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The Educational Progress of California's Immigrant Children

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Abstract

Increased immigration, coupled with the relative youth of the foreign born, has fueled a dramatic increase in the number of first- and second-generation youth in the nation's elementary and secondary schools. California's diverse immigrant youth population is growing rapidly and is more likely to be of Latin American or Asian origin than the nation overall. Nearly half of California's school-age population in 2000 had at least one foreign-born parent, more than double the U.S. average.

This paper uses 1990 and 2000 census data and logistic regression to quantify the role of immigrant generation (first (further distinguished by age at arrival), second, and third and higher) on school enrollment probabilities, both across and within generations, while controlling for individual and family characteristics. Among immigrants, Hispanic youth, particularly those from Mexico, are at the highest risk of non-enrollment in U.S. schools. I exploit the large sample sizes in the census to examine how the impact of generation status differs over time and by race/ethnicity as a proxy for national origin. Finally, I assess whether school participation among at-risk immigrant groups "catches up" with natives across generations.

I. Introduction

California is home to a disproportionate share of the nation's first[1] and second[2] generations. While the foreign-born population in the United States grew more than two thirds from 1990 to 2002 to over 33 million persons or nearly 12 percent of the nation's residents, California's first generation increased over 40 percent to 9.2 million persons or 27 percent of the state population (U.S. Bureau of the Census 2003a, b, c, d). The demographic importance of the first and second generations is evidenced by the fact that they constituted nearly 47 percent of California's 34 million people in 2000, more than double their 20 percent share of the national population (Schmidley 2001).

California's unique status as the principal place of settlement of the nation's immigrants is reflected in the generation status of its school-age population ages 5 to 18. While one quarter of the nation's elementary and high school students were first or second generation in 2001 (U.S. Bureau of the Census 2003e), at a minimum, over 45 percent of California's school-age youth were foreign born or had at least one immigrant parent in 2000, an increase of over 20 percent just since the 1990 census (table 1). Driving this compositional change is the rapid growth of the second generation, which increased over 80 percent in the intercensal period, and whose growth is projected to continue its upward trajectory (Tafoya 2002). In short, California is fast approaching the demographic threshold of a minority third-generation youth population, if it has not already passed it.

[1] A person is first generation (foreign born) if he was born outside of the United States and its territories to non-U.S. citizen parents. A native-born person was born in the United States, a U.S. territory, or was born abroad to at least one U.S. citizen parent.

[2] A native's generation status reflects her temporal proximity to an immigrant to the United States. The U.S. Census Bureau classifies a native as "second generation" if she has at least one foreign-born parent. Third-generation individuals are native-born children of two native-born parents. In practice, the "third

Failure to complete high school jeopardizes the successful economic assimilation of immigrant youth and increases the likelihood of adverse labor market outcomes and low lifetime earnings. In 2003, adults age 25 and older who were high school dropouts had a 60 percent higher unemployment rate (8.8% vs. 5.5%) than high school graduates without any college education (U.S. Department of Labor 2004). In addition, the median incomes of full-time workers who did not complete high school ($25,095 vs. $34,303 for men and $17,919 vs. $24,970 for women) was only 70 percent of that received by high school graduates in 2000 (U.S. Bureau of the Census 2001).

This paper uses consecutive decennial censuses to track the educational enrollment and attainment behavior of California youth and to explore how the determinative factors of achievement vary by generation status, ethnicity, language use and family context.

The next section lays out the and ensconces the estimation strategy in an analytical framework. The data analyzed, definitions of generation status, and methodological approach are described in Section III. Section IV presents empirical findings on the effect of generation status, ethnicity, and other individual and background factors on school participation and achievement. Section V compares the findings with those of the previous literature, discusses their implications, and gives directions for further research.

II. Theoretical Framework and Previous Research

Despite the rising presence of immigrant youth in California schools, we have a poor understanding of the educational progress of California's immigrant youth. Our knowledge of the determinants of educational outcomes and whether the influence of various factors differs by generation status or national origin groups is at an even more

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generation" actually includes third and higher-order generations since questions on parental birthplace were dropped after the 1970 census.

embryonic state. Quantitative studies of the educational achievement of immigrant children that have focused solely on the first generation generally find that the foreign born fare as well as their native peers in school. Hirschman (2001) for example, finds that many Asian-origin nationality groups are more likely than natives to participate in school, even without controlling for covariates such as family structure, parental education, length of U.S. residence, and poverty status. Some subpopulations, notably Mexicans, Central Americans, and those from Hispanic Caribbean nations, however, have lagged behind natives and European- and African-origin immigrants.

More recent work that focuses on whether generation status is an important predictor of educational achievement of youth has yielded very different results depending on the achievement measure and whether ethnicity/nationality, language use and age at arrival are controlled. Ruiz-de-Velasco et al. estimate that while foreign-born children overall are more likely to be enrolled in school than other generations, White and Glick (2000) report that newly-arrived immigrants are more likely to persist in school than otherwise comparable third-generation youth. Other research documents higher grades and test scores (Kao and Tienda 1995) and lower high school dropout rates in the second over other generations (Giorguli Saucedo et al. 2002; Ruiz-de-Velasco et al. 2000), leading to the formulation of the "immigrant optimism" hypothesis.

Quantitative studies often focus on the educational achievement of a particular racial or ethnic group (Driscoll 1999). **TO DO: Contrast research on educational success of Asian immigrant youth versus educational difficulties of Hispanic, especially Mexican-origin youth and "segmented assimilation" hypothesis**

Studies of the educational attainment of California's immigrant children are often limited to those residing in a particular geographic area or attending a limited set of schools, which are likely not representative of the state's overall youth population (Rumbaut 1995; Rumbaut and Portes 2001). Understanding the educational progress of California's diverse youth, whose ethnic backgrounds reflect the national-origin composition of the post-1965 wave of immigration from Latin America and Asia (table 1), yields important insights into the factors that influence the educational progress of the nation's immigrant youth. This paper therefore expands upon previous research by documenting broad measures of immigrant educational attainment derived from census data and the explanatory factors that underlie generation differences, with a wholistic focus on California's youth population, both foreign- and native-born.

III. Data and Methods

Data are derived from the 1990 and 2000 5 percent Census Integrated Public Use Microdata Samples (IPUMS) for California (Ruggles et al. 2004). These data sets, constructed from Censuses of Population and Housing conducted by the U.S. Bureau of the Census, provide consistently coded, detailed sociodemographic and economic information on 1.46 million and 1.69 million randomly sampled individuals in 1990 and 2000, respectively.[3] The census is the only dataset with sufficient sample sizes to detect intergenerational differences in behavior across ethnic subgroups, which provides powerful insights into the determinants of educational achievement.

The main drawback of the census is that it is a cross-sectional dataset that does not report a rich set of children's schooling outcomes, school context attributes or schooling

attitudes. Educational outcomes such as test scores, academic curriculum, schooling transitions and trajectories are not reported, nor is there information on school size and organization, teacher pedagogical practices and training, peer demographic characteristics, child/parent educational aspirations, and human capital investment practices. Measures of long-term outcomes such as a child's ultimate educational attainment are available in the census, but are typically observed only for individuals in their late teens or young adulthood, when children are more likely to live outside of the parental household. Unfortunately, family background characteristics are not reported in the census for youth who live away from their parents' households, since there is no way to link a non-resident youth to his parental household.

However, the census does contain information on current school enrollment status for each household member. We exploit the large sample sizes in the census to examine how school participation varies over time, generation and national origin groups, and to assess whether at-risk immigrant groups "catch up" with natives.

The analysis focuses on youth ages 16 to 18 in 2000 and 1990 for two reasons. First, since individuals are subject to compulsory schooling laws until age 16, enrollment is nearly universal for most generation groups at younger ages (Urdan and Garvey in press). Youth face a critical transition point in their educational histories at age 16, when the school participation becomes a choice variable. Moreover, the ability to distinguish second- from third-generation natives decreases rapidly with age as young adults increasingly leave their family households.

[3] Individuals are assigned weights so that the microdata samples are statistically representative of California's resident population on April 1 of each census year. Hence, person weights are used throughout the analysis to replicate the overall state population.

The school-age population grew by over 25 percent between the 1990 and 2000 censuses, increasing from 5.78 million to 7.26 million persons. Nearly all these children lived in households with other family members and/or unrelated individuals. However, slightly over 1 percent of youth in each census resided in "group quarters," primarily college dormitories, and to a lesser extent, correctional facilities and other institutions. Children living in group quarters are excluded from the analysis because their generation status cannot be determined.[4]

Determining generation status from census data is straightforward only for the first generation: a youth is first generation if he reports that he was born outside of the United States and its territories to non-U.S. citizen parents. Because questions on parents' place of birth were dropped after the 1970 census,[5] distinguishing second- from higher-order generations requires linking children to their biological parents. Generation status is assigned to native-born youth using a household-based methodology. IPUMS-constructed variables identify whether a youth's biological parent(s) resides in the household with the child. Parents' reported birthplace is then used to determine the native-born child's generation status. Second-generation youth are native-born individuals with at least one foreign-born biological parent present in the household. The presence of one foreign-born biological parent is sufficient to assign second generation status to a child: the other parent may be foreign born or native born, a biological or

[4] While it is true that individuals in group quarters are disproportionately likely to be low achievers (i.e., residents of group homes or prisons) or high achievers (i.e., residents of college dormitories), there is no evidence that our generation findings are biased by their exclusion. Not only is the youth population in group quarters numerically small, but foreign-born youth are no more likely to reside in group quarters as native youth. Conversely, the fraction of foreign-born youth residing in group quarters reflects their relative share of the population.

[5] As described in Farley and Alba (2002), Congress eliminated the parental birthplace question from the 1980 and subsequent censuses after the second generation sank to an historically low 12 percent of the population in 1970.

stepparent, or may not reside in the child's household. A youth is defined as third generation if she is native born, and one of the following conditions holds: both biological parents are native born, or one biological parent is native born and the other biological parent is not observed in the household. The absence of higher-order birthplace information precludes identifying the precise generation status of native-born youth of native-born parents. Throughout the analysis, therefore, the "third generation" necessarily refers to third and higher-order generations.

The residual category "unknown native generation" consists of native-born youth whose generation status cannot be determined because neither biological parent lives in the household with the child. Since the probability of non-familial household residence increases with age, it is not surprising that this generation is consistently older than all other generation groups (table 2). These natives are also disproportionately female, because young women are more likely to be married and to have established their own households than young men.

The analysis takes into account the potentially competing effects of nativity, length of U.S. residence, language background, and race/ethnicity on academic achievement, as well as other family background characteristics such as family structure, socioeconomic status, and residential attainment that have been identified in the literature as key influences on school participation of high-school-age youth in the United States.

The key independent variable is generation status. The impact of foreign-born status has been shown to be mediated by length of exposure to U.S. education (Glick and White 2003; Vernez et al. 1996). I therefore further distinguish among first-generation youth who arrived in the United States at age six or later from those who arrived before the age

of six. The latter group arrived in the United States either before school age or in their early elementary years, and would therefore, like the second and higher-order generations, have received most of their formal schooling in the United States

Key demographic characteristics related to enrollment and attainment include age, gender, English language background and race/ethnicity. Previous research demonstrates that non-enrollment increases sharply with age (Glick and White 2003; Hirschman 2001) and that men are less likely to be enrolled in school than women (White and Glick 2000). English language background and proficiency are closely linked to generation status and educational attainment (White 1997). English language fluency exhibits a complex relationship with school completion. Some studies suggest that speaking English at home does not significantly impact school completion once other factors are controlled(Vernez et al. 1996), while others find that bilingualism has little positive influence on school performance net of compensating for low parental English proficiency (Mouw and Xie 1999). I control for the potentially confounding interaction of parental English language ability and children's bilingualism by creating a set of thirteen English language background indicators that combine information on self-reported English-speaking ability (speak only English (reference category), very well, well, not well/not at all) and whether a non-English language is spoken in the child's home (Spanish, other European language, Asian, and other).

Ethnicity is reported in the census in response to a separate question about whether an individual is Spanish, Hispanic, or Latino. Of youth reporting Hispanic ethnicity, 82 to 86 percent were Mexican, 5 to 7 percent were Central American, and the rest were of another Hispanic group, primarily unspecified, in the two censuses. Three indicators of

Hispanic ethnicity are defined accordingly, irrespective of the individual's race. Beginning with the 2000 census, respondents were permitted to indicate membership in two or more race groups. To maintain comparability with the 1990 census, non-Hispanic white, black, Asian, and Native American/other race classifications are defined for both censuses, while a two or more non-Hispanic race category is specified for the 2000 census. We not only include controls for ethnicity in the full model specifications, but also estimate models separately for several larger race/ethnic groups to examine whether race/ethnicity differences in enrollment converge over generations [**TO DO**].

Family structure has been shown to have a strong influence on children's educational attainment. Four indicator variables are defined for living in a 2-parent household, in a mother-only household, a father-only household, or a household with no parents present (reference group). Family socioeconomic status has consistently shown to be one of the strongest predictors of achievement. A series of categorical variables for each parent capture the discontinuities in the impact of parental educational attainment on children's attainment that were identified in bivariate logistic regressions: no formal schooling (reference group), completed grades K-4, grades 5-8, some high school, high school graduate, some college, associate degree, and at least a bachelor degree. Poverty status is measured with four indicator variables that reflect the child's total family income the year preceding the census as a percentage of the federal poverty threshold: income below the poverty line (reference group), income between 100 and 200 percent of poverty, 200 and 300 percent of poverty, 300 and 400 percent of poverty, and income at least 400 percent of the poverty threshold. Other researchers have found that the presence of 3 or more children in a household is associated with lower educational attainment. Census data

reports family size, a proxy for the number of children in the household. Four family size indicator variables capture the non-linear impacts of family size.

A youth's current enrollment status is modeled in a latent variable framework which reflects an underlying utility-maximizing process (Wooldridge 2002, p. 457). The probability that individual *i* is enrolled in school in year *t*, S_{it}, given covariates x can therefore be modeled as a logistic regression:

$P(S_{it} = 1 \mid x) = P(S_{it} * > 0 \mid x) = \text{logit}(x\beta)$

The logistic regressions presented below consist of a baseline model conditioning only on generation status that is progressively augmented with the covariates described above.

IV. The Impact of Generation Status on Educational Outcomes

School Enrollment of California Youth

Native youth of unknown generation consistently have the lowest school participation probabilities, followed closely by the first generation (table 2). School enrollment is significantly higher in the second generation than first and unknown native generations in both years, and the third generation in 1990.

Over 87 percent of youth were enrolled in school in 2000, a 4-percentage point gain over 1990.[6] School participation rose for all generations over the period. For example, 92 percent of third-generation youth attended school in 2000 compared to 89 percent in 1990. Although the gain in school participation rates within generation status groups is encouraging, relative enrollment deficits persist for the unknown-native and first generations. In 1990, only two thirds of indeterminate native youth and 73 percent of

[6] Tabulations of 1990 and 2000 census data indicate a secular increase in school participation rates among high-school age youth. The level and growth of school participation rates of 15- to 17-year olds was similar in California to the United States overall. Enrollment of 18- and 19-year Californians lagged the national rate by over 3 percentage points in 1990, but caught up to the national rate of 66 percent in 2000

first-generation youth were in school compared to roughly 90 percent of second- and third-generation youth, a 17- to 25-percentage point enrollment disadvantage. While both groups narrowed their enrollment gap relative to the second and third generations by 2000 (enrollment rates increased to 73, 78 and 92 percent, respectively), unknown native and first-generation enrollment rates remain significantly below those of the native generations.

The racial and ethnic composition of the first and second generations reflects the top countries of birth of California's immigrant population – Mexico, the Philippines, China/Taiwan and Vietnam (Schmidley 1999).[7] Nearly two-thirds of first- and second-generation youth were of Hispanic, overwhelmingly Mexican, origin, and roughly another 22 percent identified themselves as Asian in 2000 (table 2).

Two sets of highly significant differences in within-generation enrollment rates across racial and ethnic groups are observed in the census (not shown in table 2). Hispanics, especially those of Mexican origin, typically have the lowest enrollment rates of all ethnic groups. Second, Asians have significantly higher enrollment rates than whites, primarily due to high school participation probabilities among the Chinese/Taiwanese. Indeed, it is the low school participation rate of Mexicans, and to a lesser extent, Central Americans, that drives the first generation's overall low school participation rate. By contrast, rising enrollment among Hispanic youth, particularly those of Mexican origin, and to a lesser extent greater school participation among white,

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(U.S. Bureau of the Census 1994, 2002). The factors underlying increasing school participation in the 1990s are a fruitful area for future research.

[7] While race/ethnicity does not perfectly correspond to national origin, the ethnicity measures used here do proxy well for birthplace among the primary source countries of California's first-generation youth in the 1990 and 2000 censuses. Nearly all first-generation Mexicans identify themselves as Mexican, while at least 90 percent of those born in Central America, the Philippines, China/Taiwan, and Vietnam identify themselves as the corresponding racial group.

Chinese/Taiwanese and Filipino drives the measured enrollment advantage of the second generation relative to the first generation in both census years. Two thirds of Mexican first-generation teens were enrolled in school in 2000 as compared to 90 percent of their second-generation counterparts.

These descriptive findings suggest that race and ethnicity play a more influential role on educational attainment than generation status per se. Tables 3 and 4 give first-pass estimates of logistic regressions of school enrollment in 1990 and 2000, respectively. Model 1 contains no covariates other than generation status, and thereby reproduces the descriptive results of table 2. First-generation youth who arrived in the U.S. after age 5 have the lowest participation rates of all identifiable generation groups. Yet even pre-school age immigrants are significantly less likely to be in school than second- and third-generation natives. [**TO DO**: add a late-arriver first-generation indicator given evidence that teen arrivers not enroll in school].

Model 2 adds baseline covariates of age and gender. Interestingly, first-generation youth who arrive after age 6 are slightly less likely than native youth of unknown generation to be enrolled in school. However, the effect is of small magnitude and is observed only in the 2000 census. Consistent with previous research, school participation is strongly negatively correlated with age, a result which holds irrespective of model specification. Young women are about 20 percent more likely to be enrolled in school, all else equal, in 2000. No gender advantage is observed in the 1990 census.

The rank ordering of school participation and statistically significant generation differences are observed through model 3, which includes all individual sociodemographic characteristics. The relative enrollment disadvantage of the first

generation, particularly older arrivers, persists but is dampened. Much of the older-arriving first-generation disadvantage is explained by English language proficiency, rather than race or ethnicity or generation status per se.[8] Indeed, youth who speak a non-English language at home AND report poor speaking English skills are only 20 percent to 60 percent as likely to be enrolled in school as their English-only peers.

Model 4 adds family structure, socioeconomic status and household location measures to model 3. The impact of family background characteristics on enrollment dwarfs that of generation status in both years. The presence of two parents or a mother in the household are strongly positively associated with persistence in school. Not surprisingly, parental educational attainment, particularly completion of post-secondary schooling, and higher family income are correlated with a youth's educational achievement. Interestingly, however, the enrollment advantage of the third generation relative to pre-school age first generation disappears. Indeed, only older-arriving first generation youth have lower enrollment probabilities than third generation youth.

V. Discussion and Implications for Ongoing Research

While the results presented here are preliminary, several consistent patterns are emerging that warrant further research. Older-arriving first generation youth are much less likely to enroll in school than other generations. We observe very little evidence in favor of the "immigrant optimism" hypothesis. Indeed, the second generation has no enrollment advantage in the 2000 census, while the small advantage observed in 1990 disappears upon inclusion of family covariates.

[8] In specifications not presented here, the older first generation enrollment gap is still observed if model 2 is only augmented with race and ethnicity indicators. Indeed, their disadvantage is only reduced when controls for English language proficiency are included. Results are not sensitive to the parameterization of

Emerging female advantage

Substantial positive national origin effects persist for Chinese, Korean and Vietnamese youth, even in the presence of extremely strong family structure effects, while there remains a strong Mexican enrollment penalty. As for individual characteristics, fluent bilingualism is correlated with higher enrollment, but poor English speaking ability reduces participation, irrespective of the language spoken at home.

Preliminary within-generation results (not shown) yield three consistent findings: first, membership in an intact family strongly influences enrollment, particularly for the first generation; second, Hispanic youth are less likely to enroll in school than other origin groups, particularly in the immigrant generation; and finally, an enrollment advantage observed for many Asian-origin groups in the first and second generations disappears for the third generation.

In addition to further exploring how the impact of generation status differs over time and by ethnicity as a proxy for national origin, I will assess whether school participation among at-risk immigrant groups "catches up" with natives across generations.

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language background (English speaking ability, home language use, or the combined measure presented in model 3).

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Table 1: Generation Profile of California Youth Ages 5-18, 1990 and 2000

	Total	First Generation	Second Generation	Third+ Generation	Unknown Native Generation
2000	100%	12.27%	33.23%	49.05%	5.46%
Population-weighted N	7,186,524	881,714	2,387,747	3,525,017	392,046
1990	100%	14.76%	23.00%	56.89%	5.35%
Population-weighted N	5,713,281	843,330	1,314,064	3,250,084	305,803

Notes: Figures exclude the roughly one percent of youth in each census who reside in group quarters. "Unknown Native Generation" are native-born youth for whom generation status can not be determined (see text).
Source: Author's calculations on weighted data from the 1990 and 2000 5 percent Census Integrated Public Use Microdata Samples (IPUMS) for California.

Table 2: Estimated retention rates (ages 18 and under)

				Non-Hispanic			Hispanics
Grade	All	Males	Females	White	Black	Asian	(any race)
Kindergarten	5.25%	6.28%	4.20%	4.87%	5.73%	2.88%	7.18%
1	6.97	7.25	6.66	5.62	12.68	0.64[a]	8.36
2	2.69	2.94	2.45	2.13	3.81	3.08 [a]	3.84
3	1.78	1.98	1.56	1.12	4.91	0 [a]	1.94
4	2.34	2.13	2.56	1.57	4.10	4.43	3.23
5	1.65	1.83	1.47	1.28	3.23	1.72	1.80
6	2.23	2.59	1.85	1.31	4.06	0 [a]	4.55
7	2.60	1.95	3.31	1.55	5.68	0 [a]	4.39
8	1.91	2.34	1.45	1.61	3.37	0 [a]	2.55
9	4.48	4.97	3.97	3.93	5.37	5.31	5.78
10	2.14	2.42	1.85	1.22	4.16	2.91	4.92
11	3.30	3.10	3.51	2.64	4.79	3.17 [a]	5.33
12	6.74	7.72	5.83	2.56	18.44 [a]	30.68 [a]	6.46 [a]
Average	3.20	3.41	2.98	2.40	5.47	2.94	4.50

Note: [a]Fewer than 70 observations in a cell.
Source: Author's computations from the October 2001Current Population Survey, School Enrollment Supplement.

Table 2: Sociodemographic Characteristics and Educational Outcomes of California Youth Ages 16 to 18, 1990 and 2000, by Generation Status

Year and Characteristic	Total	First Generation	Second Generation	Third+ Generation	Unknown Native Generation
1990	100%	24.92%	15.48%	50.60%	8.99%
Percent currently enrolled in school	83.15	73.43	91.08	88.68	65.32
Mean age	17.01	17.09	16.91	16.95	17.30
Proportion female	48.13%	44.90%	48.27%	47.95%	57.86%
White non-Hispanic	45.12	7.38	23.54	69.18	51.44
Black non-Hispanic	7.66	0.81	1.54	11.50	15.54
Asian non-Hispanic	11.09	29.31	16.55	1.81	3.36
Cambodian/Laotian	0.91	3.58	0.09	0.00	0.05
Chinese/Taiwanese	2.57	7.19	3.96	0.23	0.55
Filipino	2.87	6.16	7.17	0.30	0.82
Indian	0.52	1.41	0.98	0.01	0.13
Korean	1.16	3.50	1.24	0.11	0.40
Vietnamese	1.59	6.03	0.31	0.04	0.20
All other Asian	1.47	1.43	2.81	1.12	1.20
Native American/other non-Hispanic	0.92	0.34	0.41	1.23	1.67
Hispanic (any race)	35.22	62.16	57.97	16.27	27.99
Mexican	29.44	49.92	50.27	13.94	24.06
Central American	2.84	9.31	2.59	0.11	0.74
Other Hispanic	2.94	2.93	5.11	2.23	3.19
Language Background					
English home language	60.50	6.51	35.28	91.55	78.81
Spanish home language, speaks English very well	16.69	25.28	44.06	4.78	12.74
Spanish home language, speaks English well	4.94	12.49	6.51	1.04	3.24
Spanish language, does not speak English well or not at all	6.59	22.67	1.84	0.92	2.12
Age at arrival	--	9.42	--	--	--
Family Structure and SES					
Two-parent household	60.87%	53.02%	82.70%	68.64%	1.28%
Mother-only household	19.15	13.44	14.45	25.41	7.89
Father-only household	5.04	5.38	2.85	5.96	2.74
No parent in household	14.94	28.16	--	--	88.10
Mother with tertiary education	36.87	15.40	32.40	54.63	4.15
Father with tertiary education	35.96	18.10	36.09	50.81	1.69
Family size above 5	24.37	45.63	32.75	13.64	11.40
Below poverty	17.38	30.51	11.08	7.76	45.99

Central city residence	25.65	38.75	26.10	18.99	26.02
Observations (unweighted)	56,602	14,255	8,997	28,470	4,880

Table 2: Sociodemographic Characteristics and Educational Outcomes of California Youth Ages 16 to 18, 1990 and 2000, by Generation Status, continued

Year and Characteristic	Total	First Generation	Second Generation	Third+ Generation	Unknown Native Generation
2000	100%	20.74%	24.72%	46.18%	8.35%
Percent currently enrolled in school	87.59	77.78	92.47	92.08	72.68
Mean age	17.00	17.06	16.95	16.94	17.27
Proportion female	48.48%	45.52%	48.34%	48.55%	55.89%
White non-Hispanic	36.89	7.54	11.95	63.10	38.70
Black non-Hispanic	6.67	1.03	1.18	10.97	13.22
Asian non-Hispanic	11.42	24.34	21.62	1.44	4.36
Cambodian/Laotian	1.26	2.94	2.42	0.02	0.55
Chinese/Taiwanese	2.51	5.21	5.00	0.28	0.72
Filipino	2.72	5.52	5.54	0.24	1.13
Indian	0.70	1.60	1.39	0.01	0.22
Korean	1.12	2.78	2.07	0.02	0.32
Vietnamese	1.63	4.28	2.77	0.03	0.56
All other Asian	1.49	2.01	2.43	0.84	0.86
Native American/other non-Hispanic	0.78	0.21	0.35	1.16	1.37
Two or more non-Hispanic races	3.84	2.60	4.06	4.25	3.93
Hispanic (any race)	40.40	64.27	60.84	19.09	38.43
Mexican	32.28	51.18	49.19	14.92	31.21
Central American	1.96	5.68	2.44	0.20	1.08
Other Hispanic	6.16	7.42	9.21	3.96	6.13
Language Background					
English home language	55.84	7.38	24.34	91.78	70.70
Spanish home language, speaks English very well	21.68	27.71	48.24	5.22	19.03
Spanish home language, speaks English well	5.16	13.65	6.42	0.92	3.80
Spanish language, does not speak English well or not at all	5.03	20.12	1.31	0.66	2.67
Age at arrival	--	9.17	--	--	--
Family Structure and SES					
Two-parent household	61.30%	56.58%	78.58%	65.21%	0.25%
Mother-only household	19.74	13.07	17.20	27.39	1.54
Father-only household	5.83	4.83	4.21	7.40	4.46
No parent in household	13.12	25.52	--	--	93.75
Mother with tertiary education	40.51	18.26	33.70	61.30	0.94
Father with tertiary education	35.77	19.39	32.65	50.90	2.27
Family size above 5	26.08	43.49	35.79	15.02	15.25
Below poverty	19.48	32.74	17.35	9.66	47.15

Central city residence	27.25	37.43	30.91	20.48	28.56
Observations (unweighted)	70,594	14,597	17,676	32,461	5,860

Source: Author's calculations on weighted data from the 1990 and 2000 5 percent Census Integrated Public Use Microdata Samples (IPUMS) for California.

Table 3: Logistic Regressions of School Enrollment in 1990, by Generation Status

	Exp(B): Odds Ratio of Enrollment versus Non-Enrollment			
	(1)	(2)	(3)	(4)
Generation status (v. unknown native)				
First generation (arrival age 6+)	1.135***	0.972	1.332***	0.645***
	(3.12)	(0.64)	(4.57)	(6.24)
First generation (arrival age < 6)	3.088***	2.733***	2.447***	0.941
	(19.69)	(16.92)	(12.72)	(0.75)
Second generation	5.422***	4.382***	4.251***	1.123
	(32.51)	(27.40)	(24.20)	(1.44)
Third generation	4.159***	3.404***	3.288***	0.782***
	(36.68)	(29.96)	(28.15)	(3.38)
Age 16 (vs. age 18)		5.319***	5.515***	5.186***
		(45.58)	(44.53)	(42.45)
Age 17		2.904***	3.053***	2.971***
		(35.01)	(34.96)	(33.40)
Female (vs. male)		1.051*	1.012	1.020
		(1.87)	(0.41)	(0.69)
Black non-Hispanic (vs. white)			0.851***	1.087
			(2.78)	(1.37)
Chinese/Taiwanese			3.762***	3.889***
			(7.37)	(7.04)
Japanese			1.742**	1.584*
			(2.46)	(1.89)
Filipino			1.335***	0.986
			(2.71)	(0.13)
Asian Indian			2.020**	1.957**
			(2.52)	(2.18)
Korean			1.853***	1.389
			(3.23)	(1.57)
Vietnamese			2.720***	3.295***
			(5.42)	(6.18)
Cambodian/Laotian			2.342***	2.826***
			(4.05)	(4.81)
Other Asian			1.328	1.472*
			(1.30)	(1.73)
Native American/other non-Hispanic			0.586***	0.734**
			(4.37)	(2.52)
Mexican (any race)			0.588***	0.795***
			(11.58)	(4.74)
Central American (any race)			1.135	1.404***
			(1.40)	(3.60)
Other Hispanic (any race)			0.898	1.022
			(1.18)	(0.23)
Language Background (vs. English home language)				
Spanish at home, speaks English very well			1.281***	1.334***
			(4.39)	(4.97)
Spanish at home, speaks English well			1.154*	1.241***
			(1.86)	(2.74)
Spanish at home, does not speak English well			0.265***	0.354***

	(19.47)	(14.69)
European lang. at home, speaks English very well	1.389**	1.278*
	(2.45)	(1.77)
European lang. at home, speaks English well	1.925*	1.885*
	(1.91)	(1.71)
European lang. at home, does not speak English well	1.160	0.949
	(0.43)	(0.15)
Asian language at home, speaks English very well	1.915***	1.637***
	(5.90)	(4.14)
Asian language at home, speaks English well	1.324**	1.324*
	(1.98)	(1.87)
Asian language at home, does not speak English well	0.723*	0.743
	(1.88)	(1.60)
Other language at home, speaks English very well	0.849	0.993
	(0.50)	(0.02)
Other language at home, speaks English well	0.414	0.475
	(1.20)	(0.93)
Other language at home, does not speak English well	0.254*	0.287**
	(1.88)	(2.00)
Two-parent household (vs. no parents)		2.529***
		(9.05)
Mother-only household		2.760***
		(10.02)
Father-only household		2.030***
		(6.04)
Mother has K-4th grade education (vs. no school)		1.000
		(0.00)
Mother has 5th-8th grade education		0.952
		(0.50)
Mother has 9th-12th grade education		0.812**
		(2.14)
Mother a high school graduate		1.144
		(1.38)
Mother has some college		1.365***
		(3.08)
Mother has associate degree		1.559***
		(3.84)
Mother has bachelor degree or more		1.973***
		(5.98)
Father has K-4th grade education (vs. no school)		1.336**
		(2.49)
Father has 5th-8th grade education		1.341***
		(2.70)
Father has 9th-12th grade education		1.180
		(1.56)
Father a high school graduate		1.397***
		(3.14)
Father has some college		1.551***
		(4.11)
Father has associate degree		1.943***
		(5.38)

Father has bachelor degree or more				2.330***
				(7.45)
2-person family (vs. 1-person family)				0.801***
				(2.97)
3-5 person family				1.018
				(0.27)
6+ person family				0.897
				(1.57)
Family income 100-200% of poverty (vs. below poverty)				0.904**
				(2.28)
Family income 200-300% of poverty				1.066
				(1.28)
Family income 300-400% of poverty				1.061
				(1.05)
Family income above 400% of poverty				1.128**
				(2.20)
Central city residence				0.920**
				(2.53)
Observations	56601	56601	56601	56601

Notes: Standard errors are estimated with the Huber/White estimator. Robust z statistics in parentheses. Sample size is slightly less than in Table 2 because of zero person weights for an observation.
* p < 0.10; ** p < 0.05; ***p < 0.01

Table 4: Logistic Regressions of School Enrollment in 2000, by Generation Status

	Exp(B): Odds Ratio of Enrollment versus Non-Enrollment			
	(1)	(2)	(3)	(4)
Generation status (v. unknown native)				
First generation (arrival age 6+)	1.025	0.878***	1.337***	0.543***
	(0.60)	(2.89)	(4.77)	(8.42)
First generation (arrival age < 6)	3.236***	2.526***	2.289***	0.774***
	(17.70)	(13.22)	(10.61)	(2.78)
Second generation	4.614***	3.773***	3.387***	0.777***
	(33.29)	(27.67)	(22.05)	(3.08)
Third generation	4.368***	3.527***	3.260***	0.642***
	(36.58)	(29.62)	(26.19)	(5.58)
Age 16 (vs. age 18)		7.337***	8.477***	8.474***
		(49.85)	(51.81)	(51.12)
Age 17		4.274***	4.812***	4.858***
		(43.96)	(44.77)	(44.20)
Female (vs. male)		1.250***	1.187***	1.186***
		(7.94)	(5.87)	(5.72)
Black non-Hispanic (vs. white)			0.766***	1.040
			(4.15)	(0.57)
Chinese/Taiwanese			2.690***	2.974***
			(5.63)	(5.81)
Japanese			1.777*	1.377
			(1.80)	(0.91)
Filipino			1.366***	0.994
			(2.62)	(0.04)
Asian Indian			1.649*	1.193
			(1.92)	(0.64)
Korean			3.487***	2.900***
			(4.73)	(3.73)
Vietnamese			1.811***	1.947***
			(3.15)	(3.46)
Cambodian/Laotian			1.050	1.477**
			(0.28)	(2.10)
Other Asian			1.578**	1.715**
			(2.34)	(2.54)
Native American/other non-Hispanic			0.678***	0.835
			(2.58)	(1.17)
Two or more non-Hispanic races			0.850*	0.938
			(1.91)	(0.73)
Mexican (any race)			0.546***	0.762***
			(12.84)	(5.44)
Central American (any race)			0.909	1.151
			(0.91)	(1.28)
Other Hispanic (any race)			0.751***	0.964
			(4.08)	(0.51)
Language Background (vs. English home language)				
Spanish at home, speaks English very well			1.335***	1.387***
			(5.27)	(5.72)
Spanish at home, speaks English well			1.035	1.134

	(0.46)	(1.64)
Spanish at home, does not speak English well	0.199***	0.282***
	(22.56)	(17.13)
European lang. at home, speaks English very well	1.848***	1.534**
	(3.85)	(2.56)
European lang. at home, speaks English well	1.544	1.847*
	(1.32)	(1.65)
European lang. at home, does not speak English well	0.421**	0.364**
	(2.32)	(2.45)
Asian language at home, speaks English very well	1.962***	1.809***
	(6.33)	(5.20)
Asian language at home, speaks English well	1.434**	1.602***
	(2.38)	(2.92)
Asian language at home, does not speak English well	0.647**	0.683*
	(2.36)	(1.85)
Other language at home, speaks English very well	0.863	0.876
	(0.50)	(0.43)
Other language at home, speaks English well	1.466	1.796
	(0.78)	(1.35)
Other language at home, does not speak English well	0.116***	0.235***
	(4.45)	(3.17)
Two-parent household (vs. no parents)		3.561***
		(12.60)
Mother-only household		3.001***
		(10.87)
Father-only household		1.912***
		(5.93)
Mother has K-4th grade education (vs. no school)		0.738***
		(2.68)
Mother has 5th-8th grade education		0.985
		(0.16)
Mother has 9th-12th grade education		0.855*
		(1.72)
Mother a high school graduate		1.034
		(0.36)
Mother has some college		1.404***
		(3.55)
Mother has associate degree		1.640***
		(4.18)
Mother has bachelor degree or more		1.828***
		(5.55)
Father has K-4th grade education (vs. no school)		1.038
		(0.31)
Father has 5th-8th grade education		1.150
		(1.46)
Father has 9th-12th grade education		0.999
		(0.01)
Father a high school graduate		1.120
		(1.20)
Father has some college		1.533***
		(4.32)

Father has associate degree				1.665***
				(4.02)
Father has bachelor degree or more				2.002***
				(6.45)
2-person family (vs. 1-person family)				1.038
				(0.46)
3-5 person family				1.034
				(0.49)
6+ person family				0.870**
				(2.00)
Family income 100-200% of poverty (vs. below poverty)				1.016
				(0.35)
Family income 200-300% of poverty				1.058
				(1.13)
Family income 300-400% of poverty				1.179***
				(2.72)
Family income above 400% of poverty				1.280***
				(4.25)
Central city residence				0.974
				(0.78)
Observations	70577	70577	70577	70577

Notes: Standard errors are estimated with the Huber/White estimator. Robust z statistics in parentheses. Sample size is slightly less than in Table 2 because of zero person weights for some observations.
* p < 0.10; ** p < 0.05; ***p < 0.01