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THE SECOND GENERATION AND BEYOND

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ABSTRACT

In this chapter, we document generational patterns of educational attainment and earnings for contemporary immigrant groups. We also discuss some potentially serious measurement issues that arise when attempting to track the socioeconomic progress of the later-generation descendants of U.S. immigrants, and we summarize what recent research has to say about these measurement issues and how they might bias our assessment of the long-term integration of particular groups. Most national origin groups arrive with relatively high educational attainment and/or experience enough improvement between the first and second generations such that they quickly meet or exceed, on average, the schooling level of the typical American. Several large and important Hispanic groups (including Mexicans and Puerto Ricans) are exceptions to this pattern, however, and their prospects for future upward mobility are subject to much debate. Because of measurement issues and data limitations, Mexican Americans in particular and Hispanic Americans in general probably have experienced significantly more socioeconomic progress beyond the second generation than available data indicate. Even so, it may take longer for their descendants to integrate fully into the American mainstream than it did for the descendants of the European immigrants who arrived near the turn of the twentieth century.

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As a self-styled nation of immigrants, the United States takes great pride in its historical success as a “melting pot” able to absorb and unify people coming from diverse lands and cultures. At the same time, however, pride in our immigrant heritage always seems tempered by the nagging fear that the most recent arrivals are somehow different, that the latest wave of foreigners won’t integrate into the mainstream of American society. Certainly, this fear was voiced when Irish, Italian, and other relatively unskilled immigrants arrived in large numbers at the end of the 1800s and the beginning of the 1900s (Jones 1960). Time has assuaged this particular fear. In terms of outcomes such as educational attainment, occupation, and earnings, the sizable differences by national origin that initially persisted among earlier European immigrants have largely disappeared among the modern-day descendants of these immigrants (Alba and Nee 2003; Borjas 1994; Chiswick 1977; Farley 1990; Lieberman and Waters 1988; Neidert and Farley 1985; Perlmann 2005; Perlmann and Waldinger 1997).

There is considerable skepticism, however, that the processes of assimilation and incorporation will operate similarly for the predominantly nonwhite immigrants who have entered the United States in increasing numbers over the past several decades (Gans 1992; Portes and Zhou 1993; Rumbaut 1994). Indeed, Huntington (2004) voices a particularly strong version of such skepticism with regard to Hispanic immigration. Are the descendants of present-day Hispanic and Asian immigrants following the same trajectory of intergenerational integration experienced by the descendants of earlier arrivals from Europe?

In this chapter, we shed light on this question by documenting generational patterns of educational attainment and earnings for contemporary immigrant groups. We also discuss some potentially serious measurement issues that arise when attempting to track the socioeconomic progress of the later-generation descendants of U.S. immigrants, and we summarize what recent

research has to say about these measurement issues and how they might bias our assessment of the long-term integration of particular groups.

Educational Patterns in the First and Second Generations

We begin by describing patterns of educational attainment among foreign-born immigrants and their U.S.-born children. Education is a fundamental determinant of economic success, social status, health, family stability, and life opportunities (Hout 2012). In addition, information on education is available for all adults, whereas earnings data are available only for those currently working. Our primary education measure is average completed years of schooling, but similar patterns emerge for other education measures, such as the percent of individuals in the lower (less than 12 years of schooling) and upper (at least a bachelor's degree) tails of the educational distribution.

Throughout this chapter, we employ microdata from the Current Population Survey (CPS) for all months from January 2003 through December 2016. The CPS is a monthly survey of about 60,000 households that the U.S. government administers to estimate unemployment rates and other indicators of labor market activity. The sampling universe for this survey is the civilian noninstitutionalized population of the United States, which potentially generates biased estimates for groups with relatively high rates of institutionalization, such as young, African-American males (Pettit 2012). Beginning in 1980, the decennial U.S. Census stopped asking respondents about the countries of birth of their parents, and the American Community Survey follows the census in this regard. In 1994, however, the CPS began collecting this information on a regular basis from all respondents. As a result, the CPS is currently the best large-scale, nationally representative U.S. data set for investigating how outcomes vary by immigrant

generation.

In addition to the detailed demographic and labor force data reported for all respondents, the CPS collects earnings information each month from one-quarter of the sample, the so-called outgoing rotation groups. The data we analyze come from these outgoing rotation group samples. The CPS sampling scheme is such that surveys for the same month in adjacent years have about half of their respondents in common (e.g., about half of the respondents in any January survey are reinterviewed the following January). To obtain independent samples, we use only data from the first time a household appears in the outgoing rotation group samples (i.e., we use only data from the fourth month that a household appears in the CPS sample). By pooling together these 14 years of monthly CPS data, we substantially increase sample sizes and improve the precision of our estimates.

Using the CPS information on the countries of birth of each respondent and his or her parents, we define the following generation groups. The first generation consists of foreign-born individuals, excluding those born abroad of an American parent.¹ The second generation consists of U.S.-born individuals who have at least one foreign-born parent. Remaining persons are members of the third+ generation (i.e., the third and all higher generations), which consists of U.S.-born individuals who have two U.S.-born parents. Our analysis samples include men and women aged 25–59.

¹ In the discussion that follows, we will use the terms *first generation* and *immigrant* as synonymous with foreign-born individuals, in contrast to the official terminology used by the U.S. government in which immigrants are legal permanent residents, and *nonimmigrant aliens* are other foreigners such as tourists, business travelers, and recent refugee arrivals. The data analyzed here cannot make such distinctions among foreign-born individuals. In addition, individuals born in Puerto Rico and other outlying areas of the United States are included within our first-generation group. Persons born in Puerto Rico are U.S. citizens and enjoy unfettered mobility between the island and the U.S. mainland, and therefore Puerto Ricans are not, strictly speaking, a U.S. immigrant group. Nonetheless, island-born Puerto Ricans who move to the United States and their U.S.-born descendants encounter many of the same adjustment issues as conventional immigrant groups. Accordingly, the socioeconomic mobility of Puerto Ricans is often analyzed using models and methods developed to study U.S. immigrant groups (e.g., Feliciano 2001; Hirschman 2001).

For first- and second-generation individuals overall and separately for those from the largest national origin groups, Table 1 reports average completed years of schooling and the corresponding sample sizes on which these averages are based.² The bottom row of the table shows average schooling levels for first- and second-generation individuals from all countries of origin (including countries not listed individually in the table). Separate calculations are presented for men and women.

For the first generation, these tables illustrate the well-known diversity of educational attainment among U.S. immigrants (Betts and Lofstrom 2000; Card 2005). Average schooling levels range from about 10 years for those born Mexico and Central America to 15 years and above for those born in India, Japan, Korea, and Canada. For comparison purposes, note that average years of schooling among third+-generation non-Hispanic whites is 13.8 years for men and 14.0 years for women.

Additional calculations (not reported in Table 1) reveal that the foreign-born are greatly overrepresented among those with the lowest levels of education. Overall, 27 percent of immigrant men and 24 percent of immigrant women have completed less than 12 years of schooling, and these rates exceed 40 percent for Central American immigrants and exceed 50 percent for Mexican immigrants. In contrast, the corresponding rates of low educational attainment are below 7 percent for U.S.-born individuals overall. At the same time, however, the foreign-born are well represented among those with the highest education levels. Completion of a bachelor's degree is only slightly less common for immigrants than for the U.S.-born, whereas

² The specific countries (e.g., Mexico) and regions (e.g., Europe) of origin identified in these tables collectively represent 88 percent of the first-generation individuals and 92 percent of the second-generation individuals in our samples. Second-generation individuals with parents born in different foreign countries have been assigned the national origins of their fathers. We follow Jaeger's (1997) recommendations for how to construct a completed years of schooling variable from the CPS information collected about postsecondary degrees obtained.

a substantially higher fraction of immigrants than U.S. natives have postgraduate degrees, and highly educated immigrants are heavily concentrated in science, technology, engineering, and health fields (Bound and Turner 2014). College degrees and higher levels of education are especially prevalent for immigrants from Canada, Europe, and parts of Asia (including China, India, Japan, Korea, and the Philippines). To sum up, the foreign-born are overrepresented at the bottom and, to a lesser extent, the top of the U.S. educational distribution, and they are underrepresented in the middle.

For assessing educational integration, it is particularly useful to look at the second generation, because these U.S.-born children of immigrants grew up in American schools. Table 1 reveals that, overall, second-generation men and women average about 14 years of schooling. Additional calculations (not reported) indicate that second-generation Americans have high school dropout rates of 6–7 percent and college completion rates of 36–39 percent (with women holding a slight educational advantage over men). These measures of educational attainment for the second generation are very similar to the corresponding measures for non-Hispanic whites in the third+ generation.³ In this respect, the second generation as a whole has converged to the average educational attainment of the typical American.

Moreover, for the vast majority of specific national origin groups, average education levels of the second generation significantly exceed those of the typical third+-generation American. The exceptions are second-generation members of several important Hispanic groups: Mexicans, Puerto Ricans, Dominicans, and Central Americans. Note that this is not the case for *all* Hispanic groups—in particular, second-generation Cubans and South Americans exhibit

³ For third+-generation, non-Hispanic whites, the comparable measures for men are an average education level of 13.8 years, a high school dropout rate of 5.8 percent, and a college completion rate of 33.9 percent. The corresponding measures for women are 14.0 years, 4.5 percent, and 36.3 percent, respectively.

relatively high levels of educational attainment. But the low schooling levels of second-generation Mexicans and Puerto Ricans and, to a lesser extent, Dominicans and Central Americans stand in sharp contrast to the much higher educational attainment of the second generations from non-Hispanic source countries.⁴ As a result, Hispanics assume a central role in current discussions of immigrant integration, not just because Hispanics make up a large share of the U.S. immigrant population, but also because most indications of relative socioeconomic disadvantage among the children of U.S. immigrants vanish when Hispanics are excluded from the sample (Perlmann and Waldinger 1996, 1997; Farley and Alba 2002).

In large part, the educational deficits displayed by some second-generation Hispanic groups reflect the very low schooling levels of their immigrant parents (Perlmann 2005; Smith 2006). For example, Mexican immigrants average less than 10 years of education and under half have completed at least 12 years of schooling, so it is perhaps not surprising that their U.S.-born sons and daughters do not fully erase this enormous gap in human capital. Figures 1 (for men) and 2 (for women) provide further evidence on the relationship between the education levels of first- and second-generation individuals from the same source country. For the 17 countries/regions of origin displayed in Table 1, the figures plot average years of schooling for second-generation individuals aged 25–34 against those for first-generation individuals aged 50–59. These specific age groups are chosen so that the first generation more closely represents the parental cohort for the corresponding second generation. The solid regression lines in the figures highlight the central tendencies of the relationships between the average education levels of second-generation individuals from a particular source country and those of their immigrant

⁴ Similar patterns have been found by researchers employing a variety of different data sets and measures of educational attainment. See, for example, Rumbaut (2005) and Perreira, Harris, and Lee (2006).

ancestors. For reference purposes, the horizontal and vertical dashed lines indicate average years of schooling—13.8 years for men in Figure 1 and 14.2 years for women in Figure 2—for non-Hispanic whites in the third+ generation who are aged 25–34 (the same age range as the second-generation samples in the figures).

These figures reveal a strong relationship between the educational attainments of second-generation individuals and their immigrant predecessors. Most data points are close to the corresponding regression line, and the *R*-squared statistics of 0.63 for men in Figure 1 and 0.44 for women in Figure 2 indicate that much of the variation across national origin groups in the average education of the second generation is associated with differences in the human capital possessed by their immigrant ancestors.⁵ Moreover, three of the Hispanic national origin groups with relatively low levels of second-generation schooling (Mexicans, Dominicans, and Central Americans) are not prominent regression outliers in these figures, which indicates that their educational deficits in the second generation are roughly what we would expect given the low schooling levels of their immigrant parents. Puerto Ricans, however, do lie well below the regression lines. Despite having education levels in the immigrant generation that exceed those of the other disadvantaged Hispanic groups, by the second generation Puerto Ricans join Mexicans at the bottom of the U.S. educational hierarchy.

Regarding the educational integration of the second generation, the evidence presented thus far can be briefly summarized as follows: on average, the second generation as a whole and second-generation members from most contemporary immigrant groups meet or exceed the schooling level of the typical American; the primary exceptions to this pattern are several

⁵ Borjas (1994) and Card, DiNardo, and Estes (2000) provide detailed analyses of the transmission of human capital across immigrant generations for a large number of national origin groups over several decades. These studies confirm the strong relationships suggested by Figures 1 and 2.

important Hispanic groups: Mexicans, Puerto Ricans, Dominicans, and Central Americans; and the sizable educational deficits that persist into the second generation for these Hispanic groups largely reflect the very low levels of schooling, English proficiency, and other forms of human capital brought to the United States by their immigrant ancestors.

Because they start out farther behind, perhaps the lagging Hispanic groups will simply require an extra generation or so to integrate into the socioeconomic mainstream of American society. After carefully comparing the intergenerational mobility experienced by low-skill European immigrants arriving in the United States around 1900 with that experienced by modern-day Mexicans, Perlmann (2005) concludes that “Mexican economic assimilation may take more time—four or five generations rather than three or four” (p. 124), but that such assimilation is nonetheless occurring. If Perlmann is correct, then the long-term integration of Mexican Americans and other Hispanic groups may not turn out all that differently from the success stories often recounted for previous waves of U.S. immigration.

Beyond the Second Generation

Given the patterns described in the preceding section, a key question becomes how much educational progress takes place after the second generation for Mexicans and other disadvantaged Hispanic groups. To tackle this question, we must first confront the issue of how, with available data, to identify immigrant groups in the third generation and beyond. In the CPS, the only information about the national origins of third+-generation individuals comes from their subjective responses to the Hispanic origin and race questions. Using this information, Table 2 reports average years of schooling by immigrant generation for the various Hispanic and non-

Hispanic racial/ethnic groups identified in CPS data.⁶ The samples include men and women ages 25-59, and standard errors are reported in parentheses.

For Hispanics overall, Table 2 reveals a substantial schooling advantage of more than 2.5 years for the second generation relative to the first, but no further improvement is evident for the third+ generation. This pattern largely repeats itself for each of the Hispanic national origin groups: sizeable schooling gains between the first and second generations with no signs of additional progress beyond the second generation. Puerto Ricans are a notable exception, however, with average education levels increasing by about one-half of a year between the second and third+ generations. Another interesting pattern is that the gains between the first and second generations are particularly strong for the national origin groups with the least-educated immigrants (i.e., Mexicans and Central/South Americans).

Turning now to the non-Hispanic groups in Table 2, Asians of all three generations possess high levels of educational attainment, as do first- and second-generation whites. By the second generation, the average schooling levels of black and other race individuals exceed those of third+-generation whites. Educational attainment is dramatically lower (by a year or more, on average) for third+-generation members of the black and other race groups, a pattern that reflects the fundamental demographic heterogeneity across generations for these particular groups. First- and second-generation blacks, for example, primarily consist of immigrants from the Caribbean

⁶ Using answers to the questions regarding Hispanic origin and race, we assign each individual to one of five mutually exclusive and exhaustive racial/ethnic groups: Hispanic (of any race), and non-Hispanic white, black, Asian (including Native Hawaiian and Pacific Islander), and a residual “other race” category. Hispanics are disaggregated further by national origin group (Mexican, Puerto Rican, Cuban, Central/South American, or Other Hispanic). Starting in 2003, the CPS permits respondents to designate more than one race, similar to the 2000 and 2010 censuses and the American Community Survey (del Pinal 2004; Grieco and Cassidy 2001). The Hispanic origin question, however, still requires a single response. Our “other race” category includes any non-Hispanics who designated two or more major race groups, as well as those who identified with an “American Indian or Alaskan Native” group. Therefore, the non-Hispanic categories “white,” “black,” and “Asian” represent individuals who designated a single major race group. In the 2010 Census, only 2.3 percent of non-Hispanics designated more than one major race group (Humes, Jones, and Ramirez 2011). Consequently, our decision to include only those who report a single race in the white, black, and Asian race groups does not have much effect on the estimates.

and Africa and their U.S.-born children. Third+-generation blacks, however, are largely the descendants of African-American slaves whose families have been in the United States for many generations. The residual nature of the “other race” group also creates comparability issues across generations, especially for the third+ generation that disproportionately consists of individuals with American Indian and/or mixed-race ancestry. As a result, comparisons between the first two generations and the third+ generation for the black and other race groups are unlikely to shed much light on the intergenerational integration of immigrants. In contrast, such comparisons are more meaningful for the Hispanic and Asian groups, because these groups are more demographically homogenous across generations and because most of the third+-generation members are indeed third generation rather than from a higher generation.

The apparent lack of socioeconomic progress between second and later generations of U.S. Hispanics is surprising. Previous studies have consistently found parental education to be one of the most important determinants of an individual’s educational attainment and ultimate labor market success (Haveman and Wolfe 1994; Mulligan 1997). Through this mechanism, the huge educational gain between first- and second-generation Hispanics (documented in Figures 1 and 2 and Tables 1 and 2) should produce a sizable jump in schooling between the second and third generations, because on average the third generation has parents who are much better educated than those of the second generation. Yet the improvement in schooling we expect to find between the second and third generations is largely absent (except for Puerto Ricans).

Generational Patterns for Weekly Earnings

Until now we have used educational attainment rather than earnings to measure skills, in order to avoid potential biases from selective labor force participation (i.e., earnings data are

available only for those currently employed). Earnings, however, are perhaps the ultimate indicator of labor market success, because earnings reflect the market's valuation of a worker's entire package of abilities and attributes, including those for which data are often lacking (e.g., family background, or the quality of schooling). We now show that, in general, earnings patterns are similar to the education patterns discussed previously, particularly with respect to the apparent cessation of Hispanic progress after the second generation.

Figures 3 (for men) and 4 (for women) display weekly earnings differences associated with immigrant generation and race/ethnicity. The reported differentials are estimated from least squares regressions in which the dependent variable is the natural logarithm of weekly earnings from wage and salary work.⁷ Separate regressions were run for men and women, and the samples include those aged 25–59 employed in civilian wage and salary jobs. These regressions allow intercepts to differ across racial/ethnic and immigrant generation groups, but the coefficients of the control variables are restricted to be the same for all groups. All regressions include controls for age, geographic location, and survey month/year. The controls for geographic location are dummy variables identifying the nine census divisions and whether the respondent lives outside of a metropolitan area. The controls for age are dummy variables identifying five-year age intervals. The bottom panel of each figure reports differentials estimated from regressions that also control for education level (i.e., dummy variables identifying the following years of schooling intervals: less than 12 years, exactly 12 years, 13–15 years, and 16 or more years). The reported differentials are all relative to the reference group consisting of non-Hispanic whites in

⁷ CPS outgoing rotation group data do not report self-employment income.

the third+ generation.⁸ Because the outcome is weekly earnings, these differentials measure the cumulative effect of differences in both hourly wages and hours worked per week.

For Hispanics overall and for Mexicans in particular, the earnings deficits in Figures 3 and 4 display a similar pattern across generations as the education data presented earlier (see Table 2): large gains for the second generation over the first, with little or no evidence of further gains for the third+ generation. Among men, for example, the Hispanic earnings deficit (relative to third+-generation non-Hispanic whites) drops from over 50 percent for the first generation to 21 percent for the second generation, but there is no additional decline for the third+ generation.⁹ The corresponding pattern for Mexican men is quite similar. Comparing the top and bottom panels of Figure 3, the earnings deficits for Hispanic and Mexican men of every generation shrink by about half after controlling for education. For Hispanic and Mexican women, Figure 4 shows that earnings gains between the first- and second-generations are even larger than for men, and conditioning on education produces a greater reduction in the female earnings deficits relative to third+-generation non-Hispanic whites. Indeed, after controlling for education, earnings deficits all but disappear for U.S.-born Hispanic and Mexican women.

Broadly similar patterns emerge for Puerto Ricans, except that Puerto Rican men exhibit earnings gains between the second and third+ generations in Figure 3, just as they were the one group of Hispanic men to show educational gains between the second and third+ generations in Table 2. These educational gains for Puerto Rican men seem to drive much of their observed

⁸ To save space, the figures do not show the corresponding earnings differentials for Hispanic national origin groups besides Mexicans and Puerto Ricans (the two Hispanic groups with sizeable third+ generations), for the “other race” group, and for first- and second-generation non-Hispanic whites.

⁹ For ease of exposition, we will refer to the estimated log earnings differentials as if they represented percentage earnings differences (after multiplying the log differentials by 100). Strictly speaking, however, log differentials closely approximate percentage differences only when the log differentials are on the order of 0.25 or less in absolute value. For larger differentials, the implied percentage difference can be calculated as $(e^c - 1) \times 100$, where c is the log differential and e is Euler’s number (i.e., the base of natural logarithms).

earnings progress, as the decline in the earnings deficit between the second and third+ generations is substantially larger without controlling for education (the relevant earnings deficit declines from 25 percent to 18 percent) than when such controls are included (the earnings deficit declines from 12 percent to 11 percent). On the whole, these results suggest that the educational disadvantage of Hispanics accounts for much of their earnings deficit, and also that Hispanic schooling gains between the first and second generations play an important role in the earnings progress between these generations.

Among the U.S.-born groups, third+-generation black men stand out with earnings deficits that remain large even after conditioning on education. Compared to non-Hispanic white men in the third+ generation with similar education, the bottom panel of Figure 3 indicates that third+-generation black men earn about 28 percent less. In contrast, the corresponding deficit is only 11 percent for Hispanic men. These findings corroborate other research that suggests that, among men, U.S. labor market opportunities are more similar to those of whites for Hispanics than for blacks (Duncan, Hotz, and Trejo 2006; Grogger and Trejo 2002; Trejo 1997). The bottom panel of Figure 4 shows that, after controlling for education, earnings of U.S.-born women do not vary much with race/ethnicity.

Contrary to the sizable gaps observed for blacks and Hispanics, earnings deficits (relative to third+-generation non-Hispanic whites) are either small or nonexistent for first- and second-generation whites (not shown in the figures) and for Asians of all generations. However, earnings comparisons for Asians become less favorable after controlling for education. As others have noted (Sakamoto, Goyette, and Kim 2009), the schooling advantage of Asian Americans can obscure the fact that, at least among men, they tend to earn somewhat less than whites with the same level of education.

Stalled Progress for Hispanics?

The education and earnings patterns presented thus far suggest that progress stalls after the second generation for Hispanics overall and for Mexicans in particular. Huntington (2004) points to several factors that could slow the pace of intergenerational integration by Hispanics today as compared to Europeans in the past. These factors include the vast scale of current immigration flows from Mexico and other Spanish-speaking countries, the substantial (though lessening) geographic concentration of these flows within the United States, and the fact that such flows have remained sizable over a much longer period of time than did the influx from any particular European country. In addition, the close proximity of Mexico to the United States facilitates return and repeat migration. These unique features of Hispanic immigration might foster the growth of ethnic enclaves in the United States where immigrants and their descendants could, if they so choose, live and work without being forced to learn English or to Americanize in other important ways.¹⁰ Another salient factor is that many Hispanics enter the United States as illegal immigrants. Some evidence suggests that undocumented status may hinder socioeconomic advancement not just for the illegal immigrants themselves but also for their U.S.-born children (Bean et al. 2011; Bean, Brown, and Bachmeier 2015).¹¹

Moreover, today's economy provides fewer opportunities for unskilled workers to

¹⁰ Contrary to Huntington's thesis, however, available evidence suggests rapid linguistic assimilation for the U.S.-born descendants of contemporary immigrant groups (Alba et al. 2002). This holds even for Hispanics who live in areas with high concentrations of Spanish-speaking immigrants. In Southern California, for example, 96 percent of third-generation Mexicans prefer to speak English at home rather than Spanish, and only 17 percent of third-generation Mexicans retain the ability to speak fluent Spanish (Rumbaut, Massey, and Bean 2006).

¹¹ In this context, Puerto Ricans constitute an interesting case study, because they are U.S. citizens and automatically enjoy all of the associated legal rights, including the ability to migrate to and work in the United States. Therefore, issues pertaining to undocumented immigration cannot explain the incomplete socioeconomic integration of the U.S.-born descendants of migrants from Puerto Rico.

advance than did the economy that greeted earlier European immigrants (Perlmann 2005; Portes and Rumbaut 2001). Around 1900, high school completion was uncommon for native-born Americans, so while many European immigrants arrived with relatively meager educations, their skill disadvantage was smaller than that faced today by Hispanic immigrants who typically lack the additional years of high school and college that have become the norm for U.S. natives. Furthermore, recent decades have witnessed a large rise in earnings inequality among American workers, driven by substantial increases in the labor market payoffs to education and other indicators of skill (Autor and Katz 1999; Autor, Katz, and Kearney 2008; Levy and Murnane 1992). As a result, the human capital deficit possessed by most Hispanic immigrants has become even more of a liability in our modern economy that places a higher premium on knowledge and cognitive ability.

Before accepting Huntington's theoretical arguments for slower assimilation by Hispanics, however, it is important to consider several potentially serious limitations of the empirical evidence that has been presented in support of this phenomenon. First, as noted by Borjas (1993, 2006) and Smith (2003, 2006), generational comparisons in a single cross-section of data—like those reported so far—can be misleading because they do a poor job of matching immigrant parents and grandparents in the first generation with their actual descendants in later generations. If we assume that schooling is complete by the age of 25 and does not change thereafter, we can use our CPS samples to conduct an analysis of intergenerational changes in Hispanic educational attainment similar in spirit to Smith (2003).

Table 3 presents average schooling levels for Mexicans and Puerto Ricans similar to those displayed previously in Table 2, except that now separate calculations are reported for two

particular age groups: 25–34 and 50–59.¹² By choosing age groups 25 years apart, we create a situation in which the older age group from a particular generation potentially represents the parental cohort for the younger age group in the next generation. For example, the cohort of immigrant men aged 50–59 includes fathers of the second-generation cohort of sons aged 25–34.

If we make comparisons within age groups by reading across the rows of Table 3, we see the same patterns that emerged in Table 2: For Mexicans, huge educational improvement between the first and second generations but no progress after the second generation, whereas for Puerto Ricans there are more modest gains between the first and second generations but also advances between the second and later generations. If, however, we instead compare age/generation groups that potentially match parents with their children (i.e., by moving northeast between the connected cells with similar shading in Table 3), we begin to see some educational gains for Mexicans after the second generation, especially for women. Among Mexican men, for example, average schooling rises from 12.5 years for the older second generation to 12.6 years for the younger third+ generation. The analogous educational increase between the second and third+ generations is larger for Mexican women, from 12.4 to 13.0 years. Moreover, calculating schooling progress between the first and second generations in this same way produces bigger gains than those we saw in Table 2: 4.2–4.4 years for Mexicans and 1.0–1.2 years for Puerto Ricans, with the larger gains for women. Despite these intergenerational advances, young third+-generation Mexicans continue to trail the average schooling of their non-Hispanic white peers by more than a year, and the corresponding deficits for Puerto Ricans are smaller but still sizable (about two-thirds of a year).

¹² Table 3 focuses on Mexicans and Puerto Ricans because these are the Hispanic national origin groups with the largest U.S. populations of individuals beyond the second generation.

A second issue concerns measurement bias arising from “ethnic attrition.” The large, nationally representative data sources typically employed to study U.S. immigrants and their descendants provide only very limited information pertaining to immigrant generations. Microdata sources such as the decennial U.S. Census, the American Community Survey, and the CPS report each respondent’s country of birth, thereby distinguishing foreign-born individuals (i.e., the first generation) from the U.S.-born population. Only the CPS, however, currently collects information about the countries of birth of each respondent’s parents, which allows the second generation (i.e., U.S.-born individuals who have at least one foreign-born parent) to be differentiated from higher generations of U.S.-born individuals. Furthermore, none of these surveys provide information about the countries of birth of an adult respondent’s grandparents, so the third generation cannot be precisely identified.

Because of these data limitations, research on the U.S.-born descendants of immigrants often must identify the populations of interest using subjective measures of racial/ethnic identification (Duncan, Hotz, and Trejo 2006; Saenz 2005; Sakamoto, Wu, and Tzeng 2000; Snipp and Hirschman 2004; Zeng and Xie 2004). In particular, this approach is typically the only feasible option for studies that examine long-term integration by distinguishing immigrant descendants in the third and higher generations (Blau and Kahn 2007; Borjas 1994; Farley and Alba 2002; Goyette and Xie 1999; Grogger and Trejo 2002; Rong and Grant 1992; Smith 2006; Trejo 1997, 2003; Yang 2004). For example, the standard definition of third+-generation Mexicans Americans is U.S.-born individuals who have U.S.-born parents and who self-identify as Mexican in response to the Hispanic origin question.

A potential problem with this approach is that assimilation and intermarriage can cause ethnic attachments to fade across generations (Alba 1990; Alba and Islam 2009; Lee and Bean

2010; Perlmann and Waters 2007; Waters 1990), and therefore subjective measures of racial/ethnic identification might miss a significant portion of the later-generation descendants of immigrants. Moreover, if such ethnic attrition is selective on socioeconomic attainment, it can distort assessments of integration and generational progress.

Our own previous work demonstrates the salience of these issues for the specific case of Mexican Americans (Duncan and Trejo 2007, 2009, 2011). Analyzing microdata from the CPS for children living with both parents, in Duncan and Trejo (2011) we compare an objective indicator of Mexican descent (based on the countries of birth of the child, his parents, and his grandparents) with the standard subjective measure of Mexican identification (based on the response to the Hispanic origin question). We find that about 30 percent of third-generation Mexican children are *not* identified as Mexican by the Hispanic origin question in the CPS, and this ethnic attrition is highly selective. In particular, the high school dropout rate of third-generation Mexican youth (ages 16 and 17) is 25 percent higher when the sample is limited to those youth subjectively identified as Mexican. Therefore, our previous research suggests that ethnic attrition is substantial among third-generation Mexicans and could produce significant downward bias in standard measures of attainment that rely on subjective ethnic identification rather than objective indicators of Mexican descent.

Extending our earlier work in Duncan and Trejo (2017), which focused on Mexicans, we show that ethnic attrition is sizable and selective for the second- and third-generation populations of key Hispanic and Asian national origin groups. Importantly, these results indicate that ethnic attrition generates measurement biases that vary across groups in direction as well as magnitude, and that correcting for these biases is likely to raise the socioeconomic standing of the U.S.-born descendants of most Hispanic immigrants relative to their Asian counterparts. The results to date,

however, shed more light on the direction rather than the ultimate magnitude of these measurement biases, and so at this point it is unknown whether correcting for selective ethnic attrition would produce a small or large improvement in the relative attainment of later-generation Hispanics.

A third but related issue is that the data limitations just described imply that, for adults, researchers typically cannot distinguish the “true” third generation from higher generations (e.g., this is why Tables 2 and 3 and Figures 3 and 4 refer to the “third+” generation). This is potentially a problem because Mexicans in generations beyond the third are disproportionately descended from ancestors who came of age in places (e.g., Texas rather than California) and times (e.g., before the Civil Rights era) where Mexicans faced discrimination that was more severe and often institutionalized (Alba 2006; Foley 1997; Montejano 1987). The more limited opportunities for advancement experienced by these families may result in lower attainment for Mexicans in the fourth and higher generations compared with their third-generation counterparts whose families experienced less hostile environments. Alba et al. (2011) and Bean, Brown, and Bachmeier (2015) provide evidence of this pattern for schooling levels, highlighting the importance of distinguishing third-generation Mexicans from higher generations.

In recent work with coauthors (Duncan et al. 2017), we exploit previously untapped information from the National Longitudinal Survey of Youth 1997 (NLSY97) that provides, among other things, the countries of birth of respondents’ grandparents. For a sample of adults aged 28–34, these data allow us to minimize ethnic attrition by identifying third-generation Mexicans using ancestors’ countries of birth rather than subjective ethnic identification, and they also allow us to distinguish third-generation Mexicans from higher generations. We find substantial educational progress between second- and third-generation Mexicans that is largely

hidden when we instead mimic standard data sets and aggregate the third and higher generations into a “third+” generation. This analysis provides promising evidence of generational progress for a recent cohort of Mexican-American adults. Indeed, in this birth cohort, the high school graduation rate of third-generation Mexicans is only slightly below that of non-Hispanic whites from the fourth and higher generations.¹³ These NLSY79 findings are consistent with recent evidence of improving high school completion rates for U.S.-educated Hispanics from 1990 to 2010, with particularly large gains during the second half of this period (Murnane 2013).

Conclusion

Research on the educational attainment of the descendants of U.S. immigrants reveals clear success stories as well as reasons for concern. On the one hand, most national origin groups arrive with relatively high educational attainment and/or experience enough improvement between the first and second generations such that they quickly meet or exceed, on average, the schooling level of the typical American. On the other hand, several large and important Hispanic groups (including Mexicans and Puerto Ricans) are exceptions to this pattern, and their prospects for future upward mobility are subject to much debate (Alba et al. 2011; Alba, Jimenez, and Marrow 2014; Alba, Kasinitz, and Waters 2011; Bean, Brown, and Bachmeier 2015; Haller, Portes, and Lynch 2011a,b; Park, Myers, and Jimenez 2014; Perlmann 2005, 2011; Portes 2006; Telles and Ortiz 2008).

Because of the measurement issues and data limitations that we have discussed, Mexican Americans in particular and Hispanic Americans in general probably have experienced

¹³ Even in this birth cohort, however, rates of attending and completing college for third-generation Mexicans are still substantially below those of non-Hispanic whites.

significantly more socioeconomic progress beyond the second generation than available data indicate. Even so, because many Hispanic immigrants arrive in the United States with relatively low levels of human capital, it may take longer for their descendants to integrate fully into the American mainstream than it did for the descendants of the European immigrants who arrived near the turn of the twentieth century. Closing the remaining educational gap between Hispanics and other Americans should be a key component of any effort to hasten such integration.

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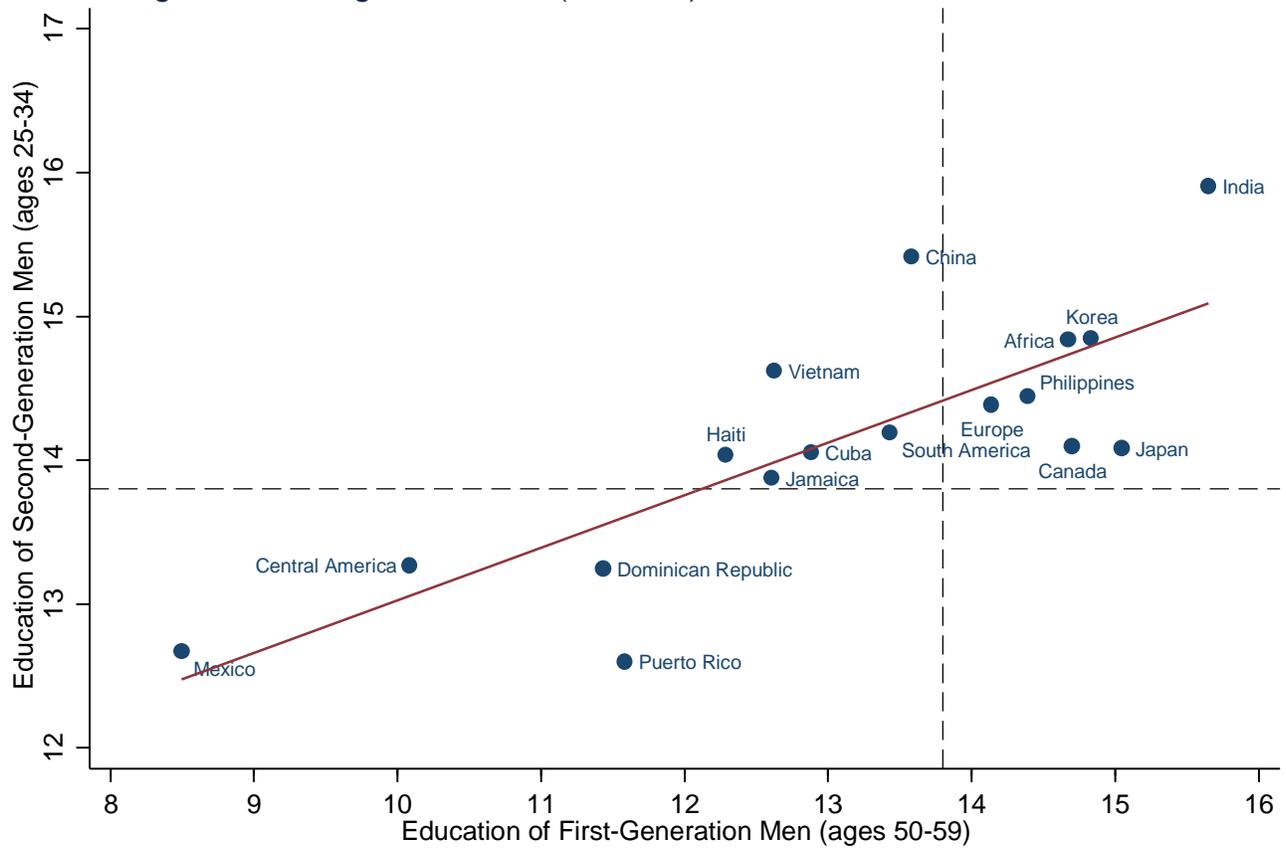
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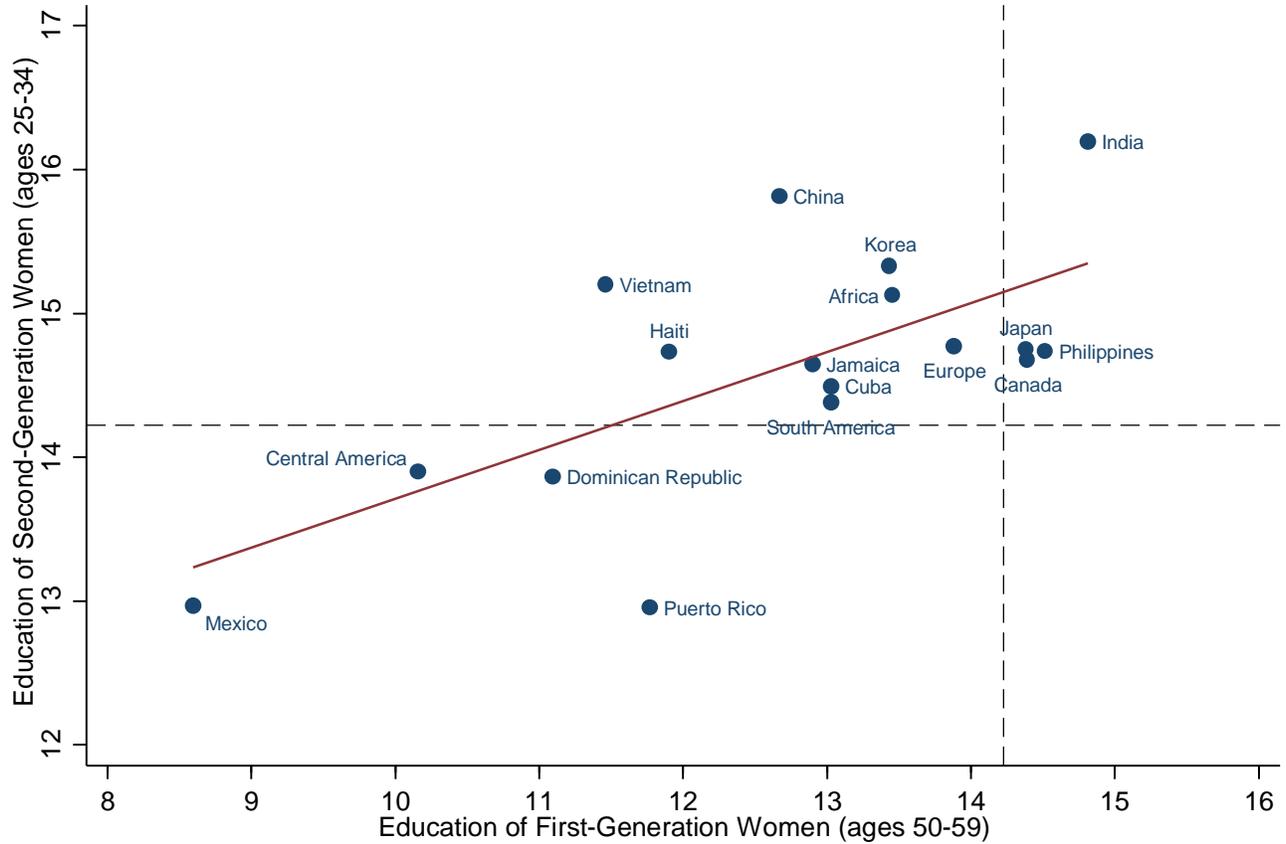
Figure 1: Average Education (in Years) of First- and Second Generation Men



SOURCE: 2003–2016 Current Population Survey outgoing rotation group data.

NOTE: The education measure is completed years of schooling. The first-generation samples include foreign-born men aged 50–59, excluding those born abroad of an American parent. The second-generation samples include U.S.-born men aged 25–34 who have at least one foreign-born parent. Sampling weights were used in the calculations.

Figure 2: Average Education (in Years) of First- and Second Generation Women

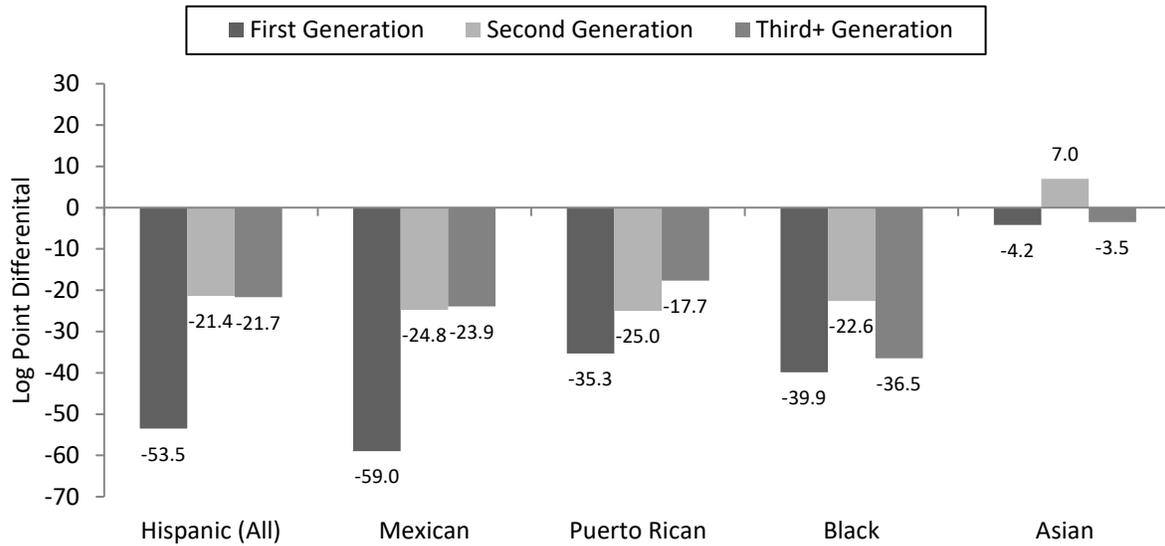


SOURCE: 2003–2016 Current Population Survey outgoing rotation group data.

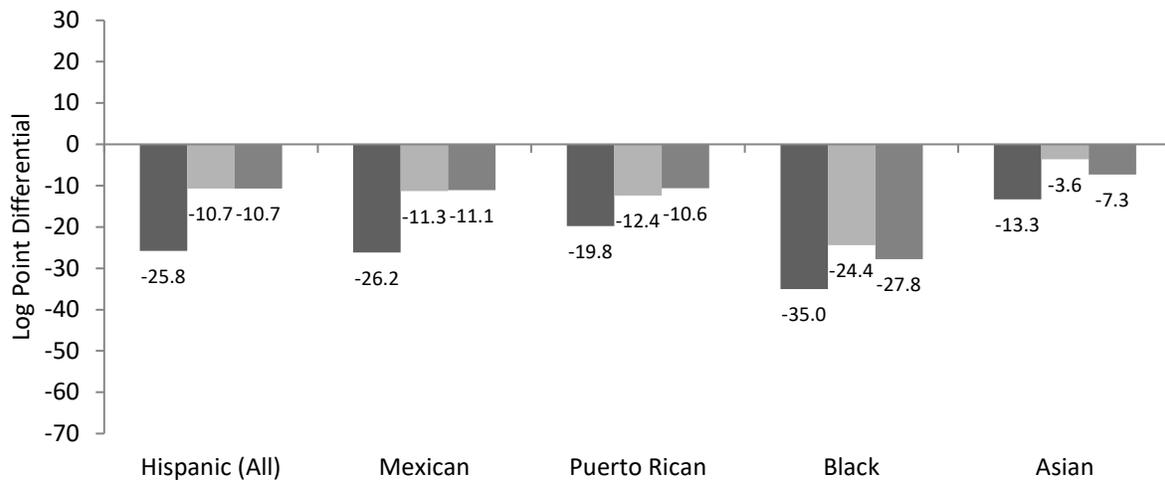
NOTE: The education measure is completed years of schooling. The first-generation samples include foreign-born women aged 50–59, excluding those born abroad of an American parent. The second-generation samples include U.S.-born women aged 25–34 who have at least one foreign-born parent. Sampling weights were used in the calculations.

**Figure 3: Weekly Earnings Differentials of Men, Ages 25-59,
By Race/Ethnicity and Immigrant Generation
(Relative to Third+-Generation, Non-Hispanic Whites)**

A. Not Controlling for Education



B. Controlling for Education

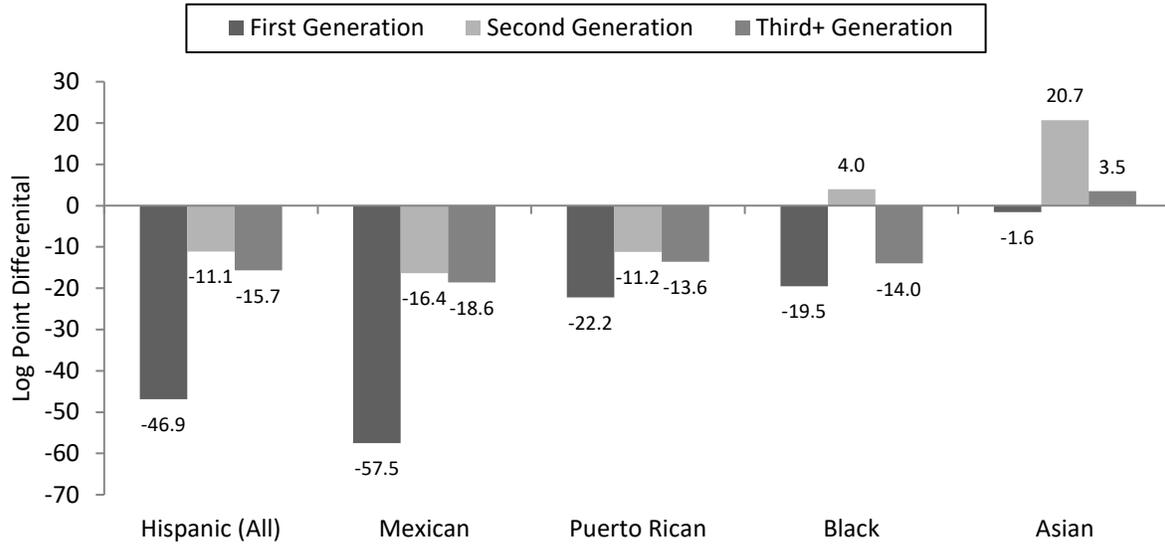


SOURCE: 2003–2016 Current Population Survey outgoing rotation group data.

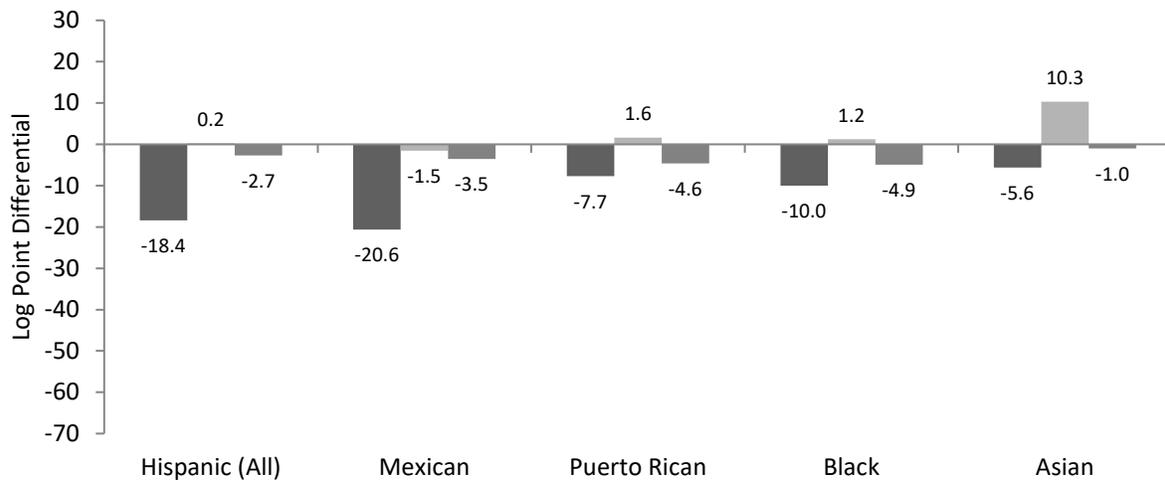
NOTE: The reported figures represent log weekly earnings differentials ($\times 100$) between each race/ethnicity and immigrant generation group and the reference group of third+-generation, non-Hispanic whites. These differentials are estimated from least squares regressions in which the dependent variable is the natural logarithm of weekly earnings. The samples include men aged 25–59 employed in civilian wage and salary jobs. All regressions include controls for age, geographic location, and survey month/year. The differentials shown in the bottom panel are from regressions that also control for education level. Sampling weights were used in the regressions.

**Figure 4: Weekly Earnings Differentials of Women, Ages 25-59,
By Race/Ethnicity and Immigrant Generation
(Relative to Third+-Generation, Non-Hispanic Whites)**

A. Not Controlling for Education



B. Controlling for Education



SOURCE: 2003–2016 Current Population Survey outgoing rotation group data.

NOTE: The reported figures represent log weekly earnings differentials ($\times 100$) between each race/ethnicity and immigrant generation group and the reference group of third+-generation, non-Hispanic whites. These differentials are estimated from least squares regressions in which the dependent variable is the natural logarithm of weekly earnings. The samples include women aged 25–59 employed in civilian wage and salary jobs. All regressions include controls for age, geographic location, and survey month/year. The differentials shown in the bottom panel are from regressions that also control for education level. Sampling weights were used in the regressions.

Table 1: Average Education of First- and Second-Generation Adults, Ages 25-59, by Source Country and Sex

Source Country	Men, by Immigrant Generation				Women, by Immigrant Generation			
	First		Second		First		Second	
	Avg. Educ.	Sample Size	Avg. Educ.	Sample Size	Avg. Educ.	Sample Size	Avg. Educ.	Sample Size
Mexico	9.5	31,039	12.7	7,671	9.7	28,167	12.9	8,468
Puerto Rico	12.2	2,909	12.7	2,459	12.4	3,643	13.0	2,996
Cuba	13.0	2,062	14.3	821	13.2	2,051	14.6	806
Dominican Republic	11.9	1,658	13.5	363	12.0	2,599	14.1	422
Central America	9.7	8,323	13.4	938	10.3	7,940	13.9	1,054
South America	13.3	5,962	14.4	1,116	13.5	7,068	14.5	1,162
China	14.9	3,149	15.4	886	14.4	3,802	15.5	902
India	16.3	5,200	15.9	576	16.0	4,700	16.0	552
Japan	15.7	560	14.4	659	14.9	1,099	14.7	645
Korea	15.4	1,898	15.0	544	14.6	2,827	15.4	530
Philippines	14.4	3,779	14.4	1,590	14.7	5,970	14.7	1,674
Vietnam	13.1	2,637	14.6	395	12.6	3,031	14.9	397
Haiti	12.8	1,056	14.1	175	12.7	1,246	14.8	235
Jamaica	13.1	1,215	14.1	286	13.5	1,756	14.8	361
Africa	14.4	4,755	14.7	604	13.6	4,238	15.0	637
Canada	15.1	1,725	14.2	3,330	14.9	2,072	14.5	3,481
Europe	14.5	10,147	14.5	12,895	14.5	11,594	14.6	13,351
All countries	12.2	99,966	13.9	38,459	12.4	106,372	14.1	40,812

SOURCE: 2003–2016 Current Population Survey outgoing rotation group data.

NOTE: The education measure is completed years of schooling. The samples include people aged 25–59. The “first generation” consists of foreign-born individuals, excluding those born abroad of an American parent. The “second generation” consists of U.S.-born individuals who have at least one foreign-born parent. The bottom row labeled “all countries” reports outcomes for first- and second-generation individuals from all countries of origin (including countries not listed individually in the table). Sampling weights were used in the calculations.

Table 2: Average Education, Ages 25-59, by Race/Ethnicity, Sex, and Immigrant Generation

Race/Ethnicity	Men, by Immigrant Generation			Women, by Immigrant Generation		
	First	Second	Third+	First	Second	Third+
Hispanic (aggregate)	10.3 (0.02)	13.0 (0.02)	12.8 (0.02)	10.6 (0.02)	13.2 (0.02)	12.9 (0.02)
Mexican	9.5 (0.02)	12.7 (0.03)	12.7 (0.02)	9.6 (0.02)	12.9 (0.03)	12.8 (0.02)
Puerto Rican	12.2 (0.06)	12.7 (0.05)	13.2 (0.06)	12.4 (0.05)	13.0 (0.04)	13.4 (0.05)
Cuban	13.0 (0.06)	14.3 (0.09)	14.0 (0.18)	13.2 (0.06)	14.7 (0.09)	13.9 (0.16)
Central or South American	11.0 (0.04)	13.8 (0.06)	13.2 (0.13)	11.6 (0.03)	14.2 (0.06)	13.6 (0.11)
Other Hispanic	12.1 (0.10)	13.6 (0.10)	13.2 (0.04)	12.4 (0.09)	13.6 (0.09)	13.2 (0.04)
Non-Hispanic:						
White	14.4 (0.02)	14.4 (0.02)	13.8 (0.004)	14.2 (0.02)	14.6 (0.02)	14.0 (0.003)
Black	13.5 (0.03)	14.0 (0.07)	12.9 (0.01)	13.3 (0.03)	14.5 (0.06)	13.3 (0.009)
Asian	14.8 (0.02)	15.0 (0.04)	14.3 (0.04)	14.3 (0.02)	15.2 (0.04)	14.5 (0.04)
Other race	14.0 (0.16)	14.3 (0.07)	13.0 (0.02)	14.3 (0.13)	14.6 (0.07)	13.3 (0.02)
All race/ethnic groups	12.2 (0.01)	13.9 (0.01)	13.6 (0.003)	12.4 (0.01)	14.1 (0.01)	13.8 (0.003)

SOURCE: 2003–2016 Current Population Survey outgoing rotation group data.

NOTE: Standard errors are reported in parentheses. The education measure is completed years of schooling. The samples include people ages 25–59. The “first generation” consists of foreign-born individuals, excluding those born abroad of an American parent. The “second generation” consists of U.S.-born individuals who have at least one foreign-born parent. Remaining persons are members of the “third+ generation” (i.e., the third and all higher generations), which consists of U.S.-born individuals who have two U.S.-born parents. Sampling weights were used in the calculations.

Table 3: Average Education of Mexicans and Puerto Ricans, Ages 25-34 and 50-59, by Sex and Immigrant Generation

National Origin and Age Group	Men, by Immigrant Generation			Women, by Immigrant Generation		
	First	Second	Third+	First	Second	Third+
Mexican						
Ages 25-34	9.9 (0.03)	12.7 (0.03)	12.6 (0.03)	10.2 (0.04)	13.0 (0.03)	13.0 (0.03)
Ages 50-59	8.5 (0.06)	12.5 (0.09)	12.5 (0.05)	8.6 (0.06)	12.4 (0.09)	12.4 (0.05)
Puerto Rican						
Ages 25-34	12.5 (0.10)	12.6 (0.08)	13.2 (0.09)	12.8 (0.09)	12.9 (0.07)	13.5 (0.08)
Ages 50-59	11.6 (0.11)	12.7 (0.11)	13.4 (0.16)	11.7 (0.11)	13.0 (0.12)	13.6 (0.17)

SOURCE: 2003–2016 Current Population Survey outgoing rotation group data.

NOTE: Standard errors are reported in parentheses. The education measure is completed years of schooling. The samples include people ages 25–34 and 50–59. The “first generation” consists of foreign-born individuals, excluding those born abroad of an American parent. The “second generation” consists of U.S.-born individuals who have at least one foreign-born parent. Remaining persons are members of the “third+ generation” (i.e., the third and all higher generations), which consists of U.S.-born individuals who have two U.S.-born parents. Sampling weights were used in the calculations.