

Declining Mobility among Mexican-Born Workers in the U.S. Labor Force

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Abstract

Geographic mobility is a key component of labor supply elasticity. We document a reversal in the relative migration elasticity of Mexican immigrants in the U.S. relative to native-born workers. In 2000–2012, Mexican immigrants’ location choice was more responsive to local economic conditions, with the gap expanding over the period. This pattern subsequently reversed, and by 2020 native-born workers had a greater migration elasticity than their Mexican-born counterparts. This reversal is unique to immigrants of Mexican origin, does not correspond to geographic differences in immigration policy, and is not explained by the occupational or demographic composition of the Mexican-born labor force.

JEL codes: J15, J21, J61, R23

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1 Introduction

Migration is a major determinant of how economic activity is distributed geographically. The movement of workers in response to economic opportunity can improve aggregate productivity by allocating labor to locations with the greatest return. Labor migration also increases resilience to local productivity shocks by distributing impacts over a broader geographic area. Inversely, barriers to mobility constrain the geographic supply elasticity of labor in ways that can lower efficiency and welfare.

Recent research has established the importance of immigrants in spatial equilibration within developed countries. Immigrant populations have been more geographically responsive to local market conditions than native-born citizens in both the United States (Basso and Peri, 2020) and Europe (Basso et al., 2019). Immigrant mobility dampens the local impacts of import competition (Albert and Monràs, 2020) and played an equilibrating role during the Great Recession (Cadena and Kovak, 2016). Even though immigrants comprise a small fraction of the population and relocate less frequently on average, their outsized elasticity offsets market pressure on natives with stronger geographical preferences (Amior, 2021).

In this paper, we document a reversal in the relative geographic elasticities of Mexican-born and native-born Americans from 2000 to 2020. In the first half of this period, Mexican immigrants displayed a consistently greater mobility response to local labor demand than natives. The gap peaked in 2006–2010, the years around the Great Recession analyzed by Cadena and Kovak (2016). The pattern subsequently reversed over the following decade, and by 2015–2019 Mexican-born workers were *less* elastic than native-born Americans. The decline is unique to Mexican immigrants, and we find no evidence of falling mobility among other foreign-born immigrants, even among those from other parts of Latin America.

The reversal in relative mobility coincides with a period of decline in immigration from Mexico. In 2000–2005, nearly three million U.S. Mexican-born residents arrived to the U.S.; this number dwindled to less than one million by 2015–2020. With fewer new entrants, the immigrant population has longer tenure on average and its demographics have shifted. Longer tenure immigrants tend to be older and more likely to live with spouses and children than recent arrivals. Moreover, declining migration has brought new arrivals that are older, more educated, and more likely to be female than in the past.

While these demographics are associated with lower mobility, compositional changes alone cannot

explain our results. Counterfactual elasticities for Mexican immigrants computed by holding demographic shares constant at 2005 levels predict even stronger mobility declines over time, indicating this labor market shift has occurred within demographic cells. We present further evidence that the pattern is common to both regular and irregular immigrants, and is consistent across duration of tenure in the U.S.

The decline in mobility similarly cannot be attributed to differential trends across demographics or industries in the labor force. Relative to the native-born population, Mexican immigrants tend to be younger, less educated, and more likely to be male. However, the average geographic elasticity among native-born Americans would not display the same downward trend were the population to match the demographic characteristics of Mexican immigrants. Furthermore, while mobility declined more following the Great Recession in industries with a greater Mexican-born share such as agriculture, construction, and support services,¹ industry-specific gaps subsequently closed for native-born workers and cannot explain the persistence of our findings through the end of the decade.

It is also possible that changes in the U.S. institutional environment over time, such as heightened immigration enforcement or animosity toward Mexican workers, create mobility barriers unique to Mexican-born immigrants. However, we find little cross-sectional evidence for this latter channel and the elasticity decline does not appear among immigrants from other origins who are likely to face similar institutional challenges.

This analysis signals a change in the mobility preferences of Mexican-born immigrants. High barriers to entry likely select for a less mobile labor force because the returns to migration are increasing in the anticipated duration of tenure. Therefore, entry costs favor those who plan to remain at their destination.

The key identification challenge in estimating migration elasticities stems from the fact that observed earnings and employment are equilibrium outcomes endogenous to labor supply, of which migration is a component. To isolate exogenous variation in labor demand, we follow the methodology of Cadena and Kovak (2016) and construct instruments using industry-weighted employment shocks to metropolitan areas following Bartik (1991). We then measure the medium-run labor force response to these shocks among native-born, Mexican-born, other Latin-American-born, and other foreign-born workers in each

¹Support services include landscaping, housekeeping, custodial work, customer service, and private security.

market. The elasticities reported in this paper exclude short-term and seasonal migration.

Our findings complement research on the determinants of Mexican migration. Studies have found that barriers to entry (Allen et al., 2019; Feigenberg, 2020), immigration enforcement (Amuedo-Dorantes and Bansak, 2012; Caballero et al., 2018; Pearson, 2022), falling U.S. labor demand (Villareal, 2014), and economic growth in Mexico (Charlton and Taylor, 2016) all play a role in limiting the number of new Mexican immigrants. We document how labor supply in the U.S. has changed alongside migration flows.

Immigrant mobility is especially relevant to regional convergence in the U.S. Ganong and Shoag (2017) document a slowdown in convergence over the past thirty years. Contributing factors include inelastic housing supply (Hsieh and Moretti, 2019; Notowidigdo, 2020; Charles et al., 2019) and preference heterogeneity (Diamond, 2016). While interstate migration slowed over this period (Kaplan and Schulhofer-Wohl, 2017), immigrants have traditionally been more responsive to labor market conditions, and therefore have therefore played an outsized role in closing spatial earnings gaps relative to their representation in the population (Borjas, 2001; Basso and Peri, 2020; Albert and Monràs, 2022). Falling mobility among a large population of previously elastic immigrants may further slow the pace of convergence.

In Section 2 of this paper we describe data sources and present general facts about immigrants in the U.S. labor force. Section 3 discusses the methodology in this paper, with results reported in Section 4. Finally, Section 5 concludes.

2 Data and Background

2.1 Data

This study measures location choice using American Community Survey (ACS) data from the Public Use Microdata Samples (PUMS) from 2005–2020 and a comparable census extract from 2000 (Ruggles et al., 2021). The ACS is an annual cross-sectional survey on worker-level demographics and labor force engagement conducted by the U.S. Census Bureau. It contains information on occupation, gender, age, high school completion, and household composition. For each worker, we also define industry according to the 2-digit NAICS code of the current or most recent employer. Importantly, respondents are selected

by random sampling of addresses so participation does not depend on migration status or other legal documentation. We classify Mexican-born workers by presumptive documentation status according to observable characteristics following the procedure in Borjas and Cassidy (2019).²

We restrict analysis to Metropolitan Statistical Areas (MSAs), defined by the Office of Management and Budget to represent geographically distinct labor markets, that have at least 2,000 Mexican-born residents. This restriction yields a sample of 124 distinct MSAs across 43 states, representing 64% of the U.S. population and 87% of Mexican immigrants living in the country. The labor force in each MSA is defined as individuals aged 18–64 not enrolled in school. We also exclude living in group quarters to minimize the influence of seasonal labor and focus on medium- to long-run mobility.

As a proxy for labor demand, we aggregate MSA employment using county-level data from the County Business Patterns (CBP) dataset also released by the U.S. Census Bureau. The CBP reports the number of jobs by industry and county.³ 2-digit industry codes are harmonized across CBP and ACS yielding 20 distinct industries, plus non-employed in the ACS. For industries not covered by the CBP—agriculture, household services, and public sector—we directly add the number of workers in the ACS.

2.2 Background

In 2000, one out of every 7 workers in the U.S. was born abroad. Of these, 32% came from Mexico, 18% from other parts of Latin America, and half from other parts of the world. Relative to the native-born population, Mexican immigrants have historically tended to be younger, less educated, and more likely to be male. They are around three times as likely to work in construction and twice as likely to work in accommodation, food, or support services. As a share of the industry, Mexican-born workers are most prominent in agriculture and construction, where they comprise 24% and 12% of total employment, respectively.

ACS data show a clear decline in Mexican migration over the past two decades. The top two panels of Figure 1 plot the number of recently-arrived immigrants and total stock of the foreign-born population in the U.S. by origin over time. New arrivals from Mexico fell by more than half over the twenty-year

²Those who do not fulfill any of the following conditions are considered likely to be undocumented: U.S. citizen; spouse is a citizen or otherwise authorized to live in the U.S.; receives Social Security, SSI, Medicaid, Medicare, or Military Insurance; veteran or currently in the armed forces; works in the government sector; occupation requires licensing; born in Cuba; arrived before 1980.

³Data for some industry–county cells are suppressed for confidentiality, and are imputed by Eckert et al. (2021) based on adding-up constraints.

period of study, and the Mexican-born population plateaued around 2008. By contrast, the number of other foreign-born residents, including from other Latin American countries, rose over the same period. By 2019, immigrants from Mexico comprised only 27% of the foreign-born U.S. population.

[Figure 1 about here.]

The falling migration rate corresponds to two sources of demographic change in the immigrant population. First, the composition of the Mexican-born population shifted toward residents of longer tenure, with the fraction that have been in the country for at least five years rising from 73% in 2000–2005 to 93% in 2015–2020. Second, those arriving and remaining in the U.S. faced different selection pressures, so the characteristics of those who appear in the labor force later in the period of study differ from those that came before.

The bottom panels of Figure 1 depict how these two factors affect the demographic composition of the Mexican-born workforce. Each plot shows the population mean among Mexican-born immigrants for select demographic characteristics by survey year and by tenure of residency with the mean among native-born workers for comparison. Longer tenure immigrants are on average older and more likely to live with a spouse or children, both characteristics that correspond to lower mobility. In addition, the fraction of women and of high school graduates in the immigrant population grew over time independent of residency tenure.

On average, foreign-born workers are less geographically mobile than their native-born counterparts. Over the period of study, roughly four percent of native-born workers relocate across MSAs in any given year. By contrast, this fraction was only three percent for Mexican-born workers in 2000, and fell to two percent by 2019. Migration among other Latin-American-born workers similarly fell from three to 2.5 percent over the same period, and movement across MSAs remained steady around 3.5 percent for those of other foreign-born origin.

The analysis in this paper focuses on responsiveness to local economic conditions rather than average rates of mobility. Figure 2 demonstrates how this relationship has shifted over time. Each panel plots population growth by nativity against economic growth for our 124-MSA sample. The left panel shows that in 2006–2010, changes in the Mexican-born population tracked local employment more closely than

changes in the native-born population, a fact also reported in Cadena and Kovak (2016) and Basso and Peri (2020). However, this pattern reversed over the subsequent decade. By 2014–2018, there was a weak and, if anything, negative relationship between Mexican-born population growth and local employment, while the correlation for native-born population had strengthened.

[Figure 2 about here.]

The patterns presented in Figure 2 are correlational. In the next section we introduce a methodology to estimate how nativity-specific labor supply elasticities have evolved.

3 Methodology

3.1 Empirical Specification

We model the mobility of a demographic group g in period t across MSAs indexed by m as

$$\dot{N}_{m,g,t} = \beta^{g,t} \dot{L}_{m,g,t} + \alpha^{g,t} + \varepsilon_m^{g,t} \quad (1)$$

where N denotes the size of the labor force and L denotes local labor demand. A dot over a variable represents a log-difference (i.e. $\dot{X}_t = \log X_t - \log X_{t-1}$). Regression following (1) estimates the group-year-specific labor supply elasticity as $\hat{\beta}^{g,t}$, and the constant $\alpha^{g,t}$ captures aggregate group-year population changes.

To quantify differences in elasticity across groups and over time, we run a combined regression

$$\dot{N}_{m,g,t} = \beta^0 \dot{L}_{m,g,t} + \beta^T \dot{L}_{m,g,t} \mathbf{1}\{t \geq T\} + \beta^G \dot{L}_{m,g,t} \mathbf{1}\{g = G\} + \beta^{GT} \dot{L}_{m,g,t} \mathbf{1}\{g = G, t \geq T\} + \alpha_{g,t} + \varepsilon_{m,g,t} \quad (2)$$

with respect to a cutoff year T . In this regression, β^0 represents the geographic elasticity before year T of a base group, which we fix as native-born workers, and β^T measures the subsequent change in this elasticity. Correspondingly, β^G describes how the elasticity for nativity group G differs from that of native-born workers prior to year T , and β^{GT} quantifies how this difference evolves.

Our main specification examines changes over four-year intervals. Data for population changes \dot{N} by

nativity come directly from labor-force-eligible respondents in the ACS. By design we measure only location choice, which can be considered an extensive margin of local labor supply, because N does not condition on employment or other measures of labor force participation.

Employment data from the CBP does not comparably record birthplace. Instead, we construct nativity-specific employment changes as the weighted average of local industry growth. Formally, we decompose the change in employment for nativity group g in MSA m and year t into the sum across industries k according to

$$\dot{L}_{m,g,t} = \log(L_{m,g,t}) - \log(L_{m,g,t-1}) = \log\left(\sum_k r_{m,g,t-1}^k \frac{L_{m,t}^k}{L_{m,t-1}^k}\right) \quad (3)$$

where $r_{m,g,t}^k$ represents the share of workers from group g in MSA m and year t that are employed in industry k , under the assumption that industry growth is distributed evenly across nativity within industry. Data on industry-specific employment L comes from the CBP, and on nativity-specific local industry shares from the ACS.

Regressions (1) and (2) are not causally identified because employment L is an equilibrium outcome and therefore endogenous to local labor supply. To isolate variation generated by labor demand shocks, we construct instruments following Bartik (1991) by replacing local growth rates with national industry growth and group-specific industry shares with common base period shares in (3).

$$Z_{m,t} = \log\left(\sum_k r_{m,0}^k \frac{L_{US,t}^k}{L_{US,t-1}^k}\right) \quad (4)$$

We then estimate using 2SLS with first-stage equations

$$\dot{L}_{m,g,t} = \gamma^{g,t} Z_{m,t} + \delta^{g,t} + e_{m,g,t} \quad (5)$$

The key identifying assumption is that national-level industry growth rates are plausibly exogenous to local supply shifters and industry shares in any given MSA so that Z is uncorrelated with ε . Instrumenting also resolves possible issues introduced by mismeasurement in the construction of \dot{L} as long as sampling error

is uncorrelated between local and national industry growth.

We discuss identification in detail in Appendix A, with specific reference to recent analysis of shift-share instruments by Goldsmith-Pinkham et al. (2020) and Borusyak et al. (2022). All 2SLS regressions in this paper are weighted by MSA population in 2000 following Goldsmith-Pinkham et al. (2020), and estimates use robust standard errors.

3.2 Elasticity Decomposition

We further decompose the group-year elasticity $\beta^{g,t}$ from (1) into subgroup-specific components to evaluate how compositional differences contribute to our results. For any partition of a population into exhaustive and mutually exclusive subgroups, such as industry, education, or gender, the aggregate change in labor supply can be expressed as the weighted sum of changes by sub-group. We test whether differences in the frequency of subgroups by nativity or changes in population composition over time account for the observed decline in Mexican mobility.

Formally, let the population of group g at time t in MSA m be

$$N_{m,g,t} = \sum_j N_{m,g,t}^j$$

the sum of sub-groups indexed by j . We can express the total population change similar to (3)

$$\dot{N}_{m,g,t} = \log(N_{m,g,t}) - \log(N_{m,g,t-1}) = \log\left(\sum_j s_{m,g,t-1}^j \frac{N_{m,g,t}^j}{N_{m,g,t-1}^j}\right) \quad (6)$$

as the sum of share-weighted sub-group changes, where $s_{m,g,t}^j$ represents the population share belonging to subgroup j .

Substituting (6) into the 2SLS estimator from (1) yields

$$\begin{aligned} \hat{\beta}^{g,t} &= \frac{1}{\sum_m Z_{m,t} \dot{L}_{m,g,t}} \sum_m Z_{m,t} \dot{N}_{m,g,t} \\ &= \frac{1}{\sum_m Z_{m,t} \dot{L}_{m,g,t}} \sum_m \left(Z_{m,t} \log \sum_j s_{m,g,t-1}^j \frac{N_{m,g,t}^j}{N_{m,g,t-1}^j} \right) \end{aligned}$$

Given an elasticity estimate for a nativity group g in year t , we define the counterfactual elasticity were its sub-group composition to match that of a different nativity group g' or year t' as

$$\tilde{\beta}_{g',t'}^{g,t} = \frac{1}{\sum_m Z_{m,t} \dot{L}_{m,g,t}} \sum_m \left(Z_{m,t} \log \sum_j s_{g',m,t'}^j \frac{N_{m,g,t}^j}{N_{m,g,t-1}^j} \right) \quad (7)$$

This counterfactual estimator expresses the aggregate elasticity from a population with the same sub-group-specific elasticities as group g in year t , but with the sub-group composition of group g' in year t' . If $\tilde{\beta}_{g',t'}^{g,t} = \hat{\beta}^{g',t'}$, then compositional differences fully explain differences in measured elasticity between populations, and if $\tilde{\beta}_{g',t'}^{g,t} = \hat{\beta}^{g,t}$ then sub-group composition has no explanatory power.

4 Results

4.1 Declining Mexican Labor Mobility

Geographic responsiveness to local economic conditions has declined among Mexican immigrants over time and relative to other nativity groups. Results from 2SLS estimation are presented in Table 1). The first two columns illustrate this paper's main finding. Column 1, which replicates Cadena and Kovak (2016), reports a small population response to local market conditions among native-born workers and a substantially larger response among Mexican-born workers over the period 2006–2010. By 2014–2018 (Column 2), geographic elasticity among native-born workers has grown while Mexican-born workers have become less responsive to economic conditions than their native-born counterparts.

[Table 1 about here.]

Figure 3 graphs how this difference evolves over all four-year intervals in 2005–2019 as well as an initial interval of 2000–2005.⁴ The figure reveals a pattern in which geographic elasticity among Mexican-born workers exceeds that of native-born workers during the early part of the period of study and subsequently declines to below that of native-born workers in later years, with the reversal starting around 2009–2013. Column 3 of Table 1 verifies this trend in regression form following (2). β^G reflects the difference in

⁴Appendix A provides full elasticity estimates by year and nativity.

elasticities between nativity groups through 2008–2012. The positive sign of β^T indicates that geographic elasticity increased among native-born workers in 2009–2013 onward. The fact that β^{GT} is negative and larger in magnitude than both β^G and β^T suggests that elasticity among Mexican-born workers fell over the latter period to below that of native-born workers.

[Figure 3 about here.]

In Appendix B we confirm robustness of this reversal across various alternate specifications. Results are robust to defining population changes \dot{N} using total population instead of only working-age non-college residents, and to constructing labor market shocks \dot{L} common to all nativity groups by using total market shares $r_{m,t}^k$ rather than group-specific industry shares in (3). Results also remain stable when estimating over three- or five-year intervals. Finally, results are not sensitive to the exact cutoff year used to split the interval of study.⁵

We next explore the importance of domestic sentiment toward immigrants using cross-sectional variation in the prevalence of anti-immigration policy and politics. To do so, we augment (2) by interacting terms with two proxy measures of anti-immigrant sentiment: vote share for Donald Trump in the 2016 presidential election and early adoption of the Secure Communities immigration enforcement policy in 2009–2011. Although these measures enter the regression as time-invariant characteristics, we interpret them in the context of increasing polarization in the U.S. political landscape as proxies for growth in hostility toward immigrants over time.

Regression estimates, presented in Appendix D, indicate both the initial gap in Mexican immigrant elasticity and the subsequent reversal are present across all MSAs regardless of sentiment toward migrants. However, it should be noted these estimates rely on cross-sectional variation in sentiments or policy; we cannot separately identify nation-wide changes in these factors from other aggregate time series trends.

The final two columns of Table 1 show the trend of declining elasticity is unique to Mexican immigrants. Column 4 compares native-born workers to other immigrants of Latin American origin, and Column 5 to immigrants from other parts of the world. In both cases, there is no relative elasticity decline in the latter years of study. In fact, immigrants from outside Latin America display the opposite pattern, with elasticity

⁵In Appendix C we discuss an attempt to decompose changes in the migrant population into immigration, emigration, and interstate mobility. Unfortunately, this decomposition introduces too much noise to isolate any specific channel with precision.

increasing even faster than that of native-born workers. These findings are consistent with the notion that declining elasticity is caused by factors within the Mexican immigrant population, as these other groups are likely to face similar external pressures within the U.S.

4.2 Effect of Labor Force Composition

The divergent patterns of geographic elasticity cannot be attributed to the observable composition of the Mexican-born labor force alone. We first investigate whether results arise due to demographic or occupational differences between Mexican-born and native-born workers. As shown in Figure 1, Mexican immigrants tend to be younger, less educated, and more likely to be male. They are also more likely to be employed in agriculture, construction, and support services. We test whether declining elasticity is a feature of these industries or demographics that are over-represented in the Mexican-born population.

For this exercise, we compute $\tilde{\beta}_{Mex,t}^{US,t}$ from (7) for each four-year interval. This counterfactual estimator uses the proportional change in population for native-born workers that was actually observed within demographic or industry sub-groups in each MSA, but reweights changes according to the sub-group composition of the Mexican-born labor force. In effect, it simulates the elasticity that would have been measured among native-born workers if they had the same population composition as Mexican-born workers in their MSA.

Results are presented in Figure 4. In each panel, the black line plots the measured native-born geographic elasticity and the red line the Mexican-born. In panels A and D, dotted lines plot counterfactual elasticities for the native-born population following reweighting according to different demographic and occupational classifications. If counterfactuals match the Mexican-born elasticity in red, it would indicate compositional differences fully explain the observed reversal. Inversely, if counterfactuals match the native-born elasticity in black, it would indicate compositional differences play no role and divergence is present within sub-groups.

[Figure 4 about here.]

Panel A of Figure 4 plots results after reweighting by demographic classifications according to age, gender, education, and household composition. In all cases counterfactual estimates closely track the

measured native-born elasticity. Notably, counterfactuals display increasing geographic responsiveness over the latter half of the data, indicating mobility decline was not a feature of any demographic more common in the Mexican-born population. Regression analysis, detailed in Appendix E, confirms none of the reweighed native-born data matches the decline observed among Mexican-born workers.

Panel B plots counterfactual elasticities using industry and occupation distributions. We reweight native-born population changes according to 5 industry classifications, 21 industry classifications, 10 occupation classifications, and by the fraction in the three most common industries and five most common occupations among Mexican-born workers. Four counterfactuals closely track the observed native-born elasticity, a fact again confirmed by regression analysis in Appendix E. Only when reweighting across 21 industry bins do we produce a decline in the counterfactual native-born elasticity that resembles the measured decline among Mexican-born workers. As evident in Figure 4, the regression result is largely driven by the period immediately following the Great Recession, when elasticity fell more sharply and remained depressed for longer among industries with relatively more Mexican-born workers. By 2019, the counterfactual native-born elasticity had recovered to near its prior peak while the actual Mexican-born elasticity continued to fall. Thus, while differential trends across industries may have contributed to the initial divergence in elasticity patterns in the early part of the 2010's, they cannot fully account for the persistence of this divergence over time.

We next investigate the role of changes in the Mexican-born labor force over time. For this exercise, we compute $\tilde{\beta}_{Mex,2005}^{Mex,t}$ using the measured proportional change by sub-group in the Mexican labor force reweighted by MSA-specific sub-group shares in 2005. This estimator simulates the counterfactual had declining rates of immigration not altered the observable composition of the Mexican-born labor force within the U.S. Results are presented in the bottom two panels of Figure 4. In this case, the more closely counterfactuals approximate the rising native-born elasticity in black over time, the greater the importance of changing immigrant demographics.

Panel C of Figure 4 plots results using the same demographic classifications as Panel A, and Panel D reweights according to documentation status and tenure of residency. In all cases, the counterfactual elasticity reproduces the observed decline, confirmed by regression analysis in Appendix E. This fact

indicates that falling mobility was not a result of changing labor force composition, but rather occurred consistently within demographic bins and migration status. In fact, the counterfactual decline is even more pronounced after demographic reweighting in Panel C, suggesting that shifts in demographic composition, if anything, had a mitigating influence on the relative reversal in elasticity between native-born and Mexican-born workers.

5 Conclusion

In this paper we document a reversal in the geographic labor supply elasticity of Mexican immigrants relative to native-born Americans over the period from 2000 to 2020. Through the first decade of study, Mexican immigrants were more geographically responsive to local labor market conditions in the U.S. than native-born Americans, with the largest gap occurring during the years of the Great Recession. Mobility among Mexican workers subsequently fell while elasticity among native-born Americans grew, so that by 2020 immigrants from Mexico were substantially less geographically responsive to local economic conditions.

The reversal in mobility patterns does not correspond to geographic differences in the policy environment and cannot be fully explained by differences in the occupational or demographic composition by nativity, nor can it be explained by shifts in the observable demographic composition or migration status of the Mexican-born labor force over time. Instead, evidence suggests that Mexican mobility has declined relative to that of natives within demographic bins, sector of employment, documentation status, and tenure of residency. This decline is unique to immigrants from Mexico and not present among those of other origin. These facts are consistent with higher barriers to entry from Mexico selecting for a stock of migrant workers with a lower preference for mobility.

Our findings would suggest the contraction of Mexican migration over the last two decades has altered the role of Mexican-born workers in the U.S. economy. In particular, immigrants may not provide as much equilibration across domestic labor markets as they had in the past. This fact alone may have increased economic and geographic pressures on native-born workers, causing some of the observed increase in their mobility over the same period (see Amior, 2021). These changing patterns should inform migration and labor market policy going forward.

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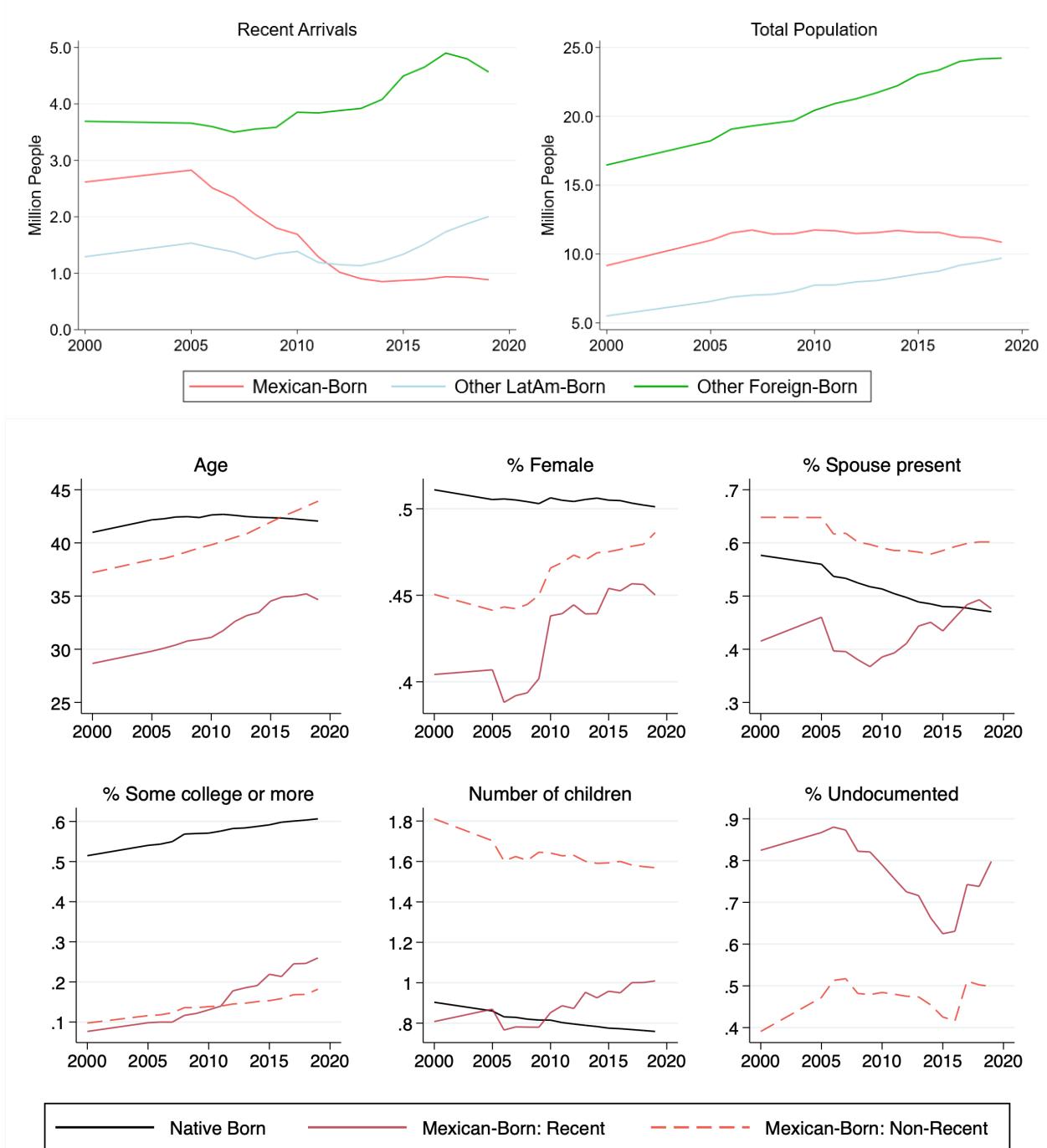
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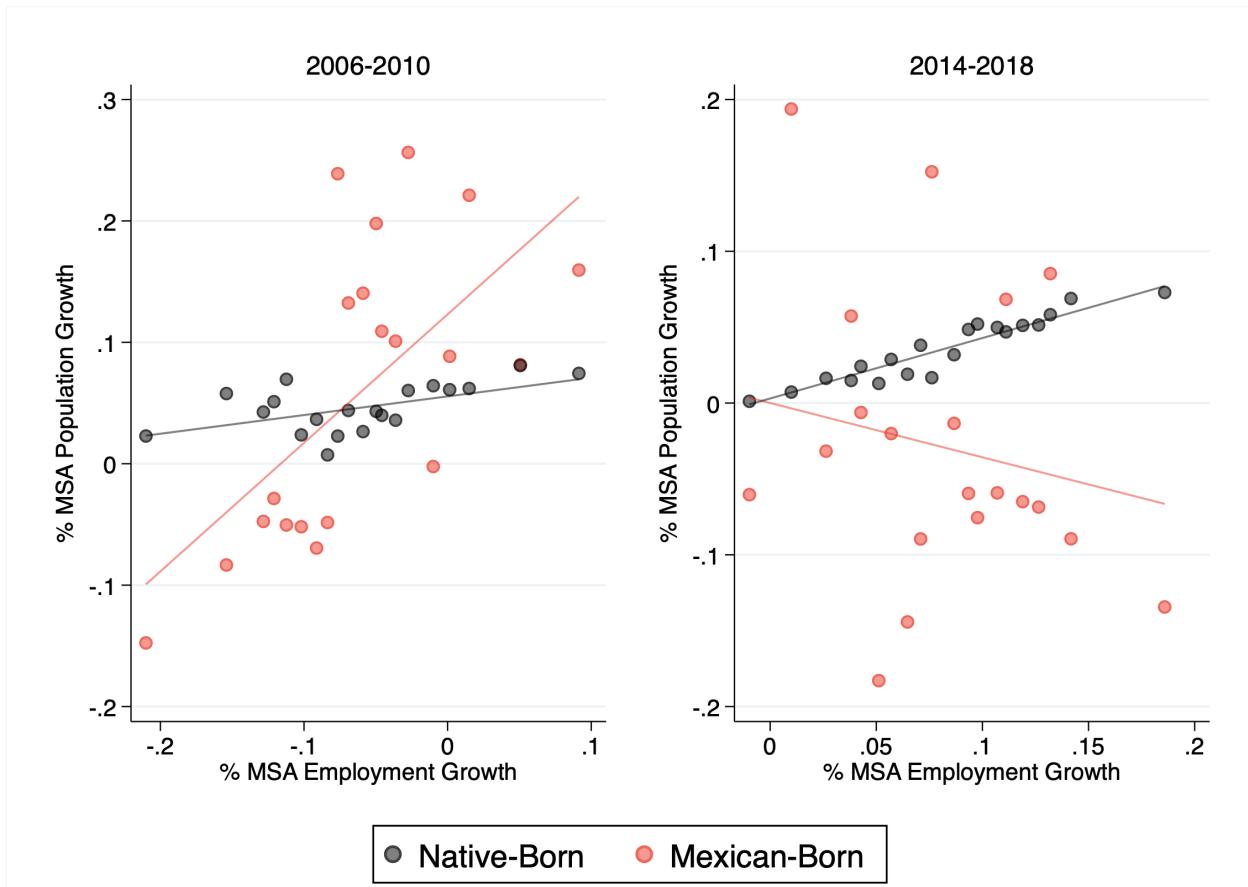
Villareal, Andrés, "Explaining the Decline in Mexico–U.S. Migration: The Effect of the Great Recession," *Demography*, 2014, 51 (6), 2203–28.

Figure 1: Immigration and Demographic Trends



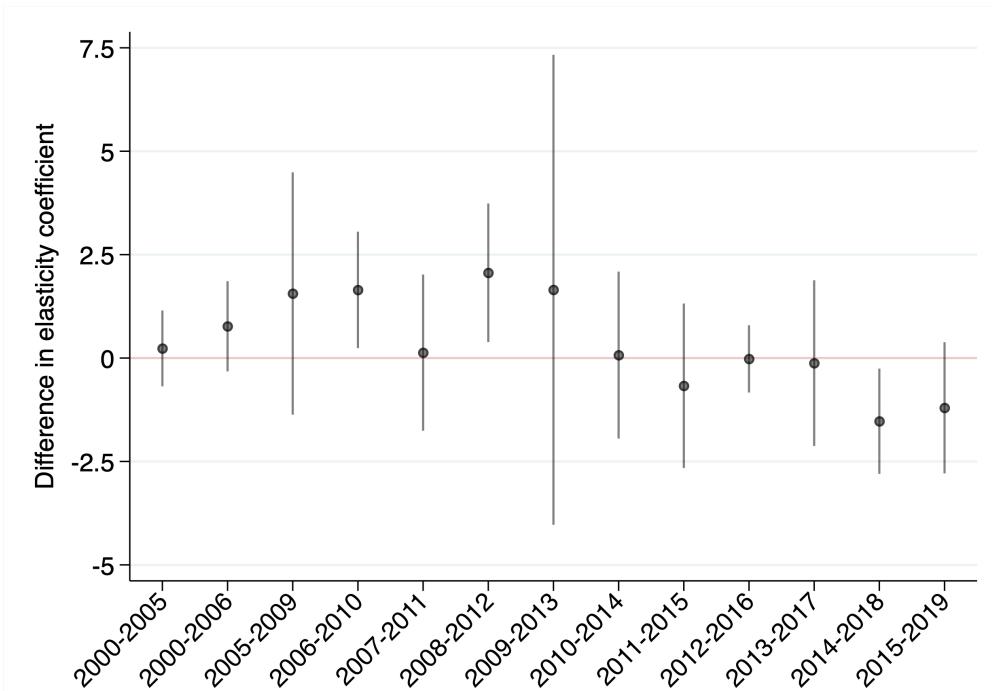
Notes: Immigration and demographic characteristics by year and by origin. Top left panel: Migrants having arrived in the prior five years. Top right panel: Total migrant population living in the U.S. Bottom panels: Mean demographic characteristics of native-born residents and Mexican-born immigrants by year. "Recent" reflects having arrived in U.S. in the prior five years.

Figure 2: Population and Employment Growth



Notes: Binned scatterplot of 4-year changes in total MSA employment and in MSA labor-force-eligible population by nativity. Left panel: Changes in 2006–2010. Right panel: Changes in 2014–2018.

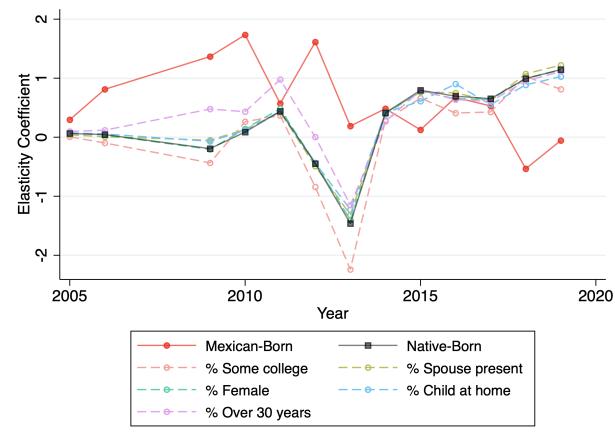
Figure 3: Difference in Elasticity between Native-Born and Mexican-Born by Period



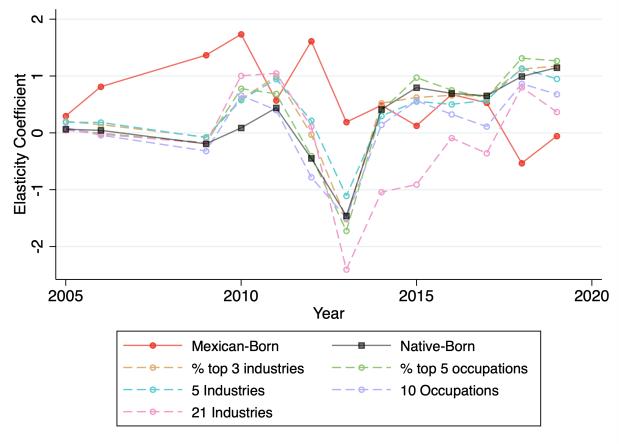
Notes: 2SLS estimates of difference in geographic elasticity between native-born and Mexican-born labor force by period. Point estimates correspond to β^G following (2) interacted with a full set of interval dummies rather than a single post period. Regressions weighted by MSA population. Error bars display 95% confidence intervals using robust standard errors.

Figure 4: Role of Labor Force Composition in Elasticity Differences

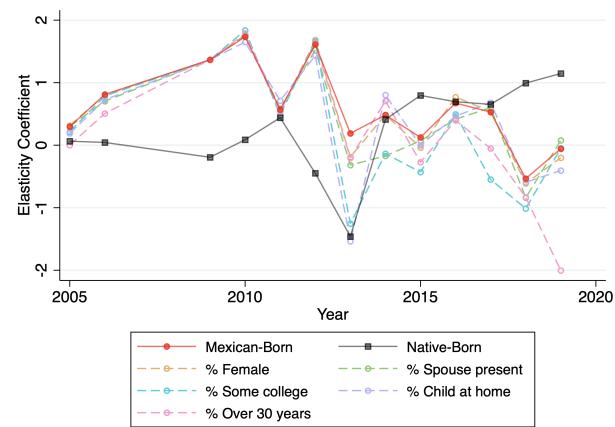
A. Native-born Elasticities with Mexican-born Shares



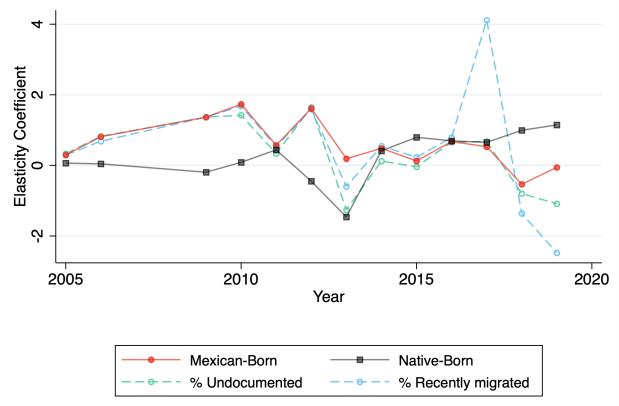
B. Native-born Elasticities with Mexican-born Shares



C. Mexican-born Elasticities at Fixed 2005 Shares



D. Mexican-born Elasticities at Fixed 2005 Shares



Notes: Actual and counterfactual geographic labor supply elasticities. Observed elasticities for native-born and Mexican-born workers according to (1) plotted in black and red. Dotted lines simulate counterfactual elasticities according to (6). Panels A and B: Counterfactual among native-born population were it to have the same demographic (Panel A) or occupational (Panel B) composition of the Mexican-born labor force. Panels C and D: Counterfactual among Mexican-born population holding its demographic (Panel C) and migration status (Panel D) composition fixed at 2005 levels. Recently arrived defined as arriving within prior five years.

Table 1: Geographic Elasticity Differences across Nativity and over Time

Immigrant origin:	Mexican-Born			Other Lat. Am.	Other Foreign
	2006–2010	2014–2018	All years	All years	All years
β^0 : Native-born geographic elasticity	0.088 (0.183)	0.993*** (0.221)	0.048 (0.093)	0.048 (0.093)	0.048 (0.093)
β^T : Change in elasticity post-2012			0.585*** (0.138)	0.585*** (0.138)	0.585*** (0.138)
β^C : Difference in immigrant elasticity	1.647** (0.718)		0.845*** (0.297)	0.257 (0.385)	-0.128 (0.228)
β^{CT} : Change in difference post-2012		-1.528** (0.649)	-1.240*** (0.444)	0.297 (0.663)	1.011*** (0.375)
Observations	248	248	3224	3172	3224

Notes: 2SLS estimates of geographic elasticity by nativity bin following (2). Columns 1 and 2: Elasticity among native-born and difference for Mexican-born in a single period. Columns 3, 4, and 5: elasticity for native-born, change post-2012, and difference with foreign-born. Regressions weighted by MSA population; robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.10.

Disclosure Statement

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Supplementary Appendix for
“Declining Mobility among Mexican-Born
Workers in the U.S. Labor Force”
For Online Publication Only

A Instrument Validity

Causal identification of the labor supply response to local labor demand shocks in this work uses an instrumental variables strategy. The empirical strategy in this paper closely replicates that of Cadena and Kovak (2016), and extends the analysis across multiple time periods. We follow the prior literature to ensure our new results post-2013 are not artifacts of differential data treatment and reflect true changes in the underlying labor market structure. In this section we discuss the validity of the Bartik instrument.

A.1 Instrument Relevance

Table S1 presents first-stage estimates of γ from (5) independently by year and by nativity group. First-stage results indicate that the constructed instruments strongly and consistently predict local labor market conditions.

[Table S1 about here.]

A.2 Exclusion Restriction

In this appendix section we discuss the validity of the Bartik instrument. We instrument for changes in local labor demand by interacting cross-sectional variation in local sectoral labor shares with time-series shifts in national sectoral labor demand. Recent analysis, especially by Goldsmith-Pinkham et al. (2020) and Borusyak et al. (2022), precisely describes the assumptions behind and interpretation of such shift-share style instrumental variables. We discuss identification in the context of these recent developments.

A.2.1 Identification from Exclusion of Shares

Goldsmith-Pinkham et al. (2020) show the IV regression coefficient from a shift-share design can be expressed as the weighted average of IV regression estimators with each sector share serving as an instrument, and weights given by the relative magnitude of sectoral shifts. It follows that a sufficient condition for identification is that sector shares are excluded. In our case, the object of interest is difference between immigrant and native migration, so this gap must be uncorrelated with prior sectoral shares at the local level.

We verify that estimation using sector shares as separate instruments for local labor demand generates the same pattern of differences in elasticity coefficients in Figure S1. The black circles reproduce our main results from Figure 3 using the Bartik instrument, and the solid red triangles present IV results using local sectoral shares as nineteen⁶ separate instruments. In every year, we fail to reject equality between the two specifications.

A corollary of this identifying assumption is that every sector share is a valid instrument for labor demand independently, and therefore dropping any single sector should have no impact on the results. The unshaded red triangles in Figure S1 present point estimates from IV regressions dropping each sector one at a time. In no case does a single sector have enough leverage to cause an economically or statistically significant change in the IV regression estimate. However, an overidentification test rejects instrument equality across sectors at the 1% level in nearly every year of study.

[Figure S1 about here.]

A.2.2 Identification from Orthogonality of Shifts

A weaker set of sufficient conditions for identification derive from an orthogonality assumption between sectoral shifts and sector-specific violations of exclusion. Borusyak et al. (2022) show that when national shifts are as good as randomly assigned across sectors, a shift-share instrument will satisfy exclusion as long as the instrument is not dominated by a small number of sectors with outsized shares. They propose the Herfindahl index (HHI) as a measure of sectoral dominance, with the inverse HHI constituting the effective

⁶There are twenty two-digit industry codes, but one is dropped due to collinearity because shares must sum to one.

cross-sectional sample size.

Table S2 presents summary statistics on national-level sectoral shocks and share concentration. At the two-digit NAICS level with twenty sectors, as used by Cadena and Kovak (2016), we have an effective sample size of just over 13 observations per year. If we zoom in to the three-digit NAICS level, the effective sample size grows to nearly 34 observations per year. Unfortunately, at the four-digit level and beyond, sector-county-year cells become small enough to violate the confidentiality of CBP respondents. The Census Bureau censored local data prior to 2017 and added noise to small cells thereafter, so instrument relevance is lost at this fine level.

[Table S2 about here.]

We confirm that results are not driven by small-sample bias from the small number of sectors in Table S3. The table reproduces the analysis from Table 1 using Bartik instruments constructed from 3-digit NAICS industry codes. Difference-in-differences estimates are statistically indistinguishable from and nearly identical in magnitude to our main results. We conclude that the patterns we demonstrate are not caused by violations of exclusion in a small number of sectors with outsized influence.

[Table S3 about here.]

A.3 Instrument Exposure

A related concern arises from the fact that IV regression estimates a local average treatment effect as a weighted average of migration elasticity by MSA, weighted by instrument exposure. Therefore, changes in the estimated elasticity over time may arise due to time-varying instrument exposure even with valid instruments in cases where there is no change in the underlying population elasticity. That is, it is possible that even if changes in the shock level are uncorrelated with migration rates, bias may be introduced by changes in correlation between the shock variance and migration elasticities.

We explore this possibility by first quantifying the importance of each migration channel (i.e. MSA–MSA pair) in the national migration rate by nativity, and then evaluating whether economic shocks have shifted from channels relatively more important for Mexican immigrants to channels relatively more important for

native-born Americans. For this exercise, we define the importance of the channel between MSAs i and j for nativity bin g to be the fraction of total migration flows represented by that channel. That is, let

$$W_{ij}^g = \frac{M_{ij}^g + M_{ji}^g}{\sum_{p,q \neq p} M_{pq}^g}$$

where M_{ij}^g represents the number of people in nativity bin g that relocate from i to j in the base period. The difference between this measure for Mexican-born immigrants and native-born Americans reflects a migration channel's relative importance to Mexican immigrants.

We next test whether instrument exposure across migration channels systematically changes over time. To do so, we define a migration channel's instrument exposure in a given period to be the absolute difference between Bartik shocks to the two endpoints in that period. Channels with larger differences are exposed to greater instrument variation, and will therefore contribute more to estimates of average elasticity.

In Figure S2 we evaluate whether time-varying instrument exposure can explain our estimation results. Each point in the figure represents the coefficient from a channel-level regression of instrument exposure ($|Z_{it} - Z_{jt}|$) on relative migration importance ($W_{ij}^{Mex} - W_{ij}^{Nat}$). For time-varying shock exposure to cause a decline in the estimated elasticity of Mexican-born immigrants relative to native-born Americans, it would need to be the case that shock exposure shifted from channels relatively more important to Mexican immigrants in the early part of the data toward channels relatively more important to native-born Americans in the latter part. This pattern would be represented by a downward trend in regression coefficients over time. In fact, we observe the opposite: there is no statistically distinguishable change in instrument exposure over time and, if anything, the shock exposure increased among migration channels relatively more important to Mexican immigrants.

[Figure S2 about here.]

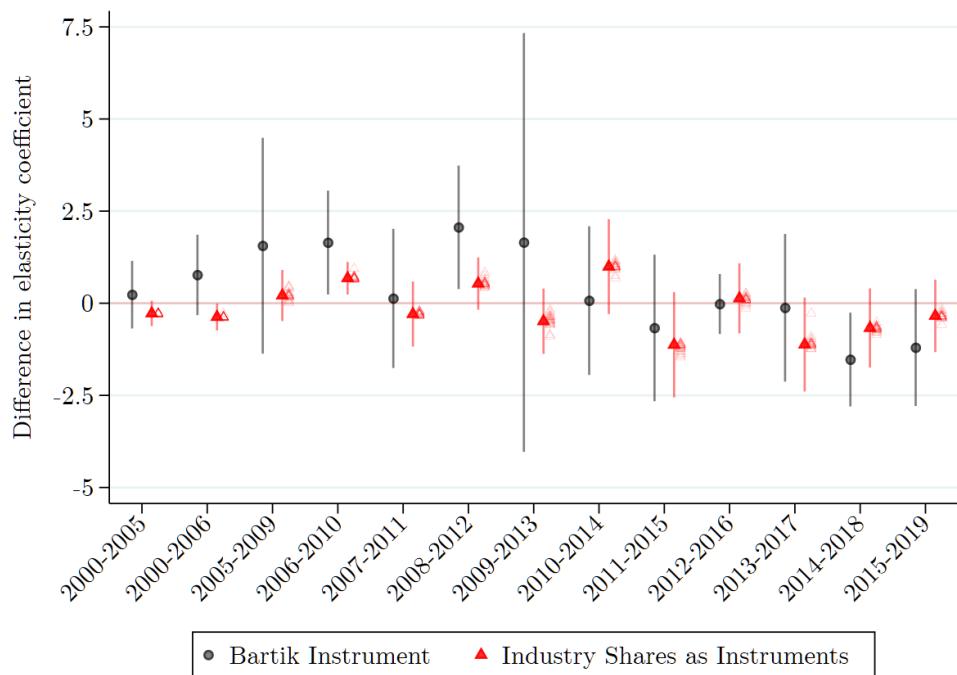
A.4 Placebo Test: Prior Migration

As a combined test of instrument validity, we regress each year's Bartik shock on time-invariant pre-study population changes using census data from 1980–1990 and 1990–2000. Results are presented in Figure S3.

The black circles reproduce estimates in Figure 3. The red triangles and blue diamonds run the same regression, but replace outcome data with population changes from 1980–1990 and 1990–2000, respectively. This placebo test could show the same trend of declining elasticity among Mexican immigrants if either changes in local shocks were correlated with pre-existing migration patterns, violating exclusion, or if the geographic variability of shocks shifted over time, leading the regression estimate to be local to a different population. In fact, the placebo regressions show no comparable trend.

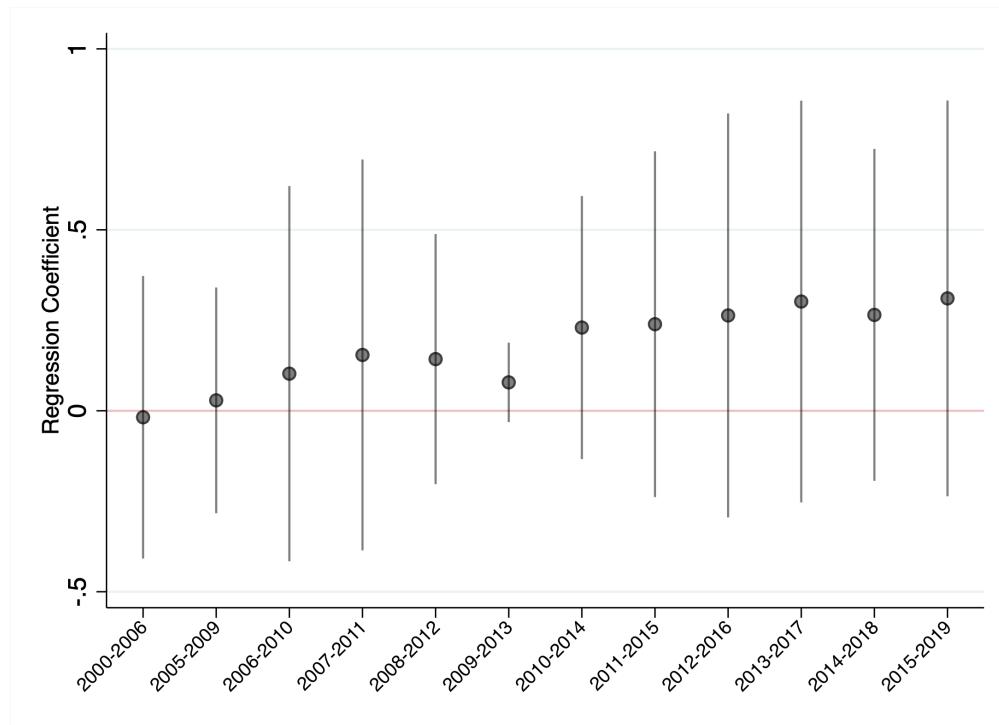
[Figure S3 about here.]

Figure S1: Difference in Elasticity between Native-Born and Mexican-Born by Period



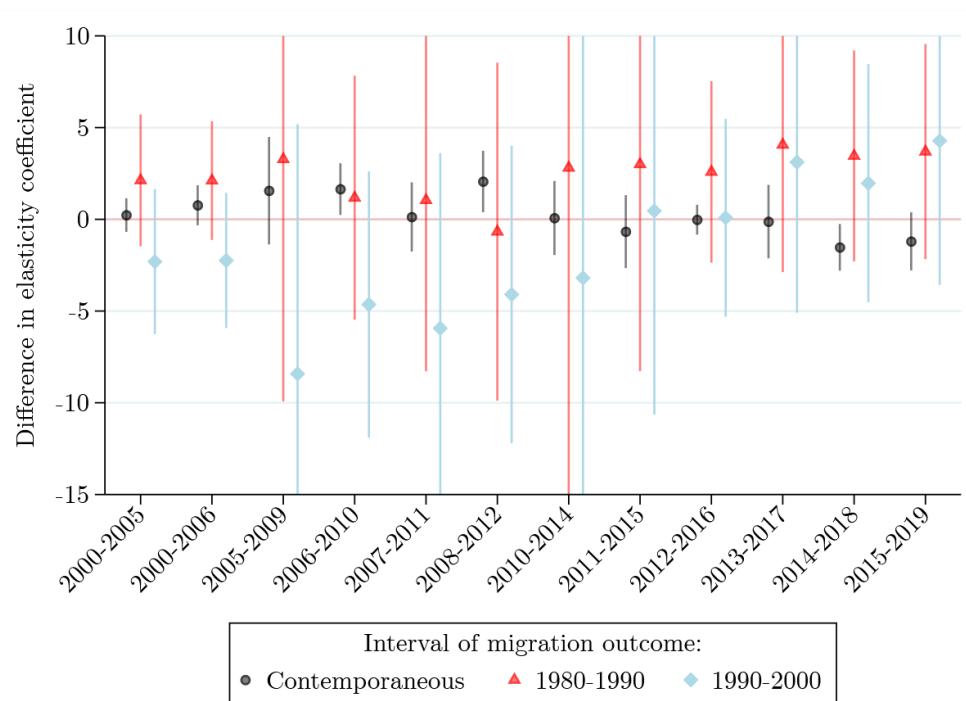
Notes: 2SLS estimates of difference in geographic elasticity between native-born and Mexican-born labor force by period. Black circles reproduce estimates in Figure 3 using the Bartik instrument. Solid red triangles use sectoral shares as instruments. Empty red triangles plot point estimates from IV regressions dropping each sector from the set of instruments one at a time. Error bars display 95% confidence intervals using robust standard errors.

Figure S2: Relationship between Instrument Exposure and Migration Importance



Notes: Regression coefficients from MSA–MSA channel-level regressions of shock exposure on relative migration importance by period. Shock exposure is defined as the absolute difference in Bartik shock between channel endpoints. Relative migration importance is defined as the difference between the fraction of national migration represented by the channel for Mexican immigrants and for native-born Americans. Error bars display 95% confidence intervals using robust standard errors.

Figure S3: Placebo Identification Tests using Historical Migration Rates



Notes: 2SLS estimates of difference in geographic elasticity between native-born and Mexican-born labor force by period. Black circles reproduce estimates in Figure 3 using true changes in population. Red triangles and blue diamonds replace outcome data with time-invariant population changes from 1980–1990 and 1990–2000, respectively. Error bars display 95% confidence intervals using robust standard errors.

Table S1: First-stage Coefficients for All Nativity Bins and Years

	(1) Native	(2) Mexican	(3) Other Lat. Am.	(4) Other Foreign
Bartik Instrument (2000–2005)	3.746** (1.713)	4.524*** (1.465)	4.155** (1.753)	4.012** (1.697)
Kleinberg-Paap F	4.779	9.542	5.621	5.590
Bartik Instrument (2000–2006)	3.506** (1.622)	4.398*** (1.456)	4.017** (1.650)	3.815** (1.578)
Kleinberg-Paap F	4.669	9.127	5.925	5.843
Bartik Instrument (2005–2009)	1.231** (0.536)	2.209** (0.849)	1.831** (0.765)	1.791*** (0.608)
Kleinberg-Paap F	5.282	6.772	5.726	8.681
Bartik Instrument (2006–2010)	1.636*** (0.426)	2.906*** (0.840)	2.131*** (0.551)	1.956*** (0.463)
Kleinberg-Paap F	14.737	11.963	14.978	17.835
Bartik Instrument (2007–2011)	1.362** (0.383)	2.771*** (0.893)	1.680** (0.488)	1.389*** (0.412)
Kleinberg-Paap F	12.621	9.631	11.866	11.386
Bartik Instrument (2008–2012)	1.554*** (0.397)	3.976*** (0.604)	2.512*** (0.438)	1.544*** (0.470)
Kleinberg-Paap F	15.321	43.329	32.873	10.790
Bartik Instrument (2009–2013)	1.467 (0.889)	1.898 (1.553)	2.213* (1.148)	2.026** (0.875)
Kleinberg-Paap F	2.724	1.492	3.718	5.356
Bartik Instrument (2010–2014)	2.696*** (0.815)	2.579*** (0.794)	2.377*** (0.828)	2.936*** (0.807)
Kleinberg-Paap F	10.941	10.549	8.252	13.223
Bartik Instrument (2011–2015)	2.743*** (0.794)	3.120*** (0.929)	2.860** (0.942)	2.721*** (0.768)
Kleinberg-Paap F	11.935	11.276	9.223	12.545
Bartik Instrument (2012–2016)	2.896*** (0.492)	4.988*** (0.808)	3.805*** (0.708)	3.078*** (0.525)
Kleinberg-Paap F	34.689	38.124	28.856	34.345
Bartik Instrument (2013–2017)	3.006*** (0.747)	3.591*** (1.092)	2.911*** (0.988)	2.693*** (0.751)
Kleinberg-Paap F	16.185	10.808	8.685	12.858
Bartik Instrument (2014–2018)	3.431*** (0.808)	4.918*** (1.100)	4.398*** (1.055)	3.277*** (0.823)
Kleinberg-Paap F	18.030	19.970	17.388	15.845
Bartik Instrument (2015–2019)	2.380*** (0.798)	3.928*** (0.929)	2.968*** (0.939)	2.883*** (0.783)
Kleinberg-Paap F	8.896	17.874	9.993	13.562

Notes: Each cell represents a separate first-stage regression following (5). Regressions weighted by MSA population; robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.10.

Table S2: Summary Statistics on National Shocks and Sectoral Shares

	NAICS-2	NAICS-3
Mean Shock	1.04	0.99
St. Dev. Shock	0.09	0.26
Sd. Dev. w/ Year FE	0.08	0.25
ICC: NAICS2 _t		0.25
ICC: Industry	0.17	0.90
Number of Industries	20	91
Largest Industry Share	0.12	0.07
Industry Share HHI	0.07	0.03
Effective Sample Size	13.4	33.9

Table S3: Difference-in-Differences Estimates using NAICS-3 Sectors for Instrument Construction

	Mexican-Born			Other Foreign	Non-Mex LatAm
	2006–2010	2014–2018	All years	All years	All years
β^0 : Native-born geographic elasticity	0.060 (0.168)	0.405 (0.392)	0.072 (0.080)	0.072 (0.080)	0.072 (0.080)
β^T : Change in elasticity post-2012			0.319 (0.198)	0.319 (0.198)	0.319 (0.198)
β^G : Difference in immigrant elasticity	1.162** (0.498)		0.722*** (0.260)	-0.173 (0.222)	0.260 (0.365)
β^{GT} : Change in difference post-2012		-1.670 (1.078)	-1.235** (0.625)	0.464 (0.564)	-0.188 (0.907)
<i>N</i>	248	248	3224	3224	3172

Notes: 2SLS estimates of geographic elasticity by nativity bin following (2) corresponding to Table 1 estimated with Bartik instruments constructed from 3-digit NAICS codes. Columns 1 and 2: Elasticity among native-born and difference for Mexican-born in a single period. Columns 3, 4, and 5: elasticity for native-born, change post-2012, and difference with foreign-born. Regressions weighted by MSA population; robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.10.

B Main Results and Robustness

B.1 2SLS Elasticity Estimates

Table S4 presents 2SLS estimates of β from (1) independently by year and by nativity group. Figure S4 reproduces these results graphically. Table S5 reports pairwise comparisons of elasticity between nativity groups in each period. Regression results are generated by interacting β^G from (2) interacted with a full set of interval dummies

$$\dot{N}_{m,g,t} = \sum_{\tau} \beta^{\tau} \dot{L}_{m,g,t} \mathbf{1}\{t = \tau\} + \sum_{\tau} \beta^{G\tau} \dot{L}_{m,g,t} \mathbf{1}\{g = G, t = \tau\} + \alpha_{g,t} + \varepsilon_{m,g,t} \quad (8)$$

Column 1 corresponds to estimates presented in Figure 3, and the other columns shows results for every other pairwise comparison. The following subsections verify robustness across a number of alternate specifications.

[Table S4 about here.]

[Figure S4 about here.]

[Table S5 about here.]

B.2 Definition of Population

To compute changes in labor-force-eligible population \dot{N} , we restrict to respondents aged 18–64 not enrolled in school and not living in group quarters. Table S6 reproduces results from Table 1 computing \dot{N} using the full population to verify these selection criteria do not drive the results.

[Table S6 about here.]

B.3 Definition of Labor Market Shock

In our main specification, we define local employment $L_{m,g,t}$ in (3) using nativity-group-specific industry shares $r_{m,g,t}^k$ to allow for a heterogeneous response to local labor demand by nativity. However, this flexibility

confounds interpretation of 2SLS estimation because elasticity is mechanically computed as the reduced-form population response to the instrument rescaled by the first-stage employment response. In Table S7 We verify that results are not driven by time-varying differences between nativity groups in the strength of the first stage by redefining $L_{m,t}$ as a common labor market shock using common industry shares $r_{m,t}^k$. This adjustment forces the first-stage employment response in each period to be consistent across nativity groups.

[Table S7 about here.]

B.4 Cutoff Year

We quantify the change in elasticity over time using 2012 as a cutoff year, so that intervals up to 2008–2012 are considered early and 2009–2013 are considered later. In Table S8 we show results are not sensitive to the exact year used to split the period of study. Over a range of different cutoffs we observe a similar pattern of Mexican-born workers initially being more elastic than native-born workers, and falling to less-elastic in later years.

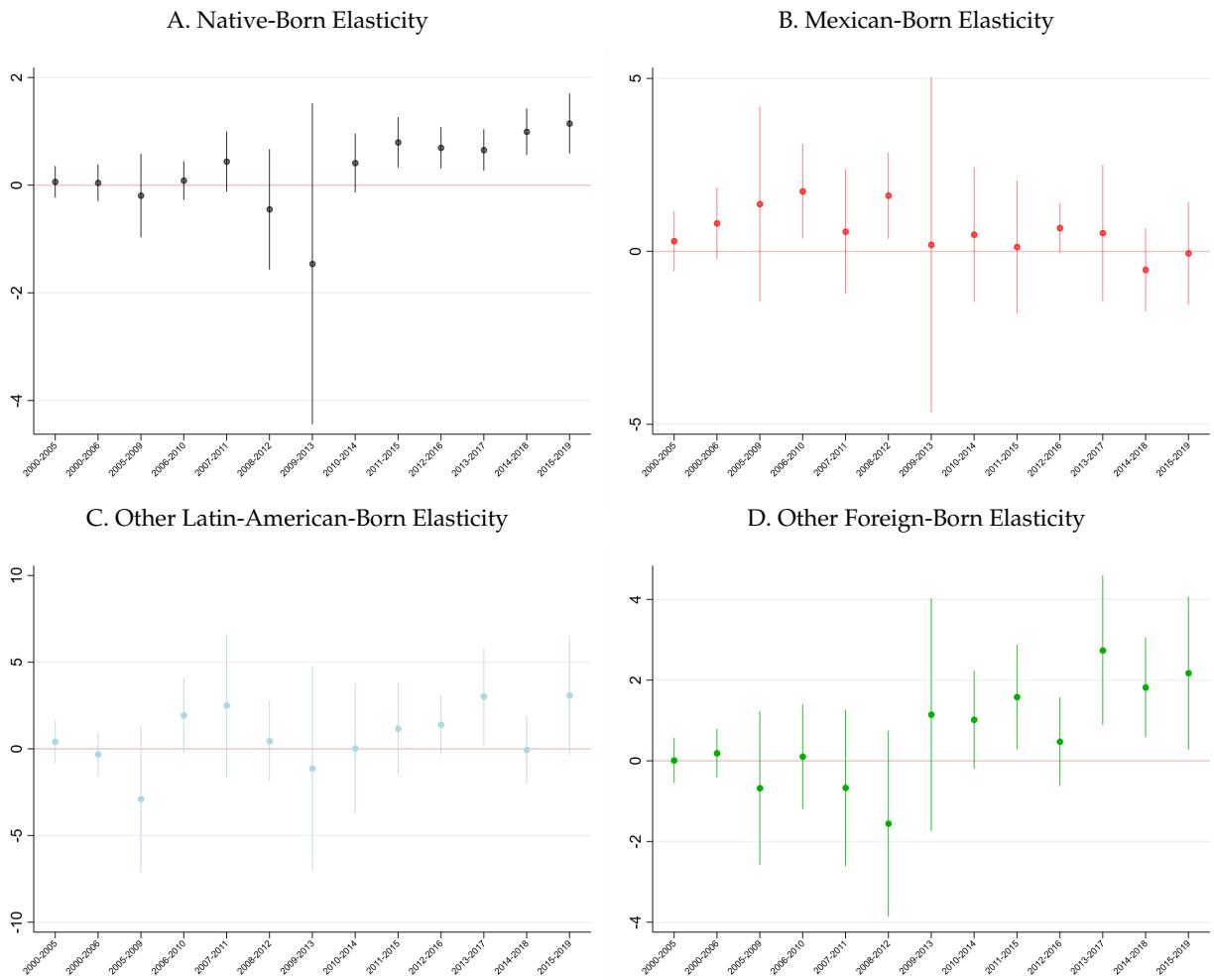
[Table S8 about here.]

B.5 Interval of Measurement

We present estimates of elasticity over four-year intervals following Cadena and Kovak (2016). In Table S9 we examine how sensitive results are to this choice of interval. The first three columns report elasticities over three-year intervals. Results are qualitatively similar but not as strong. Mobility is less stable over shorter intervals, leading to even more noise in estimation. The latter three columns report result for five-year intervals, which are consistent with our main results.

[Table S9 about here.]

Figure S4: Geographic Elasticity by Nativity and by Period



Notes: 2SLS estimates of geographic elasticity β according to (1) by nativity bin and period. Point estimates correspond to β following (1) estimated separately for each interval as reported in Table S4. Regressions weighted by MSA population. Error bars display 95% confidence intervals using robust standard errors.

Table S4: Geographic Elasticity by Nativity and by Period

	(1) Native	(2) Mexican	(3) Other Lat. Am.	(4) Other Foreign
Elasticity 2000–2005	0.063 (0.128)	0.109 (0.463)	0.217 (0.548)	-0.147 (0.336)
Elasticity 2000–2006	0.056 (0.153)	0.613 (0.491)	-0.392 (0.654)	0.115 (0.295)
Elasticity 2005–2009	-0.335 (0.595)	1.967 (1.425)	-1.673 (1.756)	0.032 (0.735)
Elasticity 2006–2010	-0.121 (0.299)	1.754*** (0.673)	1.537 (0.947)	-0.006 (0.636)
Elasticity 2007–2011	0.048 (0.346)	0.852 (0.789)	1.808 (1.842)	-0.944 (1.118)
Elasticity 2008–2012	-0.743 (0.594)	1.355** (0.599)	0.884 (1.077)	-2.117 (1.332)
Elasticity 2009–2013	-1.768 (1.549)	-0.339 (2.069)	-0.557 (2.736)	0.050 (1.024)
Elasticity 2010–2014	0.356 (0.253)	0.604 (0.885)	-0.345 (1.482)	0.765 (0.528)
Elasticity 2011–2015	0.682*** (0.205)	-0.026 (0.951)	1.832 (1.421)	1.518** (0.621)
Elasticity 2012–2016	0.751*** (0.157)	0.546* (0.331)	2.021*** (0.769)	0.929** (0.469)
Elasticity 2013–2017	0.732*** (0.173)	0.186 (0.841)	3.420** (1.341)	2.238** (0.869)
Elasticity 2014–2018	0.930*** (0.171)	-0.735 (0.635)	0.396 (0.878)	1.536*** (0.556)
Elasticity 2015–2019	1.017*** (0.234)	-0.231 (0.743)	1.706 (1.484)	1.990** (0.818)

Notes: Each column represents 2SLS estimates of geographic elasticity β following (1) with a single interval of data. Each row represents a different period. Regressions weighted by MSA population; robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.10.

Table S5: Difference in Elasticities between Nativity Groups by Period

Comparison:	(1) Mex vs Native	(2) Mex vs LatAm	(3) Mex vs Other	(4) LatAm vs Native	(5) LatAm vs Other	(6) Other vs Native
Difference 2000–2005	0.233 (0.468)	-0.119 (0.769)	0.284 (0.527)	0.351 (0.645)	0.403 (0.690)	-0.0519 (0.322)
Difference 2000–2006	0.768 (0.557)	1.128 (0.826)	0.623 (0.612)	-0.360 (0.659)	-0.504 (0.706)	0.145 (0.354)
Difference 2005–2009	1.560 (1.494)	4.254 (2.598)	2.044 (1.738)	-2.694 (2.198)	-2.210 (2.370)	-0.484 (1.049)
Difference 2006–2010	1.647** (0.718)	-0.199 (1.310)	1.629* (0.958)	1.846 (1.126)	1.828 (1.292)	0.0179 (0.685)
Difference 2007–2011	0.131 (0.963)	-1.928 (2.298)	1.239 (1.350)	2.059 (2.125)	3.168 (2.326)	-1.109 (1.028)
Difference 2008–2012	2.061** (0.855)	1.157 (1.336)	3.168** (1.338)	0.903 (1.305)	2.011 (1.662)	-1.107 (1.307)
Difference 2009–2013	1.650 (2.899)	1.318 (3.900)	-0.957 (2.873)	0.332 (3.382)	-2.275 (3.359)	2.606 (2.116)
Difference 2010–2014	0.0714 (1.029)	0.459 (2.171)	-0.535 (1.170)	-0.388 (1.952)	-0.994 (2.029)	0.606 (0.681)
Difference 2011–2015	-0.671 (1.014)	-1.033 (1.675)	-1.457 (1.186)	0.363 (1.376)	-0.424 (1.507)	0.787 (0.702)
Difference 2012–2016	-0.0206 (0.415)	-0.715 (0.952)	0.199 (0.670)	0.695 (0.901)	0.915 (1.043)	-0.220 (0.595)
Difference 2013–2017	-0.123 (1.022)	-2.490 (1.741)	-2.207 (1.380)	2.367* (1.437)	0.283 (1.710)	2.084** (0.967)
Difference 2014–2018	-1.528** (0.649)	-0.478 (1.179)	-2.355*** (0.877)	-1.050 (1.032)	-1.877 (1.189)	0.827 (0.668)
Difference 2015–2019	-1.203 (0.809)	-3.138* (1.905)	-2.232* (1.228)	1.935 (1.771)	0.907 (1.997)	1.029 (1.008)
Observations	3,224	3,172	3,224	3,172	3,172	3,224

Notes: 2SLS estimates of the difference in geographic elasticity between nativity groups $\beta^{G\tau}$ by period according to (8). Each column represents a different pairwise comparison. Regressions weighted by MSA population; robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.10.

Table S6: Robustness: Population Changes using All Respondents

Immigrant origin:	Mexican-Born			Other Lat. Am.	Other Foreign
	2006–2010	2014–2018	All years	All years	All years
β^0 : Native-born geographic elasticity	-0.121 (0.758)	0.930*** (0.171)	-0.026 (0.098)	-0.026 (0.098)	-0.026 (0.098)
β^T : Change in elasticity post-2012			0.617*** (0.130)	0.617*** (0.130)	0.617*** (0.130)
β^G : Difference in immigrant elasticity	1.875** (0.870)		0.854*** (0.289)	0.248 (0.362)	-0.140 (0.235)
β^{GT} : Change in difference post-2012		-1.664** (0.657)	-1.386*** (0.416)	0.572 (0.604)	0.889** (0.347)
Observations	248	248	3224	3184	3224

Notes: Test of robustness to defining population changes \hat{N} using full population of respondents. 2SLS estimates of geographic elasticity by nativity bin following (2) as in Table 1. Columns 1 and 2: Elasticity among native-born and difference for Mexican-born in a single period. Columns 3, 4, and 5: elasticity for native-born, change post-2012, and difference with foreign-born. Regressions weighted by MSA population; robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.10.

Table S7: Robustness: Common Labor Demand across Nativity Groups

Immigrant origin:	Mexican-Born			Other Lat. Am.	Other Foreign
	2006–2010	2014–2018	All years	All years	All years
β^0 : Native-born geographic elasticity	0.084 (0.732)	1.001*** (0.219)	0.048 (0.094)	0.048 (0.094)	0.048 (0.094)
β^T : Change in elasticity post-2012			0.512*** (0.129)	0.512*** (0.129)	0.512*** (0.129)
β^G : Difference in immigrant elasticity	2.869*** (1.036)		1.269*** (0.470)	0.335 (0.465)	-0.138 (0.251)
β^{GT} : Change in difference post-2012		-1.773* (0.936)	-1.546** (0.606)	0.169 (0.710)	0.975*** (0.367)
Observations	248	248	3224	3187	3224

Notes: Test of robustness to defining common local employment $\hat{L}_{g,t}$ across nativity groups. 2SLS estimates of geographic elasticity by nativity bin following (2) as in Table 1. Columns 1 and 2: Elasticity among native-born and difference for Mexican-born in a single period. Columns 3, 4, and 5: elasticity for native-born, change post-2012, and difference with foreign-born. Regressions weighted by MSA population; robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.10.

Table S8: Robustness: Common Labor Demand across Nativity Groups

Cutoff year:	2008	2009	2010	2011	2013	2014	2015
β^G : Initial difference in immigrant elasticity	0.771 (0.556)	2.636*** (0.539)	1.951*** (0.293)	2.051*** (0.275)	1.743*** (0.240)	0.804*** (0.192)	0.306* (0.168)
β^{GT} : Change in difference post cutoff	-1.652*** (0.576)	-3.469*** (0.559)	-2.585*** (0.339)	-2.719*** (0.327)	-0.973* (0.542)	0.026 (0.532)	0.581 (0.599)
Observations	3224	3224	3224	3224	3224	3224	3224

Notes: Test of robustness to alternate cutoff years T . 2SLS estimates of geographic elasticity by nativity bin following (2) as in Table 1, Column 3. Each column represents a different cutoff year. Regressions weighted by MSA population; robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.10.

Table S9: Robustness: Varying Interval of Measurement

Interval length:	3 Years			5 Years		
	2007–2010	2015–2018	All years	2005–2010	2013–2018	All years
β^0 : Native-born geographic elasticity	0.227 (0.769)	1.822* (0.987)	0.074 (0.141)	-0.170 (1.291)	0.904** (0.216)	-0.048 (0.191)
β^T : Change in elasticity post-2012				0.752** (0.194)		0.596*** (0.228)
β^G : Difference in immigrant elasticity	0.761 (0.868)		0.391 (0.517)	2.484* (1.448)		1.538*** (0.538)
β^{GT} : Change in difference post-2012		-3.252* (1.820)	-0.923 (0.666)		-1.403** (0.660)	-1.507** (0.618)
Observations	248	248	2728	248	248	2480

Notes: Test of robustness to length of interval over which changes are computed. 2SLS estimates of geographic elasticity by nativity bin following (2) as in first three columns of Table 1. Columns 1–3 report results from three-year intervals; Columns 4–6 report results from five-year intervals. First period remains fixed at 2000–2005 due to data availability. Regressions weighted by MSA population; robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.10.

C Migration Inflows and Outflows

We attempt to decompose immigrant mobility into its constituent components. The change in Mexican-born population in each MSA, omitting population aging and mortality, can be written as a function of international inflows, international outflows, and internal mobility.

$$N_{m,t} - N_{m,t-1} = I_{m,t}^{International} - O_{m,t}^{International} + I_{m,t}^{Domestic} - O_{m,t}^{Domestic} \quad (9)$$

Domestic flows between MSAs are measured in the ACS. Data on international arrivals comes from the *Matrículas Consulares de Alta Seguridad* (MCAS) database, a voluntary registry of Mexican-born individuals living in the U.S. maintained by the Mexican government and unconnected to documentation status.⁷ We use the annual number of new issuances aggregated to the MSA level as an annual measure of Mexican immigrant arrivals. International outflows are then constructed as the residual from (9).

We regress each component migration flow on the instrumented labor shock separately by year following (1). Results for this exercise are presented in Table S10, normalized so that positive coefficients represent population increases. Column 1 reproduces the net population elasticity,⁸ and each subsequent column reports the elasticity contributed by each component. Evaluation begins in 2006, the first year for which MCAS data is available.

We plot the relationship between net Mexican-born geographic elasticity and each constituent component in Figure S5 with best-fit lines. If anything, changes in elasticity are most strongly represented in international outflows and, to a lesser extent, domestic inflows. That is, the decline in elasticity is most associated with Mexican immigrants becoming less sensitive to economic conditions in the U.S. when returning to Mexico and to destination economic conditions when relocating within the U.S. However, this exercise is subject to high measurement error. In particular, computing international outflows from an MSA as a residual often produces negative values.

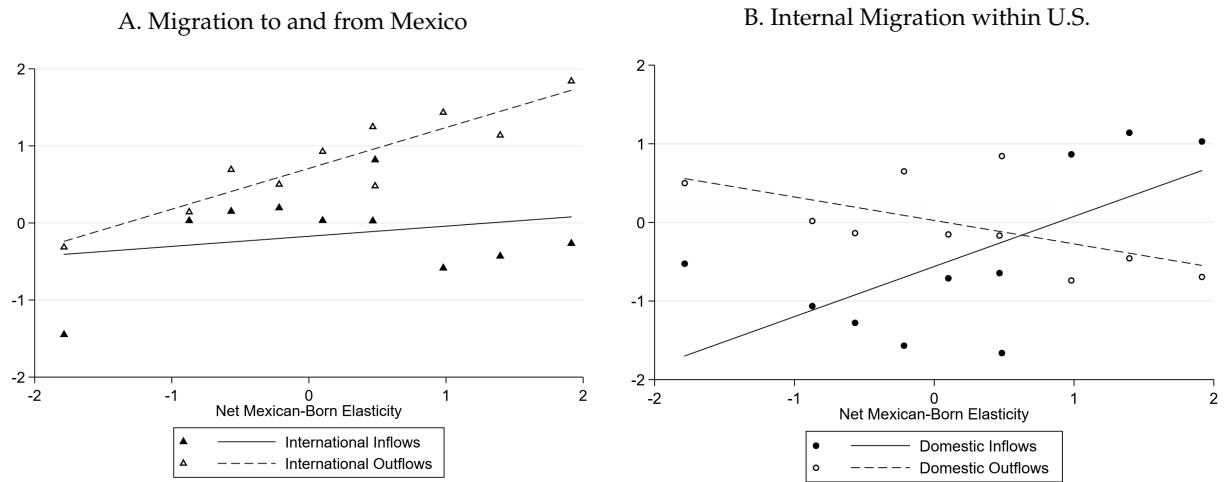
[Table S10 about here.]

⁷More details on this database, particularly on its validity as a measure of the inflow of undocumented migrants, can be found in Caballero et al. (2018).

⁸Note that coefficients differ slightly from those in S4 because we use percent changes rather than log differences as the outcome \hat{N} . This allows for direct comparison across component flows.

[Figure S5 about here.]

Figure S5: Constituent Components of Mexican-Born Geographic Elasticity



Notes: Coefficients from Columns 2–5 of Table S10 plotted against net elasticity from Column 1, with best-fit lines.

Table S10: Decomposition of Inflows and Outflows

	(1) Net Elast.	(2) $I^{International}$	(3) $I^{Domestic}$	(4) $O^{Domestic}$	(5) $\widehat{O}^{International}$
$\dot{L}_{2006-2010}^{Mex}$	1.914** (0.824)	-0.265 (0.389)	1.031 (1.048)	-0.692 (0.602)	1.840*** (0.632)
$\dot{L}_{2007-2011}^{Mex}$	0.980 (0.885)	-0.585 (0.458)	0.867 (1.060)	-0.736 (0.686)	1.434 (0.885)
$\dot{L}_{2008-2012}^{Mex}$	1.395** (0.663)	-0.430 (0.371)	1.142 (1.073)	-0.455 (0.520)	1.138* (0.673)
$\dot{L}_{2009-2013}^{Mex}$	-1.786 (2.751)	-1.449 (1.637)	-0.524 (2.542)	0.501 (1.279)	-0.314 (3.006)
$\dot{L}_{2010-2014}^{Mex}$	0.483 (1.033)	0.819* (0.491)	-1.660 (1.289)	0.845 (0.589)	0.479 (1.548)
$\dot{L}_{2011-2015}^{Mex}$	-0.217 (1.013)	0.196 (0.352)	-1.566 (1.086)	0.651* (0.370)	0.501 (1.356)
$\dot{L}_{2012-2016}^{Mex}$	0.466 (0.313)	0.027 (0.180)	-0.643 (0.620)	-0.166 (0.235)	1.248* (0.743)
$\dot{L}_{2013-2017}^{Mex}$	0.100 (0.815)	0.032 (0.253)	-0.709 (0.909)	-0.151 (0.323)	0.927 (1.359)
$\dot{L}_{2014-2018}^{Mex}$	-0.873 (0.687)	0.029 (0.189)	-1.063 (1.104)	0.019 (0.258)	0.142 (0.892)
$\dot{L}_{2015-2019}^{Mex}$	-0.567 (0.897)	0.151 (0.214)	-1.276 (1.095)	-0.135 (0.371)	0.692 (1.429)

Notes: Each column reports 2SLS estimates of geographic elasticity β following (1) with a single interval of data. Column 1 represents the net elasticity, and Columns 2–5 represent international inflows, domestic inflows, domestic outflows, and international outflows, respectively. Each row represents a separate regression in a different period. Coefficients in Column 1 differ slightly from those in S4 because regressions use percent changes rather than log differences as the outcome \dot{N} . Regressions weighted by MSA population; robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.10

D Internal Mobility and Anti-Immigrant Sentiment

We explore the importance of changes in domestic policy and sentiment toward Mexican immigrants using cross-sectional variation in the prevalence of anti-immigration policy and politics. Estimation extends (2) to

$$\begin{aligned}\dot{N}_{m,g,t} = & \beta^0 \dot{L}_{m,g,t} + \beta^T \dot{L}_{m,g,t} \mathbf{1}\{t \geq T\} + \beta^G \dot{L}_{m,g,t} \mathbf{1}\{g = G\} + \beta^{GS} \dot{L}_{m,g,t} S_m \mathbf{1}\{g = G\} \\ & + \beta^{GT} \dot{L}_{m,g,t} \mathbf{1}\{g = G, t \geq T\} + \beta^{GTS} \dot{L}_{m,g,t} S_m \mathbf{1}\{g = G, t \geq T\} + \alpha_{g,t} + \varepsilon_{m,g,t}\end{aligned}\quad (10)$$

where S_m represents an MSA-specific measure of sentiment toward Mexican immigrants. The coefficient on the interaction term β^{GS} quantifies how immigrants' geographic elasticity differed from native-born elasticity in MSAs with high anti-immigrant sentiment in the first half of our data, and the coefficient β^{GTS} describes the change in this difference over time.

For this exercise we consider two measures of anti-immigrant sentiment: vote share for Donald Trump in the 2016 presidential election and early adoption of the Secure Communities immigration enforcement policy. Secure Communities was announced in 2008 and reached nation-wide implementation by the end of 2012. We construct MSA-level variables for the share of the population within the MSA exposed to the program by 2009, 2010, and 2011 based on county-level adoption. Although these measures enter (10) as time-invariant characteristics, we interpret them in the context of increasing polarization in the U.S. political landscape as proxies for growth in hostility toward immigrants over time.

Regression estimates of (10) are presented in Table S11. The first column reproduces difference-in-differences results from Column 3 of Table 1, and the remaining four columns add interaction terms with each proxy measure of sentiment. Across all four measures, results indicate that both the initial gap in Mexican immigrant elasticity and the subsequent reversal are present across all MSAs regardless of sentiment toward migrants. If anything, anti-immigrant sentiment attenuates the post-2013 decline in relative elasticity. It should be noted that these estimates rely on cross-sectional variation; we cannot rule out that changes in the political climate over time contributed to the nation-wide decline in Mexican immigrant elasticity.

[Table S11 about here.]

Table S11: Geographic Elasticity Differences Interacted with Local Anti-Immigrant Sentiment

Measure of Sentiment:	Trump		Secure Communities by:		
	Baseline	Vote Share	2009	2010	2011
β^0 : Native-born geographic elasticity	0.048 (0.093)	0.048 (0.093)	0.048 (0.093)	0.048 (0.093)	0.048 (0.093)
β^T : Change in elasticity post-2012	0.585*** (0.138)	0.585*** (0.138)	0.585** (0.138)	0.585*** (0.138)	0.585*** (0.138)
β^G : Difference in immigrant elasticity	0.845*** (0.297)	1.021 (0.844)	0.874** (0.364)	1.991*** (0.726)	2.860** (1.281)
β^{GS} : Diff. in immigrant elasticity $\times S_m$		-0.361 (1.496)	-0.073 (0.418)	-1.324** (0.613)	-2.016* (1.106)
β^{GT} : Change in difference post-2012	-1.240*** (0.444)	-2.213** (0.974)	-1.611*** (0.497)	-2.925*** (0.838)	-3.678*** (1.357)
β^{GTS} : Change in diff. post-2012 $\times S_m$		2.159 (1.687)	0.537 (0.454)	1.776*** (0.648)	2.403** (1.145)
Mean S_m		.479	.205	.744	.903
Var. S_m		.016	.128	.149	.061
N	3224	3224	3224	3224	3224

Notes: 2SLS estimates of geographic elasticity by nativity bin interacted with anti-immigrant sentiment following (10). Column 1 replicates Column 3 of Table 1. Column 2: S_m is MSA vote share for Donald Trump in 2016 presidential election. Columns 3–5: S_m is fraction of MSA population exposed to Secure Communities policy in 2009, 2010, and 2011 respectively, based on county-level adoption. Regressions weighted by MSA population; robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.10.

E Detailed Estimates on Compositional Changes

Each panel of Figure 4 presents counterfactual elasticity estimates according to (7) for different sub-group classifications. Figures S6, S7, S8, and S9 plot each classification separately. In Tables S12, S13, S14, and S15 we present corresponding regression results estimating (2) comparing true native-born population changes to counterfactual population changes computed at the MSA level as the average of sub-group specific changes reweighted by counterfactual subgroup shares. That is, regressions use the counterfactual outcome

$$\tilde{N}_{m,g,t}^{m,g',t'} = \log \sum_j s_{g',m,t'}^j \frac{N_{m,g,t}^j}{N_{m,g,t-1}^j}$$

for non-native population changes.

[Figure S6 about here.]

[Table S12 about here.]

[Figure S7 about here.]

[Table S13 about here.]

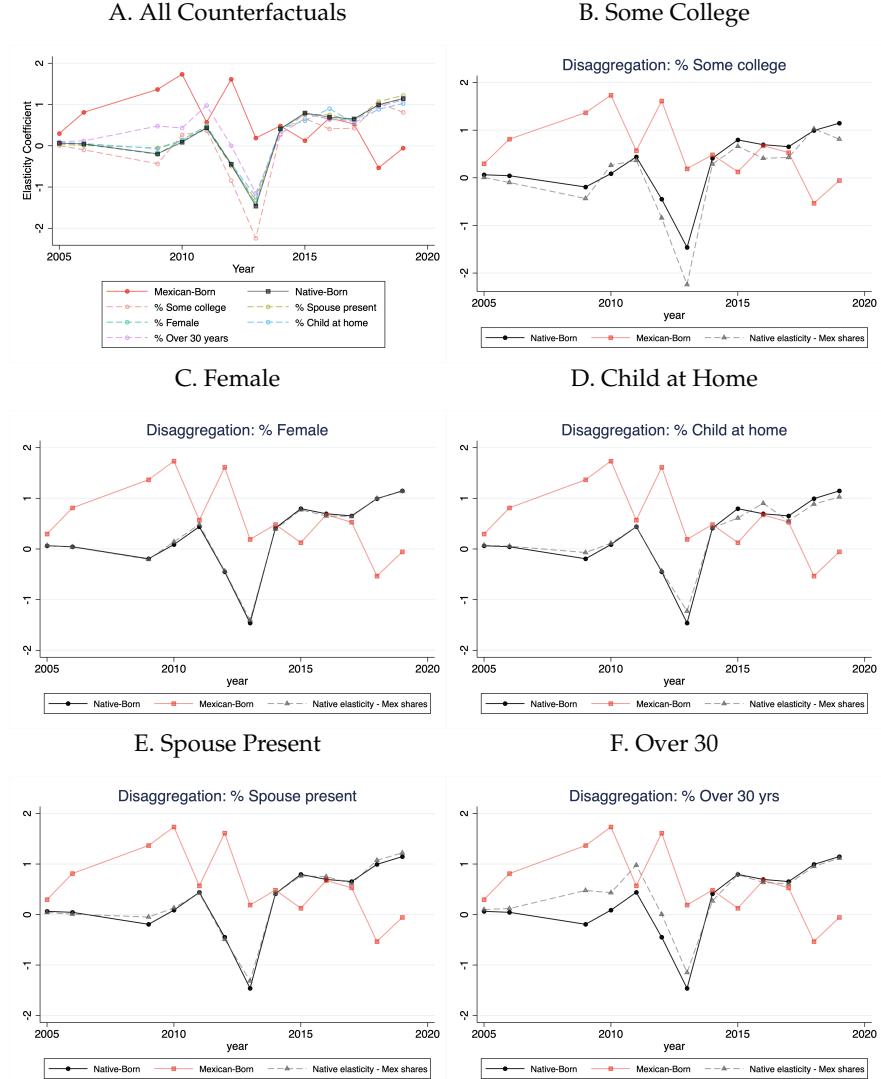
[Figure S8 about here.]

[Table S14 about here.]

[Figure S9 about here.]

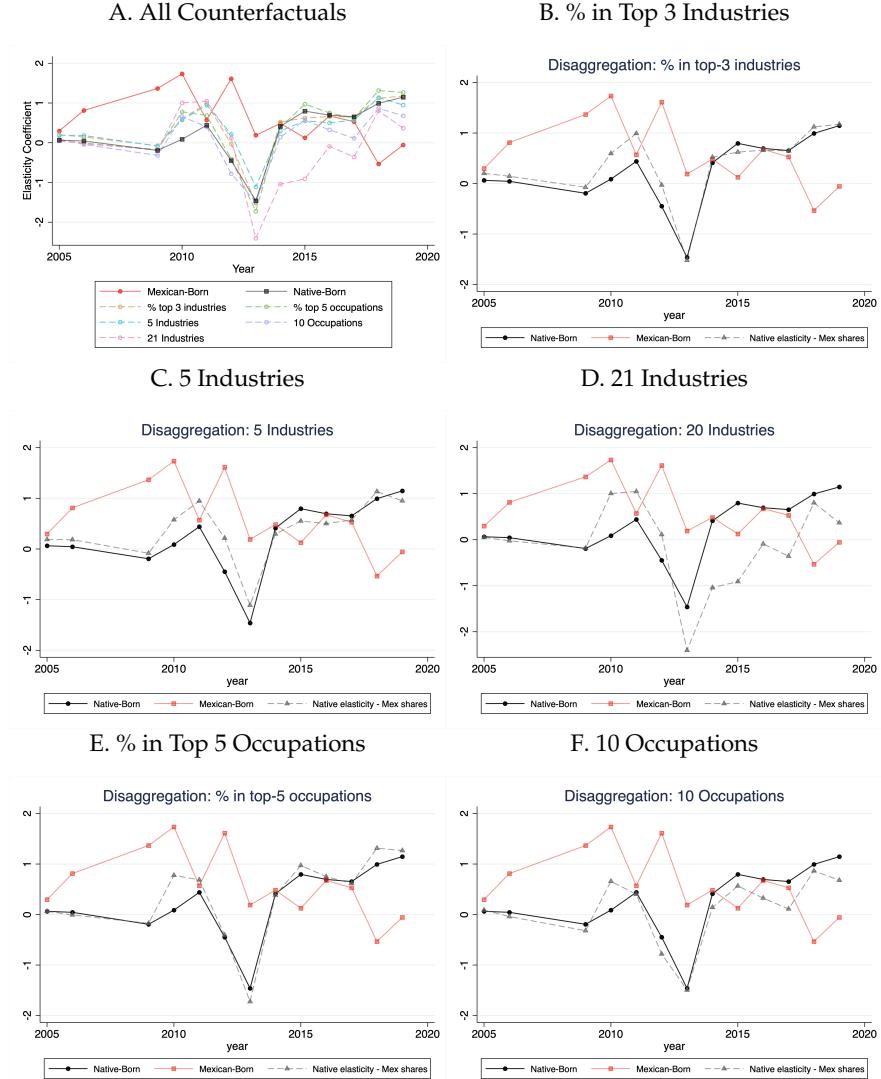
[Table S15 about here.]

Figure S6: Counterfactual Native-Born Elasticities with Mexican-Born Shares



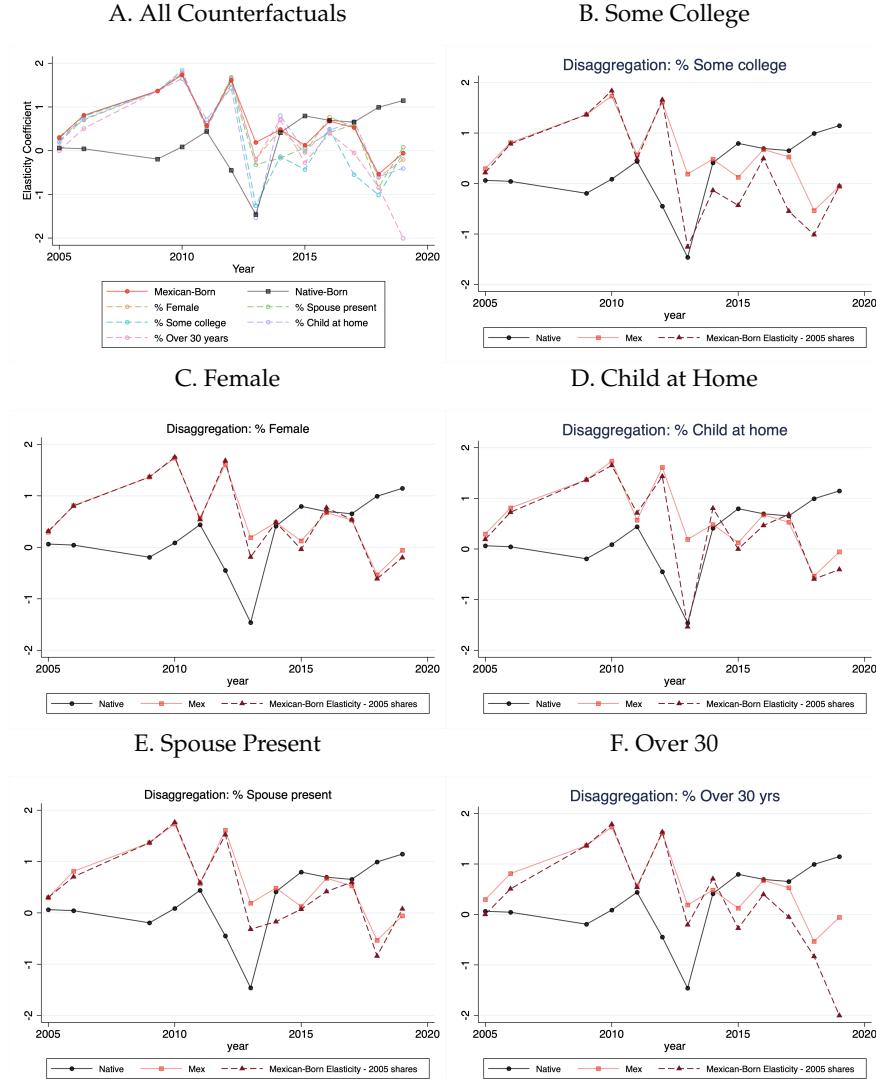
Notes: Actual and counterfactual geographic labor supply elasticities. Observed elasticities for native-born and Mexican-born workers according to (1) plotted in black and red. Dotted lines simulate counterfactual elasticities according to (7). Panel A reproduces Panel A of Figure 4; remaining panels plot each counterfactual independently.

Figure S7: Counterfactual Native-Born Elasticities with Mexican-Born Shares



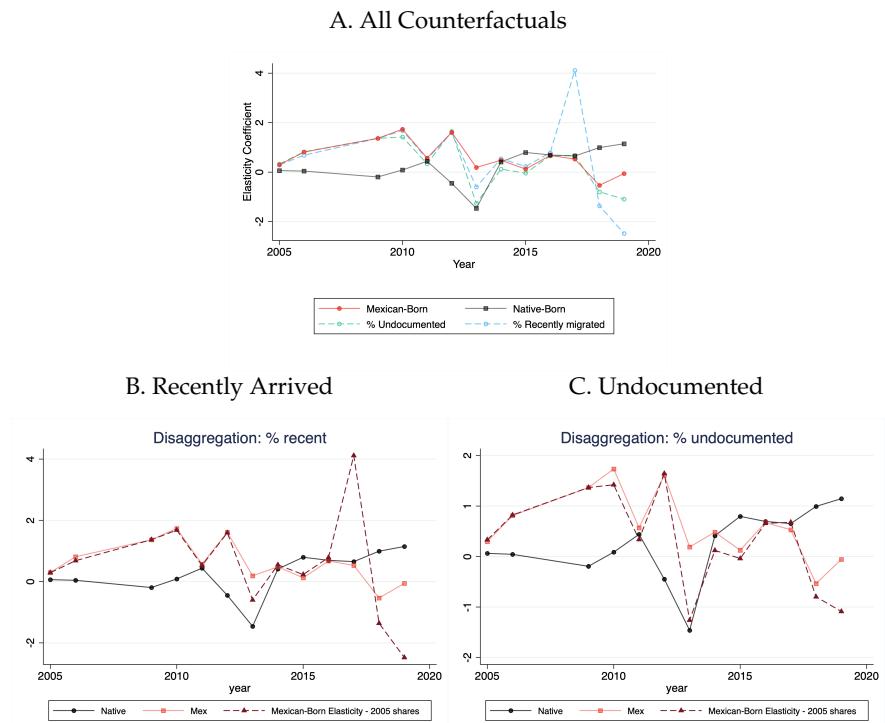
Notes: Actual and counterfactual geographic labor supply elasticities. Observed elasticities for native-born and Mexican-born workers according to (1) plotted in black and red. Dotted lines simulate counterfactual elasticities according to (7). Panel A reproduces Panel B of Figure 4; remaining panels plot each counterfactual independently.

Figure S8: Counterfactual Mexican-Born Elasticities with 2005 Shares



Notes: Actual and counterfactual geographic labor supply elasticities. Observed elasticities for native-born and Mexican-born workers according to (1) plotted in black and red. Dotted lines simulate counterfactual elasticities according to (7). Panel A reproduces Panel C of Figure 4; remaining panels plot each counterfactual independently.

Figure S9: Counterfactual Mexican-Born Elasticities with 2005 Shares



Notes: Actual and counterfactual geographic labor supply elasticities. Observed elasticities for native-born and Mexican-born workers according to (1) plotted in black and red. Dotted lines simulate counterfactual elasticities according to (7). Panel A reproduces Panel D of Figure 4; remaining panels plot each counterfactual independently. Recently arrived defined as arriving within prior five years.

Table S12: Counterfactual Native-Born Elasticities with Mexican-Born Shares

Comparison Group:	Mexican-born	Native-born counterfactual, Mexican-born shares:				
		Some college	Female	Child at home	Spouse present	Over 30
β^0 : Native-born geographic elasticity	0.048 (0.093)	0.048 (0.093)	0.048 (0.093)	0.048 (0.093)	0.048 (0.093)	0.048 (0.093)
β^T : Change in elasticity post-2012	0.585*** (0.138)	0.585*** (0.138)	0.585*** (0.138)	0.585*** (0.138)	0.585*** (0.138)	0.585*** (0.138)
β^G : Difference in immigrant elasticity	0.845*** (0.297)	-0.088 (0.166)	0.010 (0.131)	0.017 (0.126)	-0.011 (0.131)	0.181 (0.145)
β^{GT} : Change in difference post-2012	-1.240*** (0.444)	-0.121 (0.244)	-0.024 (0.195)	-0.039 (0.195)	0.039 (0.195)	-0.215 (0.203)
Observations	3224	3224	3224	3224	3224	3224

Notes: 2SLS estimates comparing geographic elasticities according to (2). All regressions use true native-born population changes. Column 1 compares to true Mexican-born population changes and reproduces Column 3 of Table 1. Columns 2–6 compare to counterfactual native-born population changes using Mexican-born sub-group shares. Regressions weighted by MSA population; robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.10.

Table S13: Counterfactual Native-Born Elasticities with Mexican-Born Shares

Comparison Group:	Mexican-born	Native-born counterfactual, Mexican-born shares:				
		Top 3 inds.	5 inds.	21 inds.	Top 5 occs.	10 occs.
β^0 : Native-born geographic elasticity	0.048 (0.093)	0.048 (0.093)	0.048 (0.093)	0.048 (0.093)	0.048 (0.093)	0.048 (0.093)
β^T : Change in elasticity post-2012	0.585*** (0.138)	0.585*** (0.138)	0.585*** (0.138)	0.585*** (0.138)	0.585*** (0.138)	0.585*** (0.138)
β^G : Difference in immigrant elasticity	0.845*** (0.297)	0.214 (0.136)	0.229 (0.143)	0.157 (0.166)	0.087 (0.137)	0.019 (0.156)
β^{GT} : Change in difference post-2012	-1.240*** (0.444)	-0.215 (0.201)	-0.317 (0.210)	-1.146*** (0.297)	-0.009 (0.214)	-0.334 (0.233)
Observations	3224	3224	3224	3224	3224	3224

Notes: 2SLS estimates comparing geographic elasticities according to (2). All regressions use true native-born population changes. Column 1 compares to true Mexican-born population changes and reproduces Column 3 of Table 1. Columns 2–6 compare to counterfactual native-born population changes using Mexican-born sub-group shares. Regressions weighted by MSA population; robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.10.

Table S14: Counterfactual Mexican-Born Elasticities with 2005 Shares

Comparison Group:	Mexican-born	Mexican-born counterfactual, 2005 shares:				
		Some college	Female	Child at home	Spouse present	Over 30
β^0 : Native-born geographic elasticity	0.048 (0.093)	0.048 (0.093)	0.048 (0.093)	0.048 (0.093)	0.048 (0.093)	0.048 (0.093)
β^T : Change in elasticity post-2012	0.585*** (0.138)	0.585*** (0.138)	0.585*** (0.138)	0.585*** (0.138)	0.585*** (0.138)	0.585*** (0.138)
β^G : Difference in immigrant elasticity	0.845*** (0.297)	0.825*** (0.300)	0.852*** (0.302)	0.775*** (0.301)	0.810*** (0.307)	0.674** (0.298)
β^{GT} : Change in difference post-2012	-1.240*** (0.444)	-1.735*** (0.454)	-1.294*** (0.454)	-1.331*** (0.467)	-1.397*** (0.465)	-1.573*** (0.481)
Observations	3224	3224	3224	3224	3224	3224

Notes: 2SLS estimates comparing geographic elasticities according to (2). All regressions use true native-born population changes. Column 1 compares to true Mexican-born population changes and reproduces Column 3 of Table 1. Columns 2–6 compare to counterfactual Mexican-born population changes using 2005 sub-group shares. Regressions weighted by MSA population; robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.10.

Table S15: Counterfactual Mexican-Born Elasticities with 2005 Shares

Comparison Group:	Mexican-born	Mexican-born counterfactual, 2005 shares:	
		Recently Arrived	Undocumented
β^0 : Native-born geographic elasticity	0.048 (0.093)	0.048 (0.093)	0.048 (0.093)
β^T : Change in elasticity post-2012	0.585*** (0.138)	0.585*** (0.138)	0.585*** (0.138)
β^G : Difference in immigrant elasticity	0.845*** (0.297)	0.789** (0.321)	0.790*** (0.305)
β^{GT} : Change in difference post-2012	-1.240*** (0.444)	-1.048 (0.680)	-1.474*** (0.479)
Observations	3224	3224	3224

Notes: 2SLS estimates comparing geographic elasticities according to (2). All regressions use true native-born population changes. Column 1 compares to true Mexican-born population changes and reproduces Column 3 of Table 1. Columns 2–3 compare to counterfactual Mexican-born population changes using 2005 sub-group shares. Recently arrived defined as arriving within prior five years. Regressions weighted by MSA population; robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.10.