Authors
Esther Duflo
Massachusetts Institute of Technology

Pascaline Dupas
Princeton University

Michael Kremer
The University of Chicago

Peer Effects, Teacher Incentives, and the Impact of Tracking: Evidence from a Randomized Evaluation in Kenya[†]

By Esther Duflo, Pascaline Dupas, and Michael Kremer[*]

To the extent that students benefit from high-achieving peers, tracking will help strong students and hurt weak ones. However, all students may benefit if tracking allows teachers to better tailor their instruction level. Lower-achieving pupils are particularly likely to benefit from tracking when teachers have incentives to teach to the top of the distribution. We propose a simple model nesting these effects and test its implications in a randomized tracking experiment conducted with 121 primary schools in Kenya. While the direct effect of high-achieving peers is positive, tracking benefited lower-achieving pupils indirectly by allowing teachers to teach to their level. (JEL I21, I45, O15)

To the extent that students benefit from having higher-achieving peers, tracking students into separate classes by prior achievement could disadvantage low-achieving students while benefiting high-achieving students, thereby exacerbating inequality (Denis Epple, Elizabeth Newlon, and Richard Romano 2002). On the other hand, tracking could potentially allow teachers to more closely match instruction to students' needs, benefiting all students. This suggests that the impact of tracking may depend on teachers' incentives. We build a model nesting these effects. In the model, students can potentially generate direct student-to-student spillovers as well as indirectly affect both the overall level of teacher effort and teachers' choice of the level at which to target instruction. Teacher choices depend on the distribution of students' test scores in the class as well as on whether the teacher's reward is a linear, concave, or convex function of test scores. The further away a student's own level is from what the teacher is teaching, the less the student benefits; if this distance is too great, she does not benefit at all.

Peer Effects and the Impact of Tracking: Evidence from a Randomized Evaluation in Kenya

To the extent that students benefit from high-achieving peers, tracking will help strong students and hurt weak ones. However, all students may benefit if tracking allows teachers to better tailor their instruction level. Lower-achieving pupils are particularly likely to benefit from tracking when teachers have incentives to teach to the top of the distribution. We propose a simple model nesting these effects and test its implications in a randomized

tracking experiment conducted with 121 primary schools in Kenya. While the direct effect of high-achieving peers is positive, tracking benefited lower-achieving pupils indirectly by allowing teachers to teach to their level.

October 01, 2011