

The Differential Impact of Wealth Versus Income in the College-Going Process

Su Jin Jez

Received: 12 December 2012 / Published online: 30 March 2014
© Springer Science+Business Media New York 2014

Abstract College is increasingly essential for economic and social mobility. Current research and public policy devotes significant attention to race, income, and socioeconomic factors in college access. Yet, wealth's role, as differentiated from income, is largely unexplored. This paper examines the differences between wealth and income in the college-going process, specifically applying to college, attending college, and what type of college attended (2-year, 4-year, and more or less selective). To examine these relationships, the National Longitudinal Study of Youth (1997) is linked to the Integrated Post-secondary Education Data System to create a nationally representative dataset. Binary and multinomial logistic regressions reveal that wealth is consistently more significant in the college choice process than income. Wealth's significance as a predictor for college application and attending a 2-year college versus no college disappears when controls for human capital, habitus, social capital, and cultural capital are added. However, wealth's significance persists for less selective and more selective 4-year college attendance, even after including these controls. K-12 and postsecondary institutions and policymakers, looking to level the playing field and make college more accessible, must address wealth's impact on the college-going process.

Keywords College access · Wealth · Income · Social capital · Cultural capital

Introduction

As the economic and social returns to college grow rapidly (Baum and Payea 2004; Hoxby 1998), higher education has become progressively more important to social and economic

S. J. Jez (✉)
Public Policy and Administration, California State University, Sacramento, 6000 J Street, Sacramento,
CA 95819, USA
e-mail: jez@csus.edu

mobility. In 2008, the median high school graduate earned \$24,612, less than half as much as those with a bachelor's degree, who earned \$52,010 (U.S. Census Bureau 2009). This gap in earnings between high school graduates and those with bachelor's degrees or higher has been increasing over time and will likely only increase further in the future (Katz and Murphy 1992). Leading scholars declare that the lack of a response to this "extraordinary economic incentive ... is the major threat to the continuing excellence of American higher education" (Bowen et al. 2005, pp. 70–71).

At the same time, top colleges, which have become even more selective (Fallows and Ganeshanathan 2004), dole out the greatest returns (Bowen and Bok 1998; Brewer et al. 1999; Hoxby 1998; Monks 2000). Moreover, the gap in returns between elite private colleges and other colleges is only increasing over time, even after adjusting for selection effects (Brewer et al. 1999). More selective colleges do a better job of graduating their students than less selective colleges; this is true even after controlling for student background characteristics (Bowen and Bok 1998).¹ Furthermore, research indicates that, all else constant, students who graduate from more selective colleges earn more after graduation (Carnevale and Rose 2004; Ehrenberg 2005). Finally, selective colleges play an important role in developing corporate, military, and political leaders (Karabel 2005). As such, it is important to analyze the factors that affect the decision to apply to and attend college, especially selective colleges.

A significant amount of attention is focused on the role of race in the college choice process, although recent reports have begun to focus on the access problem that exists for students from low socioeconomic backgrounds, especially with regards to selective colleges (Bowen et al. 2005; Carnevale and Rose 2004). One report found that only about 10 % of students at highly selective colleges came from the lowest 40 % of the family income distribution (Hill et al. 2005). To compound this fact, the students that benefit most from attending elite universities are low-income students—the students that are absent from their rolls (Bowen and Bok 1998; Dale and Krueger 2002a, 2002b; Ehrenberg 2005). Elite universities, while claiming to desire students with less socioeconomic status (SES), have not been giving them preference during the admissions process (Bowen et al. 2005; Carnevale and Rose 2004). Findings like these on the effect of family income on college attendance have been remarkable, further highlighting the vast inequalities in higher education, especially at highly selective universities (Cabrera and Nasa 2000).

Largely due to data limitations, educational research has focused chiefly on income and less on other socioeconomic proxies, with the specific role of wealth largely left unexplored. Wealth and income are markedly different. Wealth measures the total supply of financial resources available to a family, whereas income measures the current stream of cash payments. If wealth and income were strongly correlated, income would be an adequate measure of financial well-being, but they are not (Keister 2000). When income stemming from assets is not included when measuring income, the correlation is 0.26 (Lerman and Mikesell 1988). Wealth can provide income (and income may eventually build to wealth), but wealth also has other beneficial characteristics that income does not have. Wealth brings stability. It generally does not change drastically over time in the way that income may. It can be passed on from generation to generation. Unlike income, it is not used for daily expenditures; it is used to "create opportunities, secure desired stature and standard of living, or pass class along to one's children" (Oliver and Shapiro 1997:2).

¹ Dale and Krueger (2002) argue that selectivity does not matter, and that other intangible student characteristics are confounding the relationship.

In this paper, the stark differences in the roles of income and wealth in impacting the college-going process are shown, specifically, applying to college, attending college, and the type of college attended (two-year, less selective four-year, or more selective four-year). The process through which wealth and income impact the college-going process is explored (is it purely increased financial resources or something else?). Given how wealth has enhanced the understanding of academic achievement, social welfare programs, and race inequalities (Conley 1999, 2001; Oliver and Shapiro 1997; Orr 2003; Shapiro 2004), wealth's inclusion in the analysis of postsecondary access may greatly improve the understanding of the college choice process. Research in these areas indicates that when looking at measures of social equality, disparities in wealth are much greater than disparities in income (Conley 1999; Oliver and Shapiro 1997).

This paper is organized as follows: in the next section, wealth is discussed, its definition and distribution in the U.S.; then, the literature is reviewed, followed by a description of the conceptual framework that guides the study; the data and methods used, followed by the findings and conclusion.

The Definition and Distribution of Wealth

Wealth is generally measured as net worth. Net worth, also known as marketable wealth, is the difference in value of total assets and total liabilities. Total assets are comprised of the value of owner-occupied housing, other real estate owned, cash- and near-cash deposits, stocks and bonds, cash surrender value of life insurance plans and pension plans, net equity in unincorporated businesses, and equity in trust funds. Consumer durables, like cars, are excluded in the calculation of assets. Total liabilities are defined as mortgage debt, consumer debt, and other debt. Net worth is used as a measure of stored value that can be used for future consumption (Wolff 1998).

Wealth's distribution in the US is extremely skewed—significantly more so than the distribution of income. In 2010, the top 1 % of households held 35 % of US total wealth and the top 10 % held 77 % of the wealth. In comparison, households in the top 1 % of the US income distribution received 17 % of the total annual income and the top 10 % of households received 44 % of annual income in the 2009—recent data in the same year are not available (Wolff 2013).

Additionally, disparities in wealth are growing much more quickly than disparities in income, as social mobility has been shown to have not only slowed, but declined, over the last 20 years (Hacker and Pierson 2010). Between 1983 and 2004, the top 1 % saw a percentage gain in net worth of 35.1 % while the bottom 40 % of Americans saw a decrease of 0.7 %. Income, while telling a similar story, shows slower growth in inequality. The top 1 % saw an income gain of 32.7 %, while the bottom 40 saw an increase of 2 % (Wolff 2007). These numbers display how rapidly America has drifted towards growing inequality and why the study of wealth more appropriately captures the impact financial resources have on the college-going process.

Literature Review

The literature surrounding wealth and college attendance is sparse, largely due to the lack of data available on wealth. However, significant research has been conducted on the role of income and college attendance. This section begins with a review of the literature that

exists on wealth and college attendance and concludes with a critical summary of selected research on the role of income and college attendance.

Wealth and Educational Attainment

A study by Conley (2001) uses logistic regression to examine the relationship between wealth and college participation. He concluded that parental wealth has a strong effect on postsecondary access, may affect college completion, but has no significant effect on graduate school attendance. Conley also challenged the idea that wealth's role in affecting college access is through the provision of income by modeling an income stream from wealth. He found differential attributes of wealth and income in the effect on college participation.

In other work, Conley (1999) studied wealth's relationship with the probability of high school graduation and college graduation (for high school graduates) and wealth's role in explaining black-white gaps in educational attainment. Using logistic regression, he found that certain forms of wealth are positive and significant (at the $p < 0.10$ level) predictors of high school and college graduation, but that net worth, considered as a single variable, is not a statistically significant predictor of high school graduation, although it is for college graduation. In his final specification, only one of the five wealth variables is statistically significant. However, in neither study did Conley attempt to understand how wealth impacts college participation and why it is different than income.

Another study looked at the effects of parents' wealth on children's completed schooling and found that large amounts of parental assets when the child is young have a significant positive effect on years of schooling completed by age 23 (Axinn et al. 1997). This study does not look specifically at the decision to attend college but rather focused more generally on educational attainment.

Belley and Lochner (2007) studied the changing role of family income and ability in determining educational attainment, they found that students in the third and bottom wealth quartiles are significantly less likely than students in the top wealth quartile to attend college, after controlling for a wide variety of background variables.

Income and Educational Attainment

Belley and Lochner (2007) studied the changing role of income and educational outcomes in college attendance. The previous section reviewed the small piece of this paper that dealt with wealth; however, most of this study focused on the role of income. Using a nationally representative data set, the authors found that the importance of income in college attendance has increased from the late 1970s to the late 1990s. They note that the impact of income is largest for those with lower levels of academic achievement.

Family income may reflect other unobserved factors that affect both income and a child's educational attainment. Shea (2000) used variation in fathers' income due to union status, industry, and involuntary job loss to control for these confounding factors. Using two-stage least squares analysis, the author found that children's years of schooling are not affected by exogenous changes in income, except for children whose father dropped out of high school. He compared the results to the usual ordinary least squares (OLS) analysis that are common in studying the relationship between family income and child outcomes. The OLS results indicated a positive and significant relationship between family income and a child's years of schooling. These results lead one to question the result of any analysis that does not attempt to adjust for unobserved factors, like academic ability, and claims its goal

is to make a causal inference about family income's effect on child outcomes. He ended the piece calling for research that explains why "parents' income matters so little for most families" (p. 180). The study proposed in this paper hypothesizes that family wealth, not income, is the factor that matters most in children's outcome.

Plug and Vijverberg (2005) used yet another approach to examine the relationship between family income and children's educational attainment—they used adoption as a natural experiment. Plug and Vijverberg found that, after correcting for biases stemming from unobserved parenting skills and parents' differentiation between their birth children and adopted children, family income was still positively correlated with children's years of schooling.

This review of the literature exposes the lack of research on wealth and the gaps left by studies on income: few explicitly compare wealth to income, and none examine how either wealth or income affects access to selective colleges. This study fills the gap by examining the differential roles of wealth and income in the college choice process—specifically, who takes the steps necessary to attend a selective college, who applies to college, who attends college, and what type of college they attend.

Conceptual Framework

Theory and Framework

To analyze how wealth and income affect the decision to attend college, this study creates a college-going model based on an abbreviated form of Hossler and Gallagher's (1987) three-stage model of student college choice, with sociology's status attainment model (Blau and Duncan 1967) and an economic cost-benefit model embedded within. From these theories, this paper posits a two-stage process as indicated in Fig. 1.

Financial capital is the stock of financial resources available for purchases and is captured by wealth and income. As discussed, wealth measures net worth—the value of everything owned minus the value of everything owed. Income measures the current stream of cash coming in (or going out). Together, wealth and income capture the financial resources available, or financial capital.

This conceptual framework proposes that financial capital and other background characteristics interact with one another, and that together they affect a student's habitus, social capital, and cultural capital. The habitus is "a system of durable, transposable dispositions which functions as the generative basis of structure, objectively unified practices" (Bourdieu 1984, p. vii). Cultural capital, as defined by Bourdieu, is culturally valued taste and consumption patterns than one inherits (Bourdieu 1986; Harker 1990). Social capital refers to the value derived from social networks (Portes 1998). Note that this definition differs from Coleman's (1988) theory of social capital. Coleman's definition is broader and includes the ability to create value from the social structure itself. I find this definition to be closer to what this paper conceptualizes as habitus and cultural capital.

The habitus, social capital, and cultural capital directly shape a student's human capital. A student's human capital is the realized and unrealized potential a student holds. Students commonly build their human capital through education and training (Becker 1975). The conceptual framework states that a student's human capital also works to shape his or her habitus, social capital, and cultural capital. Then, habitus, social capital, cultural capital, and human capital all directly affect the perception of the costs and benefits of a college education. A student's background characteristics also directly affect how she perceives

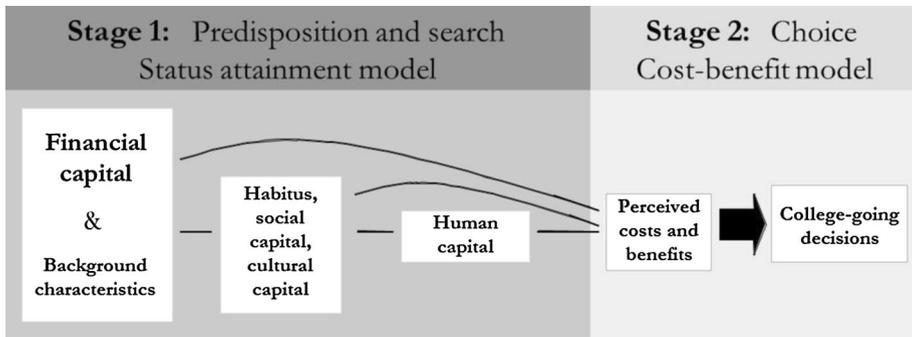


Fig. 1 Conceptual framework of the college choice process

the costs and benefits of continuing his or her formal education into college. In this choice stage, a student will weigh the perceived costs against the perceived benefits and decide whether to attend college and, if the student chooses to enroll in college, which college to attend—e.g. a community college, a less-selective state university, or a highly selective Ivy League college. This is the meaning of choice that is meant in the use of the term choice in this paper. The following two sections detail how this conceptual framework structures these relationships within the two college choice stages.

Stage 1: Predisposition and Search/Status Attainment Stage

During the predisposition and search stage, students decide whether to continue their formal education after high school (*predisposition*), and those who do choose the post-secondary educational path will then search for information on postsecondary institutions and determine which attributes are most important to them (*search*). These two major steps in the college choice process are best described by status attainment theory, which states that SES and academic ability shape a student's educational goals (Blau and Duncan 1967).

In Fig. 1, it is shown that financial capital and other individual and family characteristics directly shape a student's habitus, social capital, and cultural capital. The model above proposes that relationships exist between habitus, social capital, cultural capital, and human capital. While human capital surely shapes educational aspirations (a student with better grades and test scores will likely be encouraged to continue his or her education, whereas a student with a less stellar academic record will likely receive less encouragement), the relationship may also work in the opposite direction—an internalized college-track disposition will motivate a student to work harder on those metrics that matter in the college admissions process, like grades and test scores.

1. How financial capital and other individual and family characteristics affect habitus

An individual's habitus, being developed by one's community and rearing, is shaped by his or her financial capital. This rearing may affect views on education—as a right, a route, a privilege, or as inaccessible or unconsidered (Hossler and Stage 1992; Stewart et al. 2007). Students with less financial capital may have different aspirations, attitudes, and expectations than those with greater financial capital. In the case of families with more wealth, the habitus often includes the ideas of college as a necessary step in the development of human capital (McDonough 1997), which leads students from these families to enroll in postsecondary institutions at higher rates.

2. How financial capital and other individual and family characteristics affect social and cultural capital

Typically, families with more financial capital have also accumulated significant educationally valuable social and cultural capital. This abundance of social and cultural capital factors prominently into a child's decision to attend college.

Social capital often plays out as networks of information and resources (Portes 1998). Students with greater financial capital have social capital that supports college knowledge or the information resources necessary to negotiate the college admissions process. Students from poor families are often stuck in schools whose counselors are burdened with disciplinary matters, are not well-versed in the college admissions process, and whose expectations are so low that they are almost harmful (Lee and Ekstrom 1987; McDonough 1997). Unlike wealthy families, these families do not have the means to hire private college counselors to guide their children through the college application process.

Furthermore, poor families often lack the relevant social capital to gather information on college admissions from those around them, for they are surrounded by those whose educational situation mirrors their own (Kiyama 2010). These students and their families are left to their own devices to navigate the often bureaucratic postsecondary admissions process, which leads to some students opting out of higher education and to other students making less well-informed decisions.

A student's cultural capital is also affected by his or her family's wealth and other background characteristics. In his work on education and reproduction, Bourdieu outlined how educational institutions are structured to favor those who already possess cultural capital (Harker 1990).² Those in influential classes enjoy the most economically and symbolically valued kinds of cultural capital, which can be used to "buy" resources that are considered important to that culture, such as knowledge on how to navigate systems—like the college admissions process (Bourdieu and Passeron 1977; Harker 1990; McDonough 1997; Throsby 1999).

3. How habitus, social capital, and cultural capital affect human capital

The effect of habitus, social capital, and cultural capital may favor those with more wealth by developing students with higher levels of educationally valuable human capital. Wealthy families are better able to promote their children's elementary and secondary academic achievement and thus increase chances for college admission through various means. These families are able to locate to communities with better school systems, especially as local property taxes and voluntary resident-based educational foundations often fuel the finances of public schools. Families with greater financial resources also have the ability to avoid the public schooling system entirely and send their children to private high schools. Better academic curricula are related to college admissions and persistence (Adelman 1999; Tierney, Colyar, and Corwin 2003), and most universities give preferences to students who take more challenging coursework, most notably Advanced Placement (AP) and International Baccalaureate (IB) courses. Public schools in poorer communities offer fewer college preparatory courses, including AP classes and IB programs ("Castaneda et al. v. University of California Regents et al." 1999; Choy 2002; "Daniel et al. v. The State of California et al." 1999; "A shared agenda: a leadership challenge to improve college access and success," 2004).

Furthermore, today's schools encourage students to do significant amounts of educational development at home, from having parents read to their children in early childhood

² Bourdieu argues that the dominant habitus is changed into a kind of cultural capital, acting to reproduce educational achievement and attainment status and maintaining a hierarchical society (Harker, 1990).

to assigning substantial quantities of homework in the high school years. Families with less wealth are more likely to have less education, making them less able to help their children with their homework (Lareau 1987). Moreover, they are also more likely to consist of two working parents, influencing their ability to spend quality time with their children and develop their cognitive skills (Lareau 1987). Finally, the lack of financial resources leaves parents less able to hire private tutors or testing coaches to coach their children's academic growth when they are unable. Outside of the classroom, wealthy families have the means to provide their children with supplemental academic resources, like private tutors and expensive testing coaches.

4. How human capital affects habitus, social capital, and cultural capital

While not as dominant as the opposite causal relationship outlined above, human capital may affect a student's habitus, social capital, and cultural capital. Students with greater human capital may build their habitus, social capital, and cultural capital, as they may be more likely to draw the attention and guidance of those who can provide resources to the student. These resource providers may also work to change a student's disposition towards college and increase her college knowledge.

Stage 2: Choice/Economic Stage

The second phase of the college choice process is best described as a cost-benefit analysis. At this point, the student will weigh the present value of the *perceived* costs and benefits and, based on tastes and preferences, decide whether or not to attend (a selective) college. Habitus, social capital, cultural capital, and human capital all directly affect the perception of the costs and benefits of a college education. Background characteristics also directly affect how a student perceives the costs and benefits of a postsecondary education.

1. How habitus affects students' perception of the costs and benefits of attending college

Students with different upbringings will likely see the costs and benefits of a college education differently. Students who were raised with the disposition that college is a necessary step to maximize human capital, or a student's skills and abilities, will likely perceive the benefits of college to be greater than a student with a disposition that college is less important to the growth of human capital. In addition, certain students may have been raised with the expectation of continuing their formal education at highly selective colleges, which will shape their perception of the costs and benefits of postsecondary schooling. As previously mentioned, students who have internalized the educational process to include postsecondary education at a selective university are more likely to come from families with more wealth (McDonough 1997).

2. How social and cultural capital affect students' perception of the costs and benefits of attending college

Social and cultural capital provides some students with the information necessary to negotiate the college admissions process and allows them to better estimate the actual costs and benefits of continuing their formal education into college. These students are likely to be those from families with greater wealth.

3. How human capital affects students' perception of the costs and benefits of attending college

The growth of merit-based financial aid provides students with greater academic achievement (and the knowledge to apply for merit-based financial aid programs) the ability to lower the costs of college. Furthermore, students with greater academic achievement may also enjoy school and learning more than those with poorer academic credentials, thus increasing the perceived benefits of college (or lessening the perceived

costs, depending on one's perspective). As mentioned above, students from families with more wealth also have greater resources (financial capital, along with social and cultural capital) upon which they can draw to increase their child's academic prowess.

4. How financial capital and other individual and family characteristics directly affect students' perception of the costs and benefits of attending college

Direct influences of financial capital on the perceived costs and benefits of college attendance may exist. The opportunity costs may be greater for students whose families need them to provide income; consequently, these families are likely to be those with less wealth and fewer financial resources available. A family with greater ability to pay the direct and indirect costs related to college may lessen its importance in the college choice process, thereby leading students with greater financial resources to attend college at higher rates than those with fewer financial resources, *ceteris paribus*. Additionally, students from wealthy families may foresee better future benefits, as they have better connections for locating and securing well-paying jobs (Granovetter 1974) and they may have more of a taste for higher earnings and material wealth (Bowman 1976).

Modeling the College Choice Process

To model the college choice process, binary logistic regression is used to examine whether a student applied to college and multinomial logistic regression is used to examine college attendance: no college, two-year college, less selective 4-year college, or a more selective 4-year college. Both models regress these dependent variables on financial capital, habitus, social capital, cultural capital, human capital, and other background variables.

As the focus of this paper is to test the conceptual framework posed and understand the impact of different measures of financial capital (wealth and income), I use different specifications to see how the addition of wealth alters the coefficient estimates for income and how habitus, social capital, cultural capital, and human capital alter the coefficient estimates for wealth. As laid out in the conceptual framework, it is hypothesized that much of wealth's influence plays out through habitus, social capital, cultural capital, and human capital. Thus, it is predicted that wealth will become less significant when habitus, social capital, cultural capital, and human capital are included.

The conceptual framework details the process through which I believe financial capital impacts college-going behaviors. In the analysis, rather than test each individual relationship, I test the major relationships posited, specifically, background characteristics, then the addition of wealth, and, finally, the addition of habitus, social capital, cultural capital, and human capital.

More explicitly, a sequence of logistic regressions is used. For each dependent variable, three logistic regressions are specified. The first logistic regression includes only the most basic of controls—race and ethnicity, gender, number of children in the home, and family income. The second logistic regression adds wealth. This specification seeks to understand how the addition of wealth changes the estimates of income's impact on the college choice process. The third logistic regression adds measures of habitus, social capital, cultural capital, and human capital. As posited in the conceptual framework, this specification tests the hypothesis that wealth's role in the college choice process works largely through a student's habitus, social capital, cultural capital, and human capital.

Given the model being proposed, concerns of multicollinearity may arise—specifically with regard to the inclusion of wealth and income. The correlation between income and wealth, specifically, is 0.3935 and is significant. However, significant correlations do not

indicate an issue with multicollinearity. Rather, the variance inflation factor (VIF) is the best measure of multicollinearity. The VIF of the predictor variables in the models were all below 1.7 with the mean VIF being 1.20, well below the accepted maximums of 5 or 10 (Long and Freese 2005; Pregibon 1981).

Data

For the analyses, the National Longitudinal Study of Youth 1997 (NLSY:97) has been linked with the integrated postsecondary education data system (IPEDS). NLSY:97 is the only recent dataset that provides extensive information about wealth, education, and upbringing for approximately 9,000 youth born between 1980 and 1984. Available data on wealth include information on property owned, savings, investments, retirement funds, mortgages, and other loans. The surveys also include information on the student's development and resources, which allow habitus, social capital, and cultural capital to be carefully assessed.

IPEDS is a comprehensive data set containing information on all institutions and educational organizations whose primary purpose is to provide postsecondary education. This data set includes institutional-level information on institutional characteristics (e.g. admissions criteria, student services available, tuition and fees), degree completions and graduation rates (including students receiving athletically related aid, number completing program with 150 % of normal time to completion, number transferring to other institutions), enrollments (such as proportion of full- and part-time students, racial and ethnic breakdown of campus), financial aid, institutional prices, student finances (including revenues by source and by function), graduation rates, faculty and salaries, and staff.

These two data sets were matched by year such that a NLSY:97 respondent beginning college in 2003 is matched to the postsecondary data from IPEDS from 2003. Since institutions did not have to report to IPEDS applicant, admissions, and enrollee data and SAT/ACT scores until 2002, NLSY:97 respondents who applied to or enrolled in a postsecondary institution before 2002 use IPEDS 2002 data. NLSY:97 respondents who applied to or enrolled in a postsecondary institution in 2002 or later are matched with the corresponding year in the IPEDS data. Given how little institutional characteristics change, using data from later years should have minimal impact on the institution level (2- or 4-year) or selectivity classification. Respondents who did not indicate they applied to or enrolled in a postsecondary institution are marked as not having had applied to or not attending any postsecondary institution. As such, no students were lost in the matching process.

Working with household survey data requires careful adjustment to ensure the sample most accurately embodies the population it aims to represent. The united NLSY:97 and IPEDS datasets used in this study required two major modifications to make it as accurate as possible—multiple imputation to handle the missing data and creation of a custom sampling weight to handle the survey design. Multiple imputation, generally, uses the information from the non-missing data to infer the likely values of the missing data. More specifically, the researcher identifies a model to be used to estimate missing values. For example, one could fill in missing family wealth data by regressing family wealth on available independent variables. Using Stata's `-mi impute-` command, I included all variables in the analytic model in the imputation of missing data. To be safe, I used 20 imputations even though 5 imputations would have been adequate (Rubin 1987). Stata's suite of `-mi-` commands was used to conduct the analysis. The custom sampling weight was created by the NLS Investigator (<https://www.nlsinfo.org/investigator>) based on the

population groups used for this study. Stata's -svy- survey commands were used to take into account the sampling design.

The resulting sample used for the study largely reflects the demographic characteristics reported by other national samples (Kaufman, Alt, and Chapman 2001; Wirt et al. 2005).

Definition and Description of Key Variables

Postsecondary Institution or College

The term “postsecondary institution” or “college” includes any sort of post-high school educational or vocational institution, ranging from heating and air conditioning apprenticeship programs to a four-year university (although few students attended the less than two-year institutions that provide certifications in specializations like cosmetology or mechanics).

Attended a Most or Highly Selective College

Assignment as a most or highly selective college was based loosely on Barron's categorizations of college competitiveness. Colleges rated as most or highly selective have acceptance rates below 50 % and have admissions test scores in the top quarter of test scores. The IPEDS data was used to create this dummy variable based on acceptance rates and test scores. A student that indicated that they attended a college that fit this guideline as their first postsecondary institution after high school was marked as having attended a most or highly selective college. Examples of colleges in this category are Ivy League colleges, UC Berkeley, College of William and Mary, and Emory University.

Wealth

To measure wealth, this study utilizes the NLSY:97 net worth created variable. This variable includes all reported assets of the household and subtracts out all reported debts of the household. Wealth is broken down into deciles, as the relationship between wealth and the dependent variables proved to be non-linear. Deciles, rather than some other quantile, were used because fewer categories led to loss of information and more categories had too few cases in each cell.

Income

Income is the sum of all sources of income, including wages, child support, interest and dividends from stocks and mutual funds, rental income, retirement pension, alimony, Social Security payments, monetary gifts (except from those within the household), public support sources, and other income. As was done for wealth, income is broken down into deciles. This is done for the same reason as wealth.

Human Capital

Human capital is approximated by academic achievement as measured by student performance on the Armed Services Vocational Aptitude Battery (ASVAB). The variable

used in this study is a computed percentile score from four subject areas: mathematical knowledge, arithmetic reasoning, word knowledge, and paragraph comprehension.

Habitus

Habitus is a person's collection of dispositions, which are continually developed and reformulated from one's upbringing and direct environment that shapes expectations, attitudes, gestures, techniques, and aspirations (Bourdieu 1984). Habitus is extremely difficult to operationalize, especially when selecting from a secondary dataset. There were no variables that related directly to disposition, but there were variables that relate to the student's environment and expectations. The variables used to operationalize habitus are expectation of completing college, parents' education, and whether or not the student had a quiet area for study at home.

Expectation of completing college is the higher of the student and parents' estimation of the likelihood of the student completing college. This variable measures habitus as parental and student expectations relate directly to the type of habitus that is developed. Similar to this measure, previous research has included occupational expectations as a measure of habitus (Dumais 2002).

Parents' education is measured by years of schooling completed. Parents with higher levels of educational attainment are more likely to promote higher educational aspirations and have the knowledge to provide the environment that develops these goals, thereby developing a college-going disposition. Coleman (1988) included this as a measure of social capital, however his definition of social capital differs from the conceptualization of this paper. As such, parental education is included as a measure of habitus.

Student self-report of whether or not they have a quiet area to study in their home relates to the student's environment. Having a quiet area at home to study demonstrates an educationally focused habitus.

Social Capital

Social capital is the value derived from social networks (Portes 1998). Two variables are used to operationalize social capital: percent of peers that plan to attend college and the student–teacher ratio, both of which were self-reported by the student. A student with more peers who plan to attend college will likely also have more access to information about the college-going process, as friends who are also seeking out information on the process surround them. Previous research has used peer relationships as a measure of social capital (Furstenberg and Hughes 1995; Muller and Ellison 2001; Pribesh and Downey 1999).

Students depend on teachers for information on the college choice process (Antonio et al. 2004; Venezia et al. 2003), and students in smaller classes likely have a closer relationship with and greater access to their teacher. Moreover, previous research has included teacher and counselor relationships as a measure of social capital (Lopez 1996; Parcel and Dufur 2001).

Cultural Capital

Cultural capital is inherited culturally valued taste and consumption patterns, such as art, education, and language (Bourdieu 1986; Harker 1990). Two variables are used to operationalize cultural capital: parents' knowledge of school activities and the type of school

the student attended. Students were asked about their parents' general knowledge of their school activities—they were asked about their mother and father separately. Student response options were: knows nothing, knows just a little, knows some things, knows most things, or knows everything. In constructing this variable, the higher of the two was used. As supported by previous research (Lareau 1987; Lopez 1996), this variable serves as a measure of cultural capital, as it shows how much the parents value and consume the student's education through his or her demonstrated interest.

The type of school attended by the student includes the following options: public (the reference category for the logistic regressions); technical or vocational; Catholic school; private, religious non-Catholic school; private, secular school; home school; and other (for example, alternative schools). This variable also demonstrates the consumption of education as shown through the type of school the student enrolled. Coleman (1988) noted school type as a measure of social capital. Again, because Coleman's definition of social capital differs from that used in this study, school type is instead included as a measure of cultural capital.

Results

More disparity exists across the wealth distribution than the income distribution in nearly every variable considered as shown in Table 1. More specifically, low-wealth students look to be worse off than low-income students and high-wealth students look to be better off than high-income students.

In consideration of non-linearity between wealth and income and the descriptive variables considered, income and wealth are considered as deciles. The median level of wealth for those in the top decile is \$490,001 and the median level of income for those in the top decile is \$160,500, which is substantially greater than their respective overall median levels of \$34,550 and \$41,000, respectively. This figure is halved for the second decile of wealth (\$236,201) and drops by approximately a third for the second decile of income (\$105,200). For the eight lower wealth deciles, wealth levels continue to drop at a greater rate than income levels, highlighting greater inequalities in levels of wealth than income. The median for the bottom decile of wealth is negative \$375, indicating that these families actually owe more than they own (median income for the bottom decile of income is \$2,000).

When considering respondent's educational expectations, similar disparities are revealed. Low-income students expect to complete college at higher rates than their low-wealth counterparts and high-income students expect to complete college at lower rates than their high-wealth counterparts.

This pattern persists when looking at who takes the SAT, who applies for college, who attends college, and who attends selective colleges. It does not, however, hold true for who attend 4-year colleges. While students in the lowest wealth decile are less likely to attend a four-year college than students in the lowest income decile (14 and 28 %, respectively), students in the top wealth decile attend four-year colleges at similar rates as their top-income-decile peers (63 and 64 % respectively).

The series of logistic regressions demonstrate that income is a significant predictor in the college choice process, but its significance diminishes or completely disappears when wealth is added to the model. In testing the conceptual framework to understand the ways in which financial capital impacts the college choice process, I find that the addition of variables operationalizing human capital, habitus, social capital, and cultural capital further

Table 1 Sample composition and descriptive statistics

Variable	Proportion of sample	Mean	SE
Household wealth (median)		\$34,550	
Household income (median)		\$41,000	
Race/ethnicity ^a			
White	0.68		0.02
Black	0.16		0.01
Asian	0.02		0.01
Hispanic	0.13		0.01
Academic achievement (ASVAB percentile)		48.7	0.77
Habitus			
Chance of completing a bachelor's (per student)		0.75	0.0084
Chance of completing a bachelor's (per parent)		0.70	0.0085
Parent years of schooling		13.7	0.10
Social capital			
Percent of peers that plan to attend college		0.65	0.0067
Number of students per teacher		15.3	0.25
Cultural capital			
Parents' knowledge of school activities			0.25
Knows nothing	0.01		0.00
Knows just a little	0.03		0.01
Knows some things	0.11		0.00
Knows most things	0.35		0.01
Knows everything	0.51		0.01
Type of school attended			
Public school	0.91		0.01
Catholic school	0.038		0.01
Private, religious (non-Catholic) school	0.024		0.00
Private, secular school	0.01		0.00
Technical or vocational school	0.01		0.00
Alternative school	0.009		0.00
Home school	0.002		0.00
Special education	0.0001		0.00
Other	0.001		0.00
Applied to college	0.62		0.01
Attended college	0.56		0.01
Attended a two-year college	0.13		0.01
Attended a four-year college	0.27		0.01
Attended a most or highly selective college	0.03		0.00

N = 8962

^a Native Americans are included in the analytic sample, but are excluded from the race/ethnicity breakdown due to their size

reduces or completely eliminates the impact of financial capital. The magnitude of the impact of financial capital, human capital, habitus, social capital, and cultural capital differ for different college choice options—whether applying to college or what type of college

Table 2 Binary logistic odds ratios: applied to college versus did not apply to college

	(1) Base model	(2) + wealth	(3) + human capital, habitus, social capital, cultural capital
Financial capital			
Income (reference = top income decile)			
Second income decile	0.8557 (0.18)	0.9179 (0.19)	0.9807 (0.26)
Third income decile	0.9634 (0.22)	1.0921 (0.27)	1.2370 (0.39)
Fourth income decile	0.6870* (0.13)	0.8446 (0.17)	0.9906 (0.24)
Fifth income decile	0.4973*** (0.10)	0.6344 (0.13)	0.7215 (0.18)
Sixth income decile	0.5064*** (0.09)	0.6795* (0.12)	0.8351 (0.20)
Seventh income decile	0.3831*** (0.07)	0.5267** (0.11)	0.6931 (0.19)
Eighth income decile	0.3539*** (0.07)	0.5062** (0.11)	0.7317 (0.20)
Ninth income decile	0.3525*** (0.07)	0.5006*** (0.10)	0.7615 (0.20)
Bottom income decile	0.3900*** (0.07)	0.5503** (0.11)	0.8356 (0.20)
Wealth (references = top wealth decile)			
Second wealth decile		0.9743 (0.19)	1.1540 (0.27)
Third wealth decile		0.6921* (0.11)	0.9492 (0.17)
Fourth wealth decile		0.5298*** (0.10)	0.8117 (0.21)
Fifth wealth decile		0.4384*** (0.08)	0.7382 (0.17)
Sixth wealth decile		0.4654*** (0.09)	0.8869 (0.22)
Seventh wealth decile		0.4356*** (0.08)	1.0039 (0.25)
Eighth wealth decile		0.3687*** (0.06)	0.8993 (0.21)
Ninth wealth decile		0.3107*** (0.06)	0.7952 (0.20)
Bottom wealth decile		0.2999*** (0.05)	0.8153 (0.17)
Human capital			
Academic achievement			1.0000*** (0.00)
Habitus			
Expectation of completing college			1.0267*** (0.00)
Parents' education			1.0576** (0.02)
Quiet area at home (yes = 1; no = 0)			1.1441 (0.67)
Social capital			
Percent of peers that plan to attend college			1.0008 (0.00)
Number of students per teacher			0.9730* (0.01)
Cultural capital			
Parents' knowledge of school activities			1.1737 (0.11)
Type of school attended (reference = public school)			
Technical or vocational school			0.1029~ (0.13)
Catholic school			1.3552 (0.36)
Private, religious non-Catholic school			1.0445 (0.32)

Table 2 continued

	(1) Base model	(2) + wealth	(3) + human capital, habitus, social capital, cultural capital
Private, secular school			1.7733 (0.96)
Home school			0.5271 (0.66)
Other school			0.4977 (0.27)
<i>N</i>	8962	8962	8962

All regressions control for race and ethnicity, gender, number of children in home. Robust standard errors adjusted for clustering in parentheses. $\sim p < 0.1$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

attended versus not attending college at all. Human capital, habitus, social capital, and cultural capital's impact on financial capital is lessened as we move from applying to college and attending a 2-year college versus no college, where they are able to eliminate the impact of financial capital completely, to attending a more selective 4-year college, where they generally just reduce the impact of financial capital, but financial capital remains a large and significant predictor of attendance.

Who Applies to College?

The analysis shows wealth to have a more significant impact on who applies to college than income. However, the impact of financial capital disappears once controls for human capital, habitus, social capital, and cultural capital are incorporated. This shows that wealth itself may not be the factor that impacts who applies to college; rather, it is wealth's ability to increase human capital, habitus, social capital and cultural capital that matters. Specifically, human capital was significant but had a very small impact. All three measures of habitus (having higher college expectations, parents with greater levels of education, and a quiet study area at home) were significant, as was one measure of social capital (attending schools with smaller student–teacher ratios)—even after controlling for wealth (Table 2).

College Choice: No College, a 2-Year College, a Less Selective 4-Year College, or a More Selective 4-Year College?

Attending a 2-Year College Versus No College

Income is a significant predictor of attending a 2-year college over no college, but the addition of wealth to the model eliminates income's significance. The addition of human capital, habitus, social capital, and cultural capital variables eliminates wealth's significance (and income remains insignificant). Similar to college application rates, having higher college expectations and parents with greater levels of education were significant predictors of 2-year college attendance. However, the third measure of habitus, having a quiet study area at home, was not significant. Other significant predictors of attending a 2-year college over no college were peers' college expectations (social capital measure), how well the parents knew the student's school activities, and not attending a school classified as other (like an alternative school) versus a public school (both measures of cultural capital) (Table 3).

Table 3 Multinomial logistic regression odds ratios: attended a two-year college versus no college

	(1) Base model	(2) + wealth	(3) + human capital, habitus, social capital, cultural capital
Financial capital			
Income (reference = top income decile)			
Second income decile	1.0690 (0.21)	1.1178 (0.22)	1.1543 (0.23)
Third income decile	0.9020 (0.20)	0.9832 (0.22)	1.0069 (0.24)
Fourth income decile	0.8366 (0.18)	0.9659 (0.20)	1.0484 (0.22)
Fifth income decile	0.7614 (0.16)	0.9027 (0.19)	0.9856 (0.21)
Sixth income decile	0.6765 [~] (0.15)	0.8268 (0.18)	0.9351 (0.22)
Seventh income decile	0.6062* (0.14)	0.7530 (0.16)	0.8913 (0.20)
Eighth income decile	0.5140** (0.12)	0.6537 [~] (0.15)	0.8008 (0.19)
Ninth income decile	0.6575 [~] (0.15)	0.8333 (0.18)	1.0651 (0.23)
Bottom income decile	0.6410* (0.14)	0.8109 (0.17)	1.0685 (0.23)
Wealth (reference = top wealth decile)			
Second wealth decile		0.9663 (0.20)	1.0462 (0.24)
Third wealth decile		0.6970 (0.15)	0.8463 (0.19)
Fourth wealth decile		0.6587 [~] (0.15)	0.8530 (0.21)
Fifth wealth decile		0.5671* (0.15)	0.7993 (0.22)
Sixth wealth decile		0.4915** (0.12)	0.7239 (0.19)
Seventh wealth decile		0.5964* (0.15)	0.9930 (0.25)
Eighth wealth decile		0.5190* (0.14)	0.8779 (0.23)
Ninth wealth decile		0.3578*** (0.10)	0.6434 [~] (0.17)
Bottom wealth decile		0.4213*** (0.11)	0.7935 (0.20)
Human capital			
Academic achievement			1.0000*** (0.00)
Habitus			
Expectation of completing college			1.0192*** (0.00)
Parents' education			1.0574** (0.02)
Quiet area at home (yes = 1; no = 0)			1.1199 (0.18)
Social capital			
Percent of peers that plan to attend college			1.0033 [~] (0.00)
Number of students per teacher			1.0075 (0.01)
Cultural capital			
Parents' knowledge of school activities			1.1449* (0.06)
Type of school attended (reference = public school)			
Technical or vocational school			0.7727 (0.22)
Catholic school			0.9313 (0.25)
Private, religious non-Catholic school			1.1302 (0.36)

Table 3 continued

	(1) Base model	(2) + wealth	(3) + human capital, habitus, social capital, cultural capital
Private, secular school			1.4041 (0.65)
Home school			0.5911 (0.42)
Other school			0.4019 [~] (0.20)
<i>N</i>	8962	8962	8962

All regressions control for race and ethnicity, gender, number of children in home. Robust standard errors adjusted for clustering in parentheses. [~] $p < 0.1$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Attending a Less Selective 4-Year College Versus No College

Income is a significant predictor of attending a less selective 4-year college. The addition of wealth in the second model reduces income's impact on less selective 4-year college attendance. Moreover, wealth has a greater impact than income on the attendance of a less selective 4-year college versus no college attendance. However, the addition of human capital, habitus (college expectations and parent education), and cultural capital (parent knows school activities, attending a technical-vocational, Catholic, or home school) has a significant impact on attending a less selective 4-year college over no college. In fact, the addition of human capital, habitus, social capital, and cultural capital variables greatly reduced, but did not eliminate, the impact of financial capital – only those with the least financial capital were significantly less likely to attend a less selective 4-year college than no college compared to those with the most financial capital (Table 4).

Attending a More Selective College Versus No College

In all specifications, wealth and income are both significant predictors of attending a more selective 4-year college. Wealth has a slightly greater impact than income on selective 4-year college attendance but income still matters, although less so when we account for the impact of wealth. In the final specification with controls for human capital, habitus, social capital, and cultural capital, the impact of income and wealth are lessened. However, human capital, habitus (college expectations, parent education), and cultural capital (attending a Catholic school or private secular school, or not attending home school versus attending a public school) are significant predictors of selective college attendance versus no college (Table 5).

Conclusion

Much research has been devoted to the effects of income, but wealth has more influence on who applies to college, who enrolls in college, and the type of college attended—especially for more selective institutions. Policy makers looking to level the playing field and make college more accessible must address wealth's impact on the college-going process, instead of merely focusing on issues of income.

Table 4 Multinomial logistic regression odds ratios: attended a less selective 4-year college versus no college

	(1) Base model	(2) + wealth	(3) + human capital, habitus, social capital, cultural capital
Financial capital			
Income (reference = top income decile)			
Second income decile	0.8757 (0.13)	0.9452 (0.14)	0.9900 (0.20)
Third income decile	0.7674 (0.13)	0.8880 (0.15)	0.9637 (0.20)
Fourth income decile	0.6243** (0.09)	0.8086 (0.12)	0.9453 (0.18)
Fifth income decile	0.4834*** (0.08)	0.6664** (0.10)	0.7618 (0.13)
Sixth income decile	0.4084*** (0.07)	0.6060** (0.11)	0.6883 (0.15)
Seventh income decile	0.2805*** (0.05)	0.4332*** (0.07)	0.5710 (0.11)
Eighth income decile	0.2365*** (0.04)	0.3851*** (0.07)	0.5516 (0.11)
Ninth income decile	0.2029*** (0.04)	0.3286*** (0.06)	0.5028 (0.10)
Bottom income decile	0.2802*** (0.05)	0.4523*** (0.08)	0.6953 (0.13)
Wealth (reference = top wealth decile)			
Second wealth decile		0.9264 (0.16)	1.0621 (0.23)
Third wealth decile		0.7166~ (0.13)	0.9930 (0.22)
Fourth wealth decile		0.4658*** (0.09)	0.7048 (0.16)
Fifth wealth decile		0.4130*** (0.09)	0.7311 (0.18)
Sixth wealth decile		0.3523*** (0.08)	0.6676 (0.18)
Seventh wealth decile		0.2984*** (0.07)	0.7076 (0.18)
Eighth wealth decile		0.2162*** (0.04)	0.5364 (0.13)
Ninth wealth decile		0.1776*** (0.04)	0.4882 (0.12)
Bottom wealth decile		0.1878*** (0.04)	0.5300 (0.15)
Human capital			
Academic achievement			1.0000 (0.00)
Habitus			
Expectation of completing college			1.0296*** (0.00)
Parents' education			1.0806 (0.02)
Quiet area at home (yes = 1; no = 0)			1.0209 (0.18)
Social capital			
Percent of peers that plan to attend college			1.0023 (0.00)
Number of students per teacher			0.9805~ (0.01)
Cultural capital			
Parents' knowledge of school activities			1.2252*** (0.07)
Type of school attended (reference = public school)			
Technical or vocational school			0.4183* (0.16)
Catholic school			1.5774* (0.34)
Private, religious non-Catholic school			0.8731 (0.26)
Private, secular school			1.3921 (0.64)
Home school			0.0872* (0.09)

Table 4 continued

	(1) Base model	(2) + wealth	(3) + human capital, habitus, social capital, cultural capital
Other school			0.5596 (0.33)
<i>N</i>	8962	8962	8962

All regressions control for race and ethnicity, gender, number of children in home. Robust standard errors adjusted for clustering in parentheses. $\sim p < 0.1$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Table 5 Multinomial logistic regression odds ratios: attended a more selective 4-year college versus no college

	(1) Base model	(2) + wealth	(3) + human capital, habitus, social capital, cultural capital
Financial capital			
Income (reference = top income decile)			
Second income decile	0.4244** (0.11)	0.5096* (0.14)	0.5430* (0.16)
Third income decile	0.4203** (0.11)	0.5719* (0.16)	0.6416 (0.20)
Fourth income decile	0.2765*** (0.08)	0.4345** (0.13)	0.5359 \sim (0.17)
Fifth income decile	0.1956*** (0.07)	0.3316** (0.12)	0.3881** (0.14)
Sixth income decile	0.1660*** (0.06)	0.3154** (0.11)	0.3506* (0.14)
Seventh income decile	0.1294*** (0.04)	0.2560*** (0.08)	0.3463** (0.13)
Eighth income decile	0.0593*** (0.03)	0.1234*** (0.06)	0.1968*** (0.09)
Ninth income decile	0.0628*** (0.03)	0.1291*** (0.06)	0.2136** (0.11)
Bottom income decile	0.1128*** (0.04)	0.2258*** (0.09)	0.3689* (0.15)
Wealth (reference = top wealth decile)			
Second wealth decile		0.4414** (0.14)	0.5445 \sim (0.18)
Third wealth decile		0.2715*** (0.09)	0.4390* (0.17)
Fourth wealth decile		0.2199*** (0.08)	0.3834* (0.16)
Fifth wealth decile		0.1765*** (0.07)	0.3731* (0.16)
Sixth wealth decile		0.1212*** (0.06)	0.2786* (0.15)
Seventh wealth decile		0.1119*** (0.05)	0.3372* (0.15)
Eighth wealth decile		0.0812*** (0.04)	0.2668* (0.16)
Ninth wealth decile		0.0993*** (0.05)	0.3800 \sim (0.21)
Bottom wealth decile		0.0792*** (0.04)	0.2906* (0.16)
Human capital			
Academic achievement			1.0001*** (0.00)
Habitus			
Expectation of completing college			1.0279*** (0.01)
Parents' education			1.0817 (0.04)
Quiet area at home (yes = 1; no = 0)			0.8809 (0.31)

Table 5 continued

	(1) Base model	(2) + wealth	(3) + human capital, habitus, social capital, cultural capital
Social capital			
Percent of peers that plan to attend college			1.0038 (0.00)
Number of students per teacher			0.9836 (0.02)
Cultural capital			
Parents' knowledge of school activities			1.1523 (0.15)
Type of school attended (reference = public school)			
Technical or vocational school			0.6032 (0.71)
Catholic school			2.4677 (0.72)
Private, religious non-Catholic school			1.0816 (0.49)
Private, secular school			3.8303 (1.97)
Home school			0.0000 (0.00)
Other school			0.3985 (0.55)
<i>N</i>	8962	8962	8962

All regressions control for race and ethnicity, gender, number of children in home. Robust standard errors adjusted for clustering in parentheses. ~ $p < 0.1$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Wealth is a significant factor in who attends college, but is less of a factor in who applies to college. Public policy has had an emphasis on promoting college access (e.g., affirmative action, financial aid, federally funded TRIO programs), and the results of these efforts may be seen in the finding that high-wealth students' are no more likely to apply to college than low-wealth students after factors like parents' and students' educational expectations and parents' educational attainment are considered. But while these policies may be getting lower-wealth students to apply to college, the same results for college attendance are not seen for 4-year colleges. Wealthy students are significantly more likely to attend college and for selective institutions, the impact of wealth persists even after controlling for human capital, habitus, social capital, cultural capital, and other background characteristics. Policymaking focused on income would underestimate of these disparities, as income's impact on college attendance is less than wealth's impact.

The finding that students from wealthy families still have an advantage in selective college attendance is particularly interesting. Despite decades of outreach and attempts to diversify the SES of their students, enrollment patterns show that students who come from families in the top wealth decile are significantly more likely to attend than even students from the second wealth decile ($p < 0.10$). This holds true for students with identical levels of human capital, habitus, social capital, and cultural capital. Given the persistent impact of wealth, understanding the role of financial aid in this process would be revealing even if only relevant for needier students. Unfortunately, data limitations did not allow for an examination of how different financial aid offers (or lack thereof) impacts the college

choice process, but the persistent impact of wealth and previous research (Paulsen and St. John 2002) indicates there is a role for financial aid.

Although, to be clear, there are other factors relating to wealth that play an important role in the college choice process. K-12 institutions can reduce disparities in college application rates by building in lower-wealth students greater human capital and the type of educationally valuable habitus, social capital and cultural capital that wealthier students have. This may include: effectively delivering rigorous coursework to all students; improving students' access to correct information about college, including financial aid, course and exam requirements, and application deadlines; and maintaining students' expectations of their ability to enter and complete college. This must be done before students reach their postsecondary institutions and even before they enter their senior year of high school.

More generally, K-12 institutions need to be sensitive to how they encourage and discourage certain behaviors, attitudes, and dispositions. Research indicates that teachers and counselors react and support different students differently; families and peer groups differ in their expectations and ability to promote students' college-going processes (McDonough 1997). As such, elementary and secondary schools must look critically at how their actions affect students' thoughts and actions with regards to pursuing postsecondary educations.

Postsecondary institutions can analyze practices they employ that may support certain groups and discourage others, such as admissions policies, outreach and marketing, and financial aid. Since wealth disparities in selective college attendance persist regardless of students' background characteristics, upbringing, educational and home environments, selective postsecondary institutions must focus on the specifics of wealth itself—how does the pure financial aspect allow higher-wealth students to execute their college enrollment plans but serve as a barrier to lower-wealth students? Supporting lower-wealth students through financial aid policies come to mind, and it is worthwhile to reiterate that this study did not examine the role of financial aid.

The most effective policies in reducing wealth disparities in college attendance will likely require K-12 and higher education institutions to work together. Together, they must analyze why lower-wealth students expect to attend college, apply to college, but then do not attend—and, for selective colleges, these disparities persist even after controlling for the factors that are usually seen to be the barriers for poor youth, like lower levels of academic achievement, parental support, or even peer influence. They must then work to ensure that processes and structures are institutionalized to support a frictionless pathway to higher education and an open system of communication to ensure that this alignment is responsive to changing student needs. It is inefficient to be matching students to colleges based on traits like financial capital.

Public policy outside of education policy could play an important role in impacting these disparities in college access. Welfare policies could shift from being focused on income maintenance to asset accumulation. Given most Americans hold most of their wealth in their homes (Wolff 2013), policies that promote home ownership for lower wealth Americans should reduce wealth inequalities. Alternatively, public policy that promotes integrated housing could increase the net worth of lower wealth household by moving them out of neighborhoods that have slow appreciation rates. Tax policy could also be a useful tool in promoting behaviors that support wealth-building for lower wealth households. The mortgage interest deduction is a prime example of tax policy encouraging wealth-building, albeit for all wealth levels.

For Future Research and Limitations

This research brings up some questions that would be interesting for future research to cover, including financial aid's role in mediating the disparities in wealth. Unfortunately, this could not be answered with the data used in this study. The NLSY:97 does include information on how students financed college, but does not provide information on those who did not attend college or any financial aid packages considered but not taken, thereby limiting the analysis that could be done with these data. As noted earlier, this study does not explore interactions between the key independent variables. Future research could examine these interactions, such as interactions between wealth and academic achievement, which was consistently significant (even if not large) even after all controls were present.

Other research questions that would build understanding of wealth's role in the college choice process would be to explore other explanations for wealth's impact on selective college attendance and examine how wealth interacts with race to affect college choice. While the odds ratios for wealth were not presented, controls for wealth and other key independent variables consistently removed or reversed the negative relationship between being black and Latino and college going. The impact of wealth on racial disparities in college access is worth exploration.

An obvious next step would be to also analyze wealth's role in students' collegiate experiences—such as major declaration, campus engagement, concurrent employment, and, ultimately, completion.

Acknowledgments The author would like to thank Anthony Antonio, Michael Kirst, Susanna Loeb, and R. Richard Banks for their feedback and comments, Jerome Karabel for his support of this research idea, and the American Educational Research Association (Minority Fellowship), the Association for the Study of Higher Education (Lumina Foundation Fellowship), and the Mellon Foundation (Sawyer Fellowship) for their financial and professional support of this research.

References

- A shared agenda: a leadership challenge to improve college access and success. (2004). Boston, MA: Pathways to College Network and The Education Resources Institute.
- Adelman, C. (1999). *Answers in the tool box: Academic intensity, attendance patterns and bachelor's degree attainment*. Washington, D.C.: U.S. Department of Education, Office of Educational Research and Improvement.
- Antonio, A. L., Venezia, A., & Kirst, M. W. (2004). *Addressing the development of college knowledge: Concepts to improve student transitions from high school to college* (p. 36). Stanford, CA: Stanford Institute for Higher Education Research.
- Axinn, W., Duncan, G. J., & Thornton, A. (1997). The effects of parents' income, wealth and attitudes on children's completed schooling and self-esteem. In G. J. Duncan & J. Brooks-Gunn (Eds.), *Consequences of growing up poor* (pp. 518–540). New York: Russell Sage Foundation.
- Baum, S., & Payea, K. (2004). Education pays: The benefits of higher education for individuals and society. *Trends in higher education* (pp. 56): The College Board.
- Becker, G. (1975). *Human capital: A theoretical and empirical analysis, with special reference to education*. New York: Columbia University Press for NBER.
- Belley, P., & Lochner, L. (2007, October). *The changing role of family income and ability in determining educational achievement*. National Bureau of Economic Research Working Paper Series, (Working Paper 13527). Cambridge, MA.
- Blau, P., & Duncan, O. (1967). *The American occupational structure*. New York: Wiley.
- Bourdieu, P. (1984). *Distinction: A social critique of the judgement of taste* (R. Nice, Trans.): Harvard University Press.

- Bourdieu, P. (1986). Forms of Capital. In J. G. Richards (Ed.), *Handbook of theory and research for the sociology of education*. New York: Greenwood Press.
- Bourdieu, P., & Passeron, J. C. (1977). *Reproduction in education, society and culture*. London; Beverly Hills: Sage Publications.
- Bowen, W. G., & Bok, D. C. (1998). *The shape of the river: Long-term consequences of considering race in college and university admissions*. Princeton, NJ: Princeton University Press.
- Bowen, W. G., Kurzweil, M. A., Tobin, E. M., & Pichler, S. C. (2005). *Equity and excellence in American higher education*. Charlottesville: University of Virginia Press.
- Bowman, M. J. (1976). Through education to earnings? *Proceedings of the National Academy of Education*, 3, 221–292.
- Brewer, D. J., Eide, E. R., & Ehrenberg, R. G. (1999). Does it pay to attend an elite private college? Cross-cohort evidence on the effects of college type on earnings. *The Journal of Human Resources*, 34(1), 104–123.
- Cabrera, A. F., & Nasa, S. M. L. (2000). Understanding the college choice process of disadvantaged students. *New Directions for Institutional Research* (Vol. 2000, pp. 5–22): Jossey-Bass Publishers.
- Carnevale, A. P., & Rose, S. J. (2004). Socioeconomic status, race/ethnicity, and selective college admissions. In R. D. Kahlenberg (Ed.), *America's untapped resource* (pp. 101–156). New York: Century Foundation.
- Castaneda et al. v. University of California Regents et al. (U.S. District Court, Northern District California 1999).
- Choy, S. P. (2002). *Access Persistence: Findings from 10 Years of Longitudinal Research on Students*. Washington, D.C.: American Council on Education, Center for Policy Analysis.
- Coleman, J. (1988). Social Capital in the Creation of Human Capital. *American Journal of Sociology*, 94 (Supplement: Organizations and Institutions: Sociological and Economic Approaches to the Analysis of Social Structure), S95–S120.
- Conley, D. (1999). *Being black, living in the red: race, wealth, and social policy in America*. Berkeley: University of California Press.
- Conley, D. (2001). Capital for college: parental assets and postsecondary schooling. *Sociology of Education*, 74, 59–72.
- Dale, S., & Krueger, A. B. (2002a). Estimating the payoff to attending a more selective college: an application of selection on observables and unobservables. *The Quarterly Journal of Economics*, 117(5), 1491–1527.
- Dale, S. B., & Krueger, A. B. (2002b). Estimating the payoff to attending a more selective college: an application of selection on observables and unobservables. *Quarterly Journal of Economics*, 117(5), 1491–1527.
- Daniel et al. v. The State of California et al. (Superior Court, State of California, Los Angeles Superior Court 1999).
- Dumais, S. A. (2002). Cultural capital, gender, and school success: The role of habitus. *Sociology of Education*, 75(January), 44–68.
- Ehrenberg, R. G. (2005, September 23–24). *Reducing inequality in higher education: Where do we go from here?* Paper presented at the Conference on Economic Inequality in Higher Education: Access, Persistence and Success, Syracuse University.
- Fallows, J., & Ganeshanathan, V. V. (2004, October). *The big picture*. *The atlantic monthly*, 294, 120–128.
- Furstenberg, F., & Hughes, M. (1995). Social capital and successful development among at-risk youth. *Journal of Marriage and the Family*, 57(3), 580–592.
- Granovetter, M. S. (1974). *Getting a job: A study of contacts and careers*. Cambridge: Harvard University Press.
- Hacker, J. S., & Pierson, P. (2011). *Winner-take-all politics: How Washington made the rich richer and turned its back on the middle class*. New York: Simon & Schuster.
- Harker, R. (1990). *Introduction to the Work of Pierre Bourdieu: The practice of theory*: Palgrave Macmillan.
- Hill, C., Winston, G., & Boyd, S. (2005). Affordability: Family incomes and net prices at highly selective colleges and universities. *Journal of Human Resources*, 40(4), 769–790.
- Hossler, D., & Gallagher, K. S. (1987). Studying student college choice: A three-phase model and the implications for policymakers. *College and University*, 62(3), 207–221.
- Hossler, D., & Stage, F. K. (1992). Family and high school experience influences on the postsecondary educational plans of ninth-grade students. *American Educational Research Journal*, 29(2), 425–451.
- Hoxby, C. (1998). *The return to attending a more selective college: 1960 to the present*. Boston.
- Karabel, J. (2005). *The chosen: The hidden history of admission and exclusion at Harvard, Yale, and Princeton*. New York: Houghton Mifflin Company.
- Katz, L. F., & Murphy, K. M. (1992). Changes in relative wages, 1963–1987: Supply and demand factors. *Quarterly Journal of Economics*, 107, 35–78.

- Kaufman, P., Alt, M. N., & Chapman, C. (2001). Dropout rates in the United States: 2000. *NCJE statistics* (pp. 1–95). Washington, D.C: U.S. Department of Education.
- Keister, L. A. (2000). *Wealth in America: Trends in wealth inequality*. Cambridge: Cambridge University Press.
- Kiyama, J. M. (2010). College aspirations and limitations: The role of educational ideologies and funds of knowledge in Mexican american families. *American Educational Research Journal*, 47(2), 330–356.
- Lareau, A. (1987). Social class differences in family-school relationships: The importance of cultural capital. *Sociology of Education*, 60(2), 73–85.
- Lee, V. E., & Ekstrom, R. B. (1987). Student access to guidance counseling in high school. *American Educational Research Journal*, 24(2), 287–310.
- Lerman, D. L., & Mikesell, J. J. (1988). Rural and urban poverty: An income/net worth approach. *Policy Studies Review*, 7, 765–781.
- Long, S. L., & Freese, J. (2005). *Regression models for categorical dependent variables using stata* (2nd ed.): Stata Press.
- Lopez, E. (1996). *Social capital and the educational performance of Latino and non-Latino youth*. San Luis Obispo, CA: Julian Samora Research Institute.
- McDonough, P. M. (1997). *Choosing colleges: How social class and schools structure opportunity*. Albany: State University of New York Press.
- Monks, J. (2000). The returns to individual and college characteristics: Evidence from the national longitudinal survey of youth. *Economics of Education Review*, 19, 279–289.
- Muller, C., & Ellison, C. G. (2001). Religious Involvement, social capital, and adolescents' academic progress: Evidence from the national education longitudinal study of 1988. *Sociological Focus*, 24(2), 155–183.
- Oliver, M. L., & Shapiro, T. M. (1997). *Black wealth/white wealth: A new perspective on racial inequality*. New York: Routledge.
- Orr, A. J. (2003). Black-white differences in achievement: The importance of wealth. *Sociology of Education*, 76, 281–304.
- Parcel, T. L., & Dufur, M. J. (2001). Capital at home and at school: Effects on child social adjustment. *Journal of Marriage and the Family*, 63, 32–47.
- Paulsen, M. B., & St. John, E. P. (2002). Social class and college costs: Examining the financial nexus between college choice and persistence. *The Journal of Higher Education*, 73(2), 189–236.
- Plug, E., & Vijverberg, W. (2005). Does family income matter for schooling outcomes? Using adoptees as a natural experiment. *The Economic Journal*, 115, 27.
- Portes, A. (1998). Social capital: Its origins and applications in modern sociology. *Annual Review of Sociology*, 24, 1–24.
- Pregibon, D. (1981). Logistic regression diagnostics. *Annals of Statistics*, 9, 705–724.
- Pribesh, S., & Downey, D. B. (1999). Why are residential and school moves associated with poor school performance? *Demography*, 36(4), 521–534.
- Rubin, D. B. (1987). *Multiple imputation for nonresponse in surveys*. New York: Wiley.
- Shapiro, T. M. (2004). *The hidden cost of being African American : How wealth perpetuates inequality*. New York: Oxford University Press.
- Shea, J. (2000). Does parents' money matter? *Journal of Public Economics*, 77, 155–184.
- Stewart, E. B., Stewart, E. A., & Simons, R. L. (2007). The effect of neighborhood context on the college aspirations of African american adolescents. *American Educational Research Journal*, 44(4), 896–919.
- Throsby, D. (1999). Cultural capital. *Journal of Cultural Economics*, 23, 3–12.
- Tierney, W. G., Colyar, J. E., & Corwin, Z. B. (2003). *Preparing for college: building expectations, changing realities*. Los Angeles, CA: Center for Higher Education Policy Analysis, University of Southern California.
- U.S. Census Bureau. (2009). Educational attainment–people 25 years old and over by median income and sex: 1991 to 2008, p. 16.
- Venezia, A., Kirst, M. W., & Antonio, A. L. (2003). Betraying the College Dream: How Disconnected K-12 and Postsecondary Education Systems Undermine Student Aspirations (pp. 72). Stanford, CA: Stanford Institute for Higher Education Research.
- Wirt, J., Rooney, P., Hussar, B., Choy, S., Provasnik, S., & Hampden-Thompson, G. (2005). The Condition of Education 2005 (pp. 383). Washington, DC: U.S. Department of Education, National Center for Education Statistics.
- Wolff, E. N. (1998). Recent trends in the size distribution of household wealth. *The Journal of Economic Perspectives*, 12(3), 131–150.
- Wolff, E. N. (2013). The Asset Price Meltdown and the Wealth of the Middle Class (pp. 1–22). New York: US2010 Project.