

Children Left Behind: Self-confidence of Pupils in Competitive Environments

Miroslava Federičová¹ Filip Pertold² Michael L. Smith³

November 2016

Early-tracking systems naturally divide many classes of 11 years old students into two groups: students preparing for exams to enter better schools and everyone else, who decide not to compete for selective schools. Utilizing TIMSS data and a follow-up study in the Czech Republic, which has an early-tracking system similar to other European states following the German model, we show that this environment has a detrimental effect on the self-confidence of pupils in mathematics who do not apply for selective schools but have peers in their classroom who do apply. In particular, we show that girls who do not apply for selective schools experience a 11% drop in confidence in mathematics if they have four applicants among classmates and this effect is even larger if the applicants are successful in the admission process. We focus on self-confidence in mathematics as an outcome variable because the literature suggests it is directly linked to pupils' motivation to study STEM fields as well as subsequent educational achievement. Our results suggest that the decrease in self-confidence among girls is long lasting and implies that gender gaps in self-confidence can be a result of the competitive environment of the educational system.

Keywords: early tracking, gender differences, self-confidence, inequality aversion

JEL: I21, I24, J16, Z13

¹ CERGE-EI, a joint workplace of Charles University and the Economics Institute of the Czech Academy of Sciences, Politických vězňů 7, 111 21 Prague, Czech Republic. Supported by the Czech Science Foundation, grant no. P402/12/G130.

² CERGE-EI, a joint workplace of Charles University and the Economics Institute of the Czech Academy of Sciences, Politických vězňů 7, 111 21 Prague, Czech Republic. Supported by the Czech Science Foundation, grant no. P402/12/G130.

³ Corresponding author. CERGE-EI, a joint workplace of Charles University and the Economics Institute of the Czech Academy of Sciences, Politických vězňů 7, 111 21 Prague, Czech Republic. Email: Michael.Smith@cerge-ei.cz. Phone: (+420) 737 813 807. Supported by the Czech Science Foundation, grant no. 14-36154G.