

# U.S. Immigration Enforcement and Mexican Labor Markets

Thomas Pearson \*

PhD Student  
Department of Economics  
Boston University

## Abstract

This paper uses Secure Communities (SC), a policy which expanded local immigration enforcement, to study how increased immigration enforcement in the US affects Mexican labor markets. The variation in the application of SC across US states and in the destination patterns of comparably similar Mexican municipalities generates quasi-random variation in exposure to the policy. I show that in the short run, exposure to SC deportations increases return migration and decreases monthly incomes from working for less-educated men and women. SC deportations also increase net outflows within Mexico and emigration to the US, a potential mechanism for why earnings mostly rebound after five years. The negative short run effects do not appear to be driven by falls in remittance income or increases in crime as SC deportations increase the share of households receiving remittances and do not affect homicide rates. The results instead point to increased labor market competition as a result of deportee inflows. Lastly, I show that in municipalities with more banks and access to capital and where transportation and migration costs are lower, men's earnings are less responsive to the labor supply shock.

**Keywords:** Return migration, deportations, labor markets

**JEL Codes:** F22, O15, J40, R23

# 1 Introduction

Since Congress passed the Illegal Immigration Reform and Immigrant Responsibility Act (IIRIRA) in 1996, the US has deported a record number of unauthorized immigrants and other removable noncitizens (Rosenblum and Meissner 2014). Gonzalez-Barrera (2015) partly attributes recent increases in return migration rates to Mexico to this and other policies which led to stricter immigration enforcement in the US. Given the historic magnitude and importance of Mexican emigration to the US, this could have drastic consequences on the local economies of the migrant-sending regions of Mexico.

In this paper, I study how deportations as a result of stricter interior immigration enforcement affect labor market outcomes in Mexico. To do this, I use the spatial variation across US states over time in the application of Secure Communities, a policy that led to the largest expansion of local immigration enforcement in US history (Kalhan 2013). I also take advantage of the considerable variation in the destination patterns of migrant-sending municipalities within the same Mexican origin state.

It is not obvious how the arrival of deportees and others induced to move due to stricter immigration enforcement would affect Mexican labor markets. Some learned new skills (e.g., speaking English) and/or went to school in the US. Most of these forced return migrants likely developed networks in the US as well. They could leverage the education, networks, skills, and experience developed abroad to start new businesses and increase employment in their local economies. On the other hand, it is possible that instead of complementing the local workforce, these repatriates compete for the same jobs as locals thereby reducing employment rates and/or lowering wages. It is also possible that deportees increase crime and violence in their local communities as previous administrations often prioritized deporting individuals with criminal backgrounds.<sup>1</sup>

Besides the return migration channel, deportations could also impact local labor markets by changing the decisions of current and prospective migrants. Hearing about friends and family being deported could deter prospective migrants from emigrating to the US. This could lead to increased labor market competition and push wages down. For the migrants still living in the

---

<sup>1</sup>The Obama administration prioritized deporting individuals with criminal backgrounds (Chishti et al. 2017).

US, these policies could affect their employment opportunities and/or force them to work in the shadows affecting whether/how much they remit back to Mexico. Given remittances' economic importance, the consequences of these potential employment effects for migrants still abroad could impact their local origin economies.

The inflow of deportees could itself impact migration decisions if it has significant first order effects on labor market outcomes such as employment and wages. If deportations operate primarily through this labor supply/return migration channel and deportees crowd out the local labor force, we may expect to see more out-migration, both within Mexico and to the US, in response to the increased labor market competition. As mentioned above, by increasing emigration, this channel could impact remittance flows which themselves could have second stage effects on local Mexican economies.

To estimate the effects of deportations on Mexican labor markets, I construct a version of the Bartik instrument (Bartik 1991) used in the macro literature. I define the deportee shock from a US state to a Mexican municipality as the number of Mexicans deported from the state multiplied by the share of Mexican undocumented migrants from the municipality residing in that state before SC was established. I construct the total deportee shock for a municipality by summing up its deportee shocks from each of the US states and then normalizing this sum by the municipality's population. The intuition behind this construction is that it provides the predicted deportee arrival population share for the municipality. This shock is similar to the shift-share instruments used in the immigration literature (Card 2009) as it can also be used as an instrument for return migration rates.

When estimating the reduced form effects of the deportee shock on labor market outcomes, the identifying assumption is that the deportee shock is uncorrelated with changes in unobserved economic conditions. I argue that the predicted deportee share is quasi-random as it depends on migration decisions before the policy was established and the number of deportations at the US state level, which is plausibly exogenous to conditions in any one municipality. However, one possibility is that municipalities that were suffering economically before SC sent more migrants to the US, sent migrants with a higher likelihood of being deported, or sent migrants to US

states with higher enforcement intensity. These municipalities could have continued to suffer economically while also receiving more deportees as a result of economic conditions before SC. This situation would then provide a spurious negative coefficient on the deportee share and be incorrectly interpreted as the negative effect of deportations.

I address this concern by controlling for lagged municipality characteristics, lagged changes in the outcome variables, and Mexican state fixed effects. These controls allow me to compare similar municipalities in the same Mexican state with similar trends in the outcome variables. Including these controls also requires there to be enough variation in US destination states among comparably similar municipalities. Munshi (2003) shows this is indeed the case using data from the Mexican Migration Project and more recently which Caballero et al. (2018) show using data from the Matrícula Consular de Alta Seguridad program.

I first show that exposure to deportations changed the type of migrants that returned to Mexico from the US. Return migrants are generally younger and more likely to be male relative to non-return migrants. In municipalities with more exposure to deportations, these differences are even larger. In the exposed municipalities, return migrants are also more likely to not have a high school degree relative to a non-return migrants from the same municipality. In addition to the differential selection on these demographic characteristics, I also show that in more exposed municipalities return migrants are more likely to be employed but earn less relative to a comparable local from the same municipality. Together, these results suggest that deportations change the profile of return migrants to be younger, more male, more likely to be employed, and less positively selected with respect to earnings.

I then show that exposure to deportations increased return migration rates. A one standard deviation increase in the predicted deportee share in 2015 increased the return migration rate in 2015 by 0.37 p.p., a 33.6% increase relative to the period's return migration rate (1.10 p.p.). A one standard deviation in the deportee share in 2010 increased the return migration rate in 2010 by 0.63 p.p., a 26.6% increase relative to the period's return migration rate (2.37 p.p.). This result implies that a significant amount of repatriated Mexicans return to their home municipalities which is in line with a recent survey that found a growing fraction of forced return migrants are deciding

to stay in Mexico (Passel 2012). It also implies that return migration is a relevant channel through which deportations can affect Mexican labor markets.

Deportations crowded out labor market opportunities for less-educated men and women. A one standard deviation increase in the predicted deportee share in 2015 decreased monthly income by 6.0% for men without a high school degree and 2.3% for women without a high school degree. I find some evidence of a response on the extensive margin of employment to deportations; however, these estimates are sensitive to the specification choice and small in magnitude.

The increased labor market competition in the short run for men and women without a high school degree increased emigration rates to the US as well as net out-migration rates within Mexico. These results point to one margin of adjustment and potentially explain why a one standard deviation increase in the 2010 predicted deportee share (i.e., the lagged deportee share) increases monthly incomes from working for men without a high school degree by 4.8% and for women by 2.6% in 2015, suggesting that monthly working incomes mostly recover after five years.

Contrary to the hypothesis that immigration enforcement may cause those still living in the US to go in the shadows and thus decrease the likelihood that a household receives remittances, I find that deportation exposure increased the share of households receiving remittances. This is consistent with migrants still living in the US helping friends and family in their origin municipalities who are earning less due to the labor supply shock caused by deportations. Another possibility is that the resulting increase in emigration increased the number of potential remittance senders.

Estimating the effect of return migration on these labor market outcomes using the predicted deportee share as an instrument requires that the only way exposure to deportation affects labor market outcomes is through return migration. The reduced form results provide evidence which is consistent with increased return migration being the primary channel through which deportations affect Mexican labor markets. To contribute to the ongoing debate regarding the effects of migration on labor market outcomes, I provide two-stage least square estimates by instrumenting return migration with the predicted deportee share. I find that a 1 p.p. increase in the return migration rate decreases monthly income from working in the short run by 9.7% and then increases monthly income in the subsequent five year period by 3.9%, recovering partially from the initial drop.

The negative short run effects on men’s monthly earnings are not uniform across municipalities. I find heterogeneous responses in men’s monthly incomes from working to deportations by access to the financial sector, capital market integration, and transportation/migration costs. I find that improvements in these dimensions mitigate the fluctuation in men’s monthly earnings resulting from deportee inflows. These results suggest that underdevelopment may exacerbate the negative short run effects of labor supply shocks from return migrant flows and provide some explanation as to why the magnitudes of these effects are large relative to other contexts. They also motivate taking into account the level of development depending on the context when studying the labor market impacts of migration flows.

I use publicly available data on the number of Mexicans removed through Secure Communities by US state from the Transactional Records Access Clearinghouse (TRAC). To generate each municipality’s exposure to this policy, I use the publicly available administrative data from Mexico’s Matrícula Consular de Alta Seguridad (MCAS) identification card program. It provides the total number of IDs issued to Mexican immigrants by each US state of residence and municipio (municipality) of birth in Mexico in each year from 2006 to 2016, nearly all of which are new applications rather than renewals (Caballero et al. 2018). For municipal level controls and outcomes, I use the 2015 Mexican Intercensal Survey, 2000 and 2010 Population and Housing Censuses, and the 2005 Count of Population and Dwellings microdata from IPUMS International<sup>2</sup> provided by Mexico’s National Institute of Statistics, Geography, and Informatics (INEGI).

This paper contributes to the recent literature on the consequences of increased immigration enforcement in the US. Amuedo-Dorantes and Arenas-Arroyo (2019), Watson (2014), and Alsan and Yang (2018) all document how these policies can cause a “chilling effect” by decreasing the willingness of immigrant communities to interact with public agencies. Amuedo-Dorantes and Arenas-Arroyo (2019) shows that increased immigration enforcement decreased the number of petitions for U-visas, visas which provide legal status for women that have suffered domestic violence/abuse in exchange for cooperating with law enforcement. Watson (2014) analyzes the impact of immigration enforcement on the take-up rates of Medicaid and finds that heightened

---

<sup>2</sup>Minnesota Population Center. Integrated Public Use Microdata Series, International: Version 7.2 [dataset]. Minneapolis, MN: IPUMS, 2019. <https://doi.org/10.18128/D020.V7.2>

immigration enforcement reduces Medicaid participation among children of non-citizens, even when the children are citizens. Alsan and Yang (2018) studies how the activation of Secure Communities affected demand for safety net programs in the US. They find that this policy decreased enrollment in food stamps and SSI among Hispanic households and find evidence which suggests that this was largely due to fear of deportation.

There have been several other recent papers documenting the effects of SC by taking advantage of its staggered rollout across counties in the US. Miles and Cox (2014) evaluate the effectiveness of SC in reducing crime, its alleged purpose, and finds that it led to no significant reductions in crime rates. Hines and Peri (2019) also find null effects of SC on violent and property offenses. Ciancio and García-Jimeno (2019) use the policy to study how the interaction of federal and local enforcement efforts shape immigration enforcement outcomes. They find that more Democratic and less Hispanic counties were less likely to comply with federal immigration enforcement efforts. East et al. (2018) study the effects of the policy on the labor market outcomes in the US and finds that it decreased the employment rate of US citizens.

Most of the literature analyzing the effects of increased interior enforcement (both historically and recently through SC specifically) I've referenced has focused on effects within the US. There is relatively less work analyzing the effects on the migrant sending countries themselves. Most of this work has focused on the international transmission of violence and the spread of gangs. Using a cross-country panel, Ambrosius and Leblang (2018, 2019) show that criminal deportations from the US increase homicide rates in deportees' countries of origin. In addition to these cross-country analyses, there are several papers which use the subnational variation in exposure to increased interior enforcement. Several of these papers focus on the case of El Salvador.

For example, Sviatschi (2019) compares municipalities with and without the historical presence of gangs before and after the arrival of Salvadoran deportees in 1996. She shows that children growing up in municipalities with gangs have fewer years of schooling when they are young adults as a result of criminal deportations from the US. Similarly, Kalsi (2018) uses the timing of the deportee arrivals but instead compares regions with greater density over time arguing these areas are more suitable for future gangs. She also finds that the impact of gang exposure hinders

basic education, particularly for boys. Ambrosius and Leblang (2019) and Ambrosius (2018) take a somewhat different approach and instead use only the cross-sectional exposure to *US* crime through migration corridors from El Salvador to the US. Their hypothesis is that repatriates that lived in high crime counties in the US will increase the likelihood of gang presence in their municipalities of birth, where they are likely to return to. These two papers show that a higher exposure to US crime does increase the community's perception of gangs. The latter paper argues further that these deportations create a cycle of migration, deportations lead to more violence in the municipalities of origin which then leads to more emigration to the US.

My paper differs from these papers in that I focus on the effects of increased interior enforcement on Mexico rather than El Salvador. Mexico has sent the largest wave of immigrants of any single country in US history (Passel 2012) and accounts for the majority of apprehensions and deportations (Immigration 2019) in the US making it a worthwhile case to study. It also improves upon these papers by using both the historical origin-destination migration patterns and the timing of deportee arrivals. By using Mexican Census data, I am able to identify how subnational exposure to these deportations affected return migration. In other words, I can test whether more exposed municipalities did in fact receive more return migrants, the "first stage" these papers implicitly assume.

Besides these papers on El Salvador, Amuedo-Dorantes and Puttitanun (2014) study the effects on remittance flows to Mexico of policed based initiatives such as SC and 287(g) along with employment-based initiatives such as the E-verify mandates using data from the Mexican Migration Project (MMP). They find that the police based initiatives slightly reduced the likelihood that legal migrants remitted but did not significantly affect this likelihood for undocumented migrants. Both groups sent more money to Mexico in response to these initiatives which results in an overall increase in the average dollar amount remitted per Mexican migrant. My findings are consistent with their paper as I find that increased exposure to SC deportations increased the share of households receiving remittances. My paper also explores several other potential channels through which these kinds of policies can affect Mexican communities in addition to remittances. It improves upon Amuedo-Dorantes and Pittman's paper by using nationally representative data



as opposed to the MMP which is based on surveys of less than 200 communities in Mexico. With representative data, I can estimate the average effect of increased immigration enforcement on the extensive margin of remittances for the entire country of Mexico.

More recently, there have been several papers written about the effects of deportations and return migration to Mexico specifically.<sup>3</sup> Rozo et al. (2021) study the effects of deportation flows to 24 repatriation centers in Mexico on municipal homicide rates. They find that inflows of deportees increase homicide rates in those municipalities. Deportees are not the perpetrators of these acts of violence but instead are more likely to be the victims due to their increased vulnerability in these repatriation areas. The deportees that stay in these repatriation areas are those that will likely attempt to re-enter the US. My paper differs from this paper in that I focus on the effects of deportations on deportees' home municipalities, a much different context relative to repatriation center municipalities. I show that deportations increases return migration to deportees' home municipalities. The deportees that return to their origin municipality are likely deciding not to re-enter the US, a pattern which is becoming increasingly more common as I mentioned above. Given their intention to stay, I see the forced return migrants in my context as constituting more of a labor supply shock, connecting to the classic labor supply and immigration literature. This contextual difference may explain why in this paper, I find precise null effects of SC deportations on homicide rates.

Caballero (2020) was written concurrently with this paper and studies the effects of Secure Communities on schooling decisions of Mexican children aged 12-14. Using a similar design, she finds that SC exposure led to increased dropout rates. She also provides suggestive evidence that decreases in household income, presumably from a loss of remittances, are driving these effects. My paper differs from this paper by providing causal evidence of the dynamic labor market effects

---

<sup>3</sup>Diodato et al. (2020) use the number of self-reported deportations from the Encuesta sobre Migración en la Frontera Norte (EMIF Norte) as an instrument to study the effect of return migration in Mexican cities. Most of the deportees in the EMIF Norte survey are border removals and therefore likely did not spend time in the US. The number of deportees from the survey are thus more likely to be a function of the economic conditions in their origin cities. My paper improves upon the identification by using a specific US immigration policy which provides exogenous variation in the application of *interior* immigration enforcement across the US. The EMIF Norte survey also suffers from small samples and its destination distribution is not consistent with the distribution of Mexican noncitizens in the ACS (Caballero et al. 2018). My paper also improves on data by using the total number of interior removals provided by the Department of Homeland Security along with the best administrative bilateral data on Mexico-US migration.

of increased return migration as a result of deportations. I show that deportations increase return migration which leads to increased labor market competition and out-migration in the short run. I also show that deportations actually *increase* household remittances at the extensive margin, likely driven in part by the resulting increased emigration to the US.<sup>4</sup> These findings offer an alternative mechanism which could explain the negative enrollment effects documented in Caballero (2020). The fall in parents' wages could have put more pressure on older children to supplement household income.

As this paper focuses on the effects of deportees, it is particularly relevant to the more specific literature documenting the effects of forced return migrants on their countries of origin. Both Hunt (1992) and Edo (2017) study the effects of the repatriation of French-Algerians back to France after Algerian independence in 1962. Hunt finds that the inflow decreased employment and wages for the overall workforce but is unable to disentangle the pure composition effect. With new data, Edo finds that the inflow of repatriates had negative short run effects on locals' wages which recovered after 15 years. In the case of Yugoslavian repatriates from Germany, Bahar et al. (2019) find that return migrants increased export performance.

This paper proceeds as follows. In Section 2, I provide some background on the particular immigration policy I use in this paper, Secure Communities. In Section 3, I describe the data I use for the analysis. In Section 4, I discuss my empirical approach and identification strategy. Section 5 presents the results from the baseline analysis and Section 6 tests the robustness of the main results. I conclude in Section 7.

## 2 Secure Communities<sup>5</sup>

Before Secure Communities, federal officers under the Criminal Alien Program (CAP) or local officers under agreements with the Department of Homeland Security (DHS) interviewed arrested

---

<sup>4</sup>I use the Mexican Censuses of 2000 and 2010 which provide info on the amount of remittances received by each household as well as the Mexican Intercenal Survey of 2015 which contains an indicator for whether the household received remittances to study the effect of SC on the share of household receiving remittances. Caballero (2020)'s period of study ends in 2014 so she does not make use of the 2015 survey and thus is unable to study the effects of SC on remittances.

<sup>5</sup>Alsan and Yang (2018) provide a detailed description of Secure Communities. My summary borrows from their description along with those provided by Miles and Cox (2014); Ciancio and García-Jimeno (2019).

individuals to determine whether they were in violation of immigration law. Secure Communities began sending the fingerprints which before were previously only sent to the FBI for criminal background checks to DHS as well. Upon receiving these fingerprints, DHS would check them with those in their Automated Biometric Identification System (IDENT) to determine whether the arrested individual was deportable<sup>6</sup>. Immigration and Customs Enforcement (ICE), the principal interior enforcement agency under DHS, could then issue a detainer request for the local law enforcement agency to hold the individual for up to 48 additional hours so that they could be taken into federal custody to start their removal proceedings, regardless of whether or not the individual had been convicted of the crime for which they were originally arrested. This technology was much more efficient at identifying and removing individuals and thus significantly increased the probability of being deported conditional on being arrested (Alsan and Yang 2018).

Starting in October of 2008, SC was implemented county by county. By January 22, 2013, it had been activated in all counties across the US. Miles and Cox (2014) study the determinants of activation timing across US counties. They find that the best predictors for earlier activation was proximity to the border, the fraction of the county's population that was Hispanic, and 287(g) agreements<sup>7</sup>. Cox and Miles also show that activation timing was not associated with county crime or unemployment rates. East et al. (2018) also show that trends in labor market outcomes were similar for earlier and late adopters. The quasi-random rollout is convenient for researchers analyzing the effects of SC in the US.

In the spring of 2011, governors in Massachusetts, New York, and Illinois tried to effectively opt out of SC by ending their agreements with DHS. After several jurisdictions continued to disobey detainer requests, SC was temporarily suspended in November of 2014 and replaced with the Priority Enforcement Program (PEP). Under PEP, ICE was to transfer only individuals convicted of serious offenses. In this paper, I am focused on the number of removals in the fiscal years 2009-2015 from fingerprint matching and thus will include some removals from PEP. I will refer to all removals from this fingerprint matching program as SC throughout the paper for simplicity.

---

<sup>6</sup>Deportable noncitizens are those that have violated immigration law (ex: entered illegally, previously deported, overstayed visa) or who are lawfully in the US but are convicted of serious crimes.

<sup>7</sup>287 (g) agreements are agreements between the Department of Homeland Security and local law enforcement agencies which provide local law enforcement officers with the authority to detain immigration offenders.

### 3 Data

The primary data sources are the 2015 Mexican Intercensal Survey (9.5 percent subsample), the 2000 and 2010 Population and Housing Censuses (10.6 and 10 percent subsamples respectively), and the 2005 Count of Population and Dwellings (10 percent subsample) microdata from IPUMS International and the population counts by gender from each of these surveys from the INEGI website. I also use annual mortality data from 2000-2015 from the INEGI website to calculate homicide rates.

In the microdata, each survey asks the individual where they resided five years prior to the survey. I classify an individual as a US return migrant if they were in the US five years ago. With this definition, a US return migrant is a recently returned migrant and the total number of return migrants provides a measure of the five year return migrant inflow. Unfortunately, only the censuses in 2000 and 2010 provide info on the number of emigrants so I cannot rely on the Mexican microdata to study how deportations affected emigration flows. All three surveys provide demographic characteristics of each respondent including their gender, level of educational attainment, age, and marital status. In each of the surveys besides the 2005 Count of Population and Dwellings, respondents are also asked about their employment status and monthly income from working. In the 2015 survey, respondents are not asked about the number of hours worked in a typical week, month, or year which prevents me from being able to estimate the effects on hourly wages in the period of study.

As I describe in Section 4, I conduct my analysis at the municipio (municipality) level using consistent boundaries from 1960 to 2015 of which there are over 2,300. Municipios are roughly equivalent to US counties (Atkin 2016). The main outcome variables from the Mexican microdata are the municipal average log monthly income and employment. Employment is not conditional on labor force participation so the municipal average can be interpreted as the share of working-age individuals that are employed. Following Jaeger et al. (2018), I restrict my sample to those who are 18 to 64 years of age that aren't currently attending school. The Mexican microdata also provide each respondent's municipality or country of residence five years prior to the survey and information on whether the household receives remittances.

To construct the instrument which I describe in greater detail in Section 4, I use publicly available data on the number of Mexicans removed through SC by US state and the seriousness level of the deportees’ most serious conviction from the Transactional Records Access Clearinghouse (TRAC) for the fiscal years 2009-2015. ICE classifies offense codes into three seriousness levels. Level 1 covers what ICE considers to be “aggravated felonies” while level 2 offenses cover other felonies and level 3 offenses are misdemeanors. For the main analysis, I use the total number of Mexicans deported through SC. For robustness, I also conduct the analysis using only removals of individuals with either convictions of level 3 offenses or no criminal convictions at all.

Subnational origin-destination migration data come from Mexico’s Matrícula Consular de Alta Seguridad (MCAS) identification card program. As described in both Caballero et al. (2018) and Massey et al. (2010), the ID can be used to open a bank account and in some states to obtain a driver’s license. Massey et al. (2010) explains that it is safe to assume that all of the IDs are issued to unauthorized immigrants as authorized immigrants do not have a need for such documentation. This implies that the MCAS data cover 75 to 80 percent of the unauthorized Mexican immigrants living in the US (Caballero et al. 2018). Mexico’s Instituto de los Mexicanos en el Exterior (Institute of Mexicans in the Exterior) provides the number of matrículas issued by US state of residence and municipality of birth for the years 2006 to 2016. Caballero et al. (2018) verify the quality and representativeness of the MCAS data to study migration flows between sub-national locations.

I use the number of IDs issued to measure each municipality’s network strength in each US state. Given SC activation started in the earliest counties in late 2008 and removals through SC started in early 2009, I use the matrículas issued between 2006 to 2008 to identify initial networks. I measure a municipality’s network strength by the share of Mexicans from each municipio in each US state. Specifically, the network strength of municipio  $m$  in US state  $s$  is:

$$Share_{ms} = \frac{matriculas_{ms}}{matriculas_s} \quad (1)$$

where  $matriculas_{ms}$  is the number of matrículas issued to Mexican immigrants with residence in US state  $s$  from Mexican municipio  $m$  from 2006-2008 and  $matriculas_s$  is the total number of

matriculas issued to Mexican immigrants with residence in US state  $s$  from 2006-2008.

As I mentioned above, the Mexican microdata from IPUMS International does not provide information on emigration flows from 2010 to 2015. Given nearly all of the matrículas issued are new applications rather than renewals (i.e., to individuals requesting an ID for the first time) (Caballero et al. 2018), the number of matrículas issued over time can provide a reliable proxy for the emigration flow for each municipio. I thus use the total number of matrículas issued to proxy for municipal emigration flows to the US.

In Section 5.7, I study how development mitigates the labor market consequences of deportations. The 2004 Mexican Economic Census provides the number of financial services and insurance establishments, the value of the total stock of fixed assets, the total collection of real estate (plants and other infrastructure) and machinery, and gross fixed capital accumulation by municipality as of 2003. I also use data on road networks from the Mexican Transportation Institute in this section.

## 4 Empirical Framework

Before providing causal estimates of the impacts on labor market outcomes, I will first provide some descriptive analysis to better understand return migrants and how they differ in observable characteristics relative to non-return migrants, who I’ll refer to as “locals” in this paper. I identify return migrant selectivity based on some version of the following specification for individual  $i$  in municipality  $m$ :

$$y_{im} = \alpha_m + \beta_1 \text{returnee}_i + \beta_2 d_{m2015} \times \text{returnee}_i + \beta_3 d_{m2010} \times \text{returnee}_i + u_i \quad (2)$$

where  $y_{im}$  is the age, gender, educational attainment, employment status, or monthly income from working for individual  $i$  in municipality  $m$ ;  $\alpha_m$  is a municipality fixed effect;  $\text{returnee}_i$  is an indicator for being in the US five years prior; and  $d_{m2015}$  and  $d_{m2010}$  are the SC deportee shares which I’ll describe in greater detail in Section 5. I will first estimate differential selection on the demographic characteristics (age, gender, and educational attainment) with municipality

fixed effects without any individual-level controls. I will then estimate differential selection on the economic outcomes (employment and monthly income from working) and control for a vector demographic characteristics which include a cubic polynomial in age and interactions between a female indicator and educational attainment and marital status. The  $\beta$  coefficients identify the difference in mean  $y$  across return migrants and locals from the same municipality. I estimate this equation separately by year (2010 and 2015) using the sample of working age individuals (ages 18-64 and not in school) in the baseline sample of municipalities which I describe below. When estimating differential selection in 2010, I do not include the  $\beta_2 d_{m2015} \times returnee_i$  term. When estimating versions of this regression specification, I cluster standard errors at the municipality level.

After analyzing the selection of return migrants, I turn to providing causal estimates of their labor market effects using the “pure spatial” approach. Dustmann et al. (2016) argue that the pure spatial approach recovers the total effect of immigration on “natives”, a parameter that has a clear interpretation. The other two approaches widely used in the immigration literature are the “national skill-cell” approach which exploits the variation in the exposure to immigration within education-experience cells and the “mixture approach” which exploits both the variation across regions and within education-experience cells. Both of these approaches identify the relative effect of immigration (i.e., of one experience group versus another within the same education cell or of one education group versus another within the same experience cell) and thus provide parameters that are harder to interpret.

Following the recommendation in Dustmann et al. (2016), I estimate the following “second stage” specification:

$$\Delta y_{m2015} = \theta_{SR} r_{m2015} + \theta_{LR} r_{m2010} + \alpha_s + X'_m \beta + \varepsilon_m \quad (3)$$

where  $\Delta y_{m2015}$  is the change from 2010-2015 in the mean employment indicator, mean log monthly income, homicide rates, or the share of households receiving remittances in municipality  $m$ . The return migrant rates,  $r_{m2015}$  and  $r_{m2010}$ , are defined as the number of individuals in municipality  $m$  in year  $t$  that were in the US five years prior normalized by the size of the working age

population in  $t - 5$ . The difference in the outcome variables eliminates non-time varying municipality unobservables. I also include Mexican state fixed effects,  $\alpha_s$ , as well as initial municipality characteristics,  $X_m$ . These characteristics include the 2010 population size, gender ratio, average age, and the shares of the population with varying levels of educational attainment (no schooling, primary, high school, or university). They also include the 2000 emigrant population share which provides a measure of the relative importance of emigration as well as the number of matrículas issued to individuals from the municipality from 2006 to 2010 normalized by the 2005 population which provides a proxy for the lagged emigration flow rate.

I estimate Equation 3 on the sample of Mexican municipalities using IPUMS 1960-2015 consistent boundaries, of which there are 2,322. In the states of Baja California Sur and Quintana Roo, there is only one IPUMS 1960-2015 consistent boundary municipality. The Mexican state fixed effects absorb all of the variation for these two municipalities so I drop them from the sample. I also drop the municipality of Zlilala in the state of Guerrero due to inconsistencies in the municipality name in the IPUMS data. This leaves me with 2,319 municipalities in the baseline sample from 30 Mexican states. Given potential spatial correlation, I cluster standard errors at the Mexican state level.

Following the recommendations in Jaeger et al. (2018), Equation 3 includes the lagged return migrant share as return migrant flows are likely correlated over time and can thus be highly correlated with the excluded instrument. If this is the case, not including the lagged shock can lead to an upward bias in the estimate of  $\theta_{SR}$ , the short run effect of return migration, as municipal labor markets adjust to previous return migrant inflows.

As shown in Card (2001), the negative wage impacts of immigration can lead to native outflows. I use the following specification to estimate the effects of return migration on out-migration and emigration:

$$mig_{m2015} = \alpha_{SR}r_{m2015} + \alpha_{LR}r_{m2010} + \gamma mig_{m2010} + \delta_s + X'_m\beta + \epsilon_m \quad (4)$$

where  $mig_{m2015}$  is the migration flow rate from 2010 to 2015 and  $mig_{m2010}$  is the migration flow rate from 2005 to 2010. The flow rates I focus on in this paper are: domestic out-migration,



domestic in-migration, domestic net out-migration, and emigration. I define the out-migration flow rate for municipality  $m$  in year  $t$  as the number of individuals in municipality  $m$  in year  $t - 5$  that were in a different municipality in year  $t$  divided by the number of individuals in municipality  $m$  in year  $t - 5$ . I define the in-migration flow rate for municipality  $m$  in year  $t$  as the number of individuals that resided in a different municipality than  $m$  in year  $t - 5$  and resided in municipality  $m$  in year  $t$  divided by the number of individuals in municipality  $m$  in year  $t - 5$ . I define the net out-migration flow rate as the out-migration flow rate less the in-migration flow rate. The 2015 Intercensal Survey does not provide information on the number of emigrants so I use the number of matrículas issued to individuals from municipality  $m$  over the five year period divided by the municipality's population five years prior as a proxy for the emigration flow rate. This is a reliable proxy for emigration as Caballero et al. (2018) explain that in every year from 2006-2013, over 97% of cards issued were new cards likely issued to recently arrived migrants rather than renewals. Throughout this paper, migration flow rates are multiplied by 100 so that coefficients can be interpreted as percentage points. When estimating Equation 4, I cluster standard errors at the Mexican state level.

## 4.1 Deportation Shock

Migrants may choose to return to booming municipalities with economic opportunity. If this is the case, OLS estimates of the labor market effects using Equation 3 would be biased upward. To address the endogenous selection of return migrants to different municipalities, I use deportations from US states as exogenous push shocks to return migration.

I predict deportee inflows using a variant of the shift-share instrument used extensively in the immigration literature (Card 2001). The predicted deportee inflow to municipality  $m$  from US state  $s$  is equal to the municipality's relative network strength in that municipality as shown in Equation 1 (i.e., the share of Mexican undocumented migrants living in  $s$  from  $m$ ) multiplied by the number of Mexicans removed from state  $s$  through SC. The total predicted number of deportee arrivals to municipality  $m$  is then the sum of the predicted deportee arrivals from each of the US

states:

$$d_{mt} = \sum_{s \in S} \text{Deportees}_{st} \times \text{Share}_{ms} \quad (5)$$

where  $\text{Deportees}_{st}$  is the number of Mexicans removed through SC in state  $s$  in period  $t$ .  $d_{m2015}$  will use removals from fiscal years 2011-2015 and  $d_{m2010}$  will use removals from fiscal years 2009 and 2010 due to the fact that deportations through SC did not start FY 2009. Since I am interested in the return migrant flow rate, I scale  $d_{mt}$  by the municipality's population in  $t - 5$ . The predictive power of the instrument depends on whether Mexican migrants living in the US that are affected by increased interior enforcement through SC (either directly through being deported or indirectly through self-deportation) sometimes return to their municipalities of origin.

## 4.2 Identifying Assumptions

**Exogeneity of Deportation Shock:** The first assumption is that this deportation shock is orthogonal to trends in labor market outcomes conditional on the controls. In other words, the question is whether the trends in the outcome variables for less-exposed municipalities (i.e., those that will be hit with a smaller deportation shock) serve as an accurate counterfactual for those that are more-exposed. I will first explain how the shock's construction mostly ensures this and then discuss several potential violations and how I am addressing those possibilities.

One potential issue is that municipalities hit with negative economic shocks may send more migrants to the US and mechanically increase their exposure to SC. If shocks are negatively correlated, then deportation shocks would be spuriously negatively correlated with economic outcomes. To address this concern, I control both for the number of international emigrants living in the US in 2000 (using the Mexican Census) and the recent flow of emigrants to the US from 2005 to 2010 (proxied by the number of matrículas issued from 2006 to 2010) so that I am comparing municipalities with similar emigrant populations and with similar recent emigration flows to the US. The shock will instead exploit the fact that different municipalities have networks in different US states which generates quasi-random exposure to interior immigration enforcement.

This assumption could be violated if migrants selectively sort into particular US states with

higher rates of SC enforcement. For example, one possibility is that municipalities that are suffering economically or with increased violence send more criminal migrants which then increase deportation rates in the states where they reside. If this is the case, the predicted deportee rates for these municipalities would be correlated with the unobserved changes in economic conditions and/or crime/violence. Reduced form estimates of the deportation shock's effect would then be biased and would lead me to incorrectly interpret that increased deportee rates negatively impact employment, income, and/or violence when in fact employment/income would have fallen and/or violence would have increased regardless.

This type of selective sorting is not consistent with the literature on Mexican migration networks. In the seminal paper on Mexican migrant networks in the US, Munshi (2003) documents patterns in which comparably similar municipalities often times send their migrants to different destinations in the US. He argues that these findings are consistent with the view that historical accident played a role in forming the networks initially. Once these networks were formed, they lowered the cost of migration for other migrants from the same communities (McKenzie and Rapoport 2007). For example, Munshi (2003) shows how networks in the US improved employment outcomes for new migrants. These new migrants then eventually contributed to the network allowing it to persist.

I provide further evidence against selective sorting in Table A1. The table shows the correlations between mean log monthly income from working and homicide rates in 2000 and SC deportee shares in 2015 and 2010 after controlling for Mexican state fixed effects. The results suggest that municipalities that would eventually experience larger deportation shocks in 2015 or 2010 did not look significantly different from those that would be less exposed in terms of economic conditions or crime/violence.

One benefit of this particular instrument is that unlike the standard shift-share enclave instruments used in the immigration literature, the “share” in this case is based on shares *outside* of the municipality. The classic shift-share enclave instrument used in Altonji and Card (1991) uses the historic fraction of foreign born residents from a particular country residing *inside* an MSA. One common issue addressed in this literature, is that these shares could depend on prior MSA

economic shocks which acted as pull factors. If these economic shocks are sufficiently serially-correlated, then IV estimates could conflate persistent immigration flows with positive economic shocks leading to biased estimates of the effects of immigration. In this paper, I will study the outcomes at the municipality level; however, the shares used to generate quasi-random variation in exposure to deportations are based on the number of residents in US states.

This construction implies that the shock depends on the number of Mexicans removed from each US state. Mexican municipalities are similar in size to US counties. It is thus reasonable to assume that no single municipality would have influence on the total number of deportations from a US state. Instead, immigration enforcement intensity at the state-level is a function of the size of the state's undocumented population, the activation timing of SC for each county in the state, the composition of the state's pool of arrestees, and the level of cooperation between the state's local law enforcement agencies and federal immigration enforcement (Ciancio and García-Jimeno 2019).

To alleviate any remaining concerns, I control for pre-trends by including the difference in the outcome variables from 2000 to 2010 in Equation 3.<sup>8</sup> This allows me to compare municipalities with similar trends in the outcome variables which partially alleviates the potential violation of municipalities with different trends selectively sorting to certain states. With regard to the example I mentioned above, I can instead compare more exposed municipalities with less-exposed municipalities that have similar trends in the outcome variables. Controlling for pre-trends, the municipality characteristics mentioned in Section 4, and Mexican state fixed effects does, however, require that there be enough variation in destination states for comparably similar municipalities in the same Mexican state. Fortunately, Mexican migration to the US has this feature as Munshi (2003) shows using data from the Mexican Migration Project and more recently which Caballero et al. (2018) show using data from the same MCAS program.

**Exclusion Restriction for 2SLS:** In addition to the deportation shock being exogenous, 2SLS estimation of Equation 3 requires that the deportation shock affect these outcomes only through the return migration channel. Other immigration papers mostly take this assumption

---

<sup>8</sup>The difference is from 2000 to 2010 instead of 2005 to 2010 because the National Count in 2005 does not provide economic outcome variables.

for granted when predicting migration inflows. However, the deportee inflow rate,  $d_{mt}$ , can also be interpreted as a municipality's exposure to increased interior enforcement through SC. In this context, there are several other potential mechanisms through which deportations could affect Mexican labor markets.

First, deportations could alter the emigration decisions of prospective migrants. Prospective migrants living in more exposed municipalities may decide not to emigrate after hearing about other community members forced to return. This would lead to surplus labor which could impact employment and wages as well as violence. Dell et al. (2019) show that surplus labor stemming from increased manufacturing competition with China provided cheap labor for criminal organizations to exploit.

Second, for those migrants still living in the US, increased immigration enforcement could force them to “work in the shadows” in less formal and secure jobs. These employment affects for those abroad could impact whether and how much they remit to family members and friends in Mexico. Remittances have accounted for around 2-3% of total GDP in Mexico since the early 2000s (The World Bank) and Woodruff and Zenteno (2001) find that remittances account for almost 20% of capital invested in microenterprises in Mexico. Thus, increased deportations could also have significant effects on local economies in Mexico by affecting the earnings of Mexican migrants in the US. The findings in Amuedo-Dorantes and Puttitanun (2014) on the effects of police based initiatives like SC on remittances suggest that this is unlikely the case; however, this is something I can test using the nationally representative Mexican microdata.

If increased immigration enforcement does impact Mexican municipalities through these other potential mechanisms, then the exclusion restriction is violated and the instrument is not valid. Given this possibility, I will proceed in the following manner. I will first estimate the “first stage” effect of the deportation shock on return migration to see if there is a causal relationship between deportations and return migration. This will allow me to determine whether return migration is a valid channel through which deportations can affect labor market outcomes, migration, and violence. After documenting the first stage relationship, I will estimate the “reduced form” effects of the deportation shock by replacing the return migrant share,  $r_{mt}$ , with the deportee share,  $d_{mt}$ ,

in Equations 3 and 4.

These results are of policy interest as they provide estimates of the effects of deportations on migrant sending municipalities in Mexico, the primary goal of this paper. Besides quantifying the effects of deportations, it's also important to understand how they are impacting these communities. The reduced form results can potentially provide evidence which can help determine the primary mechanism(s) through which increased interior immigration enforcement affects these outcomes while also ruling out others. After determining the validity of the exclusion restriction assumption based on the reduced form results, I will also provide 2SLS estimates of the effects of return migration on employment and log monthly income using the deportation shock as an instrument.

## 5 Results

### 5.1 Descriptive Statistics

To understand how deportations may affect Mexican municipios, it is important to know a bit more about the deportee population. Table 6 shows the fraction of the Mexicans removed through SC from fiscal years 2009 to 2010 and from 2011 to 2015 by their most serious criminal conviction. Over half of the Mexican deportees in both periods were convicted of either lower level misdemeanors or had no criminal conviction at all. Illegal entry constitutes a significant fraction of the removals with level 3 criminal convictions. Those without criminal convictions were likely deported due to overstaying their visa, a civil (non-criminal) violation, and were not ultimately convicted of the crime that led to their arrest and eventual deportation.

The deportation shock I construct and describe in Section 4.1 depends on the variation in the number of deportations across US states over time. Figure 1 shows the number of Mexicans deported through SC per 100 pre-SC matrículas in the two periods. Municipalities with strong networks in states with higher deportation intensities will have more exposure to this policy. The maps are consistent with the findings in Ciancio and García-Jimeno (2019) as most traditionally Republican states have a higher SC enforcement intensity; however, even among more traditionally

Republican/Democratic states, there is considerable variation in the application of SC.

Figure 2 shows the SC deportation exposure for each Mexican municipality for the baseline sample of Mexican municipalities in the two periods. The maps show that there is considerable variation in the exposure to this deportation shock (the predicted deportee arrival rate) across Mexico. Even within Mexican states which are outlined in dark gray, there is substantial variation in the exposure to the deportation shock in both periods. This identifying variation is crucial given I am controlling for common shocks within Mexican states by including Mexican state fixed effects in Equations 3 and 4. There also appears to be some variation over time; however, this variation is less visually striking.

Table 1 provides some summary statistics of the return migrant and deportee shares along with several key dependent variables in the baseline sample of municipalities. The average return migrant share was 1.1 in 2015 and 2.4 in 2010. The return migrant flow from 2005 to 2010 was much larger due to poor economic conditions in the US during the Great Recession. The average SC deportee share was 0.9 in 2015 and 0.2 in 2010. The SC deportee share were much smaller in 2010 as this period's shares use only two years worth of deportations. To account for this difference, I standardize the deportee shares in both periods by their respective standard deviations in the following analyses. Conveniently, the standard deviation for the 2015 deportee share is 1 p.p. which provides a straightforward interpretation for the short run reduced form effects of SC exposure.

I compare the demographic characteristics of locals, individuals who were not in the US five years prior to the survey, to return migrants, individuals who were in the US five years prior to the survey, in Table 2. The average return migrant in the average municipality looks quite similar to the average local in the average municipality in both periods, except with regards to gender. In the average municipality, around 70% of the return migrants were men in both periods. This is important to keep in mind when discussing the results of this shock as it could have heterogeneous effects by gender and education. There does not appear to be any meaningful differences in these demographic characteristics for the return migrant populations in the two periods.

Table 3 compares the occupational choices of locals and return migrants. Return migrants are more likely to work in skilled agricultural and fishery and crafts and related trades and less likely

to work in clerical support or as technicians and associate professionals relative to locals. There also does not appear to be any meaningful differences in the occupational choices of the return migrant populations between the two periods.

Table 4 shows results from estimating Equation 2 on age, a female indicator, and an indicator for not having a high school degree. The results suggest that return migrants are younger than locals from the same municipality and more likely to be male, and even more so in municipalities with a higher contemporaneous exposure. Table 5 shows results from estimating Equation 2 but also includes a battery of demographic characteristics in addition to the municipality fixed effects. Return migrants are less likely to be employed but earn more than locals with similar demographic characteristics in less exposed municipalities. In municipalities with a higher contemporaneous deportation exposure, this pattern is reversed. Return migrants in these municipalities are more likely to be employed, but are less positively selected with respect to earnings. A one standard deviation in the 2015 deportee share increases the likelihood of a return migrant being employed by 3.1 p.p. relative to a similar local in the same municipality and decreases their monthly income from working relative to the local by 7.8%. These patterns in selection provide some understanding of the type of labor supply shock in this context and will inform the labor market effects documented in Sections 5.3 and 5.6.

## 5.2 First Stage Relationship Between Return Migrant and Deportee Shares

I start the causal analysis by first testing whether deportations increase return migration by estimating the reduced form version of Equation 4 with the return migrant shares as the dependent variables.<sup>9</sup> The results from the “first stage” regression are shown in Table 7. There is a positive and significant relationship between the contemporaneous predicted deportee shares and the return migrant shares. A one standard deviation increase in the 2015 predicted deportee share increases the 2015 return migrant share by 0.37 p.p., which relative to the mean 2015 return migrant share is

---

<sup>9</sup>For the baseline analysis I include the change in the outcome variable from 2000 to 2010 when estimating Equation 3. Table A2 presents results where Equation 4 also includes controls for lagged changes in the main outcome variables studied in this paper. The results are nearly identical to those in Equation 7.



a 33.6% increase. A one standard deviation increase in the 2010 predicted deportee share increases the 2010 return migrant share by 0.63 p.p., a 26.6% increase relative to the 2010 mean return migrant share. There is no significant effect of the 2010 deportee share on the 2015 return migrant share or of the 2015 deportee share on the 2010 return migrant share. The fact that the timing of the predicted deportee shares coincides with increased return migration provides reassuring evidence that the deportations are indeed providing an exogenous shock to return migration. These results imply that return migration is a potential channel through which immigration enforcement affects Mexican labor markets.

### **5.3 Reduced Form Labor Market Effects**

Given return migration increases as a result of increased interior enforcement, one may expect this deportation shock to impact the labor market opportunities of local Mexicans. The reduced form estimates of this shock's effects on employment and log monthly income from working are shown in Tables 8 and 9 respectively. In these and subsequent tables, I present results for the entire working age population in Column 1 and results separately by each gender-education group (women without a high school degree, women with a high school degree or more, men without a high school degree, and men with a high school degree or more) in Columns 2-5.

The reduced form effect of a one standard deviation increase in the 2015 deportee share decreases the employment rate by around 1 p.p. while a standard deviation increase in the 2010 deportee share increases the rate by nearly the same amount. This effect is fairly uniform across the four gender-education groups.

The reduced form effects on monthly income from working are much larger in economic magnitude, particularly for the groups of individuals who return migrants most easily substitute for. A one standard deviation increase in the 2015 deportee share decreases monthly incomes from working for women and men without a high school degree by 2.3% and 6.0% respectively. A one standard deviation increase in the 2010 deportee share increases monthly incomes by nearly the same amount for these two affected groups, allowing monthly incomes to recover by 2.6% and 4.8% for women and men respectively. Deportees do not appear to complement those with higher levels

of education as they do not lead to significant changes in monthly earnings for individuals with a high school degree or more.

The negative short run effects documented here are consistent with most of the immigration literature which generally finds adjustments to labor supply shocks from immigration in wages and little to no response in employment (e.g., Kleemans and Magruder 2018). The dynamics are also consistent with the theoretical and empirical findings in Jaeger et al. (2018) who show that immigrant inflows decrease wages in the short run and increase wages in the subsequent period as the labor market adjusts to the previous period's labor supply shock.

## **5.4 Reduced Form Effects on Domestic Migration, Emigration, and Remittances**

The increased competition due to the inflow of deportees and others induced to move due to increased immigration enforcement could push Mexicans to migrate to other municipalities or emigrate to the US for better opportunities. Another possibility is that hearing about other community members being deported may deter individuals from emigrating to the US, which would violate the exclusion restriction for 2SLS estimation of the effect of return migration. In this section, I provide some evidence to help determine which of these two scenarios is more likely.

Tables 10, 11, and 12 provide reduced form results of the effects of deportations on the domestic out-migration flow rate, in-migration flow rate, and net out-migration flow rate using Equation 4. These tables follow the same column pattern for the gender-education groups. The results are somewhat noisy but suggest that net out-migration increased as a result of deportations in the short run. This appears to be driven both by more people leaving and less people arriving to municipalities more exposed to deportations in the short-run. This is likely due to the fact that worse labor market opportunities as a result of the deportations makes municipalities less desirable.

In addition to domestic migration, deportations also increased emigration in the short run, seen in Column 1 of Table 13 which provides reduced form results of the effect of deportations on the emigration flow rate. The results suggest that a one standard deviation increase in the

deportation share increased the emigration flow rate by 8 p.p., a close to 100% increase relative to the mean. However, the magnitude of this coefficient should be interpreted with caution as I am using the number of matrículas issued to proxy for emigration. The estimate of the long run effect of deportations on emigration is negative but noisy. This seems to suggest that rather than deter emigration, deportations increase emigration by creating local labor market conditions which push people to emigrate to the US.

Another potential violation of the exclusion restriction is that increased enforcement could also affect remittances to Mexican municipalities and thus also affect labor market outcomes. Enforcement may discourage immigrants from commuting to and from work and/or forcing them to work in jobs with less formality/protection. I thus expect that increased immigration enforcement would decrease remittances if the negative labor market effects of US immigration enforcement are operating primarily through the remittance channel. The 2015 Intercensal Survey asks whether anyone in the household received remittances from someone abroad but does not ask about the amount received. I thus can only test whether remittances increase/decrease on the extensive margin as a result of SC. I estimate the reduced form effect of SC on the share of households receiving remittances using the baseline Equation 3 and present those results in Column 2 of 13.

In the short run, deportations *increase* the share of households receiving remittances. As the labor market adjusts to the previous labor supply shock, deportations decrease the share of households receiving remittances. These results are consistent with remittances responding on the extensive margin depending on the local labor market conditions in Mexico, increasing when monthly earnings go down, and decreasing when monthly earnings recover. An increasing fraction of Mexicans likely reach out to their friends and family abroad for help when labor market conditions worsen as a result of deportations leading to an increase in the share of households receiving remittances. This finding is more consistent with increased labor market competition driving the negative labor market effects as opposed to decreases in labor demand due to falls in remittance income.

## 5.5 Reduced Form Effects on Homicide Rates

The within-country analyses of the effects of deportations which have mostly focused on El Salvador and the recent paper by Rozo et al. (2016) summarized in Section 1 have reached the conclusion that deportations increase violence. In my context, this could also be the case as half of the Mexican deportees through SC have a criminal background. These deportees could return to their home municipalities and increase criminal activity/violence there. This could have negative effects on the local economy. In other words, criminal activity/violence could be a potential mechanism for the negative labor market effects found above. It is also possible that deportee inflows increase labor market competition, reducing wages for lesser-educated men thereby reducing the cost of criminal labor for criminal organizations to exploit which leads to more criminal activity/violence in the municipality.

I estimate the reduced form effects of SC deportations using Equation 3 where  $\Delta y_m$  is the change in the homicide rate. I estimate the effect on the overall homicide rate and the homicide rate by gender. The homicide rate is the number of homicides that occurred in the municipality divided by the corresponding population size in the previous period (total population, female population, or male population) multiplied by 1,000 so that it can be interpreted as the number of homicides per 1,000 individuals. Table 14 shows that exposure to SC deportations had zero impact on the the homicide rates.

This result is in sharp contrast to the referenced papers documenting the violent consequences of the deportations to El Salvador and the effects of deportations in repatriation areas in Mexico. This may be due to the fact that the Salvadoran deportees differed substantially from the Mexican deportees from SC. Unlike the Salvadoran deportees in the 1990s, the majority of Mexicans deported through SC have lower level convictions or no conviction at all. Sviatschi (2019) explains that many Salvadoran deportees were exposed to criminal organizations in the US and brought this criminal capital to El Salvador. Mexican deportees from SC may have had less exposure to these organizations in the US as their destinations are spread throughout the country whereas the Salvadoran diaspora was largely concentrated in cities with criminal organizations. Unlike the recent deportees near repatriation centers studied in Rozo et al. (2021), the deportees that

return to their communities likely have family and friends in their communities making them less vulnerable targets.

## 5.6 2SLS Estimates of the Effects of Return Migration

Taken together, the reduced form evidence presented above is consistent with return migration being the primary channel through which exposure to SC affects labor market outcomes. I first showed that SC deportations increased return migration. The resulting labor supply shock decreased monthly earnings of locals without a high school degree, especially for men. Rather than deter migration, I find that SC deportations increased both domestic migration and emigration to the US due to the resulting increased labor market competition. I also show that exposure to SC deportations actually increases the share of households receiving remittances, contrary to what would one expect if the negative labor market effects of SC deportations operated through remittances.

With the additional assumption of the now more plausible exclusion restriction, I can estimate the effect of return migration on employment and log monthly income using the predicted deportee shares from SC as an instrument for the return migrant shares. Tables 15 and 16 show the OLS and IV estimates of the effect of return migration on employment and log monthly income respectively. For employment and log monthly income, the OLS point estimates are biased upward which is consistent with return migrants sorting to municipalities with favorable economic conditions. The IV estimates on employment suggest that a 1 p.p. increase in the return migrant share decreases the employment rate by around 2-3 p.p. in the short run and increases it by around 1 p.p. in the long run as the labor market adjusts to the labor supply shock; however, these estimates are insignificant at the conventional levels using this specification.<sup>10</sup> This same increase in the return migrant share decreases monthly income from working by 9.7% in the short run. Due to the labor market adjustments to the previous period's inflow of return migrants, a 1 p.p. in the lagged return migrant share increases monthly earnings by 3.9%.

---

<sup>10</sup>In Section 6 where I probe the robustness of these results, I find versions of the specification which provide point estimates of similar magnitudes and smaller standard errors suggesting significant employment effects at conventional levels.

## 5.7 Heterogeneity by Level of Development and Factor Mobility

The majority of the literature on the labor market impacts of immigration has focused on developed countries.<sup>11</sup> In the developed context, capital and labor markets are more completely integrated and adjustments to labor supply shocks will thus be quicker which would lead to smaller wage impacts that dissipate more quickly. This may explain why most of the wage impacts in the literature are fairly small in magnitude. This is not the case in developing contexts where financial institutions are scarce and transportation costs are higher due to worse infrastructure. In addition to the slower adjustments, these features of underdevelopment highlighted in Jayachandran (2006) can also make labor supply more inelastic and thus place more pressure on wages.

In this section, I largely replicate the analysis in Jayachandran (2006) who shows how underdevelopment exacerbates the fluctuations in wages caused by productivity shocks. The main difference besides the country of study is that the shock (deportations) in my paper operates at least partially through labor supply (an increase in return migration) whereas in her context the productivity shocks (rainfall) affect labor demand. I similarly explore the heterogeneity in the response to the shock by measures of access to banking and road density. I also explore the heterogeneity by measures of access to capital markets and historic domestic in and out-migration as a measure of labor mobility. I follow Jayachandran, and focus on the heterogeneity in the changes in men's monthly income from working.

Table 17 provides summary statistics of the measures of access to banking and capital markets. For measures of pre-existing access to banking I follow Jayachandran and use the number of bank branches per 10,000 people and an indicator for whether the municipality had any bank branch in 2003. Over 60% of municipalities did not have a bank branch in 2003 suggesting that for many municipalities of Mexico, formal financial services are scarce or nonexistent. For measures of access to capital markets, I use the natural log of the total value of the capital stock, machinery, plants, and the absolute value of capital accumulation which each provide some measure a municipality's capital market integration.

---

<sup>11</sup>In Dustmann et al. (2016), the authors highlight 26 papers on the labor market effects of immigration. 25 out of these 26 papers focus on developed countries per the United Nations classifications. In Jaeger et al. (2018), the authors provide a list of 70 papers that use some version of the shift-share design to study the impacts of migration flows. 65 out of 70 of these papers focus on developed countries.

Table 18 provides summary statistics of the measures I use to explore the responsiveness of men's monthly earnings by a municipality's level of factor mobility. I follow Jayachandran and measure a municipality's road density as the length of paved road (km.) by the municipality's area (km. sq.). I calculate the road density for all roads, roads administered by the federal government, roads administered by the state government, and roads administered by the municipal government. I also include the in- and out-migration rates in 2000 as a measure of labor mobility. Labor markets where individuals can come and go more easily might be more flexible in absorbing the labor supply shock which could lead to smaller changes in earnings.

Given the potential violations of the exclusion restriction, in the following analyses, I estimate the reduced form version of Equation 3 which includes interactions between the deportee shares and a measure of access to banks/capital, factor market integration, or factor mobility along with a linear control for the measure.

I first test whether men's monthly income from working is less responsive in municipalities with more or any banks. The results are presented in Table 19. Column 1 shows results using bank branches per capita and Column 2 shows results using an indicator for whether the municipality had at least one bank. Both tell a similar story. Again, men's monthly income from working falls in the short run as a result of the deportee share and mostly recovers after five years. When there are more banks, men's monthly income from working falls by less in the short run. It then doesn't have to recover by as much in the following five years. Column 1 suggests that for a municipality with a predicted deportee share of 1 s.d. in 2015<sup>12</sup>, a one standard deviation increase in bank branches per 10,000 people mitigates the fall in men's monthly income from working by 1.7% in the short run. Column 2 suggests that for such a municipality, having a bank branch mitigates the drop by 5.1%.

Table 20 shows a similar pattern with regards to capital market integration. In municipalities with more integrated capital markets as measured by the stocks and capital accumulation in 2003, men's monthly income from working is less responsive to SC deportations. For municipalities with a predicted deportee share of 1 s.d. in 2015, a one standard deviation in the log value of the capital

---

<sup>12</sup>I choose this value throughout this section to facilitate the interpretation of the coefficients. See Table 1 for the means and standard deviations of the SC deportee shares in the two periods.

stock (a 70% increase relative to the mean log capital stock value) reduces the fluctuation in men's monthly income from working as a result of SC deportations by men by 3.2%.

Municipalities with more/better roads can more easily transport machinery and other equipment which help absorb the labor supply shock. They also allow individuals to work in other municipalities if the labor market becomes more competitive in their home municipality as a result of deportee inflows, putting less pressure on wages. Table 21 shows results that are consistent with this story, particularly when municipalities have a high density of roads administered by the federal government. This may be due to the fact that federal roads are more likely to be multiple lanes where vehicles can drive faster. A one standard deviation increase in the federal road density for municipalities with a predicted deportee share of 1 s.d. reduces the fluctuation in men's monthly earnings by 4.4%.

Table 22 confirms these patterns and shows that in municipalities where labor can and has moved more easily, men's monthly incomes from working are less sensitive to deportations. This is true when measuring mobility both by the out-migration rate in 2000 and the in-migration rate in 2000. It is worth noting that these two measures aren't highly correlated ( $\rho=0.05$ ). A one standard deviation increase in either of these measures reduces the fluctuation in men's monthly incomes from working by around 3-4% in municipalities with a predicted deportee share of 1 s.d.

The analysis in this section suggests that development mitigates the negative short run labor market effects of deportations and conversely that underdevelopment might be exacerbating them. In places with more banks, more integrated capital markets, more/better roads, and low migration costs, men's monthly incomes are less sensitive to the increased labor market competition caused by deportee inflows. These results provide a potential explanation for the large negative short-run effects on monthly earnings as many regions of Mexico are less developed in terms of these measures and thus are less equipped to absorb the labor supply shock.

## 6 Robustness of Main Results

In this section, I check the robustness of the main results, namely the reduced form and IV estimates of the SC deportation shock on employment and log monthly income from working. For



each robustness check, I will provide four tables similar to Tables 8, 9, 15, and 16 which provide estimates of the reduced form effects of the deportations on employment, the reduced form effects of the deportations on monthly income from working, the IV estimates of the effects of return migration on employment, and the IV estimates of the effects of return migration on monthly income from working respectively.

## 6.1 Weighting by Population Size

Some papers on the labor market effects of immigration weight each observation by the geographical area's corresponding current or lagged population size. The motivations for weighting in this context could be to improve efficiency by correcting for heteroskedasticity or to identify the population-weighted average effect in the presence of unmodeled heterogeneity by population size. Solon et al. (2015) show several instances in which weighting does not achieve these goals and instead recommend comparing both weighted and unweighted estimates. More recently, Chodorow-Reich (2020) also shows that weighting can produce coefficients that are less representative of the population average treatment effect than the unweighted regression. It can also decrease efficiency and increase bias when using instrumental variables. Given these findings and suggestions, in my baseline analysis, I weight both small and large municipalities equally and provide cluster robust standard errors.

Tables A3-A6 provide results when weighting by the lagged population size and suggest the results are robust to weighting. The weighted reduced form and IV point estimates are similar in magnitude for the effects on log monthly income from working and are slightly larger for the effects on employment relative to those in the baseline unweighted results. The weighted IV results provide standard errors that are smaller than those in the baseline unweighted results which suggests that weighting improves efficiency by correcting for heteroskedasticity. The larger point estimate of the contemporaneous effect of return migration on employment for men without a high school degree and the smaller standard error results in a point estimate that is significant at the conventional levels.

## 6.2 Using Levels for the Dependent Variable

In the baseline analysis which uses Equation 3, the dependent variable includes the value of the outcome variable  $y$  as of 2010. One of the key right hand side variables is the return migrant share as of 2010. I also include several other municipality characteristics as of 2010. Systematic measurement error could lead to biased estimates. Given this possibility, I estimate a lagged dependent variable version of 3 which replaces  $\Delta y_m$  with  $y_{m2015}$ , the labor market outcome in levels as opposed to changes, and also includes controls for the outcome levels in 2010 and 2000,  $y_{m2010}$  and  $y_{m2000}$ .

Tables A7-A10 provide results when using this lagged dependent variable version of Equation 3. The results are similar to the baseline results albeit slightly noisier in the IV estimation. Like the weighted results, results using this version of the model suggest that the negative employment effect of return migration is slightly larger in magnitude relative to the baseline results, implying an elasticity of the employment rate with respect to the return migration rate of -8.0 p.p. for men without a high school degree.

## 6.3 Dropping Deportations from Outlier States in US

Over 50% of deportees from 2011 to 2015 from SC were deported from Arizona, California, or Texas. Following the recommendations in Goldsmith-Pinkham et al. (2020), I address the concern that any one of these states is driving most of the meaningful variation by providing results which build the deportee shares in the two periods excluding deportees from each of these states one at a time. I similarly standardize the deportee shares by the each period's respective standard deviation.

Tables A11-A14 provide the baseline results when the deportee shares do not use deportations from Arizona. Tables A15-A18 provide the baseline results when the deportee shares do not use deportations from Texas. A19-A22 provide the baseline results when the deportee shares do not use deportations from California.

The results after dropping each of the states remain largely unchanged. In each of the three cases, I find negative and mostly significant effects on log monthly income from working in both

the reduced form and IV estimates with point estimates that are similar in magnitude to those in the baseline analysis. These results suggest that the baseline results are not being driven by deportations solely from outlier US states.

## **6.4 Exclude Control for Pre-Trends in Outcome Variables**

As mentioned above, I focus on changes in the outcome variables from 2010 to 2015. In the baseline analysis, I allow for differential trends by several initial municipality characteristics and I control for pre-trends by including the difference in the outcome variables from 2000 to 2010. In Tables A23-A26, I show that the results are robust to excluding the change in the outcome variables from 2000 to 2010. Excluding these trends leads to slightly smaller point estimates of the negative monthly income effects which suggests that differential trends are not driving the results as the direction of the minimal bias is in the opposite direction.

## **6.5 Using Deportations from Lower-Level Crimes**

SC deportations depend on deportable individuals being arrested and thus the number of deportations from a particular state could be a function of the criminality of the resident population. This criminality could result from the residents' origin municipalities. To show that these types of underlying municipal characteristics are not driving the results, I construct the deportee shares using only deportations of individuals with either non-serious criminal backgrounds. Specifically, I only use deportations of individuals whose most serious criminal conviction is a misdemeanor and deportations of individuals without any criminal convictions. I similarly standardize the deportee shares by the each period's respective standard deviation.

The results using only these deportations are shown in Tables A27-A30 and are nearly identical to the baseline results providing further reassurance that the results are being driven by plausibly exogenous exposure to immigration enforcement rather than underlying municipality characteristics.

## 7 Conclusion

In recent decades, tougher immigration policies in the US have led to record levels of deportations. Secure Communities, a program which allowed ICE to more efficiently locate and apprehend deportable individuals through fingerprint matching, was one of these policies deporting over 400,000 individuals since its inception (Alsan and Yang 2018). Understanding the consequences of SC and immigration enforcement more generally on migrant sending countries is vital as the current administration sets its immigration agenda. In this paper, I analyze these consequences in the context of Mexico, focusing specifically on SC.

To do this, I take advantage of the spatial variation in the policy's application over time across US states and the varied origin-destination patterns of Mexico-US migration. I construct a version of the Bartik instrument interacting a municipality's network strength and the number of deportations from SC in each US state. The sum of these interactions predicts the number of deportees from each municipality in each period and provides quasi-random variation in exposure to the policy.

I show that SC deportations increased return migration and decreased monthly earnings in the short run for men and women without high school degrees. After five years, monthly incomes mostly recover. I also find some evidence that these drops in monthly incomes cause individuals to leave employment; however, the magnitudes are relatively small.

The mostly negative short run economic effects seemed to push Mexicans to migrate to other municipalities within Mexico and to the US as well but they did not increase violence. These results are consistent with SC deportations increasing return migration which crowds out opportunities for groups most similar to the return migrant population, namely individuals (especially men) with lower levels of education. Out-migration is one of the responses which may explain the positive labor market adjustments in the long run. Remittances also play a role in this adjustment as the share of households receiving remittances increases precisely when labor market competition increases.

The reduced form results provide suggestive evidence that SC deportations affect Mexican labor markets primarily through return migration further validating the exclusion restriction. To

connect with the labor supply and immigration literature, I provide 2SLS estimates of the effect of return migration on employment and monthly income from working using the SC deportee shares as instruments for the current and lagged return migration shares. I find that a 1 p.p. increase in the return migrant share decreases monthly incomes from working by 9.7% in the short run and increases them by 3.9% in the long run.

These large fluctuations appear to be partly the result of underdevelopment. I find that municipalities with more banks, more integrated factor markets, and where transportation and migration costs are low are better able to absorb the labor supply shock. In these regions, men's monthly incomes from working fall by less in the short run and thus do not have to recover by as much afterwards. These results shed light on how the labor market effects of migration depend on the context and motivate future work in developing countries.

## 8 References

### References

- Alsan, M. and Yang, C. (2018). Fear and the safety net: evidence from secure communities. Technical report, National Bureau of Economic Research.
- Altonji, J. G. and Card, D. (1991). The effects of immigration on the labor market outcomes of less-skilled natives. In *Immigration, trade, and the labor market*, pages 201–234. University of Chicago Press.
- Ambrosius, C. (2018). Deportations and the roots of gang violence in central america. *Criminal Justice, Borders and Citizenship Research Paper*, (3225314).
- Ambrosius, C. and Leblang, D. A. (2018). Exporting murder: Us deportations & the spread of violence. *Available at SSRN 3213383*.
- Ambrosius, C. and Leblang, D. A. (2019). Immigration demand and the boomerang of deportation policies. *Available at SSRN 3491522*.

- Amuedo-Dorantes, C. and Arenas-Arroyo, E. (2019). Immigration enforcement, police trust and domestic violence.
- Amuedo-Dorantes, C. and Puttitanun, T. (2014). Remittances and immigration enforcement. *IZA Journal of Migration*, 3(1):6.
- Atkin, D. (2016). Endogenous skill acquisition and export manufacturing in Mexico. *American Economic Review*, 106(8):2046–85.
- Bahar, D., Özgüzel, C., Hauptmann, A., and Rapoport, H. (2019). Migration and post-conflict reconstruction: The effect of returning refugees on export performance in the former Yugoslavia.
- Bartik, T. J. (1991). Who benefits from state and local economic development policies?
- Caballero, M. E. (2020). The effects of immigration enforcement on educational investments in migrants' source regions. Technical report, Working Paper.
- Caballero, M. E., Cadena, B. C., and Kovak, B. K. (2018). Measuring geographic migration patterns using matrículas consulares. *Demography*, 55(3):1119–1145.
- Card, D. (2001). Immigrant inflows, native outflows, and the local labor market impacts of higher immigration. *Journal of Labor Economics*, 19(1):22–64.
- Card, D. (2009). Immigration and inequality. *American Economic Review*, 99(2):1–21.
- Chishti, M., Pierce, S., and Bolter, J. (2017). The Obama record on deportations: Deporter in chief or not? Migration Policy Institute.
- Chodorow-Reich, G. (2020). Regional data in macroeconomics: some advice for practitioners. *Journal of Economic Dynamics and Control*, page 103875.
- Ciancio, A. and García-Jimeno, C. (2019). The political economy of immigration enforcement: Conflict and cooperation under federalism. Technical report, National Bureau of Economic Research.

- Dell, M., Feigenberg, B., and Teshima, K. (2019). The violent consequences of trade-induced worker displacement in Mexico. *American Economic Review: Insights*, 1(1):43–58.
- Diodato, D., Hausmann, R., Neffke, F., et al. (2020). The impact of return migration from the US on employment and wages in Mexican cities. Technical report, Utrecht University, Department of Human Geography and Spatial Planning . . . .
- Dustmann, C., Schönberg, U., and Stuhler, J. (2016). The impact of immigration: Why do studies reach such different results? *Journal of Economic Perspectives*, 30(4):31–56.
- East, C., Luck, P., Mansour, H., and Velasquez, A. (2018). The labor market effects of immigration enforcement.
- Edo, A. (2017). The impact of immigration on wage dynamics: Evidence from the Algerian independence war.
- Goldsmith-Pinkham, P., Sorkin, I., and Swift, H. (2020). Bartik instruments: What, when, why, and how. *American Economic Review*, 110(8):2586–2624.
- Gonzalez-Barrera, A. (2015). More Mexicans leaving than coming to the US.
- Hines, A. L. and Peri, G. (2019). Immigrants’ deportations, local crime and police effectiveness.
- Hunt, J. (1992). The impact of the 1962 repatriates from Algeria on the French labor market. *ILR Review*, 45(3):556–572.
- Immigration, U. (2019). US immigration and customs enforcement fiscal year 2019 enforcement and removal operations report.
- Jaeger, D. A., Ruist, J., and Stuhler, J. (2018). Shift-share instruments and the impact of immigration. Technical report, National Bureau of Economic Research.
- Jayachandran, S. (2006). Selling labor low: Wage responses to productivity shocks in developing countries. *Journal of Political Economy*, 114(3):538–575.

- Kalhan, A. (2013). Immigration policing and federalism through the lens of technology, surveillance, and privacy. *Ohio St. LJ*, 74:1105.
- Kalsi, P. (2018). The impact of us deportation of criminals on gang development and education in el salvador. *Journal of Development Economics*, 135:433–448.
- Kleemans, M. and Magruder, J. (2018). Labour market responses to immigration: Evidence from internal migration driven by weather shocks. *The Economic Journal*, 128(613):2032–2065.
- Massey, D. S., Rugh, J. S., and Pren, K. A. (2010). The geography of undocumented mexican migration. *Mexican studies/Estudios mexicanos*, 26(1):129–152.
- McKenzie, D. and Rapoport, H. (2007). Network effects and the dynamics of migration and inequality: theory and evidence from mexico. *Journal of development Economics*, 84(1):1–24.
- Miles, T. J. and Cox, A. B. (2014). Does immigration enforcement reduce crime? evidence from secure communities. *The Journal of Law and Economics*, 57(4):937–973.
- Munshi, K. (2003). Networks in the modern economy: Mexican migrants in the us labor market. *The Quarterly Journal of Economics*, 118(2):549–599.
- Passel, J. (2012). d’vera cohn, and ana gonzalez-barrera. *Net Migration from Mexico Falls to Zero—and Perhaps Less*, pages 43–44.
- Rosenblum, M. R. and Meissner, D. (2014). The deportation dilemma.
- Rozo, S., Raphael, S. P., and Anders, T. (2016). Deportation, crime, and victimization. *Available at SSRN 2833484*.
- Rozo, S. V., Anders, T., and Raphael, S. (2021). Deportation, crime, and victimization. *Journal of Population Economics*, 34(1):141–166.
- Solon, G., Haider, S. J., and Wooldridge, J. M. (2015). What are we weighting for? *Journal of Human resources*, 50(2):301–316.



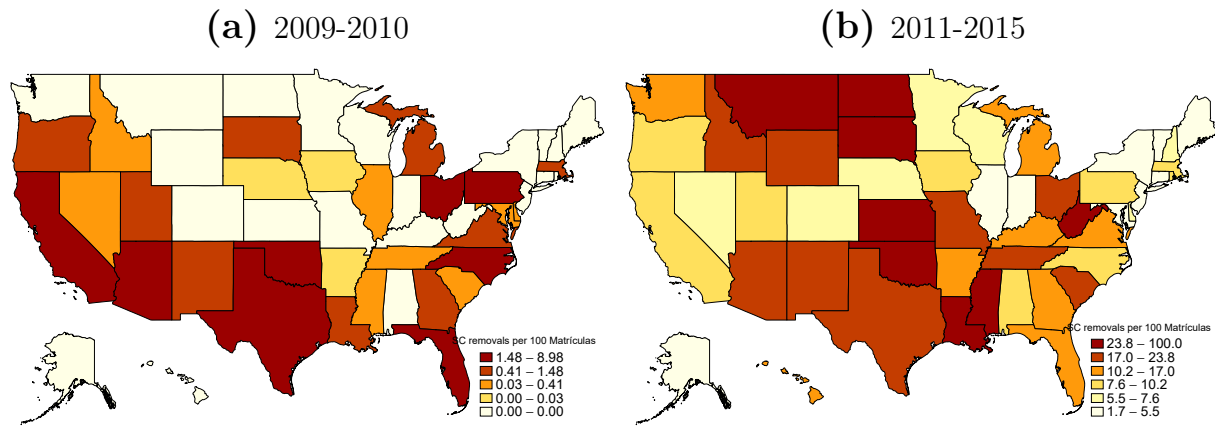
Sviatschi, M. M. (2019). Us criminal deportations and human capital in central america. In *AEA Papers and Proceedings*, volume 109, pages 239–42.

Watson, T. (2014). Inside the refrigerator: immigration enforcement and chilling effects in medicaid participation. *American Economic Journal: Economic Policy*, 6(3):313–38.

Woodruff, C. M. and Zenteno, R. (2001). Remittances and microenterprises in mexico. *UCSD, Graduate School of International Relations and Pacific Studies Working Paper*.

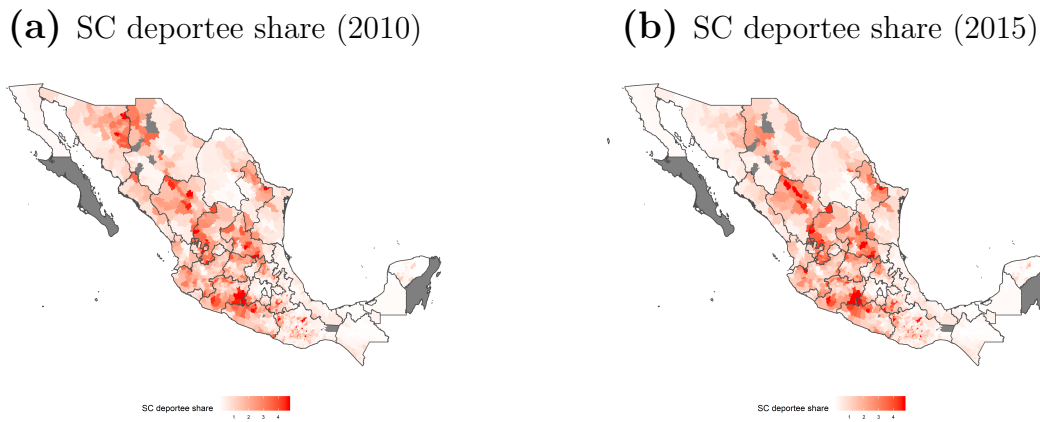
## 9 Figures

**Figure (1)** Variation in SC intensity across US states



*Notes:* These maps show the number of removals through Secure Communities (SC) per 100 matrículas consulares issued from 2006-2008 in each state. The map on the left shows removals from the the fiscal years 2009-2010 and the map on the right shows removals from the fiscal years 2011-2015.

**Figure (2)** Variation in exposure to SC across Mexican municipalities



*Notes:* These maps show the Secure Communities deportee share (see Section 4.1 for details on its construction) for the baseline sample of Mexican municipalities. The map on the left shows the SC deportee shares across Mexican municipalities for 2010 and the map on the left shows the SC deportee shares for 2015.

## 10 Tables

**Table (1)** Return Migrant Shares, Deportee Shares, and Labor Market Outcomes

	(1)
Return migrant share (2015)	1.087 (1.093)
Return migrant share (2010)	2.365 (2.187)
SC deportee share (2015)	0.901 (0.992)
SC deportee share (2010)	0.172 (0.193)
Employment rate-Women	0.273 (0.125)
Employment rate-Men	0.772 (0.127)
Log monthly income-Women	3.234 (0.404)
Log monthly income-Men	3.479 (0.378)
Observations	2319

mean coefficients; sd in parentheses

*Notes:* This table reports the means and standard deviations of several key variables in the baseline sample of Mexican municipalities.

**Table (2)** Comparing Demographic Characteristics of Locals and Return Migrants

	2010		2015	
	(1) Locals	(2) Return migrants	(3) Locals	(4) Return migrants
Age	37.769 (12.37)	34.860 (10.02)	38.492 (12.43)	37.183 (10.53)
Female	0.526 (0.499)	0.263 (0.440)	0.526 (0.499)	0.310 (0.462)
No HS	0.692 (0.462)	0.769 (0.421)	0.645 (0.479)	0.707 (0.455)
Single/never married	0.211 (0.408)	0.191 (0.393)	0.209 (0.407)	0.200 (0.400)
Observations	5874677	97977	5905067	47998

mean coefficients; sd in parentheses

*Notes:* This table reports the means and standard deviations of several demographic characteristics by return migrant status. The samples in Columns 1 and 3 are composed of individuals that weren't in the US five years prior between the ages of 18 and 64 that weren't in school at the time of the survey in the 2010 Mexican Census and the 2015 Mexican Intercensal Survey respectively. The samples in Columns 2 and 4 are composed of individuals that were in the US five years prior between the ages of 18 and 64 that weren't in school at the time of the survey in the 2010 Mexican Census and the 2015 Mexican Intercensal Survey respectively.

**Table (3)** Occupational Choices of Locals and Return Migrants (ISCO Codes)

	2010		2015	
	(1) Locals	(2) Return migrants	(3) Locals	(4) Return migrants
Legislators, senior officials and managers	0.039 (0.194)	0.021 (0.142)	0.028 (0.166)	0.019 (0.137)
Professionals	0.067 (0.249)	0.021 (0.143)	0.085 (0.279)	0.036 (0.186)
Technicians and associate professionals	0.060 (0.237)	0.023 (0.150)	0.062 (0.241)	0.030 (0.171)
Clerical support workers	0.061 (0.238)	0.028 (0.166)	0.064 (0.244)	0.037 (0.189)
Service workers and shop and market sales	0.223 (0.416)	0.203 (0.403)	0.214 (0.410)	0.217 (0.412)
Skilled agricultural and fishery workers	0.094 (0.292)	0.192 (0.394)	0.089 (0.284)	0.169 (0.375)
Crafts and related trades workers	0.177 (0.382)	0.223 (0.416)	0.163 (0.370)	0.217 (0.412)
Plant and machine operators and assemblers	0.109 (0.311)	0.106 (0.308)	0.120 (0.325)	0.125 (0.331)
Elementary occupations	0.159 (0.366)	0.174 (0.379)	0.163 (0.369)	0.144 (0.351)
Military	0.002 (0.0474)	0.000 (0.0222)	0.002 (0.0452)	0.000 (0.0218)
Unknown occ. code	0.009 (0.0958)	0.008 (0.0887)	0.009 (0.0961)	0.005 (0.0731)
Observations	3372991	65277	3273616	30016

mean coefficients; sd in parentheses

*Notes:* This table reports the means and standard deviations of occupation indicators by return migrant status. The samples in Columns 1 and 3 are composed of individuals that weren't in the US five years prior between the ages of 18 and 64 that weren't in school at the time of the survey with non-missing ISCO codes in the 2010 Mexican Census and the 2015 Mexican Intercensal Survey respectively. The samples in Columns 2 and 4 are composed of individuals that were in the US five years prior between the ages of 18 and 64 that weren't in school at the time of the survey with non-missing ISCO codes in the 2010 Mexican Census and the 2015 Mexican Intercensal Survey respectively.

**Table (4)** Differential Selection of Return Migrants on Basic Demographic Characteristics by SC Deportation Exposure

	Age		Female		No HS	
	(1)	(2)	(3)	(4)	(5)	(6)
	2010	2015	2010	2015	2010	2015
Return migrant	-2.514*** (0.229)	-1.194*** (0.205)	-0.248*** (0.009)	-0.190*** (0.008)	0.013 (0.010)	0.008 (0.014)
Return migrant × SC deportee share (2010)	-0.296** (0.121)	0.484 (0.323)	-0.022*** (0.005)	0.076*** (0.014)	0.011** (0.005)	-0.024 (0.015)
Return migrant × SC deportee share (2015)		-0.456 (0.330)		-0.106*** (0.014)		0.040*** (0.015)
Y-mean	37.760	38.514	0.523	0.525	0.694	0.646
Observations	5893900	5880540	5893900	5880540	5893900	5880540

*Notes:* This table shows results from estimating Equation 2. The dependent variable in Columns 1 and 2 is the individual's age. The dependent variable in Columns 3 and 4 is an indicator for whether the individual is a woman. The dependent variable in Columns 5 and 6 is an indicator for whether the individual does not have a high school degree. The samples in the odd numbered columns are individuals between 18 and 64 that weren't in school at the time of the survey in the 2010 Mexican Census. The samples in the even numbered columns are individuals between 18 and 64 that weren't in school at the time of the survey in the 2015 Mexican Intercensal survey. Observations are weighted by the person weights (perwt in IPUMS). Standard errors are clustered at the municipality level.

**Table (5)** Differential Selection of Return Migrants on Employment and Monthly Income by SC Deportation Exposure

	Employed		Ln(income)	
	(1)	(2)	(3)	(4)
	2010	2015	2010	2015
Return migrant	-0.068*** (0.006)	-0.064*** (0.005)	0.093*** (0.021)	0.113*** (0.030)
Return migrant × SC deportee share (2010)	0.005 (0.003)	-0.032*** (0.012)	-0.036*** (0.011)	0.024 (0.027)
Return migrant × SC deportee share (2015)		0.031** (0.012)		-0.078*** (0.028)
Y-mean	0.631	0.620	3.869	3.805
Observations	5893900	5880540	2601362	2728046

*Notes:* This table shows results from estimating Equation 2 with a cubic polynomial in age and gender×education and gender×marital status fixed effects. The dependent variable in Columns 1 and 2 is an indicator for employment. The dependent variable in Columns 3 and 4 is the natural log of real monthly income from working. The samples in Columns 1 and 2 are individuals between the ages of 18 and 64 that weren't in school at the time of the survey in the 2010 Mexican Census and 2015 Mexican Intercensal survey respectively. The samples in Columns 3 and 4 are individuals between the ages of 18 and 64 that weren't in school at the time of the survey and who reported monthly income from working in the 2010 Mexican Census and 2015 Mexican Intercensal survey respectively. Observations are weighted by the person weights (perwt in IPUMS). Standard errors are clustered at the municipality level.

**Table (6)** Most Serious Criminal Convictions of SC Deportees

	(1)	(2)
	2009-2010	2011-2015
Level 1-Aggravated felonies	0.266	0.324
Level 2-Other felonies	0.0857	0.121
Level 3-Misdemeanors	0.401	0.424
No conviction	0.247	0.130
Total SC removals	51,480	292,713

*Notes:* This table reports the share of deportees through Secure Communities (SC) by the seriousness level of their most serious criminal conviction. Column 1 reports these shares for deportations in the years 2009-2010 and Column 2 reports these shares for deportation in the years 2011-2015.

**Table (7)** First Stage Relationships Between Current and Lagged Return Migrant and Deportee Shares

	(1)	(2)
	Return migrant share (2015)	Return migrant share (2010)
SC deportee share (2015)	0.367*** (0.123)	0.028 (0.161)
SC deportee share (2010)	-0.027 (0.135)	0.633*** (0.123)
Y-mean	1.087	2.365
Observations	2319	2319
Sanderson-Windmeijer Chi-sq. p-val.	0.001	0.001
Sanderson-Windmeijer F-stat p-val.	0.002	0.002
Kleibergen-Paap rk LM stat p-val.	0.007	0.007

*Notes:* This table shows results from estimating Equation 4. The dependent variables are the return migrant share in 2015 and the return migrant share in 2010 in Columns 1 and 2 respectively. The sample in both columns is composed of the baseline sample of Mexican municipalities.

**Table (8)** Reduced Form Effects of Deportee Shares on Employment

Dependent Variable: change in employment rate	All	Women		Men	
	(1)	(2)	(3)	(4)	(5)
		No HS	HS Plus	No HS	HS Plus
SC deportee share (2015)	-0.010*	-0.009	-0.010	-0.009	-0.019*
	(0.005)	(0.009)	(0.007)	(0.006)	(0.009)
SC deportee share (2010)	0.009*	0.008	0.004	0.007	0.007
	(0.005)	(0.007)	(0.006)	(0.005)	(0.008)
$\Delta Y$ -mean (2010-2015)	-0.038	-0.031	-0.058	-0.059	-0.036
Y-mean (2010)	0.548	0.258	0.521	0.822	0.854
Observations	2319	2319	2249	2319	2257

*Notes:* This table shows results from estimating Equation 3. The dependent variable in each column is the change in the mean employment indicator for the “local” (i.e. non-return migrant) working age population of the gender-education group. Column 1 shows results for the entire local working age population. Columns 2, 3, 4, and 5 show results for local working age women without a high school degree, women with a high school degree or more, men without a high school degree, and men with a high school degree or more respectively. The samples in each column are composed of the baseline sample of Mexican municipalities with non-missing mean employment indicators for the corresponding gender-education group. Standard errors are clustered at the Mexican state level.

**Table (9)** Reduced Form Effects of Deportee Shares on Log Monthly Income

Dependent Variable: change in ln(income)	All	Women		Men	
	(1)	(2)	(3)	(4)	(5)
		No HS	HS Plus	No HS	HS Plus
SC deportee share (2015)	-0.035***	-0.023**	0.010	-0.060***	0.023
	(0.007)	(0.009)	(0.015)	(0.019)	(0.039)
SC deportee share (2010)	0.027***	0.026**	0.001	0.048***	-0.008
	(0.005)	(0.012)	(0.018)	(0.015)	(0.028)
$\Delta Y$ -mean (2010-2015)	-0.031	0.010	-0.096	-0.072	-0.155
Y-mean (2010)	3.432	2.970	3.805	3.453	3.972
Observations	2317	2300	2167	2316	2207

*Notes:* This table shows results from estimating Equation 3. The dependent variable in each column is the mean log monthly income from working for the “local” (i.e. non-return migrant) working age population of the gender-education group. Column 1 shows results for the entire local working age population. Columns 2, 3, 4, and 5 show results for local working age women without a high school degree, women with a high school degree or more, men without a high school degree, and men with a high school degree or more respectively. The samples in each column are composed of the baseline sample of Mexican municipalities with non-missing mean log monthly income from working for the corresponding gender-education group. Standard errors are clustered at the Mexican state level.



**Table (10)** Reduced Form Effects of Deportee Shares on Domestic Out-Migration

Dependent Variable: out-migration rate	All	Women		Men	
	(1)	(2)	(3)	(4)	(5)
	All	No HS	HS Plus	No HS	HS Plus
SC deportee share (2015)	0.162 (0.184)	0.483 (0.288)	-0.133 (0.688)	-0.015 (0.202)	-0.109 (0.466)
SC deportee share (2010)	0.175 (0.182)	-0.083 (0.327)	0.519 (0.692)	0.377* (0.196)	0.524 (0.322)
Y-mean	4.438	3.852	8.006	3.390	6.939
Observations	2319	2319	2314	2319	2310

*Notes:* This table shows results from estimating Equation 4. The dependent variable in each column is the out-migration rate of the “local” (i.e. non-return migrant) working age population of the gender-education group. Column 1 shows results for the entire local working age population. Columns 2, 3, 4, and 5 show results for local working age women without a high school degree, women with a high school degree or more, men without a high school degree, and men with a high school degree or more respectively. The samples in each column are composed of the baseline sample of Mexican municipalities with non-missing out-migration rates for the corresponding gender-education group. Standard errors are clustered at the Mexican state level.

**Table (11)** Reduced Form Effects of Deportee Shares on Domestic In-Migration

Dependent Variable: in-migration rate	All	Women		Men	
	(1)	(2)	(3)	(4)	(5)
	All	No HS	HS Plus	No HS	HS Plus
SC deportee share (2015)	-0.620 (0.434)	-0.660 (0.424)	-2.506 (1.690)	-0.544 (0.416)	-0.791 (0.756)
SC deportee share (2010)	0.382 (0.341)	0.451* (0.259)	1.444 (1.270)	0.263 (0.322)	1.206 (1.163)
Y-mean	4.872	4.218	9.763	3.925	8.449
Observations	2319	2319	2314	2319	2310

*Notes:* This table shows results from estimating Equation 4. The dependent variable in each column is the in-migration rate of the “local” (i.e. non-return migrant) working age population of the gender-education group. Column 1 shows results for the entire local working age population. Columns 2, 3, 4, and 5 show results for local working age women without a high school degree, women with a high school degree or more, men without a high school degree, and men with a high school degree or more respectively. The samples in each column are composed of the baseline sample of Mexican municipalities with non-missing in-migration rates for the corresponding gender-education group. Standard errors are clustered at the Mexican state level.

**Table (12)** Reduced Form Effects of Deportee Shares on Domestic Net Out-Migration

Dependent Variable: net out-migration rate	All	Women		Men	
	(1)	(2)	(3)	(4)	(5)
	All	No HS	HS Plus	No HS	HS Plus
SC deportee share (2015)	0.810*	1.129***	2.372	0.554	0.755
	(0.398)	(0.409)	(1.429)	(0.421)	(1.194)
SC deportee share (2010)	-0.187	-0.475	-0.915	0.101	-0.745
	(0.292)	(0.367)	(0.993)	(0.332)	(1.357)
Y-mean	-0.434	-0.367	-1.757	-0.535	-1.510
Observations	2319	2319	2314	2319	2310

*Notes:* This table shows results from estimating Equation 4. The dependent variable in each column is the net out-migration rate of the “local” (i.e. non-return migrant) working age population of the gender-education group. Column 1 shows results for the entire local working age population. Columns 2, 3, 4, and 5 show results for local working age women without a high school degree, women with a high school degree or more, men without a high school degree, and men with a high school degree or more respectively. The samples in each column are composed of the baseline sample of Mexican municipalities with non-missing net out-migration rates for the corresponding gender-education group. Standard errors are clustered at the Mexican state level.

**Table (13)** Reduced Form Effects of Deportee Shares on Emigration and Remittances

	(1)	(2)
	Emigration	$\Delta$ Share receive remit.
SC deportee share (2015)	7.980***	2.239***
	(1.449)	(0.291)
SC deportee share (2010)	-0.682	-0.734**
	(1.297)	(0.352)
Y-mean	8.325	
$\Delta$ Y-mean (2010-2015)		0.754
Y-mean (2010)		10.611
Observations	2319	2319

*Notes:* This table shows results from estimating Equation 4 in Column 1 and Equation 3 in Column 2. The dependent variable in Column 1 is the proxy for the emigration flow rate and in Column 2 is the change in the share of households receiving remittances. The samples in each column are composed of the baseline sample of Mexican municipalities. Standard errors are clustered at the Mexican state level.

**Table (14)** Reduced Form Effects on Municipal Homicide Rates

	(1)
	$\Delta$ Hom. rate
SC deportee share (2015)	-0.002
	(0.024)
SC deportee share (2010)	-0.015
	(0.023)
Y-mean	-0.071
Hom. rate (2010)	0.232
Observations	2319

*Notes:* This table shows results from estimating Equation 3. The dependent variable is the homicide rate (number of homicides per 1,000 people). The sample is composed of the baseline sample of Mexican municipalities. Standard errors are clustered at the Mexican state level.

**Table (15)** Estimated Effects of Return Migration on Employment

Dependent Variable:	All	Women		Men	
change in employment rate	(1)	(2)	(3)	(4)	(5)
	All	No HS	HS Plus	No HS	HS Plus
	OLS				
Return migrant share (2015)	0.008*** (0.001)	0.010*** (0.001)	0.009*** (0.003)	0.007*** (0.002)	-0.000 (0.006)
Return migrant share (2010)	-0.000 (0.001)	-0.004*** (0.001)	-0.008*** (0.002)	0.003** (0.001)	0.002 (0.003)
	IV				
Return migrant share (2015)	-0.026 (0.024)	-0.025 (0.033)	-0.028 (0.021)	-0.026 (0.018)	-0.051 (0.035)
Return migrant share (2010)	0.013 (0.012)	0.012 (0.015)	0.002 (0.009)	0.010 (0.009)	0.008 (0.015)
$\Delta Y$ -mean (2010-2015)	-0.038	-0.031	-0.058	-0.059	-0.036
Y-mean (2010)	0.548	0.258	0.521	0.822	0.854
Ret. migrant share (2015)-sd	1.093	1.093	1.049	1.093	1.052
Ret. migrant share (2010)-sd	2.187	2.187	2.183	2.187	2.187
Observations	2319	2319	2249	2319	2257

*Notes:* This table shows results from estimating Equation 3. The top panel shows results using OLS. The bottom panel shows results using IV where the return migrant shares are instrumented by the SC deportee shares. The dependent variable in each column is the change in the mean employment indicator for the “local” (i.e. non-return migrant) working age population of the gender-education group. Column 1 shows results for the entire local working age population. Columns 2, 3, 4, and 5 show results for local working age women without a high school degree, women with a high school degree or more, men without a high school degree, and men with a high school degree or more respectively. The samples in each column are composed of the baseline sample of Mexican municipalities with non-missing mean employment indicators for the corresponding gender-education group. Standard errors are clustered at the Mexican state level.

**Table (16)** Estimated Effects of Return Migration on Income

Dependent Variable: change in ln(income)	All	Women		Men	
	(1)	(2)	(3)	(4)	(5)
	All	No HS	HS Plus	No HS	HS Plus
OLS					
Return migrant share (2015)	-0.017*** (0.002)	-0.010** (0.004)	-0.013* (0.007)	-0.018*** (0.002)	0.012 (0.011)
Return migrant share (2010)	0.004** (0.002)	0.009* (0.005)	0.008*** (0.003)	0.002 (0.002)	0.001 (0.003)
IV					
Return migrant share (2015)	-0.097** (0.041)	-0.065 (0.040)	0.033 (0.037)	-0.169 (0.111)	0.058 (0.100)
Return migrant share (2010)	0.039* (0.022)	0.039 (0.030)	0.007 (0.026)	0.069 (0.056)	-0.008 (0.038)
$\Delta Y$ -mean (2010-2015)	-0.031	0.010	-0.096	-0.072	-0.155
Y-mean (2010)	3.432	2.970	3.805	3.453	3.972
Ret. migrant share (2015)-sd	1.093	1.076	1.027	1.093	1.032
Ret. migrant share (2010)-sd	2.187	2.185	2.174	2.188	2.191
Observations	2317	2300	2167	2316	2207

*Notes:* This table shows results from estimating Equation 3. The top panel shows results using OLS. The bottom panel shows results using IV where the return migrant shares are instrumented by the SC deportee shares. The dependent variable in each column is the mean log monthly income from working for the “local” (i.e. non-return migrant) working age population of the gender-education group. Column 1 shows results for the entire local working age population. Columns 2, 3, 4, and 5 show results for local working age women without a high school degree, women with a high school degree or more, men without a high school degree, and men with a high school degree or more respectively. The samples in each column are composed of the baseline sample of Mexican municipalities with non-missing mean log monthly income from working for the corresponding gender-education group. Standard errors are clustered at the Mexican state level.

**Table (17)** Summary Statistics: Access to Capital and Banking

	(1)
Bank branches per 10,000-2003	0.709 (1.743)
Any bank branches-2003	0.392 (0.488)
Log value of capital stock-2003	3.460 (2.437)
Log value of machinery - 2003	2.320 (2.425)
Log value of plants-2003	2.874 (2.171)
Log value of capital accumulation-2003	1.331 (1.793)
Observations	2319

mean coefficients; sd in parentheses

*Notes:* This table reports the means and standard deviations of variables related to access to capital and banking in the baseline sample of Mexican municipalities.

**Table (18)** Summary Statistics: Factor Mobility

	(1)
Road density (km/km sq.)	0.216 (0.201)
Fed. road density (km/km sq.)	0.065 (0.112)
State road density (km/km sq.)	0.117 (0.124)
Mun. road density (km/km sq.)	0.029 (0.0640)
Out-mig. rate 2000	5.547 (5.170)
In-mig. rate 2000	4.659 (5.400)
Observations	2319

mean coefficients; sd in parentheses

*Notes:* This table reports the means and standard deviations of variables related to factor mobility in the baseline sample of Mexican municipalities.

**Table (19)** Banking and the Elasticity of Men's Log Monthly Income

	(1)	(2)
	Bank Branches per Capita	Any Bank Branches
SC deportee share (2015)	-0.072*** (0.021)	-0.080*** (0.024)
SC deportee share (2015) × Banking	0.010*** (0.003)	0.051* (0.025)
SC deportee share (2010)	0.058*** (0.017)	0.065*** (0.019)
SC deportee share (2010) × Banking	-0.009*** (0.002)	-0.049* (0.025)
Banking	-0.003 (0.002)	-0.007 (0.008)
$\Delta Y$ -mean (2010-2015)	-0.071	-0.071
Y-mean (2010)	3.432	3.432
Banking-mean	0.709	0.392
Banking-sd	1.744	0.488
Observations	2317	2317

*Notes:* This table shows results from estimating Equation 3. The dependent variable in each column is the mean log monthly income from working for “local” (i.e. non-return migrant) working age men. Each column includes a control for a measure of access to banking (bank branches per 10,000 people in Column 1 and an indicator for whether there were any branches in Column 2) as well as interactions between the SC deportee shares and this measure. The samples in each column are composed of the baseline sample of Mexican municipalities with non-missing mean log monthly incomes from working for men and non-missing measures of access to banking. Standard errors are clustered at the Mexican state level.

**Table (20)** Access to Capital and the Elasticity of Men’s Log Monthly Income

	(1)	(2)	(3)	(4)
	Stock	Machinery	Plants	Accum.
SC deportee share (2015)	-0.093*** (0.027)	-0.076*** (0.024)	-0.090*** (0.025)	-0.072*** (0.021)
SC deportee share (2015) × Capital	0.013* (0.007)	0.011 (0.007)	0.014** (0.007)	0.015* (0.007)
SC deportee share (2010)	0.084*** (0.021)	0.065*** (0.018)	0.080*** (0.019)	0.061*** (0.016)
SC deportee share (2010) × Capital	-0.015** (0.006)	-0.012* (0.006)	-0.015** (0.006)	-0.018** (0.006)
Capital	0.003 (0.004)	0.002 (0.003)	0.003 (0.005)	0.003 (0.004)
$\Delta Y$ -mean (2010-2015)	-0.071	-0.071	-0.071	-0.071
Y-mean (2010)	3.432	3.432	3.432	3.432
Capital-mean	3.461	2.321	2.874	1.331
Capital-sd	2.436	2.425	2.171	1.793
Observations	2317	2317	2317	2317

*Notes:* This table shows results from estimating Equation 3. The dependent variable in each column is the mean log monthly income from working for “local” (i.e. non-return migrant) working age men. Each column includes a control for a measure of the capital stock/access to capital (the natural log of the value of the capital stock in Column 1, the natural log of the value of machinery in Column 2, the natural log of the value of plants in Column 3, and the natural log of the absolute value of capital accumulation in Column 4) as well as interactions between the SC deportee shares and this measure. The samples in each column are composed of the baseline sample of Mexican municipalities with non-missing mean log monthly incomes from working for men and non-missing measures of the capital stock/access to capital. Standard errors are clustered at the Mexican state level.

**Table (21)** Road Density and the Elasticity of Men’s Log Monthly Income

	(1)	(2)	(3)	(4)
	All Roads	Fed. Roads	State Roads	Mun. Roads
SC deportee share (2015)	-0.086**	-0.076***	-0.082**	-0.067***
	(0.033)	(0.023)	(0.033)	(0.023)
SC deportee share (2015) × Density	0.159	0.391***	0.177	0.047
	(0.105)	(0.104)	(0.154)	(0.254)
SC deportee share (2010)	0.074**	0.063***	0.072**	0.053***
	(0.029)	(0.019)	(0.028)	(0.018)
SC deportee share (2010) × Density	-0.171	-0.388***	-0.221	-0.016
	(0.103)	(0.109)	(0.137)	(0.211)
Density	-0.019	0.009	-0.051	-0.008
	(0.033)	(0.019)	(0.071)	(0.022)
$\Delta Y$ -mean (2010-2015)	-0.071	-0.071	-0.071	-0.071
Y-mean (2010)	3.432	3.432	3.432	3.432
Density-mean	0.216	0.065	0.117	0.029
Density-sd	0.201	0.112	0.124	0.064
Observations	2317	2317	2317	2317

*Notes:* This table shows results from estimating Equation 3. The dependent variable in each column is the mean log monthly income from working for “local” (i.e. non-return migrant) working age men. Each column includes a control for road density (km/km sq.) by road type (all roads in Column 1, roads administered by the federal government in Column 2, roads administered by the state government in Column 3, and roads administered by the municipal government in Column 4) as well as interactions between the SC deportee shares and the road density. The samples in each column are composed of the baseline sample of Mexican municipalities with non-missing mean log monthly incomes from working for men and non-missing measures of road density. Standard errors are clustered at the Mexican state level.

**Table (22)** Labor Mobility and the Elasticity of Men’s Log Monthly Income

	(1)	(2)
	Out-mig. rate 2000	In-mig. rate 2000
SC deportee share (2015)	-0.101*** (0.023)	-0.084*** (0.028)
SC deportee share (2015) × Mobility	0.007*** (0.002)	0.005* (0.003)
SC deportee share (2010)	0.078*** (0.019)	0.070*** (0.024)
SC deportee share (2010) × Mobility	-0.005** (0.002)	-0.005* (0.003)
Mobility	-0.002 (0.001)	-0.001* (0.000)
$\Delta Y$ -mean (2010-2015)	-0.071	-0.071
Y-mean (2010)	3.432	3.432
Mig.-mean	5.503	4.658
Mig.-sd	4.784	5.401
Observations	2317	2317

*Notes:* This table shows results from estimating Equation 3. The dependent variable in each column is the mean log monthly income from working for “local” (i.e. non-return migrant) working age men. Each column includes a control for a measure of historic labor mobility (the out-migration rate in 2000 in Column 1 and the in-migration rate in 2000 in Column 2) as well as interactions between the SC deportee shares and this measure. The samples in each column are composed of the baseline sample of Mexican municipalities with non-missing mean log monthly incomes from working for men and non-missing measures of historic labor mobility. Standard errors are clustered at the Mexican state level.



# 11 Appendix

## 11.1 Additional tables

**Table (A1)** Correlation Between Log Monthly Income from Working and Homicide Rates in 2000 and Eventual SC Deportation Exposure

	(1)	(2)	(3)	(4)
	ln(inc.) 2000	ln(inc.) 2000	hom. rate 2000	hom. rate 2000
SC deportee share (2015)	-0.000 (0.017)		0.003 (0.016)	
SC deportee share (2010)		0.001 (0.018)		0.001 (0.016)
Y-mean	2.960	2.960	0.161	0.161
Observations	2318	2318	2319	2319

*Notes:* This table shows results from regressing mean log monthly income from working in 2000 (Columns 1 and 2) and homicide rate in 2000 (Columns 3 and 4) on the SC deportee shares in 2015 and 2010. Regressions include Mexican state fixed effects. The samples are composed of the baseline sample of Mexican municipalities with nonmissing values for these two outcome variables in 2000.

**Table (A2)** First Stage Relationships Between Current and Lagged Return Migrant and Deportee Shares-Include Lagged Changes in Main Outcome Variables

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Emp.	Ln(Inc.)	Hom.	Out-Mig.	In-Mig.	Net-Mig.	Remit.
Return Migrant Share (2015)							
SC deportee share (2015)	0.362*** (0.122)	0.358*** (0.123)	0.371*** (0.124)	0.368*** (0.124)	0.369*** (0.123)	0.369*** (0.124)	0.372*** (0.116)
SC deportee share (2010)	-0.025 (0.134)	-0.022 (0.134)	-0.029 (0.135)	-0.027 (0.135)	-0.028 (0.135)	-0.028 (0.135)	-0.038 (0.128)
Y-mean	1.088	1.088	1.087	1.087	1.087	1.087	1.087
Observations	2318	2318	2319	2319	2319	2319	2319
F-stat	180.246	183.879	147.816	197.817	141.874	191.251	209.300
Return Migrant Share (2010)							
SC deportee share (2015)	0.001 (0.163)	0.003 (0.163)	0.032 (0.160)	0.035 (0.160)	0.036 (0.162)	0.041 (0.162)	0.038 (0.171)
SC deportee share (2010)	0.642*** (0.125)	0.646*** (0.123)	0.630*** (0.123)	0.636*** (0.121)	0.628*** (0.123)	0.629*** (0.121)	0.611*** (0.130)
Y-mean	2.366	2.366	2.365	2.365	2.365	2.365	2.365
Observations	2318	2318	2319	2319	2319	2319	2319
F-stat	164.775	275.498	198.358	307.984	200.681	186.965	279.500

Standard errors in parentheses

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

*Notes:* This table shows results from estimating Equation 4. Each column additionally includes changes in outcome variables from 2000-2010 (the change in the mean employment indicator for the entire local working age population in Column 1, the change in the mean log monthly income from working for the entire local working age population in Column 2, the change in the homicide rate in Column 3, and the change in the share of households receiving remittances in Column 7) or migration flows from 2005-2010 (domestic out-migration, in-migration, and net out-migration in Column 4, 5, and 6). The dependent variable in the top panel is the return migrant share in 2015 and in the bottom panel is the return migrant share in 2010. The samples are composed of the baseline sample of Mexican municipalities with nonmissing changes in the outcome variables/migration flows.

**Table (A3)** Reduced Form Effects of Deportee Ratios on Employment-Weight by Lagged Population Size

	All	Women		Men	
	(1)	(2)	(3)	(4)	(5)
		No HS	HS Plus	No HS	HS Plus
SC deportee share (2015)	-0.019*** (0.006)	-0.010 (0.007)	-0.023* (0.013)	-0.029*** (0.009)	-0.017* (0.009)
SC deportee share (2010)	0.017** (0.006)	0.012* (0.006)	0.009 (0.010)	0.024*** (0.009)	0.010 (0.008)
$\Delta Y$ -mean (2010-2015)	-0.011	-0.012	-0.023	-0.023	-0.010
Y-mean (2010)	0.548	0.258	0.521	0.822	0.854
Observations	2319	2319	2249	2319	2257

*Notes:* This table is similar to Table 8 but instead shows results when observations are weighted by the 2010 population size of the gender-education group. See the notes to Table 8 for further details on the dependent variables and samples used in each column.

**Table (A4)** Reduced Form Effects of Deportee Ratios on Log Monthly Income-Weight by Lagged Population Size

	All	Women		Men	
	(1)	(2)	(3)	(4)	(5)
		No HS	HS Plus	No HS	HS Plus
SC deportee share (2015)	-0.031* (0.016)	-0.047** (0.019)	0.033 (0.037)	-0.034** (0.017)	-0.029 (0.028)
SC deportee share (2010)	0.025* (0.015)	0.042** (0.016)	-0.020 (0.024)	0.031** (0.015)	0.044** (0.022)
$\Delta Y$ -mean (2010-2015)	-0.060	-0.017	-0.090	-0.081	-0.165
Y-mean (2010)	3.432	2.970	3.805	3.453	3.972
Observations	2317	2300	2167	2316	2207

*Notes:* This table is similar to Table 9 but instead shows results when observations are weighted by the 2010 population size of the gender-education group. See the notes to Table 9 for further details on the dependent variables and samples used in each column.

**Table (A5)** Estimated Effects of Return Migration on Employment-Weight by Lagged Population Size

Dependent Variable: change in employment rate	All	Women		Men	
	(1)	(2)	(3)	(4)	(5)
	All	No HS	HS Plus	No HS	HS Plus
OLS					
Return migrant share (2015)	0.009*** (0.003)	0.012** (0.005)	0.014*** (0.004)	0.004 (0.003)	0.005 (0.003)
Return migrant share (2010)	-0.001 (0.001)	-0.006*** (0.002)	-0.007*** (0.002)	0.004* (0.002)	-0.002 (0.002)
IV					
Return migrant share (2015)	-0.057*** (0.021)	-0.029 (0.020)	-0.100 (0.071)	-0.083*** (0.031)	-0.072 (0.046)
Return migrant share (2010)	0.024** (0.011)	0.016** (0.008)	0.011 (0.022)	0.033** (0.015)	0.015 (0.018)
$\Delta Y$ -mean (2010-2015)	-0.011	-0.012	-0.023	-0.023	-0.010
Y-mean (2010)	0.548	0.258	0.521	0.822	0.854
Ret. migrant share (2015)-sd	1.093	1.093	1.049	1.093	1.052
Ret. migrant share (2010)-sd	2.187	2.187	2.183	2.187	2.187
Observations	2319	2319	2249	2319	2257

*Notes:* This table is similar to Table 15 but instead shows results when observations are weighted by the 2010 population size of the gender-education group. See the notes to Table 15 for further details on the dependent variables and samples used in each column.

**Table (A6)** Estimated Effects of Return Migration on Log Monthly Income-Weight by Lagged Population Size

Dependent Variable: change in ln(income)	All	Women		Men	
	(1)	(2)	(3)	(4)	(5)
	All	No HS	HS Plus	No HS	HS Plus
	OLS				
Return migrant share (2015)	-0.034*** (0.007)	-0.041*** (0.008)	-0.015 (0.010)	-0.037*** (0.009)	-0.018 (0.011)
Return migrant share (2010)	0.014** (0.005)	0.018*** (0.005)	0.001 (0.006)	0.015** (0.006)	0.007 (0.006)
	IV				
Return migrant share (2015)	-0.100* (0.054)	-0.151** (0.063)	0.140 (0.186)	-0.106** (0.051)	-0.077 (0.130)
Return migrant share (2010)	0.034 (0.022)	0.055** (0.023)	-0.027 (0.040)	0.043* (0.022)	0.063** (0.032)
$\Delta Y$ -mean (2010-2015)	-0.060	-0.017	-0.090	-0.081	-0.165
Y-mean (2010)	3.432	2.970	3.805	3.453	3.972
Ret. migrant share (2015)-sd	1.093	1.076	1.027	1.093	1.032
Ret. migrant share (2010)-sd	2.187	2.185	2.174	2.188	2.191
Observations	2317	2300	2167	2316	2207

*Notes:* This table is similar to Table 16 but instead shows results when observations are weighted by the 2010 population size of the gender-education group. See the notes to Table 16 for further details on the dependent variables and samples used in each column.

**Table (A7)** Reduced Form Effects of Deportee Ratios on Employment- Lagged Dependent Variable Model

	All	Women		Men	
	(1)	(2)	(3)	(4)	(5)
		No HS	HS Plus	No HS	HS Plus
SC deportee share (2015)	-0.015** (0.007)	-0.013 (0.009)	-0.009 (0.006)	-0.016** (0.006)	-0.019** (0.008)
SC deportee share (2010)	0.010* (0.006)	0.009 (0.007)	0.004 (0.004)	0.010* (0.005)	0.007 (0.006)
Y-mean	0.509	0.227	0.463	0.762	0.818
Observations	2319	2319	2249	2319	2257

*Notes:* This table is similar to Table 8 but instead shows results when the dependent variables are in levels as opposed to changes and regressions include controls for the 2010 and 2000 levels of the corresponding outcome. See the notes to Table 8 for further details on the dependent variables and samples used in each column.

**Table (A8)** Reduced Form Effects of Deportee Ratios on Log Monthly Income-Lagged Dependent Variable Model

	All	Women		Men	
	(1)	(2)	(3)	(4)	(5)
		No HS	HS Plus	No HS	HS Plus
SC deportee share (2015)	-0.031*** (0.009)	-0.029 (0.017)	0.013 (0.014)	-0.057** (0.021)	0.031 (0.027)
SC deportee share (2010)	0.034*** (0.011)	0.038 (0.023)	-0.003 (0.017)	0.052** (0.020)	-0.008 (0.019)
Y-mean	3.400	2.980	3.710	3.381	3.817
Observations	2317	2300	2167	2316	2207

*Notes:* This table is similar to Table 9 but instead shows results when the dependent variables are in levels as opposed to changes and regressions include controls for the 2010 and 2000 levels of the corresponding outcome. See the notes to Table 9 for further details on the dependent variables and samples used in each column.

**Table (A9)** Estimated Effects of Return Migration on Employment-Lagged Dependent Variable Model

	All	Women		Men	
	(1)	(2)	(3)	(4)	(5)
	All	No HS	HS Plus	No HS	HS Plus
OLS					
Return migrant share (2015)	0.007*** (0.002)	0.009*** (0.002)	0.008*** (0.002)	0.006*** (0.002)	-0.003 (0.008)
Return migrant share (2010)	-0.001 (0.001)	-0.003*** (0.001)	-0.005*** (0.002)	0.002 (0.001)	0.003 (0.003)
IV					
Return migrant share (2015)	-0.057 (0.036)	-0.043 (0.038)	-0.017 (0.019)	-0.080** (0.036)	-0.061 (0.039)
Return migrant share (2010)	0.016 (0.019)	0.013 (0.018)	0.013 (0.011)	0.019 (0.021)	0.016 (0.022)
Y-mean	0.509	0.227	0.463	0.762	0.818
Ret. migrant share (2015)-sd	1.093	1.093	1.049	1.093	1.052
Ret. migrant share (2010)-sd	2.187	2.187	2.183	2.187	2.187
Observations	2319	2319	2249	2319	2257

*Notes:* This table is similar to Table 15 but instead shows results when the dependent variables are in levels as opposed to changes and regressions include controls for the 2010 and 2000 levels of the corresponding outcome. See the notes to Table 15 for further details on the dependent variables and samples used in each column.

**Table (A10)** Estimated Effects of Return Migration on Log Monthly Income-Lagged Dependent Variable Model

	All	Women		Men	
	(1)	(2)	(3)	(4)	(5)
	All	No HS	HS Plus	No HS	HS Plus
OLS					
Return migrant share (2015)	-0.002 (0.004)	-0.001 (0.005)	-0.004 (0.008)	-0.006* (0.003)	0.023** (0.010)
Return migrant share (2010)	0.004*** (0.001)	0.007 (0.004)	0.004 (0.003)	0.004** (0.002)	0.002 (0.002)
IV					
Return migrant share (2015)	-0.053 (0.054)	-0.041 (0.062)	0.161 (0.105)	-0.115 (0.097)	-0.055 (0.078)
Return migrant share (2010)	0.043 (0.031)	0.034 (0.038)	-0.043 (0.067)	0.064 (0.051)	0.060 (0.050)
Y-mean	3.400	2.980	3.710	3.381	3.817
Ret. migrant share (2015)-sd	1.093	1.076	1.027	1.093	1.032
Ret. migrant share (2010)-sd	2.187	2.185	2.174	2.188	2.191
Observations	2317	2300	2167	2316	2207

*Notes:* This table is similar to Table 16 but instead shows results when the dependent variables are in levels as opposed to changes and regressions include controls for the 2010 and 2000 levels of the corresponding outcome. See the notes to Table 16 for further details on the dependent variables and samples used in each column.

**Table (A11)** Reduced Form Effects of Deportee Ratios on Employment-Exclude Deportations from Arizona

	All	Women		Men	
	(1)	(2)	(3)	(4)	(5)
		No HS	HS Plus	No HS	HS Plus
SC deportee share (2015)	-0.012** (0.004)	-0.008 (0.009)	-0.009 (0.007)	-0.014 (0.009)	-0.023** (0.011)
SC deportee share (2010)	0.011*** (0.003)	0.007 (0.007)	0.003 (0.006)	0.013 (0.008)	0.015 (0.011)
$\Delta Y$ -mean (2010-2015)	-0.038	-0.031	-0.058	-0.059	-0.036
Y-mean (2010)	0.548	0.258	0.521	0.822	0.854
Observations	2319	2319	2249	2319	2257

*Notes:* This table is similar to Table 8 but instead shows results when the SC deportee shares are built excluding deportations from Arizona. See the notes to Table 8 for further details on the dependent variables and samples used in each column.

**Table (A12)** Reduced Form Effects of Deportee Ratios on Log Monthly Income-Exclude Deportations from Arizona

	All	Women		Men	
	(1)	(2)	(3)	(4)	(5)
		No HS	HS Plus	No HS	HS Plus
SC deportee share (2015)	-0.030*** (0.009)	-0.027** (0.013)	0.003 (0.015)	-0.054** (0.024)	0.023 (0.034)
SC deportee share (2010)	0.023*** (0.008)	0.029** (0.012)	-0.001 (0.011)	0.042* (0.020)	-0.013 (0.027)
$\Delta Y$ -mean (2010-2015)	-0.031	0.010	-0.096	-0.072	-0.155
Y-mean (2010)	3.432	2.970	3.805	3.453	3.972
Observations	2317	2300	2167	2316	2207

*Notes:* This table is similar to Table 9 but instead shows results when the SC deportee shares are built excluding deportations from Arizona. See the notes to Table 9 for further details on the dependent variables and samples used in each column.

**Table (A13)** Estimated Effects of Return Migration on Employment-Exclude Deportations from Arizona

	All	Women		Men	
	(1)	(2)	(3)	(4)	(5)
	All	No HS	HS Plus	No HS	HS Plus
	OLS				
Return migrant share (2015)	0.008*** (0.001)	0.010*** (0.001)	0.009*** (0.003)	0.007*** (0.002)	-0.000 (0.006)
Return migrant share (2010)	-0.000 (0.001)	-0.004*** (0.001)	-0.008*** (0.002)	0.003** (0.001)	0.002 (0.003)
	OLS				
Return migrant share (2015)	-0.033 (0.024)	-0.023 (0.031)	-0.014 (0.018)	-0.038* (0.021)	-0.048 (0.039)
Return migrant share (2010)	0.018 (0.013)	0.011 (0.013)	-0.016 (0.019)	0.019* (0.012)	0.008 (0.022)
$\Delta Y$ -mean (2010-2015)	-0.038	-0.031	-0.058	-0.059	-0.036
Y-mean (2010)	0.548	0.258	0.521	0.822	0.854
Ret. migrant share (2015)-sd	1.093	1.093	1.049	1.093	1.052
Ret. migrant share (2010)-sd	2.187	2.187	2.183	2.187	2.187
Observations	2319	2319	2249	2319	2257

*Notes:* This table is similar to Table 15 but instead shows results when the SC deportee shares are built excluding deportations from Arizona. See the notes to Table 15 for further details on the dependent variables and samples used in each column.

**Table (A14)** Estimated Effects of Return Migration on Log Monthly Income-Exclude Deportations from Arizona

	All	Women		Men	
	(1)	(2)	(3)	(4)	(5)
	All	No HS	HS Plus	No HS	HS Plus
OLS					
Return migrant share (2015)	-0.017*** (0.002)	-0.010** (0.004)	-0.013* (0.007)	-0.018*** (0.002)	0.012 (0.011)
Return migrant share (2010)	0.004** (0.002)	0.009* (0.005)	0.008*** (0.003)	0.002 (0.002)	0.001 (0.003)
IV					
Return migrant share (2015)	-0.078 (0.051)	-0.080 (0.068)	0.007 (0.031)	-0.142 (0.122)	0.048 (0.084)
Return migrant share (2010)	0.029 (0.029)	0.062 (0.063)	0.007 (0.037)	0.054 (0.062)	-0.004 (0.033)
$\Delta Y$ -mean (2010-2015)	-0.031	0.010	-0.096	-0.072	-0.155
Y-mean (2010)	3.432	2.970	3.805	3.453	3.972
Ret. migrant share (2015)-sd	1.093	1.076	1.027	1.093	1.032
Ret. migrant share (2010)-sd	2.187	2.185	2.174	2.188	2.191
Observations	2317	2300	2167	2316	2207

*Notes:* This table is similar to Table 16 but instead shows results when the SC deportee shares are built excluding deportations from Arizona. See the notes to Table 16 for further details on the dependent variables and samples used in each column.

**Table (A15)** Reduced Form Effects of Deportee Ratios on Employment-Exclude Deportations from Texas

	All	Women		Men	
	(1)	(2)	(3)	(4)	(5)
		No HS	HS Plus	No HS	HS Plus
SC deportee share (2015)	-0.008*** (0.003)	-0.011* (0.006)	-0.008 (0.007)	-0.007 (0.005)	-0.020*** (0.005)
SC deportee share (2010)	0.008*** (0.003)	0.009* (0.005)	0.003 (0.006)	0.007* (0.004)	0.012** (0.005)
$\Delta Y$ -mean (2010-2015)	-0.038	-0.031	-0.058	-0.059	-0.036
Y-mean (2010)	0.548	0.258	0.521	0.822	0.854
Observations	2319	2319	2249	2319	2257

*Notes:* This table is similar to Table 8 but instead shows results when the SC deportee shares are built excluding deportations from Texas. See the notes to Table 8 for further details on the dependent variables and samples used in each column.



**Table (A16)** Reduced Form Effects of Deportee Ratios on Log Monthly Income-Exclude Deportations from Texas

	All	Women		Men	
	(1)	(2)	(3)	(4)	(5)
		No HS	HS Plus	No HS	HS Plus
SC deportee share (2015)	-0.032*** (0.007)	-0.012 (0.008)	-0.028** (0.013)	-0.059*** (0.012)	0.024 (0.029)
SC deportee share (2010)	0.028*** (0.005)	0.025** (0.010)	0.023* (0.012)	0.049*** (0.011)	-0.012 (0.022)
$\Delta Y$ -mean (2010-2015)	-0.031	0.010	-0.096	-0.072	-0.155
Y-mean (2010)	3.432	2.970	3.805	3.453	3.972
Observations	2317	2300	2167	2316	2207

*Notes:* This table is similar to Table 9 but instead shows results when the SC deportee shares are built excluding deportations from Texas. See the notes to Table 9 for further details on the dependent variables and samples used in each column.

**Table (A17)** Estimated Effects of Return Migration on Employment-Exclude Deportations from Texas

	All	Women		Men	
	(1)	(2)	(3)	(4)	(5)
	All	No HS	HS Plus	No HS	HS Plus
OLS					
Return migrant share (2015)	0.008*** (0.001)	0.010*** (0.001)	0.009*** (0.003)	0.007*** (0.002)	-0.000 (0.006)
Return migrant share (2010)	-0.000 (0.001)	-0.004*** (0.001)	-0.008*** (0.002)	0.003** (0.001)	0.002 (0.003)
IV					
Return migrant share (2015)	-0.028 (0.022)	-0.034 (0.034)	-0.018 (0.021)	-0.023* (0.013)	-0.049** (0.023)
Return migrant share (2010)	0.015 (0.012)	0.015 (0.017)	-0.007 (0.018)	0.012 (0.008)	0.008 (0.014)
$\Delta Y$ -mean (2010-2015)	-0.038	-0.031	-0.058	-0.059	-0.036
Y-mean (2010)	0.548	0.258	0.521	0.822	0.854
Ret. migrant share (2015)-sd	1.093	1.093	1.049	1.093	1.052
Ret. migrant share (2010)-sd	2.187	2.187	2.183	2.187	2.187
Observations	2319	2319	2249	2319	2257

*Notes:* This table is similar to Table 15 but instead shows results when the SC deportee shares are built excluding deportations from Texas. See the notes to Table 15 for further details on the dependent variables and samples used in each column.

**Table (A18)** Estimated Effects of Return Migration on Log Monthly Income-Exclude Deportations from Texas

	All	Women		Men	
	(1)	(2)	(3)	(4)	(5)
	All	No HS	HS Plus	No HS	HS Plus
OLS					
Return migrant share (2015)	-0.017*** (0.002)	-0.010** (0.004)	-0.013* (0.007)	-0.018*** (0.002)	0.012 (0.011)
Return migrant share (2010)	0.004** (0.002)	0.009* (0.005)	0.008*** (0.003)	0.002 (0.002)	0.001 (0.003)
IV					
Return migrant share (2015)	-0.099** (0.049)	-0.050 (0.052)	-0.072 (0.049)	-0.177 (0.118)	0.053 (0.087)
Return migrant share (2010)	0.046 (0.031)	0.073 (0.065)	0.023 (0.024)	0.077 (0.064)	-0.002 (0.029)
$\Delta Y$ -mean (2010-2015)	-0.031	0.010	-0.096	-0.072	-0.155
Y-mean (2010)	3.432	2.970	3.805	3.453	3.972
Ret. migrant share (2015)-sd	1.093	1.076	1.027	1.093	1.032
Ret. migrant share (2010)-sd	2.187	2.185	2.174	2.188	2.191
Observations	2317	2300	2167	2316	2207

*Notes:* This table is similar to Table 16 but instead shows results when the SC deportee shares are built excluding deportations from Texas. See the notes to Table 16 for further details on the dependent variables and samples used in each column.

**Table (A19)** Reduced Form Effects of Deportee Ratios on Employment-Exclude Deportations from California

	All	Women		Men	
	(1)	(2)	(3)	(4)	(5)
		No HS	HS Plus	No HS	HS Plus
SC deportee share (2015)	-0.007* (0.004)	-0.006 (0.006)	-0.010* (0.005)	-0.008** (0.003)	-0.013** (0.005)
SC deportee share (2010)	0.005** (0.002)	0.005 (0.004)	0.005 (0.006)	0.004* (0.003)	0.007 (0.005)
$\Delta Y$ -mean (2010-2015)	-0.038	-0.031	-0.058	-0.059	-0.036
Y-mean (2010)	0.548	0.258	0.521	0.822	0.854
Observations	2319	2319	2249	2319	2257

*Notes:* This table is similar to Table 8 but instead shows results when the SC deportee shares are built excluding deportations from California. See the notes to Table 8 for further details on the dependent variables and samples used in each column.

**Table (A20)** Reduced Form Effects of Deportee Ratios on Log Monthly Income-Exclude Deportations from California

	All	Women		Men	
	(1)	(2)	(3)	(4)	(5)
		No HS	HS Plus	No HS	HS Plus
SC deportee share (2015)	-0.023*** (0.005)	-0.026** (0.011)	-0.000 (0.015)	-0.041*** (0.012)	0.008 (0.018)
SC deportee share (2010)	0.023*** (0.004)	0.028** (0.013)	0.017 (0.011)	0.038*** (0.008)	-0.001 (0.015)
$\Delta Y$ -mean (2010-2015)	-0.031	0.010	-0.096	-0.072	-0.155
Y-mean (2010)	3.432	2.970	3.805	3.453	3.972
Observations	2317	2300	2167	2316	2207

*Notes:* This table is similar to Table 9 but instead shows results when the SC deportee shares are built excluding deportations from California. See the notes to Table 9 for further details on the dependent variables and samples used in each column.

**Table (A21)** Estimated Effects of Return Migration on Employment-Exclude Deportations from California

	All	Women		Men	
	(1)	(2)	(3)	(4)	(5)
	All	No HS	HS Plus	No HS	HS Plus
OLS					
Return migrant share (2015)	0.008*** (0.001)	0.010*** (0.001)	0.009*** (0.003)	0.007*** (0.002)	-0.000 (0.006)
Return migrant share (2010)	-0.000 (0.001)	-0.004*** (0.001)	-0.008*** (0.002)	0.003** (0.001)	0.002 (0.003)
IV					
Return migrant share (2015)	-0.031 (0.028)	-0.029 (0.041)	-0.056* (0.034)	-0.032* (0.019)	-0.050* (0.030)
Return migrant share (2010)	0.007 (0.009)	0.009 (0.011)	0.002 (0.016)	0.003 (0.008)	0.007 (0.012)
$\Delta Y$ -mean (2010-2015)	-0.038	-0.031	-0.058	-0.059	-0.036
Y-mean (2010)	0.548	0.258	0.521	0.822	0.854
Ret. migrant share (2015)-sd	1.093	1.093	1.049	1.093	1.052
Ret. migrant share (2010)-sd	2.187	2.187	2.183	2.187	2.187
Observations	2319	2319	2249	2319	2257

*Notes:* This table is similar to Table 15 but instead shows results when the SC deportee shares are built excluding deportations from California. See the notes to Table 15 for further details on the dependent variables and samples used in each column.

**Table (A22)** Estimated Effects of Return Migration on Log Monthly Income-Exclude Deportations from California

	All	Women		Men	
	(1)	(2)	(3)	(4)	(5)
	All	No HS	HS Plus	No HS	HS Plus
OLS					
Return migrant share (2015)	-0.017*** (0.002)	-0.010** (0.004)	-0.013* (0.007)	-0.018*** (0.002)	0.012 (0.011)
Return migrant share (2010)	0.004** (0.002)	0.009* (0.005)	0.008*** (0.003)	0.002 (0.002)	0.001 (0.003)
IV					
Return migrant share (2015)	-0.118* (0.062)	-0.193 (0.263)	0.024 (0.089)	-0.202 (0.153)	0.023 (0.071)
Return migrant share (2010)	0.045* (0.024)	0.059 (0.065)	0.063* (0.035)	0.071 (0.049)	0.006 (0.024)
$\Delta Y$ -mean (2010-2015)	-0.031	0.010	-0.096	-0.072	-0.155
Y-mean (2010)	3.432	2.970	3.805	3.453	3.972
Ret. migrant share (2015)-sd	1.093	1.076	1.027	1.093	1.032
Ret. migrant share (2010)-sd	2.187	2.185	2.174	2.188	2.191
Observations	2317	2300	2167	2316	2207

*Notes:* This table is similar to Table 16 but instead shows results when the SC deportee shares are built excluding deportations from California. See the notes to Table 16 for further details on the dependent variables and samples used in each column.

**Table (A23)** Reduced Form Effects of Deportee Ratios on Employment-W/O Control for Change in Outcome Variable (2000-2010)

	All	Women		Men	
	(1)	(2)	(3)	(4)	(5)
		No HS	HS Plus	No HS	HS Plus
SC deportee share (2015)	-0.015*** (0.004)	-0.013 (0.009)	-0.005 (0.006)	-0.018** (0.007)	-0.025** (0.010)
SC deportee share (2010)	0.010*** (0.004)	0.009 (0.006)	0.004 (0.005)	0.010** (0.005)	0.015 (0.010)
$\Delta Y$ -mean (2010-2015)	-0.038	-0.031	-0.060	-0.059	-0.037
Y-mean (2010)	0.548	0.258	0.519	0.822	0.853
Observations	2319	2319	2311	2319	2307

*Notes:* This table is similar to Table 8 but instead shows results when regressions do not control for the change in the outcome variable from 2000-2010. See the notes to Table 8 for further details on the dependent variables and samples used in each column.

**Table (A24)** Reduced Form Effects of Deportee Ratios on Log Monthly Income-W/O Control for Change in Outcome Variable (2000-2010)

	All	Women		Men	
	(1)	(2)	(3)	(4)	(5)
		No HS	HS Plus	No HS	HS Plus
SC deportee share (2015)	-0.010 (0.007)	-0.007 (0.011)	0.103 (0.064)	-0.033*** (0.012)	-0.013 (0.012)
SC deportee share (2010)	0.014** (0.006)	0.008 (0.012)	-0.070 (0.058)	0.031*** (0.009)	0.026* (0.014)
$\Delta Y$ -mean (2010-2015)	-0.031	0.010	-0.097	-0.072	-0.155
Y-mean (2010)	3.431	2.969	3.795	3.452	3.960
Observations	2318	2307	2275	2317	2284

*Notes:* This table is similar to Table 9 but instead shows results when regressions do not control for the change in the outcome variable from 2000-2010. See the notes to Table 9 for further details on the dependent variables and samples used in each column.

**Table (A25)** Estimated Effect of Return Migration on Employment-Does not control for change in outcome variable (2000-2010)

	All	Women		Men	
	(1)	(2)	(3)	(4)	(5)
	All	No HS	HS Plus	No HS	HS Plus
OLS					
Return migrant share (2015)	0.008*** (0.001)	0.011*** (0.001)	0.006* (0.003)	0.008*** (0.002)	0.001 (0.005)
Return migrant share (2010)	-0.003*** (0.001)	-0.007*** (0.001)	-0.009*** (0.001)	0.001 (0.001)	-0.000 (0.003)
IV					
Return migrant share (2015)	-0.041* (0.024)	-0.036 (0.035)	-0.013 (0.015)	-0.050*** (0.019)	-0.071 (0.051)
Return migrant share (2010)	0.015 (0.012)	0.013 (0.015)	0.005 (0.008)	0.014 (0.011)	0.021 (0.027)
$\Delta Y$ -mean (2010-2015)	-0.038	-0.031	-0.060	-0.059	-0.037
Y-mean (2010)	0.548	0.258	0.519	0.822	0.853
Ret. migrant share (2015)-sd	1.093	1.093	1.077	1.093	1.092
Ret. migrant share (2010)-sd	2.187	2.187	2.189	2.187	2.188
Observations	2319	2319	2311	2319	2307

*Notes:* This table is similar to Table 15 but instead shows results when regressions do not control for the change in the outcome variable from 2000-2010. See the notes to Table 15 for further details on the dependent variables and samples used in each column.

**Table (A26)** Estimated Effect of Return Migration on Log Monthly Income-W/O Control for Change in Outcome Variable (2000-2010)

	All	Women		Men	
	(1)	(2)	(3)	(4)	(5)
	All	No HS	HS Plus	No HS	HS Plus
	OLS				
Return migrant share (2015)	-0.014*** (0.003)	-0.011*** (0.003)	-0.003 (0.005)	-0.013*** (0.003)	0.008 (0.008)
Return migrant share (2010)	0.009*** (0.001)	0.016** (0.006)	0.009*** (0.003)	0.005* (0.003)	0.000 (0.003)
	IV				
Return migrant share (2015)	-0.029 (0.020)	-0.019 (0.035)	0.302 (0.256)	-0.094 (0.064)	-0.036 (0.031)
Return migrant share (2010)	0.021* (0.011)	0.013 (0.021)	-0.083 (0.128)	0.045 (0.031)	0.039 (0.028)
$\Delta Y$ -mean (2010-2015)	-0.031	0.010	-0.097	-0.072	-0.155
Y-mean (2010)	3.431	2.969	3.795	3.452	3.960
Ret. migrant share (2015)-sd	1.093	1.091	1.081	1.093	1.079
Ret. migrant share (2010)-sd	2.187	2.187	2.193	2.188	2.184
Observations	2318	2307	2275	2317	2284

*Notes:* This table is similar to Table 16 but instead shows results when regressions do not control for the change in the outcome variable from 2000-2010. See the notes to Table 16 for further details on the dependent variables and samples used in each column.

**Table (A27)** Reduced Form Effects of Deportee Ratios on Employment-Deportees with Lower Level Crimes or No Convictions

	All	Women		Men	
	(1)	(2)	(3)	(4)	(5)
		No HS	HS Plus	No HS	HS Plus
SC dep. share cat. 3 or no conv. (2015)	-0.012* (0.007)	-0.010 (0.010)	-0.013* (0.007)	-0.013** (0.006)	-0.018** (0.008)
SC dep. share cat. 3 or no conv. (2010)	0.011* (0.006)	0.009 (0.007)	0.006 (0.006)	0.010* (0.006)	0.006 (0.007)
$\Delta Y$ -mean (2010-2015)	-0.038	-0.031	-0.058	-0.059	-0.036
Y-mean (2010)	0.548	0.258	0.521	0.822	0.854
Observations	2319	2319	2249	2319	2257

*Notes:* This table is similar to Table 8 but instead shows results when the SC deportee shares are built using deportations of individuals convicted of lower level crimes or who do not have any criminal convictions. See the notes to Table 8 for further details on the dependent variables and samples used in each column.

**Table (A28)** Reduced Form Effects of Deportee Ratios on Log Monthly Income-Deportees with Lower Level Crimes or No Convictions

	All	Women		Men	
	(1)	(2)	(3)	(4)	(5)
		No HS	HS Plus	No HS	HS Plus
SC deportee share (2015)	-0.010 (0.007)	-0.007 (0.011)	0.103 (0.064)	-0.033*** (0.012)	-0.013 (0.012)
SC deportee share (2010)	0.014** (0.006)	0.008 (0.012)	-0.070 (0.058)	0.031*** (0.009)	0.026* (0.014)
$\Delta Y$ -mean (2010-2015)	-0.031	0.010	-0.097	-0.072	-0.155
Y-mean (2010)	3.431	2.969	3.795	3.452	3.960
Observations	2318	2307	2275	2317	2284

*Notes:* This table is similar to Table 9 but instead shows results when the SC deportee shares are built using deportations of individuals convicted of lower level crimes or who do not have any criminal convictions. See the notes to Table 9 for further details on the dependent variables and samples used in each column.

**Table (A29)** Estimated Effect of Return Migration on Employment-Deportees with Lower Level Crimes or No Convictions

	All	Women		Men	
	(1)	(2)	(3)	(4)	(5)
	All	No HS	HS Plus	No HS	HS Plus
OLS					
Return migrant share (2015)	0.008*** (0.001)	0.011*** (0.001)	0.006* (0.003)	0.008*** (0.002)	0.001 (0.005)
Return migrant share (2010)	-0.003*** (0.001)	-0.007*** (0.001)	-0.009*** (0.001)	0.001 (0.001)	-0.000 (0.003)
IV					
Return migrant share (2015)	-0.041* (0.024)	-0.036 (0.035)	-0.013 (0.015)	-0.050*** (0.019)	-0.071 (0.051)
Return migrant share (2010)	0.015 (0.012)	0.013 (0.015)	0.005 (0.008)	0.014 (0.011)	0.021 (0.027)
$\Delta Y$ -mean (2010-2015)	-0.038	-0.031	-0.060	-0.059	-0.037
Y-mean (2010)	0.548	0.258	0.519	0.822	0.853
Ret. migrant share (2015)-sd	1.093	1.093	1.077	1.093	1.092
Ret. migrant share (2010)-sd	2.187	2.187	2.189	2.187	2.188
Observations	2319	2319	2311	2319	2307

*Notes:* This table is similar to Table 15 but instead shows results when the SC deportee shares are built using deportations of individuals convicted of lower level crimes or who do not have any criminal convictions. See the notes to Table 15 for further details on the dependent variables and samples used in each column.

**Table (A30)** Estimated Effect of Return Migration on Log Monthly Income-Deportees with Lower Level Crimes or No Convictions

	All	Women		Men	
	(1)	(2)	(3)	(4)	(5)
	All	No HS	HS Plus	No HS	HS Plus
	OLS				
Return migrant share (2015)	-0.017*** (0.002)	-0.010** (0.004)	-0.013* (0.007)	-0.018*** (0.002)	0.012 (0.011)
Return migrant share (2010)	0.004** (0.002)	0.009* (0.005)	0.008*** (0.003)	0.002 (0.002)	0.001 (0.003)
	IV				
Return migrant share (2015)	-0.065*** (0.022)	-0.042 (0.033)	0.018 (0.038)	-0.124** (0.056)	0.052 (0.093)
Return migrant share (2010)	0.025*** (0.009)	0.030 (0.022)	0.015 (0.023)	0.049* (0.029)	-0.006 (0.035)
$\Delta Y$ -mean (2010-2015)	-0.031	0.010	-0.096	-0.072	-0.155
Y-mean (2010)	3.432	2.970	3.805	3.453	3.972
Ret. migrant share (2015)-sd	1.093	1.076	1.027	1.093	1.032
Ret. migrant share (2010)-sd	2.187	2.185	2.174	2.188	2.191
Observations	2317	2300	2167	2316	2207

*Notes:* This table is similar to Table 16 but instead shows results when the SC deportee shares are built using deportations of individuals convicted of lower level crimes or who do not have any criminal convictions. See the notes to Table 16 for further details on the dependent variables and samples used in each column.