Essays on Human Capital Formation and Measurement Error
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1 Parental Income, College Enrollment, and College Completion (job market paper).

An extensive literature examines the impact of parental resources on their children’s human capital development during early childhood. Few studies examine such investments when children are in college. Yet, parental transfers are the most significant source of financial support for children during college. This study examines the effect of parental income on college matriculation and college completion. I provide novel evidence that, despite little effect on college enrollment rates, transitory parental income when a child is between the ages of 16 and 18 has a substantial impact on college completion rates. To rationalize this pattern, I develop and estimate a model of sequential parental investments in their children’s college education. The model incorporates parents’ uncertainty over (1) their own future income and (2) the likelihood their child will complete college. Parents facing uncertainty may choose to enroll their child in college, but do not necessarily fund their children’s college through degree completion. Parents may also send their children to higher-quality schools that charge higher tuition, but have lower dropout rates. The estimated model reveals that higher-income parents facing uncertainty are more likely to help finance college attendance and to send their children to colleges with higher completion rates, which helps to explain why higher income affects completion but not enrollment. Moreover, using the estimated model, I show that counterfactual policies that reduce uncertainty can increase college completion rates.

2 Teacher Expectation Matters (with Nicholas W. Papageorge and Seth Gershenson), Revision Requested at Review of Economics and Statistics.

We develop and estimate a joint model of the education and teacher-expectation production functions that identifies both the distribution of biases in teacher expectations and the impact of those biases on student outcomes via self-fulfilling prophecies. Our approach leverages a unique feature of a nationally representative dataset: two teachers provided their educational expectations for each student. Identification of causal effects exploits teacher disagreements about the same student, an idea we formalize using lessons from the measurement error literature. We provide novel, arguably causal evidence that teacher expectations affect students’ educational attainment: Estimates suggest an elasticity of college completion with respect to teachers’ expectations of about 0.12. On average, teachers are overly optimistic about students’ ability to complete a four-year college degree. However, the degree of over-optimism of white teachers is significantly larger for white students than for black students. This highlights a nuance that is frequently overlooked in discussions of biased beliefs: less biased (i.e., more accurate) beliefs can be counterproductive if there are positive returns to optimism or if there are socio-demographic gaps in the degree of teachers’ over-optimism; we find evidence of both.

3 The Effect of SNAP and School Food Programs on Food Spending, Diet Quality, and Food Security: Sensitivity to Program Reporting Error (with Robert Moffitt), Forthcoming, Southern Economics Journal.

There is an extensive research literature on the effects of the Supplemental Nutrition Assistance Program (SNAP) on food-related outcomes which has shown somewhat mixed results but generally favorable effects. However, most of the research has used data sets whose information on SNAP participation is gathered from responses on household surveys, and such responses are subject to reporting error. This study uses the FoodAPS data set to examine the effect of reporting error, for that data set contains information on SNAP participation gathered from government administrative records. Our analysis shows that the degree of reporting error is small and has little effect on the estimated impact of participation in the SNAP program on food security, diet quality, and food spending. A supplemental analysis of the effect of school food programs likewise shows no difference in using survey or administrative data in the analysis.