

Schooling for Money: Swedish Education Reform and the Role of the Profit Motive

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Gabriel H. Sahlgren

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About the author

Gabriel H. Sahlgren was a Visiting Research Fellow at the Institute of Economic Affairs during the summer of 2010.

Having been active at US and Swedish think tanks, he is currently studying Politics at the University of Cambridge.

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Institute of Economic Affairs
2 Lord North Street
London
SW1P 3LB

www.iea.org.uk

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Summary

- For-profit schools benefit students from all socio-economic backgrounds, but they produce the largest benefits for students from less privileged backgrounds.
- School competition in Sweden has increased levels of educational achievement.
- Free schools enjoy higher levels of parental satisfaction than government schools.
- Competition from free schools has improved conditions for teachers.
- The profit motive provides strong incentives for entrepreneurs to enter the schools market and to expand their businesses. Banning for-profit schools risks dramatically reducing the number of free schools that are created, thereby limiting the benefits of competition.

Introduction

‘We have seen the future in Sweden and it works’ (Michael Gove, 2008).

In 1992, Sweden embarked on a radical education reform programme, which has become the subject of intense debate in the UK. The Conservatives claim that the Swedish experiment with increased choice through a universal voucher programme has been successful. Labour, in contrast, claims that the Swedish reforms have failed. For example, early in 2010, then Secretary of State for Education, Ed Balls, stated that Michael Gove (the current Secretary of State for Education), ‘needs to explain why he is copying an experiment that has not worked and which politicians in Sweden are now rethinking’ (*The Guardian*, 9 February 2010).

Opponents to voucher reforms have also voiced concerns over the role of profit, which by some is considered antithetical to quality. Such concerns have led the UK government to ban for-profit independent schools; only non-profit independent schools will be allowed to operate. Has Swedish school competition increased standards? And if so, what role, if any, did the profit motive play?

This paper suggests that, although not a panacea, school competition in Sweden improved educational achievement and conditions for teachers. In addition, independent schools enjoy higher levels of parental satisfaction. Using data from the Swedish National Agency for Education (NAE) and Statistics Sweden, it provides quantitative evidence indicating that the overall effects of for-profit and non-profit schools are comparable. Furthermore, for-profit schools benefit students from all socio-economic backgrounds, and the effect is the strongest for students from families with low levels of education. Non-profit schools, on the other hand, seem to be more uneven in their effects. The paper also argues that the profit motive has been essential for the increase in school competition. Over 65% of independent schools are for-profit and whereas these expand in new municipalities, non-profit schools tend to be small, local operations. The profit motive, therefore, is an important determinant of whether or not competition will increase in the first place.

Finally, implications for the Lib-Con coalition are discussed. Since the Swedish voucher reform has been successful overall, it is argued that the coalition should move forward with its free schools policy. However, the ban on for-profit schools must be revoked. Contrary to doomsday predictions, the profit motive has not led to a search for quick returns at the expense of educational quality. Instead, it has been essential to the increase in competition *per se*. The implication is clear – without the profit motive, the UK’s reforms may fail.

The Swedish reforms

After 25 years of economic growth and stability under constant Social Democratic rule, the Swedish economy and political landscape became more volatile in the 1970s. In 1976 the first non-socialist government since the 1930s was elected. When the public sector was criticised, education was often upheld as a prime reason why the Swedish welfare system had begun to fail to deliver on its promises. Many argued that the centralised public school system was expensive and inefficient. Students had few alternatives as state-provided education was basically the sole option. Business organisations and centre-right political parties thus began seeing education reform as crucial - and they played an important role in the shift towards the emphasis on competition, choice and responsibility (Lundahl, 2002).

Reforms after the 1970s reflected the new emphasis on local freedom and responsibility in education. For example, a major step was taken under Social Democratic rule in 1990 when the right to run primary and secondary education was transferred to the municipalities, giving them 'full financial responsibility for the schools offering such education' (Björklund et al., 2004, p.10). However, it was not until a centre-right government was elected in 1991 that the 'choice revolution' began to take shape in education policy on a large scale. Sweden went from having one of the most centralised education systems in the West to one of the most decentralised (OECD, 1998).

One of the most radical reforms was the 1992 voucher programme. Since 1992, basically everybody has the right to start and run a school – and get funding corresponding to the average cost per student for each student from the municipality in which the school is located. Independent schools have to be approved by the NAE, follow the national curriculum, and are not allowed to 'cherry pick' students based on ability, socio-economic status or ethnicity. Since all ownership structures are allowed - whether for-profit or non-profit – it is relatively easy to enter the education market. Moreover, independent schools are not allowed to charge any top-up fees (Böhlmark and Lindahl, 2008). Thus, any profits schools make come from voucher income alone.

Before the reform, there were few independent schools in Sweden - fewer than 1% of students in compulsory education attended schools run by organisations independent from the state or municipalities (Sandström, 2002,p.17). Figures 1 and 2 show the increase in the role of independent schools that followed the voucher reform of 1992. Today, about 10% of compulsory education students attend independent schools; for upper-secondary school students the figure is over 20%.

Figure 1
Percentage of students in independent schools

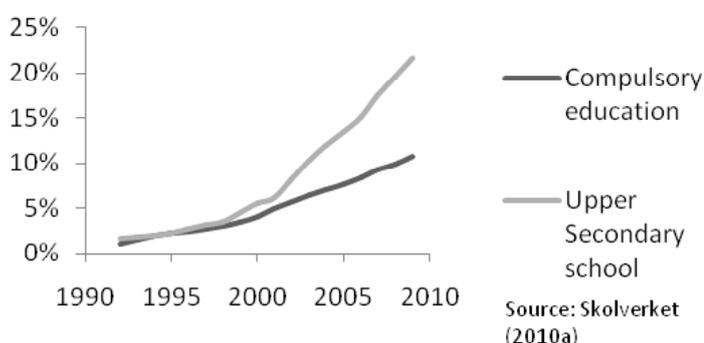
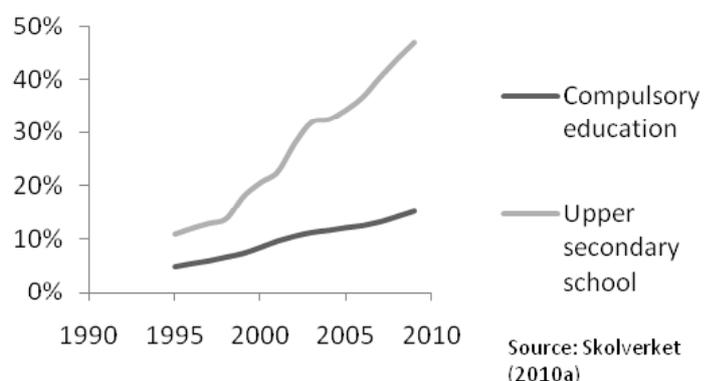


Figure 2
Percentage of independent schools



The effect on educational achievement

What were the results of the voucher reform? Following Friedman's (2007, p. 198) argument that '[t]he development and improvement of all schools would...be stimulated', one of the motivations behind the voucher reform was rather straight forward: by subjecting municipal schools to increased competition, educational achievement could be driven up in a cost-effective manner.

There are basically two ways in which competition from independent schools can improve educational achievement. Firstly, independent schools could simply be better than municipal schools. If so, educational achievement should increase through the reallocation of students to independent schools from municipal schools. Secondly, municipalities, as monopolists, may lack incentives to provide good education, but are forced to improve when competition from independent schools kicks in (Böhlmark and Lindahl, 2008).

However, in the debate that followed the Swedish voucher reform, some claimed that municipal schools were left with fewer resources and quality declined. Carl Tham (2001, p. 1), a former Social Democratic Minister of Education, claimed that '[t]here is inevitably a conflict between freedom of choice and a good school for all'. In the UK, Per Thulberg, Director General of the Swedish NAE, gave ammunition to Ed Balls and Labour when he told *The Guardian* (9 February 2010) that the 'competition between schools that was one of the reasons for introducing the new schools has not led to better results'.

But is this true? The current literature answers two questions: (1) whether the existence of independent schools increased/decreased educational achievement among students that remained in municipal schools (or overall), and (2) whether independent schools produce higher achieving students. The GPA (maximum 320 points), which reflects grades given by individual teachers, and test scores from national standardised tests in 9th grade are the most common gauges of student achievement.

In one of the first large-scale quantitative studies on the subject, Sandström and Bergström (2005, p. 379) provoked intense debate when they found that 'greater competition increases the standards of [municipal] schools', in terms of the GPA and standardised mathematics test scores. Including both municipal and independent school students, Ahlin (2003) reports a strong, significant effect of competition on mathematics test scores, but no effects on test scores in English or Swedish. This is in contrast to Björklund et al. (2004) who find a positive impact on test scores in Swedish and English but none in mathematics.

Reaching slightly more sober conclusions, Böhlmark and Lindahl (2007) analysed a sample of 20% of all students through a long panel of data from 1988 to 2003. They found a small, but robust, effect of competition – a 10% increase of independent school share increases the 9th grade GPA by about 1%. While students from low-income families benefit *more* than those from high-income families, the positive effect for students with low-educated parents or an immigrant background is insignificant.¹ The authors, however, emphasise that 'even though there is some evidence of heterogeneous effects, none of these sub-groups are losing from a higher private school share' (Böhlmark

¹ However, first and second-generation immigrants are lumped together, making it difficult to interpret the results since there are important differences between the two groups (as this paper displays).

and Lindahl, 2007, p. 27). In a later study, they also find a positive impact of competition on the percentage of students choosing academic programmes in upper-secondary school. However, there is no evidence that the positive effect would translate into higher grades in upper-secondary school or university attainment. The authors suggest that effects of competition are not larger because 'the entry of new private schools not has been followed by the closing down of public schools' (Böhlmark and Lindahl, 2008, p. 23).

These findings have not passed unnoticed in the UK. In a recent review article of research on the Swedish reform, Allen (2010) described Böhlmark and Lindahl's studies as 'the latest' and most 'robust', and the authors' relatively moderate findings were emphasised – something which was picked up by *The Daily Telegraph* (2010) and *The Economist* (2010).

However, Allen missed a study published in April 2010 (it is available in Swedish only). Whereas all previous research relies on a sample of students/municipalities, Tegle (2010) analyses the educational achievement of all 9th grade students in 2006. Data from graduates in 2005 are used as a control for model specification, but the results are almost identical. Tegle finds a significant effect of competition on municipal school students' GPAs for students from all socio-economic backgrounds: a 10% increase of students in independent schools increases the municipal school average GPA by up to 2%, while increasing the performance on the standardised test in mathematics by up to 5.9%. Furthermore, Tegle shows that students in independent schools do significantly better than peers in municipal schools. The effect of attending an independent school equates to a 21% increase in the GPA and, even more astonishingly, a 33% increase in scores on the standardised mathematics test.

Finally, the NEA, by comparing available resources and student attainment, has shown that independent schools are more efficient than municipal ones, and that municipal schools subjected to competition are more efficient than those that are not (Skolverket, 2005).²

Overall, therefore, the research displays a rather conclusive picture: the Swedish voucher reform has been beneficial. Böhlmark and Lindahl's findings, however, also indicate that such a reform is no panacea. This is not surprising. Sweden implemented its voucher programme during a severe economic crisis, leading to cuts in school funding. Furthermore, other factors affecting performance deteriorated as unemployment and housing segregation increased during the 1990s. Larger school cohorts, and a re-shuffling of responsibility from teachers to individual students (which means that students do more work on their own) also appear to have contributed to declining performance in mathematics, science and reading comprehension during the 1990s (Skolverket, 2009).³ And as Bergström (2010) argues, the explosion of education university courses combined with declining interest among students to become teachers led to a reduction in teacher quality.

But viewed in the light of this, the positive findings become even more conspicuous; voucher reform can improve educational achievement at the margin even in times of severe turbulence and budget cuts – something which the UK government can learn from. Furthermore, Böhlmark and Lindahl's suggestions also point to the need to close down failing municipal schools for competition to function properly – larger shares of school budgets may have been spent on keeping failing

² Waldo (2007) finds no significant effects of competition on municipal school efficiency, but he uses an input-oriented model of efficiency (the objective for schools should be to increase output in relation to their budgets); analyses output data from one year only (when competition was relatively marginal); and uses municipal-level rather than school-level data for inputs and outputs. This makes the NEA report appear to be more robust.

³ It should also be noted, however, that Sweden still performs better than the UK in mathematics; on par with the OECD average in science, but lower than the UK; and higher than the OECD average and the UK in reading performance (OECD 2007).

municipal schools afloat. This has also been suggested by Sandström (2002). Sweden's reforms, in this respect, have not gone far enough.

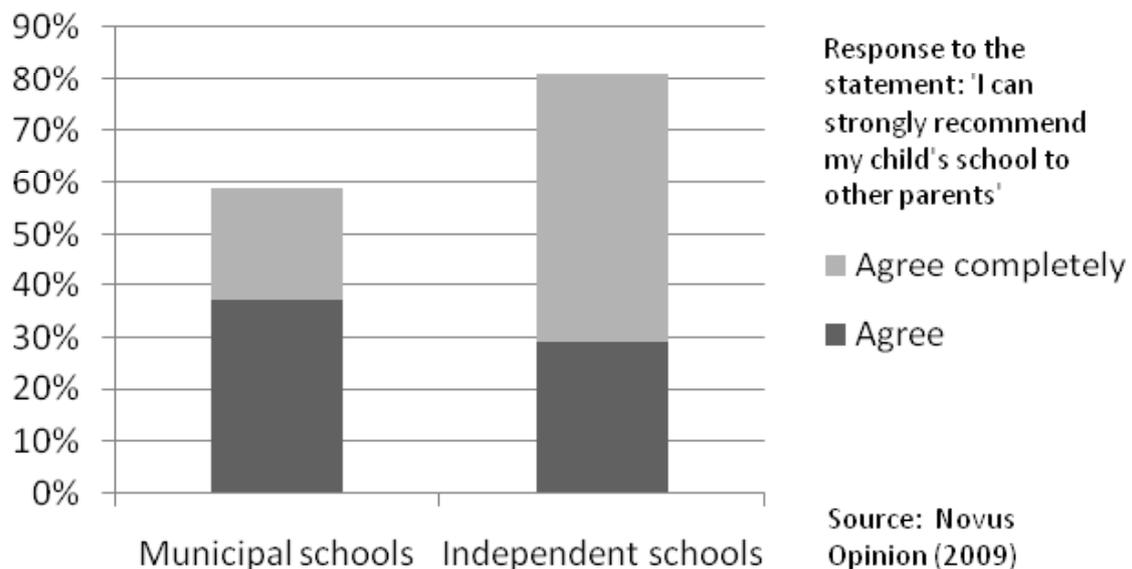
The impact on segregation

But has the voucher reform led to increased segregation? Using different methodologies and definitions of segregation, there is some dispute about this between economists/political scientists, who generally find decreased segregation or at least no effect in quantitative analyses, and sociologists/educationalists, who sometimes find negative effects in qualitative research (Skolverket, 2009). However, two of the more recent comprehensive studies by Lindbom and Almgren (2007) and Nordström and Åslund (2009) conclude that segregation in compulsory schools is almost entirely linked to residential segregation. Thus, it seems highly improbable that the voucher reform per se has affected segregation significantly. Furthermore, in practice, education policy cannot mitigate residential segregation by restricting choice, but rather by closing down failing schools and reallocating students to better ones (Lindbom and Almgren, 2007).

Satisfaction levels among parents and teachers

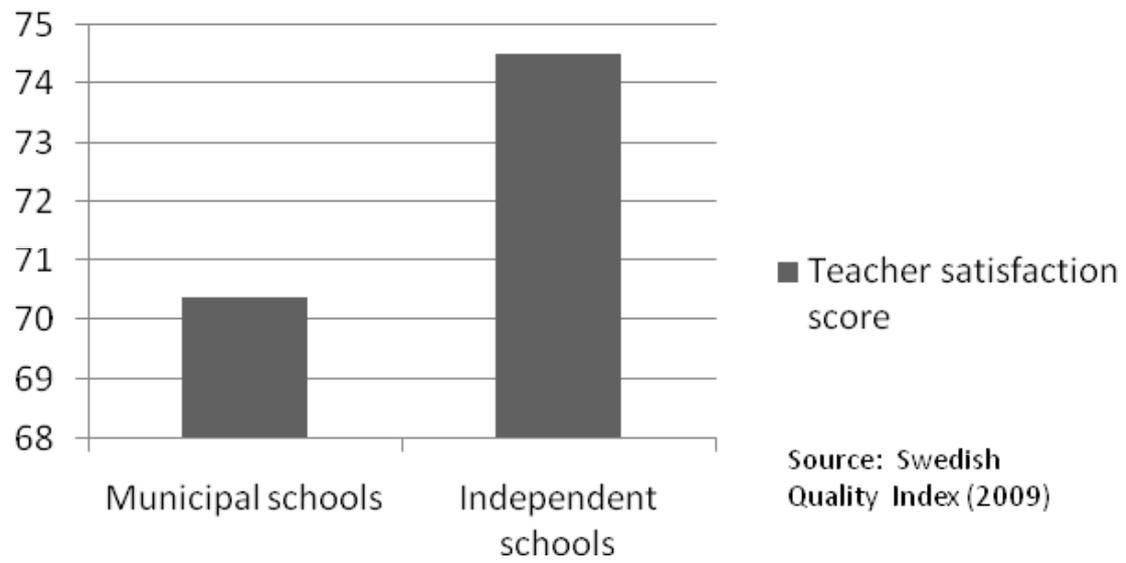
In addition, when examining parental satisfaction levels, the evidence points in one direction. As Figure 3 shows, parents are more satisfied with independent schools than municipal ones.

Figure 3
Parental satisfaction (2009)



What about teachers? Teaching unions in the UK have adamantly opposed Swedish-style independent schools in the UK. But the evidence suggests it is unclear why. In a recent study, Hensvik (2010) finds that Swedish teachers entering employment in the most competitive locations, in both independent and municipal schools, receive a starting salary 2% higher than they would in less competitive areas. Furthermore, as Figure 4 shows, according to the independent agency Swedish Quality Index – part of the international organisation EPSI Rating – teachers in independent schools are more satisfied than teachers in municipal schools. Thus, the evidence indicates that the Swedish voucher system has worked in favour of teachers, making opposition to a similar scheme in the UK rather puzzling.

Figure 4
Teacher satisfaction score (2009)



Assessing the impact of for-profit schools

In the immediate aftermath of the voucher reform, entrants to the education market were mainly schools using specialist teaching methods, religious schools and parent cooperatives. Thus, non-profit organisations were the most common ownership structure at the time. However, after the initial stage, independent schools of a general profile have grown strongly and are now the most common type. These schools are often started by principals/teachers from municipal schools or by for-profit companies (Böhlmark and Lindahl, 2008).

All studies on the Swedish voucher experience regarding educational achievement so far have examined the voucher reform per se - no one to the author's knowledge has investigated potential differences between for-profit, non-profit and municipal schools. This gap in the literature is important since some fear that the profit motive is detrimental because schools purportedly seek to maximise profits at the expense of quality. Carl Tham (2001, p. 1), in response to a comparison between airlines and schools by a director of a for-profit independent school, has argued that, 'Everybody who has experienced how the airlines treat their customers understands what this means. Independent schools run by for-profit companies should not be funded by the state.' In the UK, Ed Balls expressed similar fears when he urged education secretary Michael Gove to ensure that for-profit schools are banned. In Parliament, he asked, 'Or can we look forward, as in Sweden, to the grotesque chaos of private companies scuttling round the country touting to parents they will set them up a new school and make a profit at the expense of the taxpayer and other children's education?' (BBC, 21 June 2010). Moreover, he argues that 'the evidence from Sweden is that this very policy [allowing for-profit independent schools] caused educational standards across the country to fall' (Balls, 2010, p.1). Clearly, for some, the prospect of schools making profits from public money is anathema.

But are such fears warranted? As discussed previously, competition per se has been beneficial overall. However, differences between for-profit and non-profit schools in Sweden have not been analysed. Furthermore, the only study analysing for-profit/non-profit independent schools and public schools *in general*, to my knowledge, analyses the Chilean voucher reform. Responding to a proposal by the Christian Democrats to ban for-profit voucher schools, Chumacero and Paredes (2008) find that such schools are doing better than public schools; in terms of a standardised test for 4th graders, students in for-profit voucher schools score 3-15 points higher than their peers in government schools. They do find that non-profit schools perform better than for-profit ones, but also emphasise that the relevant comparison is with government schools; if for-profit voucher schools out-compete government schools, fears of the profit motive in education are unwarranted.

Quantitative evidence from Sweden

In order to investigate the impact of for-profit schools in the Swedish context, I use the NAE's (Skolverket, 2010a) and Statistics Sweden's (SCB, 2010) databases to analyse school-level data from all Swedish schools with at least fifteen 9th grade students in 2005-2009, amounting to 6,935 observations (1,543 schools) and comprising 725,195 students out of a total of 737,788 students graduating in those years. The 12,593 students who are not covered by the sample attended small special schools for students with learning disabilities, regular schools with fewer than fifteen graduating students or schools which do not conform to the standard grading practice. The purpose of the analysis is to determine whether or not different school ownership structures matter: by using data over several years, effects specific for students in one year only are taken into account.

Having coded schools by ownership structure, a quick glance at the descriptive statistics in Table 1 shows that there are significant differences among the different school types. For-profit independent schools do better than municipal schools and non-profit independent schools do better than for-profit schools. Also, independent schools established prior to the 1992 reforms do best.

In the regressions, schools' average GPAs are used as a measure of achievement, partly due to data availability and partly because the GPA is what ultimately determines which upper-secondary school students will attend. Furthermore, it is the single best measure of overall student achievement. Given the decentralised grading practice in the Swedish education system, grade inflation may create problems for using the GPA as a measure of educational attainment. However, analysing differences between test scores and final grades, the NAE recently concluded that grade inflation is not higher in independent schools compared with municipal ones, nor is it higher in municipal schools that are subjected to competition compared with those that are not (Skolverket, 2010b).

Table 1: Descriptive statistics for different school types

	Municipal	For-profit independent	Non-profit independent	Independent (pre-1992)
Average GPA	206	223	231	239
Average percentage of boys	52%	49%	48%	48%
Average number of teachers/100 students	8.50	7.32	8.36	8.41
Average level of parental education	2.15	2.32	2.40	2.43
Average percentage of immigrants	7%	6%	8%	11%
Average percentage of second-generation immigrants	7%	10%	14%	19%
Average number of students	408	280	230	270
N	5,956	574	405	146

Note: Independent schools run by joint-stock companies, private companies and trading companies are classified as for-profit, while schools run by non-profit organisations, economic associations and foundations are classified as non-profit. A couple of schools run by joint-stock companies wholly owned by non-profit foundations are also classified as non-profit. All independent schools established before 1992, apart from one, are non-profit today (these schools are also included in the non-profit/for-profit categories respectively). The level of parental education denotes the average of three levels: 1=completed compulsory education; 2=completed three years of upper-secondary education; 3=completed either a fourth year of upper secondary education (a now abolished optional year) or at least 20 credits of tertiary education.

Following previous studies and numerous NAE reports regarding factors that influence grades (e.g. Skolverket, 1998), I include average parental education levels; the percentage of boys; the percentage of students with an immigrant background; and the number of students in each school as predictors.⁴ Since the level of parental education is measured as the average for all graduating students in each school, this should also capture potential peer effects somewhat; attending a school with higher average levels of parental education could be beneficial for the students from less educated families (Skolverket, 2006). This could be important as some, such as Hoxby (2000) and Hanushek et al. (2003), find large peer effects on educational achievement. Unlike other studies, however, I also add the teacher-student ratio at the school level to the equation. It is not clear whether the coefficient for this variable should be positive or negative. A higher teacher-student ratio could impact student achievement positively, as it means that students get more attention. However, research using the measure as a proxy for school resources often finds negative effects on educational achievement from a higher teacher-student ratio (Andersson, 2007). A reason for this could be that a higher ratio is a signal of more underperforming students or students in need of extra support; increasing

⁴ Girls tend to do better and immigrants tend to do worse. Furthermore, school size affects school organisation and the pedagogical environment (Skolverket 2005), which could impact performance.

the teacher-student ratio could then be seen as an attempt to improve lower-performing schools. In this analysis, then, the variable serves as a rough proxy for student quality; fewer teachers/100 students indicate better students and fewer students in need of extra support.

To capture the effect of different ownership structures on the average GPA, dummy variables for for-profit and non-profit independent schools are introduced. To control for the impact of independent schools established prior to the 1992 reforms, I also include a dummy for these. The idea is that since most of these schools are prestigious and high-achieving they could bias the estimates for post-reform schools. Also, a dummy variable denoting schools for students with special needs is introduced to control for what should be a significant negative impact. Finally, time dummies are included to control for year effects that impact all schools equally.

In the second model, municipal specific variables are added. Since I do not have access to average parental income at the school level, average municipality income for 30-59 year olds is included to capture socio-economic differences not included in parental education levels. Furthermore, I control for the number of people per km² in each municipality and also include an urban area dummy to filter out any potential urban-rural differences. More densely populated and urban areas give students a larger degree of choice regarding schools, leading to higher intra- and inter-municipal competition - which should result in higher grades. Finally, I also add the average cost per student (excluding premises) in each municipality to control for municipal variations in education expenditure, which could potentially impact educational achievement.

Thus, the following equation is estimated:

$$y_{st} = c + b_1 FP_t + b_2 NP_t + b_3 X_{smt} + b_4 D_{06-09} + e_{st}$$

where y_{st} denotes the average GPA for school s in year t ; c is a constant; b_1 is the coefficient for FP_t , which denotes for-profit independent schools; b_2 is the coefficient for NP_t , which denotes non-profit independent schools; X_{smt} is a vector of the school and municipal level control variables described above; b_3 is a coefficient vector denoting the effect of X_{smt} ; b_4 is the coefficient for D_{06-09} , which denotes a vector of time dummies for the years 2006-09; and e_{st} is an error term.

It is important to acknowledge that analysing school-level data makes it difficult to control for endogeneity entirely. The problem is that choice of school is not random, but depends on parents' preferences for independent schools – which could bias estimates. Furthermore, as grades or test scores are not reported until 9th grade in Sweden, a value-added approach – including students' prior achievement as a control variable – is not generally possible in the Swedish context. Research shows, however, that failing to take into account endogeneity significantly *underestimates* the effect of independent schools (Tegle, 2010). The estimates presented here should thus be interpreted with caution since they are likely to be biased against for-profit/non-profit independent schools. Moreover, there is no theoretical reason why the prevalence of different ownership structures of independent schools would bias the results in favour of for-profit schools. In fact, selection bias could favour non-profit schools, as these are often parental cooperatives and/or employ a special style of teaching, requiring more parental involvement. Parents of children in non-profit schools tend to be prepared to put more effort into their children's education. In contrast, for-profit schools are often larger operations with little direct parental involvement. Hence, the methodology used here is not likely to bias estimates in favour of for-profit schools vis-à-vis non-profit ones.

The effect on achievement

The results (see Table 2) confirm earlier findings, which show that socio-economic background –measured by parental levels of education – is very important for children’s educational achievement. Also confirming previous findings, boys do worse than girls, and first-generation immigrants tend to lag their peers with a Swedish family background. Interestingly, however, this effect cannot be detected for second-generation immigrants, who have a significant positive effect in the first model, while turning insignificant in the second. This difference could be explained simply by the fact that the two groups have wholly different experiences: settling in a new country is more difficult than growing up with parents who are born abroad. The average cost per student, the number of students in school, and the average income appear to matter little for school GPA levels. However, the teacher-student ratio is negative at the 1 percent significance level. As described earlier, this does not indicate that increasing the number of teachers lead to decreasing student performance, but rather that the presence of more teachers more likely is a *result* of having more underperforming students. As expected, the special school dummy is strongly negative. Finally, the urban area dummy and the number of people/km² are positive – possibly signalling the competition effect described earlier.

Table 2: The effect of different ownership structures on educational achievement (average school GPA)

	Model 1	Model 2
For-profit independent school dummy	5.61*** (1.2)	4.50*** (1.1)
Non-profit independent school dummy	6.16*** (1.7)	5.74*** (1.60)
Pre-reform independent school dummy	9.53*** (3.1)	8.73*** (2.77)
Special school dummy	-42.97*** (5.9)	-47.44*** (6.6)
Percentage of boys	-0.22*** (0.02)	-0.23*** (0.02)
Percentage of immigrants (1st generation)	-0.42*** (0.04)	-0.45*** (0.04)
Percentage of immigrants (2nd generation)	0.16*** (0.03)	0.006n.s. (0.04)
Average level of parental education	59.52*** (1.6)	53.95*** (1.72)
Number of teachers/100 students	-0.46*** (0.15)	-0.46*** (0.14)
Number of students in school	0.004** (0.002)	0.001n.s. (0.002)
Average income (30-59 year olds)	NO	0.01n.s. (0.01)
Average cost/student	NO	0.00006n.s. (0.00005)
Urban area dummy	NO	3.37*** (0.7)
Population/km2	NO	0.002*** (0.0004)
Constant	94.24*** (4.07)	101.18*** (4.90)
Time dummies	YES	YES
Adjusted R2	0.60	0.62
N	6,898	6,896

Note: Significance levels: *p<0.10; **p<0.05; ***p<0.01; n.s., not significant. Cluster-robust standard errors in parentheses. Due to missing data, the sample is reduced by 37 and 39 observations.

Most importantly, post-reform for-profit and non-profit independent schools have similar positive effects on the average school GPA, raising it by 5.61 points and 6.16 points respectively in the first model. Controlling for municipality variables, non-profit independent schools raise the average GPA by 5.74 points, whereas the for-profit schools raise it by 4.50 points.

The importance of controlling for the effect of independent schools established prior to 1992 is evident by the fact that these have stronger impacts in both models. Excluding this dummy, the effect of non-profits in Model 1 jumps to 9.51 points while the effect on GPA of for-profits declines marginally to 5.60; in Model 2 the effect jumps to 8.76 points for non-profits, whilst for-profits again decline slightly to 4.45 (all significant at the 1% level).

But are there any differences between for-profit/non-profit schools' effect on different socio-economic groups? Table 3 displays the results when dividing schools into three categories based on the average level of parental education.

Table 3: Ownership structure, achievement (average school GPA) and parental education

	Average level of parental education		
	<u>Low</u>	<u>Medium</u>	<u>High</u>
For-profit independent school dummy	11.64**	5.01***	4.08***
	(4.90)	(1.38)	(1.53)
Non-profit independent school dummy	4.39n.s.	5.17**	4.45**
	(7.37)	(2.08)	(2.13)
Pre-reform independent school dummy	19.21*	4.57n.s.	6.06*
	(11.20)	(3.45)	(3.31)
School level controls	YES	YES	YES
Municipal controls	YES	YES	YES
Time dummies	YES	YES	YES
Adjusted R2	0.42	0.33	0.52
N	1,141	4,714	1,041

Note: Significance levels: *p<0.10; **p<0.05; ***p<0.01; n.s., not significant. Cluster-robust standard errors in parentheses. Average parental education levels at <2 are classified as 'low'; levels at 2≤2.39 as 'medium'; and levels at ≥2.4 as 'high'. In all regressions, the above described control variables have been added.

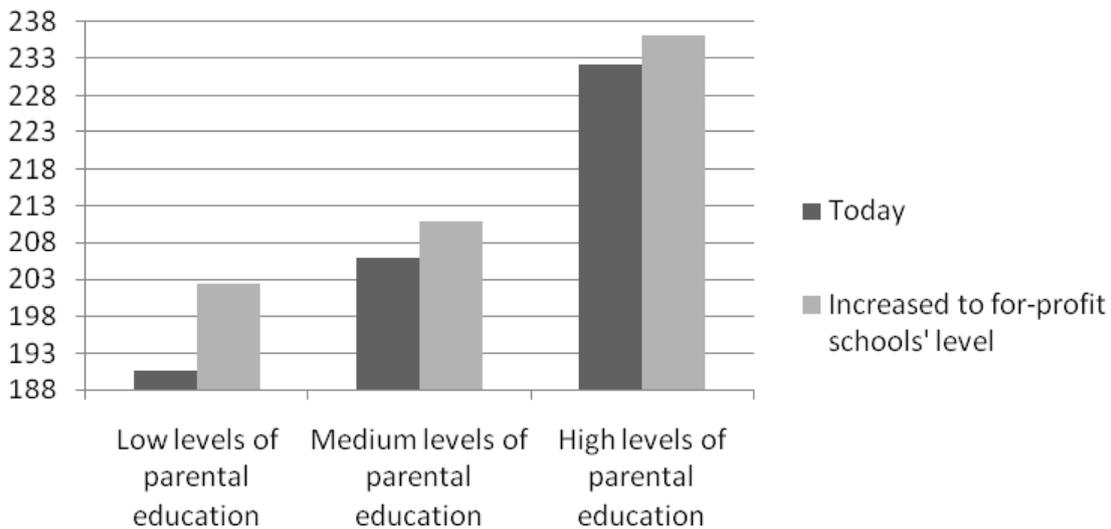
The effect of for-profit independent schools is the strongest for schools with students from low socio-economic backgrounds: being for-profit increases the average school GPA by 11.64 points. The non-profit schools' effect in this category is 4.39 points but it is not significant (p=0.55). In the middle-level category, the effect of non-profit schools is 5.17 points, compared with the effect for for-profit school impact of 5.01 points. Finally, in the high-level group, non-profit schools have an effect of 4.45 points, which is marginally higher than the for-profit school impact of 4.08 points. Meanwhile, the pre-reform independent school dummy is positive and significant at the 10% level in the low-level and high-level groups (with the strongest effect in the low-level group and the only for-profit school in the high-level category), but insignificant in the medium-level category. This indicates that for-profit independent schools benefit students from all backgrounds while non-profit schools are more uneven in their effects.

Overall, the results for for-profit independent schools are predicted by Friedman's (2007) argument

that voucher reform would benefit students from lower socio-economic backgrounds the most; municipal schools in wealthy neighbourhoods are more likely to function well than those in poor neighbourhoods. However, post-reform non-profit schools do not conform to this prediction (although one should be careful not to dismiss their importance in the low-level category simply because the effect is insignificant). This could simply reflect that many of these have different niches that possibly could benefit students from higher socio-economic backgrounds more than students from lower socio-economic backgrounds.

In combination with previous research on independent schools, therefore, these findings show little that substantiates the fears of the profit motive in education reform. Overall, the effects of post-reform for-profit and non-profit schools are comparable. Moreover, for-profit schools are beneficial for students from all backgrounds, with the largest effect for students from low-educated families. Post-reform, non-profit schools, on the other hand, perform well among students with higher levels of parental education, but do not have a statistically significant impact among students from low-educated families. And, most importantly, for-profit independent schools do better than municipal schools in all models. The evidence presented here, therefore, indicates that the doomsday predictions are not accurate. Rather, the performance of for-profit independent schools should serve as guidelines for municipal schools regarding minimum acceptable levels of student achievement, as displayed in Figure 5.

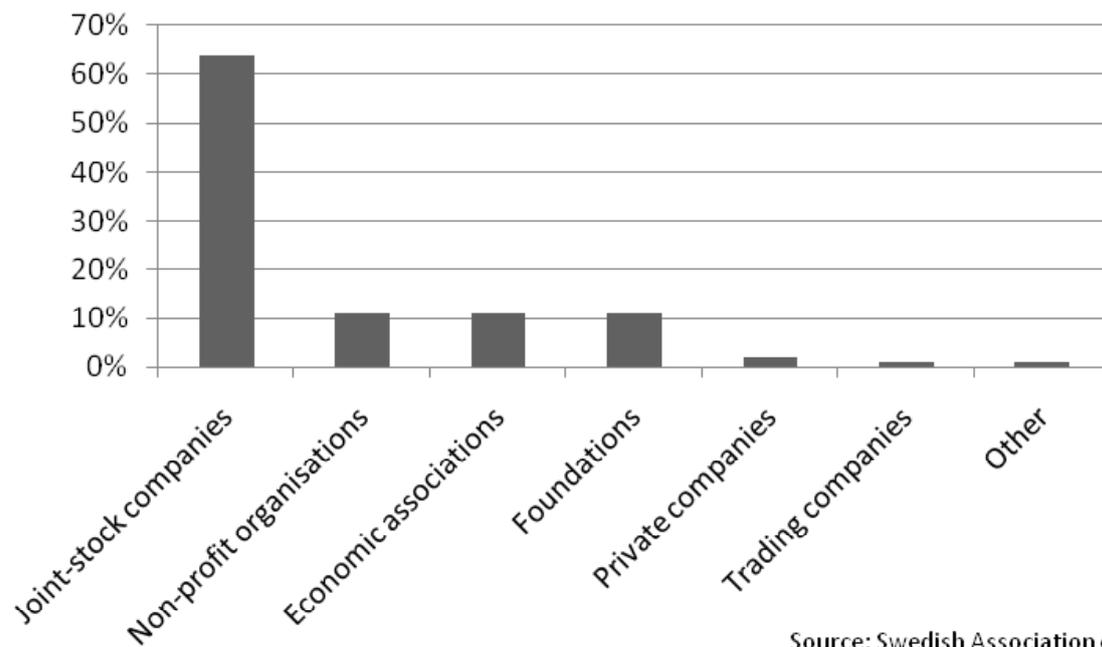
Figure 5
Average municipal school GPA - actual and potential



Incentives for market entry and expansion

Having provided quantitative evidence indicating that fears that for-profit schools would drive down educational quality are unsubstantiated, one must also appreciate the significant differences in incentive structures between for-profit and non-profit schools. First, the absence of a profit motive produces fewer incentives for entering the market, leading to smaller increases in competition and quality. Indeed, as Figure 6 displays, most independent schools today are joint-stock companies, i.e. for-profit corporations, which can and do pay out dividends to shareholders. About 65% of independent schools are for-profit, and thus form an integral part of the Swedish voucher experience; little suggests that Sweden would have experienced the surge in independent school penetration had for-profit companies been banned from entering the education market.

Figure 6
Ownership structure of independent schools (2008)

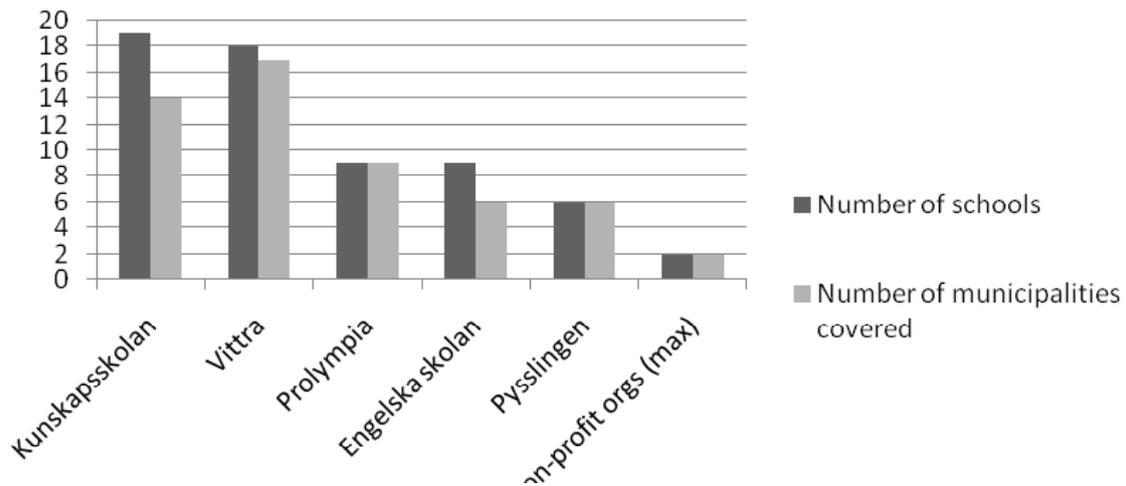


Source: Swedish Association of Independent Schools (2009)

Second, as Coulson (2001) argues, even when non-profit schools are established, the lack of a profit motive could have stultifying effects as it eliminates the incentive structure necessary for overcoming risks of expansion, causing non-profit schools to be small organisations. Again, this means that competition would remain low as fewer schools would expand in new districts, yielding less pressure on municipal schools to improve. There is a reason why the majority of Swedish independent schools are for-profit: the idealism and drive of those running non-profit schools cannot serve as an incentive to start schools for many people otherwise perfectly capable of doing so. The simple reason for that is that idealism is scarce and local. Not allowing for-profit independent schools will not lead to a similar increase in the number of non-profit independent schools. It will just lead to fewer independent schools and less competition – and educational achievement will not reach its potential. Figure 7 compares the number of schools and expansions in different municipalities for a couple

of the for-profit and non-profit schools in the sample analysed above.⁵ The empirical evidence confirms the theory: for-profit companies tend to start new schools and expand into new markets while non-profit organisations remain small, local operations. Without the profit-motive, therefore, it is doubtful whether Sweden's voucher reform would have been successful.

Figure 7
School ownership structure and expansion



⁵ The figure displays schools in the sample only (in 2009). Many for-profit education companies have expanded in more districts if one includes upper-secondary schools, pre-schools and lower level compulsory schools.

Lessons for coalition policy

Having discussed the Swedish voucher programme, on which the Lib-Con coalition bases its education reform programme, the implications are clear. The evidence does not suggest that voucher reform is a panacea that automatically will improve all students' results radically, regardless of other social and economic changes. It does suggest, however, that it can improve educational achievement on the margin even during a period of economic instability – and in times of sharp budget cuts this opportunity should not be forsaken.

Furthermore, fears of the profit motive in education do not stand up to empirical scrutiny. Swedish for-profit schools do better than municipal schools in terms of school average GPA, and for-profit and non-profit schools' overall effects are comparable. Furthermore, the impact of for-profit schools can be seen to benefit students from lower socio-economic backgrounds the most, while affecting other students positively as well. Non-profit schools, however, have more uneven effects. Given that the estimates presented here are likely to err on the side of caution, further research to determine more precise effects of for-profit/non-profit schools is necessary. However, the analysis does indicate that for-profit schools do not conform to predictions made by opponents.

In fact, even though the role of non-profits should not be underestimated, there is little evidence to suggest that the Swedish reform would successfully have increased competition and educational attainment without the profit motive. This is something the UK government should learn from. Indeed, Anders Hultin, advisor to the 1991-1994 Swedish centre-right government and the architect of the voucher reform, has rightly argued that 'if you're not allowing profit-making organisations the scheme could fail. [Otherwise] You need to rely on charities and there are already a lot of charities running schools in this country' (*Guardian*, 2 October 2009). Michael Gove's calculations that about 2,000-3,000 new schools could emerge due to voucher reform in the UK are simply misguided due to the lack of a profit motive. Ironically, when Gove saw the 'future' in the Swedish voucher reform, he missed one of its essential ingredients.

It might be good politics to develop the reforms around unsubstantiated ideological fears of introducing a profit motive in a publicly funded education system, but it is poor policy. By schooling for money, the majority of Swedish independent schools have increased competition and standards. Banning state-funded, for-profit independent schools in the UK would put the voucher reform at risk of failing and would thus be a great disservice to students, parents and the education system in general.

Afterword: dealing with endogeneity

After some criticism by Mr Francis Gilbert at the Local Schools Network⁶, this afterword presents further evidence, utilising more advanced models, on the effect of for-profit schools on educational achievement in Sweden. The overall conclusion remains: there is no evidence of negative effects of for-profit schools. Rather, the new findings indicate that I was correct in arguing that the estimates of for-profit schools in the paper were biased downwards.

As the author of the paper, I am rather flattered by Mr Gilbert's accusation, which appears to be that my models are 'too sophisticated' – but if there is any problem, it is that the models I employ might not be sophisticated *enough*. On page 16 of the paper, I discuss the problems of 'endogeneity' - it might be the case that even after employing a vast range of control variables, students in free schools may be better (or worse!) than students attending municipal schools, have more/less motivation etc. That is, if we fail to control for important uncontrollable variables that affect performance, our estimates will be biased. However, the most recent study (Tegle, 2010) suggests that not taking this into account significantly *underestimates* the effect of free schools generally – the effect is much stronger when using more sophisticated models that explicitly are supposed to take into account the problem of endogeneity. My paper is very clear on that point – the estimates presented are likely to err on the side of caution.

The reasons I did not attempt to employ models accounting for endogeneity, which according to previous research would show even stronger effects of for-profit/non-profit schools, were threefold. Firstly, I was mostly interested in analysing whether the 'deterioration thesis' – that the profit motive drives *down* educational quality – held up to empirical scrutiny. As endogeneity was highly likely to bias the estimates against free schools, finding that my models displayed positive effects was thus enough to indicate strongly that the 'deterioration thesis' was not accurate (especially since 65% of all free schools are for-profit). Secondly, I didn't have enough time. Assembling the statistics for about 1,500 schools over five years and coding all schools by ownership structure was time-consuming. Employing more advanced models would necessitate further variables. Thirdly, as I analysed school-level evidence, I was concerned that it might be difficult to control for endogeneity entirely.

However, after I had completed the paper, I analysed this further by employing models explicitly designed to deal with endogeneity (so-called Instrumental-Variable models). For this analysis I use estimates from 2009 due to time constraints. Using the same methodology as in my paper (OLS-regressions) for this truncated sample renders the estimates basically the same as when I use data over five years. As instruments, I use the percentage of children in each municipality attending privately run kindergarten (i.e. 'free kindergarten'), and the percentage of 'low-educated' people in each municipality, which have been used previously in the literature (Sandström and Bergström 2005; Tegle 2010). Since valid instruments are difficult to find, and since I need one instrument for each endogenous variable, I do not include the pre-reform dummy. However, removing all these schools from the sample produces almost exactly the same estimates, but the non-profit effect is slightly smaller and marginally less significant (at the 10% level).

Table 4 displays the results. I find that – in line with Tegle's findings from IV-regressions regarding

⁶ <http://www.localschoolsnetwork.org.uk/2010/12/new-research-claims-to-show-for-profit-schools-are-great-but-is-it-valid/>

the overall free school effect – both for-profit and non-profit schools increase the GPA by about 34 points on average, which is much stronger than the effects I find in the paper (around 5 points in the model with the overall estimates). This represents an increase of 16.3% in comparison with municipal schools.

Table 4: IV-regression on the effect of different ownership structures on educational achievement (average school GPA in 2009)

For-profit independent school dummy	33.74*** (12.8)
Non-profit independent school dummy	33.86** (13.4)
School level controls	YES
Municipal controls	YES
Hausman test (p-value)	0.0002
Weak instrument test, all free schools (a value > 10 is valid)	24.03
Sargan over-identification test, all free schools (p-value)	0.98
Adjusted R ²	0.50
N	1,408

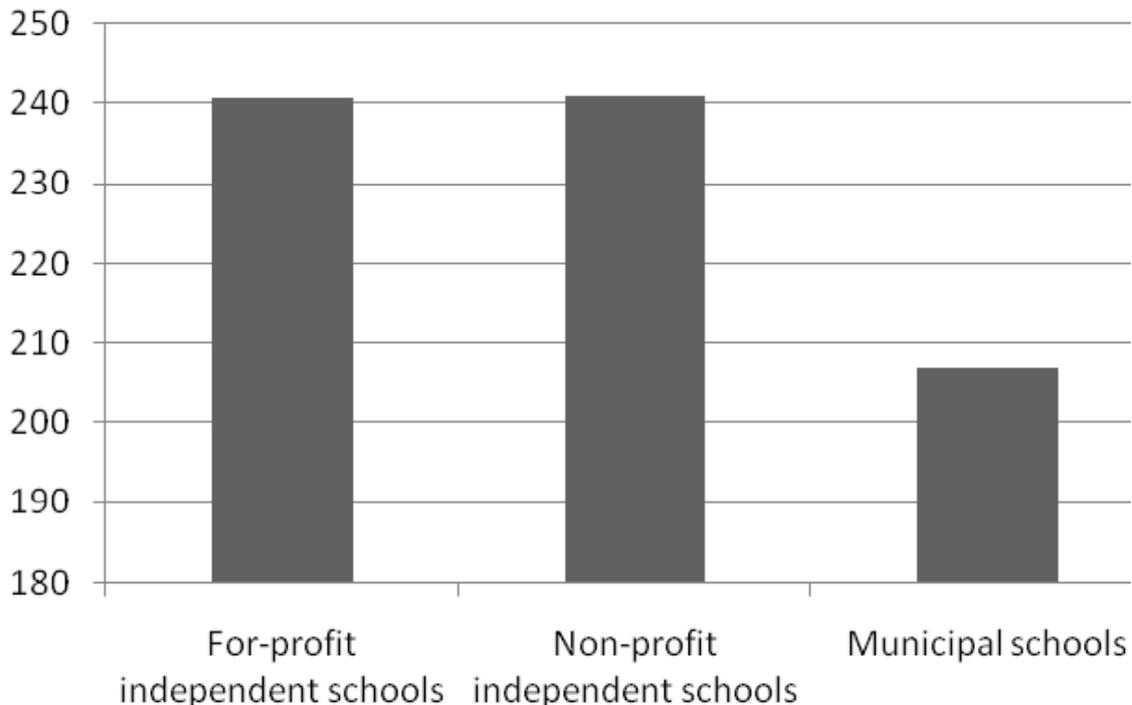
Note: Significance levels: *p<0.10; **p<0.05; ***p<0.01; n.s., not significant. Robust standard errors in parentheses. For the over-identification test and weak instrument test, all free schools are lumped together to see if both instruments employed are valid instruments.

The Hausman test strongly rejects the null hypothesis of no endogeneity. This suggests that the estimates in my paper are biased downwards, which confirms that these probably err on the side of caution. Furthermore, a test of weak instruments and an over-identification test, when lumping all free schools together (which gives an overall free school effect of 33.77 points), suggests that my instruments are valid.

Overall, the results strongly suggest that, taking endogeneity into account, for-profit and non-profit schools are equally good at raising standards. Not only does this provide further evidence against the ‘deterioration thesis’, but the IV-regression also suggests a powerful effect on educational attainment of both for-profit and non-profit independent schools in the Swedish context as displayed in Figure 8.

The models employed in the paper thus probably underestimate the effect of for-profit schools – but this is something I anticipated. I was mainly interested in whether for-profit schools drove down quality and found no evidence that they did. The findings presented here also indicate that the strong free school effect Tegle (2010) finds applies to for-profit and non-profit schools equally.

Figure 8
Average GPA levels by school type after dealing with endogeneity (2009)



Mr Gilbert argues that ‘Many statisticians would question [the IEA’s] results because they have used “control mechanisms” which claim to equalise children from different backgrounds in an attempt to compare “like for like”.’ However, statisticians would not question the use of control variables (which is essential to statistical evidence); rather they might argue that I have not controlled for *enough* variables. But the statistical model utilised above is specifically designed to control for the variables which are difficult to control for (such as motivation, ability etc.). And when one does, the effects of both for-profit and non-profit schools are even more positive.

Thirdly, regarding the PISA results to which Mr Gilbert refers, one must take into account other reasons why countries with more competition do not perform better on average – again, we meet the problem of not controlling for enough variables. For example, the Swedish voucher programme in 1992 was introduced during an economic crisis. Residential segregation and unemployment increased during the 1990s while school budgets were cut. Meanwhile, we introduced a new grading system, which removed a ‘relative system’ which was based on a bell-curve. Furthermore, we began to transfer more responsibility from the teacher to the student (allowing more students to work on their own), which the international research suggests would have had a negative effect. A perfect storm of causes contributed to problems in Swedish education during the 1990s.

Given that hitherto presented research – which I have extended to include for-profit free schools – finds positive effects of school competition in Sweden, these problems would probably have had a larger negative impact on educational performance had it not been for school competition. The evidence of declining performance in international ratings during the 1990s is bad news for those who argue that school competition is a panacea. But those of us who do not argue this would still conclude that competition has been beneficial.

The next step for those wanting to question my findings is to provide new research showing that for-profit free schools are in fact bad. So far, no such evidence has been presented, and I therefore conclude that fears of the profit motive in education reform, at least in the Swedish context, are unfounded.

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