

Impact of high school exit exams on STEM education and skills

In many countries, women have been getting more education than men in recent years, and they go to college more than men. However, they still do not pick subjects like science, technology, engineering, and math (STEM) as much as men do. And it is not because they are not good at math and science. There are two important reasons why we should care about the underrepresentation of women in STEM fields. One reason is fairness, which means giving women the same chances as men. The other reason is to ensure we have enough people with relevant skills as the role of technology in economic growth increases.

Empirical literature highlights the role of students' preferences, students' self-confidence, the lack of same-sex role models in STEM, and gender norms as factors explaining why women choose STEM fields of study less often than men. There is limited evidence on the role of institutional setting: school and exam regimes.

The project's first aim is to understand if introducing compulsory mathematics exams after high school impacts fields of study choices, particularly STEM, and if there are differences between men and women. Passing an exam in mathematics is required to apply for most STEM fields of study. Women choose mathematics less often than men when it is not compulsory, so introducing it may have a bigger impact on women's choices.

The project's second aim is to evaluate the long-term impact of compulsory mathematics exams after high school on adult mathematical skills. Previous research indicates that high-stakes exams increase students' test scores, but there is no evidence that this effect translates into higher skills in the long term when they are adults.

The project will help answer important policy questions: (i) Can changes in high school exit exams increase the representation of women in STEM? (ii) Do compulsory exit exams in mathematics after high school increase the mathematical skills of adults in the long term?