

Education: other empirical studies

Lecture 4/3 - 2/2013

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Ability Differences, Spillovers, and the Returns to Investment in Education

- ▶ Mincer equation assumes that the average innate abilities of the more and less educated groups of workers are the same, hence no effect on the average earnings differential.
- ▶ However, we can think that another cause of differences in educational attainment is differences in ability
 - ▶ High-ability students graduate from secondary school while low-ability students drop out.
 - ▶ Hence, part of the higher earnings of secondary school graduates reflects their higher ability, and the return to secondary education is overestimated.

Ability Differences, Spillovers, and the Returns to Investment in Education

- ▶ Earnings differentials underestimate the social return to investment in education.
- ▶ Why? 'Positive spillover' or 'human capital externality' when people learn from those around them.
- ▶ Rauch (1993) finds that workers earn more if the average level of education in their city is high, controlling for individual characteristics and other important attributes of the city.
- ▶ Psacharopoulos's claim that social returns to investment are greatest for primary education and least for university education. If the spillover is most important for learning new technology, it may have the greatest impact on the social return to university education.

Educational inputs and student performance

- ▶ Teacher-pupil ratio, teacher education - experience - salary, expenditure per pupil
- ▶ 8 of 30 studies find a significant results supporting smaller classes; almost half find statistically insignificant
 - ▶ With a wide set of environments in developing countries, it does not support the policy to reduce the class size.
- ▶ 16 of 46 studies display significant positive benefits from more teaching experience, but 28 of these find it statistically insignificant.
- ▶ The majority of studies support that more education for teachers improves student performance.

Educational inputs and student performance

- ▶ No compelling support for the notion that higher wages yield better teachers.
- ▶ Still unclear what relationship between total expenditure per pupil and student performance.
- ▶ Schools show very large differences in their ability to improve student achievement, but these differences are not highly correlated with measured characteristics of teachers and schools.
 - ▶ Only 16% of the variance in school quality is related to teacher attributes (education and gender) and school attributes (class size and facilities)

Quality vs. Access

- ▶ Should policy maker choose expanding the availability of education or providing high-quality schools?
- ▶ Low quality may be an explanation for the failure to take advantage of the high returns in investment in education
 - ▶ Students tend to stay in good schools and drop out of poor ones.
 - ▶ Estimates of rate of return to schooling that do not account for quality differences will systematically overstate the productivity gains associated with additional years of schooling, because the estimates will include quality differences that are correlated with quantity.
- ▶ Glewwe and Jacoby (1994) find that improving school facilities tends to hold students in school longer, other things equal.
 - ▶ This implies both less dropouts and more grade repetition.