



# Report

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## **THE IMPROVING EDUCATIONAL PROFILE OF LATINO IMMIGRANTS**

by

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and

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The opinions expressed in this report are those of the authors and do not necessarily reflect the views of the Pew Charitable Trusts.

## EXECUTIVE SUMMARY

It is a commonplace claim that the education level of the Latino immigrant population is continually falling behind that of the U.S.-born population. However, the Pew Hispanic Center finds that the educational profile of the adult population of foreign-born Latinos has improved significantly during the past three decades. These gains, however, have not yet produced a notable convergence with the level of education in the native-born U.S. population. During the period 1970 to 2000 the native-born population also experienced improvements of education that outpaced the progress among Latino immigrants. Nonetheless, the trends identified in this

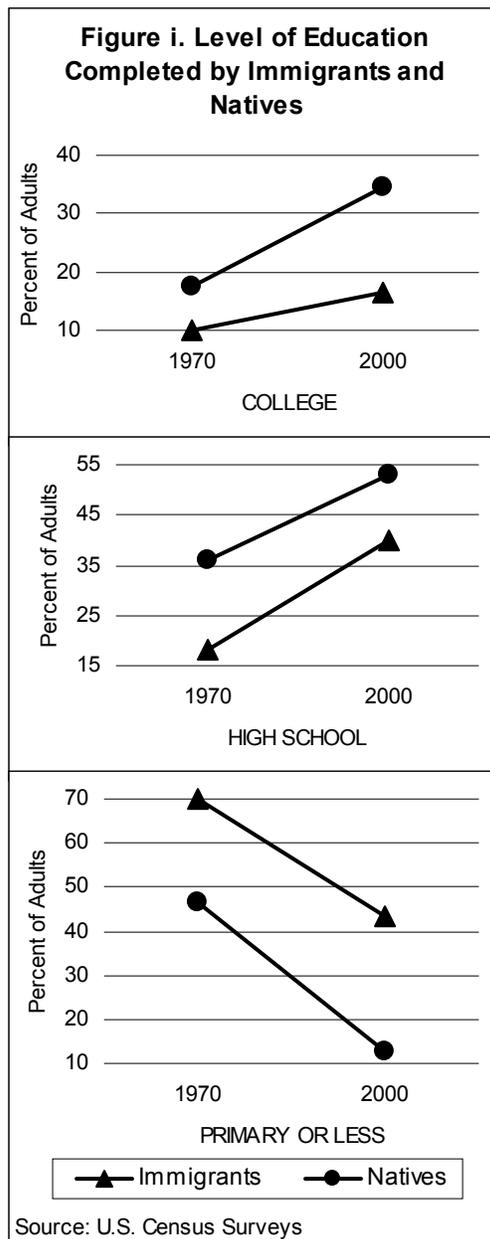
report suggest that the gap between immigrants and natives will narrow in the future.

The Pew Hispanic Center tabulated U.S. Census Bureau survey data to track changes in the educational profile of the adult foreign-born population from 1970 to 2000. The data measure completed education for individuals 25-years-old and older when most people have finished their schooling. Educational trends are reflected in the percentage of adults who complete primary (6 years of schooling), secondary (12 years), or college education (14 and more years or associate's degree and higher).

A comparison of native-born Americans—of any race or ethnicity—to Latino foreign-born adults from 1970 to 2000 shows a narrowing gap in the percentage of adults who complete high school, and a declining percentage of adults in both groups with no more than a primary education. Meanwhile, the surge of native-born college graduates surged in the 1990s (Figure i).

Other specific findings include the following:

- The percentage of adults with a high school education has grown faster among the foreign born than among natives since 1970. The educational profile of female immigrants has improved markedly.



- Fewer foreign-born Latinos than natives have completed college, but further gains by natives will be hard to sustain; therefore, this gap is not likely to grow.
- There remains a large but declining share of foreign-born adults who have no more than a primary education. These are older adults; consequently mortality will further reduce their numbers in the future. In the 1990s there was no increase in the number of foreign-born adults with less than a primary education.
- The number of foreign-born Latinos who come to the United States and receive their education here is growing, and this segment of the population has a better educational profile than immigrant Latinos who are educated abroad.
- Levels of educational achievement have improved in sending countries, and those who choose to migrate to the United States are better educated than those who stay behind.

In the coming decades, the educational composition of the Latino foreign-born population will begin to look more like that of the American native-born population. Improvements in the educational profile of the Latino immigrant population will coincide with a slowing of improvements for the native population. For example, among American natives, the older, less-educated population has already aged-out of the work force for the most part, and so this process will not contribute to an improvement in the educational profile of the native born as significantly as it has for the past 30 years. Meanwhile that aging process must still play out completely among the foreign born. Similarly, both high school and college completion has reached such high levels among young natives that there is not much room for further improvement. Foreign-born Latinos, by contrast, can still achieve very substantial gains.

Education remains critical to the economic success of Latino immigrants in the United States for the simple reason that life-time earnings are closely tied to educational achievement. Critics of U.S. immigration and education policies correctly point out that many Latino immigrants have been at a disadvantage in this regard. However, the educational profile of the Latino immigrant population now seems likely to improve relative to the native born in the medium to long term. For the immediate and foreseeable future, substantial benefits can be reaped from programs that aim to bolster the education of immigrant youth and to provide adults with language and skills training. In the meantime, policymakers can feel confident that what seemed to be overwhelming problems associated with the past low levels of immigrant education are becoming surmountable.

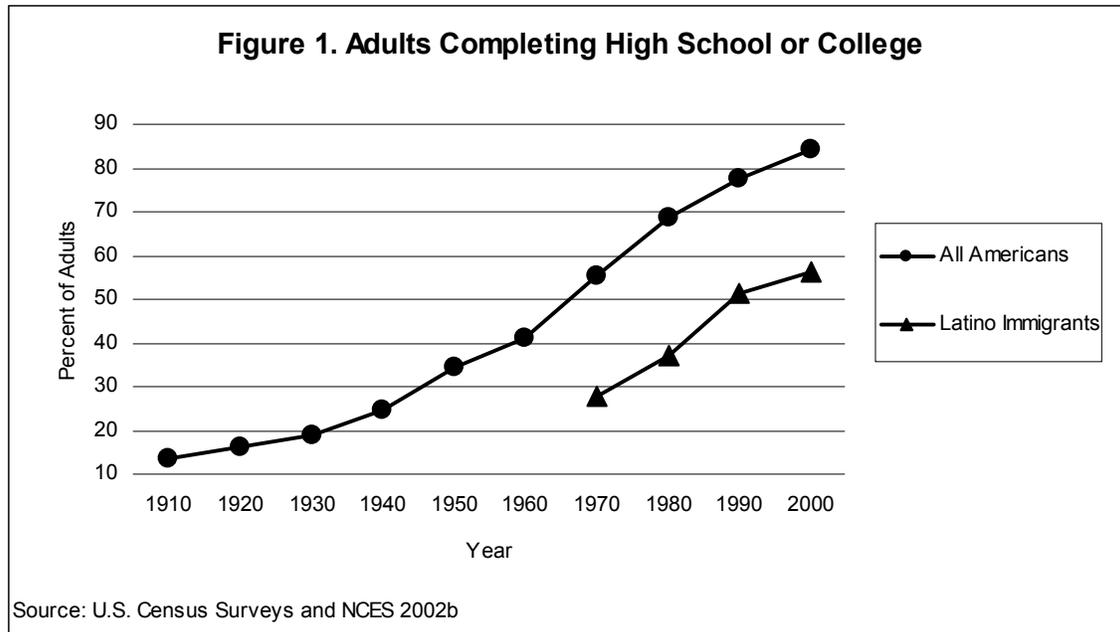
## **1. INTRODUCTION**

Over the past 20 years some scholars and other observers have decried the low educational profile of Latino immigrants, asserting that the education gap between these newcomers and the native born causes a variety of economic, fiscal, and social ills. Indeed, proponents of reduced immigration from Latin America often cite particularly harsh versions of this line of reasoning. The education gap does exist, and it is a fact that immigrants with little education usually wind up at the bottom of the U.S. labor market.<sup>1</sup>

However, Latino immigrants have, in fact, made notable strides in narrowing the educational gap, and their education profile is likely to continue to improve in the future. The share of high-school-educated Latino immigrants has doubled, while the share of those with less than high school has decreased by one-half. Latino immigrants supply a significant and growing share of workers in the United States, and the number of new arrivals is not projected to decline soon. Educational achievement is—and will continue to be—a critical factor in determining whether or not millions of foreign-born Latinos will move forward.

Poorly educated immigrants face daunting job prospects in an epoch when college-educated workers continue to earn higher wages, while the earnings of workers with less than high school education fall behind. The resultant increase in inequality associated with educational attainment over the past three decades places immigrants at a double disadvantage. The least skilled workers earn little in today's economy and they, and their families, are more often found living in poverty than other Americans.<sup>2</sup> Further, the available research is not clear as to whether Latino immigrants ever earn as much as natives with the same level of education even after the newcomers gain experience in the U.S. labor market. Even if Latino immigrants are able to catch up with equally educated natives, the poor education of many provides them few opportunities to earn a good living.

An abundant supply of low-skilled and low-paid Latino immigrant workers is beneficial to the U.S. economy in several ways, but it can have adverse effects as well. Immigrants comprise a large percentage of all workers with less than high school education, and economic research shows that they compete with native workers who have not completed high school. The growth of this labor force can drive down the wages of low-skill workers. Indeed, a growing supply of low-skilled immigrant workers can have its most immediate impact on this very same immigrant workforce by depressing wages.<sup>3</sup> While this is not good for those at the low end of the labor market, the availability of these workers helps reduce the costs of producing a wide range of goods and services and thus benefits business owners, investors, and consumers.<sup>4</sup> Additional social impacts develop from a persistent or increasing divide between low- and high-income workers. In an information-based



economy, differences in education are powerfully associated with differences in earnings potential.

This report identifies key trends in each of the two populations that are now working to narrow the gap. Education levels among all American native born, of any race or ethnicity, are not improving as rapidly as they have over the past three decades. Indeed, young natives today are no more likely to complete high school on average than they were two decades ago.<sup>5</sup> This is not because there have been setbacks; in fact, it is because graduation rates can hardly go any higher for non-Hispanic whites. Nearly nine-tenths of all native-born Americans already graduate high school and it is unlikely that graduation will ever be completely universal.

For several decades, the elderly have made up the least-educated segment of the population among the native born of all racial and ethnic groups. Overall, levels of educational attainment among older Americans offer a reverse image of the enormous gains in education that marked U.S. history in the 20<sup>th</sup> Century (Figure 1).<sup>6</sup> Older individuals are more likely to have completed their education before desegregation, before Sputnik, before the G.I. Bill, or before the expansion of the land-grant university system. During the past three decades, a significant percentage of this population aged out of the labor force and its size declined due to mortality. This demographic process, which is a simple function of the passage of time, steadily improved the educational profile among the native born by reducing the least-educated segment of that population. That process is now substantially complete for the American native-born population.<sup>7</sup>

In the future, that same process will be at work in the Latino immigrant population. Again, the elderly are the least educated segment of the Latino

population, but many of this poorly educated cohort is still of working age. Hence, the attrition of this population will produce notable gains in the educational profile.

#### **TABLE 1. NOTE ON METHODS AND MEASURES**

The Pew Hispanic Center tabulated the data for this report with these major features:

- Only **adults 25 years and older** are studied.
- **All native-born Americans** of any race or ethnic group (including native Latinos) are compared with immigrants.
- **Latino immigrants are classified by their country of birth** in Mexico, Central America, South America, and the Latin nations of the Caribbean.
- Immigrants are distinguished by **place of education**, i.e., in their country of birth or after arrival in the United States.
- The focus is on **four levels of completed education**:
  - College (14+ years) or an associate degree or better,
  - High School (12 years),
  - Primary (6 years),
  - Less than Primary (< 6 years).

The analysis draws upon **U.S. Census surveys at four points** in time: the U.S. Census for the years 1970, 1980, and 1990; and three Current Population Surveys centered on the year 2000. A discussion of the convention used here and unique properties of the samples can be found in this report's Technical Appendix.

One of the key factors in improving the educational profile of the native born Americans in the last quarter of the 20<sup>th</sup> century was the increasing number of women pursuing secondary and post-secondary education.<sup>8</sup> That same change is now being seen among Latino immigrants.

There is a growing population of foreign-born Latinos who come to the United States in their youth and complete their education here. On average, they complete more years of education than immigrants who are schooled abroad.<sup>9</sup> Educational achievement is slowly and steadily improving in Mexico and the rest of Latin America,<sup>10</sup> consequently, the population from which immigrants are drawn has a higher educational profile.<sup>11</sup> Latino immigrants are significantly more educated than Latin Americans who remain in their home countries.

This report describes changes—based on U.S. Census survey data—in the educational profile of Latino immigrants in the United States from 1970 to 2000. All of the discussion herein refers to persons of age 25 or more. Children, teenagers, and young adults are often currently enrolled in school; thus, their educational profile is in flux, and they are not part of the analysis. Beyond the young adult years, most people have completed their schooling. Please see Table 1 for a note on the methods and measures used, as well as the Technical Appendix for more detailed information.

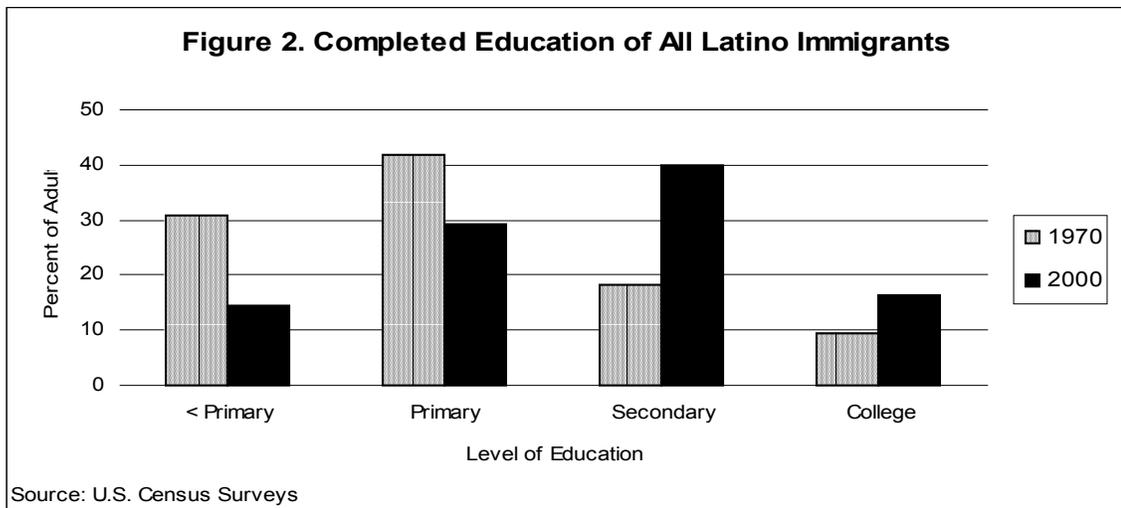
## 2. IMPROVED EDUCATION OF LATINO IMMIGRANTS

In order to measure the degree of improvement in the education of Latino immigrants, it is helpful to construct a demographic profile that portrays the shares of the total population that have achieved various levels of education (Figure 2). In 1970, the greatest percentage of Hispanic immigrants had completed no more than primary education. At that time there were 4.8 million Latino adults aged 25 and older.

The current population of foreign-born adults has grown to 9.5 million. During the 30-year period between 1970 and 2000, the percent of Latinos with primary education or less decreased, while the share that was more educated increased. By 2000, the biggest share of Latino immigrants had completed secondary education. For example, the share of those with secondary education increased from 18 to 41 percent between 1970 and 2000, while the share of college graduates almost doubled, increasing from 9 to 18 percent.<sup>12</sup> The share of adults with primary education or less was predominant in 1970; however, by 2000 the share with secondary education or better had become predominant. These changes produced an improved educational profile of the entire adult Latino immigrant population.

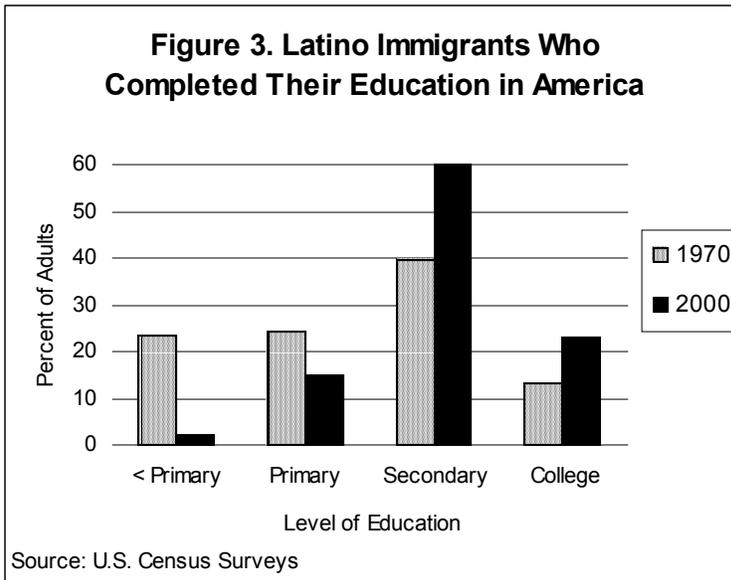
### Immigrants Educated in America Are Better Educated

Latino immigrants who are educated in the United States are significantly better educated than those who are educated abroad. Schooling is more universal in

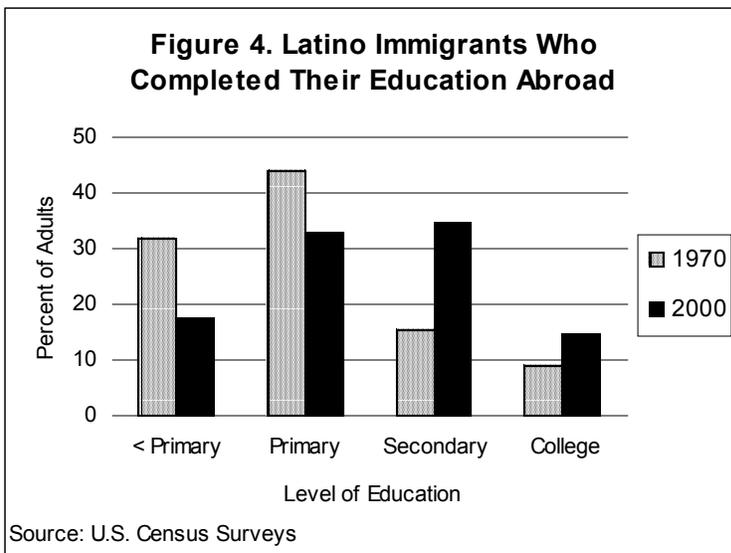


America, and foreign-born Latinos who arrive as children usually complete more years of education than immigrants who arrive as adults. However, most Latino immigrants are in their young adult years when they first settle in the United States and have already completed their education abroad.

In recent years, a greater share of foreign-born Latinos have been immigrating in childhood and completing their education in the United States. Essentially all Latino immigrants who arrive before age 11 complete American primary education and most go on to complete high school.<sup>13</sup> It is easy to see that they are much better educated than their compatriots who are educated abroad by comparing Figure 3 with Figure 4. Those who are educated in the United States are



70 percent more likely than immigrants who are educated abroad to have completed either a secondary or college education. At the same time, American-educated, foreign-born adults are 70 percent less likely than immigrants educated abroad to have no more than a primary education.



More than 80 percent of American-educated immigrants complete high school or college; that figure is approximately 10 percentage points less than the average of the entire United States populace. Nearly 25 percent of American-educated immigrants complete an associate's college degree or better. Very few American-educated immigrants stop with less than primary education.<sup>14</sup> In

contrast, only 50 percent of immigrants who are educated abroad completed high school or college, and 33 percent completed no more than primary education. Meanwhile, 18 percent failed to complete primary school.

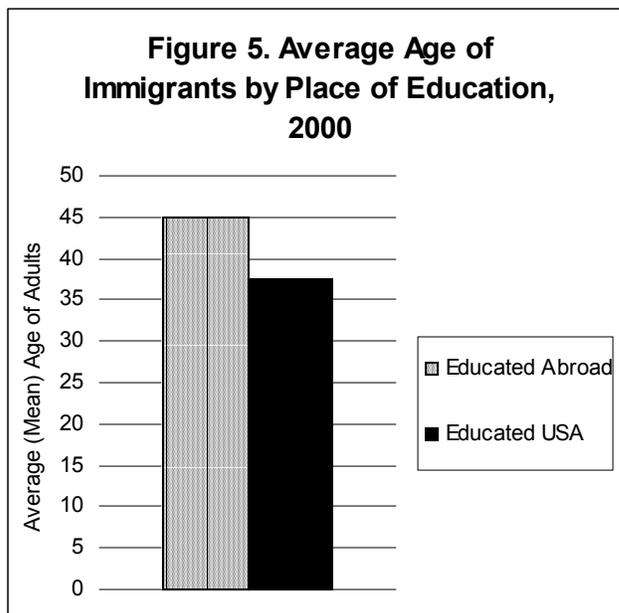
More of the foreign-born Latino population is educated in America today than three decades ago. The foreign-born Latino population in 1970 included relatively fewer families than in 2000. Over time, the immigrant stream has matured and more Latino couples settle young enough to raise their families here. Along with family building, enrollment in American schools has increased.

In 1970 only 11 percent of all Latino immigrant adults completed their education in the United States; however, by 2000, that share had doubled. Today 21 percent of the Latino immigrant adult population is American educated, and they are raising the educational profile of the entire Latino immigrant population.

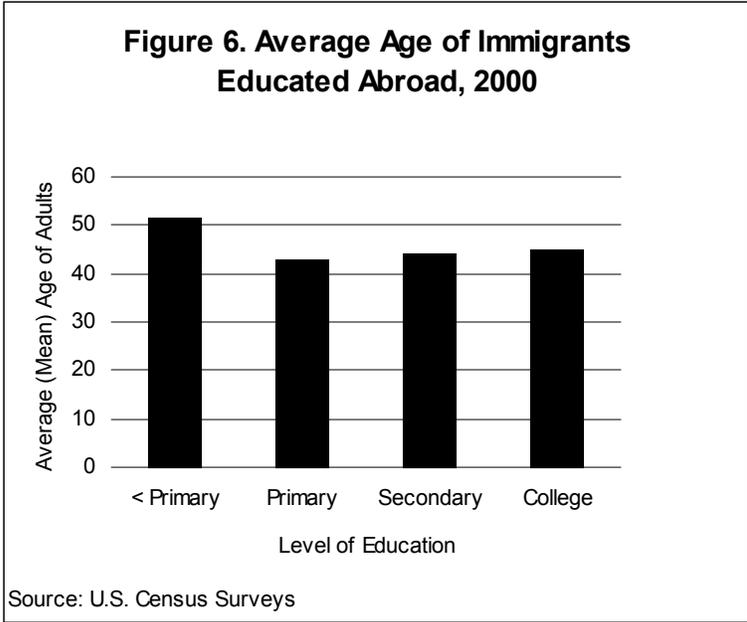
However, immigrants educated abroad are far more numerous than the American educated. Approximately eight-tenths of today's Latino immigrants have been educated abroad. Immigrants educated abroad comprise 86 percent of the total adult Latino foreign-born population with primary education or less. They are just 40 percent of the total adult Latino foreign-born population that has completed high school or college.

### 3. IMMIGRANTS WITH LITTLE EDUCATION ARE OLD

As noted in previous sections, the elderly, whether they are native or immigrant, tend to have less education than young adults. This pattern remains particularly notable among Latino immigrants today. In the future, older, less educated immigrants will begin to leave the labor force, retire, and eventually die.



American-educated immigrants are typically younger than those who are educated abroad (Figure 5). American-educated immigrants average 37 years of age, whereas immigrants educated abroad average 45 years of age. In the future, the large numbers of Latino immigrants with limited education completed abroad will reach retirement age sooner and will experience high mortality rates sooner than those younger Latino immigrants with an American education.

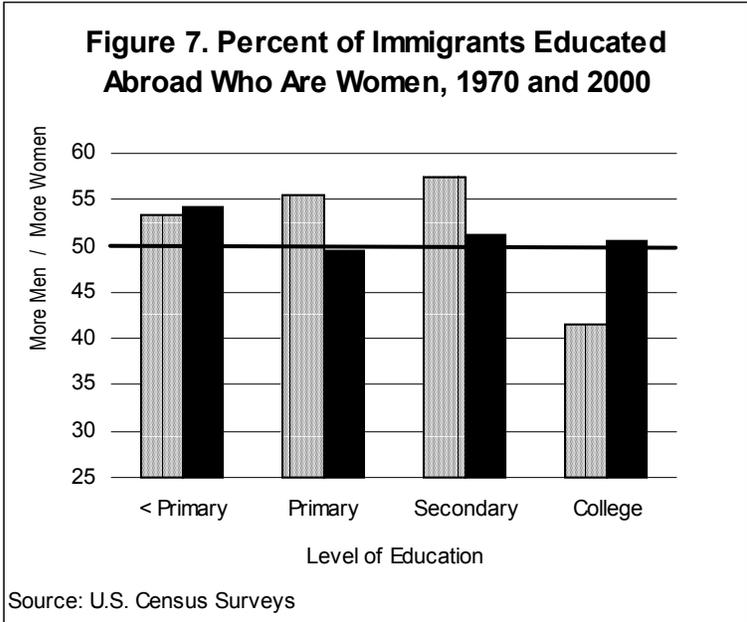


Indeed, Latino immigrants who are educated abroad and who have less than primary education are 52 years old on average (Figure 6). This is nearly a decade older than the average of 43 years of age for immigrants who are educated abroad and who do complete primary education. This older population of immigrants with less than primary

education comprises about one-fifth of the entire immigrant population. The aging of immigrants educated abroad with less than primary education will result in an increasing percent of immigrants in the labor force who have higher levels of education. This will begin to occur in the next 10 years as many Latino immigrants with less than primary education reach the end of their working life.<sup>15</sup>

**4. INCLUSION OF WOMEN IN EDUCATION**

The share of women included at all levels of education has improved markedly both in the United States and in Latin America during the past three decades, and the results are evident in the Latino immigrant population. In 1970, for

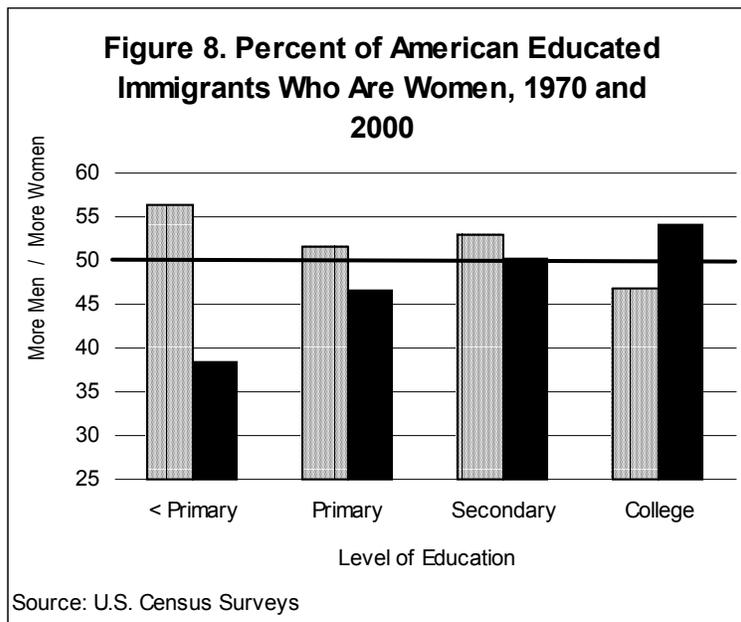


example, there were more females than males among Latino immigrants with no more than primary education. Today, women tend to be more equally represented at all levels of education, but particularly among immigrants with secondary education or better.

At the low end, in the year 2000 women comprise 54 percent of

immigrants educated abroad with less than primary education (Figure 7). This is the last and most important educational disadvantage statistically evident among female immigrants relative to males. Female Latino immigrants on the whole had less education than males 30 years ago, and the same remains true today, although the picture is changing.<sup>16</sup>

At the college level, the share of foreign-born females with an associate's degree or better has increased, regardless of place of education. In 1970, women were just 41 percent of immigrants with a college education from abroad. By 2000, women were equally represented at 50 percent of immigrants educated abroad with a college education.



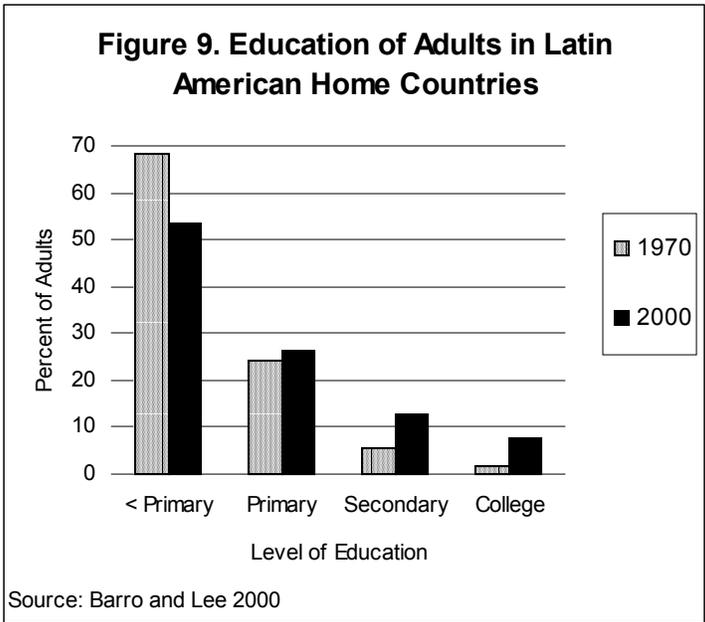
Women have made a solid contribution to increases in the share of American-educated immigrants with a college education. Indeed, in 1970, American-educated women made up less than 47 percent of college educated immigrants (Figure 8).<sup>17</sup> Thirty years later, 54 percent of American college-educated immigrants are women.<sup>18</sup>

## 5. BETTER EDUCATION ABROAD AND IMMIGRANT SELECTIVITY

During the past three decades there have been significant increases in the share of the population completing secondary education in Latin American sending countries, and that in turn is reflected in the educational attainment of immigrants coming to the United States.<sup>19</sup> The educational profile of Latin American nations, however, is still much poorer than that of the United States (Figure 9).

### Latino Immigrants Are Better Educated Than Home Population

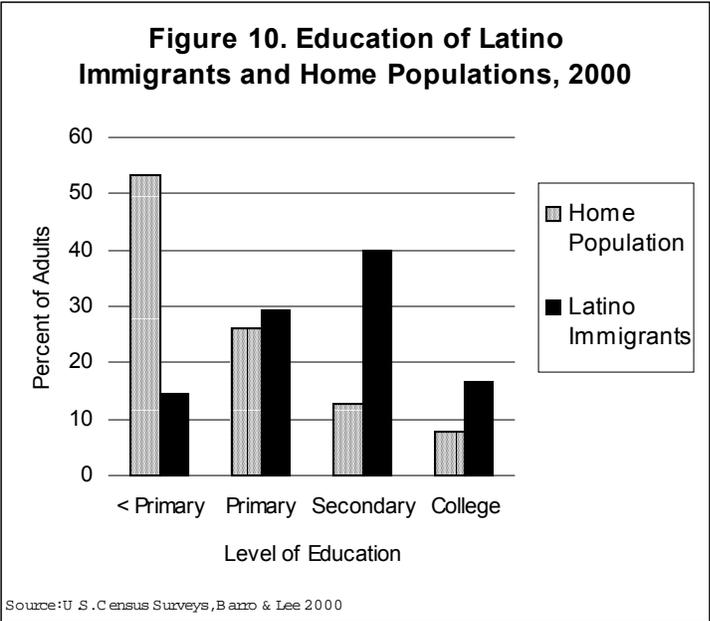
On average, those Latinos who choose to immigrate are better educated than those who choose not to leave home. Immigrants have characteristics that help them take on the challenges and costs of international mobility. For example, they tend to be risk takers. They tend to be younger and better off than non-migrants.<sup>20</sup> This can be seen by comparing the education of Latino immigrants to



that of the population in their home countries (Figure 10).<sup>21</sup> Latino immigrants are three times more likely to have secondary education than their home country compatriots, and they are more than twice as likely to have completed college. On the other hand, Latino immigrants to the United States are one-third less likely to have less than a primary education compared with their home country counterparts.

Another way to look at this is to consider how many persons at each educational level come to the United States. Of the entire population of adults who were born in Latin American countries, the following percent are residing in the United States: just 1 percent of those with less than primary education, 4 percent of those who complete a primary education, 12 percent of those who complete high school, and 12 percent of those who complete college.<sup>22</sup> To understand how this occurs, consider that the educational pyramid of the home countries has a very broad base; thus, there is a preponderance of persons with little education. So even if a small percent of this large number moves, it will generate a lot of migrants. Consequently, there are a large number of Latino immigrants with little education in the United States, but they are only a small fraction of those who could have moved. There are fewer highly educated persons in Latin America, and because they are more likely to immigrate, a much higher share of them end up in the United States.

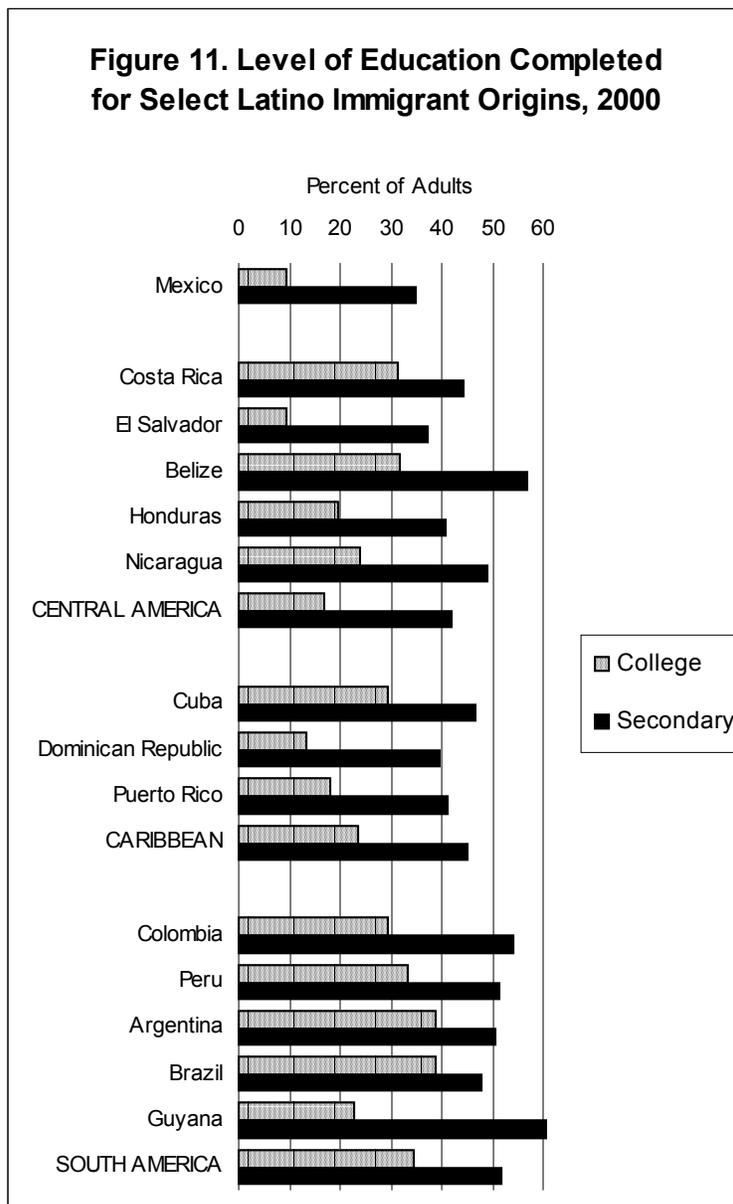
An increasing pool of educated Latin Americans, coupled with the



greater rate of migration of the highly educated, contributes to the improving educational profile of Latino immigrants in the United States.

## 6. SUBSTANTIAL DIFFERENCES BY IMMIGRANT ORIGIN

Thus far this report has focused on results for all Latino immigrants from all sending countries. There is, of course, substantial variation in education depending upon the origin or country of birth of Latino immigrants (Figure 11). Typically, Mexican and Central American immigrants are less educated than those from the Caribbean and South America.



Immigrants from Mexico and Central America are less likely to have completed either secondary education or post-secondary education than are other Latino immigrants. Mexican immigrants are one-third less likely than Caribbean immigrants, and they are one-half as likely as South American immigrants, to have completed high school or college. Just 44 percent of Mexicans complete secondary or college education, compared with 69 percent of Caribbean immigrants and 86 percent of South Americans.<sup>23</sup>

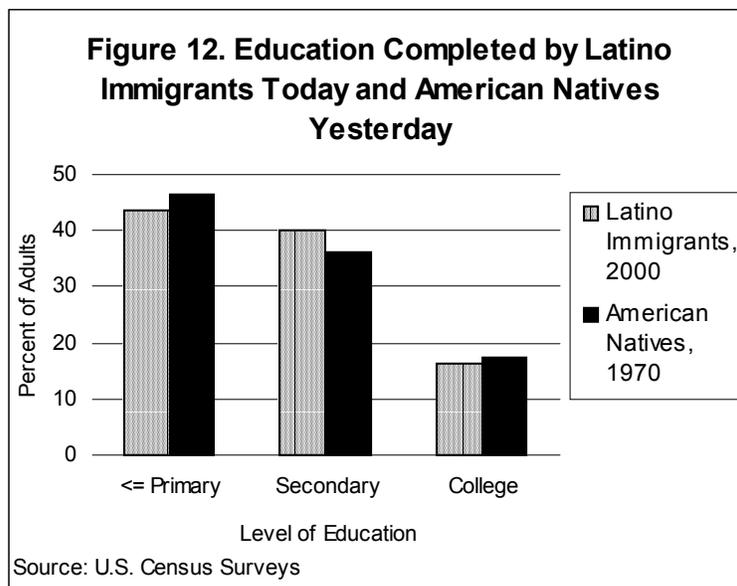
Latino immigrants from all of these countries, particularly Mexicans and Central Americans, are more likely to have completed high school than they are to have completed

college. A Mexican immigrant is 3.8 times more likely to have completed high school

than to have completed college. Likewise, Central Americans are 2.5 times more likely to have completed high school than college. The geographic proximity of the United States to Mexico and Central America obviously facilitates migration overall. In particular, proximity seems likely to make migration easier for those with lower levels of education. Thus, the migrant stream from more distant parts of Latin America is likely to have a higher educational profile. The countries sending the higher proportion of college-educated immigrants are Brazil (39 percent), Argentina (33 percent), Peru and Cuba (both 33 percent). On average, approximately 35 percent of South American immigrants have completed a college education. These rates are as high as those of the native population of the United States.

### 7. FUTURE IMPROVEMENTS BY LATINO IMMIGRANTS

Latino immigrants today have roughly the same educational distribution as all native-born Americans natives did 30 years ago (Figure 12). In 1970, 17 percent of all natives had completed a college education, and today 18 percent of Latino



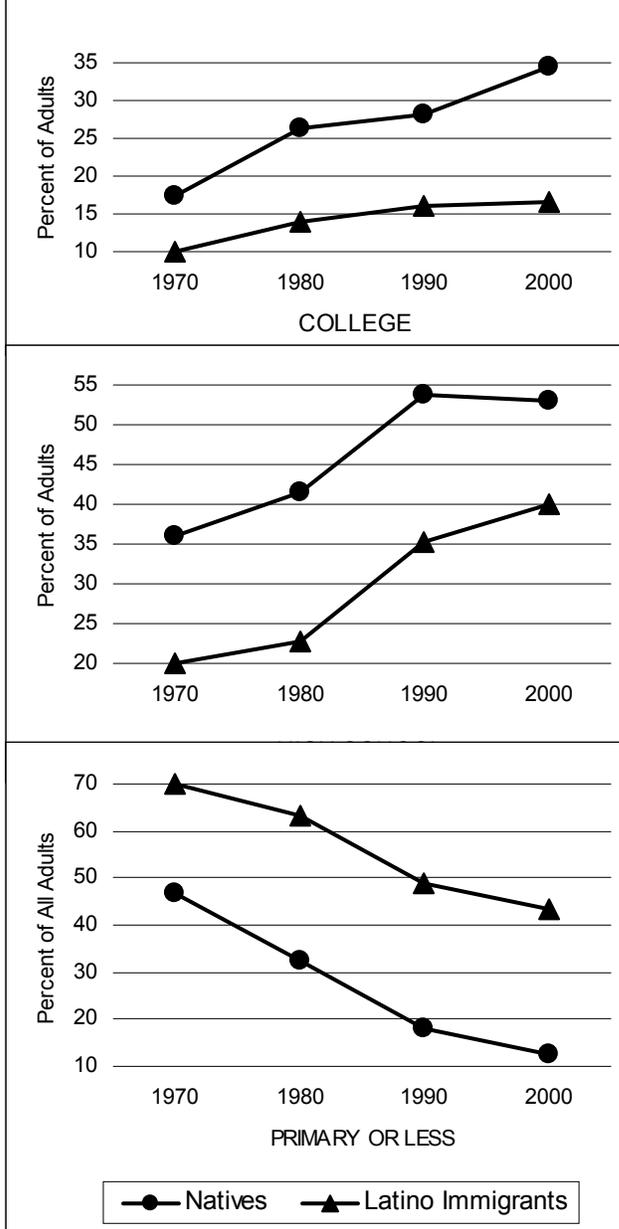
immigrants have achieved this. In 1970, approximately 36 percent of natives had completed a secondary education, and today 41 percent of Latino immigrants have met that mark. Even the combined share of persons with primary education or less is similar: 47 percent of American natives in 1970 and 41 percent of Latino immigrants today. There remain today a notable

share of Latino immigrants who have not completed primary education, but the comparison is otherwise apt.

#### Comparing Native- and Foreign-Born Trends

Education trends for American natives and Latino immigrants have both moved upward (Figure 13). Among natives, the share with a college education increased from 17 to 35 percent, and the share of adults who have completed

**Figure 13. Level of Education Completed by Latino Immigrants and Natives**



only a high school increased by one-half to 53 percent. Among Latino immigrants, the share of adults completing college doubled to 18 percent and the share of those with only a high school education also doubled to 41 percent. The education gap between American natives and Latino immigrants has narrowed most in terms of secondary education while it has widened at the college level.

At the same time as more adults completed high school or better, the share of those who only completed primary education or less declined. The number of American natives who completed no more than primary education dropped two-thirds from 47 to 12 percent of all native adults. The share of Latino immigrants with no more than a primary education declined one-third, from 72 percent to 41 percent of all immigrant adults.

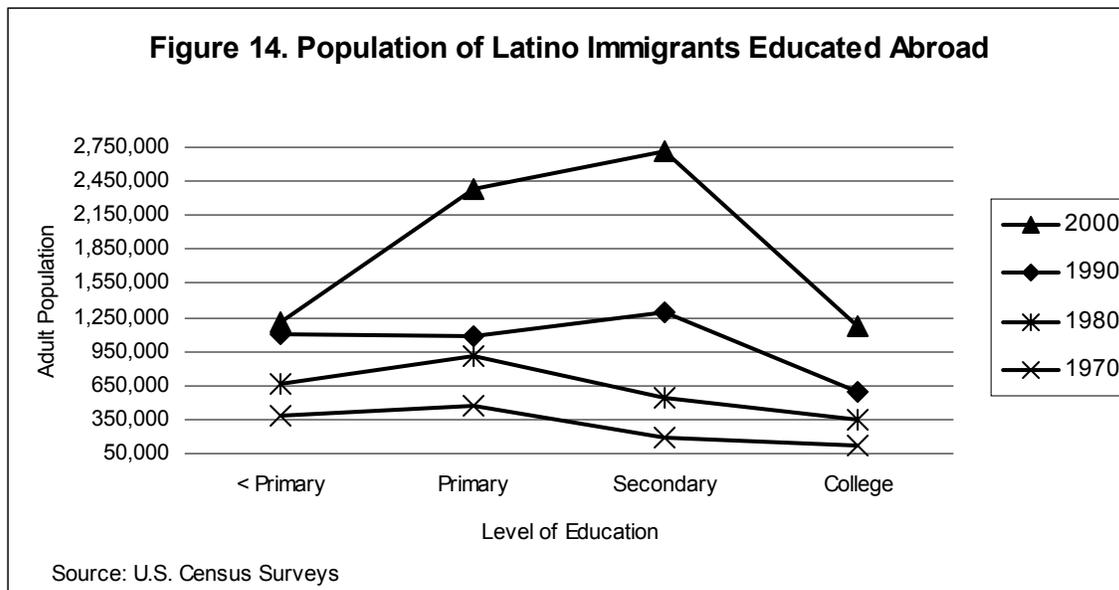
The declining share of natives with no more than primary education has much to do with the aging out of Americans educated prior to the 1950s. In fact, the educational profile of the U.S. population currently 25 to 29 years

old is very similar to the educational profile of persons in that same age bracket 20 years ago.<sup>24</sup> The aging-out process for Latinos has been less of a factor, so the relative educational improvement of recent decades has had more to do with higher levels of education among recently arrived adult immigrants, as well as the increasing number of those who are educated in America.

## 8. POPULATION INCREASE AND EDUCATION IN THE 1990s

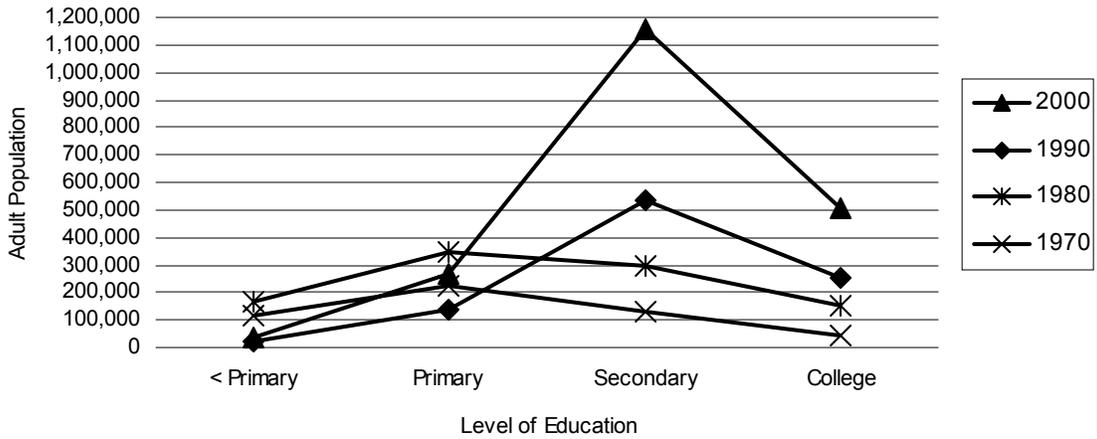
The 1990s stand out for increases in the overall volume of Latino immigration at all levels of education. The growth in the total number of Latino immigrant adults during the 1990s is unprecedented; some 4.4 million persons ages 25 and older or 2.7 times the net growth of each of the prior two decades.

Altogether, two-thirds of the net population growth of Latino immigrants was from persons with high school education or better. The greatest numerical and proportional increase was of immigrants with a high school education from abroad (Figure 14). A substantial amount—fully one-third—of the net growth of the Latino immigrant adult population was of Latino immigrants who completed their high school education abroad. An additional one-seventh of the adult population's growth was contributed by immigrants who completed high school in the United States (Figure 15). Latino immigrants with college education from both the United States and abroad comprised an additional one-fifth of net population growth.



Nonetheless, fully one-third of the total net growth during the 1990s was among immigrants with primary education or less. Almost all of that growth, however, was limited to those who completed a primary education; this trend signals a subtly improving educational profile. The number of immigrants with less than primary education, for the first time in the past three decades, grew by only a trivial amount. During the recent decade of phenomenal population growth, immigrants with less than primary education were not a factor. In this regard, the 1990s may mark a milestone.

**Figure 15. Population of Latino Immigrants Educated in America**

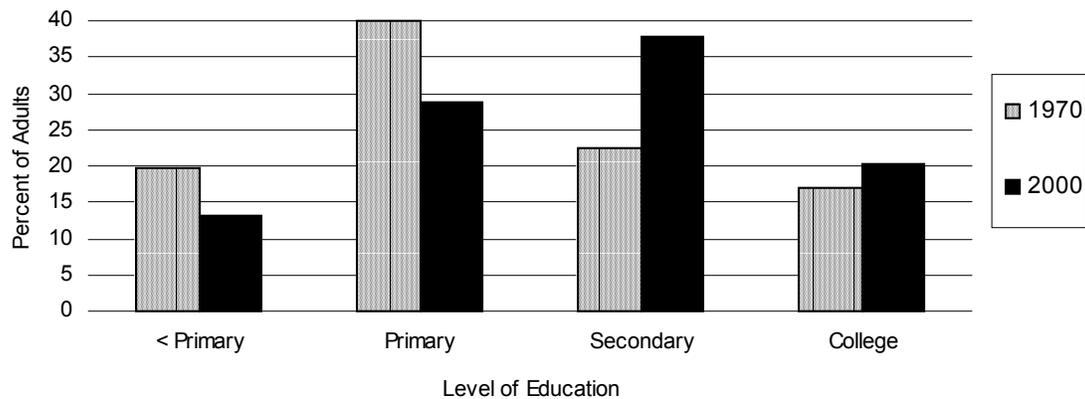


Source: U.S. Census Surveys

Recent Arrivals Are More Educated Over Time

In the past three decades, *recent arrivals*, defined here as “immigrants who entered in the decade prior to each census,” have been better educated over time (Figure 16). Consider the recent arrivals in the 1970 census (arrived 1961-1970) and those in the 2000 census (arrived 1991-2000). Compared to recent arrivals three decades earlier, those immigrants who arrived during the 1990s were 70 percent more likely to have completed high school and 20 percent more likely to have completed college.

**Figure 16. Latino Immigrants Educated Abroad Arriving in the Decade Prior to the Census**



Source: U.S. Census Surveys

## **9. CONCLUDING OBSERVATIONS**

There is one important caveat to this analysis: the least-educated Latino immigrants are those who are unauthorized to work in or reside in the United States. In the 1990s, unauthorized migrants comprised over one-half of the net growth of the total population of the Mexican or Central American foreign-born population.<sup>25</sup> It is estimated that at least two-thirds of all unauthorized migrants did not complete high school, so they make up the preponderance of the total Latino foreign-born population with no more than a primary education.<sup>26</sup> Thus, it is reasonable to conclude that unauthorized Latino migrants contributed disproportionately to the net increase of Latino immigrants in the 1990s with a primary education or less. This means, of course, that the figures in this report understate recent improvements in the education of legally admitted Latinos.

Latino immigrants are often singled out for their low levels of education and an apparent widening educational gap with natives.<sup>27</sup> In fact, they have been closing the gap in high school education and in the future several factors should favor ongoing improvements. There should be increasing secondary completion rates in Latin countries, and the trend should be toward a higher educational profile for immigrants than for the sending country population overall. In addition, there will be an aging-out of older, less-educated immigrants. If the immediate past is any indication, in another 30 years or so, Latino immigrants will have an educational profile similar to that of the native-born population today. During that time, natives will no longer be pulling away as quickly as they have in recent decades. Therefore, the educational gap between natives and Latino immigrants ought to close steadily as a result of the confluence of these two trends: Slowing improvement in the native population means it is not likely to continue pulling away, and the educational distribution among immigrants ought to catch up.<sup>28</sup>

Future gains among Latino immigrants will require ongoing increases in secondary education and significant steps forward in college education. Latino immigrants are noted for not “dropping in” to high school; in other words, many who arrive as young adults do not even enroll in American schools. Among those who do enroll, the Latino immigrant high school dropout rate is much higher than that of natives.<sup>29</sup> As more high-school-educated immigrants arrive, however, this problem may ease. As education improves individuals’ aspirations both here and abroad for more education should increase. The policy challenge, as always, is to encourage young immigrants to pursue and complete their education. For immigrants who arrive as adults, practical skills training and language instruction remain important tools for success.

In the past, the gap in education between natives and immigrants was blamed on a generous immigration policy that favors family reunification over

education. Poorly educated immigrants, who are permitted to petition for family members, tend to attract new immigrants who also have poor education. By contrast, immigrants admitted under the employment preferences of the American immigration system tend to be rather well educated. This dichotomy is unlikely to change, but the findings reported here suggest that even family-based immigration is likely to see improved education among new immigrants.

As far as legal immigration is concerned, the picture should be one of improving trends. But that is not necessarily the case for the substantial inflow of unauthorized migrants, well known to have significantly less education than their legal compatriots.<sup>30</sup> The forces driving educational improvements appear to be less applicable to unauthorized migrants. Historically, they have been drawn from the least-educated populations in Latin America and they have the least education of any immigrant group in the United States. So while policymakers need not be as concerned as before about the educational fallout of family reunification, changes in legal immigration policies will not affect the negative impact of unauthorized migration.<sup>31</sup>

Education remains a key to the success of both Latino immigrants in the United States and the communities that receive them. The medium-to-long-term trends in this regard seem positive. For the immediate and foreseeable future, policymakers should not abandon their attempts to assist newcomers through immigrant-friendly schools and adult skills training. Moreover, they should have some confidence that their efforts will not be overwhelmed by a limitless supply of poorly educated Latino immigrants. As the educational profile of the Latino immigrant population continues to improve, education programs aimed at this population should be expected to yield greater results.

## **10. TECHNICAL APPENDIX**

This Technical Appendix contains detailed descriptions of the U.S. Census data that are used, the methods used to measure education, and the place of education.

### U.S. Census Survey Data

The data used for this report were collected by the U.S. Bureau of the Census. The first three cross sections are the public use microsamples (PUMs) based on the long-form questionnaire of the decennial Census: the 3 percent PUMs of 1970, and the 5 percent PUMs for 1980 and 1990.

For the year 2000 it is necessary to use other data collected by the Census. The 2000 Census PUMs will not be available until sometime mid-to-late 2003. The alternative Census 2000 Supplementary Survey PUMs (C2SS) is, unfortunately, a subsample of the national survey and is too small to yield reliable results, especially for individual countries of birth.

The 2000 time point is constructed using the well-known Current Population Survey (CPS) collected by the U.S. Census Bureau in order to maximize sample size. First, the 2000 cross section is centered on CPS data for 1999, 2000, and 2001. Second, the CPS data used are from the "Labor Extract Files" provided by the National Bureau of Economic Research (NBER) that concatenates 12 months of "outgoing rotation groups." The outgoing rotation group of a monthly CPS has demographic, detailed labor force, and earnings information for approximately 30,000 individuals. An annual merged outgoing rotation group file has the sample size of approximately three monthly CPSs combined, and each year's file has information on 275,000 to 325,000 adults.

On a final note, these standard CPS data are not, as yet, weighted to yield 2000 Census populations, and the CPS is known to undercount the Latino population captured in the 2000 Census. Most of the analysis herein, however, is based on point estimates of percentages; thus, the likelihood of extensive bias is not the same. We tested that proposition by using a special set of calculations constructed to weight the March 2000 CPS to the 2000 Census. While too small a sample for the detailed tables generated for this report, the standard CPS and special 2000 Census CPS weights produced very similar point estimates on education.

### Measuring Completed Education and the Sheepskin Effect

This report measures three major levels of completed education and a fourth level of non-completion. While each year of schooling improves a person's opportunity for success in the United States, actually finishing a degree confers the

clearest advantage. Known as the “sheepskin” effect, economists find that workers earn significantly greater wages if they complete a degree than if they do not. For example, graduating from high school increases a worker’s earnings by 7 percent over and above simply attending 12 years of school.<sup>32</sup> Graduating from a 4-year college adds 15 percent to a worker’s earnings. Two years of completed college or an associate’s degree also increases earnings, albeit by a smaller amount.

Completed education is measured by the attainment of a given number of years of education and/or a degree. The U.S. Census in 1970 and 1980 asked about highest grade attained, while those of 1990 and 2000 inquired about attainment of a given year and completion of a high school, associate’s (technical or academic) degree, and higher. This is known to create a discrepancy in the time series, and year equivalents have been worked out to create comparable numerical averages of years of education.<sup>33</sup> Attainment of a given number of years of education may overstate the tendency for individuals to have completed, for example, a high school degree.

However, in lieu of alternative data, convention is followed in comparing the time series.<sup>34</sup> There is little alternative, but this is not thought to introduce excessive bias to results, especially when the focus is on the adult population 25 years and older. At the least, by age 25 school enrollment is minimal and the likelihood of completing 12 or 14 years (and even 16 years) of education and the complementary degree is extremely high.

Furthermore, any bias in terms of measured change across the earlier and later cross sections will be conservative. The 1970/1980 data tend to over-estimate “completion” shares; in comparison, the 1990/2000 data will generate lower “completion” shares, with the result that changes over time will be less than if the measures were precisely the same.

There are four educational categories that can be assigned using U.S. Census data and schooling definitions:

- *College* –completed 14 years of education or an associate’s degree or better;
- *Secondary* –completed 12 years of school or high school/GED degree;
- *Primary* –completed 6 years of education; and
- *< Primary* –has completed less than 6 years of education.

Focusing on completed education creates a fourth category of persons (<primary) who, in most cases, had some schooling but had not finished their sixth year. In essence, high school “drop outs” is the combined primary and less than primary categories.

College education by this definition is not restricted to just persons who graduated a four-year college, but refers to anyone who has an associate’s degree

or better. This is a common international benchmark that is seen less frequently in U.S. statistics and, as noted above, will tend to lessen bias in comparing Census data. Furthermore, research finds that some college leads to higher income, even if not as high as a four-year degree completion.<sup>35</sup>

While Latinos of all generations have low bachelor's degree attainment, it turns out that college education as defined by an academic two-year degree increased during the 1990s. Latinos' share is now higher than it is for the white population in the United States. More so than in the past, it may be that associate's degree completion is the first phase of an inter-generational increase in education. Parents' education is believed to be an excellent predictor of their children's. For the population of Latinos, the increased past share of parents with high school education may be leading to the pursuit by their children of two-year community college education, especially in the context of a low-income population that tends to rely on family and community resources.

#### Immigrants' Place of Education

Research finds that, generally speaking, immigrants who get their education in the United States have higher wages than those who arrive with their education from abroad.<sup>36</sup> In fact, the sheepskin effect of an American education is even greater for immigrants, perhaps because immigrants who complete their college in the United States are "selected" or unique, high achievers.<sup>37</sup>

The U.S. Census does not ask where a person completed their education so that must be imputed. The heuristic used here is to estimate an immigrant's age at arrival by subtracting their year of arrival in the United States from the Census date (and from their age). Then the immigrant's reported completed education is used in conjunction with typical ages of completion of each of the educational levels:

- *College education in America* – the immigrant arrived by age 17 and, hence, *all* of their reported college (and pre-college) education is assumed to have been in the United States.
- *Secondary education in America* – the immigrant arrived before age 17 and, hence, is assumed to have completed at least their final year of high school education in the United States.
- *Primary education in America* – the immigrant arrived before the age of 11 and, hence, is assumed to have completed at least their final year of primary school education in the United States.
- *< Primary education in America* – the immigrant arrived before the age of 11 and, hence, is assumed to have been able to access the American educational system but did not complete their sixth year.

If an immigrant arrived “young enough” to have completed his/her degree in the United States, then place of education is assigned to the United States. If an immigrant arrived “older” than the age at which his/her reported degree is typically completed, then place of education is assigned as being abroad.

How much younger or older? The logic at the college level, using age 17 as the cutoff, is consistent with what other researchers have done. The idea is that the immigrant had either already been in the United States for at least secondary education and then went on, or arrived in time to get their entire college education in the United States. And at this advanced level of education it is rare that individuals switch between institutions of higher learning (abroad to here), so this is a pragmatic cutoff.

At intermediate levels, only one year of United States eligibility is required. This is a minimum requirement for at least the completed year to have been in the United States. However, it is rather likely that persons with completed primary or secondary education have had several years of experience in American schools. A fair share of Latino immigrant youth does not attend school at all, and completers are selected from among those who began early in the American educational system.<sup>38</sup> At the less than primary level (<primary), age 11 is chosen to assign immigrants who arrived after this age as having “not” achieved while abroad, while those who arrived before age 11 failed to complete their education while in the United States.

Imputing using these rules should be reliable. The greatest problem with such an assignment is that period of arrival is reported in intervals which reduces precision. It is also the case that some older immigrants enroll in American educational institutions after entry; thus, a small portion will be wrongly assigned completion abroad. There is some evidence that the least-educated immigrants are the most likely to invest in skill accumulation after arriving in the United States, but this is gauged through wage trajectories and it is not clear that significant numbers of such immigrants actually complete higher degrees.<sup>39</sup> In fact, very similar results are found in comparisons of the results of such Census imputations with data that actually asks about place of education.<sup>40</sup>

## 11. ENDNOTES

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<sup>1</sup> Borjas 1999; Kodrzycki 2002; Ellwood 2001; Siles and Pérez 2000.

<sup>2</sup> Camarota 2001.

<sup>3</sup> Smith and Edmonston 1997.

<sup>4</sup> Davies et al. 1998.

<sup>5</sup> Barton 2002.

<sup>6</sup> NCES 2000b, 2002a.

<sup>7</sup> Little and Triest 2001.

<sup>8</sup> NCES 2000a.

<sup>9</sup> Rumbaut 1995.

<sup>10</sup> Tedesco and Lopez 2002.

<sup>11</sup> Lowell and Findlay 2001.

<sup>12</sup> Note that as the percent of adults who complete college increases, the percentage that completes only high school necessarily decreases. In other words, those who complete college are subtracted from those who complete high school only. This distinction was made because it marks an important demographic milestone in the educational profile of the population that is the focus of this report. However, it is also possible, as Figure 1 of this report does, to consider the high school and college educated together. This latter reporting is a cumulative representation of "high school or better." In a similar fashion, both the categories of primary and less than primary education can be thought of more simply as "less than high school."

<sup>13</sup> Rumbaut 1995.

<sup>14</sup> Rumbaut 1995.

<sup>15</sup> Aging out will not play a strong role in reducing the number of immigrants who had only completed primary education for perhaps another two decades.

<sup>16</sup> It is also possible that this is a unique population whose males are most likely employed in agriculture or manual labor. They shuttle back and forth between the United States and their home country, particularly Mexico. Being more mobile than females, the males are not captured in the U.S. Census and so more females are counted than males.

<sup>17</sup> Siles and Pérez 2000.

<sup>18</sup> An additional finding is the surprising change between 1970 and 2000 among American-educated immigrants with no more than primary education. From more females than males in 1970, by the year 2000 there are fewer females than males with no more than primary education. This new over-representation of males likely reflects a demand for minimally qualified male workers in agriculture and other manually intensive industries in the year 2000. While worth noting, this population is very small today being less than 2 percent of the entire foreign-born population.

<sup>19</sup> Tedesco and Lopez 2002.

<sup>20</sup> Among the factors that change the educational profile of the immigrant population are the characteristics of those who choose to return to their country of origin. However, research has not fully addressed whether or not returning Latino emigrants *per se* are persons with low or high education. If return emigrants have less education than those who remain, that would tend to further improve the educational profile of Latino immigrants in the United States. Research does, in fact, suggest that the United States retains the best educated Latino immigrants.

<sup>21</sup> Much of the research literature focuses on the fact that it is not the poorest who migrate, but those in the social strata just above the poorest. It is often presumed that the highest social strata, and the best educated, are among the least likely to move.

<sup>22</sup> These figures are calculated using the Latino immigrant populations used for this report and dividing them through the similarly educated population in Latin American nations (see Lowell and Findlay 2001 for method; see Barro and Lee 2000 for sending country information). These estimates do not include the Caribbean nations.

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<sup>23</sup> Puerto Ricans born on the island are included here as being “foreign born” by virtue of being first-generation residents of the mainland. They are, in fact, U.S. citizens so they are legally “natives” at birth.

<sup>24</sup> Kodrzycki 2002, Ellwood 2001.

<sup>25</sup> Lowell and Suro 2002.

<sup>26</sup> Fix and Passel 2001.

<sup>27</sup> Borjas 1999, Kodrzycki 2002; Ellwood 2001.

<sup>28</sup> Ellwood 2001.

<sup>29</sup> Vernez and Abrahamse 1996.

<sup>30</sup> Camarota 2001.

<sup>31</sup> There is some academic disagreement about the future of unauthorized migration. Some theorists expect undocumented migration to continue unabated, while others believe that declining population growth and economic development will reduce future migration flows. The argument for reduction, at least in the case of Mexico, forecasts a decline of unauthorized migration beginning in the coming decade. If this occurs, then there will certainly be a stronger improvement in the educational profile of the Latino immigrant population.

<sup>32</sup> Betts and Lofstrom 2000.

<sup>33</sup> Yaeger 1997.

<sup>34</sup> Mare 1995.

<sup>35</sup> Boesel and Fredland 1999.

<sup>36</sup> Betts and Lofstrom 2000.

<sup>37</sup> Obviously, most Latino immigrants are educated in the “Americas.” Just as obviously, America is used here to denote the United States as it less cumbersome than other designations.

<sup>38</sup> Because average age at completion, especially among Latinos, is usually greater than the typical age, this decision rule is biased in the direction of generating more likely American schooling completions at these levels. On the other hand, because it does not require that all primary or secondary education was received in America, it is biased toward inclusion of some persons with what may be truly minimal American education. At the same time, the less education an immigrant had completed upon arrival, the more likely they are to pursue additional education in the United States (see Betts and Lofstrom 2000). In this way a small portion of immigrants will be assigned completed education abroad when, in reality, they completed in America.

<sup>39</sup> Duleep and Dowhan 2002.

<sup>40</sup> Betts and Lofstrom 2000.

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