

# **CMRE Research Digest 2014-10 (6)**

*Editor: Gabriel Heller Sahlgren*

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## Editor's Pick

### **The Impact of No Child Left Behind's Accountability Sanctions on School Performance: Regression Discontinuity Evidence from North Carolina**

*By: Thomas Ahn and Jacob Vigdor*

#### **NBER Working Paper No. 20511**

Available at: <http://www.nber.org/papers/w20511.pdf>

Since the 1980s, the use of accountability regimes has grown significantly worldwide. Theoretically, accountability could be one way to make up for the lack of extrinsic incentives to improve outcomes among schools by using carrots and sticks.

On the other hand, accountability may have deleterious unintended effects, examples of which include decreasing intrinsic motivation among school staff to do their jobs well, shifting focus to pupils on the borderline of different grade boundaries, excluding poorly performing pupils from accountability assessments, and outright cheating.

In a new study, Economists Thomas Ahn and Jacob Vigdor investigate the effects of the largest, and possibly most contentious, accountability programmes worldwide: the No Child Left Behind Act of 2001 (NCLB). NCLB required states to evaluate performance among schools receiving Federal Title 1 funding, distributed by the federal government to schools with high proportions of disadvantaged pupils. If performance falls below a certain established threshold, schools are threatened by a string of sanctions, which begin to kick in if schools perform under the threshold for a second consecutive year. These become more draconian for each year the school remains underperforming.

Using data from North Carolina, the authors analyse the impact of different threats and sanctions on pupil performance. Since threats and sanctions are only triggered if schools fall below a certain threshold, they can compare those very close to the threshold on each side. This means that the schools are very similar and that the impact of accountability sanctions can be estimated.

Overall, pupils attending schools that barely missed the threshold improve slightly more in mathematics than pupils attending schools that just met the requirements. The effect size amounts to about 0.02 standard deviations (SD), which is equivalent to about 2 PISA points. However, there is no effect on reading scores. The problem is that these results lump together all different threats and sanctions that are triggered when schools fall under the threshold, and it is therefore impossible to distinguish differential impacts.

And when the authors investigate the impact of specific sanctions and threats, a more nuanced picture emerges. Among the schools that fall under the threshold for the first time, the effects amount to about 0.05 SD in mathematics, when threatened by the fact that pupils will be allowed to transfer to other, non-failing public schools in case the school falls under the threshold the year after as well. When the first threat instead is mandatory tutoring, the impact is about 0.03 SD. In reading, the effect size is about 0.02 SD regardless of threat type, but it's sensitive to the specific bandwidth around the threshold that is used – it is not always statistically significant.

But when analysing the actual exposure to *sanction* rather than threat, there is no impact at all, apart from the two final sanctions: schools that fail to reach the threshold a fifth time in a row are required to implement a restructuring plan – with the last threat being the actual implementation – which has a *negative* impact on reading performance, amounting to about 0.06 SD. There is no impact in mathematics.

At the same time, the final penalty – the actual implementation of the restructuring plan – which applies to schools that fail to reach the threshold six consecutive years, has a positive impact on pupil performance in both subjects, amounting to 0.03 SD in reading and 0.05 SD in mathematics. The authors also provide evidence that restructuring increases the likelihood of staff turnover significantly, suggesting that part of the effect is likely be due to this channel.

The positive effects in mathematics are generally concentrated among lower-performing pupils, suggesting that schools do start focusing more on these when faced with a sanction. Indeed, schools also start to focus on pupil sub-groups that caused them to miss the threshold. However, the effects are never negative among highly performing pupils, which in turn suggests that the gains among low-performing pupils are not occurring at their expense. In reading, on the other hand, effects are very similar across the board, but rarely statistically significant.

Again, the largest exception to this is the impact of the final punishment, the implementation of the restructuring plan, which has similar effects across the board in mathematics (and to some extent also reading).

Overall, therefore, it is clear that NCLB has had very small positive effects on pupil achievement overall in North Carolina, although the final punishment, restructuring, does have a more consistent and larger positive impact. At the same time, lower-performing pupils tend to gain the most, while high-performing pupils do not lose out. The reason might be that North Carolina has its own accountability system, which also focuses on improvements in pupil test scores, rather than their absolute achievement, which gives schools incentives to focus on high-performing pupils as well.

While the study provides important new findings in the accountability literature, it does not deal persuasively with potential gaming that could inflate the scores. For this reason, we cannot be sure that the small positive effects that did occur are not due to different forms of gaming.

Nevertheless, it is intriguing that the most clear positive effects are found when schools are forced to actually implement a restructuring plan, which is often accompanied with staff turnover. This supports prior findings in the literature, which suggests that school turnaround does not occur unless new teachers and headteachers are brought in. It is also interesting that the threat, but not the actual sanction, of giving pupils choice is enough to improve schools more than most other threats and sanctions.

If we ignore potential gaming, the policy implications are that accountability sanctions might improve lower-performing pupils' scores somewhat, without hurting high-performing pupils (at least with the proper design), but that it might be better just to require restructuring than other elaborate sanctions that have little impact on their own.

Since choice threats, but not actual implementation, have positive effects on results, it is also plausible that schools reacted to potential competition, which then never materialised. One way to improve this mechanism is to increase the number of choices available to pupils within a reasonable distance, for example by making it easier for private providers to enter the market.

At the same time, the effects are hardly transformative, so there is little reason to expect accountability by itself to push schools to produce higher achievement; hoping to *radically* improve poorly performing schools via accountability does not appear to be realistic.

## Effects of Policy and Practice – Developed World

### **What Can International Comparisons Teach Us about School Choice and Non-Governmental Schools in Europe?**

*By: Jaap Dronkers and Sivia Avram*

#### **Comparative Education (Forthcoming)**

Available at: <http://apps.eui.eu/Personal/Dronkers/articles/CE2014.pdf>

All European states have a primary obligation to establish and maintain governmental schools everywhere, but as the result of political struggle and constitutional guarantees, they have also allowed and often financed non-state schools based on special pedagogical, religious or philosophical ideas. Depending on the level of state grants for non-state schools, states have more or less the right to supervise these non-governmental schools and seek to guarantee that the quality of organisation and teachers are not lower than those in governmental schools.

Using comparable cross-national data for all member states of the European Union, the authors first describe four existing basic arrangements of non-governmental and governmental schools: integrated educational systems of public and non-state schools, denomination supportive educational systems, limited-support non-governmental schools and educational systems with segregated public and non-state schools.

Using the same cross-national data for all member states of the European Union, they then explore three other topics: parental background and the choice of non-governmental schools, non-governmental schools and their cognitive outcomes, and non-governmental schools and their non-cognitive outcomes. There are important differences between non-governmental-independent (without state grants) and non-governmental-dependent schools (with state grants); that school choice of non-governmental-dependent schools is more related to socially mobile parents, whereas schools choice of non-governmental-independent schools is more related the reproduction of social classes; that in a majority of European countries, non-governmental-dependent schools are more effective cognitively than governmental schools, but that non-governmental-independent schools are more effective cognitively only in a few countries and more ineffective in a larger number of countries. Also non-governmental-dependent schools are not more effective non-cognitively than governmental schools.

## **Cost-Effectiveness Analysis in Practice: Interventions to Improve High School Completion**

*By: Fiona Hollands, A. Brooks Bowden, Clive Belfield, Henry M. Levin, Henan Cheng, Robert Shand, Yilin Pan, and Barbara Hanisch-Cerda*

### **Educational Evaluation and Policy Analysis (September 2014)**

Published version: <http://epa.sagepub.com/content/36/3/307.abstract>

Working paper version (free):  
[http://www.ny.frb.org/research/education\\_seminar\\_series/IESHighSchoolCompletion.pdf](http://www.ny.frb.org/research/education_seminar_series/IESHighSchoolCompletion.pdf)

In this article, the authors perform cost-effectiveness analysis on interventions that improve the rate of high school completion. Using the What Works Clearinghouse (similar to the Education Endowment Foundation) to select effective interventions, they calculate cost-effectiveness ratios for five youth interventions. They document wide variation in cost-effectiveness ratios between programmes and between sites within multisite programs, reflecting differences in resource use, program implementation, and target population characteristics. They offer suggestions as to how cost-effectiveness data can be used to inform policymaking, with the goal of improving the efficiency with which public and private resources are employed in education.

## **Making it Real: The Benefits of Workplace Learning in Upper-Secondary Vocational Education and Training Courses**

*By: Cain Polidano and Domenico Tabasso*

### **Economics of Education Review (October 2014)**

Published version:  
<http://www.sciencedirect.com/science/article/pii/S0272775714000600>

Working paper version (free): <http://ftp.iza.org/dp7633.pdf>

In OECD countries, 'real world' upper-secondary vocational education and training (VET) programs are used to engage less academically oriented youth in learning, while helping to prepare them for post-school work and/or further education. In general terms, VET programs with high employer involvement, such as apprenticeship schemes, are considered to be superior to classroom-based VET programs that are typically found in many English-speaking countries. In this study, the authors examine outcomes from a potential 'third way': classroom-based VET with a short-term structured workplace learning

component. Using propensity score matching and PISA data linked to information from the Longitudinal Survey of Australian Youth, they find that this model is associated with higher school completion rates and better employment transitions.

### **Investigating the Effects of Furloughing Public School Teachers on Juvenile Crime in Hawaii**

*By: Randall Q. Akee, Timothy J. Halliday, and Sally Kwak*

#### **Economics of Education Review (October 2014)**

Published version:

<http://www.sciencedirect.com/science/article/pii/S0272775714000557>

Working paper version (free): [http://www.uhero.hawaii.edu/assets/WP\\_2013-7R2.pdf](http://www.uhero.hawaii.edu/assets/WP_2013-7R2.pdf)

Policymakers have long been concerned about the large social costs of juvenile crime. Detecting the causes of juvenile crime is an important educational policy concern as many of these crimes happen during the school day. In the 2009–10 school year, the State of Hawaii responded to fiscal strains by furloughing all school teachers employed by the Department of Education and cancelling classes for seventeen instructional days. The authors examine the effects of these non-holiday school closure days to draw conclusions about the relationship between time in school and juvenile arrests in the State of Hawaii on the island of Oahu. They calculate find that time off from school is associated with significantly fewer juvenile assault and drug-related arrests, although there are no changes in other types of crimes, such as burglaries. The declines in arrests for assaults are the most pronounced in poorer regions of the island while the decline in drug-related arrests is larger in the relatively more prosperous regions.

### **Does Anybody Notice? On the Impact of Improved Truancy Reporting on School Dropout**

*By: Kristof De Witte and Marton Csillag*

#### **Education Economics (Autumn 2014)**

Published version:

<http://www.tandfonline.com/doi/full/10.1080/09645292.2012.672555#.VEa3qOfShDw>

Working paper version (free):

<http://www.tierweb.nl/assets/files/UM/Working%20papers/TIER%20WP%2014-13.pdf>.

Various policy measures have been taken in industrialised countries to reduce school dropout rates. This paper first examines the relationship between truancy and school dropout. Using fixed effects regressions and controlling for truancy peer group effects, the authors observe that truancy positively correlates to early school leaving. A truant has a 3.4 percentage point higher risk of leaving school without a qualification. Second, they exploit the introduction of truancy reporting in a quasi-experimental identification strategy. In essence, the idea is straightforward: if students are better monitored with respect to truancy, schools can identify more easily students at risk. The results indicate that improved truancy reporting significantly reduces school dropout by 5 percentage points.

## Effects of Policy and Practice – Developing World

### **Exams, Districts, and Intergenerational Mobility: Evidence from South Korea**

*By: Yong Suk Lee*

#### **Labour Economics (August 2014)**

Published version:

<http://www.sciencedirect.com/science/article/pii/S0927537114000694>

Working paper version (free):

[http://www.williams.edu/Economics/wp/LeeExamsIntlMobility\\_040813.pdf](http://www.williams.edu/Economics/wp/LeeExamsIntlMobility_040813.pdf).

This paper examines how student assignment rules impact intergenerational mobility. High school admission had traditionally been exam based in South Korea. However, between 1974 and 1980 the central government shifted several cities to a school district based admission system. The author estimates the impact of this reform on the intergenerational income elasticity. Results indicate that the reform increased the intergenerational income elasticity from 0.15 to 0.31. Furthermore, he finds that district assignment increases the impact of parental income on migration to reform cities. The probability of migration associated with a 10% increase in parental income increased by 1.7 percentage points after the reform. In sum, the author finds that the shift from a merit to a location based student assignment rule decreases intergenerational mobility and promotes selective migration by higher income households.

## General Education

### **Herding Cats? Management and University Performance**

*By: John McCormack, Carol Propper, and Sarah Smith*

#### **Economic Journal (August 2014)**

Using a tried and tested measure of management practices that has been shown to predict firm performance, the authors survey nearly 250 departments across 100+ UK universities. They find large differences in management scores across universities and that departments in older, research-intensive universities score higher than departments in newer, more teaching-oriented universities. They also find that management matters in universities. The scores, particularly with respect to provision of incentives for staff recruitment, retention and promotion are correlated with both teaching and research performance conditional on resources and past performance. Moreover, this relationship holds for all universities, not just research-intensive ones.

### **When Does Education Matter? The Protective Effect of Education for Cohorts Graduating in Bad Times**

*By: David Cutler, Wei Huang, and Adriana Lleras-Muney*

#### **Social Science & Medicine (forthcoming)**

Published version:

<http://www.sciencedirect.com/science/article/pii/S0277953614004961>

Working paper version (free):

[http://scholar.harvard.edu/files/weihuang/files/when\\_does\\_education\\_matter\\_05-16.pdf](http://scholar.harvard.edu/files/weihuang/files/when_does_education_matter_05-16.pdf)

Using Eurobarometer data, the authors document large variation across European countries in education gradients in income, self-reported health, life satisfaction, obesity, smoking and drinking. While this variation has been documented previously, the reasons why the effect of education on income, health and health behaviours varies is not well understood. The authors build on previous literature documenting that cohorts graduating in bad times have lower wages and poorer health for many years after graduation, compared to those graduating in good times. They investigate whether more educated individuals suffer smaller income and health losses as a result of poor labour market conditions upon labour market entry. They confirm that a higher unemployment rate at graduation is associated with lower income, lower life satisfaction, greater obesity, more smoking and drinking later in life. Further, education plays

a protective role for these outcomes, especially when unemployment rates are high: the losses associated with poor labour market outcomes are substantially lower for more educated individuals. Variation in unemployment rates upon graduation can potentially explain a large fraction of the variance in gradients across different countries.