The Effect of Immigrant Generation Status and Sibling Structure on Educational Expectations among 12th Graders in U.S. High Schools

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I. Introduction.

Educational attainment in the United States varies by socioeconomic background, race, ethnicity and nativity. In 2005, approximately one quarter of foreign born youth (age 16-24) were high school dropouts compared with ten percent of US born youth (NCES, 2005). Although the figure for foreign born youths includes those who arrived in the United States in adolescence and may not have 'dropped in' to US schools, it also suggests educational disparities by nativity persist among those who do attend school in the United States.

Beyond high school, attaining postsecondary education in today's knowledge-based society is critical because a high school diploma is no longer a sufficient credential to be competitive in labor market. The transition from high school to a college or university (secondary to postsecondary education) is an important factor in defining the future trajectories of one's socioeconomic standing. Thus, even if immigrant youth make it through high school in the United States, they may still be at a competitive disadvantage if they do not continue on to college. In this paper, we examine the educational expectations of US and foreign born youths in two distinct cohorts and evaluate the likelihood of a persistent nativity gap in educational attainment. We expect differences in educational expectations to be partially mediated by the family and linguistic environments.

II. Background.

Nativity Gaps in Education. In order to explain the persistence of an educational achievement gap by nativity, scholars have adopted two perspectives. One group of researchers focused on attributive characteristics of immigrants, looking into the cultural implications of race, ethnicity, and generation among students (Matute-Bianchi 1986; Gibson 1989; Zhou and Bankston 1998). Another group of researchers focused on attained characteristics, looking into the structural effects such as social network and parental socioeconomic status which may be beneficial or costly to one's own socioeconomic attainment (Bean and Tienda 1987; Steinberg 1989; Hao and Bonstead-Bruns 1998; Hao and Pong 2008). When the discrepancy between immigrants and non-immigrants was closely examined, neither perspective alone could completely account for varied outcomes by nativity as well as race and ethnicity. When the largest racial pan-ethnic groups are compared, Asian origin students perform better in school, have higher expectations for educational attainment, are more likely to graduate from high school, and are more likely to continue their education beyond high school than Hispanics or Blacks with a smaller gap between Asians and non-Hispanic Whites (Hao and Bonstead-Bruns 1998; Kao and Thompson 2003).

A growing body of research shows that the wide gap in socioeconomic attainment among ethnic groups exists within the same generation (Schoeni, McCarthy and Vernez 1996; Portes and Rumbaut 1996), and the trajectories of later generations are determined according to the social, political, and economic context of incorporation to the receiving society among first generation (Portes and Zhou 1993; Portes and Rumbaut 2001). These studies broadened the theories of assimilation by emphasizing the interaction effect of the

conditions under which immigrants join the receiving society as well as the norms and the values that are framed by the individual's race and ethnicity. These studies also indicated the importance of initial incorporation at racial and ethnic group level and generation level. In other words, the successful incorporation of preceding cohort would set favorable conditions and thus increase the likelihood of "success" among later cohorts as they join the receiving society.

Accordingly, immigration scholars became interested in the extent to which transmission of socioeconomic status from one generation to the next occurs among immigrant parents and their children. Many of these studies focused on the difference in educational aspirations and performance by race and ethnicity, country of origin, and immigrant generation status (Kao and Tienda 1995; Glick and White 2003). Other studies have explored the importance of the timing of migration for children's own educational aspirations and outcomes (Portes and Rumbaut 2001; Rumbaut and Portes 2001; Bohlmark 2007). Overall, however, recent immigrants (i.e., first generation adolescents) are more likely to remain enrolled in high school than those who arrived earlier or born in the United States despite their lower human capital and previous academic performance (White and Glick 2000). The first generation is thus hampered by lower preparation for success in school in the form of low English language proficiency yet appears buoyed by strong support for education overall. For example, in a study on an immigrant community from Vietnam in New Orleans, Zhou and Bankston (1998) concluded that work ethics and importance of ethnic community reaffirm the emphasis on family. As a result, the tight-knit family structure supports positive educational achievement of the children while protecting them from straying in the midst of difficult socioeconomic conditions.

Nicholas, Stepick, and Stepick (2008) also concluded that among Haitian immigrants, the value of and persistence in education become a conscious matter of fulfilling obligation to their parents which is rooted in family oriented practices from their native land. Thus, Kao and Tienda (1995), comparing across three generations, concluded that second generation is in most favorable condition as they are equipped with English as well as "immigrant optimism" that are endorsed by their immigrant parents. Along this line, Perreira, Harris, and Lee (2006) also concluded that after controlling for human, cultural, school, and community capitals, first generation was most likely to stay in school than second or third plus generation.

These findings propose reconsideration of linear assimilation theory, which was based on the integration of predominantly European immigrants in the early 20th century. Unlike in the past, the racial and ethnic composition of recent immigrants have changed and also the economic conditions have become less favorable for new immigrants to accumulate wealth, invest on their children's education, and advance collectively in the receiving society by second generation if they did not land in the receiving society with sufficient capital upfront. Studies indicated that immigrants assimilate into different segments of receiving society based on their demographic backgrounds and various modes of incorporation (Portes and Zhou 1993; Portes and Rumbaut 2001).

Differential effects of family status on educational outcomes. Generation gaps in education may be influenced by several factors including socioeconomic background, language proficiency, and previous school experiences. Yet it seems likely that the family context may not operate in the same way for all youths. In particular, immigrant and

second generation youth are likely to have different educational experiences depending on their position within the family.

Family structure and resources certainly are associated with differential educational outcomes. Much of the focus on family structure with regards to educational expectations and attainment has been centering on parental structure, that is, the presence or absence of two parents and the patterns of biological or step parent(s). Astone and McLanahan (1991) concluded that educational achievement among children from two biological parents is higher than those from single parent or step-parents households. Their result also showed that parental involvement is much higher among the prior group which positively influenced higher educational achievement. Refining the groups of single parent family, Biblarz and Raftery (1999) showed that children from single-father families as well as step-families have lower educational attainment than those from two biological families or single-mother families. However, recent study has found that absence or new presence of mother ("parent transition" in author's words) early on in children's life affects high school GPA and college expectations to the negative direction, and increases the chance of suspension and expulsion during adolescence, while "father transition" has little effect on these outcomes (Heard 2007).

Beyond parental structure (i.e. one or two parents, married or otherwise), number of siblings in the immediate family is an important factor. More siblings may be associated with fewer resources per child (Blake 1981, 1985; Downey 1995). The number and gender composition of siblings can also affect the allocation of gender roles and the accumulation and distribution of resources within a family and among siblings (Becker 1981; Morgan et al. 1988). Blake (1981) proposed that parental resources are exhaustive

and that the resource available per child would decrease as the number of children in a family increases, which is known as the dilution model. Downey (1995) refined the dilution model with more sophisticated definition of measurements and rigorous empirical data, concluding that the rate of dilution will only gain its velocity to a certain point but loses its momentum once it hits the turning point. In other words, increase in the number of siblings does not decrease the allocation of parental resources per child in a linear fashion. Furthermore, he also mentioned that the dilution rate varies with the type of parental resources (i.e., interpersonal or economic/material). In general, however, there is a consensus that larger sibling size is negatively associated with educational attainment among general population[1].

Beyond number of siblings, position in birth order may also influence educational outcomes. The support for this varies considerably, however, depending on the timing and context of the research. Behrman and Taubman (1986) looked into the effect of birth order on schooling. Their result showed that later born siblings (i.e., younger siblings) have more years of education even after controlling for family background and family size. Other studies concluded consistent result that first-born siblings are more likely to start working at younger age while later born siblings continue schooling based on their study in developing countries (Weiling 2003, Chesnokova and Vaithianathan 2008). On the contrary, Conley and Glauber (2005) concluded that having more siblings means less distribution of within-family resources allocated to each child, reaffirming the dilution

[1] The effect of sibling size on educational attainment have been studied using the following data: Occupational Changes in a Generation 1962 and 1973, General Social Survey 1972-1986, Growth of American Families 1955 and 1960, Health Examination Surveys 1960-1970, National Fertility Study 1970, National Longitudinal Survey of Youths 1986, High School and Beyond, National Educational Longitudinal Study of 1988 (Steelman et al. 2002).

model. As a result, they concluded that younger siblings tend to be less equipped for high educational attainment.

In the United States, siblings could serve as an important source of social capital for younger siblings in immigrant families. As families gain access to the school system by sending one of the children, they accumulate skills and knowledge that are beneficial or even fundamental for their children to succeed in the system through experiences with teachers, administrators, and institutions. The accumulation of resources sets younger siblings at advantage as they would have more tools to proceed in schools. This is likely to be particularly important in the case of immigrant families in which the parents have little direct experience with these institutions themselves.

On the other hand, having siblings with negative experiences with these institutions may be a detriment for younger siblings. In the case of immigrant or minority families, one sibling's encounters with structural barriers or discrimination may result in lowering the educational expectations for all siblings. In other words, if an older sibling develops antithetical values towards school success, it may have negative effect on the educational outcome when younger siblings see him/her as their role model. In sum, positive or negative influence of sibling structure on educational outcome is very much driven by the context such as the neighborhood in which they live and the schools they attend as well as social relations with peers. And, these associations are likely to be stronger for immigrant youth than for those of higher order generations.

III. Hypotheses.

Nativity gaps in educational expectations may be amplified by the difference in the sibling structure. Lack of skills and knowledge about the American school system, which results from limited language proficiency of students as well as parents and less likelihood of having had a first-hand experience in the system among parents, situate children of immigrants at greater disadvantage. Therefore, the students who come from immigrant households with a larger number of siblings must not only rely on limited resources that are crucial to school success but share the small pie of resources with more siblings. These conditions may be influencing their low educational outcome especially among students who come from immigrant households with lower socioeconomic status. On the other hand, students from immigrant households who have more siblings will have more opportunity to learn about US schools. These siblings may also provide reinforcement for using English and other practices learned in schools in the United States even if parents are not English speakers or familiar with US schools.

The analyses in this paper focus on the nativity gap in educational expectations in two cohorts of adolescents in the United States and the importance of family structure, sibling size and, when possible, birth order on explaining these gaps. However, it is also expected that the effects of family status on educational expectations will vary within generation status groups.

Hypothesis 1: Number of siblings will be negatively associated with educational expectations of respondents in 12^{th} grade.

Hypothesis 2: Having siblings with whom one would speak English is positively associated with educational expectations expressed in 12^{th} grade.

IV. Data and Methods.

A. Data

Our sample comes from two nationally represented longitudinal educational data: National Educational Longitudinal Survey of 1988 (NELS: 88) and Educational Longitudinal Survey of 2002 (ELS: 2002). Both data are rich in the information on educational experiences and aspirations of individual students as well as a wide range of demographic and organizational variables that are thought to influence these experiences. NELS: 88 was third cohort of the longitudinal studies at the national level in the U.S. sponsored by the National Center for Educational Statistics (NCES) of the United States Department of Education after National Longitudinal Study of the High School Class of 1972 (NLS-72) and High School and Beyond (HS&B). NELS: 88 targeted the 8th graders in the 1988, and followed the cohort in 1990, 1992, 1994, and 2000. The survey was successful in capturing the respondents regardless of their enrollment status at the time of each survey as well as the trajectories of post high school graduation all the way up to their mid 20s. Similarly, ELS: 2002 was the fourth study which resembles the three previous cohort studies with regards to its longitudinal nature and policy focus. However, unlike NELS: 88, the cohort in interest was 10th graders in the base year. Thus far, ELS: 2002 have completed three waves (2002, 2004, 2006[2]), and the third follow-up data collection is planned in 2012. Similar to the previous cohort studies, ELS: 2002 is focused on capturing the educational experiences and aspirations of individuals, the trajectories of postsecondary education which includes the transitions from educational

[2] Public data is currently available up to the second wave. The third wave is planned to be released in several months.

settings to labor force participation (Educational Longitudinal Study of 2002 (ELS: 2002) Base Year to Second Follow-Up Data File Documentation 2007).

Our study uses a similar approach as taken by Glick and White (2003) to compare outcomes for youth in the HS & B and NELS: 88 cohorts in order to compare students' educational outcome across decades. Unlike previous studies, we pool data from the two longitudinal samples (We will include indicator variable to identify the study cohort and use specific weights for each cohort in the final paper). This provides greater statistical power in the case of smaller cells, which tends to be a persisting issue when immigrant generation status is in focus.

The sampling strategies for NELS: 88 and ELS: 2002 are quite similar as both used two-level sample selection process. First, the school was selected, and second, the proportion of 8^{th} graders and 10^{th} graders were selected. This has been the same practice as all the previous educational longitudinal studies. However, unlike different sampling strategies observed between HS&B and NELS: 88, NELS: 88 and ELS: 2002 both oversampled Asian and Hispanic students and private schools. The rate of sampling for Asians, Hispanics, and private schools in ELS: 2002 came from the Common Core Data and the Private School Survey.

The NELS and ELS cohorts consist of sufficient numbers of foreign born and US born youths as well as information on respective parent's place of birth to allow comparisons across generations as well as across cohorts. The preliminary sample of combined dataset includes the cases that are (1) present in the second follow-up of the NELS data and are also present in the first follow-up (most likely be in the base year data but that is not a necessary condition) (n = 6,314) and (2) present in the first follow-up of

the ELS data and were also present in the base year (n=8,858). Currently, any case which includes variables that are missing are dropped from the study, resulting the total sample size of 15,172 (please refer to Table 1.). The preliminary findings are based on this sample. For the final paper, we will weight cases and run multiple imputations for missing values.

B. Measures of Educational Expectation and Independent Variables

Unlike Australia and Britain where practice of gap year is quite common and widely accepted (Heath 2007, Krause et al. 2005), in many developed countries including the U.S., heading straight to university education upon graduating from high school is normative[3]. As such, parents, teachers and guidance counselors encourage students who are considered to be "college bound" to apply for four-year institutions while they are in high school and continue one's education right after high school. In other words, generally, the fundamental key to attain initial socioeconomic success in the meritocratic society is to acquire education up until at least bachelor's degree in the shortest amount of time and either go out in the "real world" with the degree under the belt or continue on with the aim to achieve higher degree.

While much research on the transition between secondary to postsecondary education focuses on traditional college age population, studies have shown that there are socioeconomic disparity between those who enroll in postsecondary education and those who refrain from it (Perna 2000; Cabrera and La Nasa 2001; Fitzgerald and Delaney 2002). In this paper, for the purpose of defining one's educational expectations, we will

[3] Although the expectation that high school graduates head straight to postsecondary education remains strong, many studies have shown that the proportion of "non-traditional" students has grown tremendously in the U.S. since 1970s (U.S. Department of Education 2007).

look into the student's plan on whether he or she will continue on to postsecondary education right after graduating from high school. We will be looking at students' plans at the end of 12th grade, and therefore, it is fair to assume that this is their realistic post-graduation plans.

1) Dependent variable: plan to go to school right after high school (asked in 12th grade)

The dependent variable for the study is respondent's plan to go to school right after graduating from high school in 12th grade (second follow-up in NELS: 88, and first follow-up in ELS: 2002). This measurement corresponded to a question "do you plan to go to school right after high school?" in both surveys. It is made into a dichotomous variable by recoding those who answered "yes" to the stated survey question as one dummy variable ("Expects to continue"), and those who answered either "no" or "don't know" into another dummy variable ("Does not expect/Unsure).

2) Independent variables

There are two key independent variables in the study: immigrant generational status and family organization, specifically focusing on the number of siblings. Unless otherwise stated, all independent variables in the study come from prior to the time when the post graduation plans were asked. In other words, independent variables for NELS: 88 come from first two waves while those of ELS: 2002 come from the base year. We consider that the postsecondary education plan right after finishing high school is influenced by the conditions in the past.

Immigrant generational status

We have divided immigrant generational status into three categories: first generation, second generation, and third plus generation. We coded the respondents who were born abroad and have one or both parents born abroad as first generation, the respondents who were born in the U.S. and have one or both parents born abroad as second generation, and the respondents who were born in the U.S. and have parents also born in the U.S. as third plus generation.

Family organization: total number of sibling and family composition

The following variables are considered as indicators of family organization: family size, total number of siblings, and living arrangement with regards to presence or absence of parent(s). These variables explain different aspects of the organization of a family, and therefore, good explanatory variables when considering the effect of family organization on dependent variable. Family size defines the frame of the organization. The number of siblings and family structure, which is often understood as presence and/or absence of parents, defines organization within a family. I recode family structure into five different categories by the presence and/or absence of parents living together: both parents (mother and father), father and a female guardian, mother and a male guardian, father only, mother only, neither parent. In the analysis, however, since family size and the combination of the total number of siblings and family composition have similar effect explained by family structure, family size was excluded from logistic regression models.

Our hypotheses focus on the interaction of siblings (number and birth order) and the linguistic environment respondents share with their siblings. For our preliminary

analyses, we proxy this interaction with a measure of whether respondents from non-English backgrounds speak their native language or primarily use English with their siblings. Of course, this measure may capture the extent to which respondents are bilingual and may reflect a bilingual home environment. Future analyses will explore this possibility with measures of language ability as well as more detailed analyses of sibling structure (discussed below).

4) Additional independent variables (control variables)

The analyses include several variables associated with socioeconomic attainment among adolescents. Father's and mother's highest level of education are controlled. Parental educational attainment, especially that of father's education level, is a good indicator of the child's educational attainment. Also, mother's educational level plays role in household income and also influences educational aspiration of children, especially among females. Both father's and mother's highest level of education are coded as follows: 1= less than high school, 2= graduated from high school or GED, 3= two year college with or without Associate Degree, 4= four year college without Bachelor's Degree, 5= four year college with Bachelor's Degree, 6= Master's Degree or Equivalent, 7= Ph.D. /M.D. or equivalent.

Other control variables include family annual income, sex, race/ethnicity, whether respondent has ever been previously held back a grade, and whether one's native language is English. The categorical measure for annual family income is treated as a continuous variable in the preliminary analyses. Sex (female as the reference group), the history of previous grade retention (no history of previous grade retention as the

reference group), and one's native language (English being the native language as the reference group) are all coded as dichotomous variable. Race (technically, race and pan-ethnicity) variable are recoded into six groups: Asian and Pacific Islanders, Black (Non-Hispanic), Hispanic, Native American and Alaskan, and White (Non-Hispanic). White is the reference group. History and plan to take college entrance tests (SAT/ACT) in 12th grade and frequency of speaking native language with one's siblings are also included in the models.

C. Methods

In this study, two different types of analyses will be utilized in order to capture (1) the distribution of students according to their postsecondary educational plans, and (2) the intervening factors on the students' postsecondary education plans. In the first analysis, bivariate analylsis, cross tabulation of dependent variable and our main independent variables will be assessed so as to see the distribution of postsecondary plans by immigrant generation status and total number of siblings (e.g., Table 2. and Table 3.). In the second analysis, the data will be analyzed in multivariate logistic regression using STATA version 10. For preliminary result, please refer to Table 4.

V. Preliminary Results and Next Steps.

Our preliminary results show some interesting signs of relationships between variables. First, there seems to be a general difference on educational expectation by immigrant generation status (please refer to Table 2). When compared across generations, a higher proportion of students among first generation responded that they plan to

continue education right after graduating from high school. The proportion who answered affirmative was lowest among third plus generation. Second, when native language background and frequency of native language usage among siblings were considered in relation to educational expectation, the distribution was dissimilar between students who come from English only background and Non-English background (please refer to Table 3). In the prior group, a higher proportion among students without any siblings responded that they plan to continue education right after high school than those with one or more siblings. On the other hand, in the latter group, those who have siblings tend to have higher educational expectation than those without any siblings. However, within this group, higher proportion of students expected to attend postsecondary education right after graduating from high school among those who speak native language with siblings only half of the time or do not speak at all, but it was less so among those who always speak native language with their siblings.

The descriptive results suggest that family composition and linguistic background are likely associated with educational expectations. Our next step is to conduct multivariate analyses. As a preliminary step, we run three logistic regression models (please refer to Table 4) on the pooled unweighted data. As seen in Model 1, controlling for demographic and economic variables, first and second generation have higher educational expectation than third plus generation. Net of all other variables, on the other hand, number of siblings has negative effect on educational expectation. In Model 2, we added indicators for past educational experiences and readiness as controls. First and second generation, or students from immigrant households, continue to have higher expectation than the reference group, and number of siblings continues to have negative

effect on the outcome. In Model 3, a variable on language background and frequency of native language usage among siblings was added. The relative advantage of first and second generation as compared to the reference group is now reduced yet continues to be significant. Net of all other variables, having one or more siblings is positively associated with a likelihood of continuing postsecondary education right after high school. However, when examined more closely, students who come from a Non-English background who speak their native language with siblings half of the time had a relative advantage. Although not statistically significant, those who come from a Non-English background without any siblings and those who come from the same language environment and only speak native language with siblings reported lower educational expectation than the reference group, English only background with no siblings. Further analyses are needed, but based on our preliminary results, there seems to be some association with one's linguistic environment and educational expectation.

Next Steps:

There are several steps planned for finalizing these preliminary results. The preliminary analyses do not adjust for the clustered sampling structure nor do they employ the appropriate weights for each cohort. The final analyses will take these steps and include measures identifying the cohort as controls in the final models. In addition, the preliminary analyses were conducted with cases with complete data. We will employ multiple imputation to compensate for the missing values and increase the sample size.

Beyond these methodological adjustments, we are also interested in looking at the role of birth order on educational expectation across immigrant generations. Guided by theories, we currently have two hypotheses:

Hypothesis A: There will be a positive association between birth order and educational expectations such that adolescents with older siblings will express stronger expectations for postsecondary education following 12th grade.

Hypothesis B: Among adolescents from immigrant families (i.e. where at least one parent is foreign born), the positive effect of having older siblings will be even stronger than for adolescents from non-immigrant families. In other words, the immigrants' work ethic and optimism encourages school success and meritocratic ideals attached to education (Kao and Tienda 1995) along with the social capital accrued from having older siblings in the American educational system will combine to increase the expectation for postsecondary education.

By focusing on immigrant generation and sibling structure and composition, we expect to add new insights to understanding the educational experiences of immigrant youths.

References

Astone, Nan Marie, and Sara S. McLanahan. 1991. "Family Structure, Parental Practices and High School Competion." *American Sociological Review* 56 (3): 309-320.

Bean, Frank D. and Marta Tienda. 1987. The *Hispanic Population of the United States.* New York: Russell Sage Foundation.

Becker, Gary S. 1981. *A Treatiese on the Family*. Cambridge, MA: Harvard University Press.

Behrman, Jere R. and Paul Taubman. 1986. "Birth Order, Schooling, and Earnings." *Journal of Labor Economics* 4(3): 121-145.

Biblarz, Timothy J., and Adrian E. Raftery. 1999. "Family Structure, Educational Attainment, and Socioeconomic Success: Rethinking the 'Pathology of Matriarchy'." American Journal of Sociology, 105 (2):321-365.

Blake, Judith. 1981. "Family Size and the Quality of Children." *Demography*, 18:421-442.

Blake, Judith. 1985. "Number of Siblings and Educational Mobility." *American Sociological Review*, 50: 84-94.

Blau, Peter M. and Duncan, Otis D.1967. *The American Occupational Structure*. New York, NY: Wiley.

Bohlmark, Anders. 2007. "Age at Immigration and School Performance: A Siblings Analysis Using Swedish Register Data." *Labour Economics*, 15: 1366-1387.

Chen, Xianglei. 2007. Part-*Time Undergraduates in Postsecondary Education: 2003-04* (NCES 2007-165). U.S. Department of Education. Washington, DC: National Center for Education Statistics.

Chesnokova, Tatyana and Rhema Vaithianathan. 2008. "Lucky Last? Intra-Sibling Allocation of Child Labor." *The B.E. Journal of Economic Analysis and Policy* 8 (1) (Advances): Article 20.

Conley, Dalton and Rebecca Glauber. 2005. "Parental Educational Investment and Children's Academic Risk: Estimates of the Impact of Sibship Size and Birth Order from Exogenous variations in Ferility." Posted online on Conley's homepage http://homepages.nyu.edu~/dc66/pdf/sibship_size.pdf and National Bureau of Economic Research http://www.nber.org/papers/w11302.

Delgado-Gaitin, C. 1994. "Socializing Young Children in Mexican-American Families: An Intergenerational Perspectives." In P.M. Greenfield and R.R. Cocking eds. *Cross-Cultural Roots of Miniority Child Development.* Hillside, NJ: Lawrence Erlbaum.

Downey, Douglas.B.1995. "When Bigger is Not Better: Family Size, Parental Resources, and Children's Educational Performance." *American Sociological Review*, 60: 746-761.

Driscoll, Anne K. 1999. "Risk of High School Dropout Among Immigrant and Native Hispanic Youth." *International Migration Review* 33(4): 857-875.

Duncan, Greg J. 1991. "The Economic Environment of Childhood," in *Children in Poverty: Child Development and Public Policy*, edited by Aletha C. Huston. Cambridge, England: Cambridge University Press.

Featherman, David and Robert Hauser. 1978. *Opportunity and Change*. NY: Academic Press.

Feliciano, Cynthia. 2006. "Beyond the Family: The Influence of Premigration Group Status on the Educational Expectations of Immigrants' Children." *Sociology of Education* 79 (October): 281-303.

Gibson, Margaret.1988. *Accommodation without Assimilation: Sikh Immigrants in an American High School. The Anthropology of Contemporary Issues Series*. Ithaca, NY: Cornell University Press.

Glick, Jennifer E. and Bryndl Hohmann-Marriott. "Academic Performance of Young Children in Immigrant Families: The Significance of Race, Ethnicity, and National Origins." *International Migration Review* 41(2): 371-402.

Glick, Jennifer E. and Michael White. 2003. "The Academic Trajectories of Immigrant Youths: Analysis Within and Across Cohorts." *Demography* 40(4): 759-783.

Hao, Lingxin and Suet-ling Pong. 2008. "The Role of School in Upward Mobility of Disadvantaged Immigrants' Children." *Annals of the American Academy of Political and Social Sciences* 620 (1): 62-89.

Hao, Lingxin and Melissa Bonstead-Bruns. 1998. "Parent-Child Differences in Educational Expectations and the Academic Achievement of Immigrant and Native Students." *Sociology of Education* 71 (3): 175-98.

Harris, Angel L., Kenneth M. Jamison, and Monica H. Trujillo. 2008. "Disparities in the Educational Success of Immigrants: An Assessment of the Immigrant Effect for Asians and Latinos." *Annals of American Academy of Political and Social Science* 620: 90-114.

Heard, Holly E. 2007. "Fathers, Mothers, and Family Structure: Family Trajectories, Parent Gender, and Adolescent Schooling." *Journal of Marriage and Family* 69:435-450.

Heath, Sue. 2007. "Widening the Gap: Pre-University Gap Year and the 'Economy of Experience'." *British Journal of Sociology of Education* 28(1):89-103.

Kao, Grace and Jennifer S. Thompson. 2003. "Racial and Ethnic Stratification in Educational Achievement and Attainment." *Annual Review of Sociology* 29: 487-513.

Kao, Grace and Marta Tienda. 1995. "Optimism and Achievement: The Educational Performance of Immigrant Youth." *Social Science Quarterly* 76(1): 1-19.

Krause, Kerri-Lee. Robyn Hartley, Richard James, and Craig McInnis. 2005. *The First Year Experience in Australian Universities: Findings from a Decade of National Studies*. Department of Education, Science, and Training. Canberra, ACT.

Lindert, Peter. 1977. "Sibling Position and Achievement." *Journal of Human Resources* 12(2): 220-41.

Matute-Bianchi, Maria E.1986. "Ethnic Identities and Patterns of School Success and Failure among Mexican-Descendant and Japanese American Students in a California High School." *American Journal of Education* 95(1):233-255.

Nicholas, Tekla, Alex Stepick, and Carol Dutton Stepick. 2008. "'Here's Your Diploma, Mom!' Family Obligation and Multiple Pathways to Success." *Annals of the American Academy of Political and Social Science* 620: 237-252.

Parish, William L. and Robert J. Willis. 2008. "Daughters, Eduction, and Family Budgets: Taiwan Experiences." *The Journal of Human Resources* 28(4): 863-898.

Perreira, Krista M., Kathleen Mullan Harris, and Dohoon Lee. 2006. "Making It in America: High School Completion by Immigrant and Native Youth." *Demography* 43(3): 511-536.

Portes, Alejandro and Ruben G. Rumbaut. 1996. *Immigrant America: A Portrait*. Berkeley, CA: University of California Press.

Portes, Alejandro and Ruben G. Rumbaut. 2001. *Legacies: The Story of the Immigrant Second Generation*. Berkeley, CA: University of California Press.

Portes, Alejandro and Min Zhou. 1993. "The New Second Generation: Segmented Assimilation and Its Variants among Post-1965 Immigrant Youth." *The Annals of American Academy of Political and Social Sciences*, 530: 74-96.

Rumbaut, Ruben G. and Alejandro Portes. 2001. *Ethnicities: Children of Immigrants in America*. Berkeley, CA: University of California Press.

Sandefur, Gary D. and Thomas Wells. 1999. "Does Family Structure Really Influence Educational Attainment?" *Social Science Research* 28: 331-357.

Schoeni, Robert F., Kevin F. McCarthy, and Georges Vernez. 1996. *The Mixed Educational Progress of Immigrants*. Santa Monica, CA: RAND.

Steelman, Lala Carr, Brian Powell, Regina Werum, and Scott Carter. 2002. "Reconsidering the Effects of Sibling Configuration: Recent Advances and Challenges." *Annual Review of Sociology* 28: 243-69.

Steinberg, Stephen. 1989. *The Ethnic Myth*. Boston, MA: Beacon.

Suarez-Orozco, Carola and Manuel M.Suarez-Orozco. 2001. *Children of Immigration.* Cambridge, MA: Harvard University Press.

Weiling, Elizabeth. 2003. "Do Returns on Investment for Educating Children in Oaxaca de Juarez, Maxico, Pay Off? A Qualitative Analysis." *Qualitative Studies in Education* 16: 817-834.

White, Michael J. and Jennifer E. Glick. 2000. "Generation Status, Social Capital, and the Routes Out of High School." *Sociological Forum* 15(4): 672-691.

Zhou, Min and Carl L. Bankston. 1998. *Growing Up American: How Vietnamese Children Adapt to Life in the United States*. New York: Russell Sage Foundation.

Table 1. Descriptive Statistics (unweighted)

	First Generation	Second Generation	Third plus Generation
Number of Siblings (Mean)	2.4	2.3	2.1
Race/ Ethnicity (%)			
Asian & Pacific Islander	50.5	28.6	1.1
Hispanic	30.8	34.0	5.5
Black (Non-Hispanic)	4.3	5.9	10.0
White (Non-Hispanic)	11.6	26.4	80.6
Native American	0.5	0.3	0.8
Multiple Race	2.4	5.0	2.1
Sex (%)			
Male	44.1	47.5	47.3
Female	55.9	52.5	52.7
Family Structure (%)			
Mother & Father	73.5	74.7	69.5
Mother & Partner	5.8	7.4	10.4
Father & Partner	2.7	2.0	2.3
Mother Only	11.1	11.6	13.6
Father Only	2.9	2.6	2.2
Other	4.1	1.8	2.1
Father's Education (%)			
Less than High School	23.1	20.6	8.6
Graduated High School or GED	17.0	18.3	30.8
Two Year College with or without Associate Degree	12.1	13.3	16.0
Four Year College without Bachelor's Degree	6.4	8.3	9.7
Four Year College with Bachelor's Degree	19.7	18.3	19.3
Master's Degree or Equivalent	11.4	12.0	9.7
Ph.D/MD or Equivalent	10.3	9.3	5.9
Mother's Education (%)			
Less than High School	26.5	19.6	6.9
Graduated High School or GED	18.4	23.5	31.7
Two Year College with or without Associate	14.4	15.0	20.6

Degree			
Four Year College without Bachelor's Degree	8.1	9.5	10.9
Four Year College with Bachelor's Degree	20.4	21.1	19.2
Master's Degree or Equivalent	8.3	8.1	8.6
Ph.D/MD or Equivalent	3.8	3.3	2.0
Family Income at BY (%)			
None	1.1	0.3	0.2
$1,000 or less	1.6	0.7	0.5
$1,001-$5,000	3.0	1.4	1.1
$5,001-$10,000	3.7	3.1	2.3
$10,001-$15,000	8.5	4.5	3.8
$15,001-$20,000	8.8	5.8	4.3
$20,001-$25,000	10.3	5.9	7.0
$25,001-$35,000	17.1	14.5	14.3
$35,001-$50,000	18.4	18.6	21.1
$50,001-$75,000	11.6	19.7	20.6
$75,001-$100,000	6.0	12.3	11.3
$100,001-$200,000	7.7	10.2	10.1
$200,000 or more	2.3	3.2	3.4
SAT/ACT Question in 10th Grade			
Have Not Thought About Taking SAT/ACT	17.5	18.8	20.7
No Plan to Take SAT/ACT	4.9	2.7	4.0
Plan to take SAT/ACT in 10th Grade	8.8	8.9	7.3
Plan to take SAT/ACT in 11th Grade	45.0	48.8	44.3
Plan to take SAT/ACT in 12th Grade	23.9	20.8	23.7
SAT/ACT Question in 12th Grade			
Have Not Thought About Taking SAT/ACT	7.6	9.0	6.6
No Plan to Take SAT/ACT	7.2	8.9	9.9
Already taken SAT/ACT	72.5	71.3	70.8
Plan to take SAT/ACT	12.7	10.9	12.8
Native Language Background (%)			
English	24.4	59.4	98.1
Non English	75.7	40.6	1.9
Frequency of Speaking Native Language with Siblings that is Different From English (%)			
Always	19.8	6.1	0.3

Half of the Times	20.4	10.1	0.4
Sometimes	22.7	16.7	1.2
Never	14.8	17.0	2.3
Legitimate Skip	22.3	50.2	95.8
Student has been held back a grade (%)	10.5	7.6	8.5
Dataset (%)			
NELS	29.7	31.9	43.9
ELS	70.4	68.1	56.1
N	887	1,838	12,447

Source: National Education Longitudinal Study: 1988-1994 and Educational Longitudinal Study: 2002-2004

Table 2. Distribution of Plan to Continue Education Right After Graduating From High School by Generation Status (%)

	First Generation	Second Generation	Third plus Generation	Total
Expects to continue	88.16	87.21	82.19	83.15
Does not expect/Unsure	11.84	12.79	17.81	16.85
N	887	1,838	12,447	15,172

Source: National Education Longitudinal Study: 1988-1994 and Educational Longitudinal Study: 2002-2004

Table 3. Distribution of Plan to Continue Education Right After Graduating From High School by Native Language and Use of Native Language with Siblings (%)

	English Only Background		Non English Background				
	No Siblings	One or More Siblings	No Siblings	Always Speaks Native Language with Siblings	Sometimes Speaks Native Language with Siblings	Never Speaks Native Language with Siblings	Total
Expects to continue	86.51	82.69	82.89	81.10	85.68	86.79	83.15
Does not expect/Unsure	13.49	17.31	17.11	18.90	14.32	13.21	16.85
N	786	12,734	76	291	880	386	15,153

Source: National Education Longitudinal Study: 1988-1994 and Educational Longitudinal Study: 2002-2004

Table 4. Odds Ratios From Logistic Regression Models Predicting Plans to Continue Education Right After High School

	Model 1	Model 2	Model 3
Immigrant Generation Status (vs. Third plus Generation)			
First Generation	1.973***	1.745***	1.467*
Second Generation	1.674***	1.691***	1.511***
Number of Siblings	0.917***	0.931***	
Race/ Ethnicity (vs. Non-Hispanic White)			
Asian & Pacific Islander	1.813***	1.612**	1.498**
Hispanic	0.861	1.047	0.952
Black (Non-Hispanic)	1.386***	1.347**	1.308**
Native American	0.568**	0.729	0.676
Multiple Race	0.758	0.764	0.753
Male	0.594***	0.702***	0.707***
Family Structure (vs. Mother & Father)			
Mother & Partner	0.738***	0.804**	0.774**
Father & Partner	0.536***	0.677**	0.626**
Mother Only	1.014	1.078	1.088
Father Only	0.642	0.719*	0.722**
Other	0.843	0.925*	0.917
Father's Education	1.282***	1.187***	1.189***
Mother's Education	1.195***	1.087***	1.094***
Family Income at BY	1.140***	1.087***	1.085***
Student has been held back a grade		0.881	0.870
SAT/ACT in 12th Grade (vs. Already Taken SAT/ACT)			
Have Not Thought About Taking SAT/ACT		0.090***	0.089***
No Plan to Take SAT/ACT		0.122***	0.121***
Plan to take SAT/ACT		0.218***	0.217***

Native Language Background and Frequency of Speaking Native Language with One's Siblings (vs. English with No Sibling)			
English with One or More Siblings			1.278*
Non-English with No Sibling			0.797
Non-English & Always Speak Native Language			0.990
Non-English & Sometimes Speak Native Language			1.632**
Non-English & Never Speak Native Language			1.318
Constant	-0.430***	1.308***	1.058
N	15,172	15,172	15,172
Log-Likelihood	-6116.3971	-5307.2345	-5306.6433
-2 Log Likelihood	12232.7942	10614.469	10613.2866
Pseudo R2	0.1112	0.2287	0.2288

Source: National Education Longitudinal Study: 1988-1994 and Educational Longitudinal Study: 2002-2004

*p<.05, **p<.01, ***p<.001