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UNDERSTANDING

CHARTER SCHOOLS

2 What impacts can charter schools have on regular state schools?

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As a form of charter school, the Government's pilot Partnership Schools, or *Kura Hourua*, will operate alongside regular state schools. The Government's hope is that the presence of these Partnership Schools will have a positive impact not just on the pupils who will attend these schools, but also on neighbouring regular state schools and the wider state school system.¹ In a previous *Research Note* we discussed the impact charter schools in other jurisdictions have had on the performance of pupils who attend them.² In this *Note* we will ask the question: what sort of impact might Partnership Schools have on regular state schools?

The Government expects that Partnership Schools will have a positive impact on neighbouring regular state schools and the wider state school system in two main ways:

- 1) through the incentive their presence will give to neighbouring schools to lift their own pupils' achievement; and
- 2) through the dissemination of the innovations in teaching and learning that it is assumed charter schools will produce out of their greater freedom from government regulation.³

Others are not so sure. Some have expressed concern that the presence of Partnership Schools will create too competitive a system in education and will undermine equitable access to public education for children from all backgrounds.⁴ They fear that the presence of Partnership Schools will force schools to vie with each other for pupils. Those regular state schools that lose pupils might enter a "spiral of decline," in which the best pupils leave, morale drops and funding and academic performance plummet. If these schools were not able to recover from this downward spiral, educational quality may suffer for the pupils that are left behind, and ultimately some regular state schools, which many see as being at the heart of local communities, could be closed.⁵

So who is right? This *Research Note* seeks to present what evidence does exist about what the likely impacts

of our own form of charter schools will be for regular state schools. It does so by examining what the best charter schools research has to say about the impact that the presence of some charter schools have had and are having on:

- 1) the performance of pupils in regular state schools; and
- 2) innovation in schools and in the school system

in the United States, England and Sweden, where such schools have been operating for a period of years. The charter schools in these places are very similar to the Partnership Schools model that has been proposed for New Zealand, making evaluations of their successes and failures instructive here.

The research base is relatively small, and somewhat inconclusive, but it does indicate some initial, helpful trends.

What impact has the presence of charter schools had on regular state school pupils' performance?

The evidence from the small body of research that exists is mixed: some studies have found the presence of charter schools to have had a small negative impact on pupil achievement in regular state schools, while other studies have found charter schools to have had either a negligible or small positive impact. The table in Appendix One summarises the key findings of each study considered for this *Research Note*. To further complicate matters, all of these studies have been carried out in specific places, such as cities or states in the United States, with their findings often highly dependent on local conditions and thus not useful for making generalisations. Other important limitations of this body of research are explained in Appendix Two.

Still, some trends are discernible. We examine whether, and to what extent, the presence of charter schools has had negative impacts on regular state schools in terms of educational quality, mainly by examining the change in standardised test scores at regular state schools which have had charter schools operate alongside them—after taking into account such factors as pupils' background and prior attainment.⁶ Of course, achievement at standardised tests is not the only outcome that is important to educational outcomes, but it is a significant and measurable one, and one that gives a preliminary indication of whether regular state schools tend to improve or falter after the introduction of charter schools.

Negative impacts

About half of the studies examined for this *Research Note* found charter schools to have had a negative impact on pupils' achievement at regular state schools. In some of these studies, the negative impact could be traced to funding rules, which hit regular state schools hard as they lost pupils to charter schools. A 2007 study, carried out by education researcher Scott Imberman in an anonymous large urban school district, speculated that a decline in test scores at regular state schools was the result of a drop of about half to two-thirds of a school's per-pupil funding when pupils left for a charter school.⁷ This loss of key funding further exacerbated a concomitant drop in teacher morale. With less money and demoralised teachers, regular state schools in this particular district suffered.

Similarly, in a 2007 study, economist Yongmei Ni found charter schools to have had a negative impact on regular state schools in Michigan, where full per-pupil funding followed pupils from regular state schools to their new charter school. For the depressed urban areas, such as Detroit, where charter schools were most likely to be found, this loss of funding was felt acutely by regular state schools, which had already been feeling the pinch of pupil population decline over the past several decades. In these schools, there appears to be evidence that when pupils have left them for charter schools, they lost the resources which they needed to be able to run well, meaning that many of them have entered a spiral of decline.⁸

Finally, some studies that have found charter schools to have had a negative impact on regular state schools

have associated these impacts with what some might call “cherry-picking,” that is, charter schools attracting the better quality pupils from a school system, thus lowering the quality of regular state school pupils and causing a decrease in regular state schools’ performance. This was what education researchers Matthew Carr and Gary Ritter believed was happening from a 2007 study of Ohio, where they found a negative relationship between the presence of charter schools and regular state school pupils’ reading and mathematics pass rates across a range of different evaluations.⁹

Though some of the concerns held by those who are wary of charter schools’ impacts on regular state schools should not be ignored, these negative results are not strong enough grounds to judge charter schools as a wholesale threat to state schools. What is critical to understand is that the type of impact charter schools have seems to depend on many factors, such as funding arrangements, the leadership present in the schools, and the structure of the education system as a whole. Some of the negative results, such as those listed above, can be attributed to funding rules, declining school enrolments, or the ability of charter schools to “cherry pick” pupils. These factors are all either not directly related to the presence of charter schools or can be fixed by decision makers. Additionally, not all of the evidence of charter schools’ impacts on regular state schools is negative.

Positive impacts

Studies of charter schools in Texas and North Carolina in the United States, and in Sweden and England, have all reported positive impacts for regular state schools after the introduction of charter schools in their districts. In Texas, political scientist John Bohte, from a 2004 study, and educational researcher Kevin Booker and others, from a 2005 study, have found consistent positive impacts on the test scores of regular state school pupils who attended schools that existed alongside charter schools.¹⁰ Bohte associated the increase in test scores at regular state schools with “reverse creaming”—that is, charter schools absorbing a share of the low-income, disadvantaged pupils in Texas’ school districts, thereby alleviating some of the burden on regular state schools. Bohte was not certain whether this “reverse creaming” occurred because charter school operators, regular state school officials and families responded constructively to charter schools, or regular state schools were unloading more resource-intensive pupils on to charter schools. Booker and others observed that the presence of charter schools was particularly associated with a marked increase in the performance of lower-performing regular state schools. Similarly, in North Carolina, economist George Holmes and others found from a 2003 study that those in regular state schools who were closest to failing made the largest achievement gains when their schools experienced pressure from charter schools, a phenomenon Holmes and his co-authors thought could be due to charter schools incentivising regular state schools to focus on working with pupils who were closest to failing, helping them to achieve more highly.¹¹

Regular state schools in Sweden and England have also experienced positive impacts related to the presence of charter schools. Sweden has a system of “Free Schools,” which are independent schools with a high degree of independence from central government regulation that do not charge fees but receive a per-pupil subsidy from the local municipality in which they operate. In a 2012 study, economists Anders Böhlmark and Mikael Lindahl found that about twenty years after their introduction, the presence of Free Schools was associated with small improvements in average achievement at the end of compulsory school and a greater chance of further attainment at high school.¹² It took approximately a decade after the introduction of Free Schools for the first positive results to be seen in Sweden.

In England, an Academies programme has run since 2000, under which some failing regular state schools’ operations have been placed in the hands of private sponsors, who have such freedoms as the capacity to use a different curriculum to the National Curriculum, to set the length of their school day, to select ten percent of their admissions by aptitude and to hire their own staff. Academies have also been shown to have positive impacts on regular state schools. In a 2011 study, economists Stephen Machin and James Veroic found that regular state schools that neighboured Academy conversions experienced improvements in their pupil performance. This effect occurred despite a drop in the quality of pupils who were entering the schools

in Year 7. Machin and Veroit believed that the improvements in educational quality were the result of positive responses from neighbouring regular state schools to the presence of Academies.¹³

Contextual factors

The effect that charter schools have had on the performance of pupils at regular state schools is not uniform. That diversity suggests that contextual factors have an enormous impact on what the consequences of charter schools will be for their neighbouring regular state schools. Various studies have noted some of these important contextual factors, such as the:¹⁴

- small scale of many charter school programmes and therefore their small share of school enrolments in the places in which they operate;
- fact that regular state schools simply did not face significant pressure from charter schools;
- short-run negative impacts found from evaluating immature charter school programmes;
- growing numbers of state school enrolments in some places, in which case charter schools were a welcome “release valve” for regular state schools with burgeoning rolls; or
- availability of other alternative state or independent schools, like magnet schools, which blunted charter schools’ competitive impacts.

Summary

The small, patchy body of research produced so far has not indicated that charter schools will undermine regular state schools. In some cases the performance of regular state schools has dropped with the arrival of charter schools, but in other situations the regular state schools have actually responded positively to the presence of charter schools, and have performed no worse, or in some cases even better, than they would have in the absence of charter schools.¹⁵ The potential for positive impacts to occur seems to be the greatest when charter schools are treated as part of state school systems and state school system leaders make educational changes in response to charter schools’ presence. As the Swedish case in particular illustrates, the impacts may not be felt for a number of years.

One would not be able to tell any of this by only considering the overall results from studies of test score achievement. This discussion illustrates why the impact of charter schools should not be judged without understanding the context in which they operate. Only from a fuller understanding of the context can we helpfully learn from studies from overseas.

Does the charter school model encourage innovation among charter schools and throughout the state school system?

When charter schools were first introduced, their advocates firmly believed that they would be “laboratories” or “incubators” of innovations in teaching and learning. Innovations, which they believed, could be shared with the wider state school system in which charter schools operate, thereby improving educational quality across the board. Again the question that needs to be asked is: has this been the case?

As with studies of charter schools’ impacts on regular state schools’ educational quality, there is only limited, usually localised, evidence of innovation in, or because of, charter schools.

Innovation within schools

Focusing on the United States, a 2009 OECD review of educational innovation found that charter schools there had helped to produce substantive innovations in school governance and organisation.¹⁶ The charter school model, by its very nature, could not help but produce innovations in school governance, since state school systems have had to rethink how the relationship works between the bureaucracy and a set of self-

governing, state-funded independent schools. In terms of school organisation, some charter schools have also innovated by introducing various:

- forms of alternative employment arrangements, such as employing non-credentialed teachers;
- structures for parental and community involvement;
- staff seniority structures; and
- forms of home-based instruction, such as online virtual schools.

These alternative ways of organising schooling are not necessarily widespread, however. Interestingly, many charter schools have stuck to traditional forms of school organisation with, for example, a principal-deputy leadership structure, classroom-based learning and set curricula.¹⁷ Thus, the OECD review reported much more mixed results for innovation in classroom teaching and learning practices. Charter schools have tended to capitalise on existing educational practices, which may already be used by regular state schools.¹⁸ For example, they might focus on:

- teaching alternative curricula, like technology;
- a longer school day or year;
- smaller class sizes;
- “back-to-basics” approaches to learning;
- multi-age class groupings;
- college preparation programmes; or
- an emphasis on safety and order.

Though such educational practices do not represent revolutionary innovations, charter schools often introduce these alternative practices to communities which may not have had access to them before. As we have discussed elsewhere, mission-focused charter schools—such as the Knowledge as Power Program (KIPP) schools in the United States—which hone these practices, can have positive benefits on the achievement of those pupils from disadvantaged backgrounds.¹⁹ This means that charter schools might be better thought of as “vehicles” for diffusing diverse teaching and learning practices, rather than as “laboratories” or “incubators” for new innovations in teaching and learning.²⁰

Innovation for the state school system

How then have regular state schools and state school systems responded to innovations from charter schools, of whatever kind or extent? The body of research discussed earlier suggests that there is limited evidence charter schools have, so far, consistently spurred regular state schools and state school systems to change. For example, a 2001 study of four Arizona school districts by educational researcher Frederick Hess and others, indicated that charter schools provoked a range of responses in those districts, from curricula reform and leadership change, to attempts to absorb and/or vilify charter schools.²¹ Further, a 2012 observational study of Michigan’s school districts by economists David Arsen and Yongmei Ni found that there was no evidence to suggest the presence of charter schools encouraged school district leaders to put resources into achievement-oriented activities.²² Much of the lack of change can also be attributed to the absence of a tangible challenge from charter schools. This behaviour was detected in a 2000 study of interviews with school leaders.²³ Principals reported that they had only changed their educational and administrative procedures when they felt competitive pressure from charter schools, and school districts said they had adopted new programmes when they saw that families wanted them for their children. However, a number of regular state school leaders reported holding the belief that charter schools were not offering an education that was worth imitating. Some commentators have suggested that the reason such school leaders took this stance, is that if they supported charter schools they would be seen to be endorsing an alternative schooling model, which some district leaders and teacher unions have not wanted to support.²⁴ Finally, if state school systems are run in such a way that they do not respond quickly, or at all, to the presence of charter schools, then this may not lead to positive change in regular state schools.

A 2001 United States Department of Education exploratory study of charter schools' impacts on the state school systems of Arizona, California, Colorado, Massachusetts and Michigan detected similar trends. Among the positive changes, it reported that nearly half of school district leaders who experienced pressure from charter schools changed how the schools in their districts worked in positive ways by becoming more focused on serving and communicating with parents. Most districts also introduced new educational programmes, changed educational structures in regular state schools or created new schools with programmes similar to those which charter schools offered.²⁵ But most school districts did not see charter schools as a way of fundamentally changing how the state education system worked. They thought that introducing charter schools was a good way of dealing with at-risk pupils or pupils dissatisfied with regular state schools. Only a few introduced charter schools as a lever for broader systemic reform of their education systems.²⁶

Contextual factors

It seems that state schools and state school leaders are more likely to change what they do in positive ways, and perhaps adopt what charter schools are doing, if:²⁷

- the state school system supports the growth of charter schools;
- a number of high-quality charter schools consequently emerge; and
- those charter schools exert pressure on regular state schools and state school systems to change.

It cannot be assumed, however, that the presence of charter schools by itself will encourage change or innovation in how regular state school systems work.

Collaboration

Perhaps the most promising form of innovation—and promising future for charter schools—is the growing collaboration between leaders of charter schools and of state school systems. In the United States, after years of antagonism, more charter school leaders and state school district leaders are coming together, rather than continuing to compete, to figure out how they can both work together to their mutual advantage and for the benefit of families and children.²⁸ This has come about because charter schools have matured and shown that they can provide quality forms of schooling for certain groups of disadvantaged children. It has also come about because state school system leaders have realised that a “one-size-fits-all” approach to schooling does not offer the best solutions for diverse children with diverse learning needs, and that it does not allow entrepreneurial school leaders and mission-focused educators the opportunity to easily experiment with alternative forms of schooling.

There are two main forms of collaboration currently happening in the United States. One form is the portfolio school system, which currently operates in major cities like Los Angeles, New York, Denver, Chicago and Washington D.C.²⁹ In a portfolio school system, a school district authorises multiple types of schools but holds all of them accountable to the same performance standards. In many cases, portfolio school systems are using charter schools to replace under-performing regular state schools.

Another form of collaboration is district-charter “compacts.”³⁰ The goal of compacts is to see the vast majority of pupils graduating from school ready for tertiary education or a career. A compact is negotiated between the school district and charter school leaders who are willing to work together to solve divisive matters, like equity issues, which include access to schools for special education pupils, and charter schools' access to school funding and facilities. Specific projects can be part of a compact, too. In Texas, one is focused on recruiting and retaining high quality teachers. Another experiment in Houston is geared at improving the performance of the lowest-performing regular state schools by injecting successful charter school practices, such as setting high expectations, having high levels of tutoring and using achievement data to inform teaching.³¹ One 2011 evaluation of Houston's experimental compact indicated that the achievement of pupils at targeted regular state schools, improved by an average of 0.28 standard deviations in mathematics. This

was comparable with successful charter school programmes, like KIPP, and is enough for a pupil to help make up a few months of learning.³²

The major risk for charter schools with collaboration is that they may lose some of their freedom from government regulation by cooperating with state school systems. This is because schools which were meant to operate one-step removed from the regular state school system may be required to compromise with the goals and operations of that system. This may tie charter schools up in levels of authority and bureaucracy that the model was meant to free them from. A major benefit of collaboration is that it can help to dismantle centralised, industrial-like state school systems by helping to make schooling more tailored and transparent to families and communities.³³ Collaboration can also help state school systems to make better use of their facilities and resources and to be more open to change and experimentation—which could benefit pupils' educational achievement and long-term attainment.

Conclusions

From the evidence and experience of charter schools' impacts on regular state schools and state school systems, it seems that charter schools have so far had a mixed impact. This may not just be due to the educational effect of charter schools; it may also be because of how the studies which have been carried out are limited at measuring the impact of charter schools' presence and whether or not charter school laws restrict their operations and so their impact on regular state schools.

From the limited body of literature, it can be seen that there are instances when the presence of charter schools has been linked to an improvement in pupil performance at regular state schools. But generally the impacts for such pupils have been small and often they have been negative. It should not be assumed that the patchy evidence of negative impacts on regular state school pupils' achievement is proof that charter schools will do harm. Decision makers should note the often localised nature of the negative impacts that some studies have found. If regular state schools lose a lot of funding, or if they are left to struggle with educating poorer-performing or harder-to-teach pupils, then regular state schools' performance can drop. But this sorting effect is not confined to regular state schools; charter schools can face exactly the same issue if they have high numbers of harder-to-teach pupils. Decision-makers should watch to see if these sorts of effects occur and be prepared to work with charter school operators and regular state schools to solve any unhelpful situations that arise.³⁴

Encouragingly, there is evidence that charter schools can have a positive impact on regular state schools and state school systems. One of the promises of charter schools is that they can be vehicles for spreading alternative forms of education to communities which have never experienced them before. State school systems can use charter schools to pilot innovations that might lead to the adoption of successful practices in state schools and perhaps even systemic changes to school governance and organisation. The presence of charter schools has prompted some regular state school leaders to introduce different educational programmes and to improve how regular state schools work. For this change to have a good chance of occurring, decision-makers ought to make rules and regulations friendly to charter schools so that they can become a larger-scale, credible alternative to regular state schools.³⁵ Only then will charter schools be able to have more than a token impact on state school systems. As New Zealand's Partnership Schools will only be a small-scale pilot, decision-makers should not expect them to bring about the major changes in regular state schools or to exert large pressure on the state school system to innovate that the Government's rhetoric suggests they will. They will, however, provide an opportunity to trial alternative forms of education that may benefit disadvantaged pupils.

Constructive collaboration between regular state school systems and charter school operators is also becoming a promising way of helping to reduce the risk of charter schools causing harm to regular state schools. Collaboration can help regular state school and charter school leaders to work out how they can best meet the educational needs of families and children in their community and to use resources wisely.

Decision-makers ought to consider introducing frameworks that will help leaders of state schools, charter schools and the communities in which they operate to work out the best solutions for improving pupils' and schools' performance. As New Zealand's Partnership Schools are meant to be targeted at disadvantaged pupils, and are not meant to be direct competitors to regular state schools, decision-makers should exploit the potential for collaboration that the model offers.

Decision-makers, school leaders and local communities should work together to realise the potential that exists with New Zealand's Partnership Schools.

Appendix One

Key Findings from Studies of the Impacts of Charter Schools on Regular State School Pupils

The table below summarises the key findings from the best quality studies of the impacts of charter schools on regular state school pupils’ achievement, attainment or discipline in the United States, England and Sweden. It is organised according to whether or not the studies show that charter schools have had a negative to negligible impact on regular state school pupils, or whether or not they show that charter schools have a had a negligible to positive impact.

Some impacts are reported in terms of effect sizes, in units of standard deviations. An effect size of ± 0.1 standard deviations, or less, represents a small impact on achievement; from ± 0.2 to ± 0.4 a medium impact; and ± 0.5 or more a large impact.³⁶

Key Findings from Studies of the Impacts of Charter Schools on Regular State School Pupils		
Study	Negligible to negative impact	Negligible to positive impact
Böhlmark and Lindahl (2012) — Sweden ³⁷		<ul style="list-style-type: none"> The impact of a 10 percentage point increase in the share of Free School pupils was associated with a 0.07 standard deviation higher average achievement at the end of compulsory school, a 2 percentage point higher chance of performing academically at high school, a 2 percentage point higher chance of attending university. Positive and statistically significant impacts were not detected until about 10 years after the introduction of Sweden’s voucher reform.
Gray (2012) — Ohio ³⁸		<ul style="list-style-type: none"> Changes to Ohio’s charter school laws in 2003 made it easier for charter schools to operate alongside regular state schools. The study found that charter schools’ presence was associated with small positive improvements in proficiency rates at state tests in reading and mathematics of 0.1 standard deviations, on average (after taking into account contextual factors) for pupils who attended regular state schools which faced pressure from charter schools. Whether or not the results were statistically significant depended on which dependent variables were included and which contextual conditions were controlled for.

Key Findings from Studies of the Impacts of Charter Schools on Regular State School Pupils		
Study	Negligible to negative impact	Negligible to positive impact
Machin and Veroit (2011) — England ³⁹		<ul style="list-style-type: none"> On average, the quality of the pupil intake in year 7 dropped at neighbouring schools to Academy conversions. Nevertheless, evidence suggested that neighbouring schools experienced statistically significant improvements in their pupil performance at achieving five or more GCSEs, including English and mathematics or the equivalent. This impact appeared to happen in schools neighbouring Academy conversions that experienced large, significant improvements in their pupils' performance.
Zimmer and Buddin (2009) — California ⁴⁰	<ul style="list-style-type: none"> Found no firm evidence of positive effects from charter schools' presence as there were few statistically significant impacts on regular state school pupils' reading and mathematics achievement. All but two estimates — at the middle and high school levels, in mathematics, with respect to distance — were negative. 	
Zimmer and others (2009) — Chicago, Denver, Milwaukee, Philadelphia, San Diego, Ohio, Texas ⁴¹	<ul style="list-style-type: none"> Only Texas' charter schools had a small, positive statistically significant impact on regular state school pupils' achievement. 	
Clark (2009) — England ⁴²	<ul style="list-style-type: none"> Examined whether or not state schools which converted to self-governing, publicly-funded "Grant Maintained" (GM) schools in England between 1988 and 1997 improved the performance of neighbouring state schools. No relationship was found between the presence of GM schools and gains in examination pass rates. 	

Key Findings from Studies of the Impacts of Charter Schools on Regular State School Pupils		
Study	Negligible to negative impact	Negligible to positive impact
Imberman (2007)—anonymous large urban school district (ALUSD) in the United States ⁴³	<ul style="list-style-type: none"> • <i>Commonly-used fixed-effects, value-added models</i> produced estimates that indicated a 10 percentage point increase in charter schools’ share of enrolments, within a 1 mile radius of a regular state school, did not have an impact on test score gains in reading, mathematics and languages at regular state schools. • Discipline also became statistically significantly worse, especially over time. • <i>With the use of instruments</i>, estimates indicated that a 10 percentage point increase in charter schools’ share of enrolments worsened test score gains by between 1.5 and 4 national percentile rank points. 	<ul style="list-style-type: none"> • <i>Commonly-used fixed-effects, value-added models</i> produced estimates that indicated a 10 percentage point increase in charter schools’ share of enrolments, within 1.5 or 2 miles of a regular state school, was associated with a 0.46 to 0.76 national percentile rank point increase in test scores in reading, mathematics and languages at regular state schools. • <i>With the use of instruments</i>, estimates indicated that a 10 percentage point increase in charter schools’ share of enrolments, within a 1.5 mile radius of a regular state school, was associated with a statistically significant annual reduction in instances of disciplinary action of between 0.5 and 0.6 per pupil.
Ni (2007)—Michigan ⁴⁴	<ul style="list-style-type: none"> • The presence of charter schools had a negative impact on the performance of regular state school pupils in both 4th and 7th grade reading and mathematics, which was small to negligible during the first four years examined but became quite large after six years or more. • At this point, regular state schools facing pressure from charter schools experienced medium-sized decreases in satisfactory rates of achievement of 0.2 standard deviations in mathematics and 0.5 in reading. 	
Carr and Ritter (2007)—Ohio ⁴⁵	<ul style="list-style-type: none"> • An increase of one charter school in a school district was associated with a statistically significant 0.30 percentage point decrease in regular state school pupils’ reading pass rates and a 0.55 percentage point decrease in mathematics pass rates. • A 1 percentage point increase in charter school enrolments as a share of school district enrolments was associated with a 0.46 percentage point decrease in regular state school pupils’ reading pass rates and 0.60 decrease in mathematics pass rates. • The existence of at least one charter school in a school district was associated with a 1.4 percentage point decrease in regular state school pupils’ reading rates and a 1.9 percentage point decrease in mathematics pass rates. 	

Key Findings from Studies of the Impacts of Charter Schools on Regular State School Pupils		
Study	Negligible to negative impact	Negligible to positive impact
Sass (2006) — Florida ⁴⁶		<ul style="list-style-type: none"> The presence of one or more charter schools within 2.5 miles of a regular state school was associated with a statistically significant 0.5 point increase in regular state school pupils' mathematics test score achievement. A 1 percent increase in charter schools' share of pupils within 2.5 miles of regular state schools was associated with a statistically significant 0.08 point increase in regular state schools' mathematics scores. No statistically significant association was found between the number of charter schools and pupils' achievement in reading.
Bifulco and Ladd (2006) — North Carolina ⁴⁷	<ul style="list-style-type: none"> The presence of charter schools reduced pupils' reading test score gains in regular state schools that were located within 2.5 miles of a charter school, and had no impact on gains in schools located between 2.5 miles and 10 miles. No impact from charter schools on mathematics scores was observed. 	
Booker (2005) — Texas ⁴⁸		<ul style="list-style-type: none"> A 1 percentage point increase in charter schools' share of enrolments was associated with statistically significant improvements in mathematics and reading across a range of statistical tests. For example, gains of about 0.11 standard deviations of the average district mathematics standardised test score, and about 0.07 standard deviations of the average district reading standardised test score were estimated over time.
Bettinger (2005) — Michigan ⁴⁹	<ul style="list-style-type: none"> Found statistically significant, small and negative impacts on fourth grade pupils' test scores over a two-year period. Regular state school pupils scored 0.01 standard deviations lower in reading and 0.02 in mathematics than other regular state school pupils. 	
Bohte (2004) — Texas ⁵⁰		<ul style="list-style-type: none"> A 1 percentage point increase in countywide charter school enrolments was associated with a 0.10 point increase in district pass rates at standardised tests in the following year.

Key Findings from Studies of the Impacts of Charter Schools on Regular State School Pupils		
Study	Negligible to negative impact	Negligible to positive impact
Ahlin (2003)—Sweden ⁵¹		<ul style="list-style-type: none"> • A 10 percentage point increase in the share of Free School enrolments was associated with statistically significant positive effects on pupils’ mathematics performance of about 5 percentile rank points. • There were no significant impacts on English and Swedish achievement.
Holmes and others (2003)—North Carolina ⁵²		<ul style="list-style-type: none"> • The presence of charter schools increased a composite index of regular state school performance by about 1 percentage points, if a charter school was between 5 and 25 kilometres from a regular state school.
Greene and Forster (2002)—Milwaukee ⁵³		<ul style="list-style-type: none"> • Found a positive statistically significant relationship between charter schools’ presence and regular state schools’ 10th grade standardised test scores. • If an average regular state school experienced pressure from a charter school located 1 kilometre away it could have expected its average test score performance to increase by 9 points between 1996-97 and 2000-01. • If the competing charter school was 4 kilometres away the increase would have been 3.5 points over the same period.
Hoxby (2001)—Michigan and Arizona ⁵⁴		<ul style="list-style-type: none"> • Found large, positive statistically significant impacts from charter schools on regular state schools. • <i>Michigan</i>—4th grade reading and mathematics scores were 1.2 and 1.1 national percentile rank points higher; and 7th grade scores were 1.4 and 0.1 points higher. • <i>Arizona</i>—4th grade scores increased by 2.3 national percentile rank points in reading, by 2.7 points in mathematics, and by 1.6 points in 7th grade mathematics.

Appendix Two

Limitations of studies which have examined charter schools' impacts on regular state schools

Compared to the amount of research which has been carried out to evaluate charter schools' impacts on their pupils' achievement, there is much less that has been done to assess charter schools' impacts on regular state school pupils' achievement.⁵⁵ In this *Research Note*, we have endeavoured to cite the studies from this relatively small body of research that meet standards of high quality research.

Elsewhere, we have described our criteria for determining which research is of the highest quality for determining charter schools' impacts on pupils' achievement and how to interpret the findings from such research.⁵⁶ Briefly put, the highest quality research should enable conclusions to be drawn about the causal effect of charter schools on pupils' achievement. Leading educational researchers, and social scientists more generally, think the strongest methods for determining causality in charter schools research are those that use experimental techniques and that:⁵⁷

- statistically control for pupils' background characteristics;
- statistically control for non-observable pupil characteristics—like parental involvement—that could influence charter schools' impacts on pupils; and/or
- sample a large population over a period of time.

While the studies that we have cited here meet some of these criteria, they do not meet all of them. This is because when researchers study charter schools' competitive effects it is not possible for them to create control groups that provide robust counterfactual cases. This is because whether or not a family sends their child to a charter school is not random.⁵⁸ It is also because charter schools are not randomly located as they may choose to establish themselves nearby under-performing regular state schools.⁵⁹ Both of these factors can bias study results unless researchers use controls for pupils' background characteristics and/or use an instrument to control for charter schools' location. Good studies will also look at charter schools' impacts over time.⁶⁰ Even if researchers use good controls, the reality is that the main tests in these studies are usually a measure of how strong the relationship is between charter schools' presence and regular state schools' performance. This does not invalidate them as meaningful research studies; it is just that we cannot be as certain that unobserved factors, such as the ones related to pupils' or schools' characteristics, have caused the observed relationship.⁶¹ In other words, findings from such studies should not be interpreted as conclusive evidence of an impact or a causal effect, but they are still insightful.

There are also some other issues that should be kept in mind when examining studies of charter schools' impacts on regular state schools. For one, some studies only use school-level data or data that has been further aggregated, such as to the school-district level, which is not as precise for measuring performance impacts, although may still be appropriate if one is interested in school-level impacts.⁶² A few argue that researchers should instead examine districts with different levels of choice to see which laws are performing best at the district level, as the goal of schooling is to educate all pupils, not just those who attend a certain type of school. If, on the whole, school districts that have charter schools perform more highly than those that do not, this may suggest that charter schools can help to improve educational outcomes overall, even if at the school level outcomes may be poor.⁶³

Secondly, how researchers have chosen to measure how much pressure the presence of charter schools has had on regular state schools can affect the magnitude of the estimated impacts.⁶⁴ For example, most researchers have used a proxy, like the number of charter schools within a certain distance of each regular state school, or the share of charter school enrolments within in a school district or within a certain distance of each regular state school. A few others have used more sophisticated instruments to reduce the non-random impact of where charter schools choose to locate, such as the distance between regular state

schools and buildings in which charter schools are likely to operate.⁶⁵ Many studies use combinations of these methods so it is important to consider the differences between the various estimates which they produce and to compare them with the results of other studies that have used similar methods to get a sense of whether the results are reasonable.

Finally, unlike some evaluations of charter schools' impacts on pupils' achievement, studies of charter schools' impacts on regular state schools have only been carried out in specific places, such as cities or states in the United States. This limits the claims that can be made from their findings.⁶⁶

Thus, the studies which we have cited here of charter schools' impacts on regular state school pupils' achievement should not be considered as conclusive evidence of causality. This means that their findings should not be used to make generalisations about charter schools' impacts on regular state school pupils' achievement.

ENDNOTES

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- 2 S. Thomas, "Can Charter Schools Improve the Achievement of Disadvantaged Pupils?" *Evaluating Charter Schools Research Note 1* (Auckland: Maxim Institute, 2012).
- 3 Partnership Schools Working Group, *Frequently Asked Questions*. On the benefits of charter schools' presence for regular state schools see, for example, J. Bohte, "Examining the Impact of Charter Schools on Performance in Traditional Public Schools," *Policy Studies Journal* 32, no. 4 (2004): 504-5; C.M. Hoxby, "School Choice and School Competition: Evidence from the United States," *Swedish Economic Policy Review* 10 (2003): 21; C.M. Hoxby, "School Choice and School Productivity (or Could School Choice be a Tide that Lifts All Boats?)," Prepared for NBER Conference on The Economics of School Choice, Cheeca Lodge (Massachusetts, Cambridge: National Bureau of Economic Research (NBER), 2001), 1-2; P. Teske et al., "Does Charter School Competition Improve Traditional Public Schools?" *Civic Report*, 10 (New York: Manhattan Institute, 2000), 2, 3; M. Schneider, P. Teske and M.J. Marschall, *Choosing Schools. Consumer choice and the quality of American schools* (Princeton & Oxford: Princeton University Press, 2000), 35. On the potential for charter schools to be innovative, see in particular C. Lubienski, "Do Quasi-markets Foster Innovation in Education? A comparative perspective," *Education Working Papers*, 25 (Paris: OECD, 2009), 10-11. Often charter schools' impacts on regular state schools have been analysed in terms of "competition." However this term does not accurately capture all of what might be happening to regular state schools as a result of alternative schools operating within a locality. For example, a charter school may or may not be in direct competition with neighbouring regular state schools for pupils depending on whether or not the charter school has a specialist focus or mission, such as to reach disadvantaged pupils. It may therefore be better to think of "competition" or "competitive effects" as "systemic" effects brought about by the presence of alternative schools to regular state schools, such as charter schools.
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- 6 S. Waslander et al., "Markets in Education. An analytical review of empirical research on market mechanisms in education," *OECD Education Working Papers*, 52 (OECD Publishing, 2010).
- 7 S.A. Imberman, "The Effect of Charter Schools on Achievement and Behavior of Public School Students" (University of Houston, 2009), 19.
- 8 Y. Ni, "The Impact of Charter Schools on the Efficiency of Traditional Public Schools: Evidence from Michigan" (University of Utah, 2007), 31, 33. It should be noted that school districts which lose pupils may continue to maintain fixed staffing and resource funding, as well as big centralised administrations and centralised services, even though they may no longer have enough pupils to finance the expenditure. School districts' failure to adjust their spending budget to fit their funding can have an impact on their financial viability.
- 9 M. Carr and G. Ritter, "Measuring the Competitive Effect of Charter Schools on Student Achievement in Ohio's Traditional Public Schools" (Fayetteville: University of Arkansas, 2007), 23.
- 10 K. Booker et al., "The Effect of Charter Schools on Traditional Public School Students in Texas: Are children who stay behind left behind?" (2005), 19-20, 32; J. Bohte, "Examining the Impact of Charter Schools on Performance in Traditional Public Schools," 513-514.
- 11 G.M. Holmes, J. Desimone and N.G. Rupp, "Friendly Competition. Does the presence of charters spur public schools to improve?" *Education Next* Winter (2006): 70; G.M. Holmes, J. Desimone and N.G. Rupp, "Does School Choice Increase Quality?" *Working Paper*, 9683 (Cambridge, MA: National Bureau of Economic Research (NBER), 2003), 13-15.
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- 14 Cf. R. Buddin, "The Impact of Charter Schools on Public and Private School Enrolments," *Policy Analysis*, 707 (Washington D.C.: Cato Institute, 2012), 8; R. Zimmer et al., "Charter Schools in Eight States: Effects on achievement, attainment and integration" (Santa Monica, CA: RAND Corporation, 2009), 78; R. Zimmer and R. Buddin, "Is Charter School Competition in California Improving the Performance of Traditional Public Schools?" *Public Administration Review* 69, no. 5 (2009): 834-35; S.A. Imberman, "The Effect of Charter Schools on Achievement and Behavior of Public School Students," 20; M. Carr and G. Ritter, "Measuring the Competitive Effect of Charter Schools on Student Achievement in Ohio's Traditional Public Schools," 24; R. Bifulco and H.F. Ladd, "The Impacts of Charter Schools on Student Achievement," *Education Finance and Policy* 1, no. 1 (2006): 85.
- 15 Cf. B. Scafidi, "The Fiscal Effects of School Choice Programs on Public School Districts" (Indianapolis: Friedman Foundation for Educational Choice, 2012), 1, 19. S. Loeb, J. Valant and M. Kasma, "Increasing Choice in the Market for Schools: Recent reforms and their effects on student achievement," *National Tax Journal* 64, no. 1 (2011): 151, citing B. Gill and K. Booker, "School Competition and Student Outcomes," in *Handbook of Research in Education Finance and Policy*, eds. H.F. Ladd and E.B. Fiske (New York: Routledge, 2008), 183-200. R. Zimmer et al., "Charter Schools in Eight States: Effects on achievement, attainment and integration," 82; E.P. Bettinger, "The Effect of Charter Schools on Charter Students and Public Schools," *Economics of Education Review* 24, no. 2 (2005): 133-47.
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- 18 B. Gross, "Inside Charter Schools. Unlocking doors to student success," 18-19.
- 19 S. Thomas, "Can Charter Schools Improve the Achievement of Disadvantaged Pupils?" *Understanding Charter Schools Research*

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 - 56 For more discussion about how we determined what characterises

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- 63 Personal Communication between N.L. Gray and S. Thomas, 23 October 2012.
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