

Educational Progress Across Immigrant Generations in California

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Foreword

Of all the political and economic uncertainties that beset California these days, perhaps none is more worrisome than the capabilities of our future labor force. The fiscal and governance challenges confronting the state will become even more complicated if, 30 years from now, a substantial part of the state's working age population is mired in marginal jobs. In the United States, as well as California, the key to avoiding that scenario has always been the process of intergenerational improvement in education and skills. Californians have typically translated the American Dream into a belief that their children will have better jobs and be better off than they were at the same age. One interpretation of "better off" is that California's youth today—many of whom are the children of immigrants—should be graduating from high school and college at greater rates than their parents did. The question is, are they?

The authors of *Educational Progress Across Immigrant Generations in California* set out to answer that question with financial support from the William and Flora Hewlett Foundation. They conclude that there is good news. When the educational attainment of second and third generations is compared directly with that of their parents or their parents' generation, the authors find strong intergenerational progress for all major immigrant groups. However, even by the third generation, Mexican Americans in California have not attained the educational levels that whites have. In other words, there is some progress but even by the third generation only 11 percent of Mexican American adults have earned a bachelor's degree. In contrast, among third-and-later-generation whites, more than a third have a bachelor's degree. Even with this note of caution it is heartening to learn that the traditional vision of intergenerational improvement is still working in California.

The authors' findings have important implications for the state's education policy. About 30 percent of California's children are growing

up in families where neither parent has completed high school. One consequence of this low educational attainment is that as many as 95 percent of these children might not earn a bachelor's degree; the low educational attainment of parents makes it less likely that their children will attain high levels of education. Among these children at risk of low educational achievement, Mexican Americans make up a large percentage. Policymakers could target at-risk children for extra attention. In addition, community colleges, a resource important to the Latino population, could provide more targeted English language, remedial, and vocational resources. Such courses will become increasingly important for workforce training, especially for those who do not go on to complete a bachelor's degree, at a time when the value of education and skills in the California economy will continue to grow. More broadly, better educational attainment by today's children should mean better attainment in later generations.

Looking into California's future 20 years out, the authors of a recently released PPIC study, entitled *California 2025: Taking on the Future*, concluded that "If California's youth do not get a college education, they face the prospect of low or no employment, lack of opportunities for high-paying jobs, and greater likelihood of depending on public health and social services. They will also generate lower tax revenues for supporting the state's infrastructure and other service needs." Even with all of the adaptive capabilities of California's huge and complex economy, it does not and will not have the capacity to absorb a low-skilled, poorly educated population indefinitely. The policy issue is right before us—elected officials, the business community, the nonprofit sector, and the millions of state residents: Education has always been and will continue to be the key to success for this and future generations. It is time to address this critical component of the education issue—educating and training our immigrant youth to be highly productive members of the labor force in future years and decades.

David W. Lyon
President and CEO
Public Policy Institute of California

Summary

More than half of all California youth ages 13 to 24 have a foreign-born parent. Because a large number of these immigrant parents have a limited education, lack of improvement in educational attainment from one generation to the next would have serious implications for the state economically as well as socially. Education is an important determinant of social and economic well-being, such as income, health, home ownership, and civic participation. The value of education in the California labor market has increased substantially in recent decades and projections suggest that workers without a college education will continue to see their earnings erode. In this context, it is particularly disconcerting that some recent studies have suggested that intergenerational progress may stall between the second and third generations. The concern for educational progress is particularly acute for Mexican Americans who, even by the third generation, have very low levels of educational attainment.

This study examines educational attainment among California's youth by race, ethnicity, and immigrant generation. It finds that intergenerational progress has not stalled but rather that second- and third-generation immigrants have made substantial educational progress when compared with their parents. Nevertheless, the low educational attainment of Mexican Americans remains a concern and the study examines the factors that influence educational attainment and the policy implications of the findings.

Key Facts and Findings

Latinos are the largest racial and ethnic group among youth and more than half have a foreign-born parent. California's youth (ages 13 to 24) are tremendously diverse. However, Latinos constitute a plurality, at 41 percent of the youth population, followed by whites, at 37 percent, Asians, at 11 percent, and African Americans, at 7 percent. Most of the

state's Latino youth are of Mexican ancestry (84%) and over 60 percent of them were born in the United States. Overall, one in four youth is a first-generation immigrant (i.e., born in a foreign country). About the same share are second-generation immigrants (i.e., born in the United States with at least one foreign-born parent).

Racial and ethnic differences in educational attainment are strongly influenced by immigration. Of the major racial and ethnic groups in California, young adults of Mexican descent have the lowest levels of education. Of those ages 25 to 29, only 51 percent have earned a high school diploma, compared to 93 percent of non-Hispanic whites. However, the rate for Mexican American youth born in the United States is substantially higher—76 percent. Although Asians typically have higher levels of education than whites have, less than 80 percent of foreign-born Asians from Cambodia and Laos have completed high school.

Mexican youth who come to the United States as teens often do not attend high school here. The older their age at arrival, the less likely Mexican youth are to attend school in California. Among those ages 16 to 18 and who recently arrived in the United States, less than half are enrolled in school. Among men, many are working; among women, substantial numbers are working, married, or raising children. In contrast, over 90 percent of Asian immigrant youth, including those from Southeast Asia, are enrolled in school at ages 16 to 18, regardless of their age at arrival.

Among youth in immigrant families, there is tremendous variation in family income and parental education. Among young immigrants ages 13 to 17, about one-third of those from Mexico are living in poor families and only 17 percent have a mother who finished high school (maternal education is measured only for those living with their mothers). Among youth from Cambodia and Laos, over half are living in poor families and only 19 percent have a mother who finished high school. In comparison, among Filipino immigrants, less than 10 percent are living in poor families and over 90 percent have a mother who finished high school. These differences in family characteristics contribute to racial and ethnic differences in educational attainment for

immigrant youth, which, in turn, contribute to education differences for their second-generation children.

Substantial educational progress is made between the first, second, and third generations of immigrants. When the educational attainment of second- and third-generation immigrants is compared directly with that of their parents or with that of their parents' generation, we find strong intergenerational progress for all major immigrant groups. In particular, although some research has suggested that educational progress stalls between the second and third generations for Mexican Americans, we find that college graduation rates of third-generation immigrants are more than twice those of their parents. Further, although over half of their parents did not graduate from high school, about eight in 10 third-generation Mexican Americans have graduated from high school.

Even by the third generation, however, Mexican Americans in California have lower educational attainment than whites have. Despite strong intergenerational progress, less than 85 percent of third-and-later-generation Mexican American adults, ages 25 to 34, have finished high school and only 11 percent have completed a bachelor's degree. ("Third-and-later" generation includes youth with both parents born in the United States but the data do not identify whether their grandparents or great-grandparents were born in the United States.) In comparison, among third-and-later-generation whites, 95 percent earned a high school diploma and over a third have a bachelor's degree.

Differences in family characteristics explain most of the lower educational attainment of Mexican Americans. Among Mexican American youth, parental education, parental English language ability, and family income are substantially lower than among white youth. Using national data, we find that these differences in family economic resources and family characteristics generally account for the lower educational attainment of Mexican American youth relative to white youth.

Policy Considerations

The findings of this study have important implications for education-related policy in California. Mexican immigrant youth who

arrive at age 15 or older are among the least educated Californians. Improving their educational attainment is particularly challenging because many do not enroll in California schools but are working and raising families. For these youth, adult education programs in school districts and community colleges may provide better schedules for part-time, evening, and weekend coursework. Another approach would be to target the workplace, offering programs in collaboration with employers to help workers develop English language and literacy skills. In addition, as these youth become parents, programs that work with young children can assist parents with parental support and literacy improvement.

For second and third generations, and for immigrants who do enter California schools, the quality of the K–12 public education system is clearly a key factor in success. Several recent and continuing reforms have sought to improve California schools, particularly in the areas of student achievement, teacher quality, and quality of facilities. In addition, English language learning is of concern for the children of immigrants. For students whose own parents have limited educational experience, programs of educational counseling and tutoring may be particularly helpful. Our analysis suggests that about 30 percent of California’s children are growing up in families where neither parent has completed high school and that as many as 95 percent of these children might not achieve a bachelor’s degree. Among these children at risk of low educational achievement, Mexican Americans make up a large share (68%).

The success of students in California’s community colleges is of particular importance for improving Latino postsecondary education because almost 80 percent of Latinos who enroll in public higher education enter through community colleges. Of great concern, however, is the low transfer rate to four-year institutions, and transfers are especially low among Latino students. In addition to preparing students for transfers, community colleges provide English language, remedial, and vocational courses. As the value of education and skills in the California economy continues to grow, these courses will become increasingly important to workforce training, especially for those who do not go on to complete a bachelor’s degree.

Investing in an education system that works for all of California's children will pay off for generations to come. Better educational attainment for today's children will translate to better family economic resources for the next generation of parents. These higher resources will help the next generation of California's children to attain even higher levels of education.

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1. Introduction

Nearly half of all Californians today are first- or second-generation immigrants. As that share of the California population continues to grow, it is increasingly important to understand the nature of intergenerational progress for immigrant groups.¹ Recent research has called into question the intergenerational progress of immigrants, particularly educational progress between the second generation and the third generation.

Because California has such large numbers of immigrants with limited education, a lack of improvement in educational attainment from one generation to the next would have serious implications for the state economically as well as socially. Educational progress is particularly important because education plays a role in determining racial and ethnic differences in other areas of social and economic well-being, such as poverty, health status, employment, home ownership, and civic participation (Reyes, 2001; Reed, 2003a). Furthermore, the economic value of education has increased substantially in the California labor market in recent decades (Betts, 2000). Over the past three decades, workers with a high school diploma or less have seen their average earnings erode whereas average earnings for those with a college degree have grown (Reed, 2003b). Neumark (2005) suggests that over the next two decades, the value of a college education in the California labor market will continue to grow.

There are a number of state and local programs designed to improve the lives of youth as well as to steer them in the direction of positive future outcomes. Youth ages 13 to 24 are of critical concern because during these ages youth are preparing for the transition to adulthood

¹Myers, Pitkin, and Park (2005) describe the growing presence of long-term and second-generation immigrants in the future California population and discuss implications for social and economic achievement.

with its increased economic challenges and responsibilities and often with new marriage and parenting relationships.² During these ages, many potentially life-changing decisions are often made, including the decisions to finish high school, to go to college, and perhaps to start a family.³

Conclusions and Organization of the Report

This report provides evidence that the intergenerational progress of immigrants has not stalled. Among all groups studied, including Mexican Americans, significant educational progress has occurred from the first to the second generation and from the second to the third generation. Nevertheless, even by the third generation, Mexican Americans have lower educational attainment than do whites and Asian Americans, the other large immigrant group. The report analyzes the factors that influence educational attainment, particularly that of Mexican Americans, and considers the implications for policy.

Chapter 2 provides a statistical portrait of California youth, focusing on race, ethnicity, and immigrant generation and differences in educational attainment among groups. Chapter 3 compares the educational attainment of young adults to that of their parents (or their parents' generation) and shows that all immigrant groups have made progress, including the first three generations of Mexican Americans. However, even accounting for this progress, the currently low educational attainment of Mexican Americans is likely to remain low in the coming decades. The findings in this chapter point to the need to understand the factors that contribute to this low educational

²See Setterson, Furstenberg, and Rumbaut (2005) for studies of the transition to adulthood in the United States and Western Europe.

³This report is part of a larger study that includes analysis of teen fertility and the transition from school to work. We chose to limit the report to education-related topics to present a more cohesive and focused discussion. Readers interested in our analysis of teen fertility and early work success are referred to Reed, Jepsen, and Hill (2005). For a more detailed description of teen fertility, see Johnson (2003). See Neumark (2004) for a discussion of school-to-career programs in California. The larger study also included an investigation of factors that contribute to positive educational and socioeconomic outcomes for youth who become teen parents and those who drop out of high school (see Hill and Jepsen, 2005).

attainment. Chapter 4 examines the determinants of educational attainment for foreign-born youth, finding that relative to Asian immigrants, Mexican immigrants are more likely to arrive after age 14 and to enter the workforce or family life and less likely to enroll in school. Chapter 5 examines the determinants of educational attainment among U.S.-born youth, finding that low parental education and low family income explain most of the lower educational attainment of Mexican American youth relative to white youth. Chapter 6 draws on all chapter findings to discuss policy directions for improving educational attainment.

A Note on Data

The *Current Population Survey* (CPS) and the decennial Censuses, used to measure youth educational attainment for this study, were chosen because they are representative of California.⁴ However, the data have two important limitations. First, they do not include information on involvement with the criminal justice system.⁵ Previous research suggests the importance of racial, ethnic, and immigrant differences in this area (Blumstein, 2001; Rumbaut, 2004). Second, they do not include detailed measures of youth background, such as attitudes about education, school conditions, and the quality of family relationships. Rumbaut (1999) provides a broad discussion of these issues for immigrant children and youth in San Diego.⁶

⁴We focus on youth educational attainment and do not address the important but broader issues of health status or farmworker conditions. See Hernandez (1998, 1999) for national research on these topics. Diversity of health status across racial, ethnic, and immigrant groups in California is a topic of ongoing research at PPIC.

⁵The CPS represents the noninstitutional, civilian population. The Census represents the entire population, including those who are incarcerated, but it does not include information on past incarcerations or broader measures of interactions with the criminal justice system. See Appendix A for further descriptions of these data.

⁶Rumbaut (1995) describes four case studies of immigrant groups in California high schools. See also Portes and Rumbaut (2001) and Rumbaut and Portes (2001). The *National Educational Longitudinal Study* (NELS), used in this study to estimate models of youth educational attainment, includes information on some of these topics, but the subsample of youth in California is small and not necessarily representative. See Kao and Tienda (1995) and Kao (1999, 2004) for national measures of these issues based on the NELS.

The tremendous diversity of the California population makes it difficult to characterize the population and socioeconomic conditions by racial, ethnic, or ancestry group.⁷ The main analyses in this study focus on four major groups: Mexican Americans, Asian Americans, non-Hispanic whites, and African Americans. We distinguish Mexican Americans from other Latinos because of their unique historical context and related socioeconomic conditions.⁸ Wherever possible we describe conditions for Central Americans, but their numbers are not sufficient to study intergenerational progress from the second generation to the third generation. Latino backgrounds also include Puerto Ricans, Cubans, Peruvians, and others. Their socioeconomic conditions are too diverse to make aggregation meaningful and their overall numbers in most of our data samples are too small for separate analysis.

California's Asian groups are particularly diverse. Where data permit, we distinguish Southeast Asians from refugee-sending countries (Laos, Cambodia, and Vietnam) from other Asians because of their substantially different historical context and socioeconomic conditions. We also consider the two Asian backgrounds that represent the largest number of Asian youth: Vietnamese and Filipinos.

⁷California is also regionally diverse and the nature of educational progress differs across regions. See Johnson and Hayes (2004) for an analysis of related issues for the Central Valley.

⁸See Chapter 4 for a discussion of the historical context of immigration for major immigrant groups.

2. Statistical Portrait of California Youth

This chapter documents the tremendous diversity of California youth in terms of race, ethnicity, and immigrant generation. The analysis demonstrates the large and growing share of first- and second-generation immigrants among California youth and also describes substantial differences in educational attainment across racial, ethnic, and immigrant groups. The portrait presented here provides a context for the following chapters, which focus on the largest immigrant groups (Mexicans and Asians) and on those with particularly low educational attainment (Mexicans and Southeast Asians).¹

Demographic Characteristics

The youth population ages 13 to 24 in California numbers almost 6.6 million. By 2010, it is expected to increase to almost 7 million and to continue to make up close to 18 percent of the state population.²

The tremendous diversity of this population makes it difficult to characterize the backgrounds of its members. About one in four California youth was born outside the United States. California's foreign-born youth are from almost 150 countries, mainly Mexico, the Philippines, El Salvador, Vietnam, and Guatemala (Table 2.1). California's U.S.-born youth are from nearly 200 different ancestral

¹Hill (2004) presents a more complete description of California's youth, including regional information as well as statistics on youth activities, parental employment, health status, teen parenting, and citizenship. See also Ramakrishnan and Johnson (2005) for a description of second-generation immigrants in California, including statistics by California region.

²Population estimates are based on California Department of Finance population projections for 2005 and 2010.

Table 2.1
Top Ten Countries of Birth and Ancestral Backgrounds of
California Youth, Ages 13 to 24, 2000

Country of Birth	Number	Ancestry	Number
Foreign-Born		U.S.-Born	
1. Mexico	783,124	1. Mexican	1,228,338
2. Philippines	76,753	2. African American	310,810
3. El Salvador	59,612	3. German	279,195
4. Vietnam	58,701	4. Irish	210,186
5. Guatemala	42,795	5. English	178,050
6. Korea	28,228	6. Italian	161,383
7. Taiwan	25,859	7. American	158,956
8. India	23,576	8. Filipino	107,742
9. Thailand	22,822	9. White	94,380
10. China	22,337	10. Chinese	82,943

SOURCE: Authors' calculations from the 2000 Census.

NOTES: See Appendix Tables B.1 and B.2 for statistics on the top 25 countries of birth and ancestral backgrounds. Ancestry is self-identified and no specific categories are supplied (see Appendix A).

backgrounds, mainly Mexican, African American, German, Irish, and English (Table 2.1).³

To further describe the youth population, we focus on the four largest racial and ethnic groups: Latinos, whites, Asians, and African Americans. Among California youth, Latinos are the largest ethnic group, comprising about 41 percent of all youth (Table 2.2). Thirteen percent of California youth were born in Mexico. The majority of Latino youth are of Mexican ancestry and were born in the United States. Fourteen percent of youth are second-generation Mexican Americans (born in the United States with at least one parent born

³The identification of racial, ethnic, and immigrant generation is complex. See Appendix A for a description of our analysis. See Rumbaut (2004) for a detailed analysis of these complexities.

Table 2.2
Percentage Distribution of California Youth by Race, Ethnicity, and Immigrant Generation, Ages 13 to 24, 2004

	Foreign-Born	Second Generation	Third-and-Later Generation	Total of Row
White	2	4	31	37
Mexican	13	14	7	34
Central American	2	1	<1	3
Other Latino	1	2	1	4
Southeast Asian	1	1	<1	3
Other Asian	4	3	1	8
African American	<1	1	6	7
Native American	<1	<1	1	1
Multiracial and all others	1	1	2	4
Total of column	25	27	49	100

SOURCES: Authors' calculations from the 2000 Census and the *Current Population Survey* (March 2003, 2004).

NOTES: Some rows and columns do not sum to totals because of rounding. See Appendix A for details on data and measurement.

outside the United States). Seven percent are third-and-later-generation Mexican Americans. Throughout the report, “third-and-later generation” refers to people who were born in the United States and whose parents were both born in the United States. Most of the analysis relies on data that do not identify later generations.⁴

The next largest racial and ethnic group is non-Hispanic whites. Among white youth, the vast majority are third-and-later-generation Americans. Similarly, African Americans (7% of youth) and Native

⁴Data from the *Current Population Survey* do not distinguish between the third generation and those in later generations. The data report the birthplace of parents but not of grandparents. Rumbaut (2004) demonstrates that further categorizations of immigrant generations into the “1.5 generation” (immigrants who arrive by age 10) and the “2.5 generation” (those with one foreign-born parent and one U.S.-born parent) are useful in understanding diversity and educational outcomes. See also Ramakrishnan (2003).

Americans (about 1% of youth) are also primarily third-and-later-generation Americans.⁵

The third largest racial and ethnic group is Asians, about 11 percent of the youth population. This population is very diverse with about half born in foreign countries, particularly the Philippines, Vietnam, Korea, Taiwan, India, Thailand, and China (Table 2.1). For U.S.-born Asian youth, the most common backgrounds are Filipino and Chinese. Among Asians, those from Southeast Asian refugee-sending countries (Cambodia, Laos, and Vietnam) tend to live in markedly worse socioeconomic conditions including higher poverty and lower educational attainment (see Chapter 4).⁶ For this reason, where possible, our analysis separates youth from these Southeast Asian backgrounds, about 3 percent of all youth.

Overall, just under half of California's youth are third-and-later-generation immigrants. About one-fourth are second-generation immigrants and about one-fourth are first-generation immigrants. Because of the influx of immigrants in their late teens and early twenties, the share of youth who are foreign-born tends to increase with age. Among youth age 13, only 14 percent are foreign-born. At age 18, 22 percent of youth are foreign-born, and at age 24, the foreign-born share is 38 percent.

Just over half of California's youth—52 percent—are male. The primary factor increasing the share of males relative to females is immigration from Mexico and Central America—56 percent of these youth are male.

Youth in California today are notably more diverse than California youth of past decades and also much more diverse than youth in the rest of the nation (Table 2.3). In 1970, the share of California youth who were white was 73 percent. In 2000, the share who were white was lower, at 66 percent for the rest of the nation, but in California the share was much lower, at only 37 percent. In the rest of the nation in 2000, as

⁵Some Native Americans are foreign-born, mainly from Canada.

⁶See Reyes (2001) for an analysis of socioeconomic indicators across Asian ethnic groups.

Table 2.3
Percentage Distribution of Youth in California and the Rest of
the Nation by Race, Ethnicity, and Immigrant Generation,
Ages 13 to 24, 1970 and 2000

	California, 1970	California, 2000	Rest of U.S., 2000
White	73	37	66
Latino	17	41	13
Asian	2	11	3
African American	7	7	15
Multiracial and all others	1	5	3
Third-and-later generation	83	49	81
Second generation	10	27	10
First generation	7	25	9

SOURCES: Authors' calculations from decennial Censuses (1970, 2000).

NOTES: Some columns do not sum to 100 percent because of rounding.
 See Appendix A for details on data and measurement.

in California in 1970, over 80 percent of youth were third-and-later-generation Americans.

Educational Attainment

California's demographic diversity may be a source of pride and economic strength, but this diversity can create challenges when there are large and continuing disparities in socioeconomic conditions between groups. As discussed in the introduction, education is a key factor in determining economic success, health status, and other socioeconomic conditions.⁷

Among first-generation immigrant youth, there is tremendous diversity in educational attainment. Immigrants from Mexico and, to a lesser extent, Central America have particularly low levels of completing

⁷The association between education and earnings is not entirely causal (Griliches, 1977). National research that adjusts for noncausal factors finds strong labor market returns to education (Jaeger and Page, 1996; Arias and McMahon, 2001). See also Kane and Rouse (1999) for national estimates of the economic return to attending community college.

high school, attending college, and getting a bachelor's degree (Table 2.4).⁸ Asian and white immigrants have relatively high educational attainment, although bachelor's degree completion is lower among immigrants from Southeast Asian refugee-sending countries and Filipino

Table 2.4
Percentage Distribution of the Educational Attainment of Young California Adults by Race, Ethnicity, and Immigrant Generation, Ages 25 to 29

	High School Diploma		Some College		Bachelor's Degree	
	First	Second+	First	Second+	First	Second+
Men						
White	89	92	72	71	48	35
Mexican	34	73	14	42	3	11
Central American	45	84	26	64	5	20
Vietnamese	82		68		30	
Other Southeast Asian	79		54		17	
Filipino	92	94	75	84	29	37
Other Asian	95	97	86	89	65	65
Black or African American	87	81	62	52	24	13
Women						
White	91	94	76	78	46	40
Mexican	38	79	18	53	5	14
Central American	50	83	27	65	7	24
Vietnamese	83		67		34	
Other Southeast Asian	72		49		14	
Filipino	96	97	83	86	38	48
Other Asian	95	98	86	93	63	71
Black or African American	85	85	68	61	29	19

SOURCE: Authors' calculations from the 2000 Census.

NOTES: See Appendix A for measurement details. High school diploma includes the General Equivalency Diploma (GED). Sample sizes are not sufficient for second- and later-generation Southeast Asians. The smallest sample used was 196 (for first-generation black women).

⁸We use ages 25 to 29 to measure education among young adults because by age 25 many have completed their education. However, particularly among Latinos, educational attainment does continue to improve at older ages. See Reed (2005).

immigrants. Black immigrant youth also have lower levels of college attainment than do other immigrants.⁹

Throughout this report, we use aggregated groups to describe socioeconomic conditions. However, within each aggregated racial and ethnic category in Table 2.4, there is a fair degree of diversity. For example, among first-generation immigrants from Central America, those from Guatemala tend to have lower educational attainment and those from Nicaragua have higher educational attainment (see Appendix Table B.1 for educational attainment among foreign-born youth by country of birth). Among Asian immigrants, those from India, Taiwan, and Hong Kong have particularly high rates of college completion. Among white immigrants, those from Armenia tend to have lower college completion. Even among young adults born in the United States, the aggregated groups mask tremendous diversity (see Appendix Table B.2 for educational attainment among U.S.-born youth by detailed ancestry group).¹⁰

Among U.S.-born (second-and-later-generation) Mexican Americans, educational attainment is much higher than for those born in Mexico. Indeed, if we were to calculate the high school completion rate among all young adults of Mexican descent, the rate would be only 51 percent. Because many Mexican immigrants do not enroll in school in the United States, this rate does not reflect the experience of Mexican Americans in California schools (see Chapter 4 and Fry, 2003).¹¹ However, even among U.S.-born Mexican Americans, educational

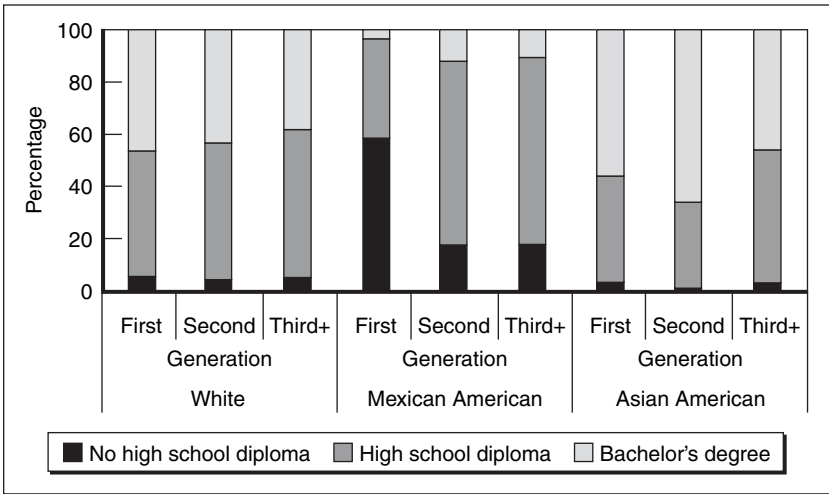
⁹The rows of Table 2.4 are distinguished by reported race, ethnicity, and ancestry and not by country of origin. Many Southeast Asian immigrant youth were born outside Cambodia, Laos, and Vietnam, especially in Thailand and Malaysia. African American or black immigrants do not necessarily come from Africa.

¹⁰Rumbaut and Portes (2001), Portes and Rumbaut (2001), and Rumbaut (2004) provide detailed descriptions of the lives of the children of immigrants by ethnicity for San Diego and South Florida, including information on parental relationships, attitudes, and activities not available in the CPS or Census data. Waldinger and Bozorgmehr (1996) describe detailed conditions by ethnicity for Los Angeles.

¹¹Educational statistics in Table 2.4 are for young adults living in California, but even for U.S.-born adults, these statistics may not reflect the educational attainment of young adults who grew up in California (because of domestic migration). See Reed (2005) for a discussion of education by race and ethnicity for Californians. For measures of high school dropout rates in California, see The Civil Rights Project (2005).

attainment is substantially below that of U.S.-born whites and somewhat below that of African Americans. For Mexican Americans in California, the education of the third-and-later generation is not substantially different from that of the second generation (Figure 2.1).¹²

Among Asians, other than those from Southeast Asia, and among whites, educational attainment across all three generations is substantially higher than for Mexican Americans. Within each of these groups, educational attainment is fairly similar across the generations.¹³



SOURCES: Authors' calculations from the *Current Population Survey* (1996–2004).
 NOTES: The age range was increased from 25–29 to 25–34 to increase sample sizes. The smallest sample has 129 observations (Third+–generation Asian Americans). Sample sizes were not sufficient to investigate other groups shown in Table 2.4.

Figure 2.1—Percentage Distribution of the Educational Attainment of Young California Adults by Race, Ethnicity, and Immigrant Generation, Ages 25 to 34

¹²Educational attainment by immigrant generation is measured using the 1996–2004 *Current Population Survey*. The CPS tends to measure higher high school completion than does the Census, in part because the *Current Population Survey* does not include institutionalized populations.

¹³Several studies at the national level have found higher educational achievements among the second generation relative to the first or third generations (Smith, 2003; Farley and Alba, 2002; Chiswick and DebBurman, 2004; Kao, 2004; Kao and Tienda, 1995).

Table 2.4 and Figure 2.1 describe educational attainment for young adults in California by immigrant generation, *but these statistics should not be used to assess intergenerational progress*. The intergenerational progress of these young adults should be measured against the achievement of their own parents or against people of their parents' generation (as opposed to other young adults). We turn to the analysis of intergenerational progress in the next chapter.

3. Intergenerational Progress and Educational Attainment

The previous chapter described the low educational attainment of immigrants from Mexico, Central America, and Southeast Asia. Because immigrants from these regions and their children constitute about one-third of all California youth, it is important for all Californians that these children acquire more education than their parents to gain the skills required by the state's economy and the income necessary to provide for their families.

In this chapter, we examine the recent history of intergenerational progress in the United States. We demonstrate substantial educational progress between second-generation immigrants and their foreign-born parents from all major immigrant-sending regions—progress that continues between the second and third generations for Mexicans, the state's largest immigrant group. Because of the recent record, we project a high degree of educational progress for the third generation (grandchildren) of today's Mexican immigrants. Despite this progress, Latino generations in years to come will still fall far short of the educational levels currently attained by U.S.-born whites.

The analysis of intergenerational progress in this chapter is based on immigrants and their descendants nationwide. Use of a national sample is appropriate and avoids potentially biasing measures of intergenerational progress. For example, if immigrant families who have been successful have been more likely to remain in California, then limiting the analysis to those in California would overestimate the intergenerational progress of immigrants.

Measuring Intergenerational Progress

Improvements in educational attainment from the first generation to the second generation are well documented (Chavez, 1991; Card,

DiNardo, and Estes, 1990; Perlmann and Waldinger, 1997; and Farley and Alba, 2002), but some researchers have found little if any progress from the second to the third generations, particularly for Latinos or Mexicans (Borjas, 1994; Grogger and Trejo, 2002; Trejo, 1997, 2003; Chapa, 1990; Camarota, 2001; Kao and Tienda, 1995; and Kao, 2004). Measuring progress from the second to the third generation is difficult because of a lack of data on grandparents' place of birth, and the research evidence that calls into question the intergenerational progress of recent immigrants is not definitive.¹ Findings that point to weak progress between second and third generations often fail to measure the appropriate type of progress—progress in relation to one's own parents (or progress from one generation of adults to an older previous generation)—or fail to consider nationally representative data. One study that compares current young adults with those of their parents' generation finds strong progress from the first to the second generation and continuing progress to the third generation (Smith, 2003).²

In this chapter, we measure intergenerational progress in education using two methods.³ In both methods, we use nationally representative data from the *Current Population Survey* to estimate changes in educational attainment from one generation to the next, comparing attainment for adults with that of their parents. The CPS includes questions on the place of birth of all household members as well as that of the parents of those household members.

We measure intergenerational change first by comparing the educational attainment of one entire generation to that of a previous generation and, second, by directly comparing an adult's educational attainment with that of his/her parents. The first approach, a comparison of specific age groups from entire generations, uses a large sample but suffers from not directly linking parents with their descendants. In this sample, we cannot identify the third generation apart from fourth and later generations. We are careful to identify the age groups and immigrant generations that allow the most appropriate

¹See Johnson (2005) for a more complete discussion.

²Smith and Edmonston (1997) also find progress across the first three generations.

³See Appendix A for details of our methodology.

comparison of one generation with a previous one. In particular, we compare educational attainment for young adults (ages 30 to 39) from one generation with the attainment of older adults (ages 57 to 66) from a previous generation. Young adults in their thirties have largely completed their formal education. On average, their parents are 27 years older. Thus, older adults ages 57 to 66 from a previous generation will include many of the parents of these young adults, and this group therefore serves as a benchmark for measuring intergenerational progress.

The second approach has the advantage of explicitly linking parents with their adult descendants by examining households in which adult children and their parents live together. This allows us to precisely measure true (parent-to-child) generational change. Moreover, unlike the first approach, we are able to specifically identify the third generation. The disadvantage of this approach is that the sample is not large and is subject to selection bias because it requires that adult children be living with their parents.⁴ Because of sample size limitations, we use this multiple-generation household approach only for the state's largest immigrant groups.

Intergenerational Progress Has Been Impressive

We find strong intergenerational progress in education. Across all generations for all groups, we consistently find that children acquire more education than their parents. This is true for U.S.-born children of immigrants (the second generation compared to the first generation), as well as for third-generation descendants of immigrants. The results are consistent for both approaches. That is, we find similar levels of progress in both the smaller sample that explicitly links parents with their adult children and the larger sample that compares one entire generation to another entire generation.

⁴See Appendix A for a more complete discussion of the sample. NELS includes information on parental education and young adult educational attainment (to age 26) regardless of living arrangements. Findings on intergenerational educational progress based on the NELS are consistent with the results shown in this chapter (see Appendix Tables A.6 and A.7).

First Generation to Second Generation

There are dramatic increases in educational attainment from the first generation to the second generation for all ethnic groups. These increases are evident in comparisons of the entire second generation (ages 30 to 39) with the entire first generation (ages 57 to 66) (Table 3.1) as well as in comparisons of individuals specifically with their own parents (Table 3.2).⁵ The increases are evident for highly educated immigrant groups as well as for less educated immigrant groups.

Overall, for immigrants from all regions, second-generation descendants born in the United States are much better educated than their parents' generation. Whereas over one-third of the first generation have not graduated from high school, more than nine of 10 second-generation descendants have graduated from high school (Table 3.1). College graduation rates are much greater for young second-generation adults than for their parents' generation, with over one-third of the second generation graduating from college compared to fewer than one in four in the first generation. These improvements from the first generation to the second generation are much larger than for other generations of U.S. natives. Among U.S.-born individuals with both parents born in the United States, 22 percent of the older generation has completed college compared to 28 percent of the younger generation (Table 3.1 bottom panel, third+ generation). Moreover, the young second generation in the United States is more likely than other U.S. natives to have graduated from college. Results for the intergenerational household sample of parents and adult children are similar (Table 3.2). In this sample, second-generation adult children are twice as likely as their first-generation parents to complete college.

Although patterns of progression vary with ethnicity and region of origin, intergenerational progress is observed for all groups. The largest

⁵We focus on changes from the first generation to the second generation, but results are similar for changes from the first generation to the 1.5 generation (individuals born abroad but who came to the United States at age 10 or younger and therefore primarily if not wholly educated in the United States). Results for the 1.5 generation are available from the authors.

Table 3.1
Percentage Distribution of the Educational Attainment of Groups in the
First and Second Generations

Ethnic Group	Less Than High School Diploma	High School Diploma	Some College	Bachelor's Degree
All ethnic groups				
First generation, ages 57 to 66	37	26	13	23
Second generation, ages 30 to 39	9	26	30	35
Mexican				
First generation, ages 57 to 66	78	12	6	4
Second generation, ages 30 to 39	18	33	34	15
Central American^a				
First generation, ages 57 to 66	54	26	9	11
Second generation, ages 30 to 39	16	26	32	26
Southeast Asian^b				
First generation, ages 57 to 66	38	31	12	19
Second generation, ages 30 to 39	13	22	24	41
Other Asian				
First generation, ages 57 to 66	21	22	12	44
Second generation, ages 30 to 39	3	14	25	58
White (non-Hispanic)				
First generation, ages 57 to 66	20	32	18	29
Second generation, ages 30 to 39	4	24	29	43
Black or African American				
First generation, ages 57 to 66	35	34	14	17
Second generation, ages 30 to 39	11	23	33	33
All ethnic groups				
Third+ generation, ages 57 to 66	18	38	22	22
Third+ generation, ages 30 to 39	8	35	29	28

SOURCES: Authors' analysis of the *Current Population Survey* (1996–2004).

NOTE: See Appendix Table A.1 for sample sizes.

^aCentral Americans are identified as Latinos born in Central America (Belize, Guatemala, Honduras, Costa Rica, El Salvador, or Panama) or with at least one parent born in Central America. The second generation includes the 1.5 generation. Our sample of Central Americans for the 1.5 and second generation ages 30 to 39 is 310.

^bSoutheast Asians are identified as Asians born in Southeast Asia (Vietnam, Cambodia, or Laos) or with at least one parent born in Southeast Asia. The second generation includes the 1.5 generation. Our sample of Southeast Asians for the 1.5 and second generation ages 30 to 39 is 169.

Table 3.2
Percentage Distribution of the Educational Attainment of First-Generation Parents and Their Second-Generation Adult Children

Ethnic Group	Less Than High School Diploma	High School Diploma	Some College	College Graduate
All ethnic groups				
First-generation parents	38	30	16	15
Second-generation descendants	10	27	33	30
Mexican origin				
First-generation parents	75	15	7	3
Second-generation descendants	14	36	38	12
Central American^a				
First-generation parents	45	33	11	11
Second-generation descendants	10	32	43	15
Southeast Asian^a				
First-generation parents	29	22	11	37
Second-generation descendants	2	25	21	52
Other Asian				
First-generation parents	16	26	18	41
Second-generation descendants	1	10	23	66
White				
First-generation parents	25	38	20	17
Second-generation descendants	8	26	33	34

SOURCES: Authors' analysis of the *Current Population Survey* (1996–2004).

NOTES: Data in the table include only households with parents and adult children in which the adult children are ages 25 to 49. Results are the average of mother-to-child and father-to-child comparisons. See Appendix Table A.2 for sample sizes.

^aFor Central Americans and Southeast Asians, we combine the 1.5 and second generations to increase sample sizes.

group of immigrants in California is from Mexico (see Chapter 2).⁶ Mexican immigrants are among the least educated populations in the United States. In the sample of older first-generation Mexican immigrants, almost four in five have not graduated from high school. Although first-generation immigrants from Mexico tend to have very

⁶Mexicans are also the largest group of immigrants to the United States (U.S. Census Bureau, 2002).

low levels of education, their children show remarkable gains. Among young adults in the second generation, over four in five have graduated from high school (Table 3.1, Mexican panel). Progress is also evident at the other end of the educational spectrum. The share of college graduates is about four times greater among the second generation than the first. Results for the multiple-generation household sample are nearly identical, also showing strong gains from the first generation of Mexican parents to their adult children (Table 3.2). Even with this progress, however, educational attainment levels for second-generation Mexican Americans are lower than those of other U.S. natives.

Although Central American immigrants show higher levels of educational attainment than Mexican immigrants, a majority of older Central American immigrants have not graduated from high school and only one in nine is a college graduate (Table 3.1, Central American panel). By the second generation, the proportion of Central Americans who are college graduates is near the average for all U.S.-born, and the share who do not have a high school diploma drops tremendously (from 54% for the first generation to 16% for the second generation). The sample of multiple-generation households for Central Americans also shows that adult second- and 1.5-generation children are much better educated than their parents, but progress does not appear to be as dramatic for college graduation.⁷

In contrast to immigrants from Mexico and Central America, Asian immigrants (not including those from Southeast Asia) tend to be better educated than other immigrants; indeed, they are more likely than U.S. natives to graduate from college. This is particularly the case for immigrants from East Asia, the Philippines, and India. It is not surprising then that their second-generation descendants have especially high levels of education, although the increase across generations is remarkable (Table 3.1, Other Asian panel). Over half of second-generation descendants of Asian immigrants have graduated from college and not completing high school is extremely uncommon.

⁷The 1.5 generation is made up of foreign-born individuals who came to the United States by age 10. The 1.5 generation in this sample is less likely than the second generation to graduate from college. We combine these groups for Central Americans to increase our sample sizes.

Even adult children of Southeast Asian immigrants, the least educated Asian immigrant group, show tremendous increases in educational attainment compared to their parents. Still, their high school dropout rates are higher than those of whites and other Asians. College graduation rates are remarkably high for second-generation Southeast Asians.⁸ The results for Southeast Asian immigrants and their descendants outlined here are dominated by Vietnamese, the largest and best educated of the Southeast Asian groups. Results for Hmongs, Laotians, and Cambodians could be very different. Results from the multigenerational household sample confirm these general patterns but should be interpreted with caution because of the small sample size.

Non-Hispanic white immigrants in California and the United States come from many different countries and regions, including Canada, Europe, and the Middle East. The older first generation has an educational profile that is similar to that of third-and-later-generation older adults in the United States, with the share not completing high school almost as large as the share completing college. The second generation that includes their children is far better educated, with 43 percent graduating from college and only 4 percent not completing high school.

Finally, blacks also show strong intergenerational progress from the first generation to the second, with the proportion graduating from college almost twice as high in the second generation as in the first. However, California is home to relatively few black immigrants.

Second Generation to Third Generation

Measuring educational attainment is difficult for the third generation. Because the CPS does not include information on grandparents' place of birth, we are able to identify only third-and-later generations in our large sample. In the smaller multigenerational households sample, we are able to identify those of the third generation precisely, because they live with their second-generation parents. Having

⁸Note that the strong educational progress of Southeast Asians is consistent with their relatively high level of school attendance shown in Chapter 4. Because of the small sample size, we combined the 1.5 and second generations for Southeast Asians.

arrived primarily in the late 1970s and the 1980s, the immigrant population from Southeast Asian refugee-sending countries has not been in the United States long enough to develop a sizable third generation.⁹ Similarly, third-generation Central American immigrants are too few to report in our multigenerational household sample and cannot be identified in other households of the CPS.¹⁰ Black immigrants are an even more recently arrived group, on average, and have not yet developed a sizable second generation of older adults.

Intergenerational progress continues from the second generation to the third generation, although progress is not as dramatic. For every group, third-generation adults are better educated than their second-generation parents (Tables 3.3 and 3.4). For less educated groups, these improvements are similar in scale, although generally not quite as large, as between first-generation immigrants and their second-generation children.

Among all third-and-later-generation young adults, only 8 percent were high school dropouts, compared to 14 percent for the second generation of older adults (Table 3.3). Among adult children living with their second-generation parents, nine of 10 had graduated from high school and more than one in four had graduated from college, compared to only 75 percent and 16 percent (respectively) of their parents (Table 3.4).

Third-generation Asians show strong intergenerational progress in the multigenerational household sample that allows comparisons of adult children with their parents (Table 3.4) but only modest progress in the larger sample that compares the entire third-and-later generation with the older second generation (Table 3.3). However, both samples show that third- or third-and-later-generation Asians are much better educated than their peers of other ethnicities, with high college graduation rates and low levels of high school dropouts relative to other third-generation groups.

⁹There are too few third-generation Southeast Asians to measure progress from the second to the third generations. In our multigenerational household sample, we observed no third-generation Southeast Asians.

¹⁰The CPS combines Central Americans with South Americans in its ethnic categories.

Table 3.3
Percentage Distribution of the Educational Attainment of Groups in the
Second and Third-and-Later Generations

Ethnic Group	Less Than High School Diploma	High School Diploma	Some College	Bachelor's Degree
Mexican				
Second generation, ages 57–66	47	28	18	7
Third+ generation, ages 30–39	20	38	29	12
Asian				
Second generation, ages 57–66	7	27	29	37
Third+ generation, ages 30–39	4	26	26	44
Black or African American				
Second generation, ages 57–66	n/a			
Third+ generation, ages 30–39	12	40	32	16
White (non-Hispanic)				
Second generation, ages 57–66	10	36	23	30
Third+ generation, ages 30–39	7	33	29	31
All ethnic groups				
Second generation, ages 57–66	14	35	23	28
Third+ generation, ages 30–39	8	34	29	28
Third+ generation, ages 57–66	18	38	22	22

SOURCES: Authors' analysis of the *Current Population Survey* (1996–2004).

NOTES: Asian includes Pacific Islanders. See Appendix Table A.3 for sample sizes.

Similarly for whites, the comparison of third-and-later-generation young adults with the entire second-generation of older adults shows only slight improvements in educational attainment (Table 3.3), whereas the comparison of third-generation adults with their second-generation parents who live in the same household shows much more substantial improvements (Table 3.4). In either case, the third (or third-and-later) generation is well educated, with high school dropout rates quite low and college completion quite high.

Third-generation Mexicans also show substantial improvements in education over the second generation. Among third-generation Mexicans who live with their parents, college graduation rates are twice those of their second-generation parents (although still relatively low at only 11 percent); and although over half of their U.S.-born parents did

Table 3.4

Percentage Distribution of the Educational Attainment of Second-Generation Parents and Their Third-Generation Adult Children

Ethnic Group	Less Than High School Diploma	High School Diploma	Some College	Bachelor's Degree
All ethnic groups				
Second-generation parents	25	39	19	16
Third-generation descendants	9	36	29	26
Mexican origin				
Second-generation parents	54	28	13	5
Third-generation descendants	18	39	33	11
Asian				
Second-generation parents	13	42	30	15
Third-generation descendants	2	21	41	36
White (not Hispanic)				
Second-generation parents	21	42	20	18
Third-generation descendants	8	36	27	29

SOURCES: Authors' analysis of the *Current Population Survey* (1996–2004).

NOTES: Data in the table include only households with parents and adult children in which the adult children are ages 25 to 49. Results are the average of mother-to-child and father-to-child comparisons. See Appendix Table A.2 for sample sizes.

not graduate from high school, more than eight in 10 third-generation descendants of Mexicans did graduate from high school (Table 3.4). Results from the larger sample (which compares entire generations but does not compare parents directly with their children) are consistent with the smaller parent-to-child sample findings presented above, showing strong although not quite as dramatic intergenerational progress from the second to the third generations (Table 3.3). This is an important finding: Increases in educational attainment do not cease between the second and third generations among Mexican Americans. Nonetheless, sizable proportions of the third generation have not completed high school and the proportion of college graduates is quite low.

Although third-generation Mexicans are better educated than their *parents*, they are not better educated than second-generation Mexicans of similar age. This conundrum is important to understand and decipher, as it has led to confusion even among scholars who study

intergenerational change. Second-generation parents (Table 3.4) are much less educated than second-generation adult children (Table 3.2). Indeed, second-generation parents are only slightly better educated than *first-generation* parents, with very few college graduates among either group. This is because today's second-generation parents were educated (or not) at a very different time in the United States. Not only were educational attainment levels much lower overall many decades ago for the entire U.S. population, certain groups—including Mexican Americans—had less access to public education. For example, in the 1930s the California legislature withheld state funds to local school districts that did not segregate Mexican children (Surace, 1982, citing Heizer and Almquist, 1977). Finally, the parents of today's second-generation parents were less educated than today's first-generation immigrants. In many of the primary sending countries of immigrants to the United States, including Mexico, educational attainment levels are on the rise. For example, recent immigrants from Mexico are much better educated than Mexican immigrants who came to the United States 30 or 40 years ago, a reflection of rising education levels in Mexico. Because parental educational attainment is such an important determinant of educational attainment for their children, these low levels of educational attainment of second-generation parents have important implications for third-generation educational attainment.

In sum, cross-sectional comparisons of all third-generation adults with the entire second generation show only marginal differences for those of Mexican descent. However, when we compare the third generation with their parents (who form the older, least-educated part of the second generation), we see dramatic gains. Thus, intergenerational progress for Mexican Americans from the second to the third generations is strong when it is properly measured by comparing attainment for individuals with attainment of their own parents.

Improvement Is Still Needed for Some Groups

Increases in educational attainment from one generation to the next, although impressive, have not been sufficient for all groups to reach parity with other U.S. natives. This disparity can be partly explained by the increasing educational attainment among U.S. natives, as well. For

example, younger U.S.-born adults are better educated than the older cohort that includes their parents: Among third-and-later-generation young adults, the proportion who did not complete high school is less than half the rate of third-and-later-generation older adults (8% for those ages 30 to 39 versus 18% for those ages 57 to 66). Of particular concern is the state's largest immigrant group, Mexicans. Second- and third-generation Mexicans have not reached parity with other U.S.-born groups. Rates of college graduation are low, and rates of high school dropout are higher for Mexican-origin descendants than for other U.S. natives.

The pattern for Asians is very different, with remarkably high levels of educational attainment—much higher than for U.S.-born whites. Even many first-generation Asian immigrants are well educated: 50 percent of the youngest adult Asian immigrants are college graduates. Second-generation Asians have even higher levels of education. Third-and-later generations still exceed the educational levels of their parents and other U.S.-born whites. Levels of college education for U.S.-born Southeast Asians are also higher than for U.S.-born whites, even though their parents are the least educated Asian group. One cautionary note is evident, however, in the relatively high rate of high school dropouts among 1.5-generation Southeast Asians—a rate that is twice that of U.S.-born whites. It is possible that Vietnamese immigrants and their descendants have met with much success educationally, whereas Laotians and Cambodians—among the least educated of any immigrant groups in the United States—have not.¹¹ In other words, the diversity of educational attainment might be a reflection of the diversity of the immigrant groups included in the category, with the relatively numerous Vietnamese composing the best educated Southeast Asians and the less numerous Hmong, Laotians, and Cambodians composing the least educated Southeast Asians.

¹¹Vietnamese immigrants tend to have higher levels of education than other Southeast Asians. Chapter 4 shows the higher family economic resources of Vietnamese compared to other Southeast Asians.

Implications for the Future

Using historical educational progress across generations as a basis, we develop projections of educational attainment for the descendants of the most recent immigrants to the United States. These projections allow us to consider the future path of intergenerational progress. To develop the projections, we used transition probabilities based on an individual's generation, maternal education, paternal education, and region of origin. Details of the method are included in Appendix A.

The premise of the projections is that within an immigrant group, the historical relationship between an individual's educational attainment and that of his/her parents will remain static over time. This relationship is, of course, a strong one—for example, the children of parents who are college graduates are much more likely than children of parents who did not complete high school to graduate from college. Nonetheless, other factors also play a role in the determination of educational attainment, and this set of projections implicitly assumes that those other factors are both embodied in the historical patterns and will remain unchanged in the future. The purpose of these projections is not to forecast what will happen, rather it is to suggest what would happen if historical patterns persist.

Because Mexicans are the single largest group of immigrants and have the lowest levels of education, we focus on that group exclusively in this discussion. The large majority of Mexican immigrants have not completed high school. Indeed, well over half have not graduated from high school. Nonetheless, the vast majority of their children and grandchildren will graduate from high school. We project that only 13 percent of the children of today's immigrants will not graduate from high school (Table 3.5), and only 11 percent of their grandchildren (the third generation) will not complete high school. A small but not insignificant proportion of the second generation will even graduate from college. That proportion is projected to increase from the second generation to the third generation but, at 17 percent, will remain far lower than that of other U.S. natives.

Table 3.5
Percentage Distribution of the Projected Educational Attainment
of Second- and Third-Generation Descendants
of Mexican Immigrants

	First- Generation Mothers	Second- Generation Children	Third- Generation Grandchildren
Less than high school diploma	66	13	11
High school diploma	21	34	30
Some college	8	39	42
Bachelor's degree	5	13	17

SOURCE: Authors' projections.

NOTES: Data in the table are based on the parent-to-child education transition matrix (see Appendix A). First-generation numbers are based on the *Current Population Survey* (2004) for Mexican immigrants ages 30 to 39.

These projections suggest strong intergenerational gains in educational attainment from the first generation to the second generation and continuing if less dramatic gains from the second generation to the third generation. However, they also suggest that the gap between U.S.-born whites and the third-generation descendants of Mexican immigrants will continue into the future. Of particular concern are the relatively low rates of completing college. These patterns persist into the third generation because the tremendous gains into “some college” by the second generation do not translate into college graduation for the third generation. Of course, these projections are based on historical patterns and future patterns could be different. Indeed, it is the goal of public policy in general and education policy in particular to improve these outcomes.

4. Determinants of the Educational Attainment of Foreign-Born Youth

The education and socioeconomic conditions of the first generation set the stage for the subsequent progress of the second generation. In this chapter, we explore the determinants of differences in educational attainment for those of the first generation, beginning with the recent historical context of their migration. We then turn to today's foreign-born youth, suggesting that the low educational attainment of first-generation Mexican youth can be understood as a continuation of the historical pattern whereby youth from families with low socioeconomic resources come to the United States as young adults primarily for work opportunities. This analysis provides a background for discussing policy challenges and possible directions for improving educational attainment among first-generation Mexican youth—topics we address in the concluding chapter.

Recent Historical Context

During the 20th century, Mexican immigration to the United States was primarily made up of low-skilled workers seeking positions in agriculture, production, and service jobs.¹ Even during the 1940s and 1950s, when foreign immigration to the United States was severely restricted, many Mexicans came to California as agricultural workers

¹See the introduction to Waldinger and Bozorgmehr (1996) for a brief history of migration to California. The volume also provides an account of the ethnic transition of Los Angeles since the 1970s, including socioeconomic conditions of specific ethnic groups. See López and Stanton-Salazar (2001) for a brief discussion of the history of Mexican immigration to California and an analysis of second-generation Mexican Americans in San Diego. See Massey, Durand, and Malone (2002) for a history of Mexican immigration and related U.S. policies.

under the Bracero program (1942–1964). Still others came as unauthorized workers in production and service sectors. The easing of immigration restrictions by the Hart-Cellar Act (1965) brought additional flows of Mexican workers and their family members. Flows increased after the passage of the Immigration Reform and Control Act of 1986 (IRCA), which legalized the status of those who had been U.S. residents since 1982 and “special agricultural workers.” These residents and workers were then joined by family members under family reunification provisions, which were further expanded in 1990.

Immigration from Central America has primarily been more recent, beginning in earnest during the late 1970s with Salvadorans and Guatemalans fleeing political unrest at home. Thus the historical context for immigration from Central America is not as closely tied to work opportunities in low-wage sectors as is Mexican immigration.

The recent history of Asian migration has been profoundly different from that of Mexican migration. The Immigration Restriction Acts (1921, 1924) severely limited Asian immigration through very low country-of-origin quotas. The Hart-Cellar Act lifted these quotas and allowed immigration to reunite families and for those with scarce and needed skills. In the years that followed, many new Asian immigrants, notably Koreans and Asian Indians, came as skilled workers and paved the way for later immigrants to come as kin. The relatively high educational attainment of recent Asian immigrants can be understood partially as a consequence of this “skill-based” reason for entry into the United States.

During the late 1970s and the 1980s, a different wave of Asian immigrants arrived: refugees fleeing communist regimes in Vietnam, Cambodia, and Laos. The first Southeast Asian immigrants were typically elites but were followed by refugees with relatively low educational attainment.

Family Characteristics

Among today’s immigrant youth, family characteristics follow a pattern that might be expected given the recent context of immigration: Immigrants from Mexico, Central America, and Southeast Asia tend to

have low resources, whereas those from other parts of Asia tend to have higher economic resources. These family resources are important because they help determine the educational attainment of first-generation youth. Parental education, particularly maternal education, is strongly linked to a child's cognitive development and school success (Haveman and Wolfe, 1995). Research has shown that higher educational attainment is also associated with having a mother who speaks English, living with both parents, and having family income above the poverty level.²

To examine family resources among immigrant youth, we focus on those ages 13 to 17 who live with their families (Table 4.1).³ Immigrant youth from Mexico have particularly low family resources. Among those who live with their mother, only 17 percent have a mother with a high school diploma. Among Central American immigrant youth, family resources are also low, but not as low as for Mexican youth. For example, 31 percent have a mother who has completed high school. Among Southeast Asian immigrants, especially those from Cambodia and Laos, maternal education is low and the share living above poverty is also particularly low (only 46%). In contrast, Filipino youth are in families with high resources: 91 percent have a mother who completed high school, and 92 percent live above the poverty line. Among Asians from other backgrounds, there is a fair amount of diversity, but family resources tend to be relatively high.

²See Haveman and Wolfe (1995) for a review of the literature on the determinants of youth outcomes. See also Pirog and Magee (1997), Denton, West, and Walston (2003), Mare and Winship (1988), Grogger and Trejo (2002), and Chuang (1997). Mayer (1997) finds that family income has only a small effect on educational attainment. She calculates that if family income were doubled for poor families, the overall high school dropout rate would fall from 17.3 to 16.1 percent. She argues that the effect is small because many basic necessities are met through government programs, including Food Stamps, Medicaid, and housing subsidies.

³See Beavers and D'Amico (2005) for a study of the conditions of children in immigrant families nationally with state comparisons.

Table 4.1
Percentage Distribution of the Family Resources of Foreign-Born California Youth by Race and Ethnicity, Ages 13 to 17, 2000

	Mother Share of Total	Mother Has High School Diploma	Mother Has Bachelor's Degree	Mother Speaks English	Youth Lives with Both Parents	Youth Lives with Any Relative	Family Income Above Poverty	Family Receives Public Assistance
White	9	83	35	72	81	97	76	21
Mexican	56	17	2	27	64	93	64	9
Central American	7	31	5	42	59	93	69	7
Vietnamese	4	38	2	25	79	98	65	47
Other Southeast Asian	4	19	2	24	77	97	46	66
Filipino	6	91	55	92	77	97	92	5
Other Asian	11	79	34	50	81	96	81	5

SOURCE: Authors' calculations from the 2000 Census.

NOTES: Maternal education and English ability include only youth who are co-resident with their biological, adoptive, or stepmother. "Mother speaks English" is the percentage who speak only English at home plus those whose mother speaks English "well" or "very well." The share living with a relative includes only those who live in a household headed by a relative. The 2000 Census does not describe family relationships for people who are unrelated to the household head. See Appendix A for further details.

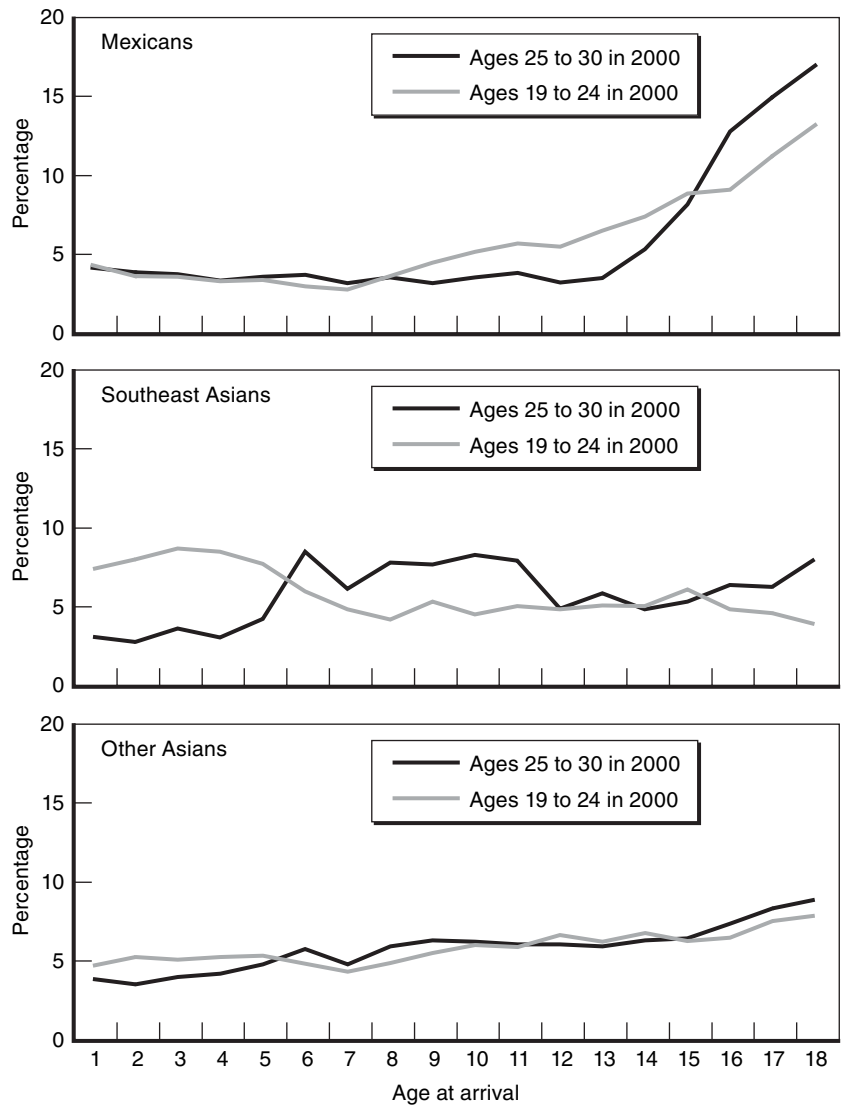
Age at Arrival

A growing body of research has noted that age at arrival is an important determinant of socioeconomic outcomes for immigrants. Hill (2004) finds that among immigrants in California, those who arrived as young children have similar educational outcomes to native-born youth of the same race and ethnicity.⁴

Among young adults from Mexico, a large share arrive at ages 15 and older. Of those who arrived by age 18, about half arrived after age 14 (Figure 4.1).⁵ Of those who arrived by age 24, 72 percent arrived after

⁴See Chiswick and DebBurman (2004) for a review of studies of age at arrival and post-immigration schooling. See also Rumbaut (2004) and Gonzalez (2003).

⁵Figure 4.1 reports the age of migration for two age cohorts to show that the major patterns are consistent. For a single age cohort, the age pattern could be dominated by an event such as IRCA. This act allowed legalization of immigrants who were working in the United States in 1982 and earlier. Following IRCA, there was a spike in immigration from Mexico in 1988–1990 as people joined newly legalized family and friends in the United States. For the older cohort, this spike begins about age 14. For the younger cohort, the spike begins at about age 8. However, for both cohorts, the highest levels of immigration are after age 14.

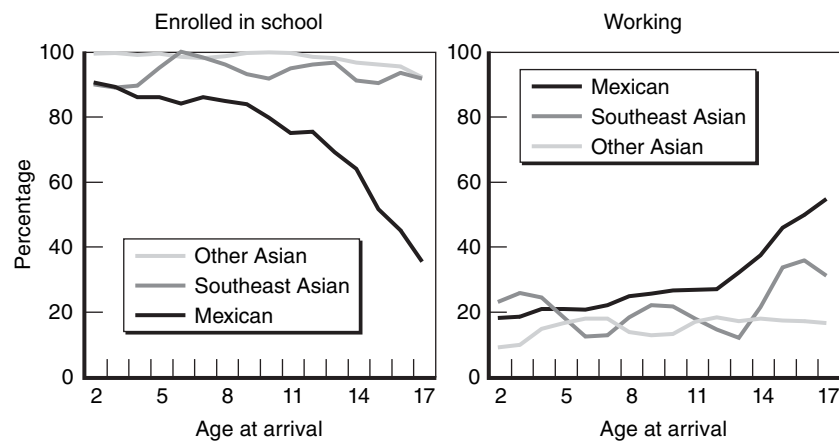


SOURCE: Authors' calculations from the 2000 Census.
 NOTES: Data in the figure include foreign-born youth who arrived in the United States before age 19. Age at arrival does not differ substantially between men and women.

Figure 4.1—Age at Arrival of Foreign-Born Mexicans and Asians

age 14 (not shown). In contrast, Southeast Asian immigrants were more likely than Mexican youth to arrive at early ages. Among Southeast Asians who arrived in the United States by age 24, about half arrived after age 14.⁶ Among other Asians, immigration is fairly evenly spread across all ages but tends to be slightly higher at ages 17 and 18. Among other Asian immigrants who arrived by age 24, just over half arrived after age 14.

The high share of Mexican immigrant youth who arrive in their late teens is particularly important because these youth are much less likely than other youth to enroll in school. Among Mexican immigrant men, almost 90 percent of those who came to the United States as young children were enrolled in school at ages 16 to 18, compared to only about a third of those who arrived at age 17 (Figure 4.2, first panel).



SOURCE: Authors' calculations from the 2000 Census.
 NOTES: Data in the table include foreign-born youth who arrived in the United States before age 19 and who have not completed high school. Reported statistics are three-year moving averages.

Figure 4.2—Activities of Foreign-Born Mexican and Asian Men by Age at Arrival, Ages 16 to 18

⁶Arrival by age 24 is measured for immigrants ages 25 to 30. Immigration from the Southeast Asian refugee-sending nations peaked around 1980. For the older cohort, this peak occurred when they were ages 6 to 11. For the younger cohort, this peak occurred when they were age 5 and under.

Among Asian and Southeast Asian immigrant men ages 16 to 18, school enrollment was over 90 percent even for those arriving at age 17.

Mexican men arriving in their late teens are much more likely than other youth to be working.⁷ About half of those who arrived after age 14 were working at ages 16 to 18 (Figure 4.2, second panel). Among Mexican men who arrived at younger ages and among Asians, work participation at ages 16 to 18 was only around 20 percent (with the exception of Southeast Asian men who arrived in their late teens, for whom work participation was about 33 percent).

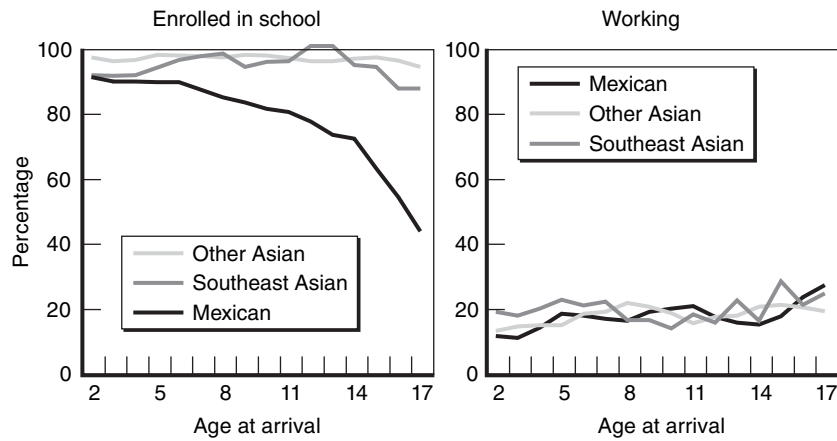
College-age youth, those ages 19 to 21, had a similar pattern (not shown in the figure). Among Mexican men who arrived at age 19, only 11 percent were enrolled in school and 70 percent were working. Among Southeast Asian men who arrived in their late teens, 64 percent were enrolled in school and 44 percent were working.⁸ Among other Asian men who arrived at age 19, 74 percent were enrolled in school and 39 percent were working.

Mexican women who arrived in their late teens were also less likely than other youth to be enrolled in school at ages 16 to 18. Among those who arrived at age 17, only 43 percent of Mexicans were enrolled in school compared to 87 percent of Southeast Asians and 94 percent of other Asians (Figure 4.3). Work participation was fairly similar between the groups at about 20 percent, but Mexican women were much more likely to be married (21% were married compared to less than 2% of Southeast Asian and other Asian women) and much more likely to be raising young children (7% compared to less than 2% of Southeast Asian and other Asian women).

Among immigrant women of college age, ages 19 to 21, Mexicans were also far less likely to be in school (not shown in the figure). Only 14 percent of Mexican women who arrived at age 19 were enrolled in school, 36 percent were working, 41 percent were married, and 22 percent were raising a young child. Southeast Asian women who arrived

⁷In Figures 4.2 and 4.3, the share working includes those who are working while in school.

⁸Because of small sample sizes, Southeast Asian statistics are averaged over those who arrived between ages 16 and 21 (but, similar to other groups, are limited to men ages 19 to 21 at the time of the 2000 Census).



SOURCE: Authors' calculations from the 2000 Census.

NOTES: Data in the table include foreign-born youth who arrived in the United States before age 19 and who have not completed high school. Reported statistics are three-year moving averages.

Figure 4.3—Activities of Foreign-Born Mexican and Asian Women by Age at Arrival, Ages 16 to 18

in their late teens were much more likely to be in school (70%) but were also fairly likely to be working (40%), married (29%), and raising young children (17%).⁹ In contrast, other Asian women who arrived at age 19 were very likely to be in school (81%), fairly likely to be working (30%), and very unlikely to be married (10%) or raising a child (3%).

The analysis of age at arrival shows that Mexican immigrant youth are more likely than Southeast Asian youth or other Asian youth to have come to the United States in their late teens. Mexican youth who arrive in their late teens have low levels of school enrollment, high levels of work participation among men, and high levels of marriage and childrearing among women. These findings suggest that many Mexican immigrant men come to California for work and many women come to work and to join their spouses or start a family.

⁹Because of small sample sizes, Southeast Asian statistics are averaged over those who arrived between ages 16 and 21 (but, similar to other groups, are limited to women ages 19 to 21 at the time of the 2000 Census).

In contrast, Asian immigrants are not particularly likely to arrive in their late teens and even among those who do, school enrollment is high, work participation among men is substantially lower than that of Mexican men, and family formation among women is lower than among Mexican women. These findings suggest that many Asian youth come to California to attend school. Many Southeast Asians came to California as refugees to escape oppressive conditions in their native countries. School enrollment is fairly high among Southeast Asians, even among those who arrived in their late teens.

This chapter has identified two factors that contribute to the lower educational attainment of Mexican immigrant youth relative to Asian immigrant youth. First, family characteristics associated with youth success, such as parental education, are much lower among Mexican immigrant youth than among Asian youth (other than those from Southeast Asia). Second, for immigrant youth from Mexico, many arrive after age 14 and a large share do not appear to enroll in school in the United States. Their educational attainment is therefore quite low.

Among Southeast Asian youth, family resources are also very low. Southeast Asian immigrant youth are more likely than Mexican immigrant youth to be living in poverty. However, Southeast Asian immigrants are much more likely than Mexican immigrants to enroll in school. One partial explanation for this difference may be the refugee status of many Southeast Asian immigrants. As refugees, Southeast Asian youth tend to come to the United States with their families and their families are eligible for public assistance. More than half of Southeast Asian youth receive some form of public assistance income, whereas among Mexican youth the share is less than 10 percent (Table 4.1). Public assistance income likely makes it possible for Southeast Asian youth to choose school because their family income is less dependent on their work earnings.

5. Determinants of the Educational Attainment of U.S.-Born Youth

Low educational attainment among Mexican immigrants helps explain the low educational attainment of second-and-later-generation Mexican Americans because parental education is a key determinant of attainment (see Chapter 4). In this chapter, we explore the relationships between parental education and other family characteristics and educational attainment among U.S.-born youth. In particular, we examine the extent to which differences in family characteristics can explain racial and ethnic differences in educational attainment. In addition to providing a better understanding of the factors that explain racial and ethnic differences, the analysis is used to estimate the share of California children at risk of not finishing high school or college and to suggest mechanisms for targeting educational support programs.

Family Characteristics

Perhaps not surprisingly, the family characteristics of U.S.-born (second-and-later-generation) youth follow similar patterns to those shown for immigrant youth in the previous chapter. Mexican American youth tend to have low maternal education: Fewer than half have a mother with a high school diploma and only 5 percent have a mother with a bachelor's degree (Table 5.1). Maternal education is also low among Southeast Asians. Southeast Asian and Latino youth are less likely than Asian and white youth to be growing up in a family with income above the poverty level.¹ Family income is particularly low among Southeast Asians with ancestry other than Vietnamese.

¹The 2000 Census measures poverty in 1999. Since 1999, a recession and unstable economic conditions have led to mild growth in poverty (Reed, 2004).

Table 5.1

Percentage Distribution of the Family Characteristics of U.S.-Born California Youth by Race and Ethnicity, Ages 13 to 17, 2000

	Share	Mother Has High School Diploma	Mother Has Bachelor's Degree	Mother Speaks English	Youth Lives with Both Parents	Family Income Above Poverty	Family Income Above Low
White	44	93	29	99	71	92	81
Mexican American	29	46	5	70	66	78	49
Central American	2	44	7	66	63	79	47
Vietnamese	1	55	10	55	78	76	54
Other Southeast Asian	1	21	2	35	77	52	22
Filipino	2	95	53	99	81	95	86
Other Asian	4	84	44	77	87	92	80
African American	8	84	14	99	37	73	51

SOURCE: Authors' calculations from the 2000 Census.

NOTES: See the notes to Table 4.1. The low-income threshold is twice the federal poverty threshold for each family.

Factors Contributing to Racial and Ethnic Differences in Educational Attainment

To explore the extent to which these differences in family characteristics explain racial and ethnic differences in educational attainment, we use longitudinal data that measure family resources in the 8th grade and follow youth until roughly age 26. We use a national sample because such longitudinal data are not available for California. However, because of similarities in family resources and youth outcomes by race and ethnicity, the national results appear to be applicable to California (see Appendix A). We focus our discussion on findings for Mexican American youth because of their relatively low educational attainment. Findings for African Americans and Asian Americans are

reported in the figures. The survey has too few Southeast Asians for analysis.²

Compared to third-and-later-generation white men (hereafter referred to as “white men” for ease of exposition), third-and-later-generation Mexican American men were 7 percentage points less likely to complete high school (Figure 5.1).³ Using a statistical model, we adjust for parental education to compare Mexican Americans with whites who have similar parental education backgrounds.

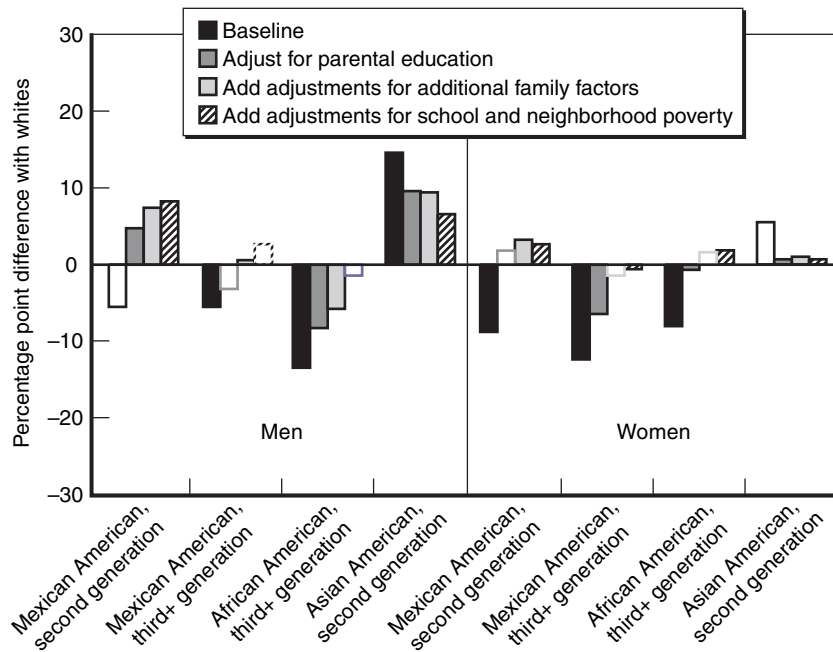
After this adjustment, third-and-later-generation Mexican American men have high school completion rates that are not statistically distinguishable from those of white men.⁴ In other words, parental education and any factors associated with parental education (such as family income, family size, or even neighborhood characteristics) explain the lower high school completion rates of third-and-later-generation Mexican American men. For third-and-later-generation Mexican American women, the gap with white women is substantially reduced when we adjust for parental education and the gap is eliminated when we further adjust for family income, single-parent families, speaking English in the home, family size, and region of residence.

Among second-generation Mexican American men, their lower high school completion rates are within the sampling error of the survey. For second-generation Mexican American women, low parental education explains their gap with white women. Overall, then, the lower high school completion rates of Mexican Americans relative to whites is explained by their lower family resources, particularly parental education and related factors.

²We do not report results for second-generation whites because the NELS sample appears to be not representative. For third-and-later-generation Asians, the NELS sample is too small and also appears to be not representative. See Appendix Table A.4.

³Figure 5.1 and related figures show marginal effects from logistic regressions (measured at the means of other variables). Statistical significance is based on the coefficient estimate. See Appendix C for model results.

⁴We adjust for parental education by including dummy variables for mother having a high school diploma, attending college, and having a bachelor’s degree plus a dummy for both parents not completing high school and a dummy for both parents having bachelor’s degrees.



SOURCE: Authors' calculations from NELS.
 NOTES: High school completion defined as diploma by about age 20 (six years after 8th grade). Figure shows percentage point differential with third-and-higher-generation whites based on a logistic regression. White-filled bars signify difference with whites is not statistically significant at the 10 percent level.

Figure 5.1—High School Completion Rates Relative to Third-and-Later-Generation Whites

In contrast, second-generation Asian men are more likely than white men to complete high school and less than half of the difference can be explained by parental education and other family factors.⁵ When we add adjustments for whether they attend a high-poverty school and whether they live in a low-income neighborhood, about half of the gap can be explained.⁶ The high school completion rate among second-generation

⁵Several studies have shown the importance of “attitudes” and parenting styles for educational outcomes, especially among Asians (Fuligni, 1997, 1998; Kao and Tienda, 1995; and Kao, 2004).

⁶We use the share of students who are eligible for a free or reduced price meal as a measure of school poverty. We use poverty rate in the neighborhood of the school. For

Asian American women is not statistically different from that of white women.

Among young Californians who leave school before finishing high school, the age at leaving school is not substantially different across racial and ethnic groups. For most groups, the share of youth who are not enrolled in school at ages 13, 14, 15, 16, and 17 is 3 percent or less.⁷ For Mexican Americans, the share out of school is 3 percent or less through age 15, 4 percent for age 16, and 5 percent for age 17. Among those who do not complete high school, the majority have completed 11th or 12th grade (Figure 5.2).⁸ The share is slightly lower for Mexican Americans (62%) than for whites (70%).

Similar to high school completion, enrollment in postsecondary education tends to be lower for Mexican Americans than for whites but the gaps disappear when we adjust for parental education (Figure 5.3).⁹ Indeed, second-generation Mexican Americans have higher postsecondary school attendance than whites with similar parental education backgrounds.

Mexican Americans are substantially less likely than whites to complete a bachelor's degree (Figure 5.4). The college completion gap disappears after adjusting for family characteristics, except in the case of third-and-later-generation Mexican American women for whom adjustments cut the gap by only about half.

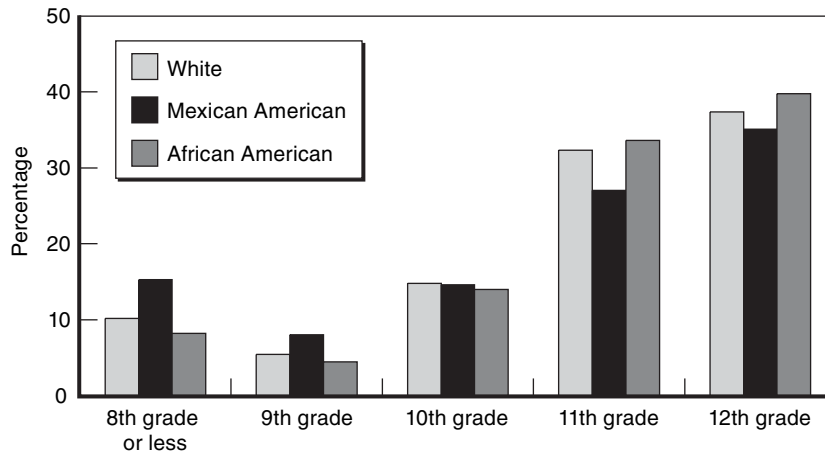
For Mexican Americans, gaps with whites in bachelor's degree completion are much larger than gaps in postsecondary school enrollment (comparing Figures 5.3 and 5.4). Findings from the 2000

research on neighborhood and school effects, see Duncan and Hoffman (1990), Brewster (1994), Patterson (2000), Wolfe, Wilson, and Haveman (2001), and Light and Strayer (2000, 2002).

⁷We rely on the 2000 Census for this analysis because the NELS sample for youth not completing high school is too small.

⁸The 2000 Census allowed respondents to indicate that they completed the 12th grade but did not achieve a high school diploma. For example, a person may have attended an entire year of schooling after the 11th grade but not completed all requirements for a high school diploma.

⁹Postsecondary school attendance is measured as enrollment in any postsecondary institution. Postsecondary school attendance and achieving a bachelor's degree are measured in 2000, when most NELS respondents were age 26.



SOURCE: Authors' calculations from the 2000 Census.

NOTE: The sample is too small to calculate the grade level distribution for Asians and Central Americans.

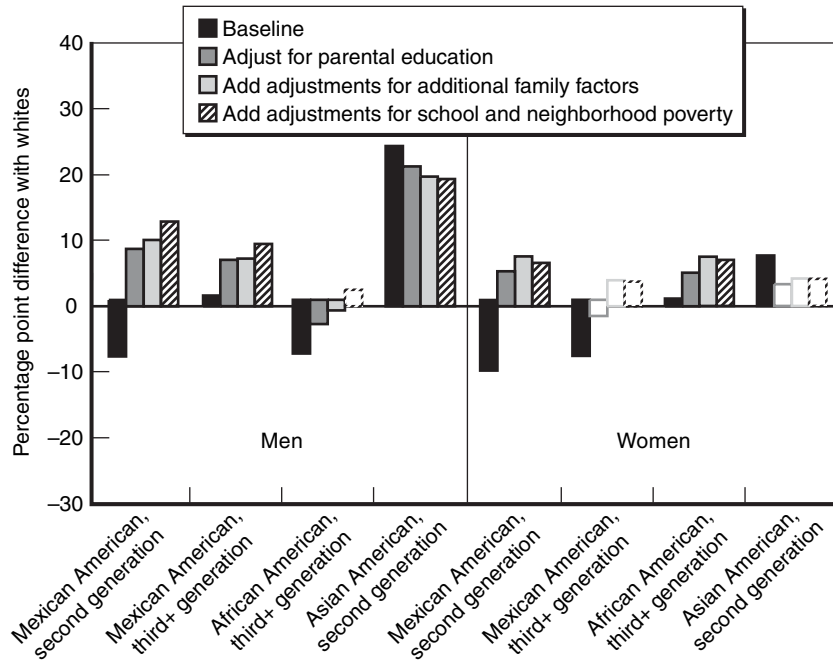
Figure 5.2—Grade Level Completion Rates of U.S.-Born Young California Adults with No High School Diploma, Ages 19 to 24, 2000

Census confirm that not only do Mexican Americans have relatively low college enrollment, but of those who have attended college, the share that graduated with a bachelor's degree is particularly low for these groups in California and the rest of the nation (Table 5.2).¹⁰

For most major racial and ethnic groups, young adults from California are slightly more likely than those from other states to have attended college, although they are not more likely to have completed a bachelor's degree (Table 5.2).¹¹ Perhaps the large size of the community college system helps explain the higher college enrollment of Californians. In 2002, the California Community College (CCC) system enrolled over 146,000 first-time freshmen compared to less than

¹⁰Measures of bachelor's degree attainment in the Census (Table 5.2) exceed those of the CPS (Figure 2.1) for each major racial and ethnic group in California and nationally.

¹¹Migration to and from other states to attend college or shortly after finishing college tends to increase college attendance and completion rates for California. To estimate college rates for those who were educated in California, Table 5.2 reports statistics by state of birth regardless of state of current residence (see Reed, 2005).



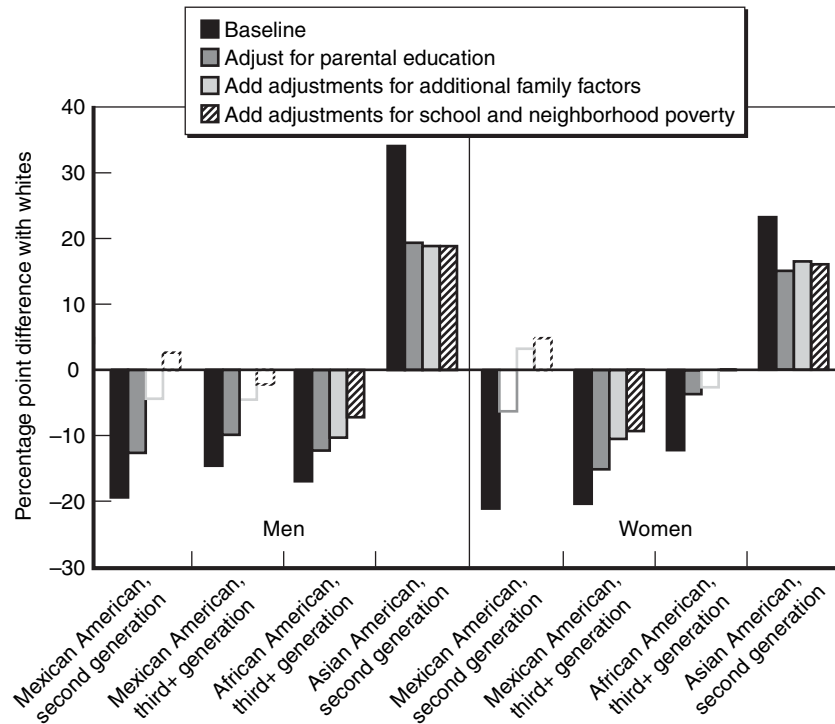
SOURCE: Authors' calculations from NELS.
 NOTES: Postsecondary school attendance is defined as enrollment in any postsecondary educational institution as of about age 26. See the notes to Figure 5.1.

Figure 5.3—Postsecondary School Attendance Relative to Whites

30,000 in the University of California (UC) system and less than 40,000 in the California State University (CSU) system (Table 5.3).¹²

The representation of Latino students in the CCC system matches that of public high school graduates in California (Table 5.3), whereas Latinos are underrepresented in the CSU and UC systems. Owing to the large size of the CCC system and the relatively large share of Latinos entering CCCs, almost 80 percent of all Latino freshman in public

¹²Enrollment data include first-time freshman enrollees from private high schools and from out of state. If limited to graduates from California public high schools, the share of whites in UC would be slightly lower (34%) and the share would be higher for Latinos (15%) and Asians (35%).



SOURCE: Authors' calculations from NELS.

NOTES: College completion is defined as attaining a bachelor's degree as of about age 26. See the notes to Figure 5.1.

Figure 5.4—College Completion Ratio Relative to Whites

higher education in California are in the CCC system.¹³ Thus, from a policy perspective, the success of students in the CCC system is an important determinant of the success of Latino youth, an issue we return to in the concluding chapter.

Transfer rates from CCC are fairly low, with about 48,000 students per year transferring to CSU, about 11,000 students per year transferring to UC, and about 8,000 students per year transferring to private institutions (California Postsecondary Education Commission, 2002).

¹³See also Lopez, Puddefoot, and Gándara (2000). Fry (2002) documents the disproportional enrollment of Hispanics in community colleges at the national level.

Table 5.2
Percentage Distribution of College Attendance and Completion Rates of
U.S.-Born Youth by Race and Ethnicity, Ages 25 to 29, 2000

	Born in California			Born Elsewhere in the U.S.		
	Some College	Bachelor's Degree	Graduation Rate	Some College	Bachelor's Degree	Graduation Rate
White	69	31	44	65	32	49
Mexican American	48	12	26	45	13	28
Central American	65	23	35	65	27	41
Vietnamese				63	31	50
Other Southeast Asian						
Filipino	82	39	48	84	48	57
Other Asian	91	66	72	88	70	79
African American	54	15	28	48	15	31

SOURCE: Authors' calculations from the 2000 Census.

NOTES: The column labeled "Graduation Rate" shows the percentage with a bachelor's degree of those who attended college. The sample size is too small to calculate statistics for Vietnamese in California and for other Southeast Asians nationally.

Table 5.3
Percentage Distribution of Students in Higher Education Institutions
in California by Race and Ethnicity, 2002

	Public High School						
	CCC Graduates	CCC Freshmen	CCC Transfers	CSU Freshmen	CSU Graduates	UC Freshmen	UC Graduates
White	43	39	42	39	43	37	40
Latino	33	33	20	23	20	14	12
Filipino	3	4	3	6	4	5	4
Other Asian	12	10	14	14	14	33	30
African American	7	7	5	7	5	3	3
Number	323,573	146,240	49,029	38,710	59,025	29,664	34,716

SOURCE: Reed (2005), based on California Postsecondary Education Commission Data.

NOTES: CCC transfers include transfers to private institutions. Columns do not sum to 100 percent because some students do not identify their race or ethnicity.

The share transferring to four-year institutions is particularly low for Latinos (Table 5.3). One explanation for low transfer rates is that students attend CCCs for other programs such as workforce training, vocational or occupational education, and remedial education. Thus, the CCC system provides important opportunities for educational attainment beyond simply the transfer function.

Research on the efficacy of community college provides mixed results. In an analysis of research based on the NELS, Fry (2004) finds that Latino students are more likely than similarly prepared white students to choose less-selective and “open” admissions colleges such as community colleges. Fry argues that because selective colleges tend to have higher graduation rates, more Latino students would earn bachelor’s degrees if they were to choose the same colleges.¹⁴ In contrast, Sandy, Gonzalez, and Hilmer (forthcoming) find that differences in student quality (and not institutional quality) explain most of the lower bachelor’s degree completion rates for students who attend community college. Furthermore, Gonzalez and Hilmer (forthcoming) find that access to a community college increases the chances that Latino students finish a bachelor’s degree. Apparently, although some Latino students and others may have been hindered in their progress at community colleges (e.g., by lack of counseling, inability to transfer units, or limited availability of courses), many others have found that community colleges promote their progress by providing greater access through low fees, flexible schedules, and local availability.

California Youth At Risk of Low Educational Attainment

Estimates of the relationship between family resources and young adult educational attainment can be used to describe the size and nature of the California population at risk for low attainment in the future. If the relationships measured in the NELS were to continue to hold, we would

¹⁴Fry (2004) also finds that Latinos have lower graduation rates than whites when comparing those in the same colleges. He argues that lower completion rates may be related to Latinos’ delayed enrollment in college, greater financial responsibility for family members, and living at home rather than in campus housing.

expect about 17 percent of California’s children ages 0 to 9 to become high school dropouts (Table 5.4). Of course, California has had many educational reforms over the last decade and further reforms are likely.¹⁵ However, conditions for higher education may erode, particularly in light of current fiscal constraints and the growing number of college-age youth (Hanak and Barbour, 2005). Other changes, such as income growth or large waves of new immigrants, may also affect educational and other outcomes. Therefore, the statistics in Table 5.4 do not tell us what will happen but do provide a sense of the size and nature of the child population most at risk for low attainment.

The analysis suggests that the children most at risk of low attainment are those whose parents have not completed high school. Roughly 30 percent of California children have parents with no high school diploma.

Table 5.4
Percentage Distribution of Educational Attainment by Family Characteristics, Ages 0 to 9, 2000

Family Characteristic	Share of Children	No High School Diploma	No Bachelor’s Degree
All		17	68
Neither parent has a high school diploma	30	36	95
Mother has a high school diploma	17	15	82
Mother attended college	26	7	61
Mother has a bachelor’s degree	7	2	15
Both parents have a bachelor’s degree	11	<1	4
Parents do not speak English	12	29	91
Family income < \$25,000	29	31	88
Raised by single parent	23	29	83

SOURCE: Authors’ calculations from the NELS (1994, 2000) and the 2000 Census.

NOTES: Children living with a single parent who has not completed high school are included in “Neither parent has a high school diploma.” “No high school diploma” is estimated at age 20 and “No bachelor’s degree” is estimated at age 26. See Appendix A for a discussion of measurement issues.

¹⁵See Reed (2005) for a review of recent educational reforms in California.

If the relationships measured during the 1990s were to hold, 36 percent of these children would drop out of high school and 95 percent would not receive a bachelor's degree (by age 26). The risk of low attainment is also very high among children whose parents do not speak English, families with low income, and children being raised by a single parent.

Among California children at risk of low attainment, Mexican Americans make up a disproportionate share. For example, among children with parents who do not have a high school diploma, Mexican Americans make up 68 percent, whereas among all children that number is 40 percent. Thus, this analysis provides further evidence that we should expect the relatively low educational attainment of Mexican Americans to continue in the next generation (see also Chapter 3).

6. Conclusion

Our results have much to say about what we can expect for the future of California. We find evidence of substantial educational progress between second-generation immigrants and their foreign-born parents—progress that continues between the second and third generations. These findings are particularly important because prior research comparing same-age cohorts of second- and third-generation immigrants has found that second-generation immigrants tend to have higher educational attainment, suggesting the possibility that educational progress stalls between the second and third generations. Using the recent record as a basis, we project a high degree of educational progress for the third-generation grandchildren of today’s Mexican immigrants.

Despite continued intergenerational progress, educational attainment for third-and-later-generation Mexican Americans still lags that of U.S.-born whites. Without future improvements, Mexican American generations in years to come will fall far short of the educational levels currently attained by U.S.-raised whites.¹ The stakes are high—13 percent of California’s youth are immigrants from Mexico and another 21 percent are U.S.-born Mexican Americans. In addition, Central American immigrants, whose educational attainment is somewhat similar to that of Mexican immigrants, are growing in number (currently representing 2% of the youth population).

Low educational attainment is of particular concern in light of the growing importance of education in the California labor market. Today, more so than in past decades, economic success is strongly related to educational attainment. Education can also be linked to health outcomes and civic participation. Thus, education is arguably one of the most important factors for the integration of immigrants into California.

¹See López and Stanton-Salazar (2001) for a stark perspective on the future for Mexican Americans.

Policy Directions

The findings of this study have important implications for education-related policy in California. Other areas of public policy, such as federal immigration policy and state health care policy, are relevant for immigrant integration, but these broader policy issues were not the focus of this study and we do not discuss them here.²

Improving educational attainment and other conditions among Mexican immigrants who arrive as youth is particularly challenging. Among young adult Mexican immigrants in California, almost three of every four arrived after age 14. Many of these youth are not enrolled in California schools. Thus, youth programs that operate in and through schools will not reach these Mexican youth, who have some of the lowest educational attainment in California. One approach is to encourage them to enroll in high schools. For those who do, English language training and educational counseling may be particularly important. However, a substantial share of those who are not in school are working and raising families. For these youth, adult education programs in school districts and community colleges may provide better schedules for part-time, evening, and weekend coursework in vocational or academic subjects.³ Another approach would be to target the workplace, potentially working with employers who may see advantages to workers developing English language or literacy skills. In addition, as these youth become parents, policies could be devised to engage them through their young children, by offering parental support and literacy courses.⁴

For second and third generations, and for immigrants who do enter California schools, the quality of the K–12 public education system is clearly a key factor in success. Recent research suggests that the quality of public schools in California is relatively low (Carroll et al., 2005; The Civil Rights Project, 2005) and that Latino and African American students are more likely than other groups to be in low-performing

²The Little Hoover Commission (2002) describes a broad range of state and local policy approaches for integrating immigrants in California.

³See de Cos (2004) for a study of adult education in California.

⁴For example, the First Five commissions in California support a variety of parenting-support services, as do the federal Head Start programs.

schools (Reed, 2005). Several recent reforms have sought to improve California schools, particularly in the areas of student achievement, teacher quality, and adequate facilities (Reed, 2005). In addition to these basic elements of school quality, English language learning is of particular concern for the children of immigrants.⁵ One additional approach would be to target students from poor families for educational counseling, tutoring, and other mentoring.⁶ For example, such programs could target children whose parents have not completed high school. We find that about 30 percent of California's children are growing up in families where neither parent has completed a high school diploma and that as many as 95 percent of these children might not achieve a bachelor's degree.⁷ Mexican American children make up 68 percent of these at-risk children but they constitute only 40 percent of all children.

Almost 80 percent of Latinos who enroll in public higher education enter through the CCC system. Through open admissions policies, low fees, flexible schedules, and local availability, community colleges provide greater access to a college education. Of great concern, however, is the low transfer rate to four-year institutions; transfers are especially low among Latino students.⁸ In addition to preparing students for transfers, community colleges provide English language, remedial, and vocational courses. As the value of education and skills in the California economy continues to grow, these courses will become increasingly important to

⁵See Jepsen and de Alth (2005) for analysis of English language learners in California schools. See also Rumbaut and Cornelius (1995).

⁶The Advancement Via Individual Determination (AVID) program is an example of a program that targets middle and high school students for additional mentoring and support. See Torres and Marquez (2005) for a discussion of parental outreach programs for postsecondary education.

⁷Head Start is an example of a program targeting poor children early in their educational careers. Wald and Martinez (2003) suggest an alternative targeting approach focused on youth who have poor outcomes during their teens, including those not completing high school, those deeply involved in the criminal justice system, young unmarried mothers, and adolescents in the foster care system.

⁸See California Postsecondary Education Commission (2002) for a summary of recent policies to address student transfer from CCC.

workforce training, especially for those who do not go on to complete a bachelor's degree.

Directions for Future Research

The analysis of this report suggests important areas for future research. Although education policy is clearly a target area for promoting the integration of immigrants in California, research has not provided clear direction on specific policies that will improve school quality and further educational attainment, particularly among disadvantaged youth. Ongoing and future research at PPIC is working to address specific policy options in the areas of K–12 financing and reform, community college education, and adult English language training.

Policy research on out-of-school immigrant youth who arrive in their teenage years is important as they represent a substantial share of California's youth and their children will be a substantial share of the next generation of Californians. Their activities, attainment, and resources are different from those of youth who were born in the United States. Future PPIC research will examine resources, needs, and policies for these immigrant youth.

Finally, California is undergoing major demographic transitions as the second-generation population continues to grow. PPIC will be developing projections of the demographic and socioeconomic conditions of California's future population. These projections have important implications for California policy in the areas of education and workforce training, health and human services, and civic participation.

Appendix A

Notes on Data and Methods

Throughout this report we have relied on several sources of data as well as a variety of methods. In this appendix, we provide further details on the data and methods. The appendix is arranged by chapter and, within chapters, generally follows the order that data and methods are discussed in the main text.

Chapter 2

Information on the number of youth by country of birth, ancestry, race, and ethnicity comes from the 2000 Census (5-percent Public Use Microdata Sample).¹ We include as “U.S.-born” those who were born in one of the 50 United States and those who were born abroad of American parents. Youth born in Puerto Rico or other outlying areas of the United States are included as foreign-born.

For detailed ancestral backgrounds (Table 2.1 and Appendix Table B.2), we used the first of two ancestries recorded. In some cases, we aggregated similar responses (for example, combining “Mexican” with “Mexican American”). In cases where youth identified a single Hispanic or Asian identity in response to “Hispanic origin” and “Race” questions, we used these to determine detailed ancestry. Table 2.2, which shows aggregated race and ethnicity, is based mainly on responses to “Hispanic origin” and “Race” questions with two exceptions. First, because a substantial number of Hispanics did not identify a specific Hispanic background, we used detailed ancestry to allocate these youth first to Mexican American, then to Central American, and finally to “all other Latinos.” Second, for Southeast Asians, we used ancestry to include

¹Although the Census Bureau attempts to include undocumented immigrants in the Census and *Current Population Survey*, the number of immigrant youth is likely to be underreported.

Cambodian, Khmer, Hmong, Laotian, Meo, Western Lao, Vietnamese, Katu, Ma, and Mnong.

The 2000 Census does not have information that allows us to separately identify second-generation U.S.-born youth from later generations. We use the CPS (March Annual Social and Economic Supplement, 1996–2004 combined)² to estimate these shares among U.S.-born youth, separately for each row of Table 2.2.³ We identify the second generation as those with either parent born outside the 50 United States. We identify “third-and-later generations” as those with both parents born in one of the 50 United States. We then applied these shares to the count of U.S.-born youth in the Census by race and ethnicity. All analysis with the Census and CPS uses the sample weights (individual-level weights).

Rumbaut (2004) provides a detailed discussion of the complexity of using the CPS to identify and describe the first and second generations. A serious limitation of the CPS is that it includes only the noninstitutionalized, civilian adult population. As noted by Rumbaut (2004) and Blumstein (2001), experiences with the criminal justice system differ substantially across racial, ethnic, and immigrant groups. Another issue that affects our analysis is that later generations and youth of mixed parentage are less likely to identify a specific ancestry.

Chapter 3

Developing estimates of immigrant intergenerational progress is made difficult by the lack of large datasets that record an individual’s nativity, his/her parents’ nativity, and his/her grandparents’ nativity. Immigration researchers have been frustrated by this lack of data on the

²We do not use the CPS for 1994 and 1995 because of concerns raised by Jeffrey Passel at the Urban Institute regarding the representativeness of race, ethnicity, and immigrant generation in these years.

³The CPS does not identify detailed ancestry. We use “Hispanic origin” to identify subgroups of U.S.-born Hispanics. We separate Central American immigrants from South American immigrants using country of birth. For Southeast Asian immigrants, we use country of birth of youth and parents (Vietnam, Laos, and Cambodia). Many Southeast Asian youth whose parents were refugees from these countries were themselves born in Thailand and Malaysia. We identify these youth from the birthplace of their parents.

place of birth of a U.S. native's parents and grandparents (Hirschman, 1994). The primary sources of information on the population of the United States, the Decennial Censuses and the CPS (March Annual Social and Economic Supplement), do not include information on place of birth of an individual's grandparents. The last three decennial Censuses have not even collected information on the place of birth of an individual's parents. Beginning in 1994, the CPS has included information on the place of birth of an individual's parents but still does not collect information on grandparents' nativity. Such information is necessary to identify the third-generation descendants of immigrants. The General Social Survey (GSS), a much smaller survey than the CPS and conducted only in English, does collect information on foreign birth of an individual's parents and grandparents and also collects information on ancestry but not specific country of birth. We used the GSS to estimate intergenerational change for Mexican Americans and found that the results are consistent with those presented in this report (see Johnson, 2005).

In this chapter, we use recent CPS data to estimate changes in educational attainment across three generations of immigrants and their descendants. We use the following definitions of generations: The first generation consists of anyone born outside the United States (not of American parents) and who came to the United States at age 11 or older; the 1.5 generation consists of those foreign-born individuals who came to the United States as young children; the second generation consists of U.S.-born individuals with at least one foreign-born parent; and the third generation consists of individuals with at least one foreign-born grandparent. We develop two samples from the CPS data to estimate intergenerational changes. In one sample, we consider only those adults who live with their parents. This multigenerational household sample links parents with their children and provides for direct identification of first, second, and third generations. Specific countries of origin can be identified in the public use data for an individual and his/her parents, allowing for the identification of the first- and second-generation descendants of immigrants by country of origin. Third-generation descendants of immigrants can be directly identified by examining the place of birth of the parents of the adult child's parents, something that

can be done only if the adult child lives with his/her parents. In addition, because the CPS includes data on the educational attainment of all household members, information on the educational attainment of the adult child and his/her parents is available in the multigenerational samples of the CPS. This permits an analysis of generational changes that compares an individual with his/her parents. Moreover, aggregation bias in ethnic categories is not a problem with this sample: Because we compare adult children with their parents, ethnic groups are consistently represented in the different generations. The tables show the average of educational attainment for mothers and fathers of a previous generation in comparison to that of their adult children.

The primary concern with the multigenerational sample is whether residents of such households are representative of all immigrants and their descendants. On the one hand, we might think that living in an extended family is an indication that an individual has not adopted U.S. norms, as such households are uncommon among U.S. natives. In addition, adult children might live with their parents because they lack the resources to establish their own households. Both of these factors suggest that such individuals would have lower educational attainment. On the other hand, living in an extended family might be a marker of a strong and supportive family environment or an indication that an adult child has the resources to care for his/her parents. If this is the case, then we might expect such individuals to have higher levels of education. Results from the data suggest that adult children who live with their parents have similar educational attainment profiles as adults who do not live with their parents.

In the other sample, we compare all individuals of one generation with all individuals from another generation. In this much larger sample, parents and children are not linked, and the third generation must be identified indirectly. Indeed, third-and-later-generation descendants of immigrants must be grouped together. Any adult born in the United States to parents born in the United States is assigned to the third-and-later generation. Many, if not most, of the third-and-later generation are fourth-and-later generations. Third-and-later-generation descendants of Mexican and Central/South American immigrants are identified on the basis of ancestry; specifically, those U.S. natives who

report one of five Mexican or Central/South American ethnicities and whose parents were born in the United States constitute the third-and-later generation.⁴ Third-and-later-generation descendants of Asian immigrants are identified on the basis of race; specifically, those U.S. natives who report their race as Asian or Pacific Islander and whose parents were born in the United States constitute the third-and-later generation. Aggregation bias could be a problem with the Asian category, with Asian subgroups possibly disproportionately represented in the different generations. This approach produces a much larger sample than the multigenerational sample but suffers from not directly linking parents with their descendants. In addition, third-and-later-generation assignment is dependent on responses to race or ancestry questions, and some descendants of first-generation immigrants might not identify with that immigrant's race or ancestry. In other work on descendants of Mexicans, we show that this most likely causes a downward bias of third-generation educational attainment. We are careful to identify the age groups in combination with the immigrant generation that provide for the most appropriate comparison of one generation with a previous generation. We do so by comparing older members of earlier generations with younger members of subsequent generations—that is, by comparing a generation that includes parents with a subsequent generation that includes their children.

In both of our samples, we consider the largest immigrant groups to California and the United States. Data are from the 1996–2004 CPS (combined surveys). Sample sizes are shown below (Tables A.1 to A.3). Samples for some groups are so small (less than 100) that we did not publish results. For Central Americans and Southeast Asians, we combine the 1.5 generation with the second generation to evaluate changes that occur between immigrants and their children. This is necessary because of the small samples for these groups.

⁴The CPS groups Central Americans with South Americans in its reporting of ancestry.

Table A.1
Sample Sizes for Data Used in Table 3.1

All ethnic groups	
First generation, ages 57–66	15,004
Second generation, ages 30–39	14,191
Mexican	
First generation, ages 57–66	2,708
Second generation, ages 30–39	2,825
Central American	
First generation, ages 57–66	503
Second generation, ages 30–39	310
Southeast Asian	
First generation, ages 57–66	455
Second generation, ages 30–39	169
Other Asian	
First generation, ages 57–66	2,635
Second generation, ages 30–39	809
White (non-Hispanic)	
First generation, ages 57–66	4,035
Second generation, ages 30–39	7,076
Black or African American	
First generation, ages 57–66	875
Second generation, ages 30–39	384
All ethnic groups	
Third+ generation, ages 57–66	86,973
Third+ generation, ages 30–39	176,757

NOTE: Central American and Southeast Asian second-generation samples include the 1.5 generation.

Table A.2
Sample Sizes for Data Used in Tables 3.2 and 3.4

	Total	Mexican	Central American	Southeast Asian	Other Asian	White
First:second generation	3,577	815	176	113	352	1,303
Second:third generation	8,645	890	Insuf.	Insuf.	430	4,984

NOTES: The Central American and Southeast Asian second-generation samples include the 1.5 generation. “Insuf.” indicates that the sample size was less than 100, and no results are provided.

Table A.3
Sample Sizes for Data Used in Table 3.3

Mexican	
Second generation, ages 57–66	1,228
Third+ generation, ages 30–39	6,030
Asian	
Second generation, ages 57–66	384
Third+ generation, ages 30–39	1,287
Black or African American	
Second generation, ages 57–66	Insuf.
Third+ generation, ages 30–39	20,230
White (non-Hispanic)	
Second generation, ages 57–66	7,723
Third+ generation, ages 30–39	143,591
All ethnic groups	
Second generation, ages 57–66	9,795
Third+ generation, ages 30–39	176,757
Third+ generation, ages 57–66	86,973

NOTE: “Insuf.” indicates that the sample size was less than 100, and no results are provided.

Finally, using the historical progress across generations with respect to educational attainment as a basis, we develop projections of educational attainment for the descendants of the most recent immigrants to the United States. To develop the projections, we use transition probabilities based on an individual’s generation, maternal education, and region of origin. These transition probabilities are derived from the CPS multigenerational household sample that links parents with their children. Thus, we have education levels for both the adult child and his/her parents. The transition probabilities are developed separately for first- to second-generation changes in educational attainment, and second- to third-generation changes. We report the results only for descendants of Mexican immigrants. Five educational attainments are measured—less than 9th grade, 9th to 12th grade but no high school diploma, high school diploma, some college, and bachelor’s degree—but only four are reported. The accuracy of the projections depends on the stability of the transition probabilities over

time. In addition, the method assumes that the transition probabilities we observe in multigenerational households are an accurate representation for all second- and third-generation individuals, regardless of whether they live in a multigenerational household.

Chapter 4

Analysis in this chapter, focused on foreign-born youth, is based on the 2000 Census. We chose the 2000 Census over the CPS because of the larger sample size. Identification of race and ethnicity follows the same strategy as in Chapter 2. However, among these immigrant youth, Hispanic subgroups, Vietnamese, and Filipinos are identified by country of birth. Southeast Asians are identified by ancestry and country of birth (including, for example, immigrants of Vietnamese descent who were born in Thailand). Information on maternal education and English language ability is available only for those youth living with their mother. For this reason, we report family characteristics for youth ages 13 to 17—ages when most immigrant youth (79%) are living with their mother. The share living with their mother is lower among Mexican and Central American immigrants (about 75%) and higher among white immigrants (90%).

Chapter 5

Analysis of family characteristics and other topics, focused on U.S.-born youth but not by immigrant generation, is based on the 2000 Census. We chose the 2000 Census over the CPS because of the larger sample size. Identification of race and ethnicity follows the strategy described for Chapter 2. Vietnamese and Filipinos are separately identified based on “Race” (using any combination that includes Vietnamese or Filipino, respectively) and ancestry. Information on maternal education and English language ability, available only for youth living with their mother, is available for 86 percent of U.S.-born youth ages 13 to 17. The share living with their mother is lower among African Americans (77%).

To examine the role of family characteristics in explaining differences in youth attainment, we use the 1988 NELS.⁵ The NELS is a nationally representative sample of 8th-graders who were first surveyed in the spring of 1988. Follow-up surveys were conducted in 1990, 1992, 1994, and 2000. The NELS is a valuable data source for this study because it is longitudinal—we observe characteristics (e.g., parental education) at early ages that can then be related to attainment of the same youth at later ages. In addition, the NELS covers enough years to allow observation of young adult attainment, such as completion of a bachelor’s degree by age 26. For this reason, we chose not to use more recent longitudinal surveys such as the National Longitudinal Survey of Youth from 1997 and the Adolescent Health Survey. However, in follow-up work on this issue, we do expect to use these newer surveys.

Measures from the NELS are not defined exactly the same as those from the Census or CPS. In general, the NELS has more detailed information for the specific cohort. For example, to measure high school completion in NELS, we use high school diploma received by 1994 when most respondents are approximately age 20.⁶ In comparison, using the Census we measured high school diploma or GED received for those ages 25 to 29. Relative to the 2000 Census and the CPS, the NELS measures unusually high numbers of students who report having enrolled in postsecondary education. The difference appears to be due to a difference in the surveys. In the Census and CPS, the question on educational attainment refers specifically to college and to college degrees. In the NELS, the question refers to “college, university, or vocational, technical, or trade school for academic credit.” The NELS

⁵For other studies of determinants of youth outcomes, see Haveman and Wolfe (1995) and Pirog and Magee (1997). For studies of differences between the foreign-born and the native-born, see Mare and Winship (1988), White and Kaufman (1997), and Fligstein and Fernandez (1985). For studies of the relationship between outcomes and behaviors such as drug and alcohol use, crime, gang activity, and youth employment, see Chuang (1997), Mensch and Kandel (1988), Eckstein and Wolpin (1999), Schoenhals, Tienda, and Schneider (1998), and Moore and Zaff (2002).

⁶This is the same definition of high school graduation used in Grogger and Trejo (2002). Graduation is defined as of 1994 because most respondents were still in high school when the previous survey was administered in the spring of 1992. Graduation does not include those with a General Equivalency Diploma.

also has several follow-up questions and thus is more likely to capture enrollments that respondents may fail to mention (e.g., because they were of short durations) in the Census and CPS. Therefore, the magnitudes of group differences as measured in NELS are not directly comparable to those shown in Chapters 2 and 5.

Following Grogger and Neal (2000), we use NELS sample weights in our estimates (sample weights are specific to each year of the survey). Grogger and Trejo (2002) compare the NELS with the CPS and conclude that the NELS is representative of the U.S.-born population and immigrants arriving by age 5 for whites, African Americans, and Mexican Americans. They do not consider Asian Americans or separately consider second versus third-and-later generations. We compared the 2000 NELS and the CPS and found the NELS to be fairly representative of third-and-later-generation whites, second- and third-and-later-generation Mexican Americans, second-generation Asian Americans, and African Americans (Table A.4).⁷ Among Asians, the NELS does not have adequate samples of any subgroup. We therefore model an aggregated second-generation Asian category, including Southeast Asians.⁸ For third-and-later-generation Asian Americans, the sample size was quite small and appeared to be not representative. For second-generation whites, the sample was also apparently not representative. We did not analyze “Other Hispanics” because the sample size was relatively small and the group of the greatest relevance for California, Central Americans, was not separately identified.

Kao (2004) and Kao and Tienda (1995) use the NELS to study the academic achievement of high school students by immigrant generation, including first-generation immigrants. However, the NELS is not representative of most first-generation immigrant youth (who never attended the 8th grade in the United States, with many arriving after age 14). We include immigrants arriving before age 5 with the second generation based on their similar characteristics (Hill, 2004) and to

⁷We do not include second-generation blacks or Native Americans because of their small sample sizes in the NELS.

⁸The sample of Southeast Asians is small enough that dropping them from the analysis does not change the results.

Table A.4
Sample Sizes and Percentage Distribution of College Completion Rates in the
NELS (2000) and CPS (1996–2000)

	NELS		CPS		Difference in Bachelor's Degree
	Sample Size	Bachelor's Degree	Sample Size	Bachelor's Degree	
Men					
White, second generation	203	35	1,498	38	3
White, third+ generation	5,368	28	25,836	31	3
Mexican American, second generation	211	7	1,355	12	5
Mexican American, third+ generation	235	13	1,488	12	-1
Other Hispanic, second generation	128	37	966	20	-16
Other Hispanic, third+ generation	91	22	506	18	-5
Asian American, second generation	240	62	614	55	-7
Asian American, third+ generation	69	18	259	44	26
African American, third+ generation	855	11	3,585	14	2
Women					
White, second generation	215	61	1,615	44	-17
White, third+ generation	4,710	36	28,335	35	-1
Mexican American, second generation	261	14	1,530	12	-2
Mexican American, third+ generation	253	14	1,653	12	-2
Other Hispanic, second generation	132	27	1,139	21	-6
Other Hispanic, third+ generation	96	13	603	18	4
Asian American, second generation	274	59	570	57	-2
Asian American, third+ generation	69	28	274	46	18
African American, third+ generation	731	23	5,243	16	-7

NOTE: CPS results are for those ages 25 to 29.

increase the sample sizes for the second generation. We remove immigrants arriving at age 5 or older.

To examine high school completion, we use the 1994 survey to measure “high school diploma” at a time when most respondents were about age 20. For postsecondary schooling and bachelor’s degree completion, we use the 2000 survey, when most respondents were about age 26. For detailed model results from the NELS logistic regression analysis, see Appendix C.

We use the NELS at the national level because the California subsample is small and not necessarily representative. We include a California indicator (dummy variable) in the models along with other

regional indicators. We argue that the model results are likely to be relevant for California because racial and ethnic differences in education are similar for California youth and youth from the rest of the nation (see Table 5.2 and Reed, 2005).⁹ To verify the applicability of NELS model estimates to California youth, we use model coefficients from the NELS to project the bachelor's degree completion rates of California-born children ages 6 to 9 in the 1980 Census.¹⁰ We then compare these projections to bachelor's degree attainment for California-born young adults ages 26 to 29 in the 2000 Census. There are many reasons why the projections would not match the 2000 Census, including that measures of education and income differ in the two surveys. However, the results confirm that the NELS models are applicable to California (Table A.5). For the estimations in Table 5.4, we followed the same approach, using California children under age 10 in the 2000 Census.

The NELS allows us to assess parent-to-child educational progress without limiting the analysis to young adults who live with their parents (as was necessary for the analysis in Chapter 3). The analysis in Chapter

Table A.5
Percentage Distribution of NELS Model Projections
Versus Actual Bachelor's Degree Attainment for
Californians by Race and Ethnicity

	NELS Projection	2000 Census
White	35	31
Mexican American	11	13
Asian	53	58
African American	19	16

SOURCES: Authors' calculations from NELS (2000) and the 1980 and 2000 Censuses.

⁹Asians, especially Filipinos, from California are somewhat less likely to achieve a bachelor's degree than are their counterparts nationally.

¹⁰For these NELS models, we combined immigrant generations because the Census does not distinguish between second and third-and-later generations. Instead, we add English language proficiency of the parents to the NELS models.

3 relies on the CPS to study more racial and ethnic groups than are represented in the NELS. In particular, as shown in Table A.4, the NELS is not representative of third-and-later-generation Asian Americans. However, as a check that our findings on intergenerational progress are robust, we show here that all of the groups represented in the NELS demonstrate substantial educational progress from parent to child (Tables A.6 and A.7).

Table A.6
Percentage Distribution of Educational Attainment by Generation:
Mother-to-Child

Ethnic Group	Less Than High School Diploma	High School Diploma	Some College	Bachelor's Degree
All ethnic groups				
Foreign-born parents	31	19	31	19
Second-generation youth	6	8	48	39
Second+-generation parents	11	29	42	18
Third+-generation youth	5	16	46	33
Mexican				
Foreign-born parents	65	15	18	2
Second-generation youth	14	14	61	11
Second+-generation parents	25	31	40	4
Third+-generation youth	10	15	59	16
Asian				
Foreign-born parents	16	15	28	41
Second-generation youth	1	2	33	64
White (non-Hispanic)				
Foreign-born parents	11	21	44	24
Second-generation youth	2	6	41	51
Second+-generation parents	9	30	41	20
Third+-generation youth	5	15	43	36
Black or African American				
Second+-generation parents	15	24	52	10
Third+-generation youth	6	18	57	20

SOURCES: Authors' calculations from the NELS (2000).

NOTE: In our analysis of the NELS, second-generation youth also include foreign-born youth who arrived in the United States by age 5.

Table A.7
Percentage Distribution of Educational Attainment by Generation:
Father-to-Child

Ethnic Group	Less Than High School Diploma	High School Diploma	Some College	Bachelor's Degree
All ethnic groups				
Foreign-born parents	30	15	27	28
Second-generation youth	6	8	46	40
Second+-generation parents	12	22	37	30
Third+-generation youth	4	15	44	38
Mexican				
Foreign-born parents	72	6	20	2
Second-generation youth	13	19	57	12
Second+-generation parents	28	22	39	12
Third+-generation youth	8	11	63	18
Asian				
Foreign-born parents	4	17	29	50
Second-generation youth	5	2	31	63
White (non-Hispanic)				
Foreign-born parents	10	20	32	39
Second-generation youth	1	6	39	53
Second+-generation parents	10	22	36	32
Third+-generation youth	4	15	41	40
Black or African American				
Second+-generation parents	25	21	41	14
Third+-generation youth	4	16	56	25

SOURCE: Authors' calculations from the NELS (2000).

NOTE: In our analysis of the NELS, second-generation youth also include foreign-born youth who arrived in the United States by age 5.

Appendix B

Detailed Nativity and Ancestry

Table B.1

Number of Youth and Educational Attainment for the Top 26 Countries of Birth Reported by Foreign-Born Californians, Ages 13 to 24, 2000

	Rank	Population	High School Diploma (%)	Bachelor's Degree (%)
Mexico	1	783,124	36	4
Philippines	2	76,753	94	34
El Salvador	3	59,612	46	5
Vietnam	4	58,701	83	33
Guatemala	5	42,795	38	5
Korea	6	28,228	97	56
Taiwan	7	25,859	99	73
India	8	23,576	96	81
Thailand	9	22,822	90	52
China	10	22,337	90	59
Iran	11	16,536	95	48
Hong Kong	12	14,819	98	70
Armenia	13	13,588	86	24
Japan	14	12,731	96	45
Nicaragua	15	11,479	70	12
Honduras	16	11,370	40	4
Laos	17	11,283	71	13
Canada	18	9,250	97	62
Russia	19	7,733	95	59
Peru	20	7,614	87	20
Indonesia	21	7,114	94	60
Cambodia	22	7,096	81	23
Ukraine	23	6,769	91	37
South Korea	24	5,982	97	59
England	25	5,941	97	55
Pakistan	26	5,011	85	44

SOURCE: Authors' calculation from the 2000 Census.

NOTES: Includes all countries of birth with California populations over 5,000. Education is reported for adults ages 25 to 29.

Table B.2

Number of Youth and Educational Attainment for the Top 25 Ancestries
Reported by U.S.-Born Californians, Ages 13 to 24, 2000

	Rank	Population	High School Diploma (%)	Bachelor's Degree (%)
Mexican	1	1,228,338	76	12
African American	2	310,810	86	17
German	3	279,195	95	40
Irish	4	210,186	94	39
English	5	178,050	96	45
Italian	6	161,383	94	41
American	7	158,956	88	25
Filipino	8	107,742	95	39
White	9	94,380	85	20
Chinese	10	82,943	97	70
Hispanic	11	72,515	83	19
Scotch Irish	12	66,807	95	43
French	13	46,820	93	30
European	14	46,422	97	54
American Indian	15	38,530	84	13
Norwegian	16	37,770	98	43
Portuguese	17	37,754	94	26
Japanese	18	34,913	97	55
Vietnamese	19	34,878	78	34
Polish	20	34,659	96	54
Salvadoran	21	32,360	81	15
Swedish	22	31,934	98	48
Korean	23	31,781	96	62
Dutch	24	27,848	94	42
Puerto Rican	25	26,601	79	18

SOURCE: Authors' calculation from the 2000 Census.

NOTES: Includes all ancestries with California populations over 25,000. Specific race or Hispanic identifiers were used in place of "ancestry" when available. For example, a U.S.-born Californian identifying Hispanic background as "Mexican" is included as Mexican regardless of ancestry identification. Ancestry was used when the race or Hispanic identifier was not specific (e.g., "Other Hispanic"). Education is reported for adults ages 25 to 29.

Appendix C

Detailed Model Results

The tables in this appendix provide coefficient estimates from logistic regressions for high school completion by age 20, postsecondary school attendance by age 26, and bachelor's degree completion by age 26. For a description of the methods, see Appendix A.

Table C.1
Logistic Probability Model for High School Completion

	Men			Women		
	(1)	(2)	(3)	(1)	(2)	(3)
Mexican American, second generation	0.358+ (1.65)	0.663** (3.00)	1.358** (5.42)	0.129 (-0.68)	0.389+ (1.90)	0.608* (2.51)
Mexican American, third+ generation	-0.205 (-0.97)	0.041 (-0.19)	0.294 (-1.16)	-0.513** (-2.68)	-0.141 (-0.71)	-0.113 (-0.48)
Black, third+ generation	-0.509** (6.44)	-0.382** (4.59)	-0.144 (-1.48)	-0.069 (-0.71)	0.17 (-1.63)	0.373** (3.01)
Asian American, second generation	0.87+ (1.85)	0.924+ (1.93)	0.935+ (1.81)	0.065 (-0.2)	0.104 (-0.31)	0.123 (-0.33)
Mother has a high school diploma	0.452** (3.55)	0.264* (2.02)	0.171 (-1.13)	0.794** (6.31)	0.622** (4.83)	0.659** (4.38)
Mother has some college	1.039** (8.14)	0.834** (6.34)	0.83** (5.46)	0.693** (5.96)	0.48** (3.96)	0.559** (3.92)
Mother has a bachelor's degree	1.94** (10.69)	1.342** (6.94)	1.442** (6.75)	2.033** (9.77)	1.471** (6.76)	1.495** (6.27)
Neither parent has a high school diploma	-0.945** (5.72)	-0.747** (4.42)	-1.046** (5.32)	-0.741** (4.77)	-0.651** (4.11)	-0.527** (2.84)
Both parents have a bachelor's degree	0.644** (3.78)	0.405* (2.29)	0.442* (2.29)	1.729** (6.02)	1.509** (5.18)	1.594** (5.26)
Family income		0.023** (6.78)	0.016** (4.20)		0.028** (8.42)	0.025** (6.46)
Family income squared		-0.005** (2.62)	-0.002 (-0.89)		-0.008** (5.15)	-0.006** (3.78)
Raised in single-parent home		-0.241* (2.30)	-0.359** (3.04)		0.026 (-0.26)	0.066 (-0.59)
Number of siblings		-0.079** (2.99)	-0.079** (2.67)		-0.05* (2.03)	-0.041 (-1.46)
Family size		-0.026 (-0.89)	0.006 (-0.19)		-0.015 (-0.52)	-0.002 (-0.07)
School offers vocational education			0.107 (-0.49)			-0.319 (-0.78)
% receiving free lunch at school			-0.716** (3.36)			-0.461+ (1.92)
Neighborhood poverty			-0.766+ (1.88)			-0.478 (-1.07)
Constant	1.123** (9.29)	0.495* (2.30)	2.134** (6.56)	1.419** (12.23)	0.331 (-1.58)	2.526** (5.37)
Observations	7,331	7,331	7,331	6,671	6,671	6,671
Pseudo R-squared	0.0886	0.1145	0.2963	0.1067	0.1423	0.3415

SOURCE: Authors' calculations from the NELS (1994).

NOTES: T-ratio is given in parentheses. Models 2 and 3 also include regional and California indicators.

+Significant at 10 percent.

*Significant at 5 percent.

**Significant at 1 percent.

Table C.2
Logistic Probability Model for Postsecondary School Enrollment

	Men			Women		
	(1)	(2)	(3)	(1)	(2)	(3)
Mexican American, second generation	0.531* (2.24)	0.697** (2.89)	1.058** (4.20)	0.411* (2.23)	0.821** (4.00)	0.7** (3.29)
Mexican American, third+ generation	0.404+ (1.65)	0.443+ (1.76)	0.664* (2.53)	-0.13 (-0.65)	0.314 (-1.48)	0.298 (-1.37)
Black, third+ generation	-0.161+ (1.78)	-0.05 (-0.52)	0.101 (-1)	0.388** (3.28)	0.77** (6.03)	0.743** (5.54)
Asian American, second generation	2.709** (3.02)	2.582** (2.86)	2.73** (3.00)	0.218 (-0.66)	0.342 (-0.99)	0.348 (-1)
Mother has a high school diploma	0.45** (3.09)	0.279+ (1.85)	0.258+ (1.67)	0.756** (6.28)	0.53** (4.18)	0.509** (3.91)
Mother has some college	1.263** (8.63)	0.996** (6.57)	0.964** (6.21)	1.432** (11.86)	1.12** (8.73)	1.118** (8.50)
Mother has a bachelor's degree	3.503** (13.08)	2.726** (9.89)	2.703** (9.71)	3.334** (12.63)	2.566** (9.41)	2.493** (9.06)
Neither parent has a high school diploma	-0.652** (3.39)	-0.444* (2.22)	-0.433* (2.12)	-0.476** (3.06)	-0.323* (1.98)	-0.226 (-1.36)
Both parents have a bachelor's degree	1.964** (8.59)	1.631** (6.98)	1.701** (7.19)	1.607** (6.70)	1.324** (5.36)	1.34** (5.34)
Family income		0.035** (9.53)	0.03** (7.74)		0.041** (11.63)	0.04** (10.95)
Family income squared		-0.009** (4.87)	-0.007** (3.61)		-0.012** (7.94)	-0.011** (7.54)
Raised in single-parent home		0.199 (-1.57)	0.224+ (1.74)		-0.055 (-0.48)	0.009 (-0.08)
Number of siblings		-0.111** (3.60)	-0.107** (3.45)		-0.082** (3.15)	-0.084** (3.16)
Family size		0.019 (-0.56)	0.04 (-1.18)		-0.112** (3.74)	-0.104** (3.39)
School offers vocational education			-0.594** (3.45)			-0.386+ (1.68)
% receiving free lunch at school			-0.953** (4.63)			-0.513* (2.23)
Neighborhood poverty			-0.383 (-0.93)			1.327** (2.79)
Constant	0.108 (-0.78)	-0.594* (2.43)	0.491 (-1.6)	0.442** (3.88)	-0.127 (-0.56)	0.572+ (1.73)
Observations	5,626	5,626	5,626	5,613	5,613	5,613
Pseudo R-squared	0.1254	0.1528	0.1790	0.1286	0.1834	0.2100

SOURCE: Authors' calculations from the NELS (2000).

NOTES: T-ratio is given in parentheses. Models 2 and 3 also include regional and California indicators.

+Significant at 10 percent.

*Significant at 5 percent.

**Significant at 1 percent.

Table C.3
Logistic Probability Model for a Bachelor's Degree

	Men			Women		
	(1)	(2)	(3)	(1)	(2)	(3)
Mexican American, second generation	-0.845*	-0.303	0.097	-0.325	0.105	0.18
	(2.08)	(-0.73)	(-0.23)	(-1.38)	(-0.42)	(-0.7)
Mexican American, third+ generation	-0.643*	-0.247	-0.093	-0.899**	-0.605*	-0.541*
	(2.02)	(-0.75)	(-0.27)	(3.60)	(2.34)	(2.04)
Black, third+ generation	-0.809**	-0.666**	-0.444**	-0.209+	-0.156	-0.014
	(6.18)	(4.96)	(3.20)	(1.87)	(-1.31)	(-0.11)
Asian American, second generation	0.883**	0.872**	0.888**	0.608**	0.677**	0.66**
	(3.07)	(2.92)	(2.87)	(2.63)	(2.73)	(2.64)
Mother has a high school diploma	0.57*	0.341	0.283	0.723**	0.67**	0.635**
	(2.50)	(-1.44)	(-1.17)	(4.48)	(4.01)	(3.74)
Mother has some college	1.055**	0.798**	0.706**	1.22**	1.161**	1.126**
	(4.77)	(3.44)	(3.00)	(7.83)	(7.11)	(6.78)
Mother has a bachelor's degree	2.85**	2.267**	2.224**	2.727**	2.353**	2.267**
	(12.52)	(9.33)	(9.01)	(16.10)	(13.05)	(12.39)
Neither parent has a high school diploma	-1.11**	-0.866*	-0.871*	-0.954**	-0.734**	-0.677*
	(2.85)	(2.14)	(2.13)	(3.78)	(2.82)	(2.57)
Both parents have a bachelor's degree	0.965**	0.836**	0.838**	1.083**	0.865**	0.794**
	(8.68)	(6.88)	(6.77)	(10.62)	(7.99)	(7.21)
Family income		0.021**	0.014**		0.017**	0.015**
		(7.12)	(4.69)		(6.87)	(5.88)
Family income squared		-0.005**	-0.003*		-0.003**	-0.002*
		(4.20)	(2.30)		(3.15)	(2.43)
Raised in single-parent home		-0.362**	-0.357*		0.302**	0.338**
		(2.38)	(2.30)		(2.59)	(2.87)
Number of siblings		-0.131**	-0.112**		-0.131**	-0.128**
		(3.51)	(2.94)		(4.72)	(4.51)
Family size		-0.067+	-0.057		-0.02	-0.014
		(1.66)	(-1.38)		(-0.64)	(-0.45)
School offers vocational education			-0.544**			-0.228+
			(4.40)			(1.80)
% receiving free Lunch at school			-1.303**			-1.051**
			(4.82)			(4.75)
Neighborhood poverty			-1.33*			0.454
			(2.52)			(-1.05)
Constant	-1.951**	-2.128**	-0.829*	-1.717**	-2.326**	-1.687**
	(8.98)	(6.86)	(2.38)	(11.17)	(9.61)	(5.90)
Observations	5,626	5,626	5,626	5,613	5,613	5,613
Pseudo R-squared	0.1748	0.2070	0.2291	0.1614	0.1949	0.2082

SOURCE: Authors' calculations from the NELS (2000).

NOTES: T-ratio is given in parentheses. Models 2 and 3 also include regional and California indicators.

+Significant at 10 percent.

*Significant at 5 percent.

**Significant at 1 percent.

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