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The Effects Of Social Capital On The Educational Attainment Of Second-Generation Immigrants

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THE EFFECTS OF SOCIAL CAPITAL ON THE EDUCATIONAL ATTAINMENT OF SECOND-GENERATION IMMIGRANTS

By

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This thesis, submitted by Sean Cleary in partial fulfillment of the requirements for the Degree of Master of Science in Applied Economics from the University of North Dakota, has been read by the Faculty Advisory Committee under whom the work has been done and is hereby approved.

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Sean Cleary
7/9/2017

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ABSTRACT

With a growing focus on immigration to the United States, it is paramount to understand the factors that influence the educational outcomes of the immigrant population. In this paper, I focus on how the social capital of second-generation immigrant students affects their post-secondary educational enrollment. Using data from the Children of Immigrant Longitudinal Survey (1991-2006), I found that the students in the survey were significantly more likely to enroll in post-secondary education if they had a social group in high school that had college aspirations. The converse was also true, with students who had a social group with no college aspirations being significantly less likely to enroll in post-secondary education themselves. These findings were consistent even when a robust set of control variables were included in the models, such as prior academic performance, parental socioeconomic status, and citizenship status.

CHAPTER 1

INTRODUCTION

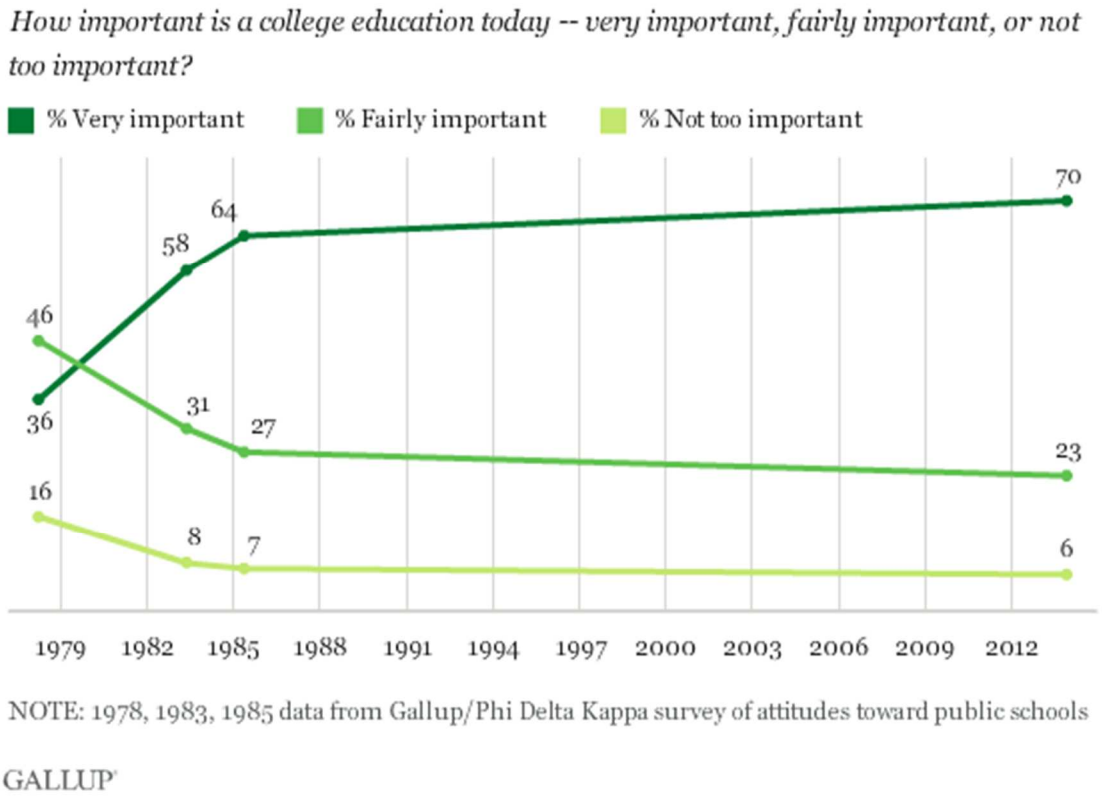
With a growing immigrant population in the United States, issues surrounding immigrants' educational attainment will be important to understand. This is especially true at a time when higher education serves as a path to reaching the middle class in the United States. In this paper, I examine the determinants of the pursuit of post-secondary education by second-generation immigrants (immigrants who have at least one parent who has immigrated to the United States from a foreign country). My research focuses specifically on two samples of students from the Miami and San Diego areas, and I examine the role that the educational plans of their peers plays in their own educational outcomes. I found that students who had a higher number of friends with college aspirations were themselves more likely to pursue higher education. Conversely, I found that students with more friends who had no college plans were themselves less likely to pursue higher education after high school.

In 2015, there were 15.8 million people under the age of 18 in the United States considered second-generation immigrants; this has trended upward from a total of 10.4 million in 2000 (Zong and Batalova, 2017). Of the total population of second-generation immigrants in the United States in 2012, approximately 46 percent were White, 4 percent were Black, 35 percent were Hispanic, and 12 percent were Asian. Second-generation immigrants have increased rates of college graduation compared to their parent's generation; 36 percent of second-generation

immigrants are college graduates compared to 29 percent of the first-generation population (PEW Report). Along with this increase in college graduation rates comes increases in other measurements of economic well-being, including income, home ownership, and portion of the population above the poverty line. Additionally, immigrant high school graduates were more likely to enroll in postsecondary education compared to native-born students of the same race (Teranishi et. al. 2011).

In the United States, public polling has shown that Americans increasingly view a college education as important. In a 2013 Gallup poll, 76 % of the respondents responded that a college education is "very important;" up from 36 % of respondents from the same poll in 1979 (Newport and Busteed 2013):

Figure 1:



[1] margin of sampling error is ±4 percentage points at the 95% confidence level.

This importance of higher education is also born out in the academic literature, with research from the Federal Reserve Bank of New York showing that higher education in the United States is still a crucial part of reaching the middle class, despite rising costs of attendance and stagnating wages. This is in part because the real wages of those without a college education has decreased (Abel and Dietz 2014). Longitudinal data from the Department of Education shows socioeconomic status closely correlates with completion of a bachelor's degree or higher (Department of Education, 2014). In this paper, I examine how second-generation immigrant's social environment impacts their future educational outcomes, going beyond examining only socioeconomic status by incorporating the effects of their peers' educational plans while in high school.

The combination of the growing population of second-generation immigrants in the United States, the increasing rates of college graduation amongst this population, and the consequences education has on future earnings makes it a relevant topic for policy makers and universities in the United States. Studying immigrant populations provides a good opportunity to examine and control for characteristics that are more applicable to immigrants, like English ability, citizenship status, and length of time spent in the United States. With the importance of the topic established, I will now provide a review of the literature on relevant topics to my research. This will be followed by a description of my data, models, and results.

CHAPTER 2

LITERATURE REVIEW

There is a wide literature on determinants of college enrollment, immigrant educational attainment, and social capital's role in education. Standardized test scores are nearly always a criteria of admission in institutions of higher education (Atkinson and Geiser 2009), so it should not be surprising that whether a student takes the SAT and what they score, while not a perfect measurement of academic ability, are both positively correlated with enrollment in higher education. However, the test's place in the college admission process is frequently debated and measured (Rothstein 2004). GPA and standardized testing scores are both widely used as control variables in academic literature regarding college enrollment and success.

Past research has shown that poor English language ability is associated with poor academic performance among second-generation children (Rosenthal, Baker, and Ginsburg, 1983). Additionally, length of time spent in the United States is highly correlated with immigrants' English ability. Pong and Landel (2012) used data from the New Immigrant Survey, a study based on a nationally representative sample of legal immigrant students, to show that the pre-migration education of the student's parents is strongly correlated with the academic test-scores of the student. They attributed a portion of this to lower cognitive stimulation for the children at home; children in their sample who had parents with lower socioeconomic status and English ability had standardized test scores. From a financial perspective, previous research has shown that the number of siblings in a particular family isnegatively correlated with the level of financial assistance a parent provides to their children when they attend post-secondary

education (Henretta et. al. 2012). Much of this research is what prompts the inclusion of several control variables I utilize in my models later in the paper.

Historically, there has been a positive and significant relationship between socioeconomic status and college enrollment (Walpole, 2003), with students of low socioeconomic status much less likely to attain a bachelor's degree. Much of the information on student's educational outcomes in the United States comes from the National Center for Education Statistics, which is part of the Department of Education. While the effects of socioeconomic status on educational outcomes is widely studied, for the purpose of this study, we are more concerned with the specific effect social capital has on college enrollment. There are many different definitions in the academic literature of what constitutes social capital pertaining to academic performance. Coleman (1988) introduced social capital as having three forms: obligations and expectations, information channels, and social norms. These forms were designed to measure both the family and community relationships of a student and included measurements of whether the mother was at home with the student as a child, communication with parents, and parental educational expectations. He found that students who came from families with more social capital were less likely to drop out from high school, even after controlling for human and financial capital.

Other researchers examined more specific measurements of social capital and their effects on academic performance. For example, Kao and Rutherford (2007) used intergenerational closure and parental involvement to measure social capital and found that it had a significant and positive relationship with high school GPA. Astone and McLanahan (1991) focused more specifically on parental interaction with their child's school work, showing that students who came from two parent households were more likely to receive assistance and

support with their education. This included both financial assistance as well as help with learning material. In addition to just parental involvement with their child, Sandefur et al. (2006) found that parental aspirations and interaction with their child's teacher were highly correlated with post-secondary academic enrollment. These authors noted the difficulty with measuring and incorporating social capital into education research, writing:

> "The introduction of the concept of social capital into the research on the effects of family resources on educational and other outcomes has led both to a substantial amount of research on various dimensions of social capital and a good deal of criticism about the theoretical ambiguity of the term" (p. 547).

Other research by Furstenberg and Hughes (1995) used an index of different aspects of the socials network of the parents and children to measure a youth's social capital and found that those with a greater measurement of social capital were more likely to graduate from high school and enroll in college. Furstenberg and Hughes conducted their research with a sample of low-income African Americans teenage mothers.

In my research, measurements of the academic plans of a student's peers are used as proxies for a student's social capital. This has been included in indexes of social capital used in past research (Furstenberg and Hughes, 1995). The rationale behind this is that students who are friends with other students who have aspirations for higher education generally have a more educated and motivated social group, which will in turn affect their own educational decisions. These variables are used in addition to several other variables that could be considered to measure social capital, like the parent's socioeconomic standing and their school environment.

While there is literature on social capital and the educational outcomes of immigrant families, this paper will aim to examine the role that social capital, specifically measured using the educational choices of the students' friends, plays in the college attendance of second-generation immigrants. Studying immigrant families will also allow for the examination of variables that could have unique effects on their education, like citizenship status, English ability, and length of time in the United States. In the next section, I will describe the data set that was used in this research.

CHAPTER 3

DATA

For my research, I used data from the Children of Immigrants Longitudinal Study (CILS), 1991-2006 (Portes and Rumbaut, 2012). All of the children initially surveyed are immigrant children in the 8th or 9th grade. The children had at least one foreign born parent, and were either brought to the United States at a young age or born in the United States after their parents' immigrated, making them "1.5" generation and second-generation immigrants, respectively. All of the children included in the study had been living in the United States for at least five years. The original respondents were from Miami/Ft. Lauderdale in Florida and San Diego, California. They attended 32 different schools at the time of the first survey. The first survey was conducted in 1992 and had a sample size of 5,262. The surveyed children were of 77 different nationalities and were an average of 14 years old. The authors of the CILS conducted the study in such a way that "the sample design called for inclusion of schools in areas of heavy immigrant concentration, as well as those where the native-born predominated," (Portes and Rumbaut 2005).

I used several variables from the first round of the survey: GPA in 1992 (*GPA1992*), gender (*Female* dummy variable), number of siblings in the household (*Siblings*), English use in the household (*English*). *English* was a dummy variable, with "1" indicating that the student

responded that a language other than English was "always" used at home and "0" indicating that a language other than English was used "seldom," "from time to time," or "often." Additionally, I created a dummy variable for if the child had been in the United States for longer than 9 years as of the first wave of the survey (*Length*). Since the children were asked how proficient their English was in a fairly subjective way, length of time in the United States arguably served as a better control variable given the correlation between the two variables in past research. Additionally, this variable serves as a way to control in part for the differences between second and "1.5" generation immigrants. The researchers conducting the CILS constructed an index of the parent's socioeconomic status (*ParentSES*) which was a "unit-weighted standardized scale of father's and mother's education, and occupational SEI scores, plus family home ownership." Although there was a wide range of data collected on the socioeconomic status of the household in the first and second surveys of the study, there were many missing data points regarding a family's income, employment status, and household characteristics. However, the original researchers calculated *ParentSES* for every observation in the study, making it a more reliable measurement for my purposes. I used two variables regarding the student's school environment from the first round of the survey. The first was a dummy variable indicating the student's school was located in the inner city (*InnerCitySchool*). The second was a dummy variable indicating that the 60 percent of the student's school was either black or Hispanic (*MinoritySchool*).

Three years later in 1995, the researchers conducted a second survey of the children as they neared high school graduation. This round of surveys also included questions to the children's parents to examine the family backgrounds of the children. The second round included survey data for 4,288 students, which was 81 percent of the original survey. There was some sampling bias within the CILS; the authors noted that students with intact family structures

(both a mother and father present at home) were overrepresented in the final survey. The GPA (*GPA1995*) and information regarding the student's SAT scores were collected during the second survey as well. For the purposes of my research, I used the national percentile of the SAT in which the student scored (*SATPercentile*). This was also the part of the survey in which the students were asked what race they were. In the data, some of the students responded with a nationality instead of a race, so I had to use this answer to assign them a race using a second survey question about that specified their nationality. From this data, I generated five dummy variables: *White, Black, Hispanic, Asian, and Other*. It was during the second round of the survey in which the student was asked whether or not they had citizenship status (*Citizen* dummy variable), with a "1" indicating they were a citizen.

Data from the second round of the survey was also used to generate the two variables of interest for my research. I converted both of these to dummy variables. The first (*NoCollegePlans*) indicated whether the student had replied "some" or "many" to the survey question "How many of your friends have: No plans to go to college?" The second variable of interest (*FourYearPlans*) indicated whether the student replied "some" or "many" to the question "How many of your friends have: Plans to attend a 4-year college or university?"

The final round of surveys was conducted when the respondents were on average 24 years old, and it was conducted between 2001-2003. The final survey produced data on 3,564 respondents, which was approximately 68 percent of the original sample. Again, family status, age, high school academic achievement had a significant impact on the attrition rate, with people from intact families and with higher high school GPA's being more likely to present in the final survey. The researchers asked a variety of questions about the person's educational attainment,

family life, and job status. The dependent variable I used in my regressions is whether or not the individual had attended college by the time of the third wave of the survey (*College*). Specifically, the participants were asked "What is the highest grade or year of school you have completed?" Any person indicating they completed at least one year of post-secondary education of any kind was counted as college attendee.

In my dataset, GPA during both waves of the data were on a five-point scale; this shows that schools in the sample granted extra points for honors classes. Research has indicated that 76 percent of high school counselors indicated that some form of weighted grading was in place at their school districts, with 92 percent weighting Advanced Placement courses and 75 percent of Honors classes (Norton, 2008). For the particular data I used, the schools in the Miami-Dade County Public School system granted bonus points for AP, Honors, and Dual enrollment courses (Miami-Dade County Public Schools, 2013). San Diego utilizes a similar 5-point weighted scale (High School Graduation Requirements, 2017).

Detailed descriptions of the variables used in the regressions are included in Table 3. Additionally, there are tables summarizing the summary statistics for several of the key variables in both geographic areas that I used in my tests (Tables 4 and 5).

Chapter 4

METHODOLOGY

I utilized a probit regression in order to examine the determinants of post-secondary education within the sample. This model is appropriate because the decision on whether or not to pursue post-secondary education is a binary outcome. Specifically, the dependent variable is whether or not a particular student had attended any form of post-secondary education by the time of the third wave of the survey, with a "1" indicating they had done so. This was the dependent variable used in all of my probit regressions. Since there are distinct differences in higher education policy between the two locations included in my two samples, I examined both groups separately and reviewed similarities and differences after conducting my analysis.

In my models, I ran a variety of different probit regressions using three different sets of controls. I had two primary variables of interest: *NoCollegePlans* and *FourYearPlans*. All of the probit regressions included in my study included controls for gender (*Female* dummy variable), GPA in the second wave of the data (*GPA1995*), GPA in the first wave of the data (*GPA1992*), citizenship status in the United States (*Citizen* dummy variable), national percentile of the SAT in which the student scored (*SAT*), number of siblings in the household during the first round of the survey (*Siblings*), and parent's socioeconomic status (*ParentSES*). This results in the following equations, with X representing the standard set of control variables and Z representing the control variables of a specific regression:

1) $College = \alpha + \beta_1 NoCollegePlans + \beta_2 X + \beta_3 Z + \varepsilon$

2) $College = \alpha + \beta_1 FourYearPlans + \beta_2 X + \beta_3 Z + \varepsilon$

The first set of the probit regressions includes the control variables *Length* and *English*. These variables were included to control for English speaking ability, which past research has shown correlates with post-secondary success. The second set of regressions included the *InnerCity* and *MinoritySchool* control variables. These variables were included to control for the type of school attended, with the rational that students from better schools would be more likely to attend college. The third set of regressions controlled for race by including the White, Black, Hispanic, Asian dummy variables. These specifications resulted in a total of 12 probit regressions for my study. Both parameters of interest (*CollegePlans* and *FourYearPlans*) were included with the three different sets of controls, and these regressions were run for both the Miami area and San Diego samples.

After running the individual probit regressions, I then found the marginal effects of each of the variables at the mean of the sample. This was done so that I could examine the effects each estimate had on the likelihood the student attended college. Given that the probit coefficients themselves do not give much insight into the actual effects of the independent variables on the dependent variable, we are primarily interested in the marginal effects at the mean for the independent variables, which give a more accurate depiction of the effects of the independent variables on the dependent variable. For dummy variables, the marginal effects of the variable show how probabilities change when the dummy variable changes from 0 to 1. Since both probit and logit models are very similar, with the differences between the two models involving an assumption about how the errors are distributed, I did initially run both specifications on my data

in order to examine the differences in results. Given that I am most interested in the marginal effects of the independent variables and the differences between the models were only marginally different (all independent variables were significant at the same level, with the magnitudes varying only slightly) I ultimately choose to report the results of the probit models along their marginal effects. In doing so, I assumed that there was a normal distribution of errors within my model. Since I was concerned that the error terms may be correlated, I conducted my models using robust standard errors, although I found that this ultimately did not have a large impact on my model's results.

My hypothesis is that the variables representing increased college attendance amongst a particular student's friends will be significantly correlated with that student's decision on whether or not to attend higher education. Specifically, this means that students who answered "some" or "many" of their friends have no plans on attending college will be significantly less likely than the alternative. Likewise, students who answered that "some" or "many" of their friends have plans to attend a 4-year college or university will be significantly more likely to attend college themselves.

There are some issues with this data set that affect the explanatory power of the independent variables. For instance, not all variables that could possibly explain a student's college attendance are included; there are very likely to be missing characteristics of specific children that are not captured in the data. For this reason, omitted variable bias might be present to a certain extent, which will ultimately skew the explanatory power of the probit coefficients and their marginal effects. I try to address this by including several sets of control variables, but the effects of omitted variable bias and endogeneity should be taken into account when examining the marginal effects of the data. While some of the independent variables were

correlated with each other, these correlations were not high enough to raise issues related to multicollinearity. Now that I have elaborated on the data and methodology used, I will explain the results of my models.

Chapter 5

RESULTS

The results of my probit regressions were mixed, but they all resulted in the variable of interest – whether it was the dummy variable for friends with no college plans or friends with 4-year college plans – being statistically significant. The degree of significance and the magnitude of the coefficients varied depending on the particular regression. The effects of the variables are also in line with my respective hypothesis for them; *NoCollegePlans* was negatively and significantly correlated with college enrollment, while *FourYearPlans* was positively and significantly correlated with college enrollment. Complete tables showing the marginal effects and initial probit coefficients for all the control variables are included in the appendix (Tables 3 through 6). These results were consistent with my hypotheses. For the purposes of this research, marginal effects at the mean of the sample are more useful; they provide a better approximation and comparison of the independent variables' effect on the dependent variable than the probit regressions original coefficients. In order to better explain my results, I divided the regressions into two different sets. The first set of regressions uses *NoCollegePlans* as the variable of interest, while the second set uses *FourYearPlans*. Abbreviated results for the first set of regressions are below:

Table 1 - Marginal Effects: Friends With No College Plans (Summary)

	1) SD	2) Miami	3) SD	4) Miami	5) SD	6) Miami
NoCollegePlans	-0.0485**	-0.0656***	-0.0418*	-0.0638***	-0.0451*	-0.0654***
	-0.0245	-0.0192	-0.0245	-0.0192	-0.0245	-0.0193
GPA1995	0.0769***	0.1266***	0.0790***	0.1283***	0.0772***	0.1243***
	-0.0179	-0.0186	-0.0179	-0.0187	-0.0179	-0.0185
GPA1992	0.0680***	-0.0413**	0.0666***	-0.0417**	0.0671***	-0.0423**
	-0.0203	-0.0196	-0.02	-0.0196	-0.0206	-0.0196
SATPercentile	0.0028***	0.0020***	0.0026***	0.0019***	0.0029***	0.0021***
	-0.0006	-0.0005	-0.0006	-0.0005	-0.0006	-0.0005
ParentSES	0.0669***	0.0545***	0.0507***	0.0466***	0.0677***	0.0534***
	-0.0176	-0.0149	-0.0185	-0.0152	-0.0183	-0.0146
N	1081	1137	1081	1137	1081	1137
% Correctly Classified	81.22%	84.78%	79.65%	84.61%	80.57%	84.61%

Standard errors in parentheses

="* p<0.1 ** p<0.05 *** p<0.01"

[1]Columns 1 and 2 include controls for length of time in the United States and English ability. Columns 3 and 4 include controls for inner-city and majority minority schools. Columns 5 and 6 include controls for race. All columns include controls for citizenship, family size, and gender.

For the first model involving the *NoCollegePlans* variable, it is clear that the students from the Miami area were more impacted by having friends with lower aspirations for higher education. The marginal effects for the variable for a student in Miami averages -6.49%, whereas the effect averages -4.51% for students in the San Diego sample. Additionally, the variable is statistically significant at the .01 level for the Miami sample, whereas it is between the .05 and .1 levels for the San Diego regressions, depending on the controls used. Notably, the magnitudes of the marginal effects of the variables vary only slightly depending on the particular controls that are included.

Several of the standard control variables were statistically significant in all of the regressions, including *SATPercentile*, *GPA1995*, and *GPA1992*. As would be expected, *SATPercentile* was positively correlated with college enrollment. *GPA1995* had a significant,

positive, and relatively large effect on a student's decision to attend college in both samples, which is fairly intuitive. The results for *GPA1992* were slightly more difficult to interpret. In the San Diego sample, *GPA1992* was significant and positive, while in Miami the variable was significant at the .05 level but was negative. A similar result was found in the second set of regressions, with the magnitudes of the coefficients being only slightly different. The magnitude of the marginal effects was relatively stable (averaging -4.18%) for the Miami students in both regressions. One possible explanation for this is that students with higher GPA's at the end of their high school careers were likely to attend college, but students with high GPA's early on were not more likely to attend college after controlling for their later performance. This could indicate the effect recency of academic proficiency has on college enrollment. Similar ideas have been explored in the literature, with researchers showing that students whose GPA's that trended upward during their high school careers were much more likely to be successful in college. Later grades in high school were found to be a better predictor of college success than overall GPA and test scores (Bulman 2017). However, there is no clear explanation for why this would be the case for one of the samples in my research and not the other. Further research with a larger sample would be necessary in order to draw more practical conclusions about the differences in the marginal effects of the GPA variables at different times.

The index for the parent's socioeconomic status was statistically significant at .01 level in all of the regressions for both the Miami and San Diego samples. Since this variable was a standardized scale of education, occupational prestige scores and home ownership, the marginal effects of the variable were more difficult to interpret. The index was positively correlated with college enrollment, which is not surprising. The number of siblings was statistically significant and had a small negative effect in the San Diego regressions, but not in the Miami regressions.

Female was not statistically significant in any of the probit regressions, while *Citizen* was only statistically significant in the San Diego regressions at the .1 level.

None of the three groups of control variables appeared to have a large effect on the college attendance of the students in either sample location. Neither *English* nor *Length* were statistically significant in the first set of regressions. *InnerCitySchool* was statistically significant at the .1 level and had a negative impact on college enrollment in the San Diego sample, but the minority composition of the school didn't have a statistically significant impact on a student's college enrollment in either sample. The race dummies were not statistically significant.

The second set of regressions simply replaced the variable of interest; instead of *NoCollegePlans*, *FourYearPlans* was used in the set of independent variables. An abbreviated table of the results is below:

Table 2 - Marginal Effects, Friends with 4 year College Plans (Summary)

	1) SD	2) Miami	3) SD	4) Miami	5) SD	6) Miami
FourYearPlans	0.1145***	0.0763**	0.1015**	0.0740**	0.1134***	0.0727**
	-0.0415	-0.0329	-0.0415	-0.033	-0.0416	-0.0329
GPA1995	0.0793***	0.1292***	0.0811***	0.1314***	0.0794***	0.1267***
	-0.0181	-0.019	-0.0181	-0.0191	-0.018	-0.0189
GPA1992	0.0660***	-0.0389*	0.0656***	-0.0399**	0.0667***	-0.0396**
	-0.0205	-0.02	-0.0202	-0.02	-0.0209	-0.0199
SATPercentile	0.0028***	0.0021***	0.0026***	0.0020***	0.0028***	0.0021***
	-0.0006	-0.0005	-0.0006	-0.0005	-0.0006	-0.0005
ParentSES	0.0652***	0.0573***	0.0493***	0.0500***	0.0663***	0.0561***
	-0.0178	-0.015	-0.0187	-0.0158	-0.0184	-0.0148
N	1081	1137	1081	1137	1081	1137
% Correctly Classified	81.31%	84.87%	80.39%	84.96%	81.04%	85.14%
="* p<0.1	** p<0.05	*** p<0.01"				

[1]Columns 1 and 2 include controls for length of time in the United States and English ability. Columns 3 and 4 include controls for inner-city and majority minority schools. Columns 5 and 6 include controls for race. All columns include controls for citizenship, family size, and gender.

As the table illustrates, students who indicated that many or most of their friends had plans to attend college were themselves more likely to attend college. As the table indicates, *FourYearPlans* was positive and statistically significant at the .05 level or higher in all of the probit regressions for the San Diego sample. *FourYearPlans* was positive and statistically significant at the .05 level in the Miami regressions as well, although the variable had a smaller marginal effect for the students in Miami compared to San Diego. The marginal effects at the mean of *FourYearPlans* averaged 10.90% for the San Diego regressions and 7.43% percent for Miami. Again, the results for the variable of interest did not vary widely between the different groups of control variable.

Several of the control variables had similar effects in the second set of regressions as they did in the first. For both geographic locations, *SATPercentile* and *GPA1995* were statistically significant at the .99 level and had positive marginal effects on a students' probability in enrolling in post-secondary education. A similar significant and negative effect for *GPA1992* was observed in the Miami regressions was also observed when *FourYearPlans* was the dependent variable in the second set of regressions. The effects of the additional control variables were similar to the effects found from the first set of regressions; only *InnerCitySchool* in the San Diego sample was statistically significant. It had a negative marginal effect on a student's probability of enrolling in post-secondary education (-6.62%). None of the other additional control variables were statistically significant.

Interestingly, the *FourYearPlans* variable was a larger magnitude for the San Diego sample, while *NoCollegePlans* was larger for Miami. While there is no readily apparent explanation for the differences in these variables between the two samples, it is a topic that could warrant further investigation in future research. Given the potentially subjective nature of the

survey responses, it is difficult to precisely ascertain the nature of the students' responses that describe their social groups. For example, what one student means when they say "some" of their friends have college plans could be noticeably different than other students in the survey.

Chapter 6

CONCLUSION

As my results have shown, college attendance by the second-generation immigrants in my sample of students is significantly correlated with the educational choices of their friends. This is true for both the geographical samples and variables of interest at least at the .05 significance level in nearly all of the regressions, with the exception of two of the regressions for the San Diego students when *NoCollegePlans* is used as the independent variable of interest, where the variable is significant at the .1 level. There were noticeable differences in the marginal effects in the variables of interest between the two geographical locations. However, including various control variables for English ability, school differences, and race did not have a large impact on the marginal effects on the variable of interest in a particular area. The results show the importance of examining the impact the educational aspirations a students' peers have on their own educational pursuits, even compared to more traditional measurements of academic ability and socioeconomic status. Given the role of higher education in increasing earnings and improving economic outcomes for immigrants, identifying the effects of a student's social capital on their educational outcomes could have important policy implications for high schools and institutions of higher education.

Future research on this topic would be well served to expand the sample size of the population being examined. While this analysis was informative, a more geographically,

demographically, and economically diverse sample of students would provide greater insight into the effects of social capital on college attendance. This could also allow for comparisons between immigrant and native-born families, rather than examining the immigrant students separately from other students. This could also allow researchers to examine the differences between different immigrant communities.

While the models I used in this research focused on the educational aspirations of a student's friends, there is a wide variety of ways that researchers could attempt to measure social capital and its influence on educational outcomes. Utilizing different measurements of social capital could provide valuable insights into the different determinants of educational choices, particularly among immigrant communities. Additionally, future research in this field could take a closer look into why particular students make the decision on whether or not to enroll in post-secondary education; was it that they didn't want to go, or that that they were not able to due to various financial or other factors?

While the results are not particularly surprising, they do highlight the importance of examining the role of social capital in the educational attainment of second-generation immigrants. In both of my samples, students who had many friends with college aspirations were significantly more likely to attend college themselves. The converse was also true; students with many friends with no college plans were less likely to attend college themselves. These findings were relatively consistent, even after controlling for a wide variety of other demographic and academic variables. For the students in these samples, their social environment played a large role in their own educational outcomes. These findings warrant future investigation and research in order to come to better understanding of how and why students, particularly from immigrant families, make decisions regarding higher education.

APPENDIX

Table 3- Variable Descriptions		
Variable	Description	Wave #
College	Dummy Variable. Equal to "1" if the person attended any form of post-secondary education.	3
FourYearPlans	Dummy Variable. Equal to "1" if the person answered "some" or "many" to the question "How many of your friends have: Plans to attend a 4-year college or university?"	2
NoCollegePlans	Dummy Variable. Equal to "1" if the person answered "some" or many" to the question "How many of your friends have: No plans to go to college?" Equal to "0" if the answer was "none."	2
Female	Dummy Variable. Equal to "1" if the person is female, equal to "0" if male.	1
Citizen	Dummy Variable. Equal to "1" if person was a US citizen in 1995, "0" if not.	2
SATPercentile	Equal to the national percentile in the SAT in which the student scored.	2
GPA1995	High School GPA for the person in 1995	2
GPA1992	High School GPA for the person in 1992	1
ParentSES	This is a unit-weighted standardized scale of father's and mother's education, and occupational prestige scores, and family home ownership.	2
Siblings	Number of siblings in 1992	2
Length	Dummy variable. Equal to "1" if the person had lived in the United States for longer than 9 years by the time of the first survey. Equal to "0."	1
English	Dummy variable. Equal to "1" the student answered "Always" to the question "How often do people in your home use this language (not English) when they are talking to each other?" Equal to "0" if the answer is "seldom," "from time to time," or "often."	1
InnerCity	Dummy variable. Equal to "1" if the school was located in the inner city and equal to "0" if it was in the suburbs.	1
MinoritySchool	Dummy variable. Equal to "1" 60% of the school is Black or Hispanic, "0" if not.	1
White	Dummy variable. Equal to "1" if person is White, "0" if not.	3
Black	Dummy variable. Equal to "1" if person is Black, "0" if not.	3
Asian	Dummy variable. Equal to "1" if person is Asian, "0" if not.	3
Hispanic	Dummy variable. Equal to "1" if person is Hispanic, "0" if not.	3

Table 4 - Miami- Summary Statistics

Dummy Variables	Mean	Std.	Total	Min.	Max.
College	0.83817	0.36846	953	0	1
NoCollegePlans	0.54969	0.49774	625	0	1
FourYearPlans	0.94195	0.23394	1071	0	1
Citizen	0.67370	0.46906	766	0	1
White	0.28320	0.45075	322	0	1
Black	0.07300	0.26025	83	0	1
Asian	0.02902	0.16795	33	0	1
Other	0.15040	0.35762	171	0	1
Hispanic	0.46438	0.49895	528	0	1
Female	0.57080	0.49518	649	0	1
InnerCity	0.29727	0.45726	338	0	1
MinoritySchool	0.81970	0.38461	932	0	1
Length	0.77924	0.41494	886	0	1
English	0.53210	0.49919	605	0	1
Other Variables					
Siblings	1.38610	1.05212		0	8
SATPercentile	56.73990	22.14138		0	99
ParentSES	0.16274	.68251		-1.66	1.88
GPA92	2.58938	0.86449		0.22	4.67
GPA95	2.47500	0.90837		0.14	4.97

n= 1137

Table 5 - San Diego - Summary Statistics

Dummy Variables	Mean	SD	Total	Min.	Max.
College	0.77243	0.41946	835	0	1
NoCollegePlans	0.56429	0.49608	610	0	1
FourYearPlans	0.93247	0.25105	1008	0	1
Citizen	0.73080	0.44375	790	0	1
White	0.01110	0.10482	12	0	1
Black	0.00648	0.08025	7	0	1
Asian	0.64015	0.48018	692	0	1
Other	0.12118	0.32649	131	0	1
Hispanic	0.22109	0.41517	239	0	1
Female	0.53284	0.49915	576	0	1
InnerCity	0.34320	0.47500	371	0	1
MinoritySchool	0.01203	0.10905	13	0	1
Length	0.76781	0.42243	830	0	1
English	0.46901	0.49927	507	0	1
Other Variables					
Siblings	2.08788	1.47405		0	8
SATPercentile	48.57493	27.43605		1	99
ParentSES	-0.12676	.78484		-1.66	1.85
GPA92	2.90401	0.79323		0.38	4
GPA95	2.89286	0.87793		0	4.8

n= 1081

Table 6 - Marginal Effects: Friends With No College Plans

	1) SD	2) Miami	3) SD	4) Miami	5) SD	6) Miami
NoCollegePlans	-0.0485**	-0.0656***	-0.0418*	-0.0638***	-0.0451*	-0.0654***
	-0.0245	-0.0192	-0.0245	-0.0192	-0.0245	-0.0193
Female	-0.0002	-0.0255	-0.0007	-0.0257	0.0021	-0.0231
	-0.0244	-0.0186	-0.0243	-0.0186	-0.0248	-0.0187
GPA1995	0.0769***	0.1266***	0.0790***	0.1283***	0.0772***	0.1243***
	-0.0179	-0.0186	-0.0179	-0.0187	-0.0179	-0.0185
GPA1992	0.0680***	-0.0413**	0.0666***	-0.0417**	0.0671***	-0.0423**
	-0.0203	-0.0196	-0.02	-0.0196	-0.0206	-0.0196
Citizen	0.0563*	0.0227	0.0538*	0.0259	0.0592**	0.0271
	-0.0297	-0.0217	-0.0285	-0.0192	-0.0293	-0.0192
SATPercentile	0.0028***	0.0020***	0.0026***	0.0019***	0.0029***	0.0021***
	-0.0006	-0.0005	-0.0006	-0.0005	-0.0006	-0.0005
Siblings	-0.0187**	0.0029	-0.0179**	0.0026	-0.0189**	-0.0007
	-0.0076	-0.0083	-0.0076	-0.0082	-0.0076	-0.0085
ParentSES	0.0669***	0.0545***	0.0507***	0.0466***	0.0677***	0.0534***
	-0.0176	-0.0149	-0.0185	-0.0152	-0.0183	-0.0146
Length	0.0241	0.0139				
	-0.0288	-0.024				
English	0.0134	0.0117				
	-0.0239	-0.0193				
InnerCitySchool			-0.0681**	-0.0304		
			-0.027	-0.0199		
MinoritySchool			-0.1566*	0.0101		
			-0.0896	-0.0266		
White					-0.0222	-0.039
					-0.1281	-0.0297
Black					-0.173	0.0093
					-0.1248	-0.0421
Asian					-0.0261	0.0095
					-0.0386	-0.0883
Hispanic					-0.0212	-0.0166
					-0.0413	-0.0277
N	1081	1137	1081	1137	1081	1137
% Correctly Classified	81.22%	84.78%	79.65%	84.61%	80.57%	84.61%

Standard errors in parentheses

* p<0.1 ** p<0.05 *** p<0.01

Table 7 - Marginal Effects, Friends with 4-year College Plans

	1) SD	2) Miami	3) SD	4) Miami	5) SD	6) Miami
FourYearPlans	0.1145***	0.0763**	0.1015**	0.0740**	0.1134***	0.0727**
	-0.0415	-0.0329	-0.0415	-0.033	-0.0416	-0.0329
Female	-0.0002	-0.0277	-0.0012	-0.0279	0.001	-0.0256
	-0.0247	-0.0191	-0.0245	-0.0191	-0.025	-0.0192
GPA1995	0.0793***	0.1292***	0.0811***	0.1314***	0.0794***	0.1267***
	-0.0181	-0.019	-0.0181	-0.0191	-0.018	-0.0189
GPA1992	0.0660***	-0.0389*	0.0656***	-0.0399**	0.0667***	-0.0396**
	-0.0205	-0.02	-0.0202	-0.02	-0.0209	-0.0199
Citizen	0.0654**	0.0206	0.0591**	0.0245	0.0640**	0.0236
	-0.0302	-0.0222	-0.0289	-0.0201	-0.0297	-0.0196
SATPercentile	0.0028***	0.0021***	0.0026***	0.0020***	0.0028***	0.0021***
	-0.0006	-0.0005	-0.0006	-0.0005	-0.0006	-0.0005
Siblings	-0.0183**	0.0029	-0.0176**	0.003	-0.0185**	-0.0009
	-0.0077	-0.0085	-0.0076	-0.0085	-0.0077	-0.0087
ParentSES	0.0652***	0.0573***	0.0493***	0.0500***	0.0663***	0.0561***
	-0.0178	-0.015	-0.0187	-0.0158	-0.0184	-0.0148
Length	0.0147	0.0119				
	-0.0291	-0.0246				
English	0.0182	0.012				
	-0.0241	-0.0198				
InnerCitySchool			-0.0662**	-0.0319		
			-0.0273	-0.0206		
MinoritySchool			-0.147	0.0111		
			-0.0914	-0.0271		
White					-0.0318	-0.0352
					-0.129	-0.0302
Black					-0.1796	0.0109
					-0.1271	-0.0428
Asian					-0.031	0.0203
					-0.0391	-0.092
Hispanic					-0.0223	-0.0175
					-0.0417	-0.0283
N	1081	1137	1081	1137	1081	1137
Percent Correctly Classified	81.31%	84.87%	80.39%	84.96%	81.04%	85.14%

Standard errors in parentheses

* p<0.1 ** p<0.05 *** p<0.01

Table 8 - Friends with No college Plans: Probit Coefficients

	1) SD	2) Miami	3) SD	4) Miami	5) SD	6) Miami
NoCollegePlans	-0.2033**	-0.3677***	-0.1763*	-0.3575***	-0.1892*	-0.3666***
	-0.103	-0.1088	-0.1035	-0.1089	-0.1032	-0.1093
Female	-0.0007	-0.1428	-0.0031	-0.1441	0.0086	-0.1298
	-0.1025	-0.1046	-0.1027	-0.1048	-0.1039	-0.1051
GPA1995	0.3224***	0.7092***	0.3336***	0.7190***	0.3239***	0.6971***
	-0.075	-0.1061	-0.0757	-0.1069	-0.0751	-0.106
GPA1992	0.2850***	-0.2312**	0.2810***	-0.2337**	0.2815***	-0.2370**
	-0.0851	-0.1097	-0.0847	-0.1099	-0.0867	-0.1098
Citizen	0.2358*	0.1272	0.2271*	0.1452	0.2484**	0.1519
	-0.1243	-0.1214	-0.1204	-0.1077	-0.1229	-0.1079
SATPercentile	0.0119***	0.0113***	0.0111***	0.0107***	0.0120***	0.0116***
	-0.0024	-0.0029	-0.0024	-0.0029	-0.0024	-0.0029
Siblings	-0.0782**	0.0164	-0.0756**	0.0143	-0.0795**	-0.0042
	-0.0318	-0.0467	-0.0319	-0.0461	-0.0319	-0.0479
ParentSES	0.2804***	0.3054***	0.2139***	0.2610***	0.2842***	0.2995***
	-0.0745	-0.0841	-0.0785	-0.086	-0.0774	-0.0826
Length	0.1011	0.0776				
	-0.1206	-0.1343				
English	0.0561	0.0654				
	-0.1001	-0.1083				
InnerCitySchool			-0.2873**	-0.1706		
			-0.1138	-0.1113		
MinoritySchool			-0.6608*	0.0565		
			-0.3788	-0.1492		
White					-0.0931	-0.2189
					-0.5377	-0.1663
Black					-0.7259	0.0521
					-0.5244	-0.2362
Asian					-0.1095	0.0532
					-0.1619	-0.4953
Hispanic					-0.0888	-0.093
					-0.1732	-0.1555
_cons	-1.2875***	-0.4939**	-1.0730***	-0.3853	-1.1060***	-0.266
	-0.2721	-0.2494	-0.2571	-0.27	-0.2863	-0.2553
N	1081	1137	1081	1137	1081	1137
pseudo R-sq	0.251	0.207	0.257	0.209	0.252	0.21

Standard errors in parentheses

* p<0.1 ** p<0.05 *** p<0.01

Table 9 -Friends with College Plans: Probit Coefficients

	1) SD	2) Miami	3) SD	4) Miami	5) SD	6) Miami
FourYearPlans	0.4763***	0.4163**	0.4253**	0.4040**	0.4726***	0.3974**
	-0.1707	-0.1781	-0.1719	-0.1788	-0.1713	-0.1789
Female	-0.001	-0.1509	-0.0051	-0.1523	0.0043	-0.1399
	-0.1026	-0.1047	-0.1028	-0.1049	-0.104	-0.1051
GPA1995	0.3299***	0.7049***	0.3400***	0.7178***	0.3310***	0.6930***
	-0.0753	-0.1058	-0.0759	-0.1066	-0.0754	-0.1057
GPA1992	0.2748***	-0.2123*	0.2747***	-0.2180**	0.2779***	-0.2165**
	-0.0858	-0.109	-0.0851	-0.1093	-0.0872	-0.109
Citizen	0.2719**	0.1125	0.2475**	0.134	0.2670**	0.129
	-0.1254	-0.1214	-0.1211	-0.1097	-0.1234	-0.1074
SATPercentile	0.0117***	0.0114***	0.0108***	0.0108***	0.0117***	0.0117***
	-0.0024	-0.0029	-0.0024	-0.0029	-0.0024	-0.0029
Siblings	-0.0761**	0.0156	-0.0739**	0.0164	-0.0772**	-0.0051
	-0.0319	-0.0465	-0.032	-0.0466	-0.032	-0.0477
ParentSES	0.2711***	0.3126***	0.2067***	0.2731***	0.2764***	0.3069***
	-0.0748	-0.0831	-0.0788	-0.0872	-0.0776	-0.0817
Length	0.0614	0.0651				
	-0.1212	-0.1341				
English	0.0757	0.0652		0.0382		
	-0.1004	-0.108		-0.1091		
InnerCitySchool			-0.2771**	-0.1744		
			-0.1141	-0.1121		
MinoritySchool			-0.6158	0.0608		
			-0.3833	-0.1478		
White					-0.1325	-0.1927
					-0.5375	-0.1649
Black					-0.7488	0.0598
					-0.5306	-0.2342
Asian					-0.129	0.1112
					-0.1627	-0.5038
Hispanic					-0.0931	-0.0958
					-0.1738	-0.1548
Constant	-1.8465***	-1.1296***	-1.5862***	-1.0431***	-1.6576***	-0.8978***
	-0.3005	-0.2759	-0.2902	-0.3064	-0.3164	-0.2824
N	1081	1137	1081	1137	1081	1137
pseudo R-sq	0.254	0.201	0.26	0.203	0.255	0.203

Standard errors in parentheses

* p<0.1 ** p<0.05 *** p<0.01

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