

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

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Abstract

College is increasingly essential for economic and social mobility. Current research and 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 differential role of wealth from income in the college choice process, specifically applying to college, attending college, and what type of college attended (two-year, four-year, and selective). To examine these relationships, I linked the National Longitudinal Study of Youth (1997) to the Integrated Postsecondary Education Data System to create a nationally-representative dataset for nearly 9,000 youth. Regression analyses reveal that wealth and income affect the college choice process differently, with wealth consistently being more significant in predicting who enrolls in college, and the type of college they attend. The impact of wealth persists even after controlling for academic achievement, habitus, social capital, and cultural capital.

Three keywords: college access, wealth, education

INTRODUCTION

As the economic and social returns to college grow rapidly (Baum & Payea, 2004; Hoxby, 1998), higher education has become progressively more important to social and economic 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 & 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, Kurzweil, Tobin, & Pichler, 2005: 70-71).

At the same time, top colleges, which have become even more selective (Fallows & Ganeshanathan, 2004), dole out the greatest returns (Bowen & Bok, 1998; Brewer, Eide, & Ehrenberg, 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 &

Bok, 1998).¹ Furthermore, research indicates that, all else constant, students who graduate from more selective colleges earn more after graduation (Carnevale & 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 & Rose, 2004). One report found that only about 10 percent of students at highly selective colleges came from the lowest 40 percent of the family income distribution (Hill, Winston, & Boyd, 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 & Bok, 1998; S. B. Dale & A. B. Krueger, 2002; 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 & 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 & Nasa, 2000).

Largely due to data limitations, higher education 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 & 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 & 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, I show the stark differences in the roles of income and wealth in impacting the college-going process, specifically applying to college, attending college, and the type of college attended (two-year, four-year, most or highly selective college). I aim to understand the process through which wealth and income impact this process (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 & 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 & Shapiro, 1997).

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

THE DEFINITION AND DISTRIBUTION OF WEALTH

Wealth is generally categorized as net worth or financial wealth. Net worth, also known as marketable wealth, is the difference in value of total assets and total liabilities, or what one *owns* (assets) less what one *owes* (liabilities or debt). 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. 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). Slightly different than net worth, financial wealth is defined as net worth less net equity in owner-occupied housing. This measure of wealth better represents the resources *immediately* available for consumption or investment, as housing wealth is fairly illiquid (Wolff, 1998).

No matter how wealth is measured, its distribution in the US is extremely skewed – significantly more so than the distribution of income. In 1998, the top one percent of families held 34 percent of US total wealth and the top ten percent held 69 percent of the wealth (Kennickell, Starr-McCluer, & Surette, 2000). In comparison, households in the top five percent of the US income distribution received 22 percent of the total annual income and the top 20 percent of households received 50 percent of annual income in the same year (U.S. Census Bureau, 2004).

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 twenty years (Pearson & Hacker, 2010). Between 1983 and 2004, the top 1 percent saw a percentage gain in net worth of 35.1 while the bottom 40 percent of Americans saw a decrease of 0.7 percent. Income, while telling a similar story, shows slower growth in inequality. The top 1 percent saw a gain of 32.7 percent while the bottom 40 saw an increase of 2 percent (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 concludes 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 challenges the idea that wealth's role in affecting college access is through the provision of income by modeling an income stream from wealth. He finds differential attributes of wealth and income in their effect on college participation.

In other work, Conley (1999) studies 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 finds that certain forms of wealth are positive and significant (at the $p < .10$ 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 does Conley attempt to understand how wealth impacts college participation and why it is different than income.

Another study looks at the effects of parents' wealth on children's completed schooling and finds 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, Duncan, & Thornton, 1997). This study does not look specifically at the decision to attend college but rather focuses more generally on educational attainment.

Belly and Lochner (2007) study the changing role of family income and ability in determining educational attainment, finding 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) study 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 focuses on the role of income. Using a nationally representative data set, the authors find 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. John Shea (2000) uses 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 finds 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 compares 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 indicate 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 ends 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 (2002) use yet another approach to examine the relationship between family income and children's educational attainment – they use adoption as a natural experiment.

Plug and Vijverberg find that, after correcting for biases stemming from unobserved parenting skills and parents' differentiation between their birth children and adopted children, family income is still positively correlated with children's years of schooling.

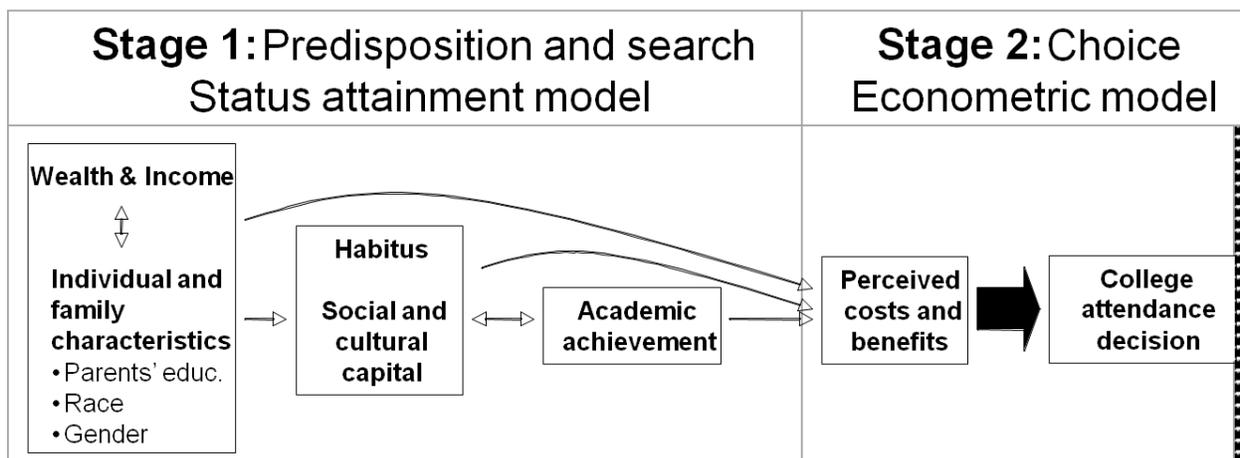
This review of the literature exposes the lack of research on wealth and the gaps left by studies on income: few explicitly compare wealth to income, and none examine how either wealth or income affects access to selective colleges. This study fills the gap by examining the differential roles of wealth and income and their interactions 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

1. 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 & Duncan, 1967) and an econometric model embedded within. From these theories, this paper posits a two-stage process that is described in Figure 1.

Figure 1. Conceptual framework of the college choice process.



This conceptual framework proposes that wealth, income, 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: vii). Social capital refers to the value derived from social networks (Portes, 1998). Cultural capital, as defined by Bourdieu, is culturally-valued taste and consumption patterns than one inherits (Bourdieu, 1986; Harker, 1990).

The habitus, social capital, and cultural capital directly shape a student’s academic achievement and a student’s academic achievement also works to shape her habitus, social capital, and cultural capital. Then, habitus, social capital, cultural capital, and academic achievement 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 the costs and benefits of continuing 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. The choice stage can be used to model whether or not a student decides to attend college, and if she does decide to attend college, what type of college to attend – e.g. a community college, a less-selective state university, or a highly selective Ivy League college. This meaning of choice is what is meant 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 postsecondary 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 socioeconomic status and academic ability shape a student’s educational goals.

Stage 2: Choice / econometric 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 academic achievement 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.

MODELING THE COLLEGE CHOICE PROCESS

To model the college choice process, logistic regression is used to regress:

- (1) whether a student applied to college,
- (2) whether a student enrolled in college, and
- (3) whether a student enrolled into a:
 - (a) two-year college
 - (b) four-year college
 - (c) most or highly selective college

on wealth, income, habitus, social capital, cultural capital, and other background variables.

The use of binary logistic regression for (1) and (2) is clear, as they are binary choices. For (3) multinomial logit was considered, but was not used because students do not necessarily consider their options being explicit and comprehensive (McDonough, 1997). Multinomial logit requires one of the choices to be the reference and no such reference category makes sense with how students actually consider their college options – many students who are planning to attend a two-year college do not consider four-year colleges and many students who are planning to attend a four-year college do not consider two-year colleges. As such, binary logistic regression is used for each choice.

Different specifications are utilized to see how the addition of wealth alters the coefficient estimates for income and how habitus, social capital, and cultural 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, and cultural capital. Thus, it is predicted that wealth will become less significant when habitus, social capital, and cultural capital are included.

To study this process, this study utilizes a series of logistic regressions. For each dependent variable (whether a student applies to college, whether a student enrolls in college, whether a student enrolls in a 4-year college, whether a student enrolls in a 2-year college, and whether a student enrolls in a highly or most selective college), six logistic regressions are specified (see below).

	First set		Second set		Third set	
Independent variables		+ <i>wealth</i>		+ <i>wealth</i>		+ <i>wealth</i>
Race, ethnicity	√	√	√	√	√	√

Gender	√	√	√	√	√	√
No. of children in home	√	√	√	√	√	√
Income	√	√	√	√	√	√
Wealth		√		√		√
Academic achievement			√	√	√	√
Habitus, social capital, cultural capital					√	√

These six specifications can be thought of as three nested sets of two specifications – one specification excluding wealth as an independent variable, and one specification including wealth as an independent variable.

The first set of logistic regressions includes only the most basic of controls – race and ethnicity, gender, number of children in the home, family income, and wealth (in one of the two specifications of the set).

The second set of logistic regressions includes a measure of academic achievement in addition to those in the first set. Academic achievement is a key factor in promoting college access and success (Adelman, 2006). From this model, we will be able to discern the role of wealth in developing a student’s academic achievement.

The third, and final, set of logistic regressions includes measures of habitus, social capital, and cultural capital, in addition to the variables in the second set. As posited in the conceptual framework, this final specification will test the hypothesis that wealth’s role in the college choice process works largely through a student’s habitus, social capital, and cultural capital.

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 provides extensive information about wealth, education, and upbringing for approximately 9,000 youth born between 1980 and 1984 (ages 26-30 today). The first eight rounds of NLSY:97 data were used, with the eighth round of data having had been collected in 2005 and released in 2006. 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 percent 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 into a postsecondary institutions 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.

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 data set 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.

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 selective have acceptance rates below 33 percent and have admissions test scores in the top eighth

quantile. There are approximately 146 colleges in this category (according to Barron's) and include the likes of Stanford University, Yale University, US Air Force Academy, Pomona College, and UC Berkeley. Colleges rated as highly selective accept between one-third and half of their applicants and have admissions test scores in the second eighth quantile. Postsecondary institutions included in this category include College of William and Mary, University of North Carolina at Chapel Hill, Emory University, and University of Texas at Austin. 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.

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.

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.

Academic achievement. This metric is 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. A person's collection of dispositions, continually developed and reformulated from one's upbringing and direct environment, that shapes expectations, attitudes, gestures, techniques, and aspirations 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 and parents' education.

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 the parental and student expectations relate directly to the type of habitus that is developed.

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.

Social capital. Social capital is the value derived from social networks. 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. Students depend on teachers for information on the college choice process (Antonio, Venezia, & Kirst, 2004; Venezia, Kirst, & Antonio, 2003), and students in smaller classes likely have a closer relationship with and greater access to their teacher.

Cultural capital. Cultural capital is inherited culturally-valued taste and consumption patterns, such as art, education, and language. 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' knowledge of their school activities – they were asked about their mother and father separately. In constructing this variable, the higher of the two was used. 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; alternative school; and other. This variable also demonstrates the consumption of education as shown through the type of school the student enrolled.

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			
White	0.68		0.02
Black	0.16		0.01
Asian	0.02		
Hispanic	0.13		
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
<i>N=8984</i>		

RESULTS

Descriptive analysis

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

Descriptives by wealth and income. This section looks at variables of interest broken down by wealth and income deciles. More disparity exists across the wealth distribution than the income distribution in nearly every variable considered. 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 percent and 28 percent, respectively), students in the top wealth decile attend four-year colleges at similar rates as their top-income-decile peers (63 percent and 64 percent respectively).

The remainder of this paper seeks to understand the differences between income and wealth in the college choice process, pushing on what has only begun to be revealed.

Who applies to college?

My analysis shows wealth to have a more significant impact on who applies to college than income, even with the introduction of an academic achievement control. However, the differences largely disappear once controls for 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 habitus, social capital and cultural capital that matters. Conversely, income's effect on who applies to college is not consistently significant.

Who attends college?

Wealth has a statistically significant effect on who attends college, as students from families with greater wealth are more likely to attend college than their less wealthy counterparts. This holds true even when controlling for academic achievement, habitus, social capital, and cultural capital.

The significance of income is lessened when wealth is included, indicating that income may be capturing at least some of the effect of wealth.

Who attends 2-year colleges?

Wealth and income are not significant predictors of who attends a two-year college, after controlling for other background characteristics. It is only with two year college attendance does wealth not have a consistently significant impact at any point.

Who attends 4-year colleges?

Students from families with greater wealth are statistically significantly more likely to attend a four-year college than their less wealthy counterparts. This holds true even with the inclusion of academic achievement and habitus, social capital, and cultural capital.

Income is a significant predictor except when wealth or habitus, social capital, and cultural capital are included. When these variables are included, only the bottom deciles of income are significantly different from the top income decile.

Students in the lower 60 percent of the wealth distribution have decreased odds of four-year college attendance, regardless of academic achievement or habitus, social capital, and cultural capital. This persistent gap may stem from issues of financing enrollment at a four-year college or it may be that these measures of habitus, social capital, and cultural capital are not accurately capturing their true effects.

Table 2. Binary logistic regression odds ratios: attended a four-year college

	(1a)	(1b)	(2a)	(2b)	(3a)	(3b)
	<i>Basic background controls only</i>	<i>+ wealth</i>	<i>(1a) + academic achievement</i>	<i>+ wealth</i>	<i>(2a) + habitus, social capital, cultural capital</i>	<i>+ wealth</i>
Income						
Second decile	0.8093 (0.0998)	0.9417 (0.1491)	0.8755 (0.1223)	0.967 (0.1661)	0.9744 (0.1393)	1.0309 (0.1801)
Third decile	0.7265* (0.0944)	0.9155 (0.147)	0.8007 (0.1123)	0.9246 (0.1535)	0.9618 (0.1467)	1.0182 (0.1779)
Fourth decile	0.6634*** (0.0714)	0.8818 (0.1191)	0.7581* (0.0948)	0.8971 (0.1303)	1.0105 (0.1472)	1.0556 (0.1814)
Fifth decile	0.5117***	0.7661	0.5874***	0.7515	0.8389	0.9078

	(0.0646)	(0.1238)	(0.0812)	(0.1308)	(0.1316)	(0.1716)
Sixth decile	0.4263*** (0.0564)	0.6903* (0.1074)	0.4697*** (0.0739)	0.6303** (0.1102)	0.6728* (0.1157)	0.7472 (0.1429)
Seventh decile	0.2721*** (0.0394)	0.4893*** (0.0835)	0.3557*** (0.0588)	0.5678** (0.102)	0.5264*** (0.0905)	0.6921 (0.1327)
Eighth decile	0.2100*** (0.0306)	0.3635*** (0.0689)	0.3043*** (0.053)	0.4435*** (0.0909)	0.4703*** (0.0855)	0.5499** (0.1144)
Ninth decile	0.1859*** (0.033)	0.2493*** (0.05)	0.2765*** (0.052)	0.3002*** (0.0621)	0.4028*** (0.08)	0.3610*** (0.0822)
Bottom decile	0.3036*** (0.0472)	0.5194*** (0.0933)	0.4264*** (0.0709)	0.6257* (0.1203)	0.5971** (0.1102)	0.7196 (0.1571)
Wealth						
Second decile		0.9182 (0.1449)		1.082 (0.1844)		1.1725 (0.2166)
Third decile		0.7389 (0.1405)		0.9518 (0.2028)		1.1696 (0.2688)
Fourth decile		0.3931*** (0.0617)		0.5394*** (0.091)		0.6424* (0.1236)
Fifth decile		0.3727*** (0.0674)		0.4816*** (0.0869)		0.6355* (0.1259)
Sixth decile		0.3277*** (0.0584)		0.4478*** (0.0886)		0.5829* (0.1364)
Seventh decile		0.2836*** (0.0498)		0.4998*** (0.0952)		0.6852 (0.1569)
Eighth decile		0.1624*** (0.0325)		0.2757*** (0.056)		0.4173*** (0.0979)
Ninth decile		0.1634*** (0.0334)		0.3042*** (0.0665)		0.4749** (0.113)
Bottom decile		0.2017*** (0.0378)		0.3293*** (0.0669)		0.4827** (0.1106)
N	5738	4323	5738	4323	5738	4323
BIC	6859.79	4966.92	5933.54	4373.37	5563.9	4208.8

All regressions control for race and ethnicity, gender, number of children in home. Robust standard errors adjusted for clustering in parentheses. *p<.05; **p<.01; ***p<.001

Who attends highly and most selective colleges?

Students from the top wealth decile are statistically significantly more likely to attend a most or highly selective college than their less wealthy counterparts, even after controlling for academic achievement, habitus, social capital, and cultural capital. Income is significant in specifications that exclude wealth, indicating that the income effect seen is really a wealth effect.

These results indicate that wealth is a strong and significant predictor of most or highly selective college attendance, even after controls for academic preparation and habitus, social capital, and cultural capital are considered. Moreover, the wealth advantages are heavily concentrated with those in the top wealth decile – students in the top wealth decile even hold a statistically significant advantage over those in the second wealth decile, even after controlling for academic achievement, habitus, social capital, and cultural capital.

Similar figures for income are less spread – four percent of students are represented in the top income and achievement cell and slightly more than one percent of students are represented in the top income and bottom achievement cell.

Table 3. Binary logistic regression odds ratios: attended a most or highly selective college

	(1a)	(1b)	(2a)	(2b)	(3a)	(3b)
	<i>Basic background controls only</i>	<i>+ wealth</i>	<i>(1a) + academic achievement</i>	<i>+ wealth</i>	<i>(2a) + habitus, social capital, cultural capital</i>	<i>+ wealth</i>
Income						
Second decile	0.3292*** (0.075)	0.7895 (0.2563)	0.3516*** (0.0815)	0.8157 (0.2518)	0.3865*** (0.0915)	0.8054 (0.2566)
Third decile	0.4397*** (0.0946)	1.0287 (0.3382)	0.4797*** (0.1069)	1.0674 (0.3598)	0.5876* (0.136)	1.1141 (0.3819)
Fourth decile	0.3139*** (0.0833)	0.8921 (0.3548)	0.3573*** (0.0964)	1.0049 (0.4038)	0.4581** (0.1249)	1.0876 (0.4426)
Fifth decile	0.2499*** (0.0801)	0.6143 (0.2846)	0.2979*** (0.0964)	0.6294 (0.2966)	0.3962** (0.1282)	0.6593 (0.3112)
Sixth decile	0.2208*** (0.0691)	0.8067 (0.3319)	0.2636*** (0.085)	0.8635 (0.3568)	0.3469** (0.1126)	0.892 (0.361)
Seventh decile	0.1992*** (0.0675)	0.6652 (0.293)	0.2905*** (0.1006)	0.8434 (0.3638)	0.4158* (0.1445)	0.9226 (0.3847)
Eighth decile	0.0546***	0.1989**	0.0881***	0.2539**	0.1322***	0.2957*

	(0.0251)	(0.1062)	(0.041)	(0.1338)	(0.0624)	(0.1615)
Ninth decile	0.0809*** (0.0352)	0.1623** (0.1121)	0.1390*** (0.0629)	0.2141* (0.1448)	0.1923*** (0.0836)	0.2560* (0.1734)
Bottom decile	0.1905*** (0.0586)	0.4141* (0.1751)	0.2876*** (0.0898)	0.5238 (0.2185)	0.3886** (0.1212)	0.5196 (0.2248)
Wealth						
Second decile		0.2589*** (0.0877)		0.2778*** (0.0949)		0.2953*** (0.1004)
Third decile		0.1604*** (0.0604)		0.1949*** (0.0755)		0.2282*** (0.0883)
Fourth decile		0.2357*** (0.0854)		0.3368** (0.1222)		0.3867* (0.1469)
Fifth decile		0.1477*** (0.0546)		0.1971*** (0.0719)		0.2445*** (0.0929)
Sixth decile		0.0995*** (0.0503)		0.1359*** (0.0683)		0.1695** (0.0917)
Seventh decile		0.1240*** (0.058)		0.2186** (0.1068)		0.2810* (0.1454)
Eighth decile		0.0635*** (0.0323)		0.1194*** (0.0609)		0.1605*** (0.0855)
Ninth decile		0.1467*** (0.0782)		0.2993* (0.1679)		0.4097 (0.2401)
Bottom decile		0.1190*** (0.0531)		0.2050*** (0.0977)		0.2832** (0.1268)
N	5738	4323	5738	4323	5738	4323
BIC	1654.93	1186.96	1539.67	1130.77	1585.87	1183.48

All regressions control for race and ethnicity, gender, number of children in home. Robust standard errors adjusted for clustering in parentheses. *p<.05; **p<.01; ***p<.001

CONCLUSION

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

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 we may be seeing the results of these efforts in the finding that high wealth students' are no more likely to apply to college than low wealth students after we consider things like parents' and students' educational expectations and parents' educational attainment. But while these policies may be getting lower wealth students to apply to college, we do not see the same results for college attendance. Wealthy students are significantly more likely to attend college, attend four-year colleges, and, especially, attend most and highly selective colleges than less wealthy students, even after controlling for a variety of background characteristics. Policymaking focused on income would miss much of these disparities, as income's impact on college attendance is largely explained by students' upbringing.

The finding that students from very wealthy families still have an advantage in highly selective college attendance is particularly interesting. Despite decades of outreach and attempts to diversify the socioeconomic status 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. This holds true for students with identical levels of academic achievement, habitus, social capital, and cultural capital.

Although, to be clear, there are other factors relating to wealth (and potentially just wealth itself) 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 the higher levels of academic achievement and the type of habitus, social capital and cultural capital that wealthier students have.

Even still, this research indicates that a wealth gap would persist in college attendance – so, K-12 and higher education institutions must also think more critically about how else wealth affects the college-going process. The types of K-12 supports that may affect student success in the college-choice process 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 differentiate in their expectations and ability to promote affect 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 post-secondary 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 college attendance persist regardless of students' background characteristics, upbringing, educational and home environments, 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.

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 it is not due the usual factors that are discussed, 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.

For future research and limitations

This research brings up some questions that would be interesting for future research to cover, including examining if there are other mechanisms through which wealth affects the college choice process and studying how wealth, habitus, social capital, cultural capital, and race interact with a student's proximity to postsecondary institutions. Unfortunately, these questions 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, thereby limiting the analysis that could be done with this data.

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