

Economic Assimilation of Mexicans and Central Americans in the United States*

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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 wage and employment probability to that of natives with similar age and education. We find that on average they started with a wage gap of 40-45 percent and eliminated half of it in the 20 years after entry. Recent cohorts, arrived after 1995, did better than earlier cohorts in initial gap and convergence. They also started with no employment disadvantage at arrival, and they surpassed the native employment rate within 20 years of arrival.

Keywords: Economic Assimilation, Earnings, Employment, Mexicans and Central Americans, Cohort Analysis

(JEL Codes: J15, J24, J61.)

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I Introduction

The economic assimilation of immigrants, usually measured by economists by how their income and employment status compares to that of similarly skilled natives, is a crucial outcome for immigrants and the native-born population (natives). On one hand, it affects the material and psychological well-being of immigrants. For example, their gains from migration are larger if they achieve earnings comparable to those of the receiving country's residents (Clemens et al. 2016). On the other hand, it may contribute to a more favorable opinion about immigrants, which can reduce discrimination and promote equality (Alesina et al. 2018). The United States has historically been a place where immigrants, attracted by economic opportunities, have been able to overcome initial difficulties and succeed economically (Chiswick 1978). While differences among national groups exist, the narrative relative to immigrants who arrived in the U.S. before the 80's is that most of them were able to assimilate in terms of their ability to earn the same amount as natives. Similarly, the evidence on earlier immigrants suggests that they also assimilated economically and, when compared to similar natives, they did not have a significant initial gap (Abramitsky et al. 2014).

Several studies have pointed out that the recent history of immigrant assimilation has changed. These studies suggest that there has been a deterioration in the initial immigrant-native earnings gap for the cohorts that arrived in the 80's and 90's, which is putting their economic assimilation at risk. Recently, Borjas (2015) argues that not just the initial gap, but the rate of economic assimilation, measured as the average wage convergence of immigrants over time, has been declining for the cohorts that arrived in the 80's and 90's. These studies paint a picture of a progressive increase in the initial earnings gap and a decline in the "catching up" of more recent immigrants. A decline in economic assimilation would be a cause for worry, as it implies that immigrants arrive with a larger initial disadvantage and are unable to make up for it. As different groups of immigrants are present in very

different numbers, depending on the cohort of arrival, the changing wage gap and trajectory of the average immigrant relative to the average native is due, in part, to a composition effect. Borjas (2015) shows that this is partly the case. As migrants of different nationalities have different education levels, age, and initial skills, the changing composition may give a false impression of a deteriorating initial gap and convergence rate. A situation in which immigrants are able to earn wages comparable to similar natives, but where their composition has changed over time in terms of education, age, and place of origin is very different from a scenario in which all immigrants are increasingly lagging behind at arrival and whose assimilation rates are declining. The first scenario implies stable levels of assimilation for each group even if the composition of immigrants is changing. The second implies a decrease in economic assimilation, which could lead to discrimination and create barriers to immigrant participation in the labor market. The latter scenario would call for an in-depth analysis of the causes of such deterioration.

In this paper, we focus on Mexicans and Central Americans, and we update the existing picture of assimilation to very recent cohorts. Mexicans and Central Americans represent the largest, and the least economically affluent, group of immigrants in the U.S., hence a documentation of their recent labor and income dynamics is important. We follow the labor market assimilation of different arrival cohorts over time, starting with the cohort that arrived between 1965 and 1969 and ending with the one that arrived between 2005 and 2011. We first ask whether these immigrants, who are usually characterized as having low educational attainment and are often employed in manual and low-paying jobs, have performed poorly in terms of their employment probability and earnings *relative to natives of the same age, and then relative to natives of the same age and education*. By focusing on this group, we zoom into the economic assimilation of low skilled immigrants, and we examine whether it has deteriorated over time. The second contribution to this literature is that we look at the employment probability in addition to earnings. Mexicans and Central Americans have been employed in many low-skilled jobs, and the general perception is that

they work at high rates. Rarely, however, has the employment probability been the focus of analysis in the United States. By following various cohorts of arrival constructed with the U.S. Census and American Community Survey (ACS) data, we also examine how large the attrition of each cohort is, which is often attributed to return migration.

While we do not identify causal determinants of economic assimilation, we determine whether the sector of employment, the location, and the local economic environment are related to the initial gap and assimilation rate of these immigrants. We also discuss the potential role of the changing composition, in terms of education and language proficiency, of the more recent cohorts. Finally, for comparison, we analyze the earnings convergence behavior of two other immigrant groups, which have been quite different from Mexicans and Central Americans in terms of skills, and whose numbers have been growing at a faster rate in the last decade, namely the Chinese and Indians.

Our analysis uncovers four main findings. First, upon arrival, Mexicans and Central Americans had an initial earnings gap of about 40 percent and only cut it in half during the first two to three decades in the U.S., with not much progress after that. Second, we find that both the initial gap and speed of convergence has not worsened for recent cohorts of arrival. In fact, the most recent cohorts (the ones that arrived between 1995 and 1999 and between 2005 and 2011) have fared quite well relative to similar natives both in terms of the initial gap and in terms of convergence. However, given that natives at low levels of education have done poorly in the U.S. labor market, and because Mexicans and Central Americans tend to have relatively low educational attainment, recent Mexicans and Central Americans have not performed very strongly overall in terms of earnings.

Third, when looking at the employment probability, the picture is more positive. Recent Mexicans and Central Americans have almost no employment rate gap at arrival. In addition, they have consistently surpassed U.S. natives in terms of their likelihood of being employed. Moreover, the employment probability of this immigrant group has become higher for recent cohorts relative to previous ones. This superior performance of low skilled immigrants in

terms of their employment rate distinguishes the U.S. from Europe and most other countries where the reverse is true (see Battisti et al. 2018). When decomposing Mexicans and Central Americans by their sector of employment, we find that the initial gaps are smaller and the assimilation rates are faster for immigrants in the construction sector, while their performance is the worst in the agricultural sector. We also find a somewhat smaller initial earnings gap in urban (rather than rural) areas. By looking at the evolution of observable characteristics of recent arrival cohorts, especially the ones that arrived between 1995 and 1999 and between 2005 and 2011, we notice that they are comparable to previous cohorts in terms of the share of Central Americans and English language skills. Although they have a slightly higher education level and larger share of nonwhite individuals, these differences do not seem particularly large and are unlikely to drive the significant improvement in the performance of the most recent cohorts.

Finally, by analyzing the other two largest groups of immigrants in the U.S., the Chinese and Indians, who show a much higher average educational attainment than Mexicans and Central Americans, we see that the relative performance of the most recent cohorts (i.e., the ones that arrived between 1995 and 1999 and between 2005 and 2011) was better than the performance of those who arrived in the 70's and 80's. We conclude that the impression of a worse initial gap and declining convergence rate presented in Borjas (2015) is likely an artifact of the changing composition of immigrants rather than a deterioration in the actual assimilation of immigrants.

The rest of the paper is developed as follows. Section II frames this paper in the existing literature on assimilation of immigrants. Section III introduces the data and some aggregate statistics. Section IV covers the empirical models we estimate. Section V describes the main results on the earnings and employment rate assimilation of Mexican and Central American immigrants. Section VI describes some differences between immigrants by sector of employment and location. Section VII analyzes the economic assimilation of the other two largest groups of immigrants, the Chinese and Indians, and Section VIII provides some

concluding remarks.

II Economic Assimilation of Immigrants in the Literature

Since the seminal work of George Borjas (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 gap and changes in assimilation rates across cohorts.

However, even the cohort analysis must be considered with caution. As subsequent cohorts of immigrants in the U.S. have been quite different in terms of their composition (by origin and education), the initial average gap in earnings has changed, and the average convergence in earnings may have varied over time due to changes in composition. Typically, this literature looks at the aggregate set of immigrants and compares them to the average native. If the composition of immigrants and the performance of different groups of natives changes over time, wage dynamics relative to all workers of a certain skill group can be confounded with changes in assimilation rates. Moreover, as the cohort approach does not use longitudinal data, changes in the cohort composition due to attrition from the return migration of individuals to their countries of origin can also be a relevant concern. Using longitudinal data from SIPP (Survey of Income and Program Participation) linked to tax records, Villareal and Tamborini (2018) show that recent arrival cohorts of immigrants 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 can actually follow individuals over time, capturing more closely the individual wage dy-

namics. However, the small size of their sample, the fact that they consider all immigrant groups together, and the fact that they do not compare immigrants to natives of a similar age and education makes their study less informative about the economic assimilation of economically disadvantaged groups of immigrants, such as those that are considered in our analysis.

In this paper we use an approach similar to Borjas (2015), but we focus on a specific and more homogeneous group of immigrants: Mexicans and Central Americans. Moreover, we focus on a comparison with similarly aged and educated natives so that the income and employment dynamics of native groups do not get confused with changes in assimilation rates. While the recent literature on immigrants' income convergence in the U.S. has raised questions about the ability of recent cohorts to assimilate, the literature on the assimilation of immigrants in Europe, which is more recent, has emphasized the employment gap of immigrants, especially refugees, and their slow convergence.

Evidence from the U.K. (Clark and Lindley 2006), Norway (Bratsberg et al. 2017), and from a set of 13 E.U. 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 source countries. While some convergence is usually observed, it is far from complete even after 20 years. Several recent papers have looked at what policies have been successful in promoting a more complete and rapid convergence. Using causal inference through regression discontinuity and quasi-experimental 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, the recent literature expresses concern about the assimilation of recent immigrants, especially refugees in Europe (Fasani et al. 2018). Our paper looks at the economic assimilation of the most vulnerable group of immigrants in the U.S. (Mexicans and Central Americans) and examines whether

their initial gap has widened and if their convergence rates have slowed down over time. While we will not provide causal evidence on the effect of policies, we will identify some factors, such as occupation and location, as important correlates of the economic assimilation of this group, and we will discuss characteristics of immigrants as potentially correlated with their assimilation.

III Data and Earnings Gap-Convergence for All Immigrants

The data we use were obtained from IPUMS (Ruggles et al. 2019) and contain samples similar to those used in Borjas (2015). However, we update our analysis to the year 2017 and document for the first time assimilation in the most recent seven years for which IPUMS data are available. These data include the decennial U.S. Census samples spanning the period between 1970 and 2000, as well as the pooled 2009-2011 and the 2017 ACS samples¹.

The sample of individuals used in the earnings analysis only includes males between the ages of 25 and 64 who have between 1 and 40 years of potential work experience, worked at least one week during the previous year, were not living in group quarters or attending school at the time of the survey, and arrived in the U.S. at age 18 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.² We classify individuals as employed if they

¹Our samples differ slightly from those used by Borjas (2015) because of errata in the 2009-2011 ACS sample that had not been corrected at the time of Borjas (2015)'s analysis. In particular, on July 1, 2015 (which is after the date that Borjas (2015) had conducted his analysis), IPUMS adjusted the CPI on the source variables (*inwage* and *incbus00*) that are used to construct the main outcome variable (*incearn*) used in the analysis. In addition, on May 25th, 2017, 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 .01) to those reported by Borjas (2015), so we are confident that the updated samples we use will reflect estimates that are comparable to his analysis.

²We use the terms “employment rate” and “employment probability” interchangeably throughout this paper.

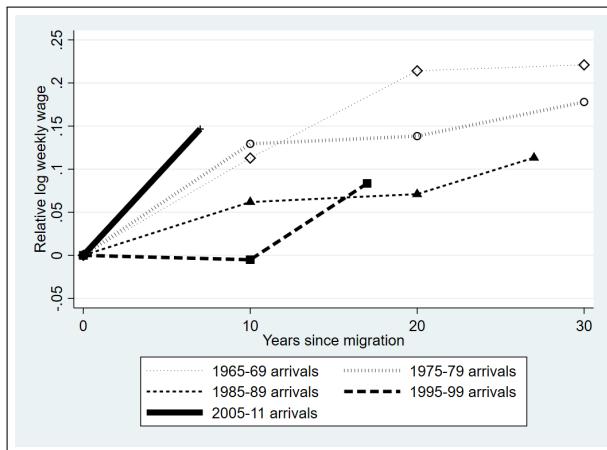
worked at least one week in the previous year.

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, U.S. city average for all items for all urban consumers.”³

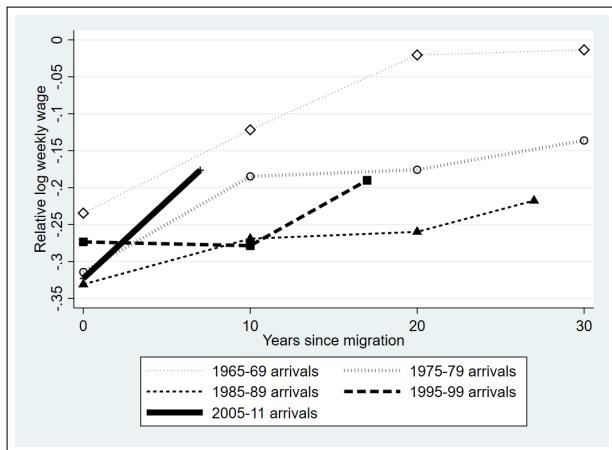
Figure 1 and Table 1 update the stylized facts shown in Borjas (2015) relative to all immigrants, adding in the cohort that arrived in 2005-2011 and expanding the sample to 2017. Table 1 shows the estimates of the log earning gap relative to U.S. natives in the same age group for each cohort of entry in each Census year 1970, 1980, 1990, 2000, 2010, and 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, connecting each entry cohort over 30 years of stay in the U.S. We first standardize the initial gap to 0 in Panel A

Figure 1 Age-Adjusted Convergence for the Relative Weekly Earnings of Immigrant Cohorts from All Countries of Origin

A: Normalized Convergence



B: Initial Gap and Convergence



Note: 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 comprised 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 1A, the relative log weekly earnings for each cohort is normalized to zero at the time of the entry.

³This 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 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.

Table 1 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** (0.000)	0.032** (0.002)	0.100** (0.003)	0.147** (0.010)	...	...
1960-64 arrivals	-0.058** (0.001)	-0.041** (0.001)	0.046** (0.004)	0.074** (0.004)	0.594** (0.019)	...
1965-1969 arrivals	-0.235** (0.001)	-0.122** (0.000)	-0.020** (0.003)	-0.014* (0.005)	0.196** (0.010)	...
1970-74 arrivals	...	-0.223** (0.001)	-0.124** (0.002)	-0.128** (0.006)	-0.057** (0.004)	0.161** (0.012)
1975-1979 arrivals	...	-0.314** (0.001)	-0.185** (0.000)	-0.176** (0.005)	-0.136** (0.004)	-0.118** (0.007)
1980-84 arrivals	...	...	-0.285** (0.001)	-0.236** (0.002)	-0.206** (0.006)	-0.188** (0.010)
1985-1989 arrivals	...	...	-0.331** (0.001)	-0.269** (0.002)	-0.260** (0.005)	-0.218** (0.011)
1990-94 arrivals	...	...	...	-0.269** (0.003)	-0.271** (0.003)	-0.168** (0.010)
1995-1999 arrivals	...	...	...	-0.273** (0.004)	-0.279** (0.001)	-0.190** (0.006)
2000-04 arrivals	...	...	...	...	-0.349** (0.003)	-0.224** (0.003)
2005-2011 arrivals	...	...	...	...	-0.323** (0.004)	-0.176** (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 differentials presented in this table are calculated from regressions that are estimated separately for each cross section, which are identified by the year displayed in the column heading. The dependent variable identifies 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 fixed effects: one for each immigrant cohort, including one (not shown in the table) for the cohort that arrived in the U.S. prior to 1950. The omitted group is comprised of native-born workers such that the coefficients 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. [†] $p < .1$, * $p < .05$, ** $p < .01$

and then show the actual estimated initial gap in log points in Panel B. These initial graphs and table provide a benchmark for the average immigrant in a cohort in terms of the earnings gap upon arrival to the U.S. and the average convergence rate over time. Panel B of Figure 1 also reveals that there is a progressively larger initial gap and slower convergence rate for more recent cohorts. In particular, the cohorts that arrived between 1985 and 1989 and

between 1995 and 1999, which are the two most recent cohorts considered in Borjas (2015), show large initial gaps and slow convergence rates relative to the previous two cohorts. These figures, however, compare cohorts of immigrants that changed drastically in country of origin and education levels over time. That is, these results compare the average immigrant to the average U.S. 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.

IV Methodology and Empirical Specification

In order to estimate the rate of wage and employment convergence for Mexicans and Central Americans, we start by estimating the following model separately for each cross section (τ) while restricting the sample to include only native-born and immigrant workers from Mexico and Central America:

$$Y_{\ell\tau} = \beta_0 + \boldsymbol{\beta} \mathbf{C}_\ell + \boldsymbol{\Gamma} \mathbf{X}_{\ell\tau} + \epsilon_{\ell\tau}. \quad (1)$$

In equation (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 individual ℓ measured in year (cross section) τ , $Emp_{\ell\tau}$ is a dummy variable that identifies whether an individual was employed during the previous year, $\mathbf{X}_{\ell\tau}$ is a third-order polynomial for the individual's age, \mathbf{C}_ℓ 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.⁴ With this notation and convention, the coefficients $\boldsymbol{\beta}$ for the vector of fixed effects \mathbf{C}_ℓ capture the log weekly earnings or employment rate differential for each immigrant cohort group relative to native workers of the same age after allowing for nonlinear age effects.⁵

⁴We define employed as working at least one week during the previous year.

⁵All regressions that use equation (1) are weighted by the individual sample weights using the variable

Then we pool the information in all cross sections and allow for the comparison of different cohorts of immigrants to similarly aged and educated natives. We estimate the following model, including natives and immigrants from Mexico and Central America:

$$Y_{\ell\tau} = \beta_0 + \boldsymbol{\Gamma} \mathbf{X}_{\ell\tau} + \boldsymbol{\alpha} \mathbf{y}_{\ell\tau} + \boldsymbol{\beta} \mathbf{C}_\ell + \boldsymbol{\theta} (\mathbf{y}_{\ell\tau} \mathbf{C}_\ell) + \mathbf{S}_{\ell\tau} + \epsilon_{\ell\tau}. \quad (2)$$

In equation (2), $\mathbf{X}_{\ell\tau}$ is third order polynomial for the age of each individual, $\mathbf{y}_{\ell\tau}$ is a third order polynomial that identifies the number of years in the U.S. capturing the potentially nonlinear effect of U.S. work experience, \mathbf{C}_ℓ is a vector of dummy variables identifying each immigrant cohort and $\mathbf{y}_{\ell\tau} \mathbf{C}_\ell$ identifies a cohort-specific additional experience trend. The term $\mathbf{S}_{\ell\tau}$ is a vector of age-education-survey year fixed effects.⁶ The introduction of such a rich set of skill-by-year effects implies that we are comparing immigrants to natives of the same age in the same age-education group. The estimated coefficients $\boldsymbol{\beta}$ 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 of immigrants relative to natives.⁷⁸

All the tables that show results from equation (2) report the cohort-of-arrival specific initial gap and the 10-year estimated relative growth. The coefficients are estimated first without the age-education-year effects ($\mathbf{S}_{\ell\tau}$), so as to capture the earning gap and growth of Mexicans and Central Americans relative to the average native of the same age, and then with the set of age-education-year fixed effects ($\mathbf{S}_{\ell\tau}$), so as to capture the gap and convergence relative to natives of a similar age and education level. The difference between those two specifications captures the part of the gap and convergence explained simply by the composition of immigrants across education groups and the different performance of

⁶perwt.”

⁷We include four education groups (high school dropouts, high school graduate, some college, and college diploma) and eight age groups broken into five year intervals between the ages of 25 and 64 years old.

⁸Our model deviates from the one used in Borjas (2015) by constraining the age effects to be equal for natives and immigrants. This allows us to conveniently compare the results from equation (2) to equation (1), which uses the same constraint for age.

⁸All regressions that use equation (2) are weighted by the variable “perwt” divided by the population of the cross section that the observation belongs to.

those groups over time, common to natives and immigrants.

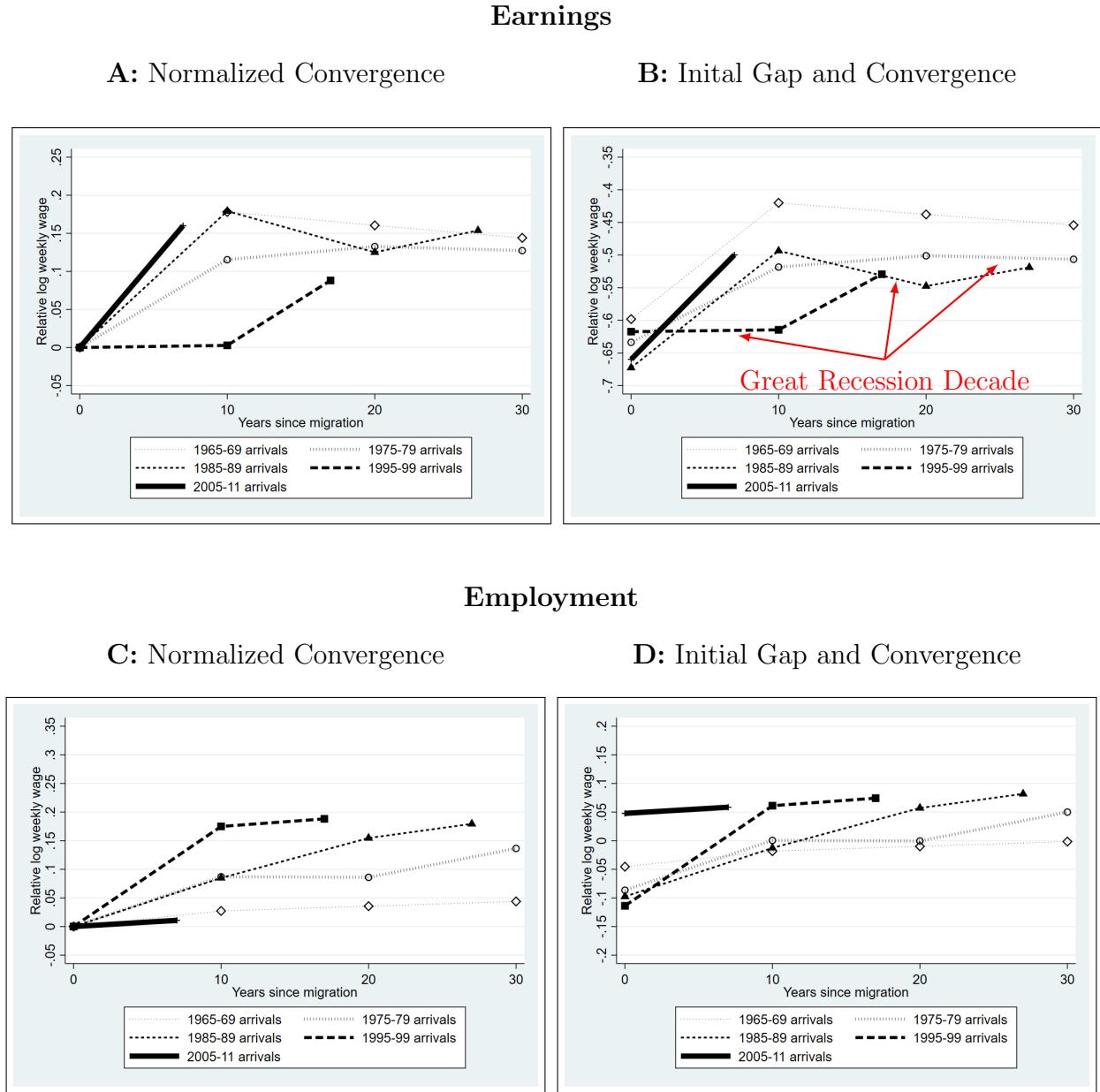
V Empirical Findings: Earnings and Employment Convergence for Mexicans and Central Americans

V.I Adjusted Earnings Gaps and Convergence

Figure 2 below shows the convergence of log earnings for Mexicans and Central Americans relative to U.S. natives of a similar age, either normalizing the initial gap to 0 (Panel A) or starting from the estimated initial gap (Panel B). This figure is generated from the β coefficients in equation (1) above. We use dotted lines for the early cohorts, dashed for the intermediate cohorts, and a solid line for the most recent cohort, and we emphasize each subsequent cohort with a line that increases in thickness. Several things are worth noting. First, while the initial earnings gap is somewhat smaller for the very early cohort (1965-69), the difference is small, and the convergence rate seems roughly comparable across cohorts. Second, the initial gap is substantial (-60 to -70 log points), and it is only reduced by 15 to 20 log points in the first twenty years. Third, the great recession seems to have produced one lost decade of convergence for all cohorts. In Panel B we indicate which segments in the convergence of three cohorts coincide with the period 2000-2010, which is when the great recession took place. Each of those segments is either flat or downward sloping, implying a zero or negative convergence rate in that decade for all cohorts. Finally, for the most recent cohort that arrived between 2005 and 2011, the convergence rate seems to be quite good, with an initial gap comparable to the cohort that arrived in the 70's and a more rapid rate of convergence than any of the previous cohorts. In fact, this cohort closed the earnings gap by 17 log points within 10 years. It may be early to evaluate the economic success of this cohort, but these results are encouraging.

Although Figure 2 presents the relative gap and convergence over time, it does not

Figure 2 Age-Adjusted Convergence for the Relative Weekly Earnings and Employment Rate of Mexican and Central American Cohorts

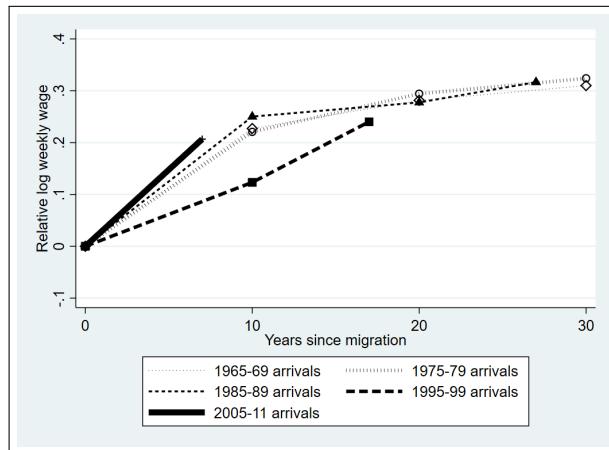


Note: The log weekly earnings and employment rate differentials presented in this figure are calculated from regressions that are estimated separately for each cross section. The dependent variable in the earnings regressions identifies the log weekly earnings of each individual. The dependent variable in the employment regressions identifies whether each individual was employed for at least one 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 is comprised of native-born workers such that the coefficients on the cohort fixed effects represent each cohort's employment rate relative to native-born workers in a given survey year, which are used to construct the data points in the graphs. In Figure 2A, the relative log weekly earnings for each cohort is normalized to zero at the time of entry. In Figure 2C, the relative employment rate for each cohort is normalized to zero at the time of the entry.

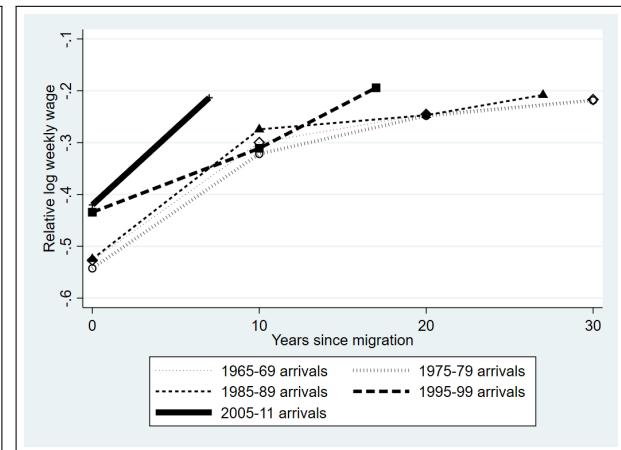
account for the fact that the population of Mexicans and Central Americans in the U.S. has a large concentration of individuals with relatively low educational attainment. If the wages of the less educated have not grown at a rate comparable to the average native-born worker, there can be an appearance of slower assimilation while the reason for slow convergence to the mean could result from increased earnings inequality for both natives and immigrants. In order to clean our analysis from this issue, in Table 2 below, we show a comparison of the initial earnings gap and ten year relative earnings growth of each cohort. We first compare immigrants to the average U.S. native of similar age in column 1 and then compare immigrants to U.S. natives with the same age and education level in column 2, reflecting the inclusion of the age-education-year fixed effects in equation (2). The table shows three important differences between columns 1 and 2. First, relative to column 1, the results in column 2 show initial gaps that are reduced by one fourth to one third for each cohort. Most cohorts have a gap of 42-43 log points (about 34-34 percent) when compared to similarly

Figure 3 Age-Adjusted Convergence for the Relative Weekly Earnings of Mexican and Central American Cohorts, Only High School Educated or Less

A: Normalized Convergence



B: Initial Gap and Convergence



Note: 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 comprised 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 3A, the relative log weekly earnings for each cohort is normalized to zero at the time of the entry. In Figures 3A and 3B, all individuals (both native and immigrant) have a high-school education or less.

Table 2 Age-Education-Adjusted Relative Weekly Earnings of
Mexicans and Central American Immigrants:
Initial Gap and Convergence After First 10 Years

	(1)	(2)
Panel A		
<i>Relative Entry Wage</i>		
1965-1969 arrivals	-0.523** (0.0439)	-0.449** (0.0283)
1975-1979 arrivals	-0.626** (0.0418)	-0.437** (0.0284)
1985-1989 arrivals	-0.670** (0.0463)	-0.445** (0.0342)
1995-1999 arrivals	-0.674** (0.0225)	-0.423** (0.0262)
2005-2011 arrivals	-0.732** (0.0159)	-0.427** (0.0272)
2012-17 arrivals	-0.530** (0.00379)	-0.237** (0.0260)
Panel B		
<i>Relative Wage Growth in First 10 Years</i>		
1965-1969 arrivals	0.081 [0.202]	0.221** [.000]
1975-1979 arrivals	0.088 [0.162]	0.216** [0.001]
1985-1989 arrivals	0.109 [0.102]	0.198** [0.002]
1995-1999 arrivals	0.099* [0.031]	0.181** [0.000]
2005-2011 arrivals	0.189** [0.000]	0.239** [0.000]
Basic Specification	X	—
Age-Educ-Year FE	—	X
N	9,669,594	9,669,594

Note: The wage differentials presented in Panel A are generated from regressions that are ran 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 immigrants have spent in the U.S., a set of cohort fixed effects, and a set of cohort fixed effects that are each interacted with a continuous variable identifying the number of years that immigrants have spent in the U.S. 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 fixed effects. The omitted group is comprised 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. Standard errors are in parentheses. P-values are in brackets. [†] $p < .1$, * $p < .05$, ** $p < .01$

educated natives (see column 2). Second, the convergence is faster, equal to 20 log points (about 19 percent) in the first decade for most cohorts. Third, the two most recent cohorts (the ones that arrived between 2005 and 2011 and between 2012 and 2017) seem to be performing quite well. The initial gap for the 2005-11 cohort was about 40 log points, but it was reduced by half within 10 years, while the 2012-17 cohort only had an initial gap of 24 log points. These encouraging findings are also confirmed in Figure 3, which shows the convergence in Panel A and the initial gap and convergence in Panel B while only considering Mexicans, Central Americans, and natives with a high school education or less. This figure reveals that when Mexicans and Central Americans are compared to similarly educated natives, the gap is significantly smaller.

V.II Employment Rate Gaps and Convergence

Mexicans and Central Americans show a substantial initial earnings gap, albeit with convergence and no deterioration for the most recent cohorts. However, a different picture is painted by analyzing the employment rate gap. Panels C and D of Figure 2 show the convergence and initial gap 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 their marginal attachment to the labor market. This group of immigrants has a high employment rate, and after 10-20 years in the U.S., their employment rate consistently exceeds that of similarly aged natives (the graphs do not even correct for schooling). What is also true is that, in terms of the relative employment rate, the performance of recent cohorts has improved, with the last two cohorts surpassing natives within 10 years. This phenomenon is consistent with the idea that low skilled immigrants have taken a large number of manual and physically demanding jobs, whose job creation has been relatively strong in the recent decades (Basso et al. 2017). The flexible U.S. labor market has employed many immigrants, although at low wages. This situation is quite different from what has occurred with refugees in Europe, where employment rates have remained quite low due, in part, to the more gen-

erous support of governments but also because it is harder to gain access to labor markets (Fasani et al. 2018). While the U.S. labor market employs low-skilled immigrants at a high rate, the fact that they have a significant wage penalty, coupled with 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.

V.III How Large is Return Migration?

The cohort method we adopt has been used as the main tool of analysis of immigrant assimilation, and the U.S. Census and ACS data have been the main source for this type of analysis. However, we need to emphasize two important caveats about these data. First, if there is return migration to the source country, a cohort may change size and composition over time. If return migration is selective, part of the earnings convergence may be driven by poorly performing immigrants returning to their home country. Second, there may be some recall error in the arrival time, which would introduce measurement error in the size and composition of each cohort. Table 3 shows the population of each cohort used in our empirical analysis, which we can follow along the rows of the table. Notice that the cohorts we use for the labor market analysis include people 25 to 64 years old, not in group quarters, and includes all Mexicans and Central Americans who enter the U.S. at 18 or older. The change in size of the cohort in the first decade after arrival is always positive, and it is due to the people who arrived at age 18-24 and enter the considered age group. After that, notice that the cohort size shrinks, and this attrition is largely due to return migration and, to a lesser extent, to aging out of the group. 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 cohort size 30 years after arrival can be substantial (comparing the number after 30 years with that after 10 years). 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.

Table 3 Population Estimates for Mexican and Central American Immigrant Cohorts

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

Note: These figures 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 U.S. at the age of 18 or older.

VI The Role of Sector and Location

VI.I Convergence by Sector of Employment

It is difficult to produce causal evidence that identifies which economic conditions or policies promote rapid 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 sectors and locations where Mexicans and Central Americans are highly concentrated, we can determine whether the choice of sector or location is correlated with better outcomes relative to similar natives. Specifically, we analyze whether being located in an urban area or in a state with a large share of Mexicans and Central Americans (enclaves) is associated with an earnings advantage or disadvantage. Different sectors may provide different opportunities for upward mobility, and some specific urban locations are associated with more rapid earnings growth and stronger inter-generational mobility of natives (Chetty and Hendren 2018; Moretti 2013). As a result, certain locations may possibly generate benefits for immigrants, too.

Table 4 shows the proportion of Mexicans and Central Americans in four sectors of the economy, the proportion residing in urban and rural locations, and the proportion residing in enclave and non-enclave states. We define enclave states as the states with the largest

percentage of Mexicans and Central Americans in the population calculated over the period 1970 to 2017. These states include California, Texas, Arizona, New Mexico, Nevada, and Illinois. In each of the sectors chosen, the immigrant group is over-represented relative to its average presence in the labor force. In particular, in the agriculture (respectively construction) sector, 23.8% (respectively 15.1%) of the labor force was Mexican or Central American in 2017. These statistics imply a very high degree of over-representation because Mexicans and Central Americans were only 5.4% of the overall labor force during that year. The other two sectors we consider, manufacturing and personal and household services, include a larger than average share of Mexicans and Central Americans but not by much. The growth of the share of Mexicans and Central Americans in the workforce, especially in agriculture (respectively construction), has also been substantial, starting at 1.5% (respectively 0.4%) in 1970 and increasing to 23.8% (respectively 15.1%) in 2017. Panel B of the table reveals that Mexicans and Central Americans are more concentrated in urban areas and enclave

Table 4 Percent of Workforce Comprised 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	6.0	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
Non-Enclave	0.2	0.2	0.5	1.8	3.3	3.1

Note: These figures only include U.S.-born, Mexican, and Central American males between the age of 25 and 64 who had between 1 and 40 years of potential work experience, were not in school or living in group quarters, had positive earnings, worked at least one week during the survey year, and (for immigrants) entered the U.S. at the age of 18 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.

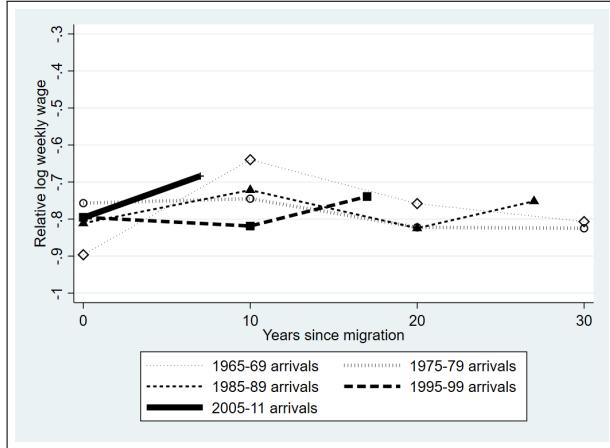
states (by definition).

The earnings gap and convergence of Mexicans and Central Americans employed in different sectors relative to natives of the same age is shown in Figure 4, where each panel includes only Mexicans and Central Americans working in one specific sector and natives in all sectors. These graphs compare the average earnings of Mexicans and Central Americans in a sector to the average American of the same age. The sectors we consider represent the ones with the largest Mexican and Central American presence. Each panel of the figure shows the initial earnings gap and 30-year convergence for each cohort starting with the one that arrived between 1965 and 1969 and ending with the one that arrived between 2005 and 2011.

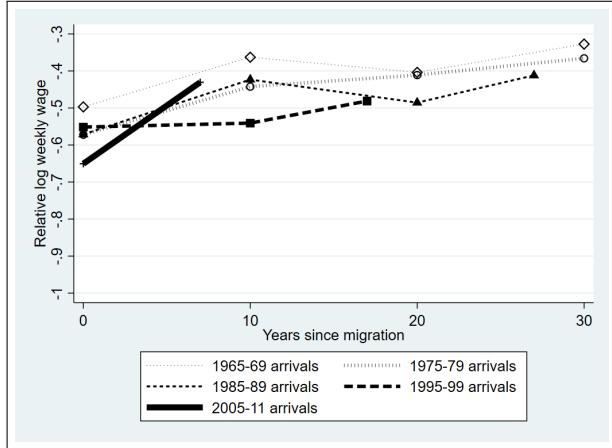
Our analysis reveals three main findings. First, within a sector, both the initial earnings gap and convergence rates for each cohort have not changed systematically over time. It is also important to note that this is a “within sector” convergence, so part of the aggregate convergence may result from Mexicans and Central Americans changing sector of work (say from agriculture to construction), which our analysis does not resolve. Second, agriculture is the sector with the largest initial earnings gap (about 80 log points, corresponding to a stunning 55 percent gap) and least rapid (almost insignificant) convergence. These results are not surprising because the agricultural sector has a negative wage differential with most other sectors, and agricultural workers do not experience much earnings growth over a career. Mexicans and Central Americans in the personal and household services sector do not perform much better than those in the agricultural sector. Third, Mexicans and Central Americans in the construction sector show a smaller initial earnings gap and a more rapid and persistent convergence rate over thirty years, much better any other sector. An initial gap of 60 log points is reduced to around 30 log points after 30 years. It is important to keep in mind that these are gaps relative to the average U.S. native of a similar age. If we compare Mexicans and Central Americans to similarly aged and educated natives, as we do in Table 5, the results become even more striking.

Figure 4 Age-Adjusted Convergence for the Relative Weekly Earnings of Mexican and Central American Cohorts by Sector: Initial Gap and Convergence

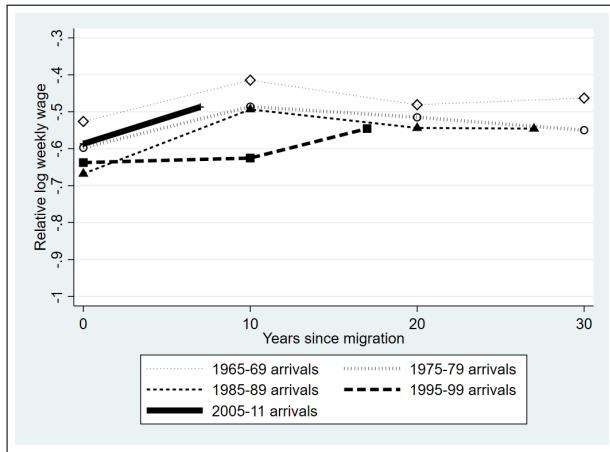
A: Agriculture and Farming



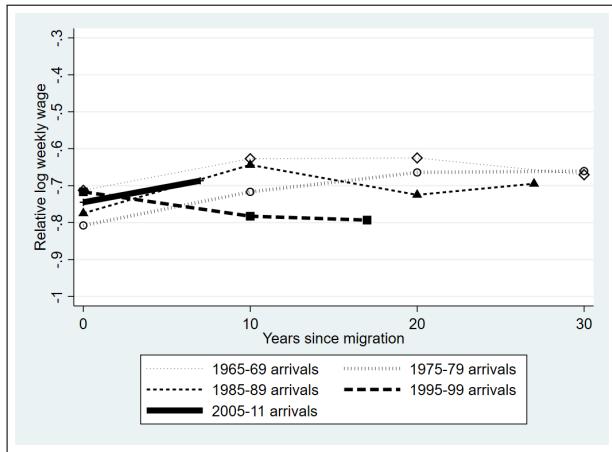
B: Construction



C: Manufacturing



D: Personal and Household Services



Note: The wage differentials presented 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 is comprised 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.

Table 5 Age-Education-Adjusted Relative Weekly Earnings of
Mexicans and Central American Immigrants by Sector:
Initial Gap and Convergence After First 10 Years

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

Note: The wage differentials presented in Panel A are generated from regressions that are ran 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 immigrants have spent in the U.S., a set of cohort fixed effects, and a set of cohort fixed effects that are each interacted with a continuous variable identifying the number of years that immigrants have spent in the U.S. 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 fixed effects. The omitted group is comprised 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. Standard errors are in parentheses. P-values are in brackets. † $p < .1$, * $p < .05$, ** $p < .01$

Table 5 shows a comparison of the initial log earnings gap (Panel A) and relative earnings growth (Panel B), by sector, when comparing Mexicans and Central Americans to similarly aged natives (columns 1,3,5 and 7) and when adjusting for education (columns 2,4,6 and 8). The results in Table 5 confirm the advantage of Mexicans and Central Americans in the construction sector (lagging only 32-33 log points at arrival and catching up by 20 log points in the first decade) and their disadvantage in the agricultural sector (lagging 50 log points at arrival and catching up only by 11-12 log points in the first decade). After controlling for education, Mexicans and Central Americans in manufacturing also seem to perform relatively well, with a high relative growth rate in the first decade (20-25 log points). The performance of Mexican and Central American agricultural workers is significantly improved when they are compared to similarly educated natives, which is a sign that the negative selection of workers in agriculture and the slow earnings growth for the low educated, which is true for natives too, explains a large part of the under-performance of workers in that sector. Still, the agricultural sector is the one with largest initial earnings gap and the slowest convergence even relative to similarly aged and educated natives.

VII.II Convergence in Rural and Urban Areas

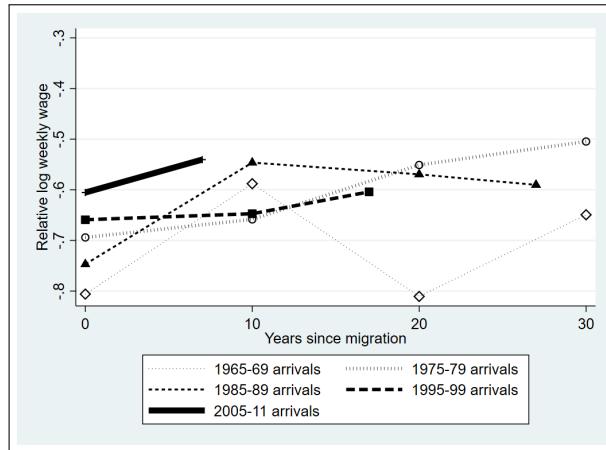
Despite their heavy presence in agricultural jobs, the concentration of Mexicans and Central Americans is larger in urban areas because most jobs are non-agricultural. Therefore, it is useful to see if urban location is associated with better wage performance relative to natives. Figure 5 shows the initial earnings gap and convergence relative to similarly aged natives for urban and rural areas, separately. The figure reveals that the initial earnings gap is smaller for those living in urban areas, but the convergence does not seem significantly different between the two graphs in the figure. Except for the 1965-69 rural cohort, which was small and shows a rather noisy estimate of convergence, the other cohorts in both rural and urban areas seem to perform similarly over time in terms of relative earnings growth.

Table 6 shows the initial earnings gap and convergence for rural and urban Mexicans

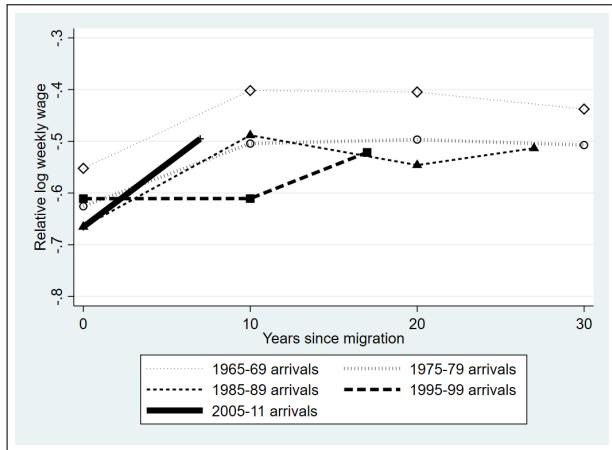
and Central Americans when we compare them to similarly aged and then to similarly aged and educated natives. The results confirm a smaller initial earnings gap for those living in urban areas but a similar rate of earnings growth. Urban location may provide some initial advantage, but it is not so clear that it produces a sustained advantage over time. It would be interesting to separate urban locations between fast growing and declining ones as the wage dynamics may be very different among them (as noted by Moretti 2013) to see if the “divergence” between those two types of urban areas is also reflected in the economic convergence of Mexican and Central American immigrants.

Figure 5 Age-Adjusted Convergence for the Relative Weekly Earnings of Mexican and Central American Cohorts by Location: Initial Gap and Convergence

A: Rural



B: Urban



Note: The wage differentials presented 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 comprised 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.

Table 6 Age-Education-Adjusted Relative Weekly Earnings of Mexicans and Central American Immigrants by Location:
Initial Gap and Convergence After First 10 Years

	Rural (1)	Rural (2)	Urban (3)	Urban (4)	Enclave (5)	Enclave (6)	Non-Enclave (7)	Non-Enclave (8)	
Panel A									
<i>Relative Entry Wage</i>									
1965-1969 arrivals	-0.720** (0.0433)	-0.625** (0.0298)	-0.481** (0.0449)	-0.413** (0.0291)	-0.536** (0.054)	-0.448** (0.035)	-0.494** (0.024)	-0.452** (0.017)	
1975-1979 arrivals	-0.722** (0.0451)	-0.521** (0.0306)	-0.612** (0.0422)	-0.425** (0.0289)	-0.650** (0.043)	-0.450** (0.029)	-0.480** (0.040)	-0.362** (0.028)	
1985-1989 arrivals	-0.714** (0.0514)	-0.447** (0.0357)	-0.663** (0.0466)	-0.441** (0.0344)	-0.698** (0.048)	-0.461** (0.035)	-0.581** (0.041)	-0.379** (0.029)	
1995-1999 arrivals	-0.704** (0.0229)	-0.406** (0.0169)	-0.668** (0.0228)	-0.419** (0.0249)	-0.705** (0.025)	-0.445** (0.023)	-0.629** (0.017)	-0.369** (0.015)	
2005-2011 arrivals	-0.647** (0.0152)	-0.320** (0.0124)	-0.743** (0.0163)	-0.434** (0.0255)	-0.751** (0.017)	-0.434** (0.019)	-0.711** (0.012)	-0.393** (0.019)	
2012-17 arrivals	-0.512** (0.00284)	-0.147** (0.00513)	-0.531** (0.00363)	-0.243** (0.0236)	-0.570** (0.003)	-0.270** (0.015)	-0.484** (0.002)	-0.176** (0.018)	
N	9,112,492	9,112,492	9,331,676	9,331,676	N	9,588,212	9,588,212	9,465,090	9,465,090
Panel B									
<i>Relative Wage Growth in First 10 Years</i>									
1965-1969 arrivals	0.047 [0.476]	0.207** [0.000]	0.073 [0.257]	0.213** [0.000]	0.086 [0.224]	0.226** [0.000]	0.096† [0.057]	0.208** [0.000]	
1975-1979 arrivals	0.093 [0.188]	0.232** [0.000]	0.084 [0.183]	0.212** [0.000]	0.103 [0.124]	0.228** [0.000]	0.024 [0.653]	0.167** [0.000]	
1985-1989 arrivals	0.097 [0.184]	0.193** [0.001]	0.107 [0.110]	0.197** [0.000]	0.126† [0.077]	0.211** [0.000]	0.056 [0.304]	0.161** [0.001]	
1995-1999 arrivals	0.079† [0.092]	0.171** [0.000]	0.098* [0.034]	0.180** [0.000]	0.119* [0.019]	0.202** [0.000]	0.062† [0.075]	0.147** [0.000]	
2005-2011 arrivals	0.067** [0.001]	0.170** [0.000]	0.204** [0.000]	0.249** [0.000]	0.195** [0.000]	0.240** [0.000]	0.182** [0.000]	0.242** [0.000]	
Basic Specification	X	—	X	—	X	—	X	—	
Age-Educ-Year FE	—	X	—	X	—	X	—	X	

Note: The wage differentials presented in Panel A are generated from regressions that are ran 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 immigrants have spent in the U.S., a set of cohort fixed effects, and a set of cohort fixed effects that are each interacted with a continuous variable identifying the number of years that immigrants have spent in the U.S. 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 fixed effects. The omitted group is comprised 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. 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. † $p < .1$, * $p < .05$, ** $p < .01$.

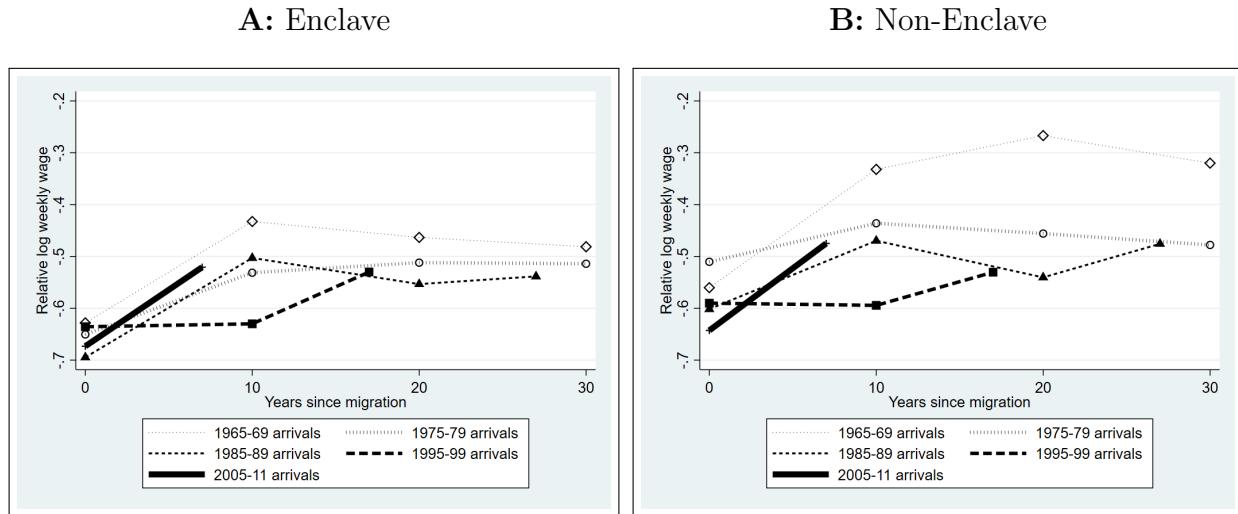
VII.III Convergence in Enclave vs. Non-Enclave States

Some studies identify the local crowding of immigrants as a reason for slower integration (e.g., Borjas 2015). If immigrants live in an enclave that has a large share of co-ethnics, they may be less inclined to learn English, socially integrate, or they may remain marginal to some job and career opportunities. However, other studies use a more careful causal identification strategy

and find that living in an enclave significantly increases earnings (Piil Damm 2009). In recent work on German refugees, Battisti et al. (2016) find that living in enclaves may provide an initial employment advantage for new immigrants, but it may reduce their investment in human capital and diminish their earnings potential in the long run.

In order to test whether there is some association between living in an enclave and the initial earnings gap and convergence, we separate Mexicans and Central Americans living in the 6 largest enclave states from those not living in those states. This classification of states provides a rough categorization as one would like to check enclaves in smaller geographical units, such as counties or metropolitan areas. However, this state-level categorization will provide some preliminary evidence. As usual, we show the representation of convergence to similarly aged natives in Figure 6, and we show the initial earnings gap and relative earnings growth in the first ten years for similarly aged and for similarly aged and educated natives in Table 6.

Figure 6 Age-Adjusted Convergence for the Relative Weekly Earnings of Mexican and Central American Cohorts by Enclave Region: Initial Gap and Convergence



Note: The wage differentials presented 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 comprised 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.

Both Figure 6 and the education adjusted coefficients in Table 6 do not show a large difference in the initial earnings gap between immigrants located in enclave or non-enclave states. Possibly, a worsening of the initial gap is visible in enclave states, which may reveal some crowding of Mexicans in some jobs, especially in the more recent decades. Several studies emphasize how the strongest labor market competition for new immigrants comes from other immigrants, and this finding may be partially consistent with that observation.

Summarizing this analysis of Mexicans and Central Americans in the U.S. over the last five decades we highlight four main findings: First, recent arrival cohorts did not do worse than previous ones in terms of the initial earnings gap or in terms of relative earnings growth. Second, there is a significant earnings gap relative to similar natives (on the order of 40 log points at arrival), which is reduced by about one third to one half but is not eliminated within 20-30 years. Third, there is a small initial employment gap, but after 20 years in the country, Mexicans and Central Americans are employed at a rate higher than similarly aged natives. Last, Mexicans and Central Americans in the construction sector and in urban areas do better than others in terms of the initial earnings gap, and those in the construction and manufacturing sectors do better in terms of relative earnings growth during the first 10 years.

The picture revealed by this analysis is one of a group coming to the U.S. to work in manual/physical intensive jobs and assimilating rapidly, in terms of being employed, but lagging behind in terms of earnings. Jobs in a sector like construction, which has a significant upward potential and usually is located in urban areas may be well suited to boost the economic success of immigrants. This finding could be an important consideration when discussing the potential for new job-related visas for less educated immigrants in terms of how to distribute them across occupations and sectors.

VI.IV Composition and Language Skills

The location and sector of employment may be important factors in improving the initial earnings gap and convergence. Here we document 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? Were there differences in the composition of the two groups? Could Central Americans be at a further disadvantage coming from poorer countries relative to Mexicans? Table 7 shows some characteristics of each cohort upon entry between 1965 and 2011, revealing evidence of potential trends, which may affect skills and earnings differentials even after controlling for age and education.

**Table 7 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 Central American	0.18	0.14	0.26	0.15	0.29
Share Speaking Some English	No Data	0.66	0.69	0.65	0.67
Share Speaking Good English	No Data	0.28	0.31	0.29	0.27
Share Nonwhite	0.06	0.06	0.56	0.55	0.42

First of all, in terms of education and age it appears that, upon arrival to the U.S., more recent cohorts are slightly better educated but are about the same age as the cohort that arrived in the 70's. These changes are small and controlled for in the convergence equation. The share of Central Americans, while varying by cohort, does not seem to have a clear trend nor does the share of those speaking English (at all or proficiently) at arrival. One variable that has increased substantially since the 1975-79 cohort arrived is the share of nonwhite, but the changed nature of the census question, which allowed people to indicate more than one ethnicity after 1980, may have affected the numbers. The share of nonwhite appears to decrease in the most recent cohort (2005-11) relative to the one arrived between 1995 and 1999. Overall, the most recent cohort, whose performance seems better than the previous ones, does not seem much different in terms of language, but it includes a larger share of

Central Americans and has a slightly higher level of education. Overall, these variables do not suggest that the skill composition of new arrivals has changed much over the past 20 years, yet more recent cohorts have performed better relative to similar natives.

VII The Other Largest Groups of Immigrants: Chinese and Indians

One important and novel finding of this paper is that the more recent cohorts of Mexican and Central American immigrants performed better than earlier ones in terms of earnings and employment rate gaps. Certainly, they have been migrating into an economy where the wages of less educated Americans have been deteriorating relative to the wages of high skilled Americans. This wage evolution has hurt immigrants in absolute terms, but it has not penalized them more than natives. This finding is interesting because several studies have pointed to a deterioration in the economic assimilation of immigrants that arrived in the 80's and early 90's (Borjas 2015). However, we show that a comparison of a more homogeneous group of immigrants to similar natives contradicts previous findings.

Do these findings also hold true for other large groups of immigrants? Are more recent cohorts of immigrants from other countries doing better than previous cohorts from the same countries? To answer these questions, we consider Chinese and Indian immigrants, separately, the two largest groups after Mexicans and Central Americans. Their immigration flows have become larger than that of Mexicans and Central Americans over the last decade. The Chinese and Indians have had a much larger share of highly educated individuals migrating to the U.S., both relative to Mexicans and Central Americans and relative to the U.S. population. Table 8 shows the share of people with a high school education or less, with some college, and with a college degree for the three groups of immigrants (Mexicans and Central Americans, Indians, and Chinese).

Table 8 Percent of Immigrants with High-School and College Education

	Survey Year					
	1970	1980	1990	2000	2010	2017
Panel A						
<i>With a High School Diploma or Less</i>						
Mexicans and Central Americans	89.4	89.9	87.3	86.4	84.5	81.6
Chinese	49.4	40.6	36.5	31.8	32.1	28.0
Indians	10.7	12.3	17.5	16.9	13.1	12.6
Natives	69.2	55.2	44.2	39.1	35.4	33.2
Panel B						
<i>With At Least Some College</i>						
Mexicans and Central Americans	10.6	10.1	12.7	13.6	15.5	18.4
Chinese	50.6	59.4	63.5	68.2	67.9	72.0
Indians	89.3	87.7	82.5	83.1	86.9	87.4
Natives	30.8	44.8	55.8	60.9	64.6	66.8
Panel C						
<i>With a Bachelor's Degree or Higher</i>						
Mexicans and Central Americans	4.3	3.8	4.2	4.6	5.6	7.2
Chinese	41.4	49.6	50.2	58.0	59.2	62.9
Indians	83.5	78.6	72.0	73.5	78.7	81.0
Natives	17.0	24.8	27.9	30.9	34.2	36.6

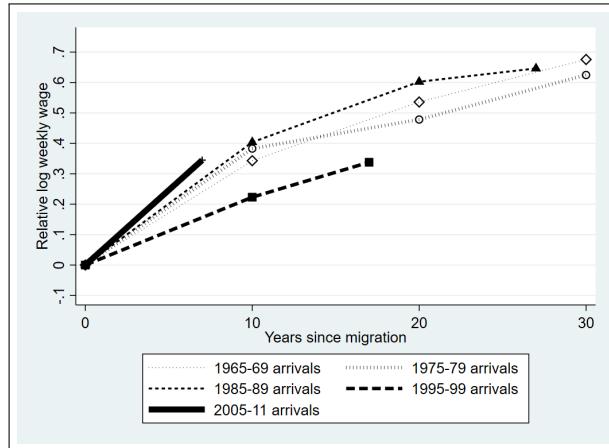
Note: These figures only include males between the age of 25 and 64 who had between 1 and 40 years of potential work experience, were not in school or living in group quarters, had positive earnings, worked at least one week during the survey year, and (for immigrants) entered the U.S. at the age of 18 or older.

It appears clearly from the table that Chinese and, even more so, Indian immigrants have been selected among highly educated individuals. These groups of immigrants have consistently had high levels of education since 1970. This very strong selection makes them more educated than natives on average. Of course Chinese and Indian immigrants have largely been employed in different sectors than Mexicans and Central Americans, with a large concentration in high tech, engineering, science, and professional occupations. Still, it is very interesting to see how subsequent cohorts of these immigrants compare to similar natives. Figures 7B and 7D show the initial gap and convergence of earnings and employment rates, respectively, for Chinese immigrants relative to similarly aged natives. In terms of earnings and employment, this group of immigrants consistently enters the U.S. with a relatively small gap and outperforms natives within 20 years of stay in the U.S. The graphs also show

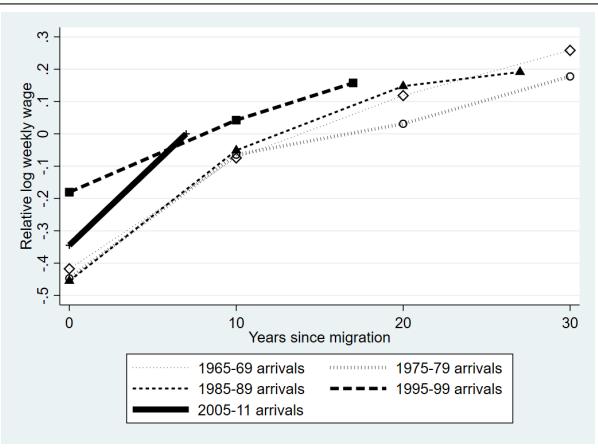
Figure 7 Age-Adjusted Convergence for the Relative Weekly Earnings and Employment Rate of Chinese Cohorts

Earnings

A: Normalized Convergence

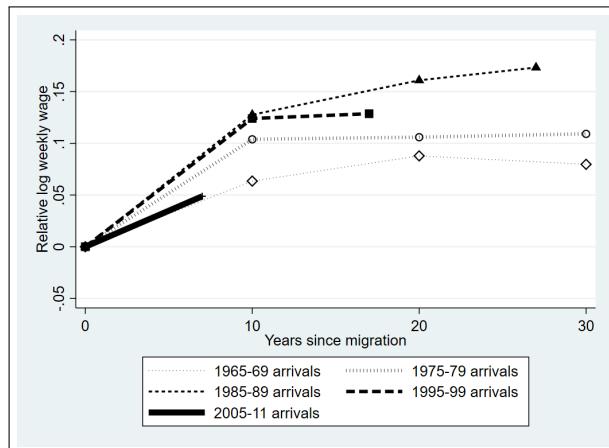


B: Initial Gap and Convergence

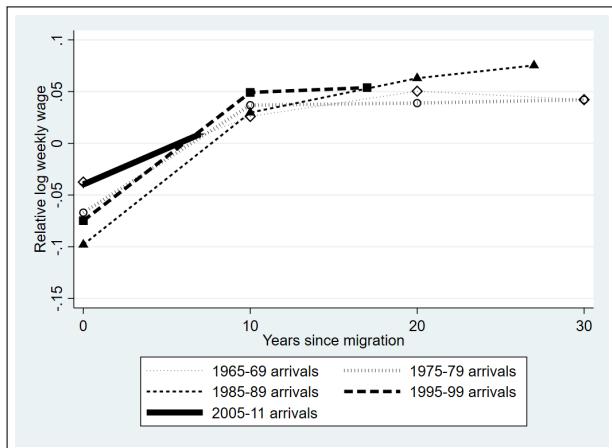


Employment

C: Normalized Convergence

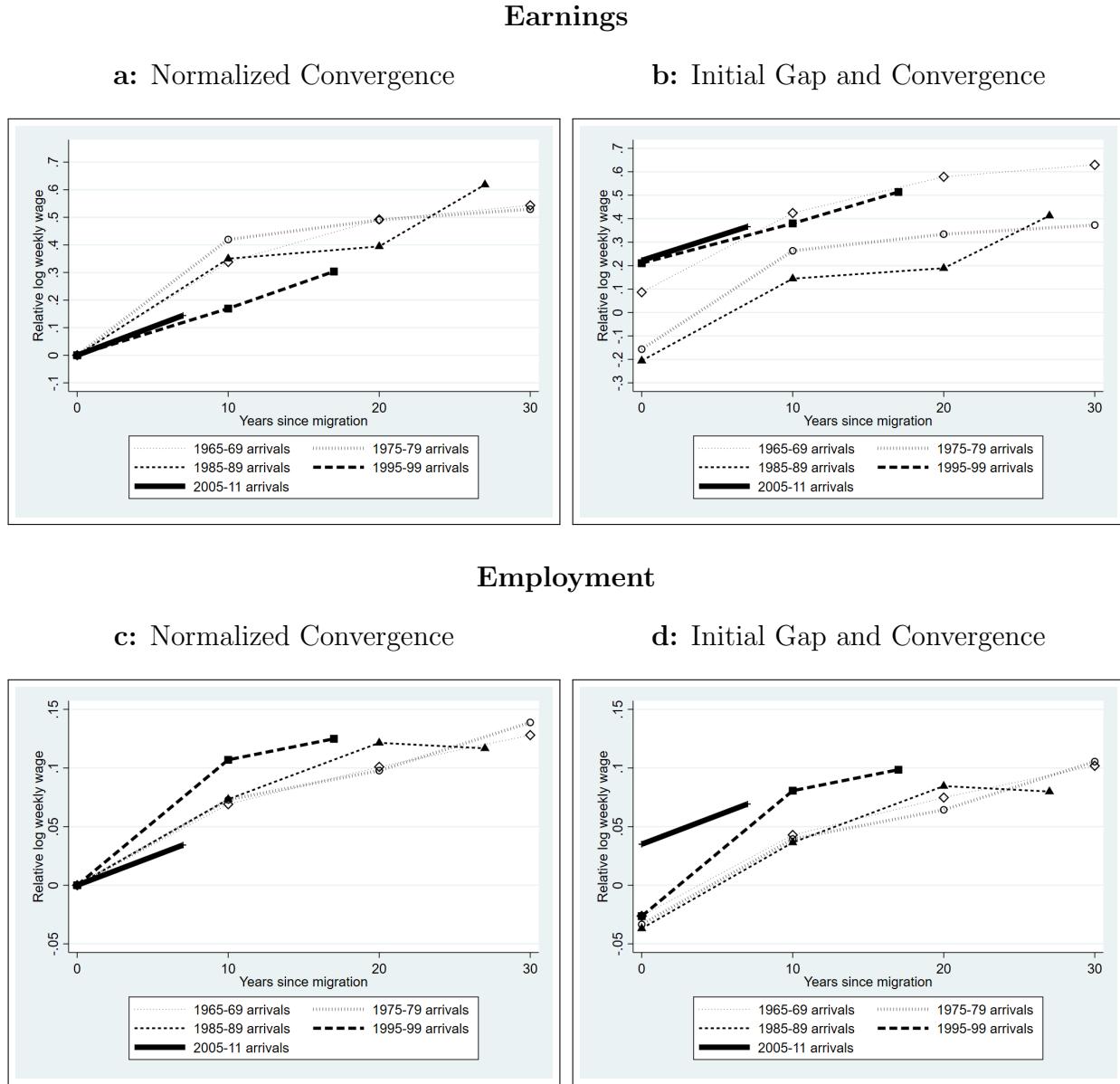


D: Initial Gap and Convergence



Note: 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 one week during the previous year. The explanatory variables for both the earnings and employment regressions include a third-order polynomial for age and a set of fixed effects: one for each immigrant cohort. The omitted group is comprised of native-born workers such that the coefficients on the cohort fixed effects represent each cohort's log weekly earnings or employment rate relative to native-born workers in a given survey year, which are used to construct the data points in the graphs. In Figure 7A, the relative log weekly earnings is normalized to zero at the time of entry. In Figure 7A, the relative employment rate for each cohort is normalized to zero at the time of entry.

Figure 8 Age-Adjusted Convergence for the Relative Weekly Earnings and Employment Rate of Indian Cohorts



Note: The log weekly earnings and employment rate differentials presented 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 one week during the previous year. The explanatory variables for both the earnings and employment regressions include a third-order polynomial for age and a set of fixed effects: one for each immigrant cohort. The omitted group is comprised of native-born workers such that the coefficients on the cohort fixed effects represent each cohort's log weekly earnings or employment rate relative to native-born workers in a given survey year, which are used to construct the data points in the graphs. In Figure 8A, the relative log weekly earnings is normalized to zero at the time of entry. In Figure 8C, the relative employment rate for each cohort is normalized to zero at the time of entry.

that the performance of the two most recent cohorts are the best overall.

Figure 8 shows the same graphs for Indians, and in this case we see an even smaller initial gap and more rapid convergence. Indian immigrants consistently outperform natives in terms of earnings and employment rates within 10 years of arrival. For this group of immigrants, the two most recent cohorts already start at par or with an advantage in earnings and probability of working and continue to improve their relative performance over time.

The analyses of Chinese and Indian immigrants confirm that the labor market performance of immigrants who arrived in the last two decades has been remarkably strong. This evidence suggests that: (i) the quality of recent immigrants, in terms of labor market skills, is not worse than that of previous immigrants when we analyze specific countries of origin and (ii) the decline in the inflow of new immigrants in recent years may have stimulated rapid convergence. Moreover, the extremely high employment rates, when compared to similar natives, confirm that immigrants come to the U.S. to work and that the U.S. labor market continues to demand these workers. The exceptional relative performance of the Indians who arrived during or after 1995, many of whom entered the U.S. on an H1-B visa, suggests that the stories of underpaid H1-B visa workers parked in jobs with little upward mobility may represent the experience of some recent arrivals, but it is not representative of the whole group, whose salary and employment prospects are better than those of natives within 10 years of arrival to the U.S.

VIII Conclusion

The economic 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, a burden to the receiving country because they do not have skills that can be integrated in the labor market, hence their employment rate is low and their earnings lag behind those of similar natives. In the U.S., there is anecdotal and empirical evidence showing

that immigrants who arrived in the 1980's and 1990's have had a harder time assimilating into the labor market.

In this paper we analyze whether such a characterization is true when extending the analysis to cohorts of entry in the 1990's and 2000's while focusing on Mexican and Central American immigrants, traditionally a group of low educated immigrants earning low wages. This is also a very large group of immigrants, comprising almost 6% of the U.S. labor force, hence their success is very important to the U.S. economy and society as a whole. While we do find an initial earnings gap and only incomplete convergence after 30 years of stay, we also find that recent cohorts of Mexicans and Central Americans (i.e., those that arrived during or after 1995) have not performed worse than the earlier ones that arrived in the 70's and 80's. Moreover, we find that, in terms of employment probability, Mexicans and Central Americans outperform similarly aged natives after 20-30 years in the country. In particular, when focusing on the cohorts that arrived between 1995 and 1999 and between 2005 and 2011, they seem to perform particularly well.

The findings from this analysis suggest that the appearance of a worsening quality of recent cohorts arises from the grouping of all immigrants together. Once we focus on immigrants from certain countries of origin and compare them to similar natives, we find that recent cohorts have performed rather well relative to earlier ones.

Finally, we also show that those employed in the construction sector and those living in urban areas start out with a smaller earnings gap, and those in the construction and manufacturing sectors have stronger relative earnings growth. On the other hand, those employed in the agricultural sector start out with larger initial gap and have the weakest convergence.

Our analysis suggests that there is no basis to claim that new immigrants are of lower labor-market quality relative to earlier ones. A consideration of immigrants from specific countries of origin reveals that subsequent cohorts have actually performed similarly or better in the U.S. Moreover, despite many hurdles, the U.S. labor market has done an exceptional

job of offering employment opportunities to immigrants, at least up until 2017 (the last year of our analysis). However, the poor earnings performance of low skilled workers, in general, has had a disproportionate impact on Mexicans and Central Americans, who are heavily represented in this group. Given the high demand for labor in the construction sector and the opportunities that it affords immigrants for upward mobility, one could think of a special visas linked to jobs in that sector.

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