

Does School Size Matter for School Quality?

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Recent research from many countries shows that school size affects average school costs as well as school quality and inequality. Therefore school size is an important policy instrument for policy makers. However, research results are mixed when it comes to the sign of the effects which is highly dependent on the context and varies between countries, age groups, and rural and urban areas. Thus, there is no magic number for ‘optimal school size’.

Changes in school infrastructure and school consolidations have been high on the political agenda in the EU countries in recent years. The number of school-aged children has been decreasing and – in the wake of the economic crisis – school resources are scarce, implying that countries and local governments are eager to reduce school costs. School consolidations are often considered to be delicate from a political perspective because of parental resistance and fear of reduced school quality. Here we present the main results from economic research on the effects of school size and school consolidation on quality.

School size, typically measured by the number of students in the entire school, varies substantially across the EU. The median school size for 15-year-olds across countries in the EU ranges from 258 students in Greece to 1,310 students in Luxembourg (see Figure overleaf). There is also substantial variation within countries. In Germany, the 10th percentile of school size is 186 students while the 90th percentile is 1,253 students.

WHY MAY SCHOOL SIZE MATTER?

There is no overall consensus in research on what the costs and benefits of small versus large schools are. This is probably related to the fact that while some benefits accrue in some settings, in others they do not. An increase in school size may imply average cost reductions and economies of scale if initial school size

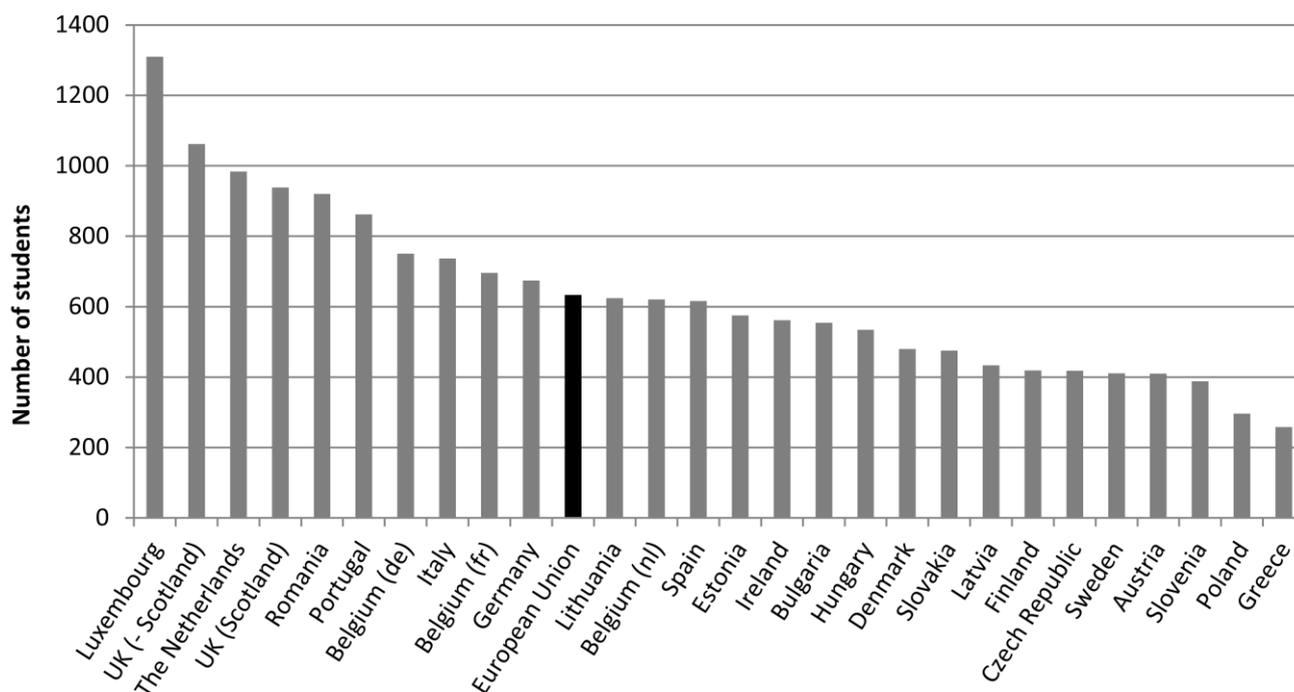
is small, but diseconomies of scale if initial school size is large.

In terms of quality, large schools are potentially more diverse in terms of course portfolios, teachers and peers. Diversity generally means more flexibility, for example a more diverse peer composition allows schools to organize peer groups in specific ways that can enhance learning. Large schools make it easier to have teachers that are specialized in a particular subject, and are also more likely to be able to attract high-quality teachers. On the other hand, smaller schools may have a higher quality of social interactions and students may feel more connected to the school.

ONE (SCHOOL) SIZE DOES NOT FIT ALL

The effects of school size found in empirical research vary considerably. There seems to be a consensus that schools should neither be ‘too big’ nor ‘too small’ but there is no ‘magic number’ in the form of an optimal school size. Optimal school size is context-dependent and varies with country, region, urbanization, level of education, student composition, and student background. Research suggests that there is a negative relationship between school size and academic performance at the primary school level, but at the secondary school level the results are mixed. School size is particularly important for disadvantaged children, but while some studies find that larger schools harm disadvantaged students, other studies find the opposite.

Median school size for 15-year-olds across countries in the European Union



Source: Numbers from EACEA/Eurydice/Eurostat (2012) which are based on the OECD, PISA 2009 database.

Most of the existing evidence suggests adverse effects of school size on attendance rates, dropout rates, and social outcomes. Particularly, the evidence suggests that larger schools are associated with lower parental involvement, less connectedness, and more youth violence.

CONSOLIDATIONS OFTEN HARM STUDENTS IN THE SHORT RUN

In the short run, school consolidations are generally found to lead to adverse disruption effects and changes in school quality. Students from closing schools are harmed significantly more than students in receiving schools. These short-run adverse effects suggest that more resources should be allocated to consolidating schools in order to minimize the disruption.

However, existing evidence suggests that closing relatively low-performing schools and moving the displaced students to relatively high-performing schools

has positive effects on average student performance and may help reduce inequality.

IMPLICATIONS FOR SCHOOL POLICY

The tight public budgets in all EU countries force politicians to reform school systems and improve efficiency of the resources spent on schools. School size and school consolidations are important policy instruments. However, high-quality education ultimately leads to economic growth, and school size has significant effects on student performance, drop-out, and inequality. Therefore it is extremely important for school policy to balance the costs and benefits of school consolidations and school size. Unfortunately, existing research does not give a clear 'road map' to optimal school structure. Thus, there is a need for high-quality research on the effects of school size in different contexts to inform policy decisions on the optimal school structure.

For more details see: Maria Knoth Humlum, Nina Smith, *The impact of school size and school consolidations on quality and equity in education*. EENEE Analytical Report 24, July 2015, http://www.eenee.de/dms/EENEE/Analytical_Reports/EENEE_AR24.pdf.