

Randomized controlled trials and production frontiers in education

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Abstract

Surprisingly to date in economics, the theory about impact evaluation and production frontiers, run as parallel lines of research with depictable relationship between them. In this work, we propose to evaluate the performance of a public programme conducted on a set of production units through a randomized controlled trial (RCT) using production frontiers. The aim is going beyond the comparison of final average results between treated and control schools, analyzing how a treatment implemented in the schools can influence their production activity. Our strategy proposes to measure Total Factor Productivity Change (due to efficiency and/or technology changes), through the estimation of production frontiers for the treated and control groups using as reference the common baseline technology for the production activity of DMUs before the treatment. For illustrating this methodology, we apply these ideas to a RCT for boosting academic results in primary schools developed by the World Bank in La Rioja (Argentina).