Essays in Public Education

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(ABSTRACT)

Chapter 1 introduces some of the issues which are addressed in the other chapters of this dissertation. These topics include: (1) the general equilibrium incentives in the provision of public education, (2) human capital production functions in economic modeling, (3) how public education spending may impact income inequality -- both positively and negatively, (4) the effect on public education spending of changes in the college wage premium, and (5) the overall efficiency of government-supplied capital.

Chapter 2 develops a public education system in which voters face general equilibrium incentives to pay taxes for education. Middle-aged voters can increase their returns to saving by increasing the aggregate amount of human capital in the economy. I find that if students differ by their ability to increase their human capital levels through schooling, then the public education policy will invest more education funds in more productive students; this perpetuates income inequality. Also, the greater the discount rate for consumption and the elasticity of education funds in the human capital production function, the more likely it is that a public system provides greater growth in the steady state than a private system.

Chapter 3 studies the allocation of government spending between general tuition subsidies for college students and need-based aid which is directed solely towards students from low-income households. The way to maximize the number of students may be to provide some need-based aid. I find that government provides more aid directed to low-income students if need-based tuition subsidies are provided rather than student loan subsidies. I also look at the effects of changes in parameters, such as the cost of education and the college wage premium, on the policies.

Chapter 4 investigates the returns to aggregate factors of production when labor is disaggregated by education level. I find that a model in which the error term is assumed to be state-wise heteroscedastic and autocorrelated does a better job of approximating the pattern of wages for the different education groups than other models (pooled OLS or random and fixed effects). In addition, this model suggests a significant positive elasticity for public capital.
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