From Low-Income to Elite: Neighborhood Effects in Selective College Admissions

Extended Abstract

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Introduction

The stakes of selective college admissions decisions are high; the benefits of attending a selective school are realized at various stages of the career. To start, attending a selective college leads to a higher probability of earning a bachelor's degree (Long 2008). This is particularly important at a time when the gap in median weekly earnings between high school graduates and four-year college graduates has grown dramatically in recent decades (Baum, Kurose, and McPherson 2013). Moreover, the selectivity of an institution is positively associated with labor market earnings (Long 2008), and the returns to selectivity have increased (Hoxby 2001). Moreover, increased selectivity at the most selective institutions has improved the resources available to students at these schools (Hoxby 2009). Graduates from high-quality colleges are also more likely to enroll in graduate programs, to enroll in higher-quality graduate programs, and to finish their graduate degree within four to five years of college graduation (Zhang 2005).

In order to understand which students have the opportunity to earn degrees from selective institutions, one must examine who enrolls at these institutions in the first place. Who enrolls at an institution is a function of which high school students decide to apply, which applicants are admitted, and which admittees decide to enroll. This paper focuses on the middle component of this equation: which applicants are admitted. The other two components refer to individual decisions; this middle part constitutes the institutional decision.

Theoretical Framework

Under the current admissions regime at selective colleges and universities in the U.S., admissions officers evaluate candidates holistically (Bowen and Bok 1998). This means that when reading applications they pay attention to a diverse range of factors to learn about applicants, including academic, extracurricular, and personal ones. Academic considerations include standardized test scores and high school performance (Alon and Tienda 2007; Espenshade and Radford 2009). As for extracurricular factors, admissions officers care about applicants' talent and commitment in activities outside the classroom (Kaufman and Gabler 2004, Espenshade and Radford 2009). Personal factors that admissions officers pay attention to include include race and legacy status (Espenshade, Chung, and Walling 2004), as well as any disadvantages applicants have faced and overcome (Steinberg 2002). This last factor is the focus of the paper at hand.

When it comes to the strength of the selective college candidacy, applicants from low SES backgrounds are disadvantaged because of the positive correlation between SES background and many of the factors that go into the application, including SAT score, high school quality, and number of AP exams (Rothstein 2004; McDonough 1997). When an applicant from a low SES background presents a credible candidacy despite facing such disadvantages, it signals something positive about the applicant. There is some evidence that admissions officers give applicants of disadvantaged class background a boost in admission (Bowen, Kurzweil, and Tobin 2005; Espenshade and Radford 2009). In these studies SES is measured at the family-level. What has not been studied is the association between admission to an elite college and SES at the neighborhood level.

An extensive body of literature concerning itself with "neighborhood effects" seeks to identify neighborhood factors that influence individual outcomes above and beyond the extent to which individual and family characteristics do. A series of studies most relevant to the current paper examines neighborhood effects on children's and adolescents' school readiness and achievement, and these have consistently found that high-SES neighbors have a positive effect on school readiness and achievement outcomes (Leventhal and Brooks-Gunn 2000). Given that academic achievement makes up an important part of the selective college candidacy, one would also expect a positive association between neighborhood SES and strength of a candidacy. Applicants from lower SES neighborhoods are thus at a disadvantage. Given that admissions officers under holistic review pay attention to any disadvantages applicants faced and overcame, it is plausible that the neighborhood in which an applicant lives is one of the factors they consider. If an applicant from a low SES neighborhood presents a credible candidacy despite the disadvantages she faced, this is likely to be viewed favorably by admissions officers.

In order to examine the hypothesis that admissions officers give a boost in admission to applicants from low-SES neighborhoods, one would need information on the set of all applicants to a given institution for a particular year, including the applicants' individual characteristics, the high schools they attended, and the outcomes of their applications. The National Study of College Experience (NSCE) offers exactly this. In addition, one would need data on the characteristics of the applicants' places of residence. Census data offers this. In the analysis at hand I merge NSCE and Census data on zip code to examine whether applicants from low-median household income neighborhoods have higher chances of admission to elite colleges than do applicants from higher-median household income neighborhoods, all else equal.

Data

The NSCE data collection effort targeted ten colleges and universities for data on admissions and student performance for the entering cohorts of 1983 (or a nearby year), 1993, and 1997. The institutions include public and private research universities in addition to liberal arts colleges. They have geographic spread, covering all four regions of the country. The institutions are all academically selective. As Espenshade and Radford (2009) have shown by comparing characteristics of (eight of) the NSCE institutions with characteristics of the top 50 universities in the U.S. News & World Report ranking, the NSCE institutions are representative of the 50 top universities in the country. The requested information included characteristics of all students who applied to a given institution (including individual characteristics and the high schools they attended), admissions decisions for each application, and academic performance for those students who enrolled. In addition to the data provided by the institutions, a sample of NSCE applicants completed a survey, in which they answered questions about their social networks and activities on campus, college expenses, pre-college experiences, and family background. Supplementing the data received from the institutions and survey respondents in the NSCE database is information from several additional sources, including the U.S. Census Bureau, the National Center for Education Statistics, The College Board, the Educational Testing Service, and the U.S. Department of Education.

For the analysis at hand I use data from seven NSCE institutions for 1997. I chose these schools because their institutional data provides complete information on admissions. I chose this year because it is the most recent data available in the NSCE. This selection results in a total of 3,829 records. Each observation is an application and contains the home address, including zip code, of the applicant. I use the zip code to merge on ZCTA (Zip Code Tabulation Area)-level Census data on median household income for the year 2000. After removal of applications from foreign countries or Puerto Rico (161), applications with unknown place of residence (37), and applications that do not have a matching zip code in the Census data (58), there are 3,573 cases for analysis.

Method

To prepare the data for analysis I create a set of variables to be used for logistic regression modeling predicting admission. The outcome is a binary variable of whether or not an applicant in question is admitted to the institution she is applying to. The independent variable of interest is the median household income in the zip code area of the applicant's residence (in categories). In addition, there are a large set of control variables. The selection of control variables is based on prior research using the NSCE data (Espenshade and Radford 2009), and includes race, household income, first-generation college-going status, gender, U.S.-citizenship, recruited athlete status, legacy status, SAT I score, average SAT II score, number of AP exams taken, GPA, class rank, merit scholar status, high school type, high school eliteness, average SAT score among students at high school, average number of AP exams among students at high school, census division, in-state status, institution, and admissions period.

Results

I estimate three logistic regression models predicting the association between being admitted to an elite institution and median household income in place of residence, accounting for the full set of controls. The first model is for all institutions, the second one is for public institutions only, and the third one is for private institutions only.

Results for the zip code SES variables show that relative to applicants in areas with a median household income of more than $80,000, the odds of being admitted are as follows: 1.67 for applicants in areas with a median household income of $70,000-$80,000, 1.41 for applicants in areas with a median household income of $60,000-$70,000, 1.63 for applicants in areas with a median household income of $50,000-$60,000, 1.86 for applicants in areas with a median household income of $40,000-$50,000, and 3.25 for applicants in areas with a median household income of less than $40,000. Generally, thus, in the overall sample the odds of admission increase as median household income goes down. The general trend is the same when running public and private institutions separately.

Discussion

Findings using application data from seven selective colleges and universities in the NSCE data show that admissions chances are higher for applicants who live in areas with lower median household incomes, all else equal. In other words, between two applicants who are of the same race and family income level, who have comparable SAT scores and high school grades, and who attended high schools of comparable academic rigor, the one growing up in an area with neighbors of lower income is more likely to be admitted. This finding is in line with the hypothesis, which speculated that admissions officers under holistic review take into account the neighborhoods in which applicants live and look favorably upon applicants from low SES neighborhoods who present credible candidacies despite the disadvantages they faced.

Giving applicants from disadvantaged neighborhoods a boost in admission is one of the ways in which the nation's elite colleges and universities can increase socioeconomic diversity in their student bodies. There is an ongoing debate over socioeconomic diversity at at these institutions, schools at which low-income students are greatly underrepresented (Carnevale and Rose 2004). The current study provides some evidence that applicants from lower SES neighborhoods receive a boost in admission, and prior work provides some evidence that applicants from lower SES families receive a boost in admission (Bowen, Kurzweil, and Tobin 2005; Espenshade and Radford 2009); however, these

preferences are modest compared to those extended based on race (Bowen, Kurzweil, and Tobin 2005; Espenshade, Hale, and Chung 2004). Moreover, not all research findings are consistent; some studies conclude that schools do not practice class-based preference (Carnevale and Rose 2004; Bowen, Kurzweil, and Tobin 2005). The authors of these studies are among the proponents of a move over the past decade to improve socioeconomic diversity at the country's selective institutions. Top institutions have been attempting to increase the number of low SES students through outreach activities and expanded financial aid programs in the application and matriculation stages, respectively (Espenshade and Radford 2009). Carnevale and Rose (2004) and Bowen, Kurzweil, and Tobin (2005) argue that at the *admissions* stage, colleges should practice class-based affirmative action that gives a systemic preference to low income students.

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