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Dynamic Skill Accumulation, Comparative Advantages, Compulsory Schooling, and Earnings

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Abstract:

We show that a calibrated dynamic skill accumulation model allowing for comparative advantages, can explain the weak (or negative) effects of schooling on productivity that have been recently reported (i) in the micro literature on compulsory schooling, ii) in the micro literature on estimating the distribution of ex-post returns to schooling, and (iii) in the macro literature on education and growth. The fraction of the population more efficient at producing skills in the market than in school is a pivotal quantity that determines the sign (and magnitude) of different parameters of interest. Our model reveals an interesting paradox; as low-skill jobs become more skill-enhancing (*ceteris paribus*), IV estimates of compulsory schooling become increasingly negative, and ex-post returns to schooling (inferred from a Roy model specification of the earnings equation) become negative for an increasing fraction of the population. This arises even if each possible input to skill production has a strictly positive effect. Finally, our model provides a foundation for the weak (or negative) effect education on growth measured in the empirical literature.

Text: See [Discussion Paper No. 6167](#)



[Back](#)