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Editor: Gabriel Heller Sahlgren

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Editor's Pick

The Aggregate Effect of School Choice: Evidence from a Two-stage Experiment in India

By: Karthik Muralidharan and Venkatesh Sundararaman

Quarterly Journal of Economics (forthcoming)

[Published version](#)

[Working paper version \(free\)](#)

In the past decades, there has been a significant increase in the share of pupils attending private schools throughout the developing world. Many of these schools are profit-making, in stark contrast to the private schools that exist in most developed countries. Indeed, recently, Laura McInerney highlighted in the [Guardian](#) the government's inconsistent approach to for-profit schools: whereas it maintains that such schools should not be allowed in England, it gladly sponsors them in developing countries.

And the private school revolution in these countries is indeed controversial, having been met with enthusiasm by some, who believe that it offers a solution to the failures of the state school systems in these countries, and with apprehension by others, who believe it weakens the state school system and exacerbates inequality.

Up until now, however, there has been little rigorous research on the impact of low-cost private schools in a developing world context. While non-experimental research often has suggested strong positive effects of private school attendance, there haven't been any experimental evaluations. In this sophisticated paper, economists Karthik Muralidharan and Venkatesh Sundararaman report the findings from a large-scale randomised voucher experiment in the Indian state of Andhra Pradesh. The programme provided a voucher to finance pupils to attend low-cost private primary schools. Applicants were encouraged to apply, and receipt of a voucher was determined by lotteries. This ensures that, on average, covariates between lottery winners and lottery losers are balanced.

But the paper went farther than any voucher study has ever done. The experiment not only randomised receipt of vouchers among households; it also randomised the villages in which the programme would be conducted. This allowed the authors to analyse potential spill-over effects of the voucher programme on pupils in the state sector. This is an important methodological contribution to existing lottery studies, which cannot separate school productivity effects from peer effects – or take into account potential competition effects on state schools.

The authors' findings display the importance of separating causation from correlation. Indeed, while the cross-sectional correlation suggests that private school pupils perform 0.65 standard deviations (SD) better than state school pupil in Telugu and mathematics, this correlation entirely displays differences in pupil ability. There is no impact at all of private school attendance in these subjects (or in social science and science) after four years in the programme.

However, pupils winning a voucher performed 0.13 SD better in English and a whopping 0.55 SD higher in Hindi (a subject not taught by state schools), with the average effect across all subjects also being 0.13 SD after four years. Among the pupils who actually opted for a private school once they had won a voucher, the average impact is 0.26 SD after four years. Overall, therefore there was a positive, albeit relatively small, effect of private school attendance.

However, these positive effects are also obtained with a significantly lower school budget: state schools spend on average more than three times as much per pupil as the private schools. Additionally, private schools have less instruction in Telugu and mathematics, but their pupils still do not perform worse. This strongly indicates that the low-cost private schools are considerably more *productive* than the state schools.

Given the two-stage randomisation design, the authors are also able to study the spill-over effects of the voucher programme on pupils in state schools. They find no effects at all, suggesting that these pupils neither benefit nor are hurt by vouchers. Similarly, the authors find no impact at all on pupils who already attended private schools. This backs up recent evidence that displays that the existence of peer effects has been grossly exaggerated in general.

On the other hand, it calls into question whether state school pupils benefit from competition from the private sector. Yet it's not clear whether we should expect competition effects here given the strong regulations and little autonomy present in the studied school sector, where it's also unlikely that money follow pupils. One of the key conditions for school competition to even have a chance to work is that schools have incentives and sufficient autonomy to react to competition. Furthermore, the area under study is rural, which naturally limits competition.

Nevertheless, the authors do find some evidence that the effect of winning a voucher is higher in areas that have more choice and competition between private schools. In these areas, the effect of attending private schools is strongly significant across all subjects and the effect size after four years amounts to 0.2 SD in English to 0.5 SD in Telugu and Science/Social Sciences. While more research is needed, this is indicative evidence that voucher programmes are more likely to be successful in areas where there is more choice.

Overall, the paper provides evidence that warrants a more nuanced attitude towards private schools in the developing world, both among critics and supporters. Private schools do slightly outperform state schools on average,

albeit only in Hindi and English, despite the fact that they spend considerably less on average per pupil. They are therefore clearly part of the solution rather than part of the problem. At the same time, it's also clear that these schools do not provide the vastly superior outcomes for which they sometimes are heralded – it turns out that pupil ability and background can explain much (even most) of the private school “effect”.

Furthermore, it's important to note that an important [reason](#) why these primary private schools can be so cheap in the first place is because they hire young female, untrained teachers who are paid considerably less – and these women have often been educated in government secondary schools. This “invisible” public-private partnership appears to be important for the ability of the private schools to be so cheap in the first place.

Finally, the external validity of the experiment appears limited to similarly poor rural regions in developing countries. In other words, it has limited relevance for policymakers in the developed world, apart from suggesting the importance of rigorously evaluating policies before adopting them nationwide. Indeed, allowing a randomised two-stage trial with for-profit schools and a pure voucher programme in England would advance our understanding of the impact of choice and competition also in a developed world context.

Effects of Policy and Practice – Developed World

Capitalization of Charter Schools into Residential Property Values

By: Scott Imberman, Maggie O'Rourke, and Michael Naretta

NBER Working Paper No. 20990 (2015)

[Working paper version](#)

While prior research has found clear impacts of schools and school quality on property values, little is known about whether charter schools have similar effects. Using sale price data for residential properties in Los Angeles County from 2008 to 2011, the authors estimate the neighbourhood level impact of charter schools on housing prices. Using an identification strategy that relies on census block fixed-effects and variation in charter penetration over time, they find little evidence that the availability of charter schools affect housing prices on average. However, they do find that when restricting to charter schools located in the same school district as the household, housing prices outside Los Angeles Unified School District fall in response to an increase in nearby charter penetration.

Apprenticeship, Vocational Training and Early Labour Market Outcomes - In East and West Germany

By: Regina T. Riphahn and Michael Zibrowius

Education Economics (forthcoming)

[Published version](#)

[Working paper version \(free\)](#)

The authors study the returns to apprenticeship and vocational training for three early labour market outcomes all measured at age 25 for East and West German youths: non-employment (i.e. unemployment or out of the labour force), permanent fulltime employment, and wages. They find strong positive effects of apprenticeship and vocational training. There are no significant differences for different types of vocational training, minor differences between East and West Germany and males and females, and no significant changes in the returns over time. Instrumental variable estimations confirm the regression results. The positive returns hold up even in poor labour market situations.

The Maine Question: How is 4-year College Enrolment Affected by Mandatory College Entrance Exams?

By: Michael Hurwitz, Jonathan Smith, Sunny Niu, and Jessica Howell

Educational Evaluation and Policy Analysis (volume 37, 2015)

[Published version](#)

The authors use a difference-in-differences analytic approach to estimate postsecondary consequences from Maine's mandate that all public school juniors take the SAT. They find that, overall, the policy increased 4-year college-going rates by 2- to 3-percentage points and that 4-year college-going rates among induced students increased by 10-percentage points.

The Uneven Performance of Arizona's Charter Schools

By: Matthew M. Chingos and Martin R. West

Educational Evaluation and Policy Analysis (volume 37, 2015)

[Published version](#)

Arizona enrolls a larger share of its students in charter schools than any other state in America, but no comprehensive examination exists of the impact of those schools on student achievement. Using student-level data covering all Arizona students from 2006 to 2012, the authors find that the performance of charter schools in Arizona in improving student achievement varies widely, and more so than that of traditional state schools. On average, charter schools at every grade level have been modestly less effective than state schools in raising student achievement in some subjects. But charter schools that closed during this period have been lower performing than schools that remained open, a pattern that is not evident in the traditional state sector.

Effects of Policy and Practice – Developing World

Improving Middle School Quality in Poor Countries: Evidence from the Honduran Sistema de Aprendizaje Tutorial

By: Patrick J. McEwan, Erin Murphy-Graham, David Torres Iribarra, Claudia Aguilar, and Renán Rápalo

Educational Evaluation and Policy Analysis (volume 37, 2005).

[Published version](#)

This article evaluates the impact and cost-effectiveness of offering an innovative middle school model—the Sistema de Aprendizaje Tutorial (SAT)—to Honduran villages instead of traditional middle schools. The authors identified a matched sample of villages with either type of school and collected baseline data among primary school graduates eligible to enrol in middle schools. After 2 years, the test scores of children residing in SAT villages were 0.2 standard deviations higher than children in other villages, though the per-student cost in SATs was at least 10% lower than traditional schools. The article is one of the few studies to rigorously evaluate a scaled-up instructional reform in a poor country, implemented with an alternative model of teacher recruitment and contracting.

Improving Learning in Primary Schools of Developing Countries: A Meta-Analysis of Randomised Experiments

By: Patrick J. McEwan

Review of Educational Research (forthcoming)

[Published version](#)

The author gathered 77 randomized experiments (with 111 treatment arms) that evaluated the effects of school-based interventions on learning in developing-country primary schools. On average, monetary grants and deworming treatments had mean effect sizes that were close to zero and not statistically significant. Nutritional treatments, treatments disseminating information, and treatments that improved school management or supervision, had small mean effect sizes (0.04–0.06) that were not always robust to controls for study moderators. The largest mean effect sizes included treatments with computers or instructional technology (0.15); teacher training (0.12); smaller classes, smaller learning groups within classes, or ability grouping (0.12); contract or volunteer teachers (0.10); student and teacher performance incentives (0.09); and instructional materials (0.08). Meta-regressions suggested that effects of contract teachers and materials were partly accounted for by composite treatments including training and/or class size reduction. There are insufficient data to judge the relative cost-effectiveness of interventions.

General Education

Education and Human Capital Externalities: Evidence from Colonial Benin

By: Leonard Wantchekon, Marko Klašnja, and Natalija Novta

Quarterly Journal of Economics (volume 130, 2015)

[Published version](#)

[Working paper version \(free\)](#)

Using a unique data set on students from the first regional schools in colonial Benin, the authors investigate the effect of education on living standards, occupation, and political participation. Since both school locations and student cohorts were selected with very little information, treatment and control groups are balanced on observables. They can therefore estimate the effect of education by comparing the treated to the untreated living in the same village, as well as those living in villages where no schools were set up. The authors find a significant positive treatment effect of education for the first generation of students, as well as their descendants: they have higher living standards, are less likely to be farmers, and are more likely to be politically active. They find large village-level externalities—descendants of the uneducated in villages with schools do better than those in control villages. They also find extended family externalities—nephews and nieces directly benefit from their uncle’s education—and show that this represents a “family tax,” as educated uncles transfer resources to the extended family.

Using Student Test Scores to Measure Principal Performance

By: Jason A. Grissom, Demetra Kalogrides, and Susanna Loeb

Educational Evaluation and Policy Analysis (volume 37, 2015)

[Published version](#)

Expansion of the use of student test score data to measure teacher performance has fuelled recent policy interest in using those data to measure the effects of school administrators as well. However, little research has considered the capacity of student performance data to uncover principal effects. Filling this gap, this article identifies multiple conceptual approaches for capturing the contributions of principals to student test score growth, develops empirical models to reflect these approaches, examines the properties of these models, and compares the results of the models empirically using data from a large urban school district. The article then assesses the degree to which the estimates from each model are consistent with measures of principal performance that come from sources other than student test scores, such as school district evaluations.

The results show that choice of model is substantively important for assessment. While some models identify principal effects as large as 0.18 standard deviations in math and 0.12 in reading, others find effects as low as 0.05 (math) or 0.03 (reading) for the same principals. The authors also find that the most conceptually unappealing models, which over-attribute school effects to principals, align more closely with non-test measures than do approaches that more convincingly separate the effect of the principal from the effects of other school inputs.