Transitions to Work for Racial, Ethnic, and Immigrant Groups

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Abstract

The youth population of the United States is becoming increasingly diverse in terms of race, ethnicity, and nativity. We demonstrate that the patterns of transition from school-age to work-age are substantially different across demographic groups. For foreign-born youth, we explore school attendance and work behavior by origin and age of arrival. For U.S.-born youth, we use longitudinal data to investigate the determinants of racial and ethnic differences in educational attainment, work, and teen fertility. We argue that the diversity of the youth population has important consequences for designing and evaluating programs for youth.

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Introduction

The youth population of the United States is becoming increasingly diverse in terms of race, ethnicity, and nativity. Although U.S.-born, non-Hispanic whites remain the majority group, their share fell from 75 to 61 percent between 1980 and 2000 and is expected to fall to 55 percent by 2020. More than 10 percent of youth are immigrants and nearly one-in-four has a foreign-born parent.[1]

The diversity of the youth population is of tremendous import in designing and evaluating youth policies. Youth from different racial, ethnic, and immigrant backgrounds tend to have different patterns of experiences in the transition from school-age to working-age in terms of the timing and likelihood of completing high school, attending college, achieving success in employment, and beginning a family. These patterns affect the nature of programs that are likely to be needed such as English language training or basic skills as well as design features of the program such as implementing in schools versus the workplace or including childcare.

The growing diversity combined with differing patterns of transition also point to the importance of evaluating whether specific programs are effective for youth from different racial and ethnic backgrounds. For youth policy to be successful in aggregate, it must meet the needs of increasingly diverse youth. In particular, youth with early labor market difficulties are strongly concentrated among racial and ethnic minorities. Similarly, for those programs targeting youth who are not completing high school on time and moving on to college (sometimes referred to as "The Forgotten Half"[2]), the target population is increasingly non-white. To the extent that school-to-work and other training programs are tools that can be used

[1] Diversity statistics based on authors' calculations from the U.S. Census (1980, 2000), the March Current Population Survey (2003), and projections from the U.S. Census Bureau (2000).
[2] See W.T. Grant Commission on Work, Family, and Citizenship (1988) and Donahue and Tienda (1999).

to raise the prospects of youth who would otherwise be likely to have low educational attainment and low earnings, then the programs increasingly need to be effective for minority populations. If successful for minorities, these programs could also operate to reduce the substantial educational and labor market divides between racial and ethnic groups.[3]

We begin this paper by documenting the growing diversity of the youth population in the United States. We then describe the differential patterns of transitions from school-age to working-age for U.S.-born youth from different backgrounds. Our analysis in this first section covers territory that has been studied by others.[4] Our purpose here is to update that work with new data, to provide a better understanding by investigating patterns separately by nativity, and to consider patterns for ethnic subgroups of the two fastest growing demographic groups: Hispanics and Asians. Understanding transitions to work for Hispanic youth is of particular importance because, at 16 percent of the youth population, they constitute the largest minority group and their share is expected to grow the fastest, to 22 percent in 2020.[5] After describing the patterns, we explore the factors that help explain these differences among youth raised in the United States. Using the National Educational Longitudinal Study (NELS:88), we find that maternal education, family income, and other family and school characteristics explain much of the differences in educational attainment across racial and ethnic groups.

We then turn to the transition to work for immigrant youth, focusing on immigrants from Mexico and Asia. We find that the school attendance and the transition to work depend strongly on the age at arrival. We argue that many immigrant youth from Mexico appear to be coming to the United States for work whereas those from Asia appear to be going directly into schooling.

[3] See Smith (2001) for a summary of recent trends in labor market conditions for blacks, whites, and Hispanics.
[4] See Donahue and Tienda (1999) and papers cited therein. Fussell and Furstenberg (2003) document historical patterns in the transition to adulthood by race, nativity, and gender.
[5] See Table 1 for data sources for Hispanic youth population growth.

We also note that family resources differ substantially between young immigrants from Mexico and those from Asia.

This paper is primarily a descriptive piece, seeking to provide a fuller picture of the diverse youth population and the relationships between race, ethnicity, nativity, socioeconomic status, and youth transitions to work. What is clear from this analysis is that in order for youth policies to be successful, they must effectively engage and support disadvantaged minority youth, especially blacks and increasingly Hispanics.

1. Youth Diversity in the United States

As recently as 1980, non-Hispanic native-born whites made up 75 percent of the youth population ages 13 to 24 years (Table 1). By the time of Census 2000, their share of the population was only 61 percent. Census Bureau projections for 2020 put their share at just over half, 55 percent. In 1980 and 2000, foreign-born whites were about 1 percent of the youth population and that share is expected to be the same in 2020. The share of native-born blacks has held steady at 13 percent and is expected to remain at that level. Foreign-born blacks are 1 percent of the youth population. Native Americans made up 1 percent of the youth population in 1980 and 2000 and are expected to remain at that share in 2020.

Over the same period, the share of Hispanics has grown considerably. In 1980, Hispanics made up only 8 percent of the youth population. Their share grew to 16 percent in 2000 and is expected to grow to 22 percent by 2020. Hispanic youth have diverse ethnic and immigrant backgrounds. Growth in the Hispanic population was largely driven by growth in the Mexican and Mexican American population which made up less than 5 percent of all youth in 1980 and more than 10 percent of all youth in 2000. In the analysis that follows, we separately investigate

the transition to work for the major Hispanic subgroups, separately for those who were U.S.-born and those foreign-born. U.S.-born Mexican Americans comprised the largest group, making up 44 percent of Hispanic youth. Foreign-born Mexicans were the next largest group at 24 percent of all Hispanic youth. The next largest groups were Puerto Ricans (9 percent, about three-fourths were born in the United States), Central Americans (9 percent, with about one-third born in the United States), and Cubans (2 percent, with about two-thirds born in the United States).[6]

[6] More than 15 percent of Hispanics did not identify a specific ethnicity in the Census 2000. We report Hispanic subgroup shares from the American Community Survey (2003) in which only 6 percent of Hispanic youth did not report a specific ethnicity. It appears that Central Americans are particularly undercounted in Census 2000 – only 5 percent of Hispanics identified as Central American.

Table 1. Youth by Race, Ethnicity, and Nativity, Ages 13-24 (percentage)

	1980		2000		2020	
	Native-born	Foreign-born	Native-born	Foreign-born	Native-born	Foreign-born
White	75	1	61	1	55	1
Black	13	0	13	1	13	1
Hispanic	6	2	10	6	19	3
Asian & Pacific Islander	1	1	2	2	5	2
Native American	1	<1	1	<1	1	<1
All other	<1	<1	2	<1		

Source: Authors' calculations from the U.S. Census (1980 and 2000 PUMS) and Census Bureau Projections (2020).
Notes: Hispanics of any race are included as Hispanics. "Other" for 2000 is mainly multiracial youth. For consistency with projections for 2020, native-born includes those born in Puerto Rico, Guam, and other U.S. outlying areas. The Census Bureau projections in the table are not adjusted to reflect the Census 2000 results because foreign-born population projections based on the Census 2000 are not yet available.

The Asian share of youth also grew substantially between 1980 and 2000 from 2 to 4 percent of the population and is expected to grow to 7 percent by 2020. Among native-born Asians, the largest ethnic subgroups are Filipino, Chinese, and Asian Indian. The largest ethnicities among Asian immigrants are Chinese, Asian Indian, Filipino, Vietnamese, and Korean.[7] In the analysis that follows, we separately identify as "Southeast Asian" youth those with origin or ancestry from the refugee sending countries of Cambodia, Laos, and Vietnam because socio-economic characteristics for these youth are markedly different than youth of other Asian heritage.[8] Southeast Asians make up about 20 percent of all Asian youth. About 60 percent of Southeast Asian youth are foreign-born.

2. Patterns of Transition to Work for U.S.-born Youth by Race and Ethnicity

We explore patterns in the transition to work by comparing activities and outcomes across racial and ethnic groups for U.S.-born youth. In order to provide a fuller sense of the

[7] Analysis of ethnic subgroups is based on people who identified only one Asian subcategory. Each of the native-born ethnicities listed makes up more than 12 percent of all U.S.-born Asians. For each of the Asian immigrant ethnicities listed, there are over 100,000 foreign-born youth living in the United States.
[8] Youth who identify as Hmong are also included in the Southeast Asian category.

transition patterns as opposed to focusing only on outcomes, we investigate three age groups that represent the period of transition from ages in which youth are mostly at school (ages 16 and 17 years) to ages in which about half of youth are at school (ages 19 to 21 years) to ages at which the majority are not in school and are working (ages 23 to 25 years). For each age group we consider activities in the areas of school, work, and family formation. We limit our analysis to a few key measures in order to emphasize elements of transition (i.e., across age groups) and differences by demographic group. Notably missing is information on involvement with the criminal justice system – information not covered in the Census. Other research suggests that this may be a major element for young black men. Of black men in their 20s, over 8 percent were in prison in 1999 and some estimates put the share involved in the criminal justice system through jail, probation, or parole at 30 percent (Blumstein, 2001).

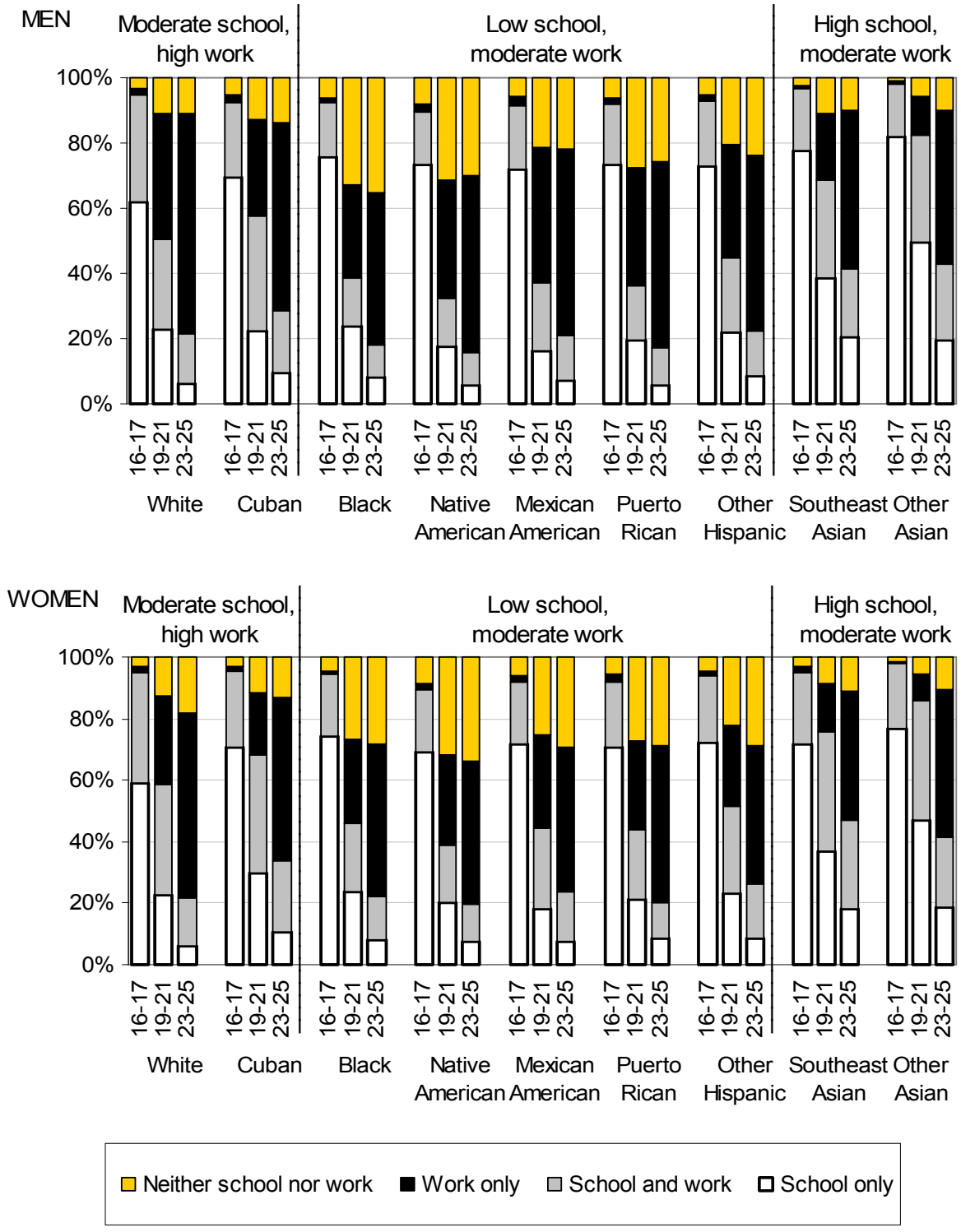
We analyze activities and outcomes across cohorts of youth and interpret higher educational attainment and more work activities at older ages as reflecting educational progress and the transition to work. We note that the data are cross-sectional and differences by age could reflect cohort differences. However, the temporal differences between the cohorts are fairly small as the sample includes those born between 1974 and 1984.

Looking across age groups, the results suggest three patterns of transition to work by race and ethnicity, although there is substantial variation within each pattern (Figure 1). Whites and Cubans fit the "moderate school, high work" pattern, characterized by relatively high levels of school enrollment at ages 19 to 21 (over half) falling to about one-fourth at ages 23 to 25. These groups showed high levels of work activity, beginning at high school ages during which whites particularly were combining school with work. At ages 19 to 21, about 65 percent of white men and women were working (including those working while enrolled in school), 68 percent of

Cuban men were working, and 58 percent of Cuban women were working. By ages 23 to 25, the share working increased to 76 percent for Cubans and white women and to 83 percent for white men. These groups had low shares in neither school nor work: generally less than 15 percent (but 18 percent for white women ages 23 to 25). Among men, over 60 percent had attended college and about one in four attained a bachelor's degree by ages 23 to 25 (Table 2). Among women, educational attainment was somewhat higher with over 30 percent finishing a bachelor's degree. Of those who were working and not in school, over half of men and about three-fourths of women had earnings of under $15,000 at ages 19 to 21, but the share fell by ages 23 to 25 to less than 30 percent for men and less than half of women.

Among white women, 22 percent had formed a family by age 19 to 21 and 48 percent had done so by age 23 to 25 (including married and/or with children, see Table 2). Family formation was less common among Cuban women (16 percent and 37 percent for the two age groups, respectively), even less common among white men (12 percent and 32 percent) and even less common among Cuban men (11 percent and 29 percent).

Figure 1. School and Work Activities by Race and Ethnicity, U.S.-born Youth, 2000



Source: Authors' calculations from Census 2000 (PUMS, 5 percent).
Notes: U.S.-born Puerto Ricans do not include those born in Puerto Rico. Statistics do not include non-Hispanics identifying more than one race or "some other race." The full sample has over 1.3 million observations (combining men and women across the three age groups). The smallest subsample, Southeast Asian women ages 23 to 25, has 189 observations. See Appendix Table 1 for statistical significance.

Table 2. Youth Outcomes, U.S.-born Men and Women, 2000 (percentage)

	White	Cuban	Black	Native Amer.	Mex.	Puerto Rican	Other Hisp.	SE Asian	Other Asian
Men, ages 16-17									
Has child	1	1	2*	2*	2*	2*	2*	1	1
Men, ages 19-21									
HS diploma	84	82	65*	66*	65*	63*	67*	80*	93*
Some college	50	52	30*	27*	29*	28*	36*	51	71*
Earn <$15,000	58	54*	72*	70*	64*	63*	65*	62*	65*
Married, no child	8	8	10*	8	9*	6*	11*	9	9*
Married, has child	3	2*	2*	4*	5*	4*	4*	1*	1*
Single, has child	1	1	3*	4*	4*	3*	3*	0*	0*
Men, ages 23-25									
HS diploma	89	89	74*	75*	70*	72*	74*	84	96*
Some college	60	69*	38*	38*	39*	38*	43*	63	83*
Bachelor's degree	23	26	9*	6*	7*	8*	10*	25	48*
Earn <$15,000	26	28	45*	44*	37*	36*	37*	42*	27
Married, no child	15	15	13*	12*	16*	11*	16*	14	9*
Married, has child	14	12	10*	16*	19*	15	15*	4*	3*
Single, has child	3	2	5*	7*	5*	5*	5*	0*	1*
Women, ages 16-17									
Has child	2	2	5*	4*	5*	4*	4*	1	1*
Women, ages 19-21									
HS diploma	88	89	76*	73*	73*	72*	77*	86*	95*
Some college	60	64*	42*	37*	39*	39*	45*	60	77*
Earn <$15,000	72	63*	77*	80	76*	70*	75*	60*	65*
Married, no child	10	8*	6*	8*	9*	7*	9*	9	10
Married, has child	7	5*	3*	10*	12*	7	9*	3*	1*
Single, has child	5	3*	19*	13*	9*	14*	9*	2*	1*
Women, ages 23-25									
HS diploma	92	92	81*	80*	77*	76*	81*	94*	97*
Some college	68	76*	51*	47*	48*	47*	54*	78*	89*
Bachelor's degree	31	36*	15*	10*	11*	12*	16*	38	59*
Earn <$15,000	41	28*	53*	63*	51*	46*	49*	33*	28*
Married, no child	17	15	6*	11*	12*	8*	12*	10*	10*
Married, has child	22	13*	13*	25*	29*	19*	24*	7*	5*
Single, has child	9	9	35*	20*	15*	27*	16*	5*	2*
Population share, ages 16-25	61	<1	13	<1	6	1	2	<1	2

Source: Authors' calculations from Census 2000 (PUMS, 5 percent).
Notes: Stars indicate the difference with whites is statistically significant at the 10 percent level. The share earning less than $15,000 is calculated among those with earnings in the past year who were not enrolled in school. Presence of children is based on co-residence with biological, adopted, or step- child. See notes to Figure 1.

Blacks, Native Americans, and Hispanics other than Cubans followed a "low school, moderate work" pattern, with low levels of school attendance at ages 19 to 21 (generally less than 40 percent for men and less than 50 percent for women) and only moderate levels of work at ages 23 to 25 (generally less than 70 percent for men and women). These groups also had high shares in neither school nor work – over 20 percent at ages 19 to 21 and ages 23 to 25. Roughly 40 percent men and half of women in each of these groups had earnings of under $15,000 at ages 23 to 25. Black men had particularly low work activity (with only 43 percent working at ages 19 to 21 and only 57 percent working at ages 23 to 25) and high shares in neither school nor work (over 30 percent). Native American men had particularly low schooling attendance with only 33 percent in school at ages 19 to 21 and only 16 percent in school at ages 23-25. Mexican American men had higher levels of work activity than the other groups – 62 percent were working at ages 19 to 21 and 71 percent were working at ages 23 to 25. "Other" Hispanics, largely comprised of Central Americans, had higher levels of schooling attendance with 45 percent of men and 51 percent of women enrolled at ages 19 to 21 and 23 percent of men and 26 percent of women enrolled at ages 23 to 25. By ages 23 to 25, the share of women with a bachelor's degree was 4 to 6 percent higher than for men for each group, with the highest shares among "Other" Hispanics (16 percent for women and 10 percent for men).

Among women in the "low school, moderate work" groups, the share who had formed their own family increased from about 30 percent at ages 19 to 21 to over half at ages 23 to 25. The share who were unmarried and raising a child was particularly high among black (35 percent at ages 23 to 35), Puerto Rican (27 percent), and Native American women (20 percent). Among men from these same groups, family formation was much lower, increasing from about 15

percent at ages 19 to 21 to about 30 percent at ages 23 to 25. Family formation was higher among Mexican American men (40 percent at ages 23 to 25).

The final pattern, demonstrated by Asians, was one of "high school, moderate work," characterized by relatively high enrollment in school (over 40 percent) and moderate work activity (about 70 percent) at ages 23 to 25. At ages 19 to 21, school attendance was high for Southeast Asians (68 percent for men and 76 percent for women) and even higher for other Asians (82 percent for men and 86 percent for women). However, educational attainment at ages 23 to 25 among Southeast Asian men was similar to that of whites (63 percent had attended college and 25 percent had a bachelor's degree), whereas college attendance was higher for Southeast Asian women than for white women (78 percent) and much higher for other Asians (over 80 percent of men and women had attended college and bachelor's degrees were held by 48 percent of men and 59 percent of women). Furthermore, among those who were working and not in school, Southeast Asian men were more likely to have earnings under $15,000 (42 percent versus about 30 percent at ages 23 to 25).

Family formation was particularly low among Asians. Among Asian men ages 19 to 21, only 10 percent had formed a family and the share was only a few percentage points higher for Asian women. Among Southeast Asian women, the share with a family at ages 23 to 25 was only 22 percent and among other Asian women the share was 17 percent. Among Asian men ages 23 to 25, the shares were 4 to 5 percent lower than for women.

3. Determinants of Native Outcomes

For U.S.-born youth, we use the National Educational Longitudinal Study (NELS) to study factors that contribute to differences in outcomes by racial and ethnic group.[9] We begin with models of high school completion, then consider college attendance, completion of a bachelor's degree, employment and earnings, and finally, teen births. Our purpose here is to explore the hypothesis that racial and ethnic differences in youth outcomes are primarily explained by differences in family and school resources.

The NELS is a nationally representative sample of eighth-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 for several reasons. First, because the study is longitudinal, we observe characteristics (e.g., family income) at early ages that can then be related to outcomes at later ages. Second, the NELS questionnaire has a wide range of topics on school and work activities, parental characteristics, and school resources. Finally, the NELS covers enough years that we can observe young adult outcomes. For this last 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.

Outcome measures from the NELS are not defined exactly the same as those used in the previous section based on Census 2000. In general, the NELS has more detailed information for the specific cohort. For example, to measure high school completion in NELS we use high

[9] We cannot replicate this analysis for a representative sample of the foreign-born, because foreign-born youth who did not attend 8th grade in the United States are not represented in the NELS. For the NELS sample, we actually include all U.S.-raised youth. That is, immigrants who arrived before the age of 5 years are included in the sample for this analysis. Grogger and Trejo (2002) examine the representativeness of the NELS relative to the Current Population Survey. They conclude that the NELS is reasonably representative of U.S.-born and "near-native" (those arriving before age 5) whites, blacks, and Mexican Americans. They do not consider Asian Americans.

school diploma received by 1994 (recall the sample is based on 8th graders in 1988). By comparison, using Census 2000 we measured high school diploma or GED received for youth ages 19 to 21 (some of whom were enrolled in high school at the time of the Census). The NELS measures enrollment in post-secondary education broadly defined whereas the Census measures "college." For teen births, NELS has information on age at first birth. In Census 2000 we considered the presence of a co-resident child. Therefore, the magnitudes of unadjusted group differences as measured in NELS are not directly comparable to those shown in the previous sections based on the Census. Due to small sample sizes, we do not examine outcomes for Hispanics other than Mexican Americans, Native Americans, or Southeast Asians.

In order to explore differences in outcomes across groups, we model the probability of achieving an outcome, such as high school completion, using a linear probability model.[10] We use whites as our reference group. However, we present the results in a format that allows for comparisons between any groups. Estimated coefficients on indicator variables for each of the three other groups (blacks, Mexican Americans, and Asians) describe whether the outcome is more common or less common for that group relative to whites.

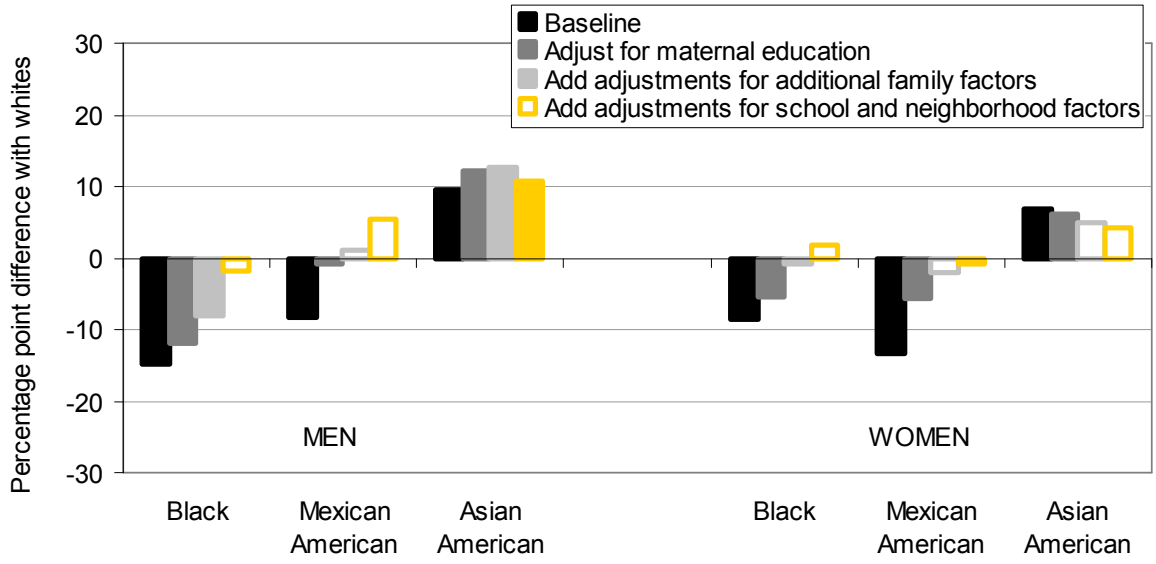
To provide a baseline, our first "model" includes only the racial and ethnic indicator variables. The purpose of this model is to estimate the size of racial and ethnic gaps in the NELS data for direct comparison to the results from our next model, which includes controls for maternal education. The third model adds controls for family resources: family income in the 8th grade, being raised by a single parent, number of siblings, and family size. The fourth model

[10] The use of a linear probability model avoids the distributional assumptions associated with a logit or probit model (Wooldridge, 2002). We used a boot-strap method for calculating standard errors in all linear probability models. We also estimated the models using a logit specification. In general, we found the coefficients in the linear model to be of similar magnitude to the marginal effects of the logit model, but the logit model resulted in lower standard errors (more statistical significance) in some cases.

includes school and neighborhood factors: whether the school offers vocational education, the share of students enrolled in the free lunch program, and neighborhood poverty level.

Figure 2 presents the model results for receiving the high school diploma by the sixth year after 8th grade (see appendix tables for full model results). Compared to white men, black men were 15 percentage points less likely to complete high school. When we adjust for maternal education, black men have 12 percent lower completion. In other words, maternal education and any factors associated with maternal education (such as paternal education, family income, family size, or even school and neighborhood characteristics) explain about a fifth of the lower high school completion rates of black men. When we further adjust for additional family resources, the gap falls to 8 percent. After adjusting for school and neighborhood characteristics, the gap is eliminated. Compared to white women, black women were 8 percentage points less likely to finish high school. When we adjust for maternal education, the gap falls to 5 percentage points. When we further adjust for additional family resources, the gap is eliminated. Thus, the lower high school completion rates of blacks relative to whites can be fully explained by lower family, school, and neighborhood resources.

Figure 2. High School Completion Relative to Whites



Source: Authors' calculations from NELS.
Notes: High school completion defined as diploma by 1994 (six years after 8th grade). Figure shows percentage point differential with whites. White-filled bars signify difference with whites is not statistically significant at the 10 percent level.

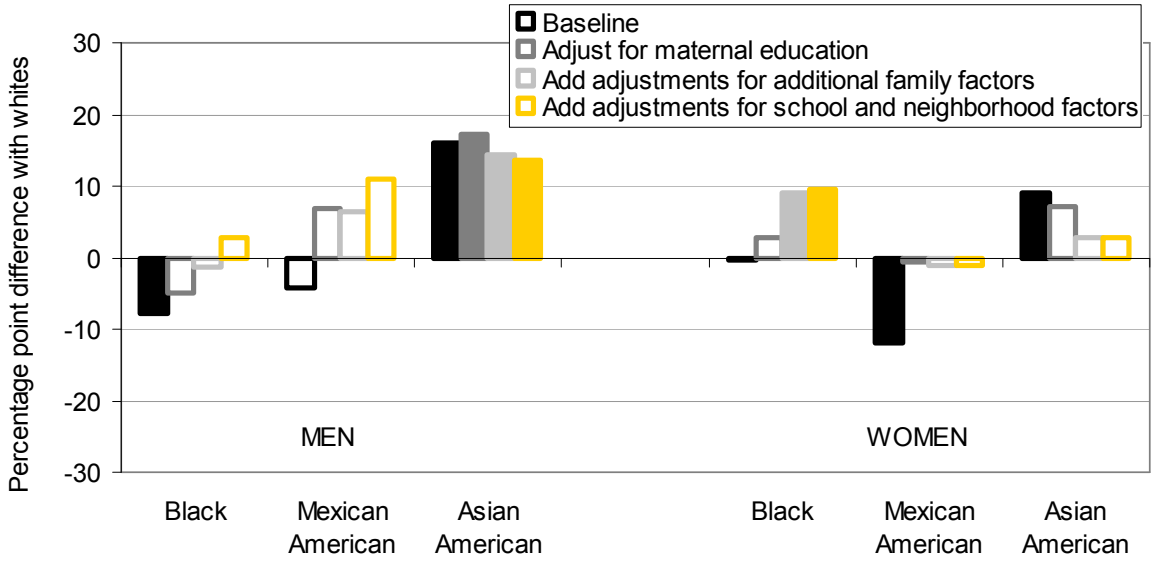
Compared to white men, Mexican American men were 8 percentage points less likely to complete high school. When we adjust for maternal education, Mexican American men have the same completion rates as white men. Compared to white women, Mexican American women were 14 percentage points less likely to finish high school. When we adjust for maternal education, the gap falls to 6 percentage points and when we further adjust for additional family factors, the gap is eliminated. Thus, 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.

Asian American men were 9 percentage points more likely to complete high school compared to white men. Adjusting for family, school, and neighborhood factors increases the size of the Asian American gap, suggesting that Asian American men have slightly lower family resources, but nevertheless attain high school diplomas at a higher rate. Asian American women were 7 percentage points more likely than white women to complete high school, and the gap is

diminished to 4 percentage points after adjusting for family, school, and neighborhood characteristics.

We investigated the determinants of attending any form of postsecondary institution and of completing a bachelor's degree by 26 years of age (Figures 3 and 4).[11] The lower postsecondary enrollment of black men relative to white men can be explained by maternal education (and associated factors). However, the lower rate of bachelor's degrees among black men can be explained only partially. After adjusting for family, school, and neighborhood factors, the gap with whites fall from 18 to 6 percentage points. Black women were not less likely than white women to enroll in postsecondary education but they were 14 percentage points less likely to complete a bachelor's degree – a gap that is eliminated when we adjust for family resources.

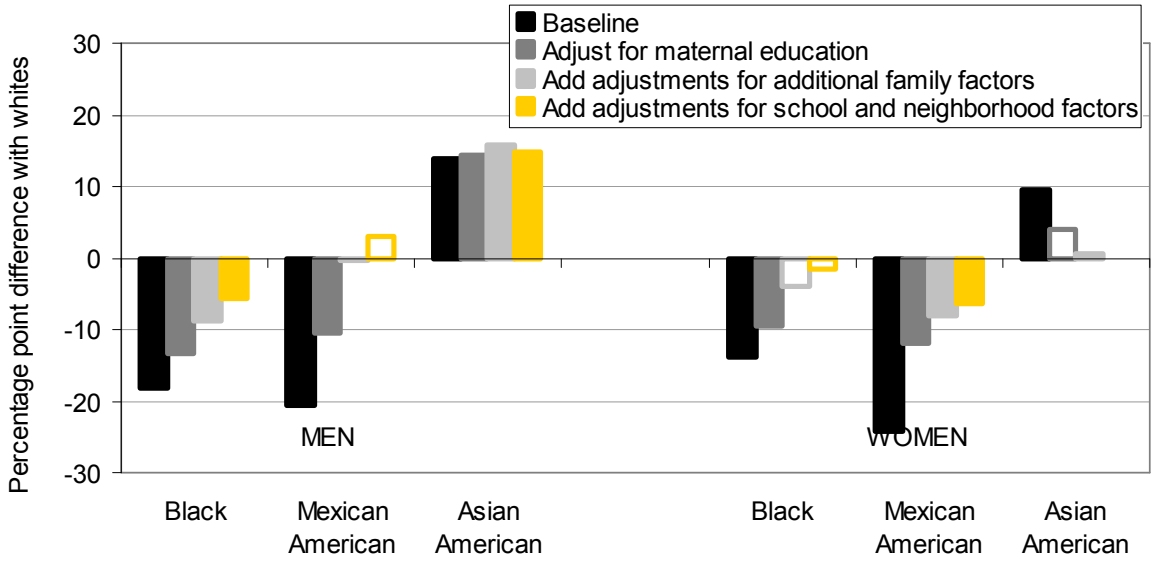
Figure 3. Postsecondary Enrollment Relative to Whites



Source: Authors' calculations from NELS.
Note: See notes to Figure 2.

[11] For clarity, we refer to the NELS surveys in terms of the typical age of respondents. For example, for college attendance, we identify any attendance as of the 2000 survey, when most respondents were 26 years of age.

Figure 4. Bachelor's Completion Relative to Whites



Source: Authors' calculations from NELS.
Note: See notes to Figure 2.

Mexican American men were just as likely to enroll in postsecondary education as were white men (note that this is all postsecondary education and not necessarily college). However, they were 21 percentage points less likely to achieve a bachelor's degree. Similar to high school completion, the college completion gap can be explained by family resources. Mexican American women were 12 percentage points less likely to enroll in postsecondary education than were white women, a gap that is eliminated after adjusting for maternal education. The gap in college completion for Mexican American women falls from 24 to 12 percentage points after adjusting for maternal education and further to 6 percentage points after adjusting for additional family, school, and neighborhood factors.

Asian American men were more likely to enroll in postsecondary education and to complete a bachelor's degree relative to white men and the gap is not substantially explained by any of the factors in our models. In contrast, Asian American women were about 10 percentage

points more likely to enroll and complete – gaps which are eliminated when we adjust for maternal education.

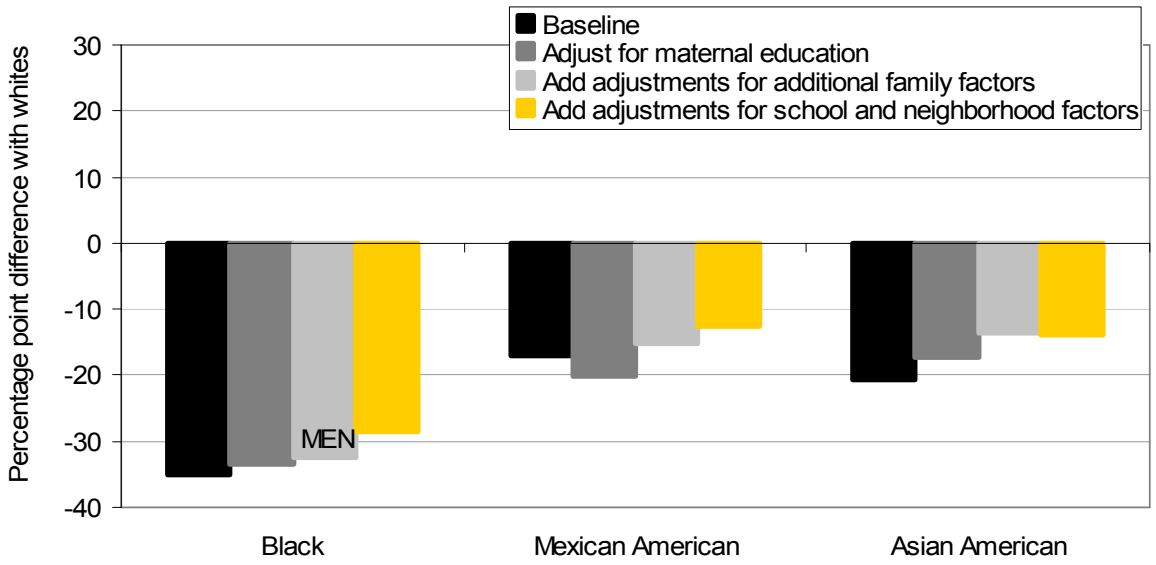
For U.S.-born youth who attend less than two years of postsecondary education, we measure a successful transition to work based on consistent workforce participation since high school and substantial earnings at age 25. Specifically, we define a successful transition as having worked at least some in the two years after high school (1992-1994), working fulltime for at least six months during 1997, 1998, and 1999, and having annual earnings in the top two-thirds of workers in 1999 ($21,000 and higher for men and $14,000 and higher for women). Using this definition of successful transition, almost 60 percent of men and almost 50 percent of women were successful. Because we include only youth with less than two years of postsecondary education, the results are affected by selection bias: Those not going on to postsecondary education are likely to have low levels of unobserved skills. In particular, for Asian Americans, this is a very small share of the population. In contrast, for blacks and Mexican Americans, the sample selection is not likely to be greater than for whites as whites are more likely to have enrolled in two years of postsecondary education.

Among women, there were no substantial gaps in successful transitions to work between whites, Mexican Americans, blacks, and Asian Americans.[12] Among men, each of the three other groups is substantially less likely than white men to successfully transition to work and only a fraction of the gaps (less than one-third) can be explained by family, school, and neighborhood characteristics (Figure 5). For black and Mexican American men, these results are in striking contrast to the results for educational attainment in which adjustments for these factors explained most, if not all, of the gaps with whites. In general, the factors in our models do not explain very much of the variation in the successful transition to work – between or

[12] For women, the unadjusted gaps with whites were small and not statistically significant.

within racial and ethnic groups. Whereas the adjusted R-squared in the high school model was 26 percent and in the college completion model was 21 percent, it was only 5 percent in the successful transition to work model.

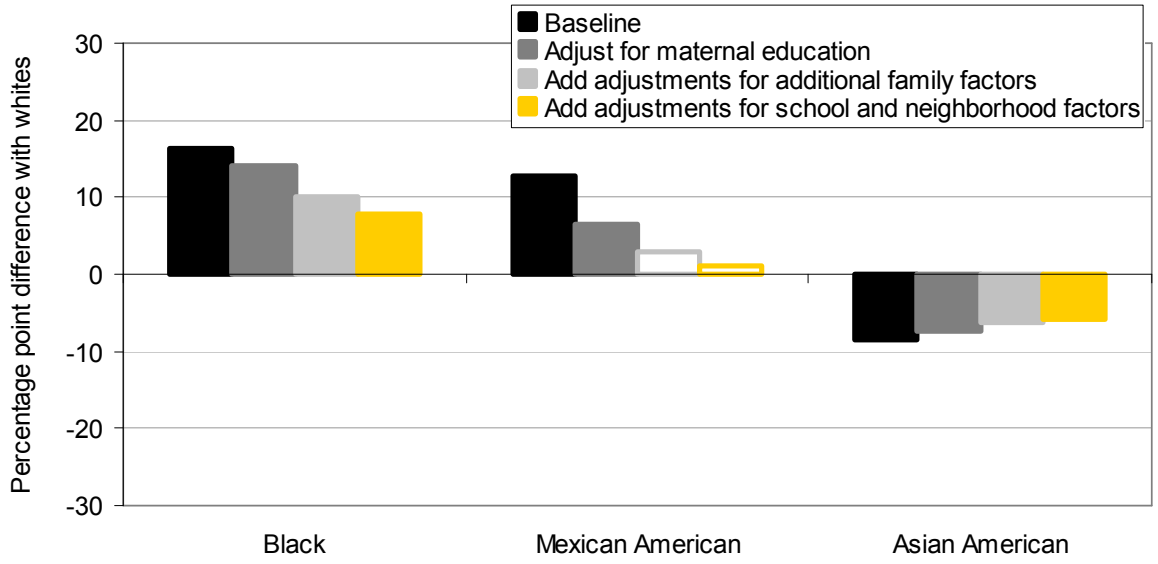
Figure 5. Successful Transition to Work Relative to Whites



Source: Authors' calculations from NELS.
Notes: See notes to Figure 2. Figure includes young adults who have less than two years of postsecondary education. See text for definition of "successful transition."

Teen birth was substantially more common for black women than for white women. When we adjust for family, school, and neighborhood factors, the gap falls from 16 to 8 percentage points (Figure 6). Mexican American women were 13 percentage points more likely to have a teen birth than were white women – a gap that is eliminated when we adjust for family resources. Asian American women were 9 percentage points less likely than white women to have a teen birth. The Asian American gap falls to 6 percentage points when we adjust for all factors.

Figure 6. Teen Fertility Relative to Whites



Source: Authors' calculations from NELS.
Notes: See notes to Figure 2.

The coefficient estimates for our control variables were generally as expected.[13] We find that family income and maternal education are generally positively associated with good youth outcomes. Being raised by a single parent and having many siblings tend to be associated with worse outcomes. Interestingly, youth who were raised in families in which English was not spoken in the home tended to have higher educational attainment, controlling for other factors. In a separate analysis, we found that for Mexicans, whites, and Asians, the children of immigrants tended to have higher educational attainment than the children of natives, controlling for other factors. This may reflect selectivity of immigrants. For example, although Mexican immigrants tend to have low maternal education and low family income, those who choose to raise their young children in the United States may place a higher value on education than do similar U.S. natives.

As a control for differences in school characteristics, we include "high school offers vocational education" in the final model. We find that attending a school that offers vocational

[13] See Haveman and Wolfe (1995) for a review of the literature on the determinants of youth outcomes.

education is associated with a higher probability of completing high school by 3 to 4 percentage points (model results in appendix). We find no statistically significant impact on the probability of attending college. However, we find that youth who attended a high school that offered vocational education are less likely to complete a bachelor's degree (7 to 9 percentage points). Attending a high school with vocational education courses does not have a statistically significant impact on successful transitions to work. We also find no impact on the chances of teen motherhood.

The preceding analysis is not meant as an evaluation of vocational education. The estimated relationships are not necessarily causal effects of vocational education but rather they may reflect other characteristics associated with schools that offer vocational education. For example, if vocational education is more common in high schools that traditionally have fewer students moving on to a bachelor's degree, this may explain the negative association between attending such a high school and completing a bachelor's degree. The effects of vocational education course-taking on academic achievement and earnings have been evaluated in previous research. In a summary of that work, the U.S. Department of Education (2004) concludes that taking a high school vocational education course increases earnings (by about 2 percent at age 26) but has little or no effect on academic achievement.[14]

[14] This evaluation did not include separate evaluations by race and ethnicity. See Haimson and Bellotti (2004) for a discussion of participation in work-based learning activities during high school including participation rates for blacks, Hispanics, and whites.

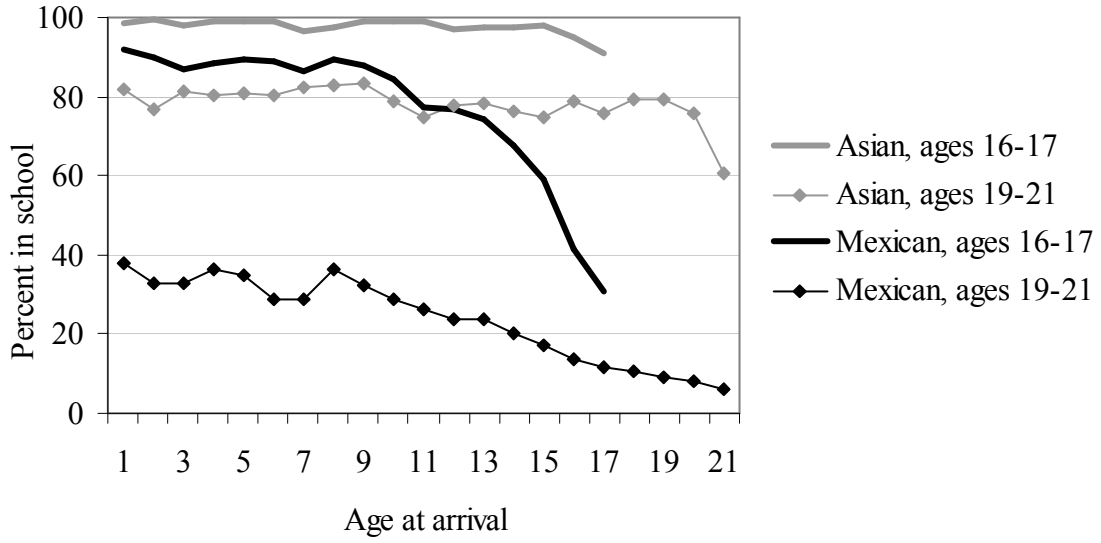
4. Understanding Immigrant Outcomes

We examine the transition to work separately for immigrant youth because their patterns of transition differ from those of natives from the same ethnic group. Furthermore, to understand immigrant transitions we must consider an additional factor: age at arrival in the United States (Portes and Rumbaut, 1996; Hill, 2004). We focus on the two largest immigrant youth groups – Mexicans who comprise 38 percent of immigrant youth ages 13 to 24 and Asians, other than those from the refugee-sending countries of Southeast Asia, who make-up 15 percent of immigrant youth.

Analysis by age of arrival is important because school and work activities differ by age of arrival, especially for Mexican immigrants. Among Mexican youth, arriving before age 14 is fairly uncommon. The share who arrived at each age increased steeply after age 15, with large shares arriving at ages 17 and later.[15] Among Mexican immigrants who arrived before the age of 10, school enrollment was similar to that of U.S.-born Mexican Americans -- roughly 90 percent for those ages 16 and 17 and about 35 percent for those ages 19 to 21 (Figure 7). For those arriving after age 10, school enrollment declines steadily with age at arrival

[15] Age at arrival patterns based on authors' calculations from Census 2000 for age cohorts 19-21, 24-27, and 30-33.

Figure 7. School Enrollment Among Foreign-born Mexicans and Asians by Age of Arrival, 2000 (percentage)



Source: Author's calculations from Census 2000, (PUMS, 5 percent).
Notes: For youth ages 16 and 17, the share enrolled includes those who have not finished high school. For those ages 19 to 21, the share includes those who have not finished a bachelor's degree.

For Asian youth, arriving before age 14 is more common than for Mexican youth. The share that arrived at each age increases moderately after age 15 and increases steeply around age 20. Among Asian immigrants ages 16 and 17, school enrollment was similar to U.S.-born Asians at just under 100 percent for those arriving by age 15. A small drop for those arriving at ages 16 and 17 may reflect difficulty enrolling in school upon arrival. For older Asian immigrants, ages 19 to 21, school enrollment was just over 80 percent for those arriving before age 10 and just under 80 percent for those arriving after age 10. For U.S.-born Asians, school enrollment at ages 19 to 21 was slightly higher at about 85 percent.

We examine the transition from school-age to working age for immigrants by age of arrival in four groups – those arriving by age 5, those arriving between ages 12 and 14 (inclusive), those arriving between ages 16 and 18, and those arriving between ages 19 and 22. Within each group, we interpret changes with age as representing transitions. However, for

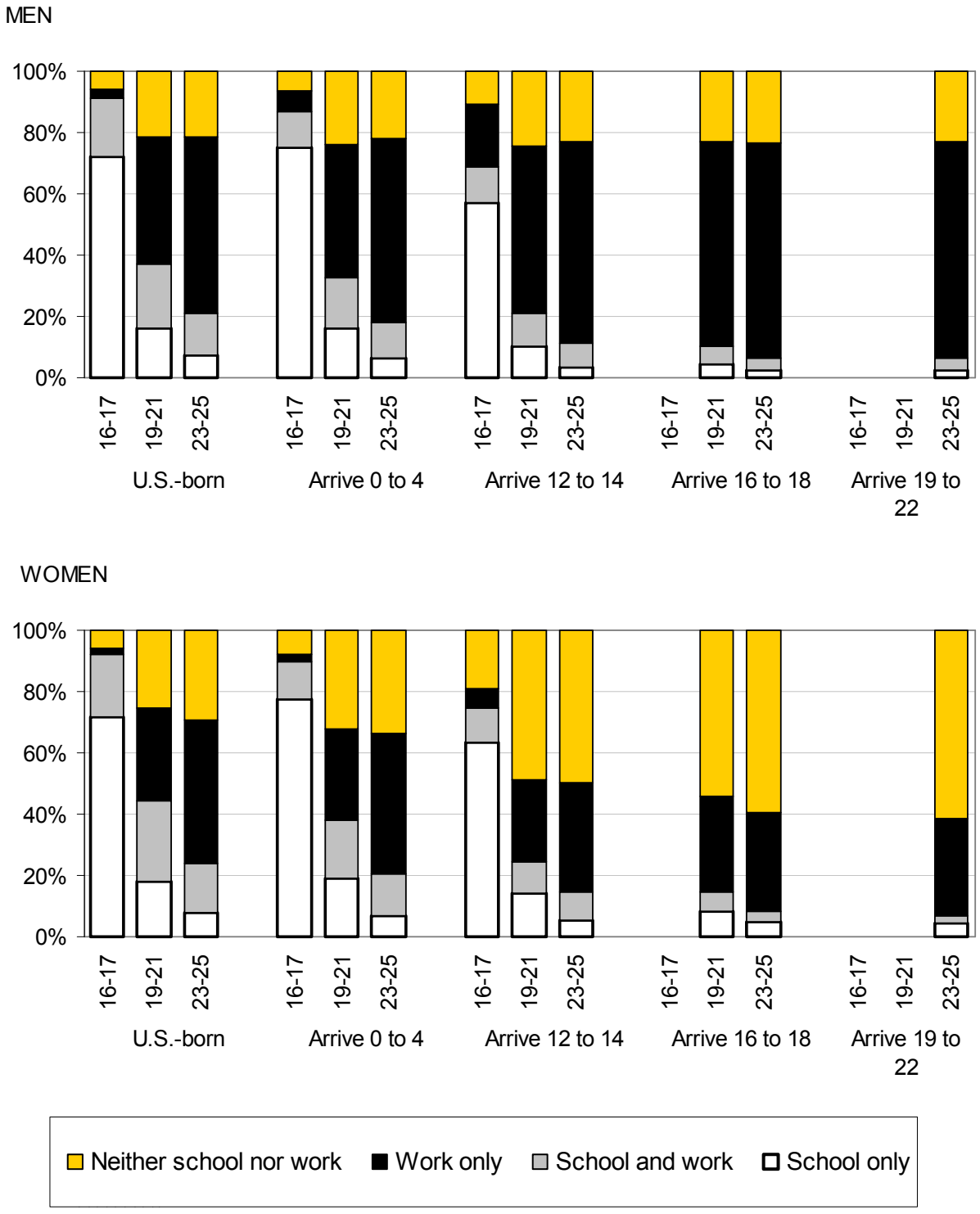
immigrants the cohort analysis is more problematic due to selective return migration. In addition, selection into migration or return migration may differ by period. For example, Borjas (1995) finds that the entry wage of immigrants arriving prior to 1980 was higher than that of immigrants arriving in the 1980s.[16]

Similar to U.S.-born Mexicans, immigrant men from Mexico fit the "low school, moderate work" pattern of transition (Figure 8). For immigrant men arriving at older ages, the lower share enrolled in school was matched by a higher share in work, so that the share in neither school nor work was about the same, roughly 20 percent, for natives and immigrants, regardless of age at arrival. Mexican women follow a markedly different pattern; those arriving at older ages had both a lower share in school and a lower share working. At ages 19 to 21, about half of those arriving in their teens were in neither school nor work. Most of these young women who were not working nor in school had already formed a family. About half of Mexican women arriving in their teens were married and/or raising a child by ages 19 to 21 (Table 3).

For men and women from Mexico, school enrollment among immigrants who arrived as young children was only slightly below that of Mexican Americans. However, they were substantially less likely to attain a high school diploma or attend college (Table 3). Those arriving at older ages had even lower levels of educational attainment.

[16] Butcher and DiNardo (2002) demonstrate the importance of the U.S. wage structure and the minimum wage in explaining immigrant wages in different periods (as opposed to simply immigrant selection).

Figure 8. School and Work Activities Among Mexican Youth by Age of Arrival, 2000



Source: Authors' calculations from Census 2000 (PUMS, 5 percent).
Notes: The full sample has over 51,000 Mexican immigrant observations (combining men and women across the three age groups). The smallest subsample, Mexican women ages 16 and 17 who arrived before age 5, has 804 observations. See Appendix Table 2 for statistical significance.

Table 3. Youth Outcomes, Mexican Men and Women by Age at Arrival, 2000 (percentage)

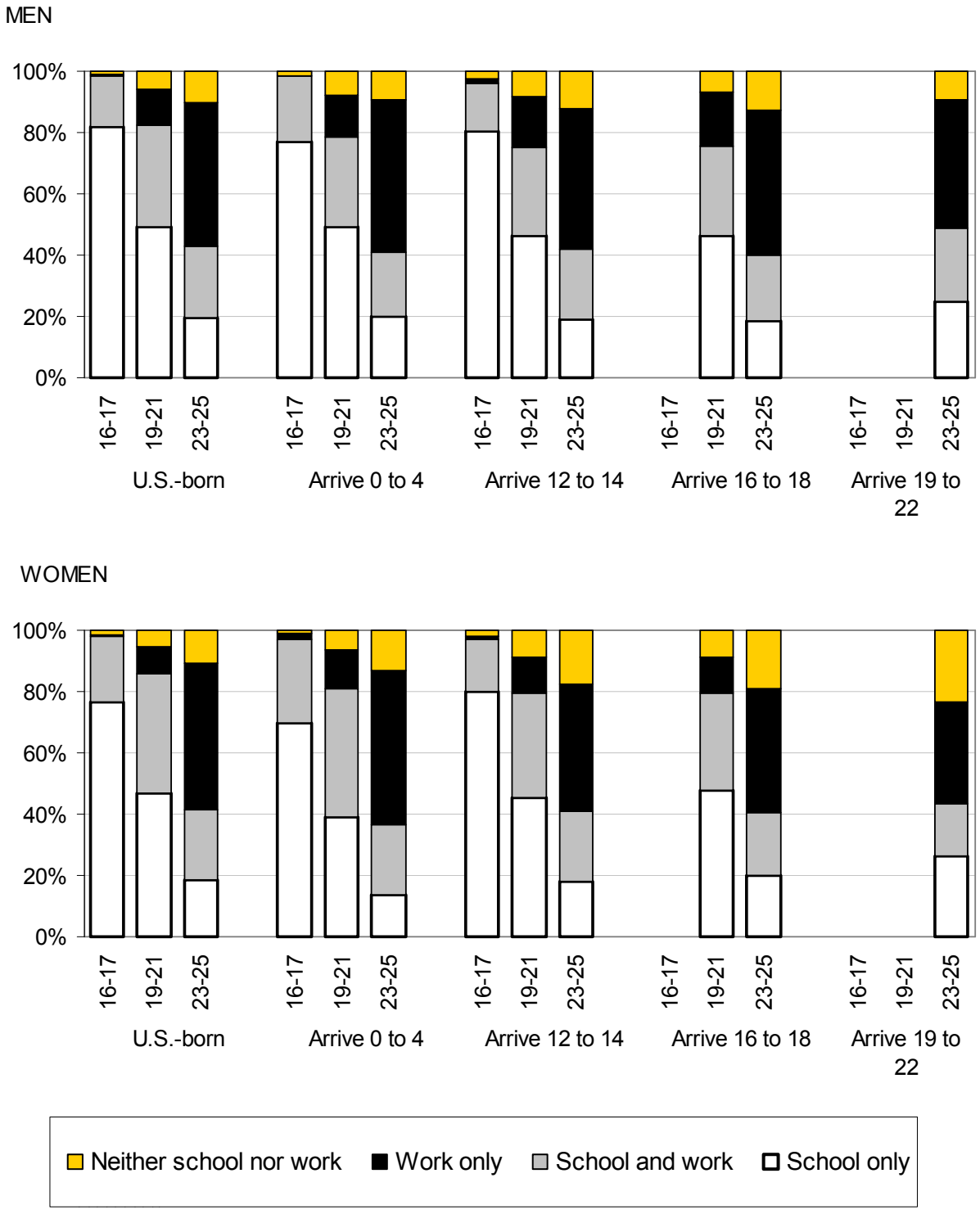
	U.S.-born	Arrived 0 to 4	Arrived 12 to 14	Arrived 16 to 18	Arrived 19 to 22
Men, ages 16-17					
Has child	2	2	2		
Men, ages 19-21					
HS diploma	65	54*	38*	24*	
Some college	29	20*	10*	5*	
Earn <$15,000	64	62	59*	60*	
Married, no child	9	11*	13*	14*	
Married, has child	5	6	8*	8*	
Single, has child	4	3	3*	2*	
Men, ages 23-25					
HS diploma	70	61*	42*	27*	29*
Some college	39	30*	16*	8*	9*
Bachelor's degree	7	6*	2*	1*	2*
Earn <$15,000	37	37	43*	45*	50*
Married, no child	16	15	20*	20*	20*
Married, has child	19	23*	23*	29*	22*
Single, has child	5	5	6	5*	3*
Women, ages 16-17					
Has child	5	6	6*		
Women, ages 19-21					
HS diploma	73	64*	44*	28*	
Some college	39	31*	16*	7*	
Earn <$15,000	76	76	78*	80*	
Married, no child	9	12*	15*	20*	
Married, has child	12	16*	23*	28*	
Single, has child	9	6*	7*	4*	
Women, ages 23-25					
HS diploma	77	67*	46*	28*	33*
Some college	48	40*	21*	8*	11*
Bachelor's degree	11	8*	3*	1*	3*
Earn <$15,000	51	52	69*	72*	75*
Married, no child	12	15*	14*	13*	19*
Married, has child	29	36*	39*	53*	50*
Single, has child	15	12*	11*	7*	5*

Source: Authors' calculations from Census 2000 (PUMS, 5 percent).
Notes: Stars indicate the difference with U.S.-born Mexicans is statistically significant at the 10 percent level. See notes to Table 2.

For immigrant youth from Mexico, many arrive after the age of 15 and a large share do not appear to enroll in school in the United States. Their educational attainment is therefore quite low, is strongly related to experiences (such as education) in the origin country, and the determinants of migration to this country. To increase educational attainment among Mexican immigrants in the United States, youth policies may need to promote "dropping in" to high school as compared to reducing "dropping out." Reaching these youth with training or health programs may need to focus on targeting the workplace rather than schools and neighborhoods.

Immigrants from Asia exhibit the "high school, moderate work" pattern as do U.S.-born Asians (Figure 9). School enrollment was high at about 40 percent at ages 23 to 25 and tended to be slightly lower for Asian immigrants relative to natives. However, Asian men arriving at ages 19 to 22 had the highest level of enrollment (49 percent). Nevertheless, Asian immigrants arriving in their teen years had substantially lower educational attainment than did U.S.-born Asians (Table 4). Asian women arriving in their teenage years were more likely to be in neither school nor work (about 20 percent) than were U.S.-born Asian women (just over 10 percent). They were also much more likely to have formed a family – over 30 percent had a family by age 23 to 25 compared to only 17 percent of U.S.-born Asians (Table 4).

Figure 9. School and Work Activities Among Asian Youth by Age of Arrival, 2000



Source: Authors' calculations from Census 2000 (PUMS, 5 percent).
Notes: The full sample has almost 16,500 Asian immigrant observations (combining men and women across the three age groups). The smallest subsample, Asian women ages 16 and 17 who arrived at ages 12 to 14, has 439 observations. See Appendix Table 2 for statistical significance.

Table 4. Youth Outcomes, Asian Men and Women by Age at Arrival, 2000 (percentage)

	U.S.-born	Arrived 0 to 4	Arrived 12 to 14	Arrived 16 to 18	Arrived 19 to 22
Men, ages 16-17					
Has child	1	1	1		
Men, ages 19-21					
HS diploma	93	93	85*	82*	
Some college	71	66*	56*	51*	
Earn <$15,000	65	66	55*	60*	
Married, no child	9	3*	6*	6*	
Married, has child	1	0	0	1	
Single, has child	0	0	1	1	
Men, ages 23-25					
HS diploma	96	97*	91*	88*	92*
Some college	83	85	75*	70*	78*
Bachelor's degree	48	51	37*	36*	44*
Earn <$15,000	27	28	26	32*	28
Married, no child	9	7	10	16*	13*
Married, has child	3	3	3	4	2*
Single, has child	1	1*	1	1	1*
Women, ages 16-17					
Has child	1	1	1		
Women, ages 19-21					
HS diploma	95	95	93*	84*	
Some college	77	75	63*	58*	
Earn <$15,000	65	66	66	62	
Married, no child	10	7*	9	10	
Married, has child	1	1	3*	3*	
Single, has child	1	1	2	1	
Women, ages 23-25					
HS diploma	97	97	95*	92*	92*
Some college	89	87	81*	75*	77*
Bachelor's degree	59	54	43*	40*	42*
Earn <$15,000	28	32*	28	34*	44*
Married, no child	10	15*	16*	18*	24*
Married, has child	5	7*	12*	12*	17*
Single, has child	2	4	3	1*	2*

Source: Authors' calculations from Census 2000 (PUMS, 5 percent).
Notes: Stars indicate the difference with U.S.-born Asians is statistically significant at the 10 percent level. See notes to Table 2.

For immigrants, we cannot model the family and other factors associated with young adult outcomes because large data sets with substantial numbers of immigrants, such as the Census and Current Population Survey, do not have information on childhood family income or parental education. However, for children who are co-resident with their parents, we can examine the family resources that we found to be associated with good educational outcomes for natives: high maternal education, high family income, having been raised by married parents, and few siblings. Compared to Mexican Americans, Mexican immigrants are less likely to have a mother who has completed high school and they are less likely to be in families living above poverty (Table 5). These factors likely contribute to the lower educational attainment of Mexican immigrants relative to Mexican Americans. U.S.-born Asians and Asian immigrants have much higher family resources than do Mexican natives and immigrants. Among Asians who arrived as young children, family resources nearly match those of Asian Americans, which is consistent with the similar educational outcomes between these two groups (Table 4). For Asian immigrants arriving in their early teens, family resources were slightly lower as were youth educational outcomes.

Table 5. Family Resources Among Mexican and Asian Immigrant Youth, Ages 13 to 18, 2000 (percentage)

	Mother has high school diploma	Mother has bachelor's degree	Family income above poverty	Parents married	Has 2 or fewer siblings
Mexican American	51	6	77	64	84
Mexican, arrived 0 to 4	20*	3*	70*	74*	71*
Mexican, arrived 12 to 14	18*	3*	65*	59*	82*
Asian American	86	47	92	81	95
Asian, arrived 0 to 4	87	46	91	83*	94*
Asian, arrived 12 to 14	75*	36*	79*	80	94*

Source: Authors' calculations from Census 2000 (PUMS, 5 percent).
Notes: Stars indicate the difference with U.S-born children of the same ethnicity is statistically significant at the 10 percent level. To limit selectivity of the sample (which requires co-residence with parents), the sample includes only youth under age 18 and, among immigrants, only those who arrived before age 15.

5. Summary and Policy Implications

Several important findings emerge from this descriptive analysis of youth outcomes across racial, ethnic, and immigrant groups. In this final section we summarize the major findings and discuss their implications for youth policy.

The youth population is becoming increasingly racially and ethnically diverse. We argue that the for youth programs to be successful, they must meet the needs of this diverse population. The share of U.S.-born whites in the youth population fell from 75 percent to 61 percent between 1980 and 2000. The share of U.S.-born blacks held steady at 13 percent. In contrast, the share of Hispanics grew from 8 to 16 percent and is expected to grow to 22 percent by 2020. Among Hispanics, growth in the Mexican and Mexican American population has been particularly strong – growing from 5 percent to 10 percent of the youth population. The share of Asians has also grown substantially from 2 percent to 4 percent and is expected to grow to 7

percent by 2020. Among Asians, growth has been particularly strong among those from Southeast Asian refugee-sending countries, who currently make up 20 percent of Asian youth.

Racial and ethnic groups experience different patterns in the transition to work. The patterns of activities during the transition from school-age to working-age suggest that racial and ethnic groups may differ in their need for and ability to use different types of programs. For example, relative to black men, Mexican American men have low rates of high school completion, higher levels of work activity, and higher shares raising children before age 25. To meet the needs of this group, youth training and employment programs may need to have a greater focus on basic skills learned in high school with flexible schedules that allow participants to meet work and family responsibilities.

The transition to work for immigrants is distinct from that of U.S.-born youth. To understand youth outcomes, it is important to separate youth by nativity. For example, 91 percent of Mexican American males ages 16 to 17 are in school – a share very similar to that of blacks. However, if Mexican immigrants are included, the share drops to 82 percent. Among Mexican immigrants, many arrive after the age of 15 and a large share do not appear to enroll in school in the United States. For Mexican immigrants, training and other programs may need to focus on targeting the work-place rather than schools.

Within major racial and ethnic groups, subgroup variation in the transition to work is substantial. Among U.S.-born youth, we find fairly similar patterns of transition for Mexican Americans and Puerto Ricans with low rates high school completion, low college attendance, and low earnings. Cuban Americans have substantially higher levels of educational attainment and higher earnings. Growth in the Hispanic population is likely to be dominated by growth of the Mexican American (and Central American) population, suggesting a growing need for

programs that emphasize educational attainment and improved earnings capacity. Although Asian groups tend to have relatively high earnings, a large share of U.S.-born Southeast Asians have low earnings.

Among youth with early labor market difficulties, minorities are a particularly large share. Hispanics make up 28 percent of youth who are neither in school nor working at ages 23 to 25 years. Blacks make up another 20 percent. Among youth who are working with low earnings at ages 23 to 25 years, 22 percent are Hispanic and 16 percent are black. Thus, programs that focus on improving outcomes for youth who are likely to have early labor market difficulties need to find effective strategies for Hispanic and black youth.

Differences in family resources and school characteristics explain most of the lower educational attainment of black and Mexican American youth relative to white youth. Adjusting for family and school factors, the black and Mexican American gaps with whites in high school and bachelor's degree completion tend to be much smaller and are often statistically insignificant. The results suggest that the youth most at risk of poor educational outcomes can be identified from characteristics observed early in the lifecourse. Furthermore, programs targeted toward low resource families and schools potentially can have a larger impact on minority youth and thus reduce racial and ethnic gaps. Finally, due to the strong connection between family resources and youth outcomes, improving critical outcomes for these future parents will likely pay off for the next generation of minority youth.

Differences in family resources and school characteristics do not explain much of the racial and ethnic differences in the successful transition to work for U.S.-born men who do not go on to college. In particular, among men who do not go on to college, those who are black, Mexican American, and Asian are substantially more likely than white men to have

inconsistent employment and low earnings. Adjusting for differences in family background and school characteristics reduces the gaps only slightly. The results suggest that early work outcomes are not determined primarily by the socioeconomic conditions of families and schools observed in our data. The factors that explain these gaps remain unknown but could include other measures of school quality, local economic conditions, social networks, or discrimination.

We have used to the descriptive analysis in this paper to argue that the increasing diversity of the youth population has important implications youth policy. The analysis points to the value of evaluating whether specific programs are effective for minority youth, especially blacks and increasingly Hispanics More broadly, which specific public investments are more likely to have strong positive impacts on the future lives of disadvantaged minority youth?

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Appendix Table 1: School and Work Activities, U.S.-born Men and Women (percentage)

	White	Cuban	Black	Native Amer.	Mex.	Puerto Rican	Other Hisp.	SE Asian	Other Asian
Men, ages 16-17									
School only	62	70*	76*	73*	72*	73*	73*	77*	82*
School and work	33	23*	17*	16*	19*	19*	20*	19*	16*
Work only	2	2	1*	3	3*	2	2	1*	1*
No school nor work	3	5*	6*	8*	6*	6*	5*	2*	1*
Men, ages 19-21									
School only	23	22	24*	18*	16*	20*	22*	38*	49*
School and work	28	35*	15*	15*	21*	17*	23*	30	33*
Work only	38	30*	28*	36*	41*	36*	35*	20*	12*
No school nor work	11	13	33*	31*	21*	27*	21*	11	6*
Men, ages 23-25									
School only	6	9*	8*	6	7*	6	9*	20*	19*
School and work	15	19*	10*	10*	14*	11*	14*	21*	23*
Work only	68	57*	47*	54*	57*	57*	54*	49*	47*
No school nor work	11	14	35*	30*	22*	26*	24*	10	10
Women, ages 16-17									
School only	59	71*	74*	69*	72*	71*	72*	72*	77*
School and work	36	25*	20*	20*	20*	21*	21*	23*	21*
Work only	2	2	1*	2	2	2	2*	2	0*
No school nor work	3	3	5*	9*	6*	6*	5*	3	2*
Women, ages 19-21									
School only	23	30*	24*	20*	18*	21*	23	37*	47*
School and work	36	38	22*	18	26*	23*	28*	39	39*
Work only	29	20*	27*	29	30*	29	26*	16*	9*
No school nor work	13	12	27*	32	25*	27*	22*	9*	5*
Women, ages 23-25									
School only	6	11*	8*	8*	8*	8*	9*	18*	19*
School and work	16	23*	14*	12*	16	12*	17*	29*	23*
Work only	60	53*	49*	47*	47*	51*	45*	42*	48*
No school nor work	18	13*	28*	34*	29*	29*	29*	11*	11*

Source: Authors' calculations from Census 2000 (PUMS, 5 percent).
Notes: Stars indicate the difference with whites is statistically significant at the 10 percent level. See notes to Figure 2.

Appendix Table 2: School and Work Activities, Mexican and Asian Immigrants (percentage)

	Mexican Youth					Asian Youth				
	U.S.-born	Arr. 0 to 4	Arr. 12 to 14	Arr. 16 to 18	Arr. 19 to 22	U.S.-born	Arr. 0 to 4	Arr. 12 to 14	Arr. 16 to 18	Arr. 19 to 22
Men, ages 16-17										
School only	72	75*	57*			82	77*	81		
School and work	19	12*	11*			16	22*	16		
Work only	3	7*	20*			1	0	1		
No school nor work	6	6	11*			1	1	2		
Men, ages 19-21										
School only	16	16	10*	5*		49	49	46	46*	
School and work	21	16*	11*	6*		33	29*	29*	29*	
Work only	41	44	54*	67*		12	14	17*	17*	
No school nor work	21	24	25*	23*		6	8*	8*	7	
Men, ages 23-25										
School only	7	6	3*	2*	2	19	20	19	19	25*
School and work	14	12*	8*	4*	4	23	21	23	22	24
Work only	57	60	66*	70*	71	47	50	46	47	42*
No school nor work	22	22	23	23*	23	10	9	12	13*	9
Women, ages 16-17										
School only	72	78*	63*			77	70*	80		
School and work	20	12*	11*			21	27*	17		
Work only	2	2	7*			0	2*	1		
No school nor work	6	8*	19*			2	1	2		
Women, ages 19-21										
School only	18	19	14*	8*		47	39*	46	48	
School and work	26	19*	10*	6*		39	42*	34*	32*	
Work only	30	30	27*	31		9	12*	12*	12*	
No school nor work	25	32*	49*	54*		5	6	9*	9*	
Women, ages 23-25										
School only	8	7	5*	5*	4	19	13*	18	20	26*
School and work	16	14*	9*	4*	3	23	23	23	21	17*
Work only	47	46	36*	32*	32	48	50	42*	40*	33*
No school nor work	29	34*	50*	60*	61	11	13*	18*	19*	24*

Source: Authors' calculations from Census 2000 (PUMS, 5 percent).
Notes: Stars indicate the difference with U.S-born youth of the same ethnicity is statistically significant at the 10 percent level. See Figures 8 and 9.

Appendix Table 3: Descriptive Statistics for NELS Data

	Females		Males	
	Mean	Std. Dev.	Mean	Std. Dev.
HS Graduate	0.844	0.363	0.799	0.401
Attended PSE	0.818	0.386	0.752	0.432
BA or More	0.358	0.479	0.287	0.452
Successful transition to work	0.496	0.500	0.623	0.485
Teenage mother	0.173	0.378	0.077	0.267
White	0.768	0.422	0.757	0.429
Black	0.137	0.344	0.154	0.361
Mexican	0.068	0.251	0.051	0.220
Asian	0.027	0.162	0.038	0.191
Mother HS graduate	0.245	0.430	0.203	0.402
Mother some college	0.373	0.484	0.283	0.450
Mother college graduate	0.137	0.344	0.133	0.340
English not spoken at home	0.064	0.245	0.055	0.229
Family income	37.343	42.610	32.335	43.847
Raised in single-parent home	0.171	0.377	0.141	0.348
Number of siblings	2.156	1.629	1.685	1.628
Family size	4.541	1.481	3.681	2.212
School offers vocational education	0.542	0.498	0.521	0.500
School percent free lunch	0.165	0.204	0.159	0.202
Neighborhood poverty	0.132	0.104	0.128	0.100
Observations	6,441		6,863	

Appendix Table 4: Linear Probability Model for High School Completion

	Females			Males		
	(1)	(2)	(3)	(1)	(2)	(3)
Black	-0.055 *	-0.008	0.019	-0.118 **	-0.080 **	-0.017
	(0.030)	(0.029)	(0.029)	(0.034)	(0.032)	(0.028)
Mexican	-0.057 *	-0.020	-0.009	-0.008	0.012	0.054
	(0.030)	(0.033)	(0.036)	(0.036)	(0.040)	(0.037)
Asian	0.061 *	0.049	0.041	0.122 **	0.127 **	0.106 **
	(0.035)	(0.039)	(0.037)	(0.023)	(0.028)	(0.026)
Mother HS graduate	0.171 **	0.137 **	0.117 **	0.168 **	0.126 **	0.104 **
	(0.026)	(0.024)	(0.022)	(0.045)	(0.039)	(0.039)
Mother some college	0.165 **	0.119 **	0.107 **	0.250 **	0.201 **	0.180 **
	(0.027)	(0.027)	(0.024)	(0.043)	(0.037)	(0.039)
Mother college graduate	0.253 **	0.157 **	0.137 **	0.312 **	0.208 **	0.186 **
	(0.025)	(0.027)	(0.023)	(0.045)	(0.040)	(0.043)
English not spoken at home		-0.026	-0.022		0.049	0.066 **
		(0.030)	(0.032)		(0.030)	(0.029)
Family income		0.003 **	0.003 **		0.003 **	0.002 **
		(0.000)	(0.000)		(0.001)	(0.001)
Family income squared		-0.001 **	-0.001 **		-0.001 **	0.000 **
		(0.000)	(0.000)		(0.000)	(0.000)
Raised in single-parent home		-0.036	-0.022		-0.056 **	-0.041 *
		(0.027)	(0.023)		(0.028)	(0.023)
Number of siblings		-0.013 *	-0.009		-0.012 *	-0.007
		(0.007)	(0.006)		(0.007)	(0.007)
Family size		0.007	0.005		-0.004	-0.001
		(0.009)	(0.008)		(0.009)	(0.008)
School offers vocational education			0.029 **			0.041 **
			(0.009)			(0.014)
School percent free lunch			-0.022			-0.097 **
			(0.038)			(0.041)
Neighborhood poverty			-0.071			-0.162 *
			(0.097)			(0.089)
Observations	6,440	6,440	6,440	6,863	6,863	6,863
Adjusted R-squared	0.06	0.10	0.26	0.08	0.10	0.27

Notes: Bootstrapped standard errors are in parentheses. Models in columns (2), (3), (5), and (6) contain additional controls for region as well as dummy variables for missing control variables (such as family income). * denotes coefficients that are statistically significant from zero at 10 percent (two-tailed test), whereas ** denotes coefficients that are statistically different from zero at 5 percent (two-tailed test).

Appendix Table 5: Linear Probability Model for Enrollment in Postsecondary Education

	Females			Males		
	(1)	(2)	(3)	(1)	(2)	(3)
Black	0.027	0.089 **	0.094 **	-0.050	-0.013	0.027
	(0.024)	(0.024)	(0.027)	(0.043)	(0.036)	(0.042)
Mexican	-0.005	-0.011	-0.012	0.069	0.064	0.110 **
	(0.043)	(0.043)	(0.046)	(0.047)	(0.045)	(0.046)
Asian	0.072	0.029	0.028	0.171 **	0.144 **	0.137 **
	(0.044)	(0.042)	(0.041)	(0.031)	(0.037)	(0.037)
Mother HS graduate	0.206 **	0.163 **	0.154 **	0.186 **	0.137 **	0.125 **
	(0.034)	(0.031)	(0.029)	(0.049)	(0.042)	(0.044)
Mother some college	0.312 **	0.249 **	0.240 **	0.357 **	0.279 **	0.263 **
	(0.031)	(0.029)	(0.027)	(0.048)	(0.036)	(0.043)
Mother college	0.412 **	0.282 **	0.267 **	0.500 **	0.342 **	0.323 **
graduate	(0.029)	(0.030)	(0.027)	(0.045)	(0.036)	(0.042)
English not spoken at		0.086 **	0.080 **		0.059 *	0.081 **
home		(0.034)	(0.037)		(0.032)	(0.035)
Family income		0.005 **	0.005 **		0.006 **	0.005 **
		(0.001)	(0.001)		(0.001)	(0.001)
Family income squared		-0.001 **	-0.001 **		-0.002 **	-0.001 **
		(0.000)	(0.000)		(0.000)	(0.000)
Raised in single-parent		-0.021	-0.011		0.043	0.047 *
home		(0.020)	(0.023)		(0.031)	(0.029)
Number of siblings		-0.015 **	-0.014 **		-0.020 **	-0.018 **
		(0.006)	(0.006)		(0.008)	(0.007)
Family size		-0.012 *	-0.011		0.005	0.008
		(0.007)	(0.007)		(0.009)	(0.010)
School offers vocational			-0.006			-0.026
education			(0.014)			(0.025)
School percent free			-0.068 *			-0.198 **
lunch			(0.038)			(0.062)
Neighborhood poverty			0.126			-0.149
			(0.088)			(0.146)
Observations	5,433	5,433	5,433	5,288	5,288	5,288
Adjusted R-squared	0.09	0.15	0.17	0.10	0.14	0.16

Notes: Bootstrapped standard errors are in parentheses. Models in columns (2), (3), (5), and (6) contain additional controls for region as well as dummy variables for missing control variables (such as family income). * denotes coefficients that are statistically significant from zero at 10 percent (two-tailed test), whereas ** denotes coefficients that are statistically different from zero at 5 percent (two-tailed test).

Appendix Table 6: Linear Probability Model for College Completion (Four-year Degree)

	Females			Males		
	(1)	(2)	(3)	(1)	(2)	(3)
Black	-0.095 **	-0.040	-0.017	-0.134 **	-0.087 **	-0.057 **
	(0.028)	(0.031)	(0.028)	(0.020)	(0.022)	(0.026)
Mexican	-0.118 **	-0.080 **	-0.064 *	-0.104 **	-0.004	0.031
	(0.026)	(0.034)	(0.033)	(0.023)	(0.031)	(0.027)
Asian	0.039	0.006	-0.002	0.144 **	0.158 **	0.148 **
	(0.054)	(0.053)	(0.049)	(0.048)	(0.049)	(0.046)
Mother HS graduate	0.143 **	0.095 **	0.082 **	0.101 **	0.039 **	0.033 *
	(0.020)	(0.020)	(0.022)	(0.021)	(0.019)	(0.019)
Mother some college	0.270 **	0.204 **	0.189 **	0.201 **	0.125 **	0.114 **
	(0.021)	(0.021)	(0.024)	(0.020)	(0.021)	(0.021)
Mother college graduate	0.589 **	0.432 **	0.408 **	0.579 **	0.411 **	0.398 **
	(0.025)	(0.029)	(0.030)	(0.028)	(0.030)	(0.032)
English not spoken at home		0.045	0.049 *		-0.069 **	-0.056 **
		(0.032)	(0.029)		(0.031)	(0.028)
Family income		0.005 **	0.004 **		0.004 **	0.004 **
		(0.001)	(0.001)		(0.001)	(0.001)
Family income squared		-0.001 **	-0.001 **		-0.001 **	-0.001 **
		(0.000)	(0.000)		(0.000)	(0.000)
Raised in single-parent home		-0.011	-0.007		-0.071 **	-0.068 **
		(0.024)	(0.025)		(0.020)	(0.022)
Number of siblings		-0.026 **	-0.024 **		-0.023 **	-0.021 **
		(0.006)	(0.005)		(0.005)	(0.006)
Family size		0.000	0.000		-0.003	-0.001
		(0.007)	(0.007)		(0.006)	(0.006)
School offers vocational education			-0.069 **			-0.093 **
			(0.027)			(0.032)
School percent free lunch			-0.154 **			-0.157 **
			(0.041)			(0.045)
Neighborhood poverty			0.031			-0.099
			(0.110)			(0.091)
Observations	5,433	5,433	5,433	5,288	5,288	5,288
Adjusted R-squared	0.15	0.20	0.21	0.18	0.22	0.24

Notes: Bootstrapped standard errors are in parentheses. Models in columns (2), (3), (5), and (6) contain additional controls for region as well as dummy variables for missing control variables (such as family income). * denotes coefficients that are statistically significant from zero at 10 percent (two-tailed test), whereas ** denotes coefficients that are statistically different from zero at 5 percent (two-tailed test).

Appendix Table 7: Linear Probability Model for Successful Transition to Work

	Females			Males		
	(1)	(2)	(3)	(1)	(2)	(3)
Black	0.020	0.042	0.070	-0.335 **	-0.324 **	-0.285 **
	(0.063)	(0.058)	(0.052)	(0.058)	(0.054)	(0.052)
Mexican	0.007	0.016	0.045	-0.202 **	-0.151 **	-0.126 **
	(0.054)	(0.074)	(0.067)	(0.056)	(0.070)	(0.063)
Asian	-0.027	-0.033	-0.027	-0.173 **	-0.137 *	-0.140 *
	(0.102)	(0.100)	(0.095)	(0.076)	(0.077)	(0.079)
Mother HS graduate	0.025	-0.010	-0.024	-0.001	-0.014	-0.013
	(0.046)	(0.049)	(0.049)	(0.050)	(0.050)	(0.043)
Mother some college	0.050	0.012	-0.001	-0.046	-0.062	-0.066
	(0.051)	(0.048)	(0.048)	(0.047)	(0.049)	(0.042)
Mother college	0.138 *	0.042	0.025	-0.117 *	-0.165 **	-0.179 **
graduate	(0.078)	(0.070)	(0.063)	(0.066)	(0.065)	(0.061)
English not spoken at		0.057	0.061		-0.084	-0.081
home		(0.065)	(0.067)		(0.060)	(0.054)
Family income		0.004 **	0.004 **		0.002 *	0.001
		(0.002)	(0.001)		(0.001)	(0.001)
Family income squared		-0.001 *	-0.001 *		-0.001	0.000
		(0.001)	(0.001)		(0.000)	(0.000)
Raised in single-parent		0.099 **	0.112 **		-0.022	-0.003
home		(0.044)	(0.046)		(0.049)	(0.042)
Number of siblings		-0.018	-0.017		0.004	0.005
		(0.012)	(0.012)		(0.010)	(0.010)
Family size		0.003	0.005		-0.003	-0.001
		(0.015)	(0.016)		(0.014)	(0.013)
School offers vocational			0.080			-0.031
education			(0.070)			(0.058)
School percent free			-0.225 **			0.047
lunch			(0.098)			(0.082)
Neighborhood poverty			0.020			-0.385 **
			(0.216)			(0.165)
Observations	2,260	2,260	2,260	2,515	2,515	2,515
Adjusted R-squared	0.01	0.03	0.05	0.09	0.10	0.12

Notes: Bootstrapped standard errors are in parentheses. Models in columns (2), (3), (5), and (6) contain additional controls for region as well as dummy variables for missing control variables (such as family income). * denotes coefficients that are statistically significant from zero at 10 percent (two-tailed test), whereas ** denotes coefficients that are statistically different from zero at 5 percent (two-tailed test).

Appendix Table 8: Linear Probability Model for Teenage Motherhood

	(1)	(2)	(3)
Black	0.141 **	0.101 **	0.079 **
	(0.026)	(0.027)	(0.027)
Mexican	0.064 **	0.028	0.012
	(0.028)	(0.027)	(0.029)
Asian	-0.074 **	-0.064 **	-0.059 **
	(0.019)	(0.022)	(0.026)
Mother HS graduate	-0.122 **	-0.085 **	-0.073 **
	(0.024)	(0.026)	(0.023)
Mother some college	-0.151 **	-0.104 **	-0.094 **
	(0.027)	(0.025)	(0.025)
Mother college	-0.236 **	-0.135 **	-0.121 **
graduate	(0.023)	(0.027)	(0.026)
English not spoken at		0.030	0.024
home		(0.025)	(0.025)
Family income		-0.003 **	-0.002 **
		(0.000)	(0.000)
Family income squared		0.001 **	0.001 **
		(0.000)	(0.000)
Raised in single-parent		0.006	-0.001
home		(0.025)	(0.024)
Number of siblings		0.023 **	0.021 **
		(0.007)	(0.007)
Family size		-0.010	-0.009
		(0.010)	(0.008)
School offers vocational			-0.014
education			(0.019)
School percent free			0.088 *
lunch			(0.046)
Neighborhood poverty			0.041
			(0.095)
Observations	6,430	6,430	6,430
Adjusted R-squared	0.06	0.10	0.14

Notes: Bootstrapped standard errors are in parentheses. Models in columns (2) and (3) contain additional controls for region as well as dummy variables for missing control variables (such as family income). * denotes coefficients that are statistically significant from zero at 10 percent (two-tailed test), whereas ** denotes coefficients that are statistically different from zero at 5 percent (two-tailed test).