CUBeC Digest

Centre for Understanding Behaviour Change

April 2013

Contents

Introduction

Over the past year, a vast array of CUBeC research has been published across a wide range of themes relevant to education policy priorities. In this second edition of the CUBeC Digest, we summarise the findings from each of these reports (section 1).

As well as giving details of research produced by CUBeC, we provide a summary of the great deal of relevant work published by others working in the field over the past year or so (section 2).

In terms of our own research in CUBeC, with reform of the school system and funding moving at a rapid pace, there has been inevitable interest in the efficient use of resources and efficient functioning of markets.

- **Understanding school financial decisions** showed that there is a high level of idiosyncratic variation in expenditure decisions across schools, i.e. variation in expenditure decisions that cannot be explained by schools' circumstances.
- **Financial incentives and working in the education sector** undertook an online experiment to investigate the effects of incentives on students' intentions to train as teachers. While offering larger incentives for the most able students in high-priority subjects did not increase expressed intention to teach in those subjects, neither did it harm the level of interest in teaching lower-priority subjects.

Department for Education

- **How can we encourage good schools to expand?** found that expansion has largely been determined by local population change rather than by school performance. Further investigation uncovered no strong incentives for schools to expand, and some possible disincentives.

With a greater role for the commissioning of services by schools, local authorities and other public sector bodies, there are a number of smaller reports examining aspects of commissioning.

- **Commissioning public services: grants versus contracts** argues that opening up services to for-profit firms is likely to involve a shift to contract funding.
- **Schools' relationship with local authorities: lessons from the decentralisation of healthcare commissioning** asserts that 'getting the incentives right' is crucial to maintain quality services. This is more likely when commissioners are well informed about the quality of services on offer, when they cannot use budget surpluses to increase salaries and when they are accountable to the ultimate consumers for the quality of services they purchase.
- **The use of evidence in commissioning children's services: a rapid review** finds that, although there is a lot of guidance on how commissioners of children's services should use evidence, we have very little information on what they actually do in this respect.

Finally, continuing the theme of the use of evidence, there is also a short piece examining the way teachers use evidence to shape their practice, in particular in managing classroom behaviour.

- **What influences teachers to change their practice? A rapid research review** concludes that existing research provides insights into the factors that influence teachers' practice but there is less evidence on what specifically influences teachers to change their practice around behaviour management and why the available guidance to teachers on effective practices is not being consistently implemented.

What is CUBeC? The Centre for Understanding Behaviour Change (CUBeC) includes academic experts of the highest international standing from the fields of economics, neuroscience, cognitive and experimental psychology, sociology, social research and educational research drawn from a range of the country's leading public policy research centres: the Centre for Market and Public Organisation (CMPO), the Institute for Fiscal Studies (IFS) and the National Centre for Social Research (NatCen). The team also includes world-class academic researchers from a number of the UK's leading universities: the University of Bristol, Imperial College London, the Institute of Education (IoE), the London School of Economics and Political Science (LSE), the University of Oxford and University College London (UCL). We are grateful to the Department for Education for providing funding. Further details can be found on the CUBeC website (**http://www.cubec.org.uk/**).

1. CUBeC Research

Understanding school financial decisions

This report looks at how spending patterns vary between schools, examining detailed expenditure data across schools and considering the potential for improvement. This issue has been addressed before for some headline spending totals, but we use a new data set – the School Workforce Census – that allows us to drill down to a very detailed level and look at some of the real operational decisions that schools make on how to allocate their budgets.

The results show that, in both primary and secondary phases, there is a lot of variation in some expenditure decisions taken by different schools. Some of this reflects their different circumstances, but even accounting for this there is still a substantial degree of idiosyncratic variation, which reflects unexplained differences in schools' approaches to decisions.

We also find that the more disaggregated the item of expenditure, the more idiosyncratic the expenditure levels are. Items that account for a large share of the budget, such as total teaching expenditure per pupil, are relatively constrained by overall budgets and so there is less variation. At the other end of the scale, detailed operational decisions such as those about expenditure on senior school leaders, support staff, headteacher pay, teacher turnover, and the deployment of teachers by subject (i.e. how many hours of a subject are taught by specialists) are less budget-constrained, giving schools more scope for change, and we can explain little of the variation. For example, regarding the number of senior school staff, controlling for the school context, we find that three-quarters of the variation is idiosyncratic. Essentially equivalent schools are making very different decisions on how many senior positions to have, on how many support staff to have, and so on.

Understanding school financial decisions, Rebecca Allen (IoE), Simon Burgess (CMPO), Imran Rasul (UCL) and Leigh McKenna (CMPO), **https://www.education.gov.uk/publications/eOrderingDownload/DFE-RR183.pdf**

Financial incentives and working in the education sector

DfE and its predecessor Departments have for many years offered bursaries to graduates wishing to train as teachers. This report examines the characteristics and motivation of people likely to become teachers and conducts an online experiment with higher education students to explore how future incentives might be modified to influence the take-up of teaching.

The research finds that students who were already considering teaching were influenced to a greater extent by a financial incentive than those not initially interested. It is likely that the incentive rationalised an existing intention, although this specific experiment could not rule out the possibility that students motivated by a need for funding may be incentivised by a bursary to consider teaching. In the experiment, offering larger incentives for the most able students in high-priority subjects did not increase student intention to teach in those subjects, although neither did it harm the level of interest in teaching lower-priority subjects.

Financial incentives and working in the education sector, Paul Dolan (LSE), Robert Metcalfe (University of Oxford) and Daniel Navarro-Martinez (LSE), **https://www.education.gov.uk/publications/eOrderingDownload/DFE-RR251.pdf**

How can we encourage good schools to expand?

To ensure every child has access to a good school place, as we move towards a more autonomous school system, it is important to understand the barriers that may inhibit the supply of high-quality places. This study explores whether the best-performing schools have added any more capacity than the worst-performing schools and the factors that may have influenced this behaviour.

The study examines which secondary schools have added most capacity between 2002 and 2011, using changes in Year 7 cohort size as a proxy for school expansion. Over the period studied, there were significant changes for secondary schools, in terms of demographics, school organisation and funding. There is, therefore, some question as to how readily the results can be interpreted in the current landscape. The research finds that, over the past decade, high-performing secondary schools have added no more capacity than other schools. Instead, expansion has largely been determined by local population change. Further investigation uncovered no strong incentives for schools to expand, and some possible disincentives:

- Where there is high socio-economic sorting around schools (i.e. pupils from more affluent backgrounds living closer), expansion could significantly reduce the quality of the pupil intake for some schools. However, this is not a major issue for most schools.
- Growing schools get the same or less funding per pupil than static schools, suggesting that local authorities distribute cost savings across all their schools. This implies schools have little to gain financially from expanding and expansion could lead to uncertainty in future funding.
- The additional pay headteachers of larger schools receive is typically small. On average, it amounts to £3,000 per year more for a secondary school with 150 extra pupils.

The study recommends moving to a funding system where revenue follows pupils, thus removing the financial uncertainty that expansion brings, giving pay incentives to headteachers of high-quality schools to expand and providing capital grants specifically targeted at the expansion of the best-performing schools.

How can we encourage good schools to expand?, Rebecca Allen (IoE) and Simon Burgess (CMPO), **http://www.bristol.ac.uk/cubec/portal/report9.pdf**

Commissioning public services: grants versus contracts

This short report examines the economic arguments about how services for children and young people are funded, comparing the current grant-based system against an alternative contract-based system. The key points to emerge are:

- Opening up services to for-profit firms is likely to involve a shift to contract funding. Sometimes, arguments around grants versus contracts become reduced to a debate about provider type; it is important to recognise the difference between the two.
- Contracting – by opening up service delivery to for-profit firms – is likely to lower costs of delivery. However, there may be a cost–quality trade-off: lower cost could come at the expense of (non-contractible) quality. This may argue for a grants-based system to favour not-for-profits rather than for-profits, but there are other ways of achieving a similar goal, e.g. basing the contracting not just on narrow cost efficiency but also on a wider social cost–benefit analysis (or social return on investment analysis).
- Grants can enable providers to define priorities and take advantage of specialised knowledge. They can also provide funding to small organisations.
- Finally, the funding arrangement is only one part of a wider commissioning process: if DfE wanted to open up priority-setting to a wider group of stakeholders, it could do that at an earlier stage in the process. Not-for-profits could be involved in a contracts-based system in the planning stages and through designing the evaluation criteria.

Commissioning public services: grants versus contracts, Sarah Smith and Susan Steed (CMPO), **http://www.bristol.ac.uk/cubec/portal/pr6.pdf**

Schools' relationship with local authorities: lessons from the decentralisation of healthcare commissioning

With the rapid expansion of the academies programme and planned reforms to schools funding, local authorities may play a smaller role in the provision and commissioning of school services over the next few years. In contrast, schools themselves seem likely to take on new roles and responsibilities for commissioning specific services. Given the history of devolving similar commissioning responsibilities in the NHS, this report aims to draw lessons from this experience for schools policymakers.

Decentralising the commissioning of public services can have advantages: local information held at lower tiers of a hierarchy can lead to more efficient and effective service provision. However, the incentives at these lower levels may not lead to better outcomes for consumers, and services may not be sufficiently accountable to consumers.

There are some clear and general recommendations from the experience of commissioning in healthcare. 'Getting commissioners' incentives right' is crucial to ensure that decentralisation and competition do not result in lower-quality services. This is less likely to occur when commissioners are well informed about the quality of services on offer, when they cannot use budget surpluses to increase salaries and when they are accountable to the ultimate consumers (parents, pupils or patients). If the commissioners are not well informed, there may be a need to regulate prices to ensure that quality is not reduced, as has occurred with the commissioning of healthcare services.

It is important for commissioners to have specialist knowledge of their service area and to develop good management and commissioning skills, otherwise they will not make best use of the 'local information' which can improve services. This may well take resources, and importantly time for commissioners to mature. However, developing strong accountability to parents can support such a reform.

Schools' relationship with local authorities: lessons from the decentralisation of healthcare commissioning, Haroon Chowdry, Jonathan Cribb and Luke Sibieta (IFS), **http://www.bristol.ac.uk/cubec/portal/pr5.pdf**

The use of evidence in commissioning children's services: a rapid review

While there is a substantial body of guidance for commissioners, there is little in the literature on the perspective of commissioners themselves, or authoritative evidence of what commissioners do and the extent to which they comply with agreed good practice. This means that we cannot be confident in saying whether or how evidence is being used.

Nonetheless, commissioners need evidence in order to:

- Understand needs or problems. Collecting and analysing data to understand need requires effective information systems, timely analysis and protocols for sharing data between partner agencies based on agreed criteria. The Joint Strategic Needs Assessment is a key mechanism for identifying need, but there can be difficulties in its use to inform commissioning.
- Know what works. Here, there remain some major gaps in the evidence base, particularly with regard to evidence on cost-effectiveness in children's services.
- Identify efficiency and effectiveness in achieving outcomes. This process is impeded by a lack of funding for evaluation, insufficiently clear expectations on the part of commissioners, and a lack of time, capacity and expertise on the part of service providers.

The main criticisms of commissioning practice in children's services come from voluntary sector providers and include inconsistency within and between local authorities, a lack of focus on outcomes, inadequate assessment of needs and of the market available to meet those needs, and poorly-managed monitoring and evaluation.

Research on knowledge transfer in health and social care suggests that evidence-based decision-making appears likely to be facilitated by:

- leaders who value evidence;
- an organisational learning culture and outcomes focus;
- data being analysed to provide 'intelligence';

- high-quality, easy-to-access research summaries;
- interaction between researchers and decision-makers to increase relevance and timeliness;
- commissioners having good critical appraisal skills – and time to use them;
- use of evidence embedded in the planning–delivery–evaluation cycle.

The use of evidence in commissioning children's services: a rapid review, Di McNeish and Sara Scott with Linda Maynard (National Centre for Social Research), **http://www.bristol.ac.uk/cubec/portal/pr8.pdf**

What influences teachers to change their practice? A rapid research review

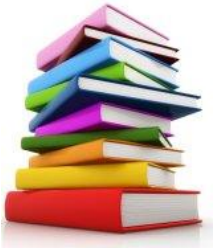
Most teachers manage behaviour well, but not all do so, despite the availability of generally agreed guidance. There is little evidence as to what influences teachers to change their behaviour management practice or as to why available guidance is not consistently implemented.

However, influences on teachers' behaviour more generally include individual factors, whole-school approaches, and external guidance and information. Applying these findings to behaviour management leads the researchers to conclude that:

- Individuals' use of effective classroom behaviour strategies will be supported most effectively when:
  - recruitment (e.g. images used to promote teaching as a career) and selection tools reflect the importance of behaviour management as well as subject knowledge;
  - support and training are tailored to specific needs (e.g. of newly-qualified teachers, experienced teachers, part-time staff, those on time-limited contracts, those with low confidence);
  - continuing professional development is delivered by people (especially other teachers) respected for their experience and expertise.
- Effective whole-school approaches to supporting behaviour management will include:
  - leadership that shares responsibility for behaviour management policies with those who implement them;
  - support to negotiate behaviour strategies with parents (e.g. parental contracts, actively involving parents in decisions about managing behaviour).
- Providers of information and guidance should be aware that:
  - people respond to information that reinforces a positive self-image; thus negative aspects of inspection reports may be harder to learn from and guidance needs to recognise that some schools have a more difficult job than others;
  - information is most likely to be used if seen as immediately relevant to day-to-day practice.

What influences teachers to change their practice? A rapid research review, Alison Webster, Di McNeish and Sara Scott with Linda Maynard and Sarah Haywood (National Centre for Social Research), **http://www.bristol.ac.uk/cubec/portal/pr7.pdf**

2. Other Published Research



In the previous section, we summarised the list of work published by CUBeC over the past year. In this section, we go beyond this and provide a summary of other published research relevant to education policy that has been released over the past year or so. This includes work published in academic journals and working papers.

The list is divided into five subsections: school standards and behaviour; families and children; school system and funding; workforce; and transition to the labour market.

School standards and behaviour

What avenues are open to us to increase children's attainment in school? This is the perennial question that faces educational policymakers and practitioners alike. Recent research gives some intriguing clues.

Looking at whether behavioural economics can teach us any lessons, the first paper reports the results of a series of field experiments involving thousands of primary and secondary school students to examine the power of **pupil incentives** to influence educational performance. Several insights emerge:

- Incentives framed as losses have more robust effects than comparable incentives framed as gains.
- Non-financial incentives are considerably more cost-effective than financial incentives for younger students, but are not effective with older students.
- All motivating power of the incentives vanishes when rewards are handed out with a delay.

The behavioralist goes to school: leveraging behavioral economics to improve educational performance, Steven D. Levitt, John A. List, Susanne Neckermann and Sally Sadoff, *NBER Working Paper 18165, June 2012*, **http://www.nber.org/papers/w18165**

Research also considers the longer-term effects of **a more rigorous educational curriculum**. Looking at young people graduating from US high schools in the late 1990s and early 2000s shows that those taking a more rigorous high-school math curriculum (algebra II / precalculus or trigonometry / calculus as opposed to algebra I or geometry) are more likely to attend college (by a margin of 17 percentage points) and more likely to attend a four-year college (by 20 percentage points).

The effects of high school math curriculum on college attendance: evidence from the NLSY97, Alison Aughinbaugh, *Economics of Education Review, 31(6):861–70, December 2012*, **http://dx.doi.org/10.1016/j.econedurev.2012.06.004**

Turning from pupil- to school-level levers, the next paper looks at the effect of **school inspection**. It finds that schools only just failing an Ofsted inspection see an improvement in scores over the following two to three years. The effect size is moderate to large at around 10% of a pupil-level standard deviation in test scores. This improvement occurs in core compulsory subjects – suggesting that this is not all the result of course entry gaming on the part of schools. There is little positive impact on lower-ability pupils. Instead, the effects are concentrated on middle- or high-ability pupils.

How should we treat under-performing schools? A regression discontinuity analysis of school inspections in England, Rebecca Allen and Simon Burgess, *Centre for Market and Public Organisation Working Paper 12/287, March 2012*, **http://www.bristol.ac.uk/cmpo/publications/papers/2012/wp287.pdf**

As schools gain more autonomy to set their own conditions regarding the length of the school day and year, two studies conducted in Wake County, North Carolina in the US look at the effect of (a) **school start times** and (b) **changed holiday patterns** on academic performance. The first analysis makes use of the fact that local school districts in the US often stagger schools' daily start times in order to reduce transport costs, with start times ranging from 7.30 to 9.00 a.m. A one-hour-later start time is related to a small but statistically significant increase in math scores, with a stronger effect for students in the lower end of the distribution of test scores. The increase is most probably due to increased hours of sleep. The second paper – an analysis of the effects of switching from traditional school

calendars to year-round calendars, spreading the 180 instructional days evenly across the year – suggests that year-round schooling has no impact on the academic achievement of the average student.

(a) **Early to rise? The effect of daily start times on academic performance**, Finley Edwards, *Economics of Education Review, 31(6):970–83, December 2012*, **http://dx.doi.org/10.1016/j.econedurev.2012.07.006**

(b) **The impact of year-round schooling on academic achievement: evidence from mandatory school calendar conversions**, Steven C. McMullen and Kathryn E. Rouse, *American Economic Journal: Economic Policy, 4(4):230–52, November 2012*, **http://www.aeaweb.org/articles.php?doi=10.1257/pol.4.4.230**

In addition, there is a substantial literature on the effects of **school resources** on students' attainment.

Two reports consider the effects of **class size**, looking beyond average results to the effects on particular groups. The first paper, an analysis of results from Project STAR, finds that while all children appear to benefit from being placed in small classes, the largest test score gains are for high achievers. In contrast, an analysis of data from the Norwegian elementary school system finds that smaller class sizes appear to confer benefit for students with parents who are educated at or below the upper secondary school level.

- **Estimating the distributional effects of education reforms: a look at Project STAR**, Erika Jackson and Marianne Page, *Economics of Education Review, 32:92–103, February 2013*, **http://dx.doi.org/10.1016/j.econedurev.2012.07.017**
- **Disadvantaged students in the early grades: will smaller classes help them?**, Jon Marius Vaag Iversen and Hans Bonesrønning, *Education Economics, October 2011*, **http://dx.doi.org/10.1080/09645292.2011.623380**

Two papers use changes in schools funding to explore the effect of **targeted resources** on different groups, both finding positive results through different funding strategies. The first – an analysis of changes in the school funding regime in Israel in 2004, which gave more weight to students from lower socio-economic and lower educational backgrounds – suggests that spending more money and spending more time at school and on key tasks all lead to improved academic performance, with the effect much larger for pupils from low socio-economic backgrounds. The second paper looks at the US case of targeted substantial School Improvement Grants (SIGs) to 'persistently lowest-achieving' public schools, which required schools accepting these awards to implement a federally prescribed school-reform model. There were significant improvements in performance in many schools – mainly among those adopting the federal 'turnaround' model, which compels more dramatic staff turnover.

- **Expanding school resources and increasing time on task: effects of a policy experiment in Israel on student academic achievement and behaviour**, Victor Lavy, *NBER Working Paper 18369, September 2012*, **http://www.nber.org/papers/w18369**
- **School turnarounds: evidence from the 2009 stimulus**, Thomas Dee, *NBER Working Paper 17990, April 2012*, **http://www.nber.org/papers/w17990**

Families and children

SEN reform

An active programme of reform makes this an area of key policy interest. Research is contributing to our understanding of **how different approaches to SEN affect outcomes**. Two recent studies examine the effectiveness of Special Educational Needs (SEN) programmes generally and of Autism Spectrum Disorder (ASD) placements, while a third looks at the 'SEN industry'.

The first paper finds that the likelihood of being designated as having SEN depends to a significant degree on which school is attended. This is particularly true for children with moderate learning difficulties. Moreover, remediation programmes appear to be ineffective for a significant proportion of children with 'SEN'.

Every child matters? An evaluation of 'Special Educational Needs' programmes in England, Francois Keslair, Eric Maurin and Sandra McNally, *Economics of Education Review, 31(6):932–48, December 2012*, **http://www.sciencedirect.com/science/article/pii/S0272775712000738**

Assessing children at the start of the school year and then again at the end of the school year, the second study found that the behaviour of children with ASD improved in both mainstream and special settings. However, those children in specialist provisions made greater improvements in conduct and socialisation.

A comparative study of the impact of mainstream and special school placement on the behaviour of children with Autism Spectrum Disorders, Phil Reed, Lisa A. Osborne and Emma M. Waddington, *British Educational Research Journal, 38(5):749–63, October 2012*, **http://onlinelibrary.wiley.com/doi/10.1080/01411926.2011.580048/abstract**

Why are special educational services expanding at the same time as inclusion in mainstream education of young people with disabilities and learning difficulties is increasing? Following discussions with some 70 professionals, administrators and others in four countries, the third article suggests that an expanded and expensive 'SEN industry' is driven variously by the needs of parents for their children to be resourced on the basis of medical or therapeutic 'diagnosis', the efforts of teachers to raise standards, and the needs of professionals and practitioners to expand their clientele.

The irresistible rise of the SEN industry, Sally Tomlinson, *Oxford Review of Education, 38(3):267–86, 2012*, **http://www.tandfonline.com/doi/abs/10.1080/03054985.2012.692055**

Childcare

The availability and funding of childcare have potential to affect both parents' behaviour – particularly their participation in the labour market – and children's outcomes. A substantial and international literature examines these issues.

Three papers examine the expansion of **subsidised childcare in Norway and its effects on parental employment and child outcomes**. The first finds no significant effects on uptake of childcare or parental employment, but positive effects on children's academic performance in junior high school, suggesting the positive shock to disposable income provided by the subsidies may be helping to improve children's scholastic aptitude. The second paper also finds strong positive effects on children's educational attainment, but, in contrast to the first, it additionally finds strong positive effects on parents' labour market participation, and reduced welfare dependency. Girls and children with low-educated mothers appear to benefit the most from childcare. The greater benefit to more disadvantaged families is echoed by the third paper, which finds that children of low-income parents seem to be the primary beneficiaries of subsidised childcare.

- **Care or cash? The effect of child care subsidies on student performance**, Sandra E. Black, Paul J. Devereux, Katrine V. Løken and Kjell G. Salvanes, *NBER Working Paper. 18086, May 2012*, **http://www.nber.org/papers/w18086**
- **No child left behind: subsidized child care and children's long-run outcomes**, Tarjei Havnes and Magne Mogstad, *American Economic Journal: Economic Policy, 3(2):97–129, May 2011*, **https://www.aeaweb.org/articles.php?doi=10.1257/pol.3.2.97**
- **Is universal child care leveling the playing field?**, Tarjei Havnes and Magne Mogstad, *CESifo Working Paper 4014, November 2012*, **http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2184732**

Two US studies take a different approach, looking at the **effects of subsidised childcare on family well-being and on obesity** respectively. They find that childcare subsidies are associated with worse maternal health (particularly regarding anxiety, depression and parenting stress), poorer interactions between parents and their children (greater psychological and physical aggression by mothers toward their children), and the prevalence of overweight and obesity among low-income children.

- **Child care subsidies, maternal well-being, and child-parent interactions: evidence from three nationally representative datasets**, Chris M. Herbst and Erdal Tekin, *NBER Working Paper 17774, January 2012*, **http://www.nber.org/papers/w17774**
- **The geographic accessibility of child care subsidies and evidence on the impact of subsidy receipt on childhood obesity**, Chris M. Herbst and Erdal Tekin, *NBER Working Paper 17471, September 2011*, **http://www.nber.org/papers/w17471**

Two further studies look at the **impacts of the Head Start programme** on (a) **educational attainment** in the first four years of school and (b) **parents' engagement** with their children in activities such as reading and maths. The programme (a) appeared to be very effective for black Head Start children, who made significant progress, whereas white and Hispanic children gained little relative to their peers who were exposed to other types of programmes and care, and (b) led to a substantial increase in parents' involvement with their children.

(a) **Head Start, 4 years after completing the program**, Young-Joo Kim, *Education Economics, September 2011*, **http://www.tandfonline.com/doi/abs/10.1080/09645292.2011.607556**

(b) **Children's schooling and parents' investment in children: evidence from the Head Start impact study**, Alexander M. Gelber and Adam Isen, *NBER Working Paper 17704, December 2011*, **http://www.nber.org/papers/w17704**

Another important theme in childcare is the importance and accessibility of **informal childcare**. A US study shows that close geographical proximity to mothers or mothers-in-law raises participation in the labour market by 4–10 percentage points for married women with young children. It argues that the reason behind this is the availability of informal childcare – including 'back-up' or emergency childcare. Two further reports summarise the current state of informal childcare in the UK. They find that, since the 1990s, use of informal care has increased as overall employment has increased, with low-income and lone parents particularly reliant. However, informal childcare is used across the socio-economic spectrum. Often it is used as part of a package of formal and informal childcare, typically to provide after-school and holiday cover, as the main type of care for babies and very young children, and as emergency or 'back-up' cover. Informal carers are most commonly grandparents.

- **Family proximity, childcare, and women's labor force attachment**, Janice Compton and Robert A. Pollak, *NBER Working Paper 17678, December 2011*, **http://www.nber.org/papers/w17678**
- **Informal childcare: choice or chance?**, Jill Rutter and Ben Evans, *Daycare Trust, Informal Childcare Research Series, March 2011*, **http://www.daycaretrust.org.uk/data/files/informal_childcare_march_2011_final.pdf**
- **The role of informal childcare: understanding the research evidence**, Caroline Bryson, Mike Brewer, Luke Sibieta and Sarah Butt, *Nuffield Foundation, March 2012*, **http://www.nuffieldfoundation.org/role-informal-childcare**

School system and funding

Different school systems affect the behaviour of those who participate in them in different ways. Research provides international and local comparisons to look at how this can work to affect pupil outcomes.

Looking at Programme for International Student Assessment (PISA) data from 2000 and 2006 in four European countries, one article shows that **educational inequality** decreased in Germany and Spain (two 'decentralised' schooling systems), whilst it increased in France and Italy (two 'centralised' systems). The paper argues that the inequality is driven by both background inequality and schools' characteristics and it is the latter which are responsible for the observed changes in inequality.

What are the causes of educational inequality and of its evolution over time in Europe? Evidence from PISA, Veruska Oppedisano and Gilberto Turati, *Education Economics, October 2012*, **http://dx.doi.org/10.1080/09645292.2012.736475**

Two papers explore the effects of **curriculum tracking** – the separation of students into schools or classes based on achievement. The first paper examines the introduction of comprehensive schooling in the UK and Sweden, the second the introduction of a more comprehensive system in Swedish upper secondary schools. Results are equivocal in both cases: there are some positive effects for some groups, but also questions about the extent to which these are sustained.

- **Incentives from curriculum tracking**, Kristian Koerselman, *Economics of Education Review, 32:140–50, February 2013*, **http://dx.doi.org/10.1016/j.econedurev.2012.08.003**
- **The effects of reducing tracking in upper secondary school: evidence from a large-scale pilot scheme**, Caroline Hall, *Journal of Human Resources, 47(1):237–69, Winter 2012*, **http://jhr.uwpress.org/content/47/1/237.abstract**

School autonomy and management

There has been much interest in **school autonomy** and US charter schools in particular. A special issue of the *Economics of Education Review* is devoted to understanding the charter schools experience, including their effectiveness in terms of student achievement and differences from public schools in terms of teacher turnover and cost-effectiveness.

***Economics of Education Review*, Special Issue: Charter Schools**, *31(2), April 2012*, **http://www.sciencedirect.com/science/journal/02727757/31/2**

Some of these concepts are combined in a paper that looks at the technical efficiency (i.e. outputs or test scores in relation to inputs or costs) of charter schools. Although the technical efficiency of charter schools was low relative to their traditional public school counterparts, it has improved more quickly.

Charter versus traditional public schools: a panel study of the technical efficiency in Ohio, Joseph Palardy, Todd M. Nesbit and Kerry A. Adzima, *Education Economics, December 2012*, **http://www.tandfonline.com/doi/full/10.1080/09645292.2012.748014**

Another paper considers the effects of school autonomy on pupil attainment by looking at the effects of foundation school status in England. Taking into account the fact that pupils are not randomly assigned to schools and schools do not randomly acquire autonomous status, it finds little evidence that foundation status causally yields superior school performance.

Measuring foundation school effectiveness using English administrative data, survey data and a regression discontinuity design, Rebecca Allen, *Education Economics, May 2012*, **http://dx.doi.org/10.1080/09645292.2012.687197**

With schools themselves commissioning a greater volume of services, it is also important to understand **how schools select amongst the different services on offer**. One recent paper uses the US market for Comprehensive School Reform service providers as a test case. The researchers investigate decision-making among school administrators in the market for school reform consulting services, finding that schools tend to contract with providers used by other schools in their own districts in the past, regardless of past performance.

When educators are the learners: private contracting by public schools, Silke J. Forbes and Nora E. Gordon, *NBER Working Paper 18185, June 2012*, **http://www.nber.org/papers/w18185**

Another paper looks at the potential benefits of **self-evaluation**, using a randomised controlled trial (RCT) to examine the impact of different approaches to establishing school self-evaluation (SSE) mechanisms on student achievement. It finds that any form of SSE is better than none, but SSE mechanisms based on research evidence of educational effectiveness are the most effective.

The impact of school self-evaluation upon student achievement: a group randomisation study, Demetris Demetriou and Leonidas Kyriakides, *Oxford Review of Education, 38(2):149–70, 2012*, **http://www.tandfonline.com/doi/full/10.1080/03054985.2012.666032**

School markets and choice

Organisational changes in schools that were introduced in England in the 1980s to increase 'efficiency' and competition have been adopted in other European countries. However, despite some evidence of convergence, England remains the outlier and continental European countries have been much slower to adopt choice and competition policies.

Market accountability in schools: policy reforms in England, Germany, France and Italy, Paola Mattei, *Oxford Review of Education, 38(3):247–66, 2012*, **http://www.tandfonline.com/doi/full/10.1080/03054985.2012.689694**

Another paper looks at the effect of **school choice** on attainment, and the mechanisms driving the effects. Using data on student outcomes and school-choice lotteries from a low-income urban school district, it finds that school choice can improve student outcomes (test scores) through improving student behaviour (reducing truancy and suspension) and the positive peer effects of attending a higher-performing school.

The effect of school choice on intrinsic motivation and academic outcomes, Justine S. Hastings, Christopher A. Neilson and Seth D. Zimmerman, *NBER Working Paper 18324, August 2012*, **http://www.nber.org/papers/w18324**

Workforce

Recent research is producing a number of results that relate to issues from teacher turnover to teacher pay and incentives. Many, though not all, have a direct focus on teacher performance / student attainment.

A study of **teacher turnover** shows that schools with higher levels of social disadvantage have higher teacher turnover. This is largely accounted for by the fact that schools with higher numbers of disadvantaged pupils hire much younger teachers on average, younger teachers being more mobile than their older colleagues.

The teacher labour market, teacher turnover and disadvantaged schools: new evidence for England, Rebecca Allen, Simon Burgess and Jennifer Mayo, *CMPO Working Paper 12/294, June 2012*, **http://www.bristol.ac.uk/cmpo/publications/papers/2012/wp294.pdf**

Another paper finds overall negative effects of **centralised pay bargaining** on educational output in England. Where local labour market wages are high, teacher wages are relatively lower and so is school performance. This effect is not offset by gains in areas where teacher pay is high relative to the local labour market. The average effect is relatively small, but large numbers of pupils are potentially affected. The researchers recommend that effort should be directed towards increasing flexibility in centralised wage bargaining.

Does wage regulation harm kids? Evidence from English schools, Carol Propper and Jack Britton, *CMPO Working Paper 12/293, July 2012*, **http://www.bristol.ac.uk/cmpo/publications/papers/2012/wp293.pdf**

A series of papers examine the effect of different types of **teacher incentives**, finding larger effects of financial incentives (a) when the incentives are stronger, (b) when the incentives incorporate loss aversion and (c) if they align with parents' incentives.

(a) **Incentive strength and teacher productivity: evidence from a group-based teacher incentive pay system**, Scott A. Imberman and Michael F. Lovenheim, *NBER Working Paper 18439, October 2012*, **http://www.nber.org/papers/w18439**

(b) **Enhancing the efficacy of teacher incentives through loss aversion: a field experiment**, Roland G. Fryer Jr, Steven D. Levitt, John List and Sally Sadoff, *NBER Working Paper 18237, July 2012*, **http://www.nber.org/papers/w18237**

(c) **Aligning student, parent, and teacher incentives: evidence from Houston public schools**, Roland G. Fryer Jr, *NBER Working Paper 17752, January 2012*, **http://www.nber.org/papers/w17752**

Two papers find positive effects of **teacher evaluations** on pupil performance – one a randomised pilot experiment that provided information on teacher performance to school principals, the other measuring the value added to student achievement before, during and after evaluation. Results appear most marked for those teachers with relatively poor pre-evaluation performance.

- **Information and employee evaluation: evidence from a randomized intervention in public schools**, Jonah E. Rockoff, Douglas O. Staiger, Thomas J. Kane and Eric S. Taylor, *American Economic Review, 102(7):3184–213, December 2012*, **http://www.aeaweb.org/articles.php?doi=10.1257/aer.102.7.3184**
- **The effect of evaluation on teacher performance**, Eric S. Taylor and John H. Tyler, *American Economic Review, 102(7):3628–51, December 2012*, **http://www.aeaweb.org/articles.php?doi=10.1257/aer.102.7.3628**

Two US studies look at the nuances of **measuring teacher quality**. The first emphasises that teachers have causal effects not only on test scores but also on non-cognitive ability. The second study finds that, once tracking and selection effects are taken into account, either teachers are less influential in high school than in elementary school or test scores are a poor metric to measure teacher quality at the high-school level.

- **Non-cognitive ability, test scores, and teacher quality: evidence from 9th grade teachers in North Carolina**, C. Kirabo Jackson, *NBER Working Paper 18624, December 2012*, **http://www.nber.org/papers/w18624**
- **Teacher quality at the high-school level: the importance of accounting for tracks**, C. Kirabo Jackson, *NBER Working Paper 17722, January 2012*, **http://www.nber.org/papers/w17722**

Headteachers are also found to affect pupil outcomes, but (a) the size of this effect depends on the statistical model(s) used and (b) there is significant variation in quality between school heads, with variation being greater for high-poverty schools. Headteachers exert their effect primarily through management of the teacher workforce, but (c) this is mediated by school culture and teacher motivations and beliefs.

(a) **Using student test scores to measure principal performance**, Jason A. Grissom, Demetra Kalogrides and Susanna Loeb, *NBER Working Paper 18568, November 2012*, **http://www.nber.org/papers/w18568**

(b) **Estimating the effect of leaders on public sector productivity: the case of school principals**, Gregory F. Branch, Eric A. Hanushek and Steven G. Rivkin, *NBER Working Paper 17803, February 2012*, **http://www.nber.org/papers/w17803**

(c) **The multilevel impact of transformational leadership on teacher commitment: cognitive and motivational pathways**, Xavier Dumay and Benoît Galand, *British Educational Research Journal, 38(5):703–29, October 2012*, **http://dx.doi.org/10.1080/01411926.2011.577889**

Transition to the labour market

Behaviour change theories potentially have much to contribute to the choices young people make when leaving school, through assessing the differences that different information and preparation strategies can make and the effects of short- and long-term rewards. A number of papers pick up on these themes in different ways.

A randomised experiment, using paired (treatment on / treatment off) schools, found that giving Year 10 pupils **information about university entry** – including loan conditions and grant – reduced the proportion put off by financial aspects of university by 5 percentage points and increased the probability that students would see education to age 18 or older as a benefit in getting a job.

Student awareness of costs and benefits of educational decisions: effects of an information campaign, Martin McGuigan, Sandra McNally and Gill Wyness, *Centre for the Economics of Education Discussion Paper 139, August 2012*, **http://cee.lse.ac.uk/ceedps/ceedp139.pdf**

An analysis of a **college-preparatory programme** implemented in inner-city schools in the US sees affected students pass more exams, be more likely to stay in college and earn higher wages. While the study is based on non-experimental variation, the paper claims results to be robust across a variety of specifications and suggests that such programmes can improve the long-run educational and labour market outcomes of disadvantaged young people.

Do college-prep programs improve long-term outcomes?, C. Kirabo Jackson, *NBER Working Paper 17859, February 2012*, **http://nber.org/papers/w17859**

A quasi-natural experimental analysis of three decades of American Community Survey data finds that **increasing the minimum wage** has little effect on the high-school dropout rate, but encourages some students to go straight into work on leaving school rather than on to tertiary education. Additionally, compulsory schooling laws increase high-school graduation rates, but exit examinations have a counterproductive effect, inducing some students to drop out or take the General Educational Development (GED) test rather than submit to the requirement.

The effects of the minimum wage and other public policies on high school graduation, Anna Morris, *Wellesley College Honors Thesis, 2012*, **http://repository.wellesley.edu/thesiscollection/37/**