

Class Size: Does It Matter?

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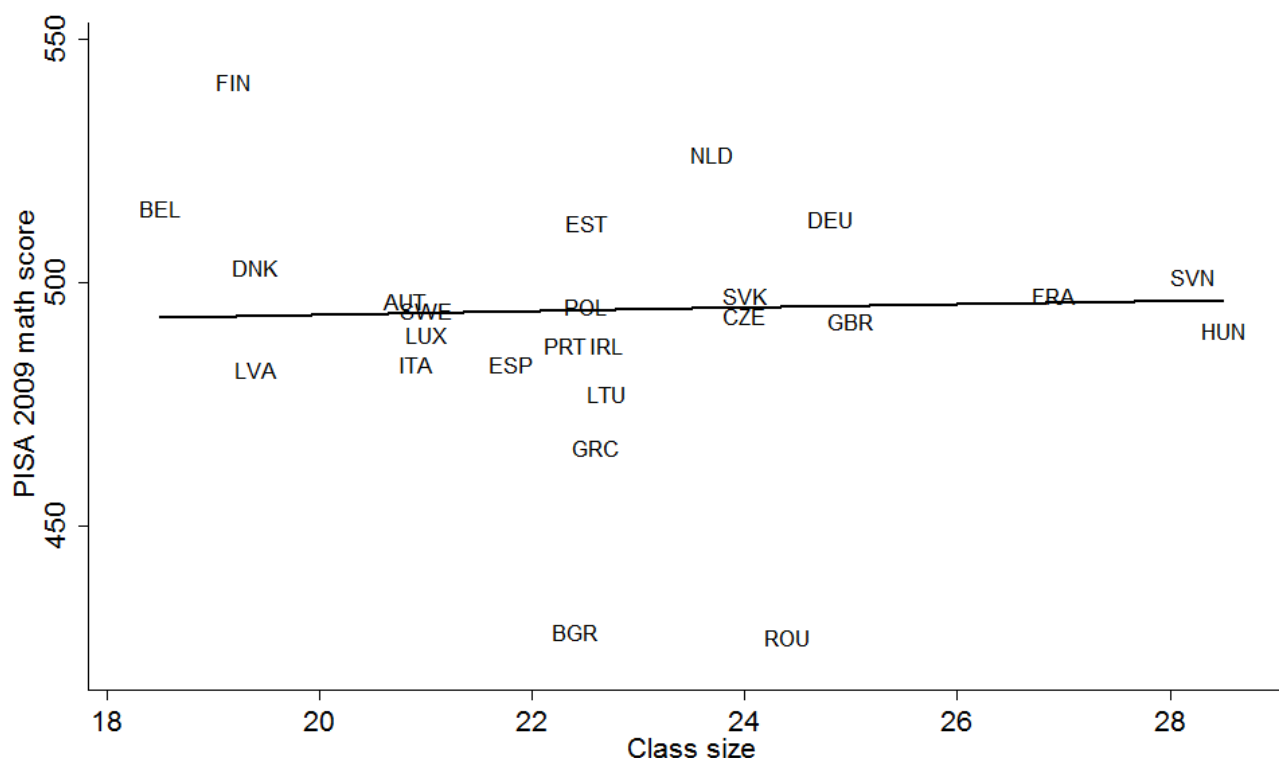
An extensive literature shows that there is remarkably little evidence that class size, by itself, is an important determinant of what students learn. Instead, a focus on teacher quality is crucial.

Particularly in times of financial and economic crisis, governments feel pressured to improve their budgets. Despite the general awareness of the importance of education for employment and growth, such pressures also reach education budgets. Some countries are tempted to go beyond increasing fees and freezing salaries and respond by hiring fewer teachers – effectively increasing class sizes. Does such policy put students' educational achievement at peril?

A large empirical literature addresses this question. The general answer is surprising: On average, class size

matters little for what students ultimately learn. At the most general level, this is easily visible when looking at countries' performance on international tests such as the Programme for International Student Assessment (PISA): Better-performing countries do not have smaller classes on average (see Figure). This descriptive result has been shown for many previous international tests; it also persists in more elaborate studies that are performed at the student level, hold other determinants of achievement constant, or analyse changes in class size over time.

Class size and student achievement in mathematics of EU countries in PISA 2009



Own depiction based on data from PISA 2009. Line reflects regression line of best fit (without three outliers).

EVIDENCE FROM WITHIN COUNTRIES

For policy deliberations, information on the impact of class size from within individual countries is perhaps more appropriate than cross-country information. Researchers have studied this topic for more than 40 years, and the available econometric evidence now includes literally hundreds of separate estimates. While the interpretation of various individual pieces of evidence has been controversial, considerable agreement now exists about the general picture on class size: There is little evidence that class sizes and teacher-student ratios have a consistent impact on students' achievement.

Perhaps more surprising, these results are also quite similar for studies focusing on financial resources more generally. There is no consistent relationship between resources and achievement.

The interpretation of this work is important. A simplistic view of the argument – convenient as a straw man in public debates – is that 'money never matters.' The research of course does not say that. Nor does it say that 'money cannot matter.' It simply underscores the fact that other decisions and incentives in schools have historically blunted any impacts of resources and smaller classes, leading to inconsistent outcomes.

MORE IMPORTANT FOR THE DISADVANTAGED?

One often held view is that resources may matter more for disadvantaged students and schools with concentrations of immigrants and poor children. However, there is little evidence that class-size effects are consistently higher in disadvantaged situations. Empirical results – available for example in France, the Netherlands, and many other European countries – are mixed at best. While there are some studies that find that class-size reductions are more effective for disadvantaged students, overall there is very little evidence suggesting that spending targeted at disadvantaged students is any more effective than spending on average.

The few studies that find significant class-size effects do tend to be limited to the first few grades of primary school, leading to the view that class sizes may be more relevant in early grades. But again, results are far from consistent, and more often than not, class size does not seem to be more relevant in primary than in secondary school.

It is also sometimes argued that there may be a threshold below which class-size reductions do not have an impact any more. Indeed, evidence from South Africa in the apartheid era suggests that class-size reductions may be relevant when going from 80 to 40 students per class. But at the range of class sizes observed in developed countries, there is again little evidence that the size of classes at the starting point is very relevant for the effect of reductions.

WE NEED TO FOCUS ON TEACHER QUALITY

The evidence indicates that countries looking for substantial improvements in student outcomes should not focus primarily on class size. Money – for smaller classes or other resources – potentially matters if the context of current school organization is changed. But before such institutional reforms, there is little reason to believe that class-size reduction is worth its cost.

Class sizes may be more relevant when teacher quality is low. Smaller classes appear to have some meaning in countries with a relatively low-quality teaching force. Simply put, high-quality teachers seem to be able to teach high-quality lessons quite independent from the size of the class. But better quality of teachers is also a very important determinant of student outcomes in itself, as the recent literature strongly demonstrates.

This points to a central trade-off for policy: Money spent on smaller classes may often come at the detriment of ensuring a high-quality teaching force. While we still do not understand the main determinants of teacher quality very well, attracting and retaining high-quality teachers is a much more promising policy than reducing the size of the classes in which they teach.

For additional discussion and further references, see section 7 in: Eric A. Hanushek, Ludger Woessmann, "How much do educational outcomes matter in OECD countries?" *Economic Policy*, Vol. 26, No. 67, pp. 427-491, 2011.

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