
Evaluating Professor Value-added: Evidence from Professor and Student Matching in Physics

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Abstract

This paper estimates a professor's value added to a postgraduate student's research achievement growth using unique panel data on matched advisor-advisee pairs at a world-leading physics graduate program. To address an identification problem related to the endogenous selection of advisors and advisees, we use a professor's turnover and estimate a semi-parametric lower bound of the variance in advisor quality affecting advisee research performance. We find that a one-standard-deviation increase in professor quality results in a 0.54 standard deviation increase in a doctorate student's research achievement growth and increases a student's number of first-authored papers published in top journals by 0.64 at the doctoral level.

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