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## Project Description I

Title:

Estimating the Effects of College Selectivity on Graduation Rates

Statement of the research problem and national importance:

### Research Problem: Low Graduation Rates Overall, Even Lower at Less Selective Colleges

Despite an increasing number of students entering college, few are leaving with a degree. From 1940 to 2007, the proportion of adults with some college experience jumped from 16% to 66% (Bailey and Dynarski 2011). Currently, almost 70% of students enroll in college immediately after completing high school (Aud et al. 2011). In contrast, college graduation rates have remained flat. While college enrollment was rising, the share of high school graduates who completed a bachelor's degree increased just one percentage point from 1970 to 1999 (Turner 2004). Only 27% of U.S. adults have completed a college degree (U.S. Census 2009), even though over 80% of students expect to earn one (Wirt et al. 2004).

Scholars claim that enrolling in less selective colleges decreases the likelihood of completing a degree, based on the low graduation rates at these institutions (Bowen et al. 2009; Roderick et al. 2008). Only one-in-four students will graduate if they attend four-year colleges with open admissions standards, where the graduation rate can dip as low as 8% (College Board 2011; Hess et al. 2009). Just half of students at four-year colleges that accept 75% or more of applicants will finish a degree (College Board 2011). The extremely low chances of graduating at less selective colleges prompted Schneider (2008) to label these institutions "failure factories."

Previous research has not determined if the low graduation rates at less selective colleges, and the high graduation rates at more selective colleges, are due to institutional factors or unobserved student variables, like motivation. This project addresses the gap by answering the following research questions: *1) Does college selectivity increase the likelihood of earning a degree, independent of unobserved student characteristics? 2) Does the effect of selectivity on graduation vary by student race or gender?*

### National Importance: Lost Human Capital, Economic and Social Costs

Understanding the effects of selectivity on college graduation is important for the large amount of human capital and financial capital involved. Over 4 million undergraduates attend bachelor's degree granting institutions where the average graduation rate is below 50%, which represents a huge loss of human capital (Hess et al. 2009). State governments spend \$1.3 billion annually on college students who will drop out after their first year (Schneider 2010). Dropping out of college is estimated to cost the nation \$3.8 billion in lost income and \$730 million in lost federal and state income tax revenue each year (Schneider and Yin 2011).

Increasing the college-educated workforce has important macroeconomic implications for national productivity. Cities will need an infusion of college-educated workers to reverse urban decline and stimulate economic growth (Merisotis 2011; Rauch 1993). The strong relationship between a skilled workforce and national economic growth (Hanushek and Woessmann 2008) reinforces the significance of research on college graduation rates.

Improving college graduation rates is also important for economic and social benefits. Bachelor's degree holders earn nearly \$22,000 per year more than high school graduates, which amounts to \$1 million in lifetime earnings (Baum et al. 2010). In addition, college-educated individuals experience lower unemployment rates (Leonhardt 2009), reduced likelihood of engaging in risky behavior (Oreopoulos and Salvanes 2011), and greater economic mobility (Haskins and Sawhill 2009). Research shows that college attendance has a positive causal effect on maternal health (Currie and Moretti 2003), parenting skills (Attewell and Lavin 2007), and civic participation (Dee 2004).

### Timeliness of College Graduation Research

Research on college selectivity and graduation is very timely due to increasing concerns about college affordability and the need for skilled workers. Over 75% of respondents currently believe college is too expensive for most Americans (Taylor et al. 2011). The largest increases in college tuition are concentrated at selective universities, where the cost of attendance now exceeds 50% of median family income (Hoxby 1997; Ehrenberg 2000). But institutions and political leaders emphasize the need for increased college education to ensure economic competitiveness. Prominent philanthropic organizations, including the Gates Foundation and the Lumina Foundation, are now investing millions of dollars in college completion initiatives. President

Obama and state governors recently called for adding 5 million college graduates to the nation's ranks so that the U.S. can regain its position as the most educated country in the world (White House 2009; NGA 2011). Finally, the Department of Labor (2009) predicts that one-half of all new jobs will require postsecondary education, so producing more educated workers will be essential to meet employment needs.

Review the literature and establish a theoretical grounding for the research:

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### Human Capital Theory

Low college completion rates are puzzling given that the average earnings for college-educated workers have increased compared to high school-educated workers (Autor, Katz, and Kearney 2008; Goldin and Katz 2008). Economic theory posits that rising returns to education will lead individuals to complete more schooling, all other things equal. According to the human capital model, people invest in skills to raise their level of productivity and earn higher wages (Becker 1964). The human capital model theorizes that students will enroll in college as long as the net present value of future earnings exceeds the costs of going to college (Borjas 2004). The theory predicts that more individuals will finish a degree in light of the higher wages paid to college-educated workers. Yet relatively few students are responding to these financial incentives by graduating from college.

### Previous Explanations for Low Graduation Rates

Prior research suggests that more students are not graduating from college, despite the rising college wage premium, due to market failures. Scholars have identified three types of market failures that prevent the college education system from operating efficiently: 1) high tuition costs, 2) inadequate information, and 3) undermatching. Existing work has focused on cost and information, but there is growing attention to the critical problem of student-college matches.

The first market failure is that high tuition and insufficient financial aid make it unaffordable to complete a college degree (Heller 2011). Adjusted for inflation, college tuition has risen steadily since the 1950s (NCES 2010), increased more than 24% in the past 10 years (College Board 2011), and climbed sharply relative to median family income (Ehrenberg 2000; Goldin and Katz 2008). Declines in grant and need-based aid create additional financial obstacles (St. John et al. 2006; McPherson and Schapiro 2006). Previous work shows that student enrollment is sensitive to sudden increases in college tuition (Kane 1999; Leslie and Brinkman 1987). Benefit programs and merit scholarships that reduce the cost of college show a 4 percentage point increase in attendance for every \$1,000 of aid (Dynarski 2008; 2004; Scott-Clayton 2009). Simplifying the financial aid process increases aid applications and receipt of financial assistance (Bettinger et al. 2009). However, generous college subsidies that reduce net price (Hoxby 2009; Winston 1999), the wide availability of student loans (Carneiro and Heckman 2003), and the meager effects of Pell grants on enrollment (Hansen 1983) suggest that the cost of college is not a limiting factor.

A second type of market failure that limits individuals in obtaining a college education is inadequate information about college. Students might lack information about how to successfully navigate life in college due to limited social capital (Perna and Titus 2005; Deil-Amen and Turley 2007). Weak attachment and social integration can also reduce student interest and capacity for college success (Tinto 1987; Pascarella and Terenzini 1980; Cabrera et al. 1993). In addition, students may lack information about the costs and benefits of attending college (Rouse 2004; Dominitz and Manski 1996). However, empirical studies reveal that inadequate information is a less important barrier than theorized (Avery and Kane 2004; Goldrick-Rab 2007).

High tuition and inadequate information combine to create a third market failure: undermatching (Bowen et al. 2009). Students who are academically qualified to attend more selective colleges often attend less selective ones, which indicates that the higher education market is operating inefficiently (Dillon and Smith 2009). Undermatching can be a serious problem because less selective colleges offer fewer resources, including advising, financial aid, required courses, and support services, to help students graduate.

Undermatching is an increasingly common phenomenon that affects a wide range of students. Over 60% of Chicago public school students enroll in institutions that are less selective than the colleges to which they likely would have been accepted, based on their academic performance (Roderick et al. 2008). Even students in advanced high school programs engage in undermatching: one-third either attend nonselective four-year colleges or two-year colleges, or do not enroll in any college (Roderick et al. 2009). In North Carolina, more than 40% of highly qualified students, i.e. those with academic records that would likely result in acceptance, do not attend the most selective state universities (Bowen et al. 2009).

Undermatching has important financial consequences due to the strong positive relationship between college selectivity and future income. A long line of literature dating over 30 years shows that attending more selective colleges is associated with higher individual earnings after college (Weisbrod and Karpoff 1968; Loury and Garman 1995; Brewer et al. 1999; Monks 2000). Low-income and minority students appear to benefit most from attending the most selective private universities (Dale and Krueger 2011; 2002). Recent work suggests that selective public colleges and universities also have positive effects on income (Hoekstra 2009; Andrews et al. 2011).

Although much work has examined the effects of attending community colleges on degree completion (e.g. Rouse 1995; Leigh and Gill 2003; Stephan et al. 2009), relatively little research has explored differences among colleges in the widely varying four-year sector (Smith 2008). Extremely selective colleges have very high graduation rates (Bowen and Bok 1998; Alon and Tienda 2005), but these institutions enroll a tiny proportion of undergraduates. Studies that examine a wider range of colleges yield conflicting results. Early work finds that low ability students appear more likely to graduate if they attend lower tier colleges, while high ability students have better chances at higher tier colleges (Light and Strayer 2000). More recent work suggests that students who attend more selective colleges are more likely to graduate than those attending less selective colleges, when comparing students matched on academic preparation and family background (Long 2008; Bowen et al. 2009). However, the graduation rates could be due to unobserved individual characteristics, like motivation or persistence, that lead students to enroll in more selective or less selective colleges. This project seeks to address this gap in the literature by isolating the causal effect of college selectivity on graduation rates.

Describe the research method that will be used:

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### Research Questions

This project seeks to address the following research questions: 1) *Do more selective colleges increase the likelihood of earning a degree, independent of unobserved student characteristics?* 2) *Does the effect of selectivity on graduation vary by student race or gender?*

### Research Methodology

A simple regression of graduation rates on college and student variables cannot distinguish between the effects of institutional factors and unobserved student characteristics. Academically qualified students who pursue postsecondary education often enroll in less selective colleges, which have fewer resources to support student success. However, the lower graduation rates attributed to these colleges could be due to the students who enroll there, i.e. selection bias. For example, if students with high test scores but low motivation choose to attend less selective colleges, then the lower graduation rates might be due to the unobserved student characteristics. The ideal experiment to measure the effect of selectivity would randomly assign qualified students to more selective or less selective colleges and then measure the difference in graduation rates. In the absence of this experiment, researchers must find exogenous variation that sorts similar ability students into different institutions.

To isolate the causal effect of college selectivity on graduation, I will employ instrumental variables estimation and use residential distance to selective institutions as a plausibly exogenous source of variation. Previous research has successfully used distance to college (e.g. Card 1993; Rouse 1995; Turley 2009) and distance to selective colleges (e.g. Do 2004; Frenette 2006; Griffith and Rothstein 2009) as an instrumental variable. The basic idea is that students who live slightly closer to a selective college will be more likely to enroll because they are more aware of the college, more likely to meet people who attend the college, and can save on costs by living at home. By comparing students who are similar, on average, except for their likelihood of attending a selective college, we can isolate the causal effect of selectivity.

I will use several analytic strategies to provide a check on each other and to improve the robustness of the results. I will conduct instrumental variables estimation on all selective colleges (see below) and state flagship universities, which are the most selective public institutions in each state. Next, I will conduct statistical tests to confirm that student ability does not systematically vary based on relative distance to selective colleges. Finally, I will compare students who are exogenously exposed to different levels of college selectivity based on their state of residence and the geographic concentration of selective colleges.

The dependent variable is college graduation, which is defined as completing a bachelor's degree within six years of initial enrollment. Over 70% of students who earned a bachelor's degree completed it within six years; expanding the window has a modest effect on completion rates (NCES 2010; Attewell and Lavin 2007). I create a dichotomous variable for college graduation based on student enrollment data.

The main independent variable is attendance at a more selective college, which is measured by a composite of the acceptance rate, grade point average, and SAT/ACT scores of entering students. Since college enrollment may be correlated with ability, I use geographic distance between the student and the college as an instrumental variable. I use ArcGIS mapping software to plot students' residential location prior to college entry and then calculate the geographic distance to the college using longitude and latitude coordinates.

I include a series of control variables to account for state and individual differences. To control for differences in the quality of primary and secondary education, I add dummy variables for state of residence. The state dummy variables also control for the differing effects of distance based on state size. To account for individual differences in academic preparation, I include control variables for individual student grade point average and SAT/ACT scores. In addition, I control for family and demographic characteristics, like income, parental education, race, age, and gender.

### Statistical Model

I will estimate the following models using Two-Stage-Least-Squares (2SLS) regression analysis. The first stage uses distance to a selective college as an instrumental variable for college attendance. The first stage model is:

$$\text{ATTEND}_i = \alpha_0 + \alpha_1 \text{DIST}_i + \alpha_2 \text{SAT}_i + \alpha_3 \text{GPA}_i + \alpha_4 \text{STATE}_i + \alpha_5 \mathbf{X}_i + \varepsilon_i \quad (1)$$

where for each individual  $i$ , ATTEND is college attendance; DIST is an instrumental variable for attendance, operationalized by the distance to the college from the student's home (before she or he entered college); SAT is student SAT score; GPA is student high school grade point average;  $\mathbf{X}$  is a vector of individual demographic characteristics, including race and gender; and  $\varepsilon$  is a random error term.

The second stage uses the predicted attendance from the first stage to determine the impact of selective college attendance on students' probability of graduating. The second stage model is:

$$\text{GRAD}_i = \beta_0 + \beta_1 \text{ATTENDhat}_i + \beta_2 \text{SAT}_i + \beta_3 \text{GPA}_i + \beta_4 \text{STATE}_i + \beta_5 \mathbf{X}_i + v_i \quad (2)$$

where for each individual  $i$ , GRAD is whether or not a student graduated from college; ATTENDhat is the predicted attendance from the equation above; and  $v$  is a random error term. (All other terms are the same as in the equation above.) The coefficient of interest is  $\beta_1$ . A positive, statistically significant value will indicate that attending a selective college increases the probability that a student earns a bachelor's degree. Then, I will compare the results for different groups of students to determine if the effect of college selectivity varies by student race or gender.

The higher graduation rates at more selective colleges could be due to institutional characteristics, like increased spending per student, or unobserved student variables, like high motivation, that lead students to enroll in these colleges. To isolate the effect of college selectivity, I use instrumental variables estimation to compare similar students who are exposed to different levels of college selectivity based on residential location. The analysis will reveal the effect of college selectivity on graduation rates, which can help students make better choices about college enrollment and help improve IPEDS data collection about college choices and outcomes.

Uploaded Appendix Document(s):

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### Project Description II

Will you use NCES target dataset? Yes

Please check all NCES datasets that apply  
- IPEDS Institutional Characteristics (IC)

Explain why each dataset best serves this research. Include a variable list for each dataset used.

This project will use the IPEDS Institutional Characteristics (IC) NCES dataset. The IPEDS dataset is critical for this research because it provides the most accurate information about the location, admissions standards, and bachelor's degree attainment rates for colleges and universities. The IPEDS Institutional Characteristics dataset will provide the official address of each university, which will enable me to map their locations. In addition, the IPEDS dataset will provide information on admissions requirements and recent counts of the number of applicants and admitted students, which are necessary to calculate and compare college selectivity levels.

Street address

City location of institution

FIPS state code

Carnegie classification: undergraduate profile

Percent admitted – total (DVIC01)

SAT Critical Reading 25th percentile score

SAT Critical Reading 75th percentile score

SAT Math 25th percentile score

SAT Math 75th percentile score

ACT English 25th percentile score

ACT English 75th percentile score

ACT Math 25th percentile score

ACT Math 75th percentile score

Secondary school GPA

Graduation rate - Bachelor degree within 6 years, total (GRTOTLT)

I will match the IPEDS dataset with data from the National Longitudinal Study of Youth. This dataset is maintained by the Bureau of Labor Statistics and contains a nationally representative sample of nearly 9,000 youth. The National Longitudinal Study of Youth dataset records detailed information, including demographic characteristics, academic preparation, and college outcomes. I will match the National Longitudinal Study of Youth data with the IPEDS data based on the college or university attended.

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Will you use NSF target dataset? No

Explain why each dataset best serves this research. Include a variable list for each dataset used.

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Will you address the NPEC focus topic? No

If yes, please briefly describe:

### **Project Description III**

Provide a timeline of key project activities:

January 2012: Begin data construction

February 2012: Finish constructing and cleaning data; submit abstract for ACSP conference

March 2012: Calculate and analyze descriptive statistics

April 2012: Conduct data analysis; submit paper for ASHE conference

May 2012: Conduct data analysis; meet with committee to discuss results

June 2012: Conduct additional data analysis and robustness checks

July 2012: Begin draft of introduction

August 2012: Finish draft of introduction; write draft of methods and data

September 2012: Write draft of findings

October 2012: Write draft of conclusion

November 2012: Edit and revise draft; present research at ACSP and ASHE conferences

December 2012: Edit and revise draft; submit to committee for comments

January 2013: Revise draft in response to comments; conduct additional data analysis as needed

February 2013: Revise draft in response to comments

March 2013: Submit second draft to committee; revise draft in response to comments

April 2013: Revise final draft in response to comments

May 2013: Defend dissertation; present research at AIR Forum

June 2013: Submit copies of final paper to AIR; Present research to Boston Public Schools

List deliverables such as research reports, books, and presentations that will be developed from this research initiative:

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#### Academic Journal Articles

Article for publication in *Research in Higher Education*

Article for publication in the *Journal of Higher Education*

Article for publication in the *Journal of Planning Education and Research*

#### Research Reports

Final paper delivered to the Association for Institutional Research (AIR)

Research report for the Boston Public Schools Department of Guidance Services

#### Conference Presentations

Presentation of research at the Association of Collegiate Schools of Planning (ACSP) 2012 annual conference in Cincinnati, OH, November 1-4, 2012

Presentation of research at the Association for the Study of Higher Education (ASHE) 2012 annual conference in Las Vegas, NV, November 15-17, 2012

Presentation of research at the Association for Institutional Research (AIR) 2013 Forum in Long Beach, CA, May 18-22, 2013

#### Other Presentations

Presentation of research to the Boston Public Schools Department of Guidance Services, June 2013

Describe how you will disseminate the results of this research:

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I plan to circulate my research findings by presenting my work at academic conferences, submitting articles for publication in widely-read academic journals, and creating a report for the Boston Public Schools.

I anticipate that the interdisciplinary nature of my research will appeal to planning professionals, policy analysts, and education researchers. By presenting my work at the Association for Institutional Research (AIR) Forum and the annual conferences of the Association of Collegiate Schools of Planning (ACSP) and the Association for the Study of Higher Education (ASHE), I will reach a wide variety of experts across these fields.

Additionally, I intend to submit articles based on my research to several scholarly journals, including *Research in Higher Education*, the *Journal of Higher Education*, and the *Journal of Planning Education and Research*. Publication in these journals will further help disseminate the results of my research within the academic community.

I will also share my results with the Boston Public Schools Department of Guidance Services in the form of a research report and presentation. The report will be written in non-technical language in order to communicate the findings to a general audience. By delivering the findings directly to guidance counselors, I hope to stimulate discussion about encouraging students to apply to more selective colleges.

Finally, I will publicly defend my dissertation and post links on my department's website in order to disseminate the work within my university.

Provide a reference list of sources cited:

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Alon, Sigal, and Marta Tienda. 2005. "Assessing the 'Mismatch' Hypothesis: Differences in College Graduation Rates by Institutional Selectivity." *Sociology of Education* 78(4):294-315.

Andrews, Rodney J., Jing Li, and Michael Lovenheim. 2011. "Quantile Treatment Effects of College Quality on Earnings: Evidence from Administrative Data in Texas." University of Texas at Dallas Working Paper.

Attewell, Paul, and David E. Lavin. 2007. *Passing the Torch: Does Higher Education for the Disadvantaged Pay Off Across the Generations?* New York: Russell Sage.

Aud, Susan, Angelina KewalRamani, and Lauren Frohlich. 2011. "America's Youth: Transitions to Adulthood." NCES 2012-026. Washington, DC: U.S. Department of Education.

Autor, David H., Lawrence F. Katz, and Melissa S. Kearney. 2011. "Trends in U.S. Wage Inequality: Revising the Revisionists." *Review of Economics and Statistics* 90(2):300-323.

Avery, Christopher, and Thomas J. Kane. 2004. "Student Perceptions of College Opportunities: The Boston COACH Program." In *College Choices: The Economics of Where to Go, When to Go, and How to Pay for It*, edited by Caroline M. Hoxby. Chicago: University of Chicago Press.

Bailey, Martha J., and Susan M. Dynarski. 2011. "Gains and Gaps: A Historical Perspective on Inequality in College Entry and Completion." In *Socioeconomic Inequality and Educational Disadvantage*, edited by Richard Murnane and Greg Duncan. New York: Russell Sage.

Baum, Sandy, Jennifer Ma, and Kathleen Payea. 2010. "Education Pays 2010: The Benefits of Higher Education for Individuals and Society." New York: The College Board.

Becker, Gary. 1964. *Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education*. Chicago: University of Chicago Press.

Bettinger, Eric P., Bridget Terry Long, Philip Oreopoulos, and Lisa Sanbonmatsu. 2009. "The Role of Simplification and Information in College Decisions: Results from the H&R Block FAFSA Experiment." NBER Working Paper. No. 15361.

Borjas, George J. 2004. *Labor Economics*. New York: McGraw-Hill/Irwin.

Bound, John, Michael F. Lovenheim, and Sarah Turner. 2010. "Why Have College Completion Rates Declined? An Analysis of

Changing Student Preparation and Collegiate Resources." *American Economic Journal: Applied Economics* 2:129-157.

Bowen, William G., and Derek Bok. 2000. *The Shape of the River*. Princeton: Princeton University Press.

Bowen, William G., Matthew M. Chingos, and Michael S. McPherson. 2009. *Crossing the Finish Line: Completing College at America's Public Universities*. Princeton: Princeton University Press.

Brewer, Dominic J., Eric R. Eide, and Ronald G. Ehrenberg. 1999. "Does It Pay to Attend an Elite Private College? Cross-Cohort Evidence on the Effects of College Type on Earnings." *Journal of Human Resources* 34(1):104-123.

Cabrera, Alberto F., Amaury Nora, and Maria B. Casteneda. 1993. "College Persistence: Structural Equations Modeling Test of an Integrated Model of Student Retention." *Journal of Higher Education* 64(2):123-139.

Card, David. 1993. "Using Geographic Variation in College Proximity to Estimate the Return to Schooling." NBER Working Paper. No. 4483.

Carneiro, Pedro, and James Heckman. 2003. "Human Capital Policy." In *Inequality in America: What Role for Human Capital Policies?* edited by James Heckman and Alan Krueger. Cambridge: MIT Press.

College Board. 2011. "Trends in College Pricing 2011." Trends in Higher Education Series. New York: College Board.

Currie, Janet, and Enrico Moretti. 2003. "Mother's Education and the Intergenerational Transmission of Human Capital: Evidence from College Openings." *Quarterly Journal of Economics* 118:1495-1532.

Dale, Stacy and Alan B. Krueger. 2011. "Estimating the Return to College Selectivity over the Career Using Administrative Earning Data." Working Paper 563. Princeton University.

Dale, Stacy Berg, and Alan B. Krueger. 2002. "Estimating the Payoff to Attending A More Selective College: An Application of Selection on Observables and Unobservables." *Quarterly Journal of Economics* 117(4):1491-1527.

Dee, Thomas. 2004. "Are There Civic Returns to Education?" *Journal of Public Economics* 88:1697-1720.

Deil-Amen, Regina, and Ruth Lopez Turley. 2007. "A Review of the Transition to College Literature in Sociology." *Teachers College Record* 109(10):2324-2366.

Dillon, Eleanor, and Jeffrey Smith. 2009. "The Determinants of Mismatch Between Students and Colleges." Working Paper.

Do, Chau. 2004. "The Effects of Local Colleges on the Quality of College Attended." *Economics of Education Review* 23(3):249-257.

Dominitz, Jeff, and Charles F. Manski. 1996. "Eliciting Student Expectations of the Returns to Schooling." *The Journal of Human*

*Resources* 31(1):1-26.

Dynarski, Susan. 2008. "Building the Stock of College-Educated Labor." *Journal of Human Resources* 43(3):576-610.

Dynarski, Susan. 2004. "The New Merit Aid." In *College Choices: The Economics of Where to Go, When to Go, and How to Pay for It*, edited by Caroline M. Hoxby. Chicago: University of Chicago Press.

Ehrenberg, Ronald G. 2000. *Tuition Rising: Why College Costs So Much*. Cambridge, MA: Harvard University Press.

Frenette, Marc. 2006. "Too Far to Go On? Distance to School and University Participation." *Education Economics* 14(1):31-58.

Goldin, Claudia, and Lawrence F. Katz. 2008. *The Race between Education and Technology*. Cambridge, MA: Belknap Press of Harvard University Press.

Goldrick-Rab, Sara. 2007. "What Higher Education Has To Say About The Transition to College." *Teachers College Record* 109(10):2444-2481.

Griffith, Amanda L., and Donna S. Rothstein. 2009. "Can't Get There From Here: The Decision To Apply To a Selective College." *Economics of Education Review* 28(5):620-628.

Hansen, W. Lee. 1983. "Impact of Student Financial Aid on Access." In *The Crisis in Higher Education*, edited by Joseph Froomkin. New York: Academy of Political Science.

Hanushek, Eric A., and Ludger Woessmann. 2008. "The Role of Cognitive Skills in Economic Development." *Journal of Economic Literature* 46(3):607-688.

Haskins, Ron, and Isabel Sawhill. 2009. *Creating an Opportunity Society*. Washington, DC: Brookings Institution.

Heller, Donald E. 2011. *The States and Public Higher Education Policy: Affordability, Access, and Accountability*. Baltimore, MD: The Johns Hopkins University Press.

Hess, Frederick M., Mark Schneider, Kevin Carey, and Andrew P. Kelly. 2009. "Diplomas and Dropouts: Which Colleges Actually Graduate Their Students (and Which Don't)." Washington, DC: American Enterprise Institute.

Hoekstra, Mark. 2009. "The Effect of Attending the Flagship State University on Earnings: A Discontinuity-based Approach." *The Review of Economics and Statistics* 91(4):717-724.

Hoxby, Caroline M. 2009. "The Changing Selectivity of American Colleges." *Journal of Economic Perspectives* 23(4):95-118.

Hoxby, Caroline M. 1997. "How the Changing Market Structure of U.S. Higher Education Explains College Tuition." NBER Working Paper. No. 6323.

Kane, Thomas J. 1999. *The Price of Admission: Rethinking How Americans Pay for College*.

Washington, DC: Brookings Institution.

Leigh, Duane E., and Andrew M. Gill. 2003. "Do Community Colleges Really Divert Students from Earning Bachelor's Degrees?" *Economics of Education Review* 22(1):23-30.

Leonhardt, David. 2009. "The Value of Education in a Recession." *New York Times*. June 8.

Leslie, Larry L., and Paul T. Brinkman. 1987. "Student Price Response in Higher Education: The Student Demand Studies." *Journal of Higher Education* 58:181-204.

Light, Audrey, and Wayne Strayer. 2000. "Determinants of College Completion: School Quality or Student Ability?" *The Journal of Human Resources* 35(2):299-332.

Long, Mark C. 2008. "College Quality and Early Adult Outcomes." *Economics of Education Review* 27(5):588-602.

Loury, Linda Datcher and David Garman. 1995. "College Selectivity and Earnings." *Journal of Labor Economics* 13(2):289-308.

McPherson, Michael S., and Morton Owen Schapiro. 2006. "Watch What We Do (and Not What We Say): How Student Aid Awards Vary with Financial Need and Academic Merit." In *College Access: Opportunity or Privilege?* edited by Michael S. McPherson and Morton Owen Schapiro. New York: College Board.

Merisotis, Jamie. 2011. "Baltimore Needs More College Graduates." *The Baltimore Sun*. May 26.

Monks, James. 2000. "The Returns to Individual and College Characteristics: Evidence from the National Longitudinal Survey of Youth." *Economics of Education Review* 19(3):279-289.

National Center for Education Statistics. 2010. "The Condition of Education 2010." NCES 2010-028. Washington, DC: U.S. Department of Education.

National Center for Education Statistics. 2004. "The Condition of Education 2004." NCES 2004-077. Washington, DC: U.S. Department of Education.

National Governors Association. 2011. Complete to Compete Initiative. <http://www.subnet.nga.org/ci/1011/>. Last accessed January 9, 2012.

Oreopoulos, Phillip, and Kjell G. Salvanes 2011. "Priceless: The Nonpecuniary Benefits of Schooling." *Journal of Economic Perspectives* 25(1):159-184.

Pascarella, Ernest T., and Patrick T. Terenzini. 1980. "Predicting Freshman Persistence and Voluntary Dropout Decisions from a

Theoretical Model." *Journal of Higher Education* 51(1):60-75.

Perna, Laura W., and Marvin A. Titus. 2005. "The Relationship between Parental Involvement as Social Capital and College Enrollment: An Examination of Racial/Ethnic Group Differences." *Journal of Higher Education* 76(5):485-518.

Rauch, James E. 1993. "Productivity Gains from Geographic Concentration of Human Capital: Evidence from the Cities." *Journal of Urban Economics* 34:380-400.

Roderick, Melissa, Jenny Nagaoka, Vanessa Coca, and Eliza Moeller. 2009. "From High School to the Future: Making Hard Work Pay Off." Consortium on Chicago School Research. Research Report.

Roderick, Melissa, Jenny Nagaoka, Vanessa Coca, and Eliza Moeller. 2008. "From High School to the Future: Potholes on the Road to College." Consortium on Chicago School Research. Research Report.

Rouse, Cecilia Elena. 2004. "Low-Income Students and College Attendance: An Exploration of Income Expectations." *Social Science Quarterly* 85(5):1299-1317.

Rouse, Cecilia E. 1995. "Democratization or Diversion—The Effect of Community Colleges on Educational Attainment." *Journal of Business and Economic Statistics* 13(2):217-224.

Schneider, Mark. 2010. "Finishing the First Lap: The Cost of First-Year Student Attrition in America's Four-Year Colleges and Universities." Washington, DC: American Institutes for Research.

Schneider, Mark. 2008. "The Costs of Failure Factories in American Higher Education." Education Outlook. No. 6. Washington, DC: American Enterprise Institute.

Schneider, Mark and Lu Yin. 2011. "The High Cost of Low Graduation Rates: How Much Does Dropping Out of College Really Cost?" Washington, DC: American Institutes for Research.

Scott-Clayton, Judith. 2009. "On Money and Motivation: A Quasi-Experimental Analysis of Financial Incentives for College Achievement." Working Paper. Harvard University.

Smith, Jeffrey A. 2008. "Heterogeneity and Higher Education." In *College Success: What It Means and How to Make It Happen* edited by Michael S. McPherson and Morton Schapiro. New York: College Board.

St. John, Edward P., Tina J. Tuttle, and Glenda D. Musoba. 2006. "Access and Equal Opportunity in Higher Education in the United States: The Effects of Education and Public Finance Policies." In *Widening Access to Education as Social Justice*, edited by A. Oduaran and H.S. Bhola. Netherlands: Springer.

Stephan, Jennifer L., James E. Rosenbaum, and Ann E. Person. 2009. "Stratification in College Entry and Completion." *Social Science Research* 38(3):572-593.

Taylor, Paul, et al. 2011. "Is College Worth It? College Presidents, Public Assess Value, Quality and Mission of Higher

Education." Social and Demographic Trends Report. Washington, DC: Pew Research Center.

Tinto, Vincent. 1987. *Leaving College: Rethinking the Causes and Cures of Student Attrition*. Chicago: University of Chicago Press.

Turley, Ruth N. López. 2009. "College Proximity: Mapping Access to Opportunity." *Sociology of Education* 82(2):126-146

Turner, Sarah E. 2004. "Going to College and Finishing College: Explaining Different Educational Outcomes." In *College Choices: The Economics of Where to Go, When to Go, and How to Pay for It*, edited by Caroline M. Hoxby. Chicago: University of Chicago Press.

U.S. Census Bureau. 2009. Current Population Survey. Washington, DC: Department of Commerce.

U.S. Department of Labor. 2009. Employment Projections: 2008-2018. Bureau of Labor Statistics.

Weisbrod, Burton A., and Peter Karpoff. 1968. "Monetary Returns to College Education, Student Ability, and College Quality." *The Review of Economics and Statistics* 50(4):491-497.

White House. 2009. Statements and Releases. Office of the Press Secretary. July 14.  
[http://www.whitehouse.gov/the\\_press\\_office/Excerpts-of-the-Presidents-remarks-in-Warren-Michigan-and-fact-sheet-on-the-American-Graduation-Initiative/](http://www.whitehouse.gov/the_press_office/Excerpts-of-the-Presidents-remarks-in-Warren-Michigan-and-fact-sheet-on-the-American-Graduation-Initiative/). Last accessed January 9, 2012.

Winston, Gordon C. 1999. "Subsidies, Hierarchy and Peers: The Awkward Economics of Higher Education." *Journal of Economic Perspectives* 13(1):13-36.

#### **IRB Statement**

Statement of Institutional Review Board approval or exemption:

My research qualifies for an Institutional Review Board exemption because it involves the study of existing data and will not identify individual subjects. (I have reviewed all Institutional Review Board procedures and completed the required human subjects training.)

#### **Statement of Use of Restricted Datasets**

The proposed research does not require the use of NCES or NSF restricted datasets. However, the proposed research does use a Bureau of Labor Statistics restricted dataset. I submitted a license application in September 2011 and it has since been processed and approved by the Bureau of Labor Statistics and my university. The license agreement is awaiting final signature; I anticipate receiving the dataset this month.

#### **Biographical Sketch**

I am a fourth year doctoral student in the Department of Urban Studies and Planning at the Massachusetts Institute of Technology (MIT). I earned a bachelor's of science degree in Neuroscience from Brown University and a master's degree in

Architecture from Yale University. Before entering my doctoral program, I worked as a low-income housing policy analyst for four years at the city and federal government levels. I decided to pursue a Ph.D. to gain a deeper understanding of social problems and the research tools needed to craft effective policy responses. I have successfully completed all of my doctoral qualifying exams, including written and oral exams in Public Policy (first field) and Education Production Functions and Inequality (second field). I recently defended my dissertation proposal, which was approved by my committee and the department.

My training and research interests reflect my deep commitment to improving the socioeconomic conditions of disadvantaged groups. At MIT, I am affiliated with the Housing, Community, and Economic Development program, which is comprised of faculty and students who combine theory, research, and practice to promote urban social change. My research examines how the relationship between residential location and educational institutions affects opportunities for social and economic mobility. I am interested in how college access and completion can help disadvantaged groups overcome structural barriers and inequality.

I have acquired the knowledge and skills to conduct my proposed research through doctoral coursework in three key areas: 1) public policy, 2) research design, and 3) methodology. First, I gained a firm understanding of the theory and content of U.S. public policy by taking a three-semester seminar on Inequality and Social Policy. The seminar's multidisciplinary approach fostered my research focus on the relationship between higher education and urban planning. Second, three semesters of research design courses trained me to use theory and substantive knowledge to formulate precise research questions, develop an appropriate research design, and test the validity of my findings. These courses provided me with the analytical framework to conduct rigorous social science research. Third, my coursework on causal methodology links my training in research design and public policy. Classes on Causal Inference in Statistics equipped me with the quantitative tools to isolate the causal effect of policy interventions using controlled, natural, and quasi-experiments. I honed my methodological skills by taking additional quantitative analysis courses, including Applied Data Analysis and Econometrics.

In addition, my work experience has strengthened my research preparation by immersing me in the academic literature on higher education. While serving as a research assistant for a class on the Economics of Education, I reviewed and analyzed the existing scholarship on college access and completion. This research helped me to identify gaps in the literature and formulate my dissertation topic. With the support of a Social Science Research Council fellowship, I developed my proposal and began preliminary data analysis.

I have acquired valuable experience with large-scale national datasets from my previous research and work experience. During the first year of my doctoral program, I examined the prevalence of subprime mortgage lending and home foreclosure as a function of neighborhood racial composition. I conducted analyses of national Home Mortgage Disclosure Act (HMDA) data, linked the records to U.S. Census data, and presented my findings at the Association of Collegiate Schools of Planning annual conference. Prior to starting my Ph.D. program, I evaluated the effectiveness of the Section 8 and public housing programs for the U.S. Department of Housing and Urban Development (HUD). At HUD, I analyzed a large national dataset containing longitudinal tenant records from residents across the country.

In addition to developing the skills to conduct my proposed research, my training has prepared me for an academic career. My focus on an applied public policy problem reflects my belief that academic research should use knowledge, theory, and methods to address pressing social issues. After graduation, I intend to teach and conduct research as a professor in a department of public policy, education, or planning. My research agenda will examine how traditionally underserved populations can acquire the education and skills necessary for socioeconomic mobility.

#### **Budget Requirements**

Salary/Stipend: \$11500.00  
 Tuition and fees: \$5800.00  
 Travel: \$1500.00  
 Other travel related expenses: \$1000.00  
 Other research expenses: \$200.00  
 Total Request: \$20000.00

#### **Funding History**

My prior and current funding consists of one year of support from a MIT Presidential Fellowship and three years of support from the MIT Department of Urban Studies and Planning. This university funding covers tuition and a stipend for my doctoral program; the funding will end this academic year as of May 2012.

During the summer of 2010, I was awarded a Social Science Research Council Dissertation Proposal Development Fellowship to refine my dissertation proposal.

There is no pending funding for the proposed research. I have not received any prior funding from the Association for Institutional Research for any activity.

**Letter of Support from Dissertation Faculty Advisor**

- [Letter of Support](#)