the native born implying even more contribution than the locals.<sup>6</sup>

Despite current research that demonstrates overwhelmingly that immigrants do not have a negative effect on the economy, countries are still enacting legislation that attempts to deter immigration. Illegal immigration has been one of the largest targets for this legislation. While there is a long history of deterring illegal immigration, it had not been until recent that the United States enlisted employers in their action.

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<sup>4</sup> Goldin, Ian, Geoffrey Cameron, and Meera Balarajan. *Exceptional people: How migration shaped our world and will define our future*. Princeton University Press, 2012. Pg. 164-165.

<sup>5</sup>Ibid., 169.

<sup>6</sup>Ibid., 170-171.

## **The Immigration Reform and Control Act (1986)**

While the United States federal government has been targeting illegal immigration for a long time, it was not until recently that the government began deterring migrants through employment. In 1986, Congress passed the Immigration Reform and Control Act which, among other provisions, prohibited the employment of unauthorized aliens. This act attempted to decrease the employment of unauthorized workers by creating a national system for verifying whether prospective employees were authorized to work.<sup>7</sup> This was the creation of the I-9 form. “Congress instructed the Attorney General to create a form on which an employer would attest, under penalty of perjury, that it had verified that an employee was authorized to work. *Id.* The prospective employee was also required to swear that he or she is a United States Citizen or an alien lawfully authorized to obtain employment in the United States. *Id.*” The worker must swear that they are either, “a citizen or national of the United States, a lawful permanent resident alien, or an alien authorized to work in the United States.” Several different documents can be used to prove authorization. The I-9 form must be held by the employers indefinitely as proof that this process was done. This legislation is codified at 8 U.S.C. § 1324a(f), 18 U.S.C. § 1546. Later, in 1990, the Immigration Act was passed which added a range of civil penalties for fraud committed by employees in the Form I-9 process. These are codified at 8 U.S.C. § 1324c.

The 1990 Immigration act added a range of criminal penalties put in place for persons that knowingly forge, counterfeit, or alter any of the documents prescribed for proof of identity or employment authorization.<sup>8</sup> The penalties for violating these laws can be criminal penalties (where there has been a pattern or practice of violations), civil fines, debarment of government

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<sup>7</sup> Campbell, David G., “Puente Arizona, et al., Plaintiffs, v. Joseph M Arpaio, et al., Defendants.” *Lexis Nexis*. November 22, 2016. Page, 2.

<sup>8</sup> Campbell, David G., “Puente Arizona, et al., Plaintiffs, v. Joseph M Arpaio, et al., Defendants.” *Lexis Nexis*. November 22, 2016. Page, 3.



contracts, or immigration consequences. As of 2016, the penalties are still rising. It can be found on Lexis Nexis that, on July 9th, 2016, JD Supra Business Advisor for the State of Texas issued a news release entitled, “Texas: Employers Beware: DOJ Nearly Doubled Civil Penalties for IRCA Violations.” It was on June 30th of last year, 2016, that the DOJ “published an Interim Final Rule adjusting civil monetary penalties for immigration related employment violations set forth in the Immigration Reform and Control Act of 1989 (IRCA).”<sup>9</sup> Improper completion and retention of I-9 forms and unfair immigration-related employment practices can cost employers thousands of dollars in fines.<sup>10</sup> As seen further in the DOJ news release, the fine minimums and maximums were increased by thousands of dollars.

These penalties are often justified under several claims; that these laws are necessary to discourage discrimination, bar unfair market advantages, and lessen labor market incentives to migrate illegally. The second and third justifications are questionable, as there is a lack of research backing them up. An example of the second justification in action can be seen in a sentencing report of a Denver paving company. In a 2014 ICE report, Kumar C. Kibble, special agent in charge of HSI Denver, said, “Homeland Security Investigations helps to ensure that these unscrupulous employers don’t gain an unfair advantage over their competition by knowingly hiring illegal workers who are paid less.”<sup>11</sup> This claim may not hold weight. For example, it might be that the only way to compete is to hire cheaper illegal labor.

There also has been little to no research backing up first and second justification’s effectiveness. One main issue, brought up by Hill and Pearce (1990), is the fact that there is a

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<sup>9</sup> JD Supra Business Advisor, “Texas: Employers Beware: DOJ Nearly Doubles Civil Penalties for IRCA Violations,” *State of Texas News Release*. July 9, 2016. Page 1.

<sup>10</sup> *Ibid.*, 1.

<sup>11</sup> U.S. Immigration and Customs Enforcement (USCIS). “Denver Paving Company Sentenced for Violating the Law by Hiring Illegal Aliens,” *Worksite Enforcement: News Releases*. 1/1. Published: 01/31/2014. Accessed: 12/10/2016.

limited budget in enforcing these laws. It is crucial to know where the burden of this legislation falls as unintended consequences can result. Much like other policies, we will see that these laws are susceptible to corruption.

Theoretically, employers could impose their penalties on unauthorized workers by decreasing wages to lower than they already are. These laws are not only ineffective at lowering discrimination, but in fact can increase discrimination. There have been issues that should certainly raise concerns including, in late 2014 a case heard by the supreme court of Delaware, *Jose Campos v. Daisy construction company*.<sup>12</sup> The company was in fact using these laws to deny Jose Campos workers compensation for injury, claiming that he was not a true employee of the company as he was unauthorized to work in the United States. There are additional issues with enlisting companies to fight unauthorized work and then subsequently prosecuting the same companies. By investigating the outcomes of the IRCA, it will be made clear why states have taken it upon themselves to enact their own more specific immigration legislation.

### **IRCA Effects**

In a 2006 article, released on Lexis Nexis, “Deputizing – and then prosecuting – America’s businesses in the fight against illegal immigration,” Green and Ciobanu write about the paradox revolving around the federal government’s sanctions on employment. The IRCA has led to a significant upsurge in the number of federal criminal prosecutions in the recent years leading up to 2006. In fact, the article points out, between 2000 and 2004, the number of federal criminal cases increased by over one half (16,724 to 37,854). This made immigration prosecutions the single largest category of federal crimes, surpassing even drug prosecutions.<sup>13</sup> Despite the

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<sup>12</sup> Strine, Chief Justice, “*Joes Campos v. Daisy Construction Company*” *In the Supreme Court of the State of Delaware*. Submitted: September 24, 2014. Decided: November 13, 2014.

<sup>13</sup> Green, Thomas C., and Ileana M. Ciobanu. "Deputizing-and then Prosecuting-America's Businesses in the Fight Against Illegal Immigration." *Immigr. & Nat'lity L. Rev.* 27 (2006): 203, 1.

upsurge in prosecutions, we will see that the IRCA sanctions are not effective. The aforementioned article points out that the main problem is with failure to identify counterfeit documents. While the IRCA required employers to visually examine an applicant's identification and employment verification documents, these are readily available as counterfeits. An employer could not do more or less than ask to see these documents.<sup>14</sup> This is one of many reasons as to why the IRCA is unsuccessful. The IRCA often does more damage than good. The article points out that in many cases the government's poor cooperation with companies led to millions wasted in unnecessary investigation costs.<sup>15</sup>

Hill and Pearce (1990) was one of the studies that emerged soon after the enactment of the IRCA that spoke to the effectiveness of the employer sanctions on wages of the unauthorized workforce population. This paper is still relevant as some of their main points hold true and can be related to the effects of E-Verify. Hill and Pearce (1990), predict how an optimal budgeting of enforcement would affect wages of low skilled workers. They conclude that for sanctions to increase the real wages of legal low-skilled workers by 10 percent, illegal and legal low-skill labor must be highly substitutable and the law must be enforced well enough to reduce the illegal working population by one-half.<sup>16</sup> The effectiveness of restrictive laws on immigration are highly contingent on the budget allocated to enforcing them. These sanctions ended up being quite negligible in curbing illegal immigration to the United States and ineffective at stopping employment as has been demonstrated by Green and Ciobanu. In fact, it can be seen on TRAC that the latest available data from the Justice Department show that during FY2016 the government reported just one new immigration prosecution with the lead charge of 08 USC

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<sup>14</sup> Ibid., 2.

<sup>15</sup> Ibid., 6.

<sup>16</sup> Hill, John K., and James E. Pearce. "The incidence of sanctions against employers of illegal aliens." *Journal of Political Economy* 98, no. 1 (1990): 28-44. Page 43.

1324a – Unlawful employment of aliens.<sup>17</sup> This case was in Salt Lake City, Utah. These prosecutions have been increasingly rare. Six years ago there were 13 cases meaning that fiscal year 2016 is down 92% since 2011.

Cobb-Clark, Shiells, and Lowell (1995) take a similar but more in depth approach to estimating the impact of the IRCA employer sanctions. Here, the modeling is more comprehensive than Hill and Pearce (1990) by taking into account the effects of IRCA legalization. This study considers the fact that the IRCA was negotiated by simultaneously legalizing many unauthorized workers already present in the U.S. labor market. Those who could demonstrate continuous employment since 1982 were granted legal residence status during an application period spanning 1987-88.<sup>18</sup> They argue that this legalization must be separately identified from the sanctions. While their results are insightful, they are left with significant uncertainty.

Even with their uncertainty and new outlook, they draw similar conclusions to Hill and Pearce (1990) concerning the sanctions effectiveness. They focus on the manufacturing sector as it is one of the largest industries employing unauthorized immigrants. They cite that, “In fact, the largest single group of newly legalized workers, 30%, were employed in manufacturing at the time they filed their legalization applications.”<sup>19</sup> Their results show that 3 years after IRCA was enacted, the sanctions had little effect on the hourly earnings of U.S. production workers. Finally, Cobb-Clark, Shiells, and Lowell (1995) argue that, “If employer sanctions are to benefit U.S. workers they must do so by reducing the flow of illegal entrants. Studies suggest that

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<sup>17</sup> Clearinghouse, Transactional Records Access. "Immigration prosecutions for 2016." (2017). Accessed: February 2 2017.

<sup>18</sup> Hill, Pearce, "The incidence of sanctions against employers of illegal aliens," 473.

<sup>19</sup> Cobb-Clark, Deborah A., Clinton R. Shiells, and B. Lindsay Lowell. "Immigration reform: The effects of employer sanctions and legalization on wages." *Journal of Labor Economics* 13, no. 3 (1995), 496.

employer sanctions have had only a transitory effect on the flow of illegal migrants into the United States (President's Report 1991b)."<sup>20</sup> Therefore, Hill and Pearce (1990) and Cobb-Clark, Shiells, and Lowell (1995) agree that sanctions on employers are not effective. This highlights the need for further cohesive federal legislation. As will be shown in the following sections, in order for legislation to deter immigration, it must be more comprehensive than the IRCA and not be contingent on a budget or easily be circumvented by fraudulent documents. States have begun to take over this area for themselves creating their own legislation. This has led to a type of gradient in restrictiveness around the United States. Arizona has been studied most intensely as they were one of the first to enact heavily restrictive legislation.

### **The Legal Arizona Workers Act (2008)**

While immigration prosecutions rose increasingly high, so did the population of unauthorized immigrants in the United States. This failure on the side of the government is what ultimately leads to the perceived need by states to make regulations individually. While some states such as those on the west coast took unrestrictive routes, we will see that some states became much more restrictive.

Research surrounding undocumented immigration law, as of recent, has come to the conclusion that there is a need for a more cohesive federal policy. In their 2016 research report, "A Cost-Benefit Framework for Analyzing the Economic and Fiscal impacts of State-Level Immigration Policies," Lynn A. Karoly and Francisco Perez-Arce, write, "Due to an absence of comprehensive federal immigration reform, almost all states have taken a more active role in the past 15 years in setting policy with respect to unauthorized immigrants." This is a response to the growing population of unauthorized immigrants residing in the United States which increased

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<sup>20</sup> Cobb-Clark, Shiells, Lowell. "Immigration reform: The effects of employer sanctions and legalization on wages," 496.

from 3.5 million in 1990 to a peak of 12.2 million in 2007. The report continues, “Information on state legislative activity, tracked since 2005 by the National Conference of State Legislatures (NCSL), shows a tenfold increase in the number of state-level immigration-related laws and resolutions, starting at 39 in 2005 and reaching 437 by 2013. A tally of immigration laws, beginning in 2005, would start with 39 and then climb to a peak of 240 in 2007. The NCSL reports, in 2007, that many states have focused on employment, health, identification, driver’s and other licenses, law enforcement, public benefits, and human trafficking. They also report that state legislators have introduced almost three times more bills in 2007 than in 2006 (570). Not all of these bills negatively impacted undocumented immigrants as some are in fact unrestrictive. Comparatively, however, Arizona ultimately enacts the most restrictive policy in a state with a high density of unauthorized workers.

The Legal Arizona Workers Act was passed in July 2007 and implemented on the first of 2008. The law carried with it what essentially was a state level version of IRCA. It included increased sanction and the possibility of criminal and civil penalties for employers who hired undocumented workers. The most cutting edge feature of the act was the added requirement for all employers to use E-Verify.

E-Verify is an online system that compares information from an employee’s Form I-9, Employment Eligibility Verification, to data from U.S. Department of Homeland Security and Social Security Administration records to confirm employment eligibility.<sup>21</sup> If the information matches, the case will receive an “Employment Authorized” result immediately. Some issues arise, however, if the information does not match. The case will then receive a “Tentative Nonconfirmation” (TNC) result. This result can be contested which may take up to a week,

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<sup>21</sup> U.S. Citizen and Immigration Services (USCIS). "How E-Verify Works" (2014). Last updated: September 11 2014. Accessed: December 10 2016.

during which time an employer cannot fire the employee. However, if the TNC is not proven incorrect, the employer must terminate the employee in a relatively short period of time.<sup>22</sup> Users of fraudulent documents are much less likely to successfully attain employment. While Arizona was not the first state to require the use of E-Verify, it was one of the first to require *all employers* to use it regardless of their affiliation with the state. Interestingly, Bohn and Lofstrom (2013) explain, during this time results are not forwarded to any kind of immigration enforcement agency. There has been extensive research done on how LAWA effected Arizona in terms of unauthorized population, wages, labor supply and labor demand. Overall it has been shown to have limited positive results.

### **Impacts of LAWA**

Bohn, Lofstrom, and Raphael (2015) research much of the effects of this law. They find some evidence of diminished employment and increased unemployment among legal low-skilled workers in Arizona. These findings were concentrated on the largest demographic group of workers – non-Hispanic white men. They find that while white non-Hispanic men are less likely to find employment, they do have on average higher earning as a result of LAWA.<sup>23</sup> Bohn, Lofstrom and Raphael attribute this to a shortage in labor supply which ends up being a dominating factor. If the goal of LAWA was to increase likelihood of employment for competing workers, there is no evidence of its success. The most recent studies find that while some legal workers earned relatively higher wages as a result, fewer found employment in the state following LAWA. These results are consistent with what others found.

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<sup>22</sup> Bohn, Sarah, Lofstrom, Magnus. "Employment Effects of State Legislation." As seen in: Card, David, and Steven Raphael, eds. *Immigration, poverty, and socioeconomic inequality*. Russell Sage Foundation, 2013, 283.

<sup>23</sup> Bohn, Sarah, Magnus Lofstrom, and Steven Raphael. "Do E-verify mandates improve labor market outcomes of low-skilled native and legal immigrant workers?." *Southern Economic Journal* 81, no. 4 (2015), 961.

Bohn, Lofstrom and Raphael (2011) estimate, using CPS data, that approximately 92,000 noncitizen Hispanic immigrants, a large percentage of whom are unauthorized immigrants, left Arizona as a result of LAWA. Bohn and Lofstrom (2013) investigate some unintentional consequences of LAWA. They determine that LAWA induced a decline in the rate of formal employment by about 11 percentage points as well as a doubling of the rate of self-employment for unauthorized, less-skilled men, from 8 to 16 percent. They explain how this movement from formal employment to informal employment is deleterious in the fact that less taxes are collected. This effect can be attributed to the nature of LAWA in that it requires that all employees must be verified, but does not require subcontractors to go through any such process. This loophole is not present in all states that have enacted similar laws. The fact that immigration law is so variable among all fifty states is highly problematic.

Each state has different immigration laws concerning unauthorized workers. What ends up happening is a shuffling around of undocumented workers between states. Little research has been done concerning the effect of LAWA on other states. While two studies, Bohn Lofstrom and Raphael (2013) and Liou and Halliday (2015), test for “spillovers” into other states as a result of LAWA, they do not investigate the full magnitude of them. Their goal in testing for spillovers is to ensure that their studies have not been biased by amount of spillovers in adjacent states. Liou and Halliday (2015) offer the most research in terms of state spillover.

### **Former Research on Spillovers**

Detailing Liou and Halliday (2015) more specifically will help to illuminate the need for more in-depth research on spillovers. Liou and Halliday (2015) use ACS data in order to estimate the response of Mexican-born people to LAWA. They estimate that roughly 36,000 Mexican-born people left Arizona as a consequence of LAWA. Their study also concludes that the



response was most pronounced in the farming and construction sectors, among high school dropouts, and among people with weak familial ties to the US. In addition, they give actual estimates as to the spillover effect of undocumented workers into one state; New Mexico. They calculate that out of the 36,360 Mexicans that left Arizona in response to LAWA, 9,670 moved to New Mexico. Their study “underscores a pathology associated with state-level migration policies.” Their paper also leads to several policy implications. The first being the harmful effects of E-Verify on the construction and farming sectors. The second is that the large spillover effects that they estimate indicate that there are negative externalities at the state level-- further emphasizing the need for a cohesive federal policy.

To conclude their analysis, Liou and Halliday (2015) test a difference-in-difference model in order to predict the spillovers from Arizona into other states. Their model predicts the likelihood that someone is Mexican-born and living in a state at a particular time. The model contains dummy variables for whether or not the person lives in California, New Mexico, or Arizona, their interaction variables are for time after 2008, and finally, there are economic factors including GDP and Unemployment. Their control in this difference-in-difference is the state of Texas.

The following paragraph will detail some reasons as to why Liou and Halliday (2015) did not find a broader view of where spillovers had occurred. Firstly, using Texas as a control state does not account for possible spillovers in Texas. In addition, they do not test Nevada, Utah, or Colorado. While theoretically, spillovers seem unlikely into those states, their policies are somewhat different. For example, Colorado only requires state contractors to use E-Verify while Utah requires state agencies and contractors to do so. Therefore, while spillovers to those states

might be quite small, they are still worth testing for. Finally, Liou and Halliday's (2015) results are not what should be expected for several reasons.

Current research tells us that unauthorized workers who left Arizona were more likely to move to California than New Mexico due to California's prevalence of networks and the level of risk. Dustmann and Gorlach (2015) can provide evidence as to the risk averseness of undocumented migrants. Second, Munshi (2003) can speak to the draw of networks.

Dustmann and Gorlach (2015) propose a theoretical framework for modeling temporary migration decisions. To the extent that the leaver group out of Arizona are who would be referred to as temporary migrants, this study will have good reasoning behind the decision making process that the workers underwent. They explain that tighter controls on undocumented immigrant's labor possibilities will alter their decision making processes for the future.

Dustmann and Gorlach (2015) point out, for example, that in terms of constraints on migrants, "immigrants expecting a relatively short stay in the host country (voluntarily or not) will have higher savings and/or send more remittances to their home country." Immigrants that stay in Arizona will have taken on more risk and therefore most likely will have altered their optimal consumption decisions. Temporary migrants that leave Arizona for another state not only incur a moving cost but might also shorten their stay. Migrants that leave Arizona due to LAWAs are doing so, in a way, to avoid risk and therefore would be incentivized to find a more risk averse state. To conclude, this fact would lead migrants towards California due to their unrestrictive immigration laws.

California is unrestrictive in terms of E-verify. Concerning E-Verify laws, each state in the southwest chose one of three paths; unrestrictive, restrictive, or remained neutral. Arizona and Colorado chose to be restrictive early on. Texas and Utah went a more mixed route in

choosing to require E-Verify for state agencies different subsets of workers. Nevada, New Mexico, and California remained neutral around the time of LAWA. California passed a law to limit E-Verify in 2011, suggesting that if it was leaning in any way it would have been towards unrestrictive legislation. Concerning risk, immigration prosecutions also would affect an undocumented immigrant's evaluation of a state.

In the years leading up to LAWA, immigration prosecutions had been steadily on the rise. It can be seen in the Transactional Records Access Clearinghouse reports that in 2008, these prosecutions right about doubled for the United States overall. The top ranked judicial districts leading up to 2008 were Texas (S), Arizona, Texas (W), New Mexico, and California (S), respectively. These rankings would most-likely lead migrants to move to California, Utah, or Colorado. New Mexico prosecuted around twice the number of entities that California did. The number climbs dramatically when one looks up the rankings. This high number of prosecutions is made even more significant when considering the proportions of unauthorized immigrant populations in these two states. In February, 2011, the Pew Hispanic Center released a report quantifying the share of undocumented immigrants by state. California had the second largest share of unauthorized immigrants in the country—7.2%.<sup>24</sup> Comparatively, New Mexico had a share of 4.3%. More evidence concerning networks would lead undocumented immigrants towards California.

Evidence from Munshi (2003) shows that migrants are “more likely to be employed, and to hold a preferred nonagricultural job, when his network is exogenously larger.”<sup>25</sup> This would hold true to the group leaving Arizona due to LAWA. Migrants leaving Arizona would have

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<sup>24</sup> Passel, Jeffrey S., and Senior Writer D'Vera Cohn. *Unauthorized immigrant population: National and state trends, 2010*. Washington, DC: Pew Hispanic Center, 2011.

<sup>25</sup> Munshi, Kaivan. "Networks in the modern economy: Mexican migrants in the US labor market." *The Quarterly Journal of Economics* 118, no. 2 (2003), 1.

been doing so due to economic factors. This can be deduced by the fact that this group left as a result of LAVA. Additionally, networks will be larger where there are higher densities of migrants from the worker's same home country. This would also mean that California has a higher likelihood of drawing migrants from Arizona. In conclusion, it is not clear why New Mexico had a much higher likelihood of spillovers in Liou and Halliday's study. However, this study attempts to explain it.

This paper builds on Liou and Halliday (2015) as well as Bohn, Lofstrom and Raphael (2015) in estimating where the remaining immigrants went more specifically. Additionally, to consider the distribution of Mexican migrants that left Arizona to an estimation of where might have been optimal. In doing so, this will give insight as to the mobility and decision making processes that undocumented migrants undergo.

## Theory

Current research argues that economic, undocumented immigrants move largely based on networks, employment, and risk aversion. LAWA induced a large outmigration of undocumented migrants, making the event an ideal natural experiment to test for movements among undocumented migrants. Following in the footsteps of Liou and Halliday (2015), a robust, (log-log) difference-in-difference regression will be used to do a more extensive test for size and placement of spillovers into surrounding states.

### Base Model

The empirical model will build off of a simple log-log, difference-in-difference model. In its most simple form, this would include: a dependent variable in natural log form, two indicator variables, one for time and one for the treatment group, and finally the interaction of the two indicator variables. This can be seen in equation (1):

$$Y = \beta_1 Time + \beta_2 TreatmentGroup + \beta_3 (Time * TreatmentGroup) + constant \quad (1)$$

### Modifications

The ways in which this model will differ from these two previous works include the choice of states, the economic factor(s) used, and the breakdown of the controls.

Unlike previous studies, all of the states surrounding Arizona will be used in the model. While Texas was not considered in past research to have spillovers from Arizona, and is sometimes not considered to be a southwest state, Texas will be used here due to its proximity and high population of Mexican-born individuals (see summary statics; Table 1). The use of these six states—Arizona, Colorado, Utah, New Mexico, California, and Nevada—should take

into account the majority of options for the “leaver” group. Presumably other choices for immigrants are farther away states or south to Mexico. These options are left for further research.

Unlike Liou and Halliday (2015), which includes state GDP as an economic factor, this model will only include the unemployment rate for each state. The reasoning for this is based in the fact that the unemployment rate is a strong driver for economic migrants. Furthermore, using the GDP would introduce unnecessary collinearity.

Finally, the controls in the model will be different. State-variant differences such as population or labor industry variations are controlled for with their respective dummy variables. Individual year variables are included in order to control for time-variant changes in the whole southwest.

The main theory behind the regression is that Arizona is intended to be the base case. Therefore, changes in the estimated coefficients are in relation to how Arizona’s Mexican-born population varied across 2005-2009. Arizona will shift the Y intercept in order to put each state’s changes into perspective. Additionally, Colorado is necessarily taken out from the model to allow for enough variation between the data and fitted regression estimation. Colorado is chosen due to its comparatively very low likelihood of spillovers, which is demonstrated further in the results section below. The estimable model is as follows:

(2)

$$\begin{aligned}
 MexBornPopulation_{st} = & \beta_1 CA + \beta_2 NM + \beta_3 TX + \beta_4 NV + \beta_5 UT + \beta_7 (Post * CA) + \\
 & \beta_8 (Post * NM) + \beta_9 (Post * TX) + \beta_{10} (Post * NV) + \beta_{11} (Post * UT) + \beta_{13} Age + \\
 & \beta_{14} Female + \beta_{15} Unemployment + \beta_{16} 2006 + \beta_{17} 2007 + \beta_{18} 2008 + \beta_{19} 2009 + Constant
 \end{aligned}$$

## **Variables**

Above, *CA*, *NM*, *TX*, *NV*, and *UT*, are dummy variables. Each observation is assigned a one for its respective state. *Post* is a dummy variable within which the number one indicates the observations that are after 2008. *Post* is then interacted with the state dummy variable in order to attain the populations after the intervention year. This leads to the creation of the interaction variables including: *Post\*CA*, *Post\*NM*, *Post\*TX*, *Post\*NV*, and *Post\*UT*. *Age* is a continuous variable that is simply defined as a person's age. *Female*, is another dummy variable given the number 1 when an observation is of female gender. *Unemployment* holds the unemployment rates for each state averaged by month and merged by year. *2006*, *2007*, *2008*, and *2009* are the time dummy variables that capture which year an observation is from. On the right hand side, the last variable to note is the constant. Finally, the left side of the equation is the variable *MexBornPopulation<sub>st</sub>* that holds the population of Mexican-born immigrants aggregated by state and year.

## **Discussion of Confounding Effects**

There are potential confounding effects that have been accounted for in this model. Firstly, the decision to choose between 2007 or 2008 as the year of intervention. While the law was passed in 2007, it went into effect in 2008. 2008 is used due to the findings of previous studies. In both Bohn, Lofstrom and Raphael (2013) and Liou and Halliday (2015), 2007 appears to have similar results but with smaller negligible effects. Bohn and Lofstrom (2013) state, "We do not think it is appropriate to define 2007 as the treatment year because the anticipatory effects should plausibly be small." This is based in the fact that the decision was made late into 2007 and whether it would go into effect was unknown until January 1<sup>st</sup>, 2008. While Bohn and Lofstrom (2013) go as far as to omit 2007 altogether, Liou and Halliday (2015) include it.

Following mainly with Liou and Halliday (2015), with a focus on population as opposed to wage and employment effects, 2007 is left in the model.

The second confounding effect concerns the ending year. 2009 is chosen as the last year to analyze effect of LAWA due to SB1070. SB1070 is a highly controversial law and was put in place in 2010. It more than likely induced another large outmigration of undocumented immigrants and therefore would cloud the effects of LAWA.

Thirdly, The Great Recession coincides directly with the enactment of LAWA. The Great Recession hit the southwest states quite uniformly with the exception of Nevada, which was hit particularly hard and negatively. While Effects of the Great Recession should be controlled for in the state and year variables, the impact of the recession will be important in how the results of the regression are interpreted. The effects of the Great Recession across these states on employment rates from 2006 to 2009, for all workers, are broken down for the Construction industry below (see Figure 1). This industry is chosen based on previous research studies that cite construction as the industry most effected by LAWA and the Great Recession.<sup>26</sup> Agriculture was effected as well, however, proportionately the change was on a much smaller scale. It can be seen in figure 1, that across the seven states that will be used in the empirical model, construction employment rates varied differently. The largest changes were in both Arizona and Nevada. These states both had over a 4% reduction in construction employment. The state least effected was Texas with a .2% decline in construction employment. This variation must be strongly considered later when analyzing the results of the empirical model estimations.

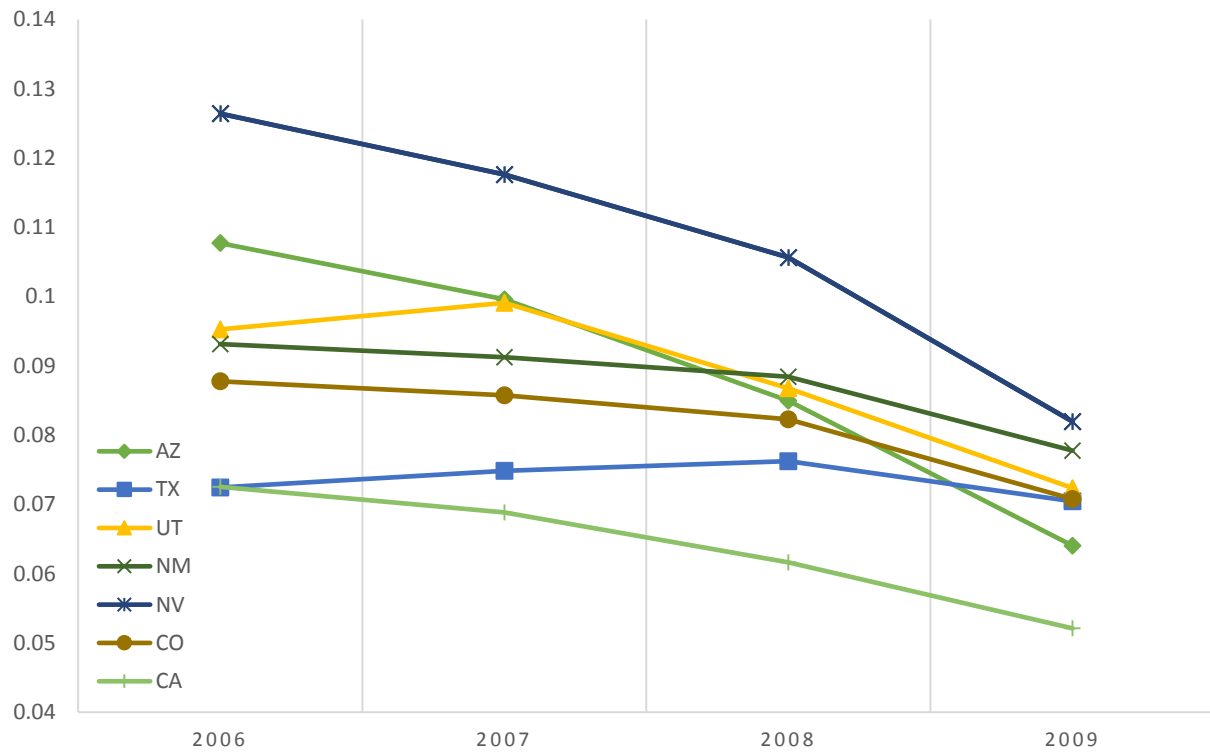
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<sup>26</sup> Bohn, Lofstrom (2013) & Liou, Halliday (2015)



Figure 1:

Average Annual Employment in Construction



Source: author's construction from Bureau of Labor Statistics

## **Data**

This section presents the data used in the regression that follows. By way of building on the spillover effects presented in Liou and Halliday (2015), the model is estimated using American Community Survey (ACS) data. The data is gathered through the Integrated Public Use Microdata Series (IPUMS). In order to capture the effects of LAWA specifically, years 2005-2009 are used. For reasons explained earlier, the data is gathered for Arizona, California, Nevada, Utah, Colorado, New Mexico and Texas.

The Bureau of Labor Statistics is used to obtain data on employment statistics. This includes the annual unemployment rates used in the regression following, as well as employment rates for construction observed in figure 1 above. The unemployment rates are gathered by month and then averaged to find a rate for each year and state. This is the same method used for employment rates in the construction sector.

In order to construct a level of risk for each state, data is gathered for prosecutions and legislation enacted over the time period. Prosecution data is gathered from the Transactional Records Access Clearinghouse by way of generating specific reports. The data on restrictiveness level of laws is collected by the author from the National Conference of State Legislature's (NCSL) yearly reports.

Table 1  
Summary Statistics

	Count	Person Count
Observations	323,907	40,600,000
Year	323,907	40,600,000
2005	60,709	7,875,029
2006	65,138	8,185,669
2007	66,732	8,335,695
2008	64,684	8,133,172
2009	66,644	8,118,133
Arizona	23,274	3,102,705
New Mexico	5,343	685,932
California	179,147	22,000,000
Texas	95,435	12,000,000
Colorado	8,256	1,242,042
Utah	3,297	483,206
Nevada	9,155	1,242,042

Source: Author's calculations

### Advantages and Limitations

Despite the limitation of not being able to capture the entire undocumented population, the data collected on Mexican-born populations are chosen for the regression. There are two other viable alternatives; all foreign-born individuals, or all non-citizens. It can be seen why data on Mexican-born populations are the best alternative by contrasting with the other options.

As seen in Liou and Halliday (2015), 60% of unauthorized immigrants are from Mexico with no other sending country accounting for more than 6% of the total.<sup>27</sup> Second, they explain that more than half of the foreign-born population in Arizona was born in Mexico. Liou and Halliday

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<sup>27</sup> Hoefler, M., N. Rytina, and B. C. Baker. "Estimates of the Unauthorized Immigrant Population Residing in the United States: January 2009, p. 2, 2009." *Washington, DC: Office of Immigration Statistics, Policy Directorate, US Department of Homeland Security Google Scholar* (2010).

(2015) focus on Mexican-born individuals as opposed to just non-citizens. Their reasoning is spelled out here and based in two studies that point out issues with popularly used surveys:<sup>28</sup>

Surveys such as ACS only record whether an individual is a citizen or non-citizen, even though the non-citizen population includes legal resident aliens and non-immigrants such as students and temporary workers. Second, even foreign-born individuals who are in the state legally could choose to move away from the stricter policies. Individuals could be part of a mixed-status household with at least one household member who is an illegal immigrant necessitating a move to accommodate the member of the household who is an unauthorized immigrant. Alternatively, individuals could move to avoid discrimination or complications stemming from the policy, such as incorrectly being considered an unauthorized immigrant by E-Verify.

This last reason, that authorized people may leave to avoid discrimination, is evidentially likely to occur more often than not. Bohn and Lofstrom (2013) explain why in the following quote:

Even an accurate verification system, however, may lead some employers to avoid hiring individuals from (certain) groups given that authorization through E-Verify is not checked until after the individual has been hired. In the event of an accurate nonconfirmation of work authorization, the new hire has a period in which to correct the finding through DHS or SSA (this is the new hire's responsibility and not the employer's). During this period, the employer cannot fire the employee except for issues unrelated to work authorization status. The employer may then lose productivity of the new hire during the waiting period and incur additional hiring costs. In Arizona, Hispanic or foreign-born applicants, in particular those with less education, are most likely to be negatively affected by this potential employer behavior.

For these reasons, this study will focus on the Mexican-born populations of each state.

While this will not pick up the full effect on undocumented workers, it will pick up more than half. Therefore, the estimates given by the model will more than likely be smaller than the actual effects on all undocumented movements.

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<sup>28</sup> Massey (2010) & Massey and Barley (2005)

## Results

This section presents the expectations and actual results of the linear regression analysis on the spillover effects of LAWA. Overall, the model is able to capture the spillover effects of each southwest state and give an expected result. Although the coefficients are all relative to Arizona, and therefore can not give an actual number of individuals that left, they allow for significant conclusions when compared to one another.

Based on previous research,<sup>29</sup> there must have been a large outflow of unauthorized workers from the state of Arizona after the implementation of LAWA. This means that there was a push out of Arizona into surrounding areas; the southwest United States or Mexico. The main focus of this study is to find where these migrants moved and if it reflects current research on movements of economic unauthorized migrants. The model presented below (Table 4) will show that there were in fact spillovers into the southwest United States. It will also show that these spillovers were overall in the expected states. The hypotheses here are centered on three main topics including: networks, occupation, and risk aversion.

The first hypothesis argues that the best interests of unauthorized workers would compel them to move into states with higher populations of other unauthorized workers. This hypothesis is based in the research of what we know about migrant networks. Unauthorized workers are more likely to hold a better job when they are in an exogenously larger network of other workers.<sup>30</sup> This would most likely mean a move to a state with a larger share of undocumented workers, implicating a move to California, the state with the largest share. However, this might also lead to a move to New Mexico, or Texas, based in their similar shares and population sizes.

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<sup>29</sup> Liou, Halliday (2015) and Bohn, Lofstrom, Raphael (2013)

Second, large reductions of employment within the construction sector in Arizona would suggest a large part of the leaver group was made up of trained construction workers.<sup>31</sup> This would compel workers to move to states with similarly large construction sectors. In table 2, located below, the percentage of Mexican-born workers in two industries is broken down by state. These industries, agriculture and construction, were chosen based on what is known about Arizona's leaver group. Based on these percentages, it would be expected that the leaver group would head towards New Mexico or Texas.

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<sup>31</sup> In comparison to agriculture. See Figure 1 and Table 2.

**Table 2**

Percentage of Mexican-Born Workers by Industry and State			
State & Year	Total Population of Mexican-Born Workers	% Working in Agriculture	% Working in Construction
California			
2007	4484507	6.325	10.449
2008	4339069	6.446	9.878
New Mexico			
2007	140537	3.608	15.502
2008	134522	4.254	16.151
Texas			
2007	2463931	1.491	16.71
2008	2437858	1.476	16.367
Utah			
2007	97771	1.269	21.576
2008	100770	1.353	16.533
Colorado			
2007	244561	2.502	21.315
2008	252810	2.41	18.652
Arizona			
2007	665875	2.618	17.068
2008	625836	2.566	14.958
Nevada			
2007	238513	0.606	18.919
2008	242307	0.986	17.962
Source: Author's calculations with American Community Survey Data 2005-2009			

Third, federal and state prosecutions levels will affect an optimal decision for Mexican-born workers to the extent that these prosecutions vary across the states. While these states do not currently differ widely, leading up to 2008, prosecutions were high. The Transactional Access Records Clearinghouse ranked the states with the highest prosecutions. As cited earlier in the literature review, these were Texas, Arizona, New Mexico, and California

respectively high to low. Based in what we know about risk aversion, when solely looking at prosecution statistics, unauthorized workers would be most likely to move from Arizona to Utah or Colorado. However, this move would be unlikely due to what we know about state law restrictiveness. This leads to the next hypothesis concerning risk aversion.

Lastly, unauthorized workers are more likely to consider a state with less restrictive legislation. The laws that effect unauthorized workers most heavily are those that require E-Verify. State E-Verify laws vary by application. Arizona, Utah, and Colorado each implemented E-Verify restrictions before or in 2008. Arizona was the most comprehensive. Unlike Colorado and Utah, Arizona applied the restriction to *all employers*. In contrast, Colorado and Utah implemented restrictions for state agencies/ contractors and public employers/ contractors, respectively. It is not clear exactly how restrictive these lesser restrictions are considering the majority of unauthorized workers are employed in the private sector.

In order to break down the restrictiveness of the four other states, Table 3 is used to shows other restrictive and unrestrictive laws implemented from 2005-2009. In order to not introduce possible bias, Table 3 shows only the number of laws, not their level of restrictiveness. There is no way to know for sure which laws would affect the unauthorized worker population the most. What can be taken away from Table 3, however, is a loose level of restrictiveness based solely on the number of laws passed. Leaving out E-Verify requirements in Colorado and Utah, the author has grouped the states into three categories including: unrestrictive, mixed, and restrictive. California, Utah, and New Mexico are all categorized as unrestrictive. The mixed states include: Texas and Nevada. Colorado is the only state to be categorized as restrictive if Arizona is not included. From these results, it can be expected that unauthorized workers would



either end up in California, Utah, or New Mexico. However, it is entirely possible that the leaver group may move to states with mixed laws depending on other factors.

**Table 3**

State	Year	Laws Restrictiveness by Year		State Totals in 2009	
		Less	More	Less	More
AZ	2005	-	2		
AZ	2007	1	8		
AZ	2009	2	4	3	14***
NV	2005	1	-		
NV	2007	2	4		
NV	2008	-	1		
NV	2009	3	3	6	8**
CO	2005	1	1		
CO	2006	1	8		
CO	2007	-	2		
CO	2009	1	1	3	11***
NM	2007	-	1	0	1*
TX	2007	1	1		
TX	2009	1	1	2	2**
UT	2005-9	-	-	0	0*
CA	2009	2	-	2	0*

Source: Author's Compilation (NCSL Reports)  
\*Unrestrictive, \*\*Mixed, \*\*\*Restrictive

By using a different control method than earlier research, this model is able to build on past studies and capture spillovers that were not considered. Subsequently, more comprehensive conclusions can be made about where the leaver group moved in response to LAWA. This will in turn shed light on the expectations laid out throughout this section.

## Regression Analysis

In order to interpret the results of the linear regression, it is necessary to first verify the viability of the model. Diagnostic testing is used to check for heteroskedasticity and normality of residuals. First, an `rvfplot` is viewed to test for heteroskedasticity. While it appears there is some heteroskedasticity, it is to be expected by nature of the model. As will be shown in the regression, there is a general move out of the study states by the Mexican-born individuals. This causes less of a scatter as time moves, however, this is accounted for through the year dummy variables. This plot can be seen below in figure 2. The likelihood of having an issue normality for this large of a data set is low, however, it is checked to be safe. This is done with `pnorm` and `qnorm` plots, as well as a Shapiro Wilk test. These yield a confident result that the model is linear.

An explanation is necessary for the significance levels. Questionably, every coefficient is significant. This can be explained by the large sample size of 323,663 observations. With a sample size this large, even the smallest of differences become highly significant. Here the large sample size is overall too much of a good thing and there is quick way to correct for this. Any dropping of observations will lead to another bias. Therefore, this leads to a shift in focus. This is a crucial note as it directs interpretation away from significance levels and hypothesis testing to analysis of the effectiveness of the coefficients.

**Table 4**

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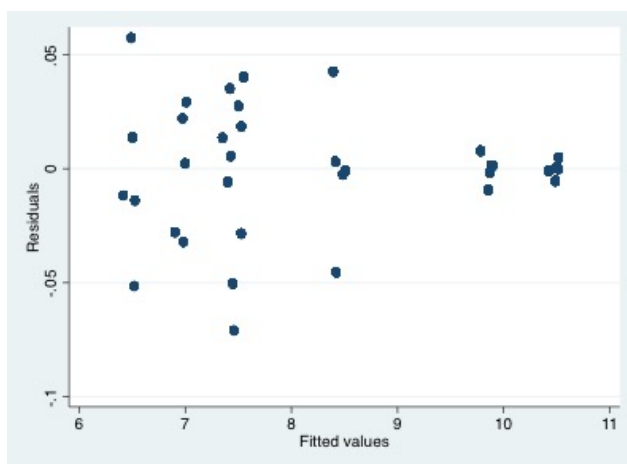
Spillover Effects of LAWA on Southwest States  
(1)  
Mexican-born Population

---

California	2.129*** (.0041992)
New Mexico	-1.245*** (.0063931)
Texas	1.548*** (.003792)
Nevada	-0.686*** (.0043141)
Utah	-1.511*** (.0063535)
Post CA	0.0849*** (.0041992)
Post NM	0.2575*** (.0036008)
Post UT	0.1292*** (.0049976)
Post NV	-.0541*** (.0034131)
Post TX	0.3263*** (.003792)
Female	0.002509 (.000487)
2006	0.1396*** (.0012276)
2007	0.1583*** (.0009263)
2008	-0.2110*** (.0067813)
2009	-0.4803*** (.0105704)
Age	0.0034*** (.0004696)
Unemployment	0.6840*** (.0100483)
Constant	7.1014***

<b>Table 4 (Continued)</b>	
Spillover Effects of LAWA on Southwest States	
(1)	
Mexican-born Population	
(.0151198)	
Observations	323663
Notes: robust standard errors in parentheses;	
*p<0.05, ** p<0.01, ***p<0.001	
Source: author's Calculations	

Figure 2: Residuals versus Fitted Plot of the estimated model.



Source: author's calculations.

## Discussion of Results

The results of the model in Table 1 illustrate a variation in movement around the southwest states from 2007 to 2009. While there was an overall movement out of these seven states, after 2008, indicated by the coefficients on *2007* and *2008* dummy variables, there are positive coefficients paired with almost all the *post* state variables. Therefore, compared to Arizona and the overall movement, these states saw relatively large increases in their Mexican-born populations. The difference in coefficients are by in large concurrent with the hypotheses proposed earlier in this section.

In order to gain insight from the *post* coefficients, they must be compared state-to-state relative to Arizona and Colorado. Texas was the state with the greatest increase in likelihood of being Mexican-born post 2008, indicated by a coefficient of .3262. In the same fashion, Nevada had the lowest increase, with a coefficient of -.0541. The difference between the post variables is therefore .3803. Nevada, is the farthest away from the other states with a difference of .139 away from California. Continuing up from California, there is a small increase of .0443 to the coefficient on Utah, which is .1292. Increasing after Utah are New Mexico and Texas, respectively. These are somewhat distant from California and Utah with a positive change of .1283 in the coefficients. This change is close in magnitude to the opposite end of the spectrum noted earlier between California and Nevada.

Nevada was expected to be set much farther from the rest of the states most likely due to its associated construction unemployment rates. On the other hand, California's outcome is more up for debate as to what conclusions can be drawn from its placement. It is likely here, that the coefficients on Utah, New Mexico, and Texas are all higher due to the share of Mexican-born populations in the construction sector. Table 2, above, shows that California has half the share of

Mexican-born people employed in construction that Utah has. While the networks must be exogenously larger due to population in California, perhaps they are less prevalent in the Californian construction sector when compared to the other states.

In summation, undocumented workers, overwhelmingly were more likely to have moved to New Mexico or Texas. This is a result of these states having had a higher share of the population in the construction sector, in the case of Texas, a larger general population of Mexican-born people, and finally, a comparatively indifferent risk environment.

## **Conclusion**

In the absence of comprehensive federal immigration reform, states have taken over the role of managing the high number of undocumented immigrants in the United States. As of 2013, 11.2 unauthorized immigrants were living in the United States. This number has not fluctuated much since, however, undocumented immigrants have been pressed under new scrutiny with the changing of public opinion. While some states are following a route with increasingly restrictive policies, other states remain neutral or are even becoming actively less restrictive. While states have been enacting their own legislation since the turn of the century, it was not until 2008 that a law was passed which aggressively targeted employment of unauthorized immigrants. The enactment of LAWA initiated a large outflow of unauthorized workers from Arizona. This, when coupled with the increasing variance of state restrictiveness surrounding Arizona, led to a dilemma among unauthorized workers. These workers that chose to leave were met with a hard decision of where the optimal place to move to was. Knowing where this leaver group mainly went can provide insight into the movements of unauthorized workers. In addition, providing a more comprehensive picture of how the surrounding state populations of undocumented workers changed after 2008, is a significant first step in predicting how disparities in state laws will affect the futures of all workers.

While current research gives great insight into how LAWA effected Arizona, little has been done to show the impacts on other states. Not much research has been done specifically on spillovers of unauthorized workers. While Liou and Halliday (2013) research the potential for spillovers, they provide a narrow possibility. In addition, their intention was not to look for spillovers specifically but to check for how spillovers may have had a confounding effect on

other conclusions. This study attempts to fill this gap by providing more comprehensive research on the unauthorized worker populations of Arizona's surrounding states.

In order to control for state level differences, economic factors, and time-variant changes data was collected from IPUMS, the BLS, and the NCSL on seven states adjacent or close to Arizona. Multiple variables were accumulated through these websites in order to set up a model that would accurately depict changes in Mexican-born populations at the state level.

In order to analyze the data, a difference-in-difference model was developed. While different by way of control, as well as, state and economic variables, the model was based off Liou and Halliday (2013). The model in this study is more comprehensive in its search for spillovers. It includes all six southwest states, excluding Arizona, as opposed to 3. In doing this, the model captures differences between states through the coefficient estimates. These estimates in turn help to verify expectations of where the optimal destinations are for the leaver group.

The coefficients on the interaction variables indicate that compared to Arizona and the other surrounding states, Texas was the most likely to have spillovers. A close second to Texas was New Mexico. Declining in likelihood from New Mexico would be Utah, California, and Nevada, respectively. Close to the largest gap was, however, between New Mexico and Utah indicating that New Mexico and Texas were the most likely to have spillovers compared to the other states. The other large difference between states was Nevada and California indicating that Nevada was by far unlikely to have spillovers comparatively. The other differences between states are small, however, do indicate a variance. The other difference to note would be between Texas and New Mexico. This difference was about half of the difference between New Mexico and Utah, however still indicates a disparity. In summation, with these outcomes, it is clear that there were two states that did not gain significant numbers of Mexican-born people due to LAWA—Nevada



and Colorado. Texas and New Mexico were both highly likely to have substantial amounts of spillovers. Finally, California is left somewhat in the middle. These results confirm what is known about undocumented worker movements from former research.

The leaver group of Mexican-born immigrants out of Arizona was very much driven by industry, networks, and risk aversion all together. While former research on drivers of migration can provide a close expected choice of state for the leaver group, which has been done here, these moves are still the result of a highly complex set of decisions; self-selection. Therefore, while it can not be concluded exactly why Utah, Texas, and New Mexico were the states most likely to have spillovers, it can be reinforced through this study that occupation, networks, and risk aversions play very influential roles in the process of self-selection.

When brought into context, these results lead to conclusions that in many cases, states will be forced to take reactionary stances concerning state legislation. Regardless of an argument on whether or not a large influx of unauthorized workers is positive or negative, states will be affected by surrounding state's legislation.

Further conclusions concerning the exact population change is not clear. The nature of the model does not allow for actual numbers since the coefficients are all in comparison to Arizona and Colorado, the base cases. Further research might attempt to set up a similar model but with a different control. A control not unlike the one used in Bohn, Lofstrom, and Raphael (2013) would be ideal. A synthetic control state made up of other similar states around the country would lead to further conclusions. In addition, if concrete numbers of immigration into Mexico after LAWA could be attained, more inference would be made possible concerning the likelihood of movements by unauthorized immigrants. Specifically, this would give more insight

into short-term migrants vs. long-term migrants as well as what would be necessary in order for the United States to accomplish its goal in changing the population of unauthorized workers.

With the change of the President of the United States and the focus of the new administration on tackling this issue, there will be more scrutiny than ever before on the undocumented population. Regardless of how the country would prefer to tackle the issue, this study gives insight into the deleterious effects of individual state legislation.

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