Choice and Effectiveness of Private and Public Schools in six countries. A reanalysis of three PISA data sets

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Although the differences in academic achievement of public and private schools are fading, the differences in academic achievement of traditional public schools and private schools have narrowed.

I. National Education Studies

Private schools consistently outperform public schools, particularly in terms of college preparation and achievement. This trend is evident across all levels of education, from elementary to secondary. The National Education Longitudinal Study (NELS) consistently shows that students in private schools outperform their public school counterparts on standardized tests and are more likely to attend college.

II. International Comparisons

According to the Program for International Student Assessment (PISA), which compares the academic performance of 15-year-old students worldwide, the United States scores significantly lower than many other countries in mathematics, science, and reading. This has led to increased scrutiny of the public education system and calls for reform. However, private schools continue to outperform their public school counterparts in these areas.

III. The Role of Affluence

Affluence is a significant factor in educational outcomes. Children from more economically advantaged backgrounds are more likely to attend private schools and have access to resources that enhance their educational experiences. This has led to debates about the role of economic inequality in shaping educational opportunities and outcomes.

IV. Future Directions

As the role of private schools in American education continues to evolve, there is a growing focus on improving the quality and accessibility of public education. This includes increasing funding, improving teacher salaries, and investing in school infrastructure. Additionally, there is a growing interest in developing alternative models of education, such as charter schools and voucher programs, to provide more choices for families.

The future of education in the United States is likely to be shaped by ongoing discussions about the role of private schools, the importance of affluence, and the need for improvements in public education. It will be a complex and multifaceted issue, requiring collaboration between policymakers, educators, and the public.
the impact of economic conditions on school success. It is suggested that the PISA scores are not solely determined by individual student ability but are influenced by socioeconomic factors such as family income, access to educational resources, and quality of schools.

4. Data and Methods

The dataset used in this study includes information from the PISA surveys conducted in 2003 and 2006. The PISA scores were adjusted for non-response bias using the Troy and Stathis (2009) method. To account for the influence of economic factors, the dataset was further divided into subgroups based on the level of economic development.

3. Disentangling Choice and Effectiveness

The substantial achievement differences between countries are influenced by both economic and educational factors. The economic context affects school resources and access to educational opportunities, while the educational context includes factors such as school quality, teacher qualifications, and curriculum content.

The difference in achievement outcomes can be attributed to the interplay between these factors. In countries with higher economic development, the investment in education is likely to be greater, leading to better educational outcomes. Conversely, in countries with lower economic development, the resources allocated to education may be limited, resulting in lower achievement scores.

Despite the substantial variation in economic conditions, countries with similar economic development levels still exhibit differences in educational outcomes. This disparity is not explained by economic factors alone, suggesting the importance of considering other variables such as governance, policy implementation, and cultural values.

1. Rural schools (Rural, 1983: 12, American Indian) and urban schools (Urban, 1983: 12, Asian) were compared using ANOVA to identify significant differences in educational performance.
The choice of private-independent over public schools...

Choice of private-independent over public schools...

...indicates whether these parents believe significantly to no effect on the school choice of a pupil. The parents' choices in private-independent schools do not show any significant difference in their school choice compared to parents in private-independent schools. However, the parents' choices in private-independent schools do show a significant difference in their school choice compared to parents in private-independent schools. This indicates that parents in private-independent schools are more likely to choose a private-independent school for their children.

The table below shows the data for France, Germany, and the USA for the years 2000 and 2002, as well as the percentage of pupils from private-independent schools in these countries. The table includes the number of pupils in private-independent schools as a percentage of the total number of pupils in each country.

<table>
<thead>
<tr>
<th>Country</th>
<th>Private-independent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>0.5%</td>
</tr>
<tr>
<td>Germany</td>
<td>2.4%</td>
</tr>
<tr>
<td>USA</td>
<td>5.3%</td>
</tr>
</tbody>
</table>

The table above shows the data for France, Germany, and the USA for the years 2000 and 2002, as well as the percentage of pupils from private-independent schools in these countries. The table includes the number of pupils in private-independent schools as a percentage of the total number of pupils in each country.
Choice of private-independent over public schools

A similar logistic regression analysis was performed to predict the choice of a private-independent school over public schooling in France, Germany, and the Netherlands. Tuition and parental occupational status were significant predictors of school choice in all three countries, higher educational resources of the private-independent school in Germany and the Netherlands, and lower tuition (positive in Germany and the Netherlands) were significant predictors of school choice in these countries. The lower half of Table 2 shows the results of the logistic regression analysis for each country separately, and the upper half shows the results of the logistic regression analysis for private-independent schools only. The results show that the choice of a private-independent school is positively associated with parental occupational status, educational resources of the school, and tuition. In general, the results show that the choice patterns for private-independent schools are dependent on the country selected, with the effects of individual school characteristics being consistent across countries.

### Table 2: Characteristics of parents or students, the visible school characteristics and their effects on school choice.

<table>
<thead>
<tr>
<th>Country</th>
<th>Male</th>
<th>Immigrant</th>
<th>Foreign language used at home</th>
<th>Cultural possessions</th>
<th>Family wealth</th>
<th>Mothers educational level</th>
<th>Fathers educational level</th>
<th>Mothers occupational status</th>
<th>Fathers occupational status</th>
<th>School size</th>
<th>School composition</th>
<th>Admissions parents' endorsement</th>
<th>Admissions special program</th>
<th>Student-teacher ratio</th>
<th>Combined-student ratio</th>
<th>Educational resources of school</th>
<th>Tuition</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>-0.08</td>
<td>-0.05*</td>
<td>0.44</td>
<td>0.02</td>
<td>0.27*</td>
<td>0.03</td>
<td>-0.08</td>
<td>0.08</td>
<td>-0.09</td>
<td>3.81*</td>
<td>-0.01*</td>
<td>1†</td>
<td>-0.02</td>
<td>-4.95*</td>
<td>0.02</td>
<td>-1†</td>
<td>4.45†</td>
</tr>
<tr>
<td>UK</td>
<td>0.25</td>
<td>0.79*</td>
<td>1.11</td>
<td>0.70</td>
<td>0.49*</td>
<td>-0.20*</td>
<td>-0.16*</td>
<td>0.28*</td>
<td>0.29*</td>
<td>12.06*</td>
<td>-0.01*</td>
<td>-0.40*</td>
<td>0.83*</td>
<td>-0.97*</td>
<td>-3.27*</td>
<td>0.45*</td>
<td>-1†</td>
</tr>
<tr>
<td>USA</td>
<td>0.28*</td>
<td>0.72*</td>
<td>-0.44</td>
<td>0.18</td>
<td>-0.08</td>
<td>-0.16*</td>
<td>-0.28*</td>
<td>0.15*</td>
<td>0.19*</td>
<td>7.01*</td>
<td>-0.03</td>
<td>2.89*</td>
<td>0.52*</td>
<td>-0.08*</td>
<td>-1.07*</td>
<td>0.62*</td>
<td>-1†</td>
</tr>
<tr>
<td>Japan</td>
<td>-0.51*</td>
<td>0.31</td>
<td>0.49</td>
<td>0.01</td>
<td>0.08</td>
<td>0.04</td>
<td>-0.02</td>
<td>0.06*</td>
<td>0.03</td>
<td>1.51*</td>
<td>0.02*</td>
<td>-0.10</td>
<td>-0.17*</td>
<td>-0.77*</td>
<td>0.22*</td>
<td>-†</td>
<td>-1†</td>
</tr>
</tbody>
</table>

Source: pooled data PISA dataset for 2000, 2003 and 2006, for France only 2000. † Dropped because no variance; * significant parameter p < .05
The presented evidence underscores the importance of understanding the process of school selection outcomes in order to better design policies to improve educational outcomes for all students.

Discussion

The paper examines school choice as a means of addressing the issue of socioeconomic disparities in educational outcomes. It argues that school choice can help to reduce the achievement gap between different socioeconomic groups and improve overall educational outcomes.

The study finds that school choice programs, such as voucher programs, can be effective in improving educational outcomes for low-income families. It also highlights the importance of creating a level playing field for all students, regardless of their socioeconomic status.

The authors conclude by emphasizing the need for continued research on school choice programs and the development of policies that promote equity and access to high-quality education for all students.
ferences in achievement across nations. The school choice of private-independent schools in France, UK, USA and Japan is mainly driven by school characteristics, especially the school composition, student-teacher ratio and better resources in the private-independent schools. After taking into account school choice processes, students at private-independent schools in France, UK and USA do not show higher average achievement scores in reading. The observed higher reading scores of private independent schools compared to public schools can be explained by the (nation-specific) school choice processes. There is no evidence that private independent schools are more effective in teaching reading than public schools. These results confirm those reported by Dronkers & Robert (2008a; 2008b) and contradict the neo-liberal notion that school choice is driven mainly by the parental search for the most effective schools. Instead, it lends support to the hypothesis that parents choose schools based on simple average scores and other visible school characteristics.

In Japan, students in private-independent schools have lower reading scores than students in public schools after controlling for intake differences. The majority of these Japanese private schools have general academic courses that do not differ from those of public schools. But these private schools are ranked lower than public schools because they cater to students that have failed the entrance examination of more prestigious public high schools.

The choice pattern between private-dependent and public schools is more diverse across the three countries we were able to compare (France, Germany, the Netherlands). The school’s educational resources seem to be the common attracting factor for parents in these three countries, while the effects of individual social class characteristics like parental occupational status or education vary in importance between the three countries. After taking into account the specific school choice processes in each country, we found consistent higher reading scores for students in private-dependent schools compared with those of public schools for Germany and the Netherlands. In France private-dependent schools show a slight but insignificant advantage over public schools. This finding does not fully support Dronkers and Robert’s (2008) conclusion which suggested a universally higher effectiveness of private-dependent schools across countries. School choice processes differ between countries due to different historic trends, legal constraints and social structure of each country which, in turn, has repercussion on the achievement advantage of private-dependent schools. On the other hand, one should not dismiss the higher effectiveness of private-dependent schools by simply referring to their intake selectivity. The evidence still supports the claim that pedagogical freedom creates the potential for more efficient instruction.

Unfortunately, the PISA data do not allow for the distinction between secular and parochial private schools to further investigate which aspect of private dependent school organisation makes these schools outperform public school in many countries. The lack of distinction between religious and non-religious private schools within the private-independent school-sector of the US might also explain why were unable to replicate the results of Coleman, Hoffer and Kilgore (1982) or Byrk, Lee and Holland (1993) who reported consistent advantages of private-independent schools in the USA. It is important to bear in mind that the presented results do not necessarily mean that an educational system with a high percentage of private government-dependent schools is more efficient at providing the best education to all children. As we have seen, the social composition of private schools explains an important part of the selectivity of private schools. If the social composition of schools within an educational system is very polarized between public schools and private schools (which means a small overlap in propensity scores, like the US), such an educational system will be less efficient because the public school students attain lower educational outcomes than they would have in a less polarized system. A polarized educational system is probably less efficient for the society at large than an educational system without private schools altogether.

Within a balanced educational context without too many rights in the private sector, a private provider of collective goods like education can produce better outcomes for two reasons: Market sensitivity and curricular flexibility. Because of the larger vulnerability to competition, the private provider has to be more concerned with the quality of his product than a public provider. At the same time, a private provider is more flexible to influence the quality of its product than a public provider who faces more legal and political constraints. The better outcomes of private providers in supplying education as a collective good can be constrained by a public context (such as financing, regulations, final examination, etc.). As long as pronounced privileges in the social composition of private schools is, like in Germany, structurally prohibited, private schools are forced to obtain higher quality through better organization and efficiency and not through selectivity.

### Literature


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5 This might be caused by the smaller number of available schools for France. Information about school characteristics is for France available only in the PISA 2000 wave. This information is not longer available in the two other waves.
The current state of education in England is characterized by several key features:

1. **School Structures and System**: England's education system is divided into primary (ages 5-11) and secondary (ages 11-16) schools. The primary school system is followed by the secondary school, which prepares students for higher education.

2. **Assessment and Exams**: Students are assessed through a series of exams, starting with the SATs at age 11, leading to the GCSEs at age 16, and finally the A-levels at age 18.

3. **Curriculum**: The curriculum is designed to cover a wide range of subjects, including English, Mathematics, Science, History, Geography, Religious Education, and more.

4. **School Performance**: Schools are ranked based on performance, which is influenced by factors such as A-level success rates, GCSE grades, and KS2 results. This ranking system can affect the perception of schools and influence parental choices.

5. **Teacher Recruitment and Retention**: Recruiting and retaining qualified teachers remains a challenge. Efforts are made to address this by offering competitive salaries and professional development opportunities.

The government has implemented various reforms to improve the educational system, focusing on enhancing teacher quality, curriculum innovation, and addressing issues of educational inequality.