

Cost-Effectiveness Analysis of Education Project Evaluation by Randomized Experiments: The Case of Kenya

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Are there strategies to measure the unbiased impact of a particular project, program or policy in such a way as to prioritize public action and maximize the outcome? The decision to expand, reduce or maintain the size of a particular project is based on impact evaluation. How an evaluation can eliminate potential bias and assess the impact of intervention in an accurate fashion is extremely important for the implementation of project, program and policy by development communities and government officials.

Randomized experiments are generally thought to be the "gold standard" in policy research. Experimental designs that involve randomly assigning participants to one or more treatment conditions and a no-treatment control group for comparison allow researchers to more confidently answer research questions about whether or not a certain policy or intervention has an influence on observed changes in the population of interest. Selection, or the possibility that an individual's unobserved characteristics are actually explaining the observed association between the intervention and the outcome, is largely ruled out in a randomized experiment.

This paper introduces recent randomized experiments of eight educational projects in the primary education sub-sector in Kenya to demonstrate how this experimental design works to reduce potential bias. Further, using the average treatment effect on the treated (ATT) estimated by the experiments, this paper runs a cost-effectiveness analysis in terms of (i) quantitative measures expressed as gains in school attendance and (ii) qualitative measures expressed as gains in test scores.

The analysis reveals that education projects diminishing the burden on parents of educational costs are more cost-effective than alternatives to improve quantitative measures at primary education in Kenya. On the other hand, those providing appropriate incentives for both students and teachers are more cost-effective to improving qualitative measures. We confirm the same result from the cost-effectiveness analyses using data obtained by randomized and quasi-experiments, in other developing countries.