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Economic Assimilation of Mexicans and Central Americans in the United States[1]

Abstract

Using United States Census data between 1970 and 2017, we analyze the economic assimilation of subsequent arrival cohorts of Mexicans and Central Americans by comparing their earnings and employment probability to those of natives with similar age and education. We find that, on average, these immigrants started with an earnings gap of 40–45% and eliminated half of it within 20 years of arrival. Recent cohorts that arrived after 1995 performed better than earlier cohorts in that they had smaller initial earnings gaps and faster convergence. Additionally, the most recent cohorts entered the United States without an employment rate disadvantage, and they surpassed natives within 10 years. We also find that Mexicans and Central Americans working in the construction sector and those living in nonenclave and urban areas had faster earnings convergence than the others.

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1 Introduction

The integration of immigrants in their host country is a multidimensional and complex process. The economic aspect of this process is often assessed by focusing on how immigrants' incomes and employment statuses compare to those of similar natives. These metrics are important. On the one hand, they affect the material and psychological well-being of immigrants, and they can affect assimilation in other aspects of life, such as political attitudes and civic engagement. Moreover, the gains from migration are larger if immigrants achieve earnings comparable to those of natives (Clemens et al., 2016). On the other hand, the economic success of immigrants contributes to more-open and positive attitudes of natives toward immigration (Alesina et al., 2018).

The United States has historically been a place where immigrants, attracted by economic opportunities, have been able to succeed economically even when starting at a disadvantage (Chiswick, 1978). While differences among national groups exist and are large, both in terms of the initial earnings gaps and convergence rates, the overall narrative is that immigrants who arrived in the United States before the 1980s generally achieved convergence to the economic status of natives. Similarly, the evidence on earlier immigrants is that they assimilated economically and, when compared to similar natives, those who stayed in the United States did not have a significant initial earnings gap (Abramitsky et al., 2014).

Some studies, however, since the work of Borjas (1985), have pointed out that the recent history of immigrant assimilation has changed. These studies find a worsening in the initial earnings gap for immigrants who arrived in the 1980s and 1990s, which appears to have put this assimilation at risk. More recently, Borjas (2015) argues that not just the initial gap, but the rate of economic assimilation too, measured by the average earnings convergence of immigrants, has been declining for the cohorts that arrived in the 1980s and 1990s. These papers paint a picture of a progressive increase in the initial gap and a decline in the "catching up" of recent immigrants relative to natives. This finding is a worrying sign because it implies that immigrants arrive with a larger initial disadvantage and do not make up for it.

As groups of immigrants from different origins are present in very different proportions, depending on the cohort of arrival, a changing earnings gap and the trajectory of the average immigrant over time can be caused by a composition effect. Borjas (2015) has shown that this is partly the case. As migrants of different nationalities have different education levels, age, and initial skills, the changing composition of subsequent cohorts may give the impression of a changing earnings gap and average convergence. A situation in which the initial gap and convergence are stable over time for each national group but where the immigrant composition has changed over time in terms of place of origin is very different from a scenario in which all immigrants are increasingly lagging behind at arrival and in their assimilation toward the economic status of natives. The first scenario implies stable levels of assimilation for each group even if the composition of immigrants is changing. The second scenario would imply a decrease in assimilation and could mean that recent immigrants have faced more difficulties, discrimination, or barriers to participation in the labor market, which would call for an effort to identify the causes of such deterioration.

In this paper, we focus on Mexicans and Central Americans and update the existing literature on assimilation to include very recent cohorts not yet analyzed in the literature. There

are three main reasons why it is important to focus on this group of immigrants and to closely examine their economic integration.

First, while not identical, Mexican and Central American immigrants are similar to each other in terms of their demographics, especially with respect to educational attainment, labor market specialization, and income. An authoritative report on the integration of immigrants by the National Academy of Sciences, Engineering, and Medicine (NASEM; see NASEM, 2015, Chapter 6) noticed strong similarities in terms of schooling and share of undocumented immigrants between Mexicans and Central Americans.[2]

Second, they represent the most economically disadvantaged group of immigrants in the United States. Different from many other groups of immigrants, their average schooling is significantly lower than that of natives. Previous studies have identified Mexicans and Central Americans as encompassing the most problematic cases in terms of integration and economic performance (see NASEM, 2015, Chapter 6). Hence, improvement in their ability to integrate would also imply a reduction in inequality and poverty in the United States.

Third, Mexico and Central America comprise a relevant geographic region of origin because immigrants from this region constitute an extremely large share of total immigrants. In fact, this region of the world has the largest representation among US immigrants, larger than Southeast Asia, Europe, or Africa.[3] This group has also contributed substantially to the inflow of immigrants in each decade from 1980 to 2020. For these reasons, the documentation of their recent labor and income dynamics is important in its own right, and it will open a window through which we can view the economic integration of the less-educated, more-disadvantaged, and vulnerable immigrant populations.

In this study, we follow the labor market assimilation of different arrival cohorts over time, starting with the cohort that arrived in 1965–1969 and ending with the one that arrived in 2005–2011. First, we contribute to the literature by documenting whether these immigrants, who are usually characterized as having low educational attainment and being employed in manual-intensive, low-paying jobs, have performed poorly in the labor market by examining how their labor market performance compares to the performance of *natives of the same age and then of natives of the same age and education*. This analysis allows us to examine whether the economic integration of this group of immigrants has slowed/worsened over time.

Our second contribution includes an analysis of immigrant integration in terms of their employment probability. Mexicans and Central Americans have been employed in many low-skilled jobs, and previous studies indicate that immigrants from this region work at high rates, usually higher than natives (e.g., Blau and Kahn, 2007; NASEM, 2015; Orrenius and Zavodny, 2018). Rarely, however, has the employment probability been the focus of analysis in studies that examine the convergence of different cohorts of immigrants over time. We show that recent Mexican and Central American immigrants have outperformed their native counterparts in terms of the employment rate within 10 years of arrival.

2 In our data, considering workers between 25 years and 64 years of age, the percentage of high school dropouts is very similar between Mexicans (49%) and Central Americans (47%), the percentage of self-employed is similar (13% and 14%, respectively), and also the percentage of females is similar (36% and 39%, respectively). These two groups stand out among all immigrants as being less educated, working in low-paid jobs, and comprising mainly males.

3 In our data, about 36% of adult working immigrants as of 2017 were Mexicans and Central Americans and, together, they represented about 5.4% of the US population between 25 and 64 years of age, which is the group that we analyze in this paper.

The third contribution is a descriptive, but informative, analysis that investigates how sector, location, and skill level are associated with the initial economic gaps and subsequent convergence.

There are also limitations to our analysis. First, we condition our data samples on male workers. We focus on men in order to maintain consistency with the existing literature (e.g., Borjas, 1985, 2015; Villareal and Tamborini, 2018), which is justified by the need to focus on individuals whose working history is more continuous and representative of the main breadwinners in the immigrant family (Blau and Kahn, 2007). Mexican and Central American women have a much lower employment rate than men, and their role and presence in the working population have changed over time. By focusing on men, we obviate the need to examine issues related to gender as they pertain to the assimilation of women in the labor market. Second, this paper focuses only on the economic integration of the first generation of immigrants, albeit over time. Several studies (such as those by Duncan and Trejo, 2011a, b, 2015), which have focused on Mexicans and Mexican Americans, compare the economic outcomes of the first, second, and third generations. While those studies are important and complement this one, the evidence of a lower starting point in terms of earnings for the first generation suggests that a more detailed examination of the economic assimilation of this group is particularly relevant. Finally, we do not conduct any causal analyses. We do, however, investigate whether the sector of employment, the location, and the local economic environment are related to the initial gaps and assimilation rates of these immigrants. We also discuss the potential role of changing composition, language proficiency, legal status, and the role of recessions in the assimilation of new cohorts of Mexicans and Central Americans. While certainly not conclusive, this more-detailed analysis is informative and useful.

Our analysis reveals four main findings. First, Mexicans and Central Americans have had an earnings gap relative to similar natives of around 40% upon arrival, and only cut it in half in the first 2–3 decades, without much progress after that.

Second, we find that both the initial gap and the speed of convergence have not worsened for recent cohorts of arrival. In fact, the most recent cohorts that arrived in 1995–99 and 2005–11 have fared quite well relative to similar natives, both in terms of the initial gaps and in convergence. However, given that natives with low levels of education and experience have done relatively poorly in US labor markets, and because Mexicans and Central Americans tend to be poorly educated, new immigrants' earnings have not performed very strongly overall, only in comparison with similar natives.

Third, when looking at the employment probability, the picture is more positive. Mexicans and Central Americans have had almost no employment gap at arrival. Furthermore, over time, they have managed to outperform natives in terms of employment both relative to the average US native and, even more so, relative to US natives with similar schooling. Moreover, the rate at which recent cohorts have assimilated in terms of the employment rate has been much higher than previous cohorts. This superior performance of low-skilled immigrants with respect to employment distinguishes the United States from Europe and most other countries, where the reverse is true (see Battisti et al., 2018).

Finally, when decomposing Mexicans and Central Americans by their sector of employment, we find that the initial gaps are smaller and the assimilation faster for those in the construction sector, while their performance is the worst in the agricultural sector. We also

find a somewhat smaller gap and faster assimilation in urban (as opposed to rural) areas. By examining the evolution of observable characteristics of the recent-arrival cohorts, especially the 1995–99 and 2005–11 cohorts, they appear to be comparable to earlier cohorts in terms of the share of Central Americans and their English language ability. Although they have a slightly higher education level and larger share of nonwhites, these differences do not appear particularly large and seem unlikely to be the primary drivers of the improved performance of these more-recent cohorts. Furthermore, these recent cohorts are composed of a larger share of undocumented immigrants and noncitizens.[4] Both of these characteristics are associated with penalties in terms of wage and employment. Hence, our results indicate improved performance in spite of this disadvantage.

Our results, which focus on Mexicans and Central Americans, present a more-positive outlook than what is shown by Borjas (2015). The aggregate impression of worse initial gaps and slower convergence of the more-recent cohorts shown in that paper could be partly an artifact of the changing composition of immigrants. Furthermore, that analysis does not account for the more-recent cohorts that arrived in the 1990s and the 2000s, which seem to have performed particularly well despite the Great Recession. The overall message of our analysis is more hopeful, yet qualified. The Mexicans and Central Americas who have arrived in the past 15 years have started out in a better position, and they show stronger convergence rates relative to previous cohorts. The caveat is that, as most of them only have a high school education or less, earnings convergence toward that of similar natives is not necessarily good news because low-educated workers have been lagging behind in terms of earnings over the past few decades. Nevertheless, this immigrant group has done well in terms of employment probability, outperforming natives within a decade of arrival.

The remainder of the paper develops as follows. In Section 2, we relate this paper and its contributions to the existing literature on the assimilation of immigrants. In Section 3, we introduce the data and some aggregate statistics. In Section 4, we present the empirical models and discuss the interpretation of the key coefficient estimates. Section 5 describes the main results on earnings and employment rate assimilation; Section 6 describes the differences in assimilation by sector of employment and location and discusses the role of composition, language proficiency, and legal status; and Section 7 provides some concluding remarks.

2 Economic Assimilation of Immigrants in the Literature

The literature on the assimilation of immigrants in the United States is large and interdisciplinary. As summarized in the authoritative report by NASEM (2015), researchers have studied many of its aspects, ranging from assimilation in terms of politics and civics (see NASEM, 2015, Chapter 4), location (see NASEM, 2015, Chapter 5), educational achievement (see NASEM, 2015, Chapter 6), family structure (see NASEM, 2015, Chapter 8), and health (see NASEM, 2015, Chapter 9), to more-specific economic outcomes, such as earnings, employment, and occupation. Much of the existing literature has examined the first, second, and third generations of immigrants (e.g., Trejo, 2003; Duncan and Trejo, 2015; Abramitsky et al., 2021),

4 Our calculations on Integrated Public Use Microdata Series (IPUMS) data show that while the cohort of Mexicans and Central Americans that arrived in 1965–70 included 77% of noncitizens, the one that arrived in 2005–2011 included 97% noncitizens.

covering assimilation over the very long run. Our study focuses on the specific economic aspect of assimilation measured by earnings and employment probability and considers only the first generation of immigrants, following them over time since arrival.

More directly related to this type of analysis, and hence to our contribution, is the seminal work of George Borjas (1985), who showed that in order to analyze the earnings convergence of immigrants, one has to follow a cohort of arrival over time and differentiate across arrival cohorts. The economic literature has followed such an approach. This approach is a significant improvement over the cross-sectional analysis of immigrants (first explored by Chiswick, 1978), which compares different groups who have been in the country for different periods of time and confounds changes in the initial gaps and changes in assimilation rates across cohorts.

Even the cohort analysis, however, must be considered with caution. The composition of subsequent cohorts of immigrants in the United States has been quite different in terms of origin and education, their initial earnings gaps have changed, and the average earnings convergence may have varied over time due to compositional changes. Typically, this literature looks at the aggregate set of immigrants and compares it to the average set of natives. If the composition of immigrants and the performance of different groups of natives change over time, wage dynamics relative to all workers of a certain skill group can be confounded by changes in assimilation rates. Additionally, as the cohort approach does not use longitudinal data, changes in the cohort composition over time due to differential attrition from return migration can generate stronger "cohort" convergence relative to the individual convergence of immigrants (see Lubotsky, 2007; Abramitsky et al., 2014).

Only a few studies have used longitudinal data to follow recent individual immigrants in terms of their assimilation. Using data from the Survey of Income and Program Participation (SIPP), which is linked to tax records, Villareal and Tamborini (2018) have shown that recent arrival cohorts have not performed worse than earlier ones and that the race of immigrants affects their assimilation, with black and Hispanic immigrants at a disadvantage. In their study, the authors follow individuals over time, capturing more closely the individual wage dynamics. However, the small size of the sample, the fact that they consider all the immigrant groups together, and the fact that they do not compare immigrants to natives with similar age and education make their study less informative about the economic assimilation of economically disadvantaged groups of immigrants, such as those that are considered in our analysis.

Similar studies on the assimilation of immigrants have recently boomed in Europe. This literature usually emphasizes the employment gap of immigrants, especially refugees, and their slow convergence. Evidence from the United Kingdom (Clark and Lindley, 2006), Norway (Bratsberg et al., 2017), and a set of 13 European Union countries (Ho and Turk-Ariss, 2018) finds a significant initial employment gap of immigrants relative to natives, especially when considering refugees and immigrants from low-income sources. While some convergence is observed, it is far from complete even after 20 years. Several recent papers have examined the policies that have been successful in promoting the economic convergence of immigrants.[5]

5 Using causal inference through regression discontinuity and quasiexperimental evidence on assignment to policies, some recent papers have established that language training (Lochmann et al., 2019), active labor market policies (Sarvimäki and Hämäläinen, 2016), and improvements in the processing time of asylum requests (Hainmueller et al., 2016) have improved the labor market assimilation and performance of immigrants.

Overall, however, recent research on immigrants in Europe emphasizes worries about the assimilation of recent immigrants, especially refugees (Fasani et al., 2018).

In this paper, we use an approach similar to that of Borjas (2015), but our new contribution is the focus on the more-homogeneous group of Mexicans and Central Americans.[6] This group of immigrants has the lowest education, lowest average earnings, and the highest share of undocumented workers; hence, their performance is important to understand the evolution of vulnerable immigrants, as well as poverty and inequality, in the United States. Additionally, we compare immigrants to natives in similar age and education groups so that the income and employment dynamics of the native groups do not confound our measures of assimilation. Relative to the existing literature, we also extend the analysis to more-recent cohorts, thus providing a more up-to-date picture, and we discuss the role of location, occupation, language skills, and legal status in relation to earnings convergence.

3 Data, Earnings Gaps, and Convergences for All Immigrants

The data we use were obtained from the Integrated Public Use Microdata Series (IPUMS) (Ruggles et al., 2019) and contain samples similar to those used by Borjas (2015). However, we update our analysis up to the year 2017 and document – for the first time – assimilation in the more recent 7 years for which IPUMS data are available. These data include the decennial US Census samples spanning the period between 1970 and 2000, as well as the pooled 2009–2011 (which we refer to as 2010) and 2017 American Community Survey (ACS) samples.[7]

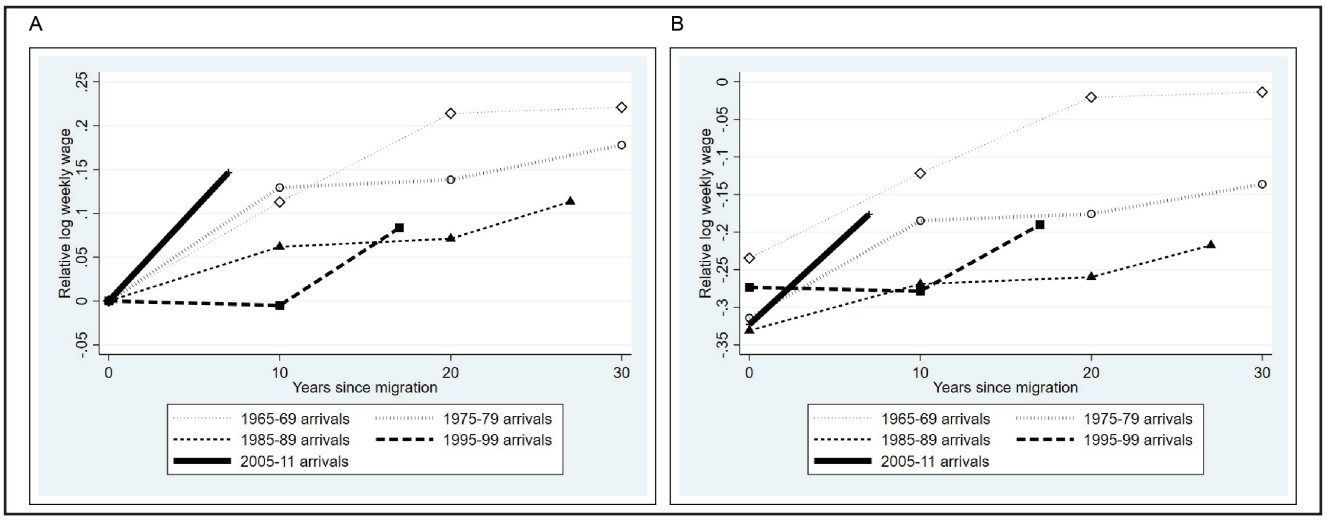
The sample of individuals used in the earnings analysis only includes males between the ages of 25 years and 64 years who have between 1 years and 40 years of potential work experience, have worked at least 1 week during the previous year, are not living in group quarters or attending school at the time of the survey, and have arrived in the United States at the age of 18 years or older. For the employment rate analysis, the same criteria are used, but individuals who did not work and those who did not generate earnings are also included in the sample as we are constructing the employment rate (employment probability) for this group. We classify individuals as employed if they had worked at least 1 week during the previous year. For the earnings analysis, all dollar amounts have been adjusted to real 1999 dollars using the consumer price index (CPI) for "Current, not seasonally-adjusted, US city average for all items for all urban consumers".[8]

6 While we provide some rationale in the Introduction section as to why it makes sense to group Mexicans and Central American together, we have also conducted the analysis on Mexicans only, who make up the largest group. When focusing on Mexicans only, the main findings with respect to the initial gaps and convergence are similar to what is shown in this paper.

7 Our samples differ slightly from those used by Borjas (2015) because of errata in the 2009–2011 ACS sample, which had not been corrected at the time of Borjas's (2015) analysis. In particular, on July 1, 2015 (which is after the date that Borjas (2015) had conducted his analysis), the IPUMS adjusted the CPI on the source variables (incwage and incbus00) that are used to construct the main outcome variable (incearn) used in the analysis. In addition, on May 25, 2017, the IPUMS made another adjustment to the source variable incwage. Nevertheless, replication exercises using these corrected data reveal coefficients that are either identical or very close (all are within 0.01) to those reported by Borjas (2015); so, we are confident that the updated samples we use reflect estimates that are comparable to those in his analysis.

8 This CPI can be found using the "Multi Screen Data Search" tool at https://www.bls.gov/cpi/data. htm. Since the census samples report earnings from the previous year, we also use the CPI from the previous year to adjust the earnings reported in the census samples. However, the ACS surveys reflect information about the previous 12 months (not the previous calendar year). Following Borjas (2015), we also use the previous year's CPI to adjust the reported earnings from the ACS samples.

Figure 1 Age-adjusted convergences for the relative log weekly earnings of immigrant cohorts from all countries of origin: **(A)** normalized convergence; **(B)** initial gaps and convergence.



Notes: The wage differentials presented in this figure are calculated from regressions that are estimated separately for each cross section. The dependent variable in these regressions identifies the log weekly earnings of each individual, and the explanatory variables include a third-order polynomial for age and a set of fixed effects: one for each immigrant cohort. The omitted group comprises native-born workers such that the coefficients on the cohort fixed effects represent each cohort's log weekly earnings relative to that of native-born workers in a given survey year, which are used to construct the data points in the graphs. In Figure 1(A), the relative log weekly earnings for each cohort are normalized to zero at the time of entry.

Table A1 and Figure 1 update the stylized facts shown in Borjas (2015) relative to all immigrants, adding the cohort that arrived in 2005–2011 and expanding the sample to 2017. Table A1 shows the estimates of the log earnings gap relative to US natives of the same age for each cohort entering in each of the following years: 1970, 1980, 1990, 2000, and 2010; moreover, we add the year 2017 from the ACS data, which allows one more cohort and a longer period of analysis for previous cohorts. Figure 1 shows those gaps in a chart, tracking each arrival cohort over 30 years of stay in the United States. The figure shows the initial gaps and the 30-year convergences for each arrival cohort using dotted lines for the early cohorts, dashed for the intermediate, and a solid line for the most recent, with increasing thickness going from early to recent. We first standardize the initial gaps to zero in Figure 1(A) and then show the actual estimated initial gaps in log points in Figure 1(B). These initial figures (Figure 1A and B) and Table A1 provide a benchmark for the average immigrant in terms of the earnings gaps upon arrival to the United States and the average convergence over time. Panel B of Figure 1 also reveals a progressively larger initial gap and a slower convergence rate for the more-recent cohorts. In particular, the cohorts that arrived in 1985–89 and 1995–99, which are the two most recent cohorts considered by Borjas (2015), show large initial gaps and slow convergence rates relative to the previous two cohorts. These figures, however, compare cohorts of immigrants that varied drastically in terms of country of origin and education levels over time. Specifically, these results compare the average immigrant to the average US native and do not account for education or country of origin; so they only provide a limited understanding of economic assimilation as it relates to the more-vulnerable immigrants.

4 Methodology and Empirical Specification

In order to estimate the rate of earnings and the employment convergence of Mexican and Central American immigrants, we start by estimating the following model separately for each cross section τ, while restricting the sample to include only native-born workers and immigrants from Mexico and Central America:

$$Y_{\ell\tau} = \beta_0 + \boldsymbol{\beta}\boldsymbol{C}_{\ell} + \boldsymbol{\Gamma}\boldsymbol{X}_{\ell\tau} + \epsilon_{\ell\tau} \tag{1}$$

In Eq. (1), $Y_{\ell\tau} \in (\ln w_{\ell\tau}, Emp_{\ell\tau})$ represents the measure of labor market performance of interest. The variable $\ln w_{\ell\tau}$ is the natural log of the weekly earnings of an individual measured in year (cross section) τ, $Emp_{\ell\tau}$ is a dummy variable that identifies whether an individual was employed during the previous year, $\boldsymbol{X}_{\ell\tau}$ is a third-order polynomial for the individual's age, $\boldsymbol{C}_{\ell}$ is a vector of fixed effects representing each immigrant cohort in the sample being considered and one fixed effect – omitted in the regression – representing native workers, and $\epsilon_{\ell\tau}$ is the error term.[9] With this notation and convention, the coefficients $\boldsymbol{\beta}$ for the vector of fixed effects $\boldsymbol{C}_{\ell}$ capture the log weekly earnings or employment rate differential for each immigrant cohort group relative to native workers of the same age after controlling for nonlinear age effects.[10]

Next, we pool the data from all cross sections and allow for the comparison of different cohorts of immigrants with natives of similar age and education. We estimate the following model while including natives and immigrants from Mexico and Central America:

$$Y_{\ell\tau} = \beta_0 + \boldsymbol{\Omega}\boldsymbol{X}_{\ell\tau} + \boldsymbol{\alpha}\boldsymbol{y}_{\ell\tau} + \Sigma\boldsymbol{C}_{\ell} + \boldsymbol{\theta}\boldsymbol{y}_{\ell\tau}\boldsymbol{C}_{\ell} + \boldsymbol{S}_{\ell\tau} + \nu_{\ell\tau} \tag{2}$$

In Eq. (2), $\boldsymbol{X}_{\ell\tau}$ is a third-order polynomial for the age of each individual, $\boldsymbol{y}_{\ell\tau}$ is a third-order polynomial that identifies the number of years that the immigrants have been in the United States, capturing the potentially nonlinear effect of US work experience, $\boldsymbol{C}_{\ell}$ is a vector of dummy variables identifying each immigrant cohort, and $y_{\ell\tau}\boldsymbol{C}_{\ell}$ identifies a linear cohort-specific US work-experience trend. The term $\boldsymbol{S}_{\ell\tau}$ is a vector of education–age–survey year fixed effects.[11] The introduction of such a rich set of skill-by-year effects implies that we are comparing immigrants to natives in the same education–experience group; here, $\nu_{\ell\tau}$ is the error term. The estimated coefficients $\boldsymbol{\Sigma}$ capture the log earnings or employment rate gap of a specific cohort at arrival, and the coefficients $\boldsymbol{\theta}$ capture the average decennial growth of that specific cohort.[12,13]

All the tables that show results from Eq. (2) report the cohort-of-arrival-specific initial gap and the 10-year estimated relative growth. These statistics are estimated first without the age–education–year effects ($\boldsymbol{S}_{\ell\tau}$), so as to capture the earnings gaps and growth of Mexicans and Central Americans relative to the average native of the same age, and then estimated with the age–education–year fixed effects ($\boldsymbol{S}_{\ell\tau}$), so as to capture the gaps and convergences relative to similarly aged and educated natives. The difference between these two specifications captures

9 We define "employed" as working for at least 1 week during the previous year.

10 All regressions that use Eq. (1) are weighted by the individual sample weights using the variable "perwt."

11 We include four education groups (high school dropouts, high school graduate, some college, and college diploma) and eight age groups broken into 5-year intervals between the ages of 25 years and 64 years.

12 Our model deviates from the one used by Borjas (2015) by constraining the age effects to be equal for natives and immigrants. This allows us to conveniently compare the results from Eq. (2) to those from Eq. (1), which uses the same constraint for age.

13 All regressions that use Eq. (2) are weighted by the variable "perwt" divided by the population in each cross section, i.e., the variable perwt divided by the total sum of the variable perwt for the year the observation belongs to (conditional on the criteria outlined in Section 3).

the part of the gaps and convergences explained by the composition of immigrants across education groups and the different performance levels of those education groups over time, common to native and immigrants. All the standard errors in Eqs. (1) and (2) are clustered at the cohort level.

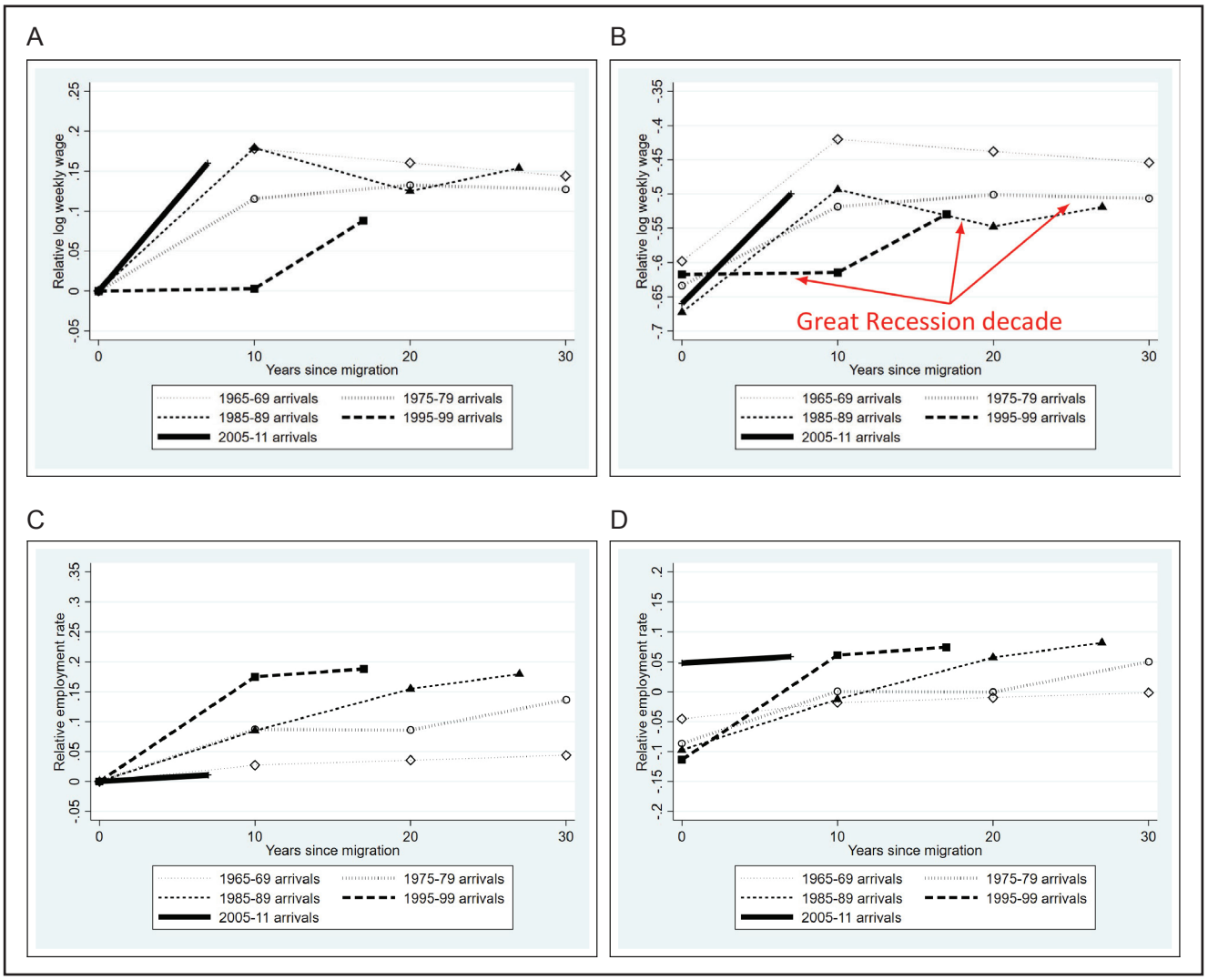
5 Empirical Findings: Earnings and Employment Convergences for Mexicans and Central Americans

5.1 Adjusted earnings gaps and convergence

Figure 2 shows the log earnings convergence of Mexicans and Central Americans relative to US natives of similar age, either normalizing the initial level to zero (Figure 2A) or starting from the estimated initial gaps (Figure 2B). These figures are generated from the coefficients estimated with Eq. (1). Several things are worth noting. First, while the initial earnings gap is somewhat smaller for the very early cohort (1965–1969), the difference is small and the convergence rate seems roughly comparable to that of the other cohorts. Second, the initial gaps are substantial (–60 to –70 log points), and they are only reduced in the first 20 years by 15–20 log points. Third, the Great Recession seems to have produced one lost decade of convergence for all cohorts. In Figure 2(B), we indicate which segments in the convergence graph coincide with the period 2000–2010, which is when the Great Recession took place. Each of these segments is flat (or even downward sloping), implying zero (or negative) convergence in that decade for all cohorts. Finally, the very last cohort that arrived in 2005–2011 seems to have performed quite well, with an initial gap comparable to that of any of the cohorts that arrived in the 70s or 80s but with faster convergence. In fact, this cohort achieved a 17 log point earnings convergence within 10 years. It may be early to make claims about the economic success of this cohort, but these results are encouraging.

Figure 2 presents the relative gaps and convergence, but it does not account for the fact that the population of Mexicans and Central Americans in the United States has a large concentration among low-education groups. If the earnings of low-educated workers have grown slower than those of the average American during the period, it will appear as if there is slower assimilation, while the reason for slow convergence to the mean is that there is increased earnings inequality affecting both natives and immigrants. In order to alleviate concern about this issue, in Table 1, we present estimates of the initial gaps and the 10-year growth in relative earnings for each cohort when compared to the average US native of similar age in Column (1) and when compared to the average US native with a similar education and age in Column (2), reflecting the inclusion of age–education–year effects in Eq. (2). This table shows three important differences between Columns 1 and 2. First, after controlling for education, the initial gaps are reduced by one fourth to one third for each cohort. Most cohorts have a gap of 42–43 (about 34–35%) log points when measured relative to similarly aged and educated natives (see Column 2). Second, the convergence is faster, equal to 20 log points (about 19%) in the first decade, for most cohorts. Third, the two most recent cohorts (the ones that arrived in 2005–11 and in 2012–17) performed quite well, as the latter shows a smaller initial gap and the former a faster 10-year convergence. These encouraging findings are also confirmed in Figure A1, where we show the convergences (Figure A1a) and the initial gaps and convergences (Figure A1b) while only considering Mexicans, Central Americans, and natives with a high school degree or less.

Figure 2 Age-adjusted convergences for the relative log weekly earnings and employment rates of Mexican and Central American immigrant cohorts: **(A)** normalized convergence; **(B)** initial gaps and convergence; **(C)** normalized convergence; **(D)** initial gaps and convergence.



Notes: The log weekly earnings and employment rate differentials presented in this figure are calculated from regressions that are estimated separately for each cross section. The dependent variable in the earnings regressions identifies the log weekly earnings of each individual. The dependent variable in the employment regressions identifies whether each individual was employed for at least 1 week during the previous year. The explanatory variables for both the earnings and the employment regressions include a third-order polynomial for age and a set of fixed effects: one for each immigrant cohort. The omitted group comprises native-born workers such that the coefficients on the cohort fixed effects represent each cohort's employment rate relative to that of native-born workers in a given survey year, which are used to construct the data points in the graphs. In Figure 2(A), the relative log weekly earnings for each cohort are normalized to zero at the time of entry. In Figure 2(C), the relative employment rate for each cohort is normalized to zero at the time of entry.

The initial gaps were around 40 log points for the two most recent cohorts and were reduced by half within 10–20 years.

5.2 **Employment rate gaps and convergence**

Mexicans and Central Americans have consistently entered the United States with a substantial earnings gap, albeit with convergence and no deterioration for the more-recent cohorts.

Table 1 Mexican and Central American immigrants: initial gaps and convergences after first 10 years

	(1)	(2)
Panel A		
Relative entry wage		
1965–1969 arrivals	−0.523**	−0.449**
	(0.044)	(0.028)
1975–1979 arrivals	−0.626**	−0.437**
	(0.042)	(0.028)
1985–1989 arrivals	−0.670**	−0.445**
	(0.046)	(0.034)
1995–1999 arrivals	−0.674**	−0.423**
	(0.023)	(0.026)
2005–2011 arrivals	−0.732**	−0.427**
	(0.016)	(0.027)
2012–17 arrivals	−0.530**	−0.237**
	(0.004)	(0.026)
Panel B		
Relative wage growth in first 10 years		
1965–1969 arrivals	0.081	0.221**
	[0.202]	[0.000]
1975–1979 arrivals	0.088	0.216**
	[0.162]	[0.001]
1985–1989 arrivals	0.109	0.198**
	[0.102]	[0.002]
1995–1999 arrivals	0.099*	0.181**
	[0.031]	[0.000]
2005–2011 arrivals	0.189	0.239**
	[0.000]	[0.000]
Basic specification	X	–
Education–age–year FE	–	X
N	9,669,594	9,669,594

Notes: The wage differentials presented in Panel A are generated from regressions that are run on the set of pooled cross sections from 1970, 1980, 1990, 2000, 2010, and 2017. The dependent variable identifies the log weekly earnings of each individual. The explanatory variables in Column 1 include a third-order polynomial for age, a third-order polynomial for the number of years that the immigrants have spent in the United States, a set of cohort fixed effects (FEs), and a set of cohort FEs that are each interacted with a continuous variable identifying the number of years that the immigrants have spent in the United States. The explanatory variables for Column 2 contain the same set of variables as in Column 1 but additionally include a set of education–age–year FEs. The omitted group comprises native-born workers such that the coefficients in Panel A each represent a separate cohort's log weekly earnings relative to native-born workers. The predicted relative wage growth in the first 10 years in Panel B assumes that all immigrants arrive in the country at the age of 25 years. Standard errors are in parentheses. *P*-values are in brackets.

$^{\dagger}p < 0.1$, $^{*}p < 0.05$, $^{**}p < 0.01$.

A different picture, however, is painted by analyzing the employment rate gap. Panels C and D of Figure 2 show the convergences and initial gaps for the employment probability. It is clear that the low earnings of Mexicans and Central Americans are not due to their lower probability of working or marginal attachment to the labor market. This group of immigrants has a high employment rate, and after 10–20 years in the United States, their employment rate exceeds that of similarly aged natives (the graphs do not even correct for schooling). What is also true in this case is that the performance in terms of the relative employment rate seems to have improved for recent cohorts, with the last two cohorts surpassing the native employment rate within 10 years. These observations are in line with the idea that low-skilled immigrants have taken a large number of jobs among manual and physically demanding occupations, job creation for these occupations being relatively strong in recent decades (Basso et al., 2017). Flexible US labor markets have employed many Mexican and Central American immigrants, although at low wages. This phenomenon stands in sharp contrast to what has occurred with refugees in Europe, where immigrant employment rates have remained quite low (Fasani et al., 2018), partially because of the more generous support of the government, but also due to labor market frictions and hiring costs. While the US labor market employs these immigrants at a high rate, the fact that they have a significant wage penalty and the fact that less-educated natives' wages have also performed badly imply that employment convergence, per se, is not sufficient to ensure the economic success of this group.

5.3 **How large is return migration?**

The cohort regression framework we adopt has been used as the main tool of analysis in this study, and the US Census and ACS have been the main sources of data for this type of analysis. However, we need to emphasize two important caveats about these data. The first caveat is that if there is return migration, cohorts may change composition over time, and selective return migration could explain part of the earnings convergence if immigrants leave when their economic performance is poor. This phenomenon would imply a reduction in the size of an arrival cohort over time. The second caveat is that there may be some recall error in the arrival time, which would introduce measurement error in the size and composition of each cohort. Table A2 in the Appendix shows the size of each cohort considered in our empirical analysis, which we can follow over time by tracing from left to right in a given row of the table. Notice that the cohorts we examine only include people 25–64 years old, not living in group quarters, not in school at the time of the survey, and (for immigrants) who entered the United States at the age of 18 years or older. The change in size of the cohort in the first decade after arrival is always positive, a result that emerges because immigrants who arrive in the United States between the ages of 18 years and 24 years enter the considered age group. After that, notice that the cohort sizes shrink, and this attrition is largely due to return migration, and to a lesser extent because of aging out of the sample. However, given that the average age at arrival is rather young, the aging out is not significant until 3 or 4 decades after arrival. The reduction in size 30 years after arrival can be substantial (comparing the number after 30 years with that after 10 years). This attrition seems differential across cohorts, and while we cannot do too much about it, it should be kept in mind as a possible source of selection of the remaining migrants.

6 The Role of Sector, Location, and Unobserved Characteristics

6.1 Convergence by sector of employment

It is hard to produce causal evidence that identifies which economic conditions or policies promote faster earnings convergence for Mexican and Central American immigrants. We can, however, identify some features of the labor market and location choices that are associated with different rates of earnings growth. In particular, by focusing on the economic sectors in which Mexicans and Central Americans are highly concentrated, we investigate whether working in any specific sector is correlated with higher and faster growth in earnings relative to similarly skilled natives. We also analyze whether being located in an urban area is correlated with an earnings convergence advantage or whether being located in a state with a large share of Mexicans and Central Americans (enclaves) hurts their ability to assimilate. Various sectors of employment and areas of residence may provide different opportunities for upward mobility and have been linked to faster wage growth and increased levels of intergenerational mobility for natives, suggesting a potential benefit for immigrants too (Chetty and Hendren 2018; Moretti 2013).

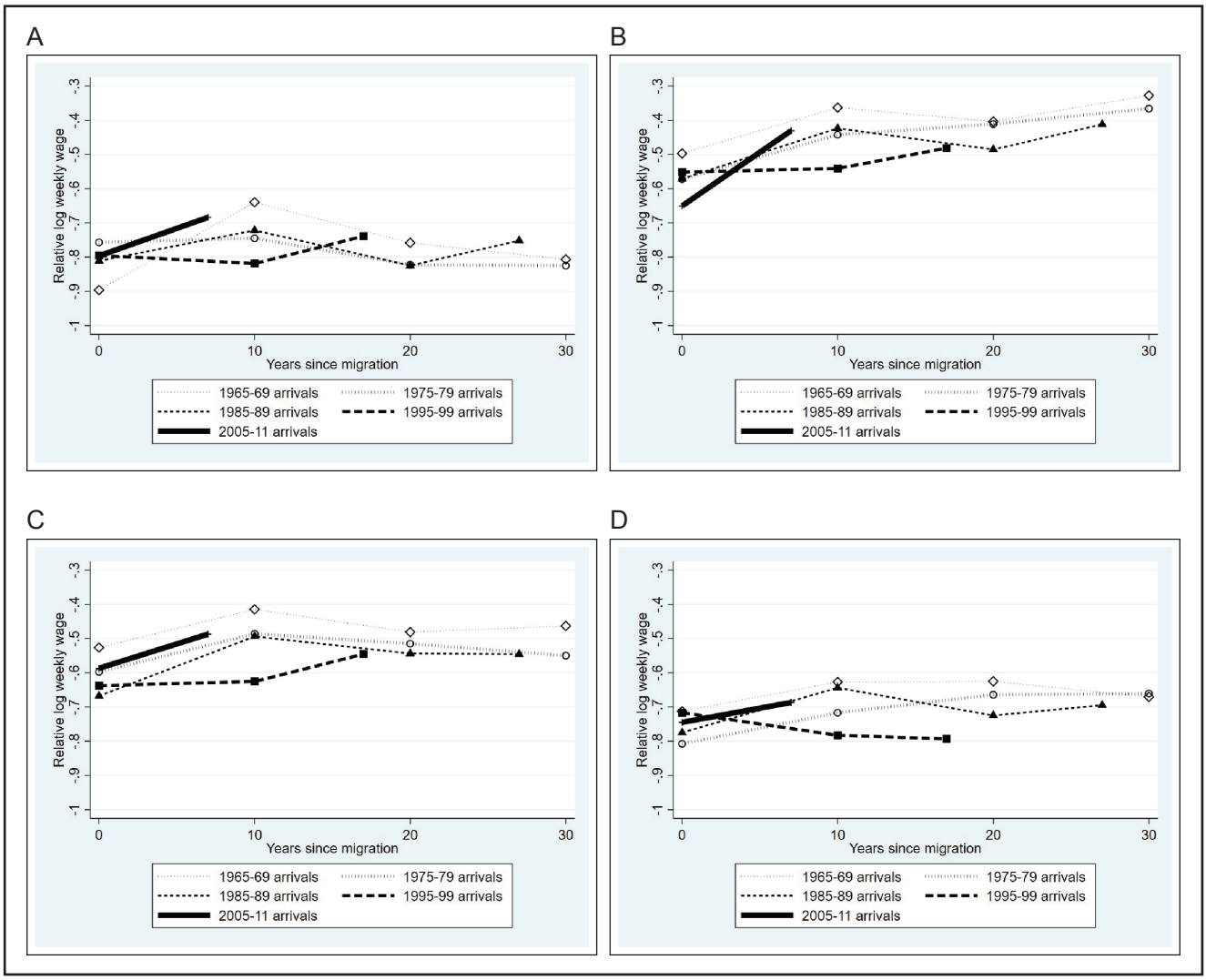
Table A3 shows the percentages of Mexicans and Central Americans among the workers of four industries, as well as their percentages in urban and rural locations and in enclave states.[14] In each of the industries chosen, the immigrant group was overrepresented relative to its average presence in the labor force. In particular, in the agriculture and construction sectors, in 2017, 24% and 15%, respectively, of the labor force was either Mexican or Central American. These percentages imply a very high degree of overrepresentation as Mexicans and Central Americans were only 5.4% of the overall labor force. The other two sectors, manufacturing and personal and household services, included a larger-than-average share of Mexicans and Central Americans but not by much. The growth of the Mexican and Central American presence, especially in agriculture (and construction), was also substantial, growing from 1.5% (and 0.4%, respectively) in 1970 to 23.8% (and 15.1%, respectively) in 2017. Panel B of the table also indicates that Mexicans and Central Americans are more concentrated in urban locations and in enclave states (by definition).

The initial earnings gaps and convergences of Mexicans and Central Americans employed in different sectors relative to natives of the same age are shown in Figure 3, where each subfigure displays the results of Mexicans and Central Americans working in one specific sector relative to natives working in all sectors. These graphs compare the average earnings of Mexicans and Central Americans in the sector to the average American in the same age group. The sectors we consider are agriculture and farming (Figure 3A), construction (Figure 3B), manufacturing (Figure 3C), and personal and household services (Figure 3D). These sectors represent those with the largest employment of Mexicans and Central Americans. These figures, which are comparable to Figure 2B, show the initial gaps and 30-year convergences for each arrival cohort.

An examination of Figure 3 reveals three main points. First, each cohort in a sector started with a similar initial gap and had similar convergences regardless of the entry period. It should be noted that a portion of the observed convergence could result from Mexicans and Central

14 We define an enclave state as a state with the largest percentage of Mexicans and Central Americans in the population over the period 1970–2017. They are California, Texas, Arizona, New Mexico, Nevada, and Illinois.

Figure 3 Age-adjusted convergences for the relative log weekly earnings of Mexican and Central American immigrant cohorts by sector: initial gaps and convergence. **(A)** agriculture and farming; **(B)** construction; **(C)** manufacturing; **(D)** personal and household services.



Notes: The wage differentials presented in this figure are calculated from regressions that are estimated separately for each cross section using data that only includes individuals employed in the sector identified in the panel being considered. The dependent variable in these regressions identifies the log weekly earnings of each individual, and the explanatory variables include a third-order polynomial for age and a set of fixed effects: one for each immigrant cohort. The omitted group comprises native-born workers such that the coefficients on the cohort fixed effects represent each cohort's log weekly earnings relative to native-born workers in a given survey year, which are used to construct the data points in the graphs.

Americans changing their sector of work (say from agriculture to construction), which is not captured by these graphs.

Second, workers in the agricultural sector have the largest initial earnings gaps (about 80 log points, corresponding to a stunning 55% gap) and slowest convergence. This result should not come as a surprise because agricultural jobs have a negative wage differential with most other jobs, and earnings growth is minimal over an agricultural worker's career. Workers in the personal and household services sector do not fare much better than those in agriculture.

Third, Mexicans and Central Americans with jobs in the construction sector show a smaller initial gap and a faster and continuing convergence over 30 years, revealing an earnings

advantage that is better than in any of the other sectors we analyze. An initial gap of 60 log points is reduced to around 30 after 30 years. If we account for the education level of Mexicans and Central Americans and compare them to similarly educated citizens, as we do in Table 2, the results become even more striking. These results confirm the advantage of immigrants in the construction sector (now lagging only 32–33 log points at arrival and catching up by 20 log points in the first decade) and their disadvantage in agriculture (lagging 50 log points at arrival and catching up only by 11–12 log points in the first decade).

Table 2 shows a comparison of the initial log earnings gaps (Panel A) and relative earnings growth (Panel B), by sector, when comparing Mexicans and Central Americans to US natives of similar age (Columns 1, 3, 5, and 7) or when comparing them to natives with similar age and education levels (Columns 2, 4, 6, and 8). After controlling for education, Mexicans and Central Americans in manufacturing also seem to perform relatively well, particularly with respect to their relative growth in the first decade (20–25 log points). The performance of immigrant agricultural workers improves when compared to similarly aged and educated natives, which is a sign that the negative selection of workers in agriculture and the slow wage growth of low-educated workers, which is also true for natives, is a big part of the underperformance story of agricultural workers. Still, workers in the agricultural sector have the largest initial gap and slowest convergence even when they are compared to natives of similar education and age.

6.2 **Convergence in rural and urban areas**

In spite of the heavy presence of Mexicans and Central Americans in agricultural jobs, most jobs in the US economy are nonagricultural, and the concentration of Mexicans and Central Americans is larger in urban areas. It is useful to see, therefore, whether urban location is associated with better wage performance. Figure 4 shows the initial earnings gaps and convergences for Mexicans and Central Americans separately in urban and rural areas. The initial gaps are smaller for those living in urban areas, but the convergences do not seem significantly different. Except for the first cohort, which was small with a rather noisy estimate of convergence, the other cohorts seem to perform similarly over time.

Table 3 shows the initial gaps and convergences for rural and urban Mexicans and Central Americans when we compare them to similarly aged and educated natives. The results confirm smaller initial gaps of urban immigrants but similar rates of earnings growth. Urban locations may provide some initial advantage in earnings and/or select more productive workers, but it is not very clear whether it produces a sustained advantage for their earnings profile. It would be interesting to separate urban locations between fast-growing and declining ones, to see whether the "divergence" between those two types of urban areas is also reflected in the assimilation of Mexican and Central American immigrants.

6.3 **Convergences in enclave versus nonenclave states**

Some studies (e.g., Borjas 2015) identify that the local crowding of immigrants may cause slower integration. If immigrants live in an enclave with a large share of coethnics, they may be less inclined to learn English and integrate, and they may remain marginal to some job and

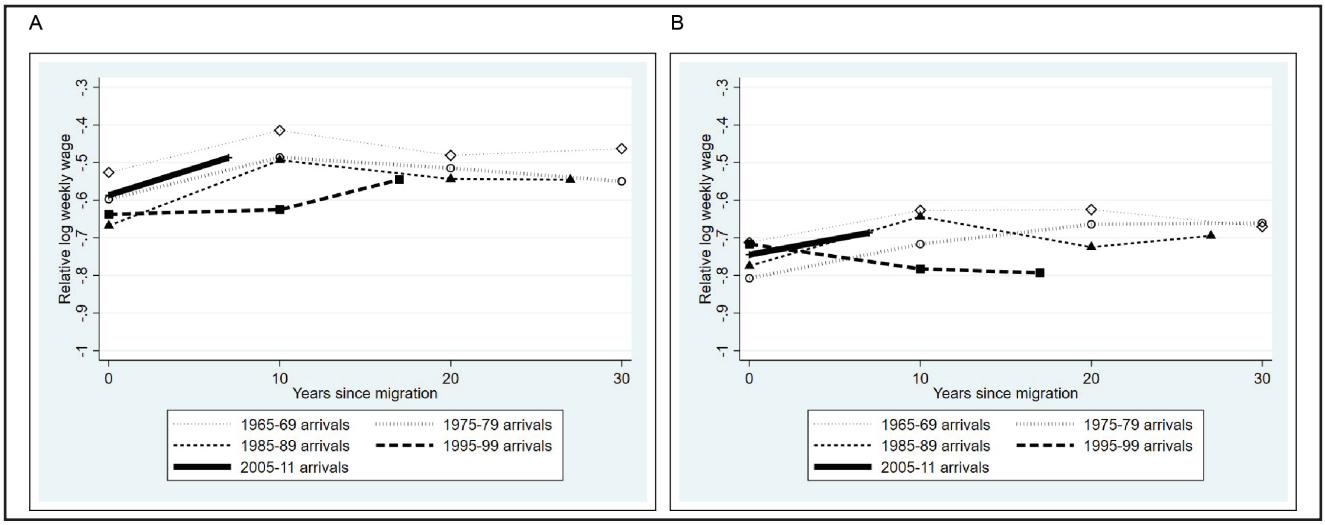
Table 2 Mexican and Central American immigrants by sector: initial gaps and convergences after the first 10 years

	Agriculture		Construction		Manufacturing		Personal and household services	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A								
Relative entry wage								
1965–1969 arrivals	−0.753**	−0.606**	−0.449**	−0.339**	−0.478**	−0.409**	−0.654**	−0.570**
	(0.033)	(0.020)	(0.047)	(0.036)	(0.032)	(0.025)	(0.037)	(0.025)
1975–1979 arrivals	−0.733**	−0.500**	−0.534**	−0.325**	−0.592**	−0.393**	−0.816**	−0.612**
	(0.034)	(0.021)	(0.041)	(0.034)	(0.031)	(0.024)	(0.036)	(0.025)
1985–1989 arrivals	−0.803**	−0.490**	−0.581**	−0.337**	−0.686**	−0.448**	−0.779**	−0.536**
	(0.036)	(0.022)	(0.041)	(0.031)	(0.038)	(0.030)	(0.036)	(0.024)
1995–1999 arrivals	−0.833**	−0.489**	−0.605**	−0.317**	−0.702**	−0.423**	−0.746**	−0.481**
	(0.020)	(0.013)	(0.020)	(0.017)	(0.017)	(0.013)	(0.018)	(0.012)
2005–2011 arrivals	−0.872**	−0.461**	−0.746**	−0.368**	−0.641**	−0.289**	−0.817**	−0.459**
	(0.014)	(0.013)	(0.014)	(0.017)	(0.015)	(0.011)	(0.013)	(0.012)
2012–17 arrivals	−0.860**	−0.424**	−0.562**	−0.149**	−0.506**	−0.209**	−0.609**	−0.262**
	(0.002)	(0.008)	(0.003)	(0.013)	(0.002)	(0.003)	(0.003)	(0.007)
Panel B								
Relative wage growth in first 10 years								
1965–1969 arrivals	0.010	0.147**	0.079	0.207**	0.072	0.243**	0.041	0.184**
	[0.854]	[0.000]	[0.161]	[0.000]	[0.162]	[0.000]	[0.457]	[0.000]
1975–1979 arrivals	−0.026	0.114**	0.082	0.209**	0.086†	0.237**	0.094†	0.224**
	[0.618]	[0.002]	[0.122]	[0.000]	[0.093]	[0.000]	[0.093]	[0.000]
1985–1989 arrivals	0.022	0.117**	0.105†	0.197**	0.134**	0.253**	0.076	0.169**
	[0.679]	[0.003]	[0.060]	[0.000]	[0.021]	[0.000]	[0.166]	[0.000]
1995–1999 arrivals	0.046	0.129**	0.094*	0.176**	0.118**	0.227**	0.006	0.099**
	[0.245]	[0.000]	[0.016]	[0.000]	[0.003]	[0.000]	[0.862]	[0.000]
2005–2011 arrivals	0.161**	0.201**	0.261**	0.313**	0.107**	0.165**	0.099**	0.120**
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
N	9,425,202	9,425,202	9,423,810	9,423,810	9,423,649	9,423,649	9,426,230	9,426,230
Basic specification	X	–	X	–	X	–	X	–
Education–age–year FE	–	X	–	X	–	X	–	X

Notes: The wage differentials presented in Panel A are generated from regressions that are run on the set of pooled cross sections from 1970, 1980, 1990, 2000, 2010, and 2017. The dependent variable identifies the log weekly earnings of each individual. The explanatory variables in Columns 1, 3, 5, and 7 include a third-order polynomial for age, a third-order polynomial for the number of years that the immigrants have spent in the United States, a set of cohort fixed effects (FEs), and a set of cohort FEs that are each interacted with a continuous variable identifying the number of years that the immigrants have spent in the United States. The explanatory variables for Columns 2, 4, 6, and 8 contain the same set of variables as in Column 1 but additionally include a set of education–age–year FEs. The omitted group is composed of native-born workers such that the coefficients in Panel A each represent a separate cohort's log weekly earnings relative to native-born workers. The predicted relative wage growth in the first 10 years in Panel B assumes that all immigrants arrive in the country at the age of 25 years. Standard errors are in parentheses. *P*-values are in brackets.

†$p < 0.1$, *$p < 0.05$, **$p < 0.01$.

Figure 4 Age-adjusted convergences for the relative log weekly earnings of Mexican and Central American immigrant cohorts by location: initial gaps and convergences. **(A)** rural; **(B)** urban.



Notes: The wage differentials presented in this figure are calculated from regressions that are estimated separately for each cross section using data that only includes individuals employed in the region identified in the panel being considered. The dependent variable in these regressions identifies the log weekly earnings of each individual, and the explanatory variables include a third-order polynomial for age and a set of fixed effects: one for each immigrant cohort. The omitted group is composed of native-born workers such that the coefficients on the cohort fixed effects represent each cohort's log weekly earnings relative to native-born workers in a given survey year, which are used to construct the data points in the graphs.

career opportunities. Other studies, such as Damm (2009), use a more careful causal identification strategy and find that living in an enclave significantly increases earnings because ethnic networks provide opportunities to newcomers. In recent work on German refugees, Battisti et al. (2016) find that living in enclaves may provide an initial employment advantage to new immigrants, but it may reduce their investment in human capital, which hurts their earnings potential in the long run.

In order to test whether living in an enclave is associated with weaker economic assimilation, we conduct separate analyses for those living in the six states with the largest share of Mexicans and Central Americans in their population. We call those states "enclaves". This categorization is rough as one would like to check enclaves in smaller geographical units, such as counties or metropolitan areas. However, it will provide some preliminary evidence. As usual, we show the representation of convergence relative to natives with similar age in Figure 5, Panels A and B, and we show the initial gaps and relative growth in the first 10 years while adjusting for education in Table 3.

Both Figure 5 and the adjusted coefficients in Table 3 do not show a large or significant difference in the initial gaps between those located in enclave or nonenclave states. Possibly, a worsening of the initial gap is visible in enclave states, which suggests that there may be some crowding of Mexicans and Central Americans in some jobs, especially in the more-recent decades. Several studies emphasize how the strongest labor market competition for new immigrants is from other immigrants, and our results may be partially consistent with that observation.

Summarizing the main findings relative to the assimilation of Mexicans and Central Americans in the United States, over the past 5 decades, we can state as follows: (i) recent-arrival cohorts did not do worse than previous ones in terms of the initial gaps or relative earnings

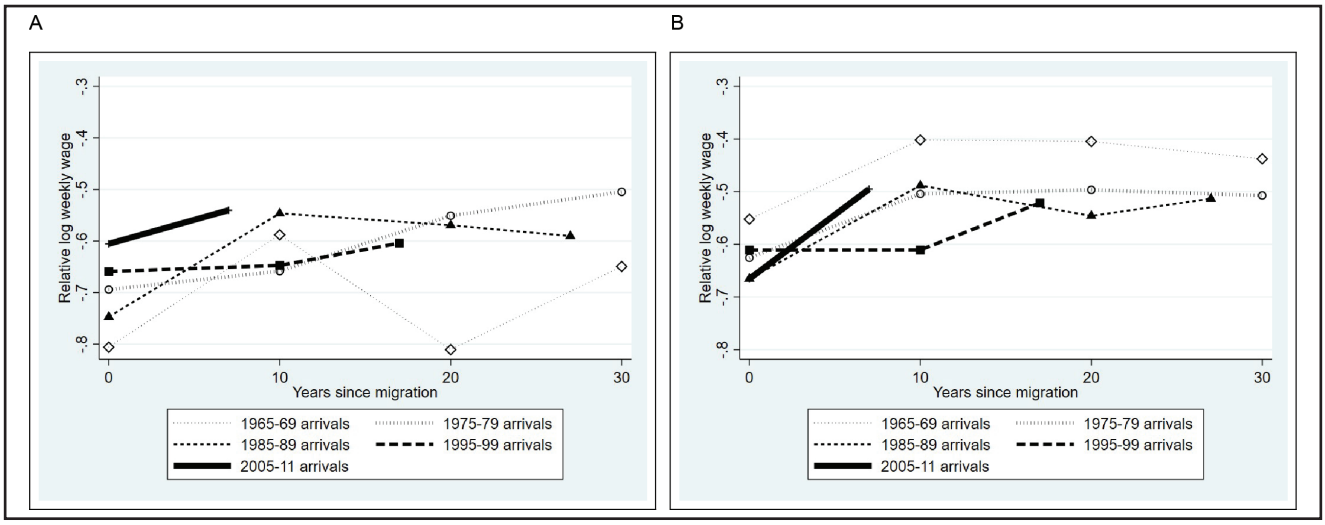
Table 3 Mexican and Central American immigrants by location: initial gaps and convergences after first 10 years

	Rural		Urban		Enclave		Non-enclave	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A								
Relative entry wage								
1965–1969 arrivals	−0.720**	−0.625**	−0.481**	−0.413**	−0.536**	−0.448**	−0.494**	−0.452**
	(0.0433)	(0.0298)	(0.0449)	(0.0291)	(0.054)	(0.035)	(0.024)	(0.017)
1975–1979 arrivals	−0.722**	−0.521**	−0.612**	−0.425**	−0.650**	−0.450**	−0.480**	−0.362**
	(0.0451)	(0.0306)	(0.0422)	(0.0289)	(0.043)	(0.029)	(0.040)	(0.028)
1985–1989 arrivals	−0.714**	−0.447**	−0.663**	−0.441**	−0.698**	−0.461**	−0.581**	−0.379**
	(0.0514)	(0.0357)	(0.0466)	(0.0344)	(0.048)	(0.035)	(0.041)	(0.029)
1995–1999 arrivals	−0.704**	−0.406**	−0.668**	−0.419**	−0.705**	−0.445**	−0.629**	−0.369**
	(0.0229)	(0.0169)	(0.228)	(0.0249)	(0.025)	(0.023)	(0.017)	(0.015)
2005–2011 arrivals	−0.647**	−0.320**	−0.743**	−0.434**	−0.751**	−0.434**	−0.711**	−0.393**
	(0.0152)	(0.0124)	(0.0163)	(0.0255)	(0.017)	(0.019)	(0.012)	(0.019)
2012–17 arrivals	−0.512**	−0.147**	−0.531**	−0.243**	−0.570**	−0.270**	−0.484**	−0.176**
	(0.00284)	(0.00513)	(0.00363)	(0.0236)	(0.003)	(0.015)	(0.002)	(0.018)
N	9,112,492	9,112,492	9,331,676	9,331,676	9,588,212	9,588,212	9,465,090	9,465,090
Panel B								
Relative wage growth in first 10 years								
1965–1969 arrivals	0.047	0.207**	0.073	0.213**	0.086	0.226**	0.096†	0.208**
	[0.476]	[0.000]	[0.257]	[0.000]	[0.224]	[0.000]	[0.057]	[0.000]
1975–1979 arrivals	0.093	0.232**	0.084	0.212**	0.103	0.228**	0.024	0.167**
	[0.188]	[0.000]	[0.183]	[0.000]	[0.124]	[0.000]	[0.653]	[0.000]
1985–1989 arrivals	0.097	0.193**	0.107	0.197**	0.126†	0.211**	0.056	0.161**
	[0.184]	[0.001]	[0.110]	[0.000]	[0.077]	[0.000]	[0.304]	[0.001]
1995–1999 arrivals	0.079	0.171**	0.098*	0.180**	0.119*	0.202**	0.062†	0.147**
	[0.092]	[0.000]	[0.034]	[0.000]	[0.019]	[0.000]	[0.075]	[0.000]
2005–2011 arrivals	0.067	0.170**	0.204**	0.249**	0.195**	0.240**	0.182**	0.242**
	[0.001]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Basic specification	X	–	X	–	X	–	X	–
Education–age–year FE	–	X	–	X	–	X	–	X

Notes: The wage differentials presented in Panel A are generated from regressions that are run on the set of pooled cross sections from 1970, 1980, 1990, 2000, 2010, and 2017. The dependent variable identifies the log weekly earnings of each individual. The explanatory variables in Columns 1, 3, 5, and 7 include a third-order polynomial for age, a third-order polynomial for the number of years that the immigrants have spent in the United States, a set of cohort fixed effects (FEs), and a set of cohort FEs that are each interacted with a continuous variable identifying the number of years that the immigrants have spent in the United States. The explanatory variables for Columns 2, 4, 6, and 8 contain the same set of variables as in Column 1 but additionally include a set of education–age–year FEs. The omitted group is composed of native-born workers such that the coefficients in Panel A each represent a separate cohort's log weekly earnings relative to native-born workers. The predicted relative wage growth in the first 10 years in Panel B assumes that all immigrants arrive in the country at the age of 25 years. The enclave states are the states with the largest percentage of Mexican and Central Americans in the population over the period 1970–2017. They include California, Texas, Arizona, New Mexico, Nevada, and Illinois. Standard errors are in parentheses. *P*-values are in brackets.

†$p < 0.1$, *$p < 0.05$, **$p < 0.01$.

Figure 5 Age-adjusted convergences for the relative log weekly earnings of Mexican and Central American immigrant cohorts by enclave region: initial gaps and convergences. **(A)** enclave; **(B)** non-enclave.



Notes: The wage differentials presented in this figure are calculated from regressions that are estimated separately for each cross section using data that only includes individuals employed in the region identified in the panel being considered. The dependent variable in these regressions identifies the log weekly earnings of each individual, and the explanatory variables include a third-order polynomial for age and a set of fixed effects: one for each immigrant cohort. The omitted group is composed of native-born workers such that the coefficients on the cohort fixed effects represent each cohort's log weekly earnings relative to native-born workers in a given survey year, which are used to construct the data points in the graphs. The enclave states are the states with the largest percentage of Mexican and Central Americans in the population over the period 1970–2017. They include California, Texas, Arizona, New Mexico, Nevada, and Illinois.

growth; (ii) there are significant earnings gaps relative to natives (in the order of 40 log points at arrival), which are reduced by about one third to one half, but not eliminated, in 20–30 years; (iii) there are small initial employment gaps, and after 20 years in the country, Mexicans and Central Americans are employed at rates that surpass similar natives; (iv) immigrants in the construction sector, and – in part – those in urban areas, do better in terms of the initial gaps and convergences than others.

The picture revealed by this analysis is one of a group coming to the United States to work in manual/physical-intensive jobs and assimilating rapidly, in terms of being employed, but lagging behind in terms of earnings. Jobs in sectors such as construction, which have significant upward potential and usually are located in urban areas, are associated with greater economic success for immigrants. This finding could be an important consideration when discussing the potential for the distribution of job-related visas across sectors for low-educated immigrants.

6.4 **Composition, citizenship, and language skills**

The initial location and sector of employment may be important factors that could help improve the economic assimilation of immigrants. Here, we document and discuss other potential factors affecting the performance of the two most recent cohorts analyzed in our study. Were those cohorts better positioned in terms of schooling or knowledge of English upon arrival? What was their composition in terms of the two groups? Are differences in the composition of Central Americans and Mexicans able to explain assimilation outcomes? Finally, how has the share of noncitizens, a proxy for those with undocumented status, changed across arrival

Table 4 Summary statistics for Mexican and Central American immigrant cohorts upon arrival

Cohort	1965–69	1975–79	1985–89	1995–99	2005–11
Age	34.24	33.11	32.85	32.98	33.73
Years of schooling	6.79	6.79	7.29	7.79	8.29
Share of Central Americans	0.18	0.14	0.26	0.15	0.29
Share of those speaking some English	No data	0.66	0.69	0.65	0.67
Share of those speaking good English	No data	0.28	0.31	0.29	0.27
Share of nonwhites	0.06	0.06	0.56	0.55	0.42
Share of noncitizens at arrival	0.78	0.89	0.92	0.95	0.97

cohorts? Table 4 shows some characteristics at entry for each cohort that arrived between 1965 and 2011 and provides some evidence of potential trends, which may affect the skills and earnings differentials even after controlling for education and age.

First of all, in terms of education and age, it appears that more-recent cohorts are slightly better educated and of similar age relative to those that arrived in the 1970s. These changes are small and controlled for in the convergence equation. The share of Central Americans varies by cohort and is larger for the most-recent cohort than the earlier ones. The share of those speaking English (at all or proficiently) at arrival did not change much. One variable increasing substantially from the 1975–79 cohort to the more-recent ones is the share of nonwhites, but the changed nature of the Census question, which allowed people to indicate more than one ethnicity after 1980, may have affected these numbers. The share of nonwhites appears to decrease in the most recent cohort relative to the one that arrived in 1995–99. Finally, the share of noncitizens, and likely the share of undocumented immigrants, increases in later arrival cohorts, implying a potential increase in the disadvantage of the later cohorts in terms of legal access to jobs.

Overall, the more-recent cohorts, whose performance seems better than that of the previous ones, include a larger share of Central Americans, nonwhites, and noncitizens but have slightly higher levels of education and similar English proficiency relative to older cohorts. These variables do not suggest that the unobserved skill content of the group has improved significantly at arrival over the past 20 years. At the same time, it is unlikely that the more-recent groups enjoyed lower labor market discrimination than previous ones. The better performance of recent cohorts in terms of earnings relative to similar natives may have more to do with US labor market opportunities than with the characteristics of (or attitudes toward) Mexicans and Central Americans.[15]

7 Conclusion

The assimilation of low-skilled immigrants is a very important issue often dominating the debate about immigration. Several receiving countries claim that immigrants are, and remain,

15 In additional specifications, not reported for brevity, we perform additional checks on legal status and enforcement. In one, we control for a "citizenship status" dummy to proxy for legal status. While the initial gaps are reduced by one quarter to one third when including the dummy variable (depending on whether we control for education in addition to age), the variation across cohorts and the estimates of speed of convergence are not significantly affected. Similarly, in a regression including state of residence by year fixed effects, to capture varying state-level measures of enforcement, the initial average gap and convergence coefficients are not affected much.

a burden to the receiving country because they do not have skills that can be integrated in the labor market, and hence, their employment rate is low and their earnings lag behind those of similar natives. In the United States, there are anecdotes and research works showing that immigrants who arrived in the 1980s and 1990s have had a harder time assimilating in the labor market.

In this paper, we analyze whether such a characterization is true when extending the analysis to cohorts of arrival in the 1990s and 2000s and when focusing on Mexican and Central American immigrants, traditionally a group of low-educated immigrants earning low wages. This group of immigrants is large, comprising almost 6% of the US labor force; hence, their success is very important to the US economy and society as a whole. While we do find a significant initial earnings gap and only incomplete convergence after 30 years of stay, we also find that recent cohorts arriving after 1995 have not performed worse than earlier ones that arrived in the 1970s and 1980s. Moreover, we find that, in terms of their employment probability, Mexicans and Central Americans outperform natives of similar age within 20–30 years in the country. In particular, focusing on the arrival cohorts of 1995–99 and 2005–11, we find that they seem to perform particularly well relative to similar US citizens.

Our findings differ from studies that consider all immigrants together and find a worsening in the quality of recent cohorts. Once we focus on a homogeneous, if disadvantaged, group of immigrants, such as the Mexicans and Central Americans, we find recent cohorts performing well relative to earlier ones.

We also show that those employed in the construction sector and those living in urban areas seem to start with higher earnings and have stronger earnings progression than the others. Immigrants employed in agriculture, instead, are associated with a larger initial gap, slower convergence, and low levels of education.

When considering ideas that could inspire policy, given the high demand for labor in the construction sector and the good opportunities that it affords immigrants, one could think of visas linked to these types of jobs. Our findings also suggest that there is no basis in the data to claim that new immigrants are of lower labor-market quality relative to earlier ones. Considering specific countries of origin, subsequent cohorts of immigrants have actually performed similarly or better in the United States. As recent cohorts are composed of a larger share of nonwhite and undocumented immigrants, the fact that their relative performance has not worsened may be an encouraging sign in terms of employment opportunities provided by the US labor market up to 2017, the final year of our analysis. However, the poor earnings performance of low-skilled workers, in general, has had a disproportionate impact on Mexican and Central Americans, who are heavily represented in those groups.

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Appendix

Table A1 Age-adjusted relative log weekly earnings of immigrant cohorts from all countries of origin by census cross section

Cohort	1970	1980	1990	2000	2010	2017
1950-59 arrivals	0.037**	0.032**	0.100**	0.147**	...	...
	(0.000)	(0.002)	(0.003)	(0.010)		
1960-64 arrivals	−0.058**	−0.041**	0.046**	0.074**	0.594**	...
	(0.001)	(0.001)	(0.004)	(0.004)	(0.019)	
1965-1969 arrivals	−0.235**	−0.122**	−0.020**	−0.014*	0.196**	...
	(0.001)	(0.000)	(0.003)	(0.005)	(0.010)	
1970-74 arrivals	...	−0.223**	−0.124**	−0.128**	−0.057**	0.161**
		(0.001)	(0.002)	(0.006)	(0.004)	(0.012)
1975-1979 arrivals	...	−0.314**	−0.185**	−0.176**	−0.136**	−0.118**
		(0.001)	(0.000)	(0.005)	(0.004)	(0.007)
1980-84 arrivals	...	...	−0.285**	−0.236**	−0.206**	−0.188**
			(0.001)	(0.002)	(0.006)	(0.010)
1985-1989 arrivals	...	...	−0.331**	−0.269**	−0.260**	−0.218**
			(0.001)	(0.002)	(0.005)	(0.011)
1990-94 arrivals	...	...	...	−0.269**	−0.271**	−0.168**
				(0.003)	(0.003)	(0.010)
1995-1999 arrivals	...	...	...	−0.273**	−0.279**	−0.190**
				(0.004)	(0.001)	(0.006)
2000-04 arrivals	...	...	...	...	−0.349**	−0.224**
					(0.003)	(0.003)
2005-2011 arrivals	...	...	...	...	−0.323**	−0.176**
					(0.004)	(0.003)
2012-17 arrivals	...	...	...	...	...	−0.103**
						(0.005)
N	945,579	2,002,074	2,373,285	2,708,438	1,653,425	557,077

Note: The wage dierentials presented in this table are calculated from regressions that are estimated separately for each cross section, which are identied by the year displayed in the column heading. The dependent variable identies the log weekly earnings of each individual, and the explanatory variables include a third-order polynomial for the age of the individual and a set of xed eects: one for each immigrant cohort, including one (not shown in the table) for the cohort that arrived in the US prior to 1950. The omitted group is comprised of native-born workers such that the coecients in a column each represent a separate cohort's log weekly earnings relative to native-born workers in that survey year. The \2010" cross section is generated from the pooled 2009-11 American Community Surveys. Standard errors in parentheses are clustered at the cohort level.

$^{\dagger}p < 0.1$, $*p < 0.05$, $**p < 0.01$.

Table A2 Population Estimates for Mexican and Central American Immigrant Cohorts

	Survey Year					
Cohort	**1970**	**1980**	**1990**	**2000**	**2010**	**2017**
1965-1969 arrivals	39,467	81,060	72,985	59,455	2,736	. . .
1975-1979 arrivals	. . .	147,640	240,400	267,721	149,135	38,555
1985-1989 arrivals	. . .	. . .	286,304	631,788	486,691	369,182
1995-1999 arrivals	. . .	. . .	. . .	640,099	768,334	653,910
2005-2011 arrivals	. . .	. . .	. . .	. . .	595,641	682,617
Natives	34,734,070	40,998,200	47,947,840	53,784,860	57,155,860	61,335,820

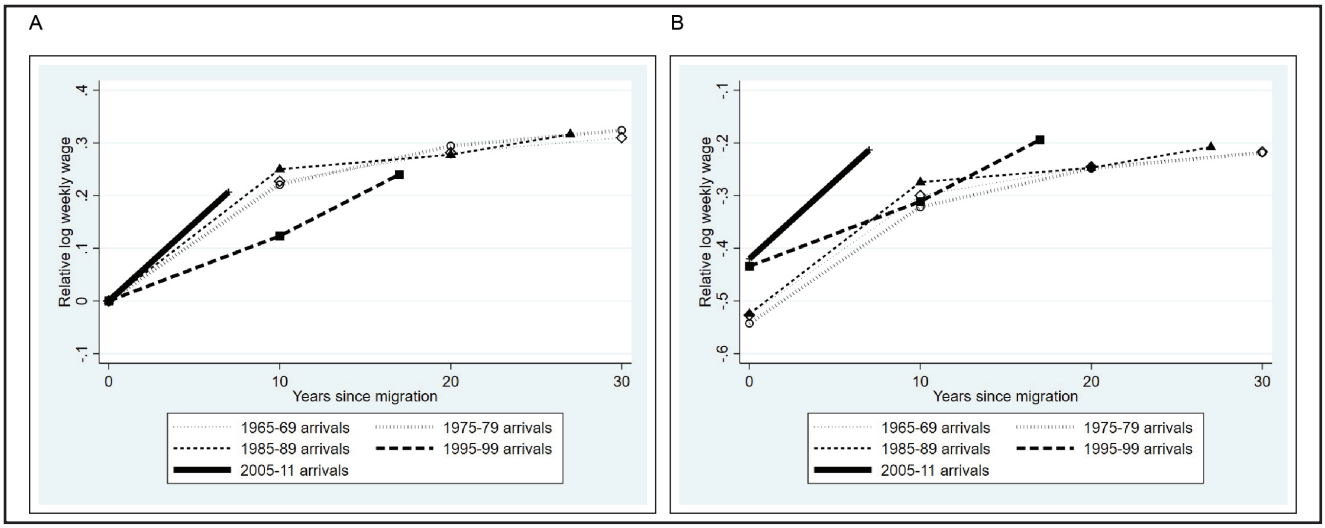
Note: These gures estimate the population of native-born and Mexican and Central American immigrant males between the ages of 25 and 64 who had between 1 and 40 years of potential work experience, were not in school or living in group quarters, and (for immigrants) entered the US at the age of 18 or older.

Table A3 Percentage of workforce composed of Mexican and Central American immigrants by sector and location

	Survey year					
	1970	**1980**	**1990**	**2000**	**2010**	**2017**
	Panel A: *by sector*					
Agriculture and farming	1.5	4.7	10.5	19.6	27.8	23.8
Construction	0.4	1.1	2.8	7.5	13.1	15.1
Manufacturing	0.8	2.7	4.4	8.5	9.7	7.5
Personal and household services	0.7	2.1	4.3	7.5	9.3	7.2
All sectors	0.4	1.1	2.1	4.4	6	5.4
	Panel B: *by location*					
Rural	0.2	0.4	0.6	1.8	2.8	2.5
Urban	0.5	1.5	2.8	5.2	6.9	6.1
Enclave	1.6	4.2	6.9	11.7	13.3	11.5
Nonenclave	0.2	0.2	0.5	1.8	3.3	3.1

Notes: These figures only include US-born, Mexican, and Central American males between the ages of 25 and 64 years who had between 1 years and 40 years of potential work experience, were not in school or living in group quarters, had positive earnings, worked at least 1 week during the survey year, and (for immigrants) entered the United States at the age of 18 years or older. The enclave states used here are based on the share of Mexican and Central American immigrants calculated over the time period 1970–2017. They include California, Texas, Arizona, New Mexico, Nevada, and Illinois.

Figure A1 Age-adjusted convergences for the relative weekly earnings of Mexican and Central American immigrant cohorts, only high school educated or less: **(A)** normalized convergence; **(B)** initial gap and convergence.



Notes: The wage differentials presented in this figure are calculated from regressions that are estimated separately for each cross section. The dependent variable in these regressions identifies the log weekly earnings of each individual, and the explanatory variables include a third-order polynomial for age and a set of fixed effects: one for each immigrant cohort. The omitted group is composed of native-born workers such that the coefficients on the cohort fixed effects represent each cohort's log weekly earnings relative to native-born workers in a given survey year, which are used to construct the data points in the graphs. In Figure A1a, the relative log weekly earnings for each cohort are normalized to zero at the time of entry. In Figure A1a and A1b, all individuals (both natives and immigrants) have had a high school education or less.