

Competitiveness, Risk Attitudes and the Gender Gap in Mathematics Achievement

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Abstract

In this paper, we investigate how competitiveness and risk attitudes are related to mathematics achievement among middle school students. We conduct an experiment at six public middle schools in Japan to collect incentivized measures of competitiveness and risk attitudes and merge them with an administrative dataset containing information on students' cognitive achievements. We find that competitiveness is positively correlated with mathematics achievement conditional on students' prior achievements and demographics, while greater risk aversion is associated with higher mathematics achievement (but not with reading and English). Since girls are less competitive and exhibit greater risk aversion compared to boys, the results indicate that the gender differences in competitiveness are widening the gender gap in mathematics achievement, but that the gender differences in risk attitudes contribute to narrowing it.

Keywords— Gender, Competitiveness, Risk Attitudes, Mathematics, Experiment

JEL Classification— C91, I20, I24, J16

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