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Research in Public Policy

A HELPING HAND?

THE IMPACT OF GOVERNMENT FUNDING ON CHARITY DONATIONS

Keeping them sweet: Behavioural economics field trials

Choice and competition: A case of better healthcare?

Can performance pay work in the public sector?

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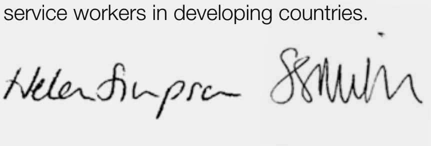
AUTUMN 2013

In this edition of *Research in Public Policy*, the spotlight falls on charities. The National Council for Voluntary Organisations has warned of swingeing cuts to the sector's income from government. The question is whether money from other sources – notably donations – can fill the gap.

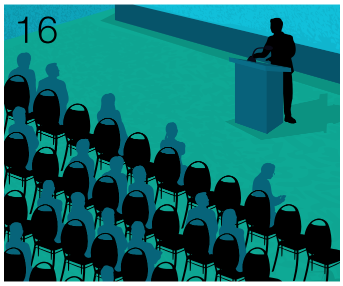
Economists have long been interested in the relationship between government funding and donations, in particular, the question of whether government money "crowds-out" voluntary income. Three articles summarise new evidence from the UK, US and Canada. The picture that emerges is complex and suggests that the effect of changes in grant funding are likely to depend on where the cuts fall and how they are implemented.

The current government has signalled its desire to increase the level of charitable giving. Rather than using traditional tax incentives, however, a series of workplace trials run by the Cabinet Office in collaboration with CMPO PhD student, Michael Sanders and the Charities Aid Foundation, have explored new ways of encouraging donations through behavioural nudges. The results suggest that relatively small scale – and cheap – interventions can have quite powerful effects on levels of giving.

Finally, we report on a major conference held by CMPO earlier in the year – the Economics of Public Service Reform – summarizing the papers and the debate at the two policy panel sessions. The first of these discussed the role of competition in healthcare and recent UK reforms from both a regulatory and healthcare provider perspective. The second panel focussed on public services provision in developing countries and the use of field experiments to learn about 'what works'. It highlighted the opportunities that developing countries offered to learn about service delivery due to the specific market structures in operation, and also put forward a defence of the use of performance related pay for public service workers in developing countries.



Helen Simpson and Sarah Smith



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PUBLIC SPENDING CUTS: PROSPECTS FOR CHARITIES

Charities and other not-for-profit organisations are increasingly important providers of public services: both contracting with government as delivery agents and filling the gap left by falling levels of public provision. Yet charities themselves have been hit by public spending cuts. The National Council for Voluntary Organisations predicts that central and local government spending on the voluntary sector will drop from £11.8bn in 2010/11 to £10.89bn in 2015/16. This raises a big question about how easy it is for organisations to raise more money from other sources such as private donations. In the articles that follow, we present new evidence on the key question of whether grant funding “crowds-out”, or “crowds-in”, other income. We also report the results of workplace trials testing innovative ways of encouraging donations.

The three articles that follow by **Sarah Smith**, **Daniel Jones** and **Abigail Payne** are about the inter-relationship between different types of income for charities. Specifically, they look at the extent to which government and grant funding substitute for other forms of income.

Grants and other income

- The first paper focuses on the effect of National Lottery funding through grants made by the Community Fund (the predecessor to the Big Lottery Fund). It finds that being awarded a grant has a positive effect. For medium-sized charities, each £1 of grant money increases their incomes by more than £1.
- The second paper looks at the effect of government grants to charities in Canada. Here, grant income crowds-out other income – by roughly 83 cents for every $1. Direct donations respond positively, but charities reduce their fundraising efforts, with a knock-on effect on income, and money from other charitable foundations falls.
- The third paper also looks at the effect of lottery money, but focuses on education lotteries run by US states. It finds that the introduction of these lotteries did cause donors to reduce giving to education causes.

On the face of it, these findings appear contradictory, but digging deeper, some common themes emerge that can explain the differing headline results.

First, the importance of government funding varies across charities. Receiving a grant has a more positive effect for smaller charities. For major charities, not only is a single grant a relatively smaller part of their total income, but they are also likely to have a much richer set of alternative funding options.

Second, it matters whether the money is for core activities or for new work. The National Lottery funding is often for new projects which the charity may simply decide not to pursue if the funding doesn't come through. If the funding is for core activities, the charity may try harder to find the funding from elsewhere if they don't receive a grant.

Third, it matters whether or not donors know about the government grant. The most likely explanation for why the education lotteries had a negative effect was that they were widely advertised: donors responded negatively to a perceived increase in funding for education charities by reducing their donations to this cause. By contrast, the National Lottery funding – and government grants more generally – are widely dispersed so that donors do not know where the money is going.

What does this tell us about the effects of the current public spending cuts? We cannot predict with certainty, but here are some pointers:

- smaller charities are most vulnerable to a cut in spending;
- organisations may fight hard to deliver core services, but sacrifice new projects;
- finally, individual charities should signal loud and clear when they are being hit by cuts in order to attract more donations.

Charities need to signal loud and clear when they are being hit by cuts to attract more donations.

Crowding-out: if a charity receives a grant from the government or another organisation then other donors will react by reducing their donations.

Crowding-in: the opposite effect where government grants attract more income for charities.

DID THE GAMBLE PAY OFF FOR CHARITIES?

THE EFFECT OF NATIONAL LOTTERY GOOD CAUSES FUNDING

The National Lottery widely trumpets the amount of money that is channelled to charities and other good causes; £35 million is allocated to good causes each week, equal to 28 pence out of each £1 spent on the lottery. The overall level of funding is impressive; but what is the net effect of this income on the organisations? **Sarah Smith**, **Jim Andreoni** and **Abigail Payne** analyse whether lottery funding simply substitutes for other sources of funding, or has a positive effect on total income, helping charities to survive and thrive.

Since the National Lottery began, the good causes funding has played a prominent role. It is distributed by independent bodies across a wide range of projects in the arts, sport, heritage and voluntary sector. For charities, lottery funding is a sizeable source of grant income – they received £0.5 billion in 2010-11 from the National Lottery good cause funding, compared to £3.0 billion in grants from the government.

One strand of the theoretical economics suggests that if a charity receives a grant – from the government or a National Lottery good cause distributor – then other donors will react by reducing their donations. This may occur because donors respond directly to an organisation receiving a grant, seeing less need for their own funding. An alternative mechanism is that the charities may cut back on fundraising, preferring to devote their effort and resources to their main activities.

The empirical evidence, primarily from the US and Canada, lends support to there being such 'crowd-out' from grants to other donations. In order to gain some further insight into this issue in England and Wales, we analysed information on applications that were made to the Grants for Large Projects programme administered by the Community Fund, one of the independent bodies responsible for allocating National Lottery funding (the predecessor to the Big Lottery Fund). By comparing outcomes among charities that successfully applied for grants with outcomes among charities that applied but were unsuccessful, the research provided new evidence on the impact of lottery funding.

The applicants

The research analysed a sample of 5,000+ applications made to the Community Fund's Grants for Large Projects programme between 2002 and 2005. This programme was open to all charities seeking funding of £60,000 or more (the mean award in our sample was £151,295). The money typically funded specific projects (i.e. in each case the application described a discrete set of activities to be funded); these could be for the continuation of existing work or for completely new activities. (See box for examples of the types of projects for which funding was sought.)

Information on charity incomes for 2002-2008 was obtained from the Charity Commission register. Given the timing of grant applications, this means that we can follow charities for up to four years after the committee decision. The Charity Commission register covers all charities in England and Wales with annual incomes of £5,000 or more but, in practice, there is a lot of missing information, particularly on sub-components of income. This guided us to looking at the overall effect of being awarded a grant on charities' incomes, rather than at specific components of income, such as donations.

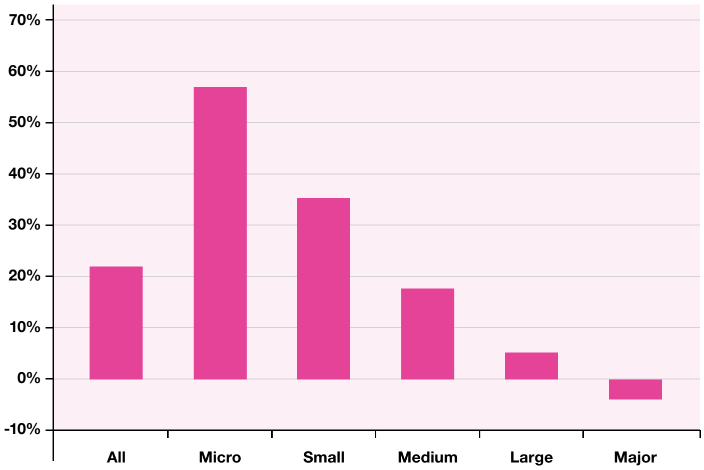
Comparing like with like

The effect of receiving a grant on charities' incomes was measured by comparing the change in income before and after

> **Examples of projects for which lottery funding was sought**
>
> **Services:** *"The project aims to provide a volunteer bureau service for the people living in [the town] and surrounding areas, which will also support people with learning disabilities, excluded young people and older people."*
>
> **Staff/training:** *"[the advice centre] wants to employ a diagnostic interviewer and receptionist to screen and signpost clients to decrease waiting time and increase capacity. Training will be provided to all staff on diagnostic interviewing."*
>
> **Capital:** *"The project will replace a well used Brownie and Guide headquarters. The project will increase and improve activities for children and young people who access the centre."*

Figure 1
Change in income among successful applicants (compared to unsuccessful)

National Lottery funding doesn't substitute for other money.



Micro charities have annual incomes of less than £10,000; small charities, £10,000 – £100,000; medium charities, £100,000 – £1m; large charities, £1m – £5m and major charities >£5m.
Standard classification of size from the National Council of Voluntary Organisations

the committee decision for successful and unsuccessful charities – all of which had chosen to apply for funding and had passed an initial eligibility screening process. This allowed us to compare outcomes for charities that, apart from receipt of a grant, are otherwise very similar.

Looking at this kind of sub-sample is important because charities that chose to apply for a grant are systematically different to the general population of charities. We know this because charities that applied for a grant, but were unsuccessful, experienced significantly higher income growth than a randomly selected group of non-applicant charities from the general population. This means that it is not possible to learn about the effect of lottery funding by comparing outcomes among successful charities with a wider sample of all other charities. The results in this summary, therefore, compare all successful charities with all unsuccessful charities.

Findings

Receiving a grant makes it more likely that a charity survives

Being awarded a grant directly affects a charity's survival. Although there is no explicit information on charity deaths, "charity exit" can be measured as sustained non-missing income (i.e. a charity for which there is no subsequent income information after the first observed period of missing income data). Controlling for charity size (mean income prior to the award), region and the score awarded by the Community Fund to the application, the exit rate among charities that received a grant was significantly lower than among those that were not awarded a grant.

Receiving a grant has a positive effect on charities' incomes

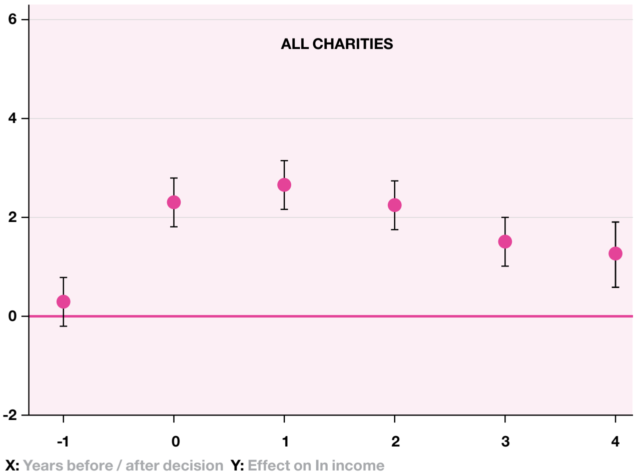
Lottery funding does not simply substitute for other sources of funding. Figure 1 summarises the change in income among charities that were awarded a grant, compared to the change in income among unsuccessful charities that applied but were not awarded a grant (looking up to four years after the grant decision). This shows that, on average, successful charities experienced incomes that were 22 per cent higher after being awarded a grant.

The positive effect of receiving a grant is greater for smaller charities

The effects of being awarded a grant are proportionately bigger for smaller charities than for larger charities, and are negative (but statistically insignificant) for major

Figure 2

Change in income among successful applicants (compared to unsuccessful) – Individual years before/after grant decision



Successful charities experienced incomes that were one-fifth higher after being awarded a grant.

charities. This may be because the lottery funding is relatively smaller for these larger charities and/or because they have more alternative funding sources. We return to this below.

The positive effect of receiving a grant persists over several years

Being awarded a grant has a positive (and significant) effect on income for four years. The effect is biggest in year 0 and year 1, but remains positive and significant for up to +4 years after the committee decision was made. Since the payment of the grant could be made over up to +2 years, this means that the positive effect of funding on total income persisted for at least two years after the grant payment period.

This is illustrated in Figure 2 and highlights the importance of making an assessment of the effects of grant funding over the longer-term. Whereas Figure 1 showed the overall effect on charities' incomes of being awarded a grant, averaged over (up to) four years after the decision was made, Figure 2 breaks the effect down by individual years.

Year -1 captures any difference in income growth between successful and unsuccessful charities in the year prior to the committee decision. The fact that this is zero implies that successful and unsuccessful charities were not any different in terms of their trend income prior to the award. This is a robustness check that the difference that emerges after the grant is awarded (in year 0) is attributable to the effect of the grant. It rules out, for example, that grants were awarded to charities that show better (or worse) income growth prior to the committee decision.

Each £1 of lottery funding increases incomes of medium-sized charities by more than £1

Quantifying per pound the effect of lottery funding (whether each pound of grant increased charities' incomes by more or less than a pound in total) reveals that, for small and medium charities, lottery funding crowds in other money. Looking over the longer period (from the year of the decision to +4 years after), each pound of grant increases charity incomes by £1.60 for medium-sized charities. For these charities, this means that lottery funding is actually "crowding-in" other funding and helping them not only survive but thrive.

Being awarded a grant has a positive effect on income for four years.

Why the difference?

Contrary to the North American case our results show strong evidence that lottery funding has a positive net effect on charities. It has helped charities to survive and, for all but major charities, increased their incomes relative to those that applied but were unsuccessful. It means that the lottery award was not simply a one-for-one replacement for other funding.

So, what might explain the difference between the experience of charities in England and Wales and those in North America and what might grant bodies learn that will help them design their funding programmes in order to increase effectiveness?

- **First**, we have shown that size matters. The positive effects of grant funding are driven by smaller charities. A plausible explanation for this is that larger charities can draw on more alternative sources of funding.

- **Second**, the effects of grants persist; it may take several years before the full picture emerges and this should be taken into account in any analysis.

- **Third**, the National Lottery grants examined put sizeable sums into specific (and often new) projects which may help to reduce any sense among potential donors that the money is simply going into a general spending pot for the charity and replacing funding from other sources.

- **Fourth**, because National Lottery good cause funding is widely spread across many projects and areas it may avoid any impression that any particular good cause is being adequately funded by this source. This is very different to the US state lotteries (discussed by Daniel Jones on page 9) which are targeted at one or a few specific causes.

This article summarises Andreoni, J., Payne, A., Smith,S., *Do grants to charities crowd out other income? Evidence from the UK*, CMPO Working Paper 13/301.

Jim Andreoni is Professor of Economics at the University of California, San Diego; Abigail Payne is Professor of Economics at McMaster University; Sarah Smith is Professor of Economics at the University of Bristol.

GOVERNMENT FUNDING AND PRIVATE CHARITABLE DONATIONS: THE CANADIAN EXPERIENCE

When a charity receives funding from government how do its donors react? Do they pull back in their giving or do they continue to give? **Abigail Payne** and **James Andreoni** look to Canada to research the overall effects on charities' incomes. Their research explores whether 'crowding-out' happens due to a change in donor behaviour (a direct effect) or charities' altering their fundraising efforts (an indirect effect), and whether there is a similar 'crowding-out' effect across different sources of donor funding such as charity events or grants from other foundations.

Figure 1
Reliance on funding

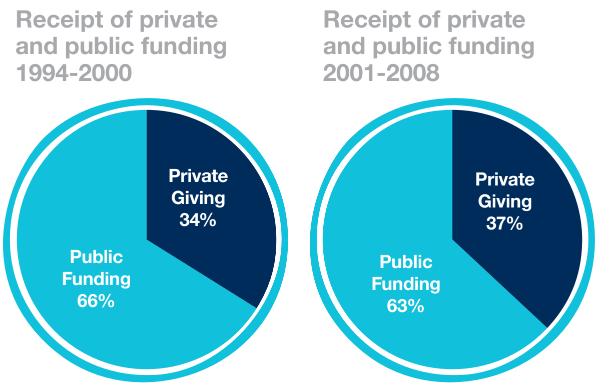


Table 1
Decomposition of overall crowd-out

	Total	
	High value	**Low value**
Total crowd-out (direct+indirect): $1 in government funding effect on overall donations to the charity	-$0.98	-$0.83
Direct crowd-out (donors changing behaviour)	$0.14	$0.29
% of total crowd-out attributable to donors directly reacting to changes in government funding	-13.9%	-34.6%
Indirect crowd-out (attributable to changes in charity fundraising	-$1.12	-$1.12
% of total crowd-out attributable to fundraising changes	113.9%	134.6%

This analysis uses data on over 13,000 Canadian charities engaged in the provision of social welfare and community oriented services for three or more years between 1994 and 2008. They are drawn primarily from the information provided by charities on their tax returns to the Canada Revenue Agency. For the sample of welfare and communities charities studied, in constant dollars,[1] these charities receive approximately $49,000 per year in private giving and over $85,000 per year in government grants and tend to be smaller charities with low levels of revenues.

Figure 1 illustrates the change in reliance on public and private funding by breaking the data into two periods: 1994 to 2000 and 2001 to 2008. Overall, charities received more funding from government sources than from private sources. Across the two periods, however, there is some evidence that reliance on government funding decreased and reliance on public funding increased. In part, increased reliance on private funding is due to an increase in the number of operating charities over the period.

A benefit to the Canadian data is that we can observe the funding flows to the charities over a long period and we can break down the effect of government grants to private giving into the component that is attributable to a direct reaction by private donors and the component that is attributable to a change in charity fundraising behaviour (an indirect reaction). Moreover, we can look at how changes in government funding affect different types of private revenues. Let's start with a measurement of the overall effect of government funding on private giving.

If a charity receives a government grant does private giving decline?

We find that overall, if there is a one dollar increase in government funding, the decline in private giving ranges from 83 cents to close to one dollar depending on the controls used in the specification. A rate of displacement this high may seem incongruous. From casual observation we tend to observe that individuals likely receive some personal satisfaction in knowing they are supporting a charity. Is there, then, another reason for this large level of displacement?

The next question focuses on charity behaviour. For some of us, to give to a charity we have to first be asked to give. Charities calling us, advertising, and running events help us to learn about where charities are giving. Therefore, charity fundraising and advertising may play a role in affecting our decisions around charitable giving.

An extra $1 of government funding results in a decline in fundraising by 22 cents.

Do charities reduce their fundraising efforts?

If a charity receives government funding, will it continue to seek private giving at the same intensity as it did before receiving the government funding? In part this answer depends on what motivates charity operations. Unlike private firms, charities may not be motivated to maximise profits or revenues. Maybe their motivation is tied to maximising service provision. Under this scenario, this would imply that charities might treat fundraising as something akin to a necessary evil. Under this hypothesis, we might see fundraising decline if a charity receives government funding.

We find that private giving increases when a charity increases its fundraising and advertising: on average an extra dollar of fundraising results in $5 of private giving. This relationship is suggestive that charities indeed are not profit or revenue maximisers. We also find that fundraising declines when the charity receives an increase in government funding. On average, an extra dollar of government funding results in a decline in fundraising by 22 cents.

Putting it all together, the overall decline in private giving observed with an increase in government funding is attributable to a change in charity behaviour, *not* donor behaviour. The decline in donations is due to the decline in fundraising behaviour by the charity.

The decline in donations is due to the decline in fundraising by the charity.

Does the reaction to government funding vary across private donor types?

With our data we can separate private giving into three groups: donations that qualify for a tax receipt,[2] revenues from an event or source where tax receipts are not issued,[3] and revenues from foundations and other charities. Our analysis suggests there are different reactions.

Direct donations that receive a tax-receipt decline with an increase in government funding but all of the crowding-out is attributable to a decline in charity fundraising. If charities maintained their levels of fundraising, we probably would not observe a decline in giving. Unsurprisingly, we also find that a decline in fundraising effort results in a decline in revenues from special events and appeals where tax receipts are not issued.

Where we do observe a direct decline in

Table 2
Decomposition of crowd-out By Type of Revenue

	Tax-receipted gifts		Revenue from fundraising		Revenue from other charities	
	High value	Low value	High value	Low value	High value	Low value
Total crowd-out (direct+indirect)	-0.36	-0.19	-0.55	-0.27	-0.30	-0.17
Direct crowd-out (donors changing behaviour)	0.24	0.41	-0.22	0.06	-0.14	-0.01
% of total crowd-out	-65.7%	-214.0%	39.6%	-23.0%	46.1%	4.9%
Indirect crowd-out (attributable to changes in charity fundraising)	-0.60	-0.60	-0.33	-0.33	-0.16	-0.16
% of total crowd-out	165.7%	314.0%	60.4%	123.0%	53.9%	95.1%

giving is with respect to revenues that come from foundations and other charities. This may be attributable to these organisations being better informed about a charity's revenue sources. The results suggest that other charities and foundations may view government funding as a direct substitute for their own contributions. Of course, if government funding requires matching funds from non-governmental sources, this would explain a more muted effect of government funding on revenues from other charities.

There is a direct decline in revenues from charitable foundations.

Conclusion
This study suggests that an increase in government funding to charities results in a decline in private giving. This decline is mostly attributable to a decline in charity efforts to raise private funding. There are differences, however, in reaction across donor types. Direct donations and revenues from fundraising decline mostly from a reduction in spending on fundraising and advertising by the charity. Contributions from other charities and foundations decline from a reduction made directly by these organisations.

While these findings were based on a large sample over an extensive period, our data are not able to capture everything. When measuring the effect of government funding changes on private giving we have to be careful in the analysis insofar as controlling for factors that might cause private and public funding to move in the same direction (e.g. a change in voter attitudes, an event, such as a natural disaster, that causes a change in need for the charitable good or service).

Moreover, while we can examine aggregate funding to the charity from different sources, we have less information about how the funding is used by the charities. For example, we do not observe whether the funding is used for capital purposes, a new program, or ongoing needs. More information on how the funding is used may help us to better understand how government funding affects private giving. We leave this issue, however, to another study.

Jim Andreoni is Professor of Economics at the University of California, San Diego, Abigail Payne is Professor of Economics at McMaster University.

This article is based on Andreoni, J. and Payne, A., *Crowing Oot: the effect of government grants on donors, fundraisers and foundations in Canada*, McMaster University Working Paper (www.economics.mcmaster.ca/documents/department-working-papers/2013-10.pdf).

[1] We use 2002 as the base year.

[2] In Canada, all taxpayers can reduce their tax liability through a non-refundable tax credit that is a proportion of the tax-receipted donations given to registered charities.

[3] For example, if a charity hosts a gala dinner, the ticket price for the dinner typically does not qualify for a tax receipt.

NOTES ON THE STATISTICAL ANALYSIS OF THE DATA

To estimate the effect of government grants to these charities on private giving, we employ a statistical analysis that controls for several potential issues. First, not all charities are alike. They vary in their mission, the communities they serve, and their size. Because we observe the revenues for our charities over several years, we can control for these differences, by allowing for an individual charity average effect for giving. We can also control for changes in the areas in which the charities are operating using measures that capture changes to these areas in terms of the composition of residents in the areas. For instance, we control for the education level, income, age, and other characteristics of the residents. Finally, we also have to control for the fact that government decisions might reflect donors' perceptions. Given that donors are also voters, if there is a change in perspective by voters, we might expect this to be reflected in government funding.

EDUCATION'S GAMBLING PROBLEM

HOW STATE EDUCATION LOTTERIES REDUCED CHARITABLE DONATIONS

Over the past fifty years in the United States, state governments have gradually come to adopt government-operated lotteries as an additional source of revenue.

Of the 43 states that currently operate a lottery, 20 states earmark 100 per cent of their lottery revenues for education-related spending, but what impact do these lotteries have on education funding? **Daniel Jones** analyses the impact of education lotteries on voluntary donations.

Part of the answer depends on whether state governments use lottery revenues as promised. Some evidence suggests they do not. That issue aside, government is not the only source of funding for education; education also benefits from and relies on private donations.

A good cause

In the United States, education is often the most popular secular category of giving. In 2011, Americans donated $40 billion to education related causes – roughly twice the amount raised from 2011 government-operated lottery revenues. That education is widely viewed as a 'good cause' is part of the reason that many states tie their lottery to education, especially in states where lotteries are opposed for cultural or religious reasons, but how does tying a lottery to a 'good cause' impact voluntary donations to that cause? This is tied to a larger (and much-discussed) question: what motivates donors to give?

If ensuring a certain level of funding for a cause is an important motivation, then a new source of funding might 'crowd-out' private donations; a donor knows that they can reduce their contributions to the cause while still maintaining the same overall level of funding. Alternatively, if donors are completely motivated by the joy or 'warm glow' they receive from giving, we would not expect crowding-out of donations.

Crowding-out

Looking at the impact of the introduction of state-run education lotteries on charitable donations the findings show that donations to education significantly decrease. Based on donor-level survey data, the average donor reduces his or her education donations by between 20 and 30 per cent when a lottery is introduced. This is not to say that education-related giving falls by 20 or 30 per cent, as many of the dollars that are donated do not come from the 'average donor' and instead are part of large donations made by the very wealthy. Still, at a more aggregate level, there is a substantial decline in donations; using data from non-profit firms' financial statements, which therefore account for donations from both 'major donors' and 'average donors', total donations to education-related organisations fall by between seven and eight per cent.

The evidence points towards donations being crowded-out. As illustrated in figure 1, the response is clearly linked to the fact that an *education* lottery is being introduced. There is no change in donations to other causes, as one might expect if donors were simply reducing charitable giving to pay for a previously-unavailable good (lottery tickets). Moreover, the drop in donations is mainly driven by individuals who never play the lottery. Similarly, education donations are not impacted when a lottery unrelated to education is introduced. It also genuinely seems to be the donors who are responding. Andreoni and Payne (2003, 2011) have pointed out that what looks like a crowding-out of donors is often actually driven by a decrease in fundraisers' effort, but – looking at fundraising behaviour in response to a lottery – that does not appear to be the explanation for these drops in giving.

These results are somewhat surprising given a long literature searching for evidence of crowd-out; much of the existing work finds very little decline in donors' willingness to give.

Too much information

What makes education lotteries different? One explanation is that these lotteries are more salient to donors than the types of government spending previously studied (e.g., government grants to non-profits). States spend millions of dollars advertising their lotteries and are quick to point out that the money goes towards education. Maybe donors *are* crowded-out by a new source of funding but only if they are aware of the change in spending. Exploring this idea more directly, there is indeed evidence that the most crowd-out occurs in states that spend more on advertising their lotteries. Similarly, there is more crowd-out in states where lotteries are introduced through direct vote rather than through legislative action. These are the states where, presumably, a larger number of donors are aware of this new source of funding for education.

Multiple good causes

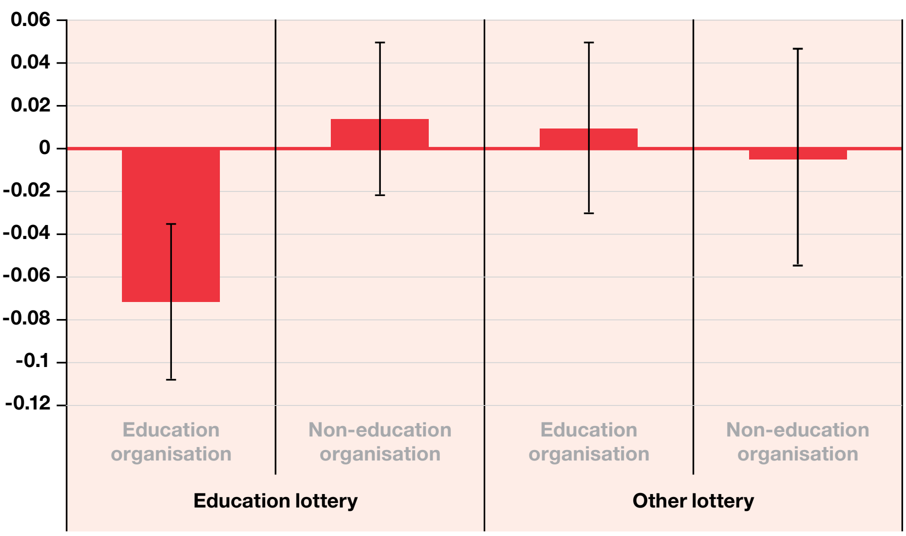
This returns us to the initial question: how does tying a lottery's revenues to a 'good cause' impact citizens' voluntary donations to that cause? In this context, the answer is fairly clear: donations fall. However, the fact that state governments are very vocal about the *particular* cause being supported (education) seems to be critical to this result.

This suggests that a lottery supporting 'good causes', but without loudly highlighting any one cause in particular, may avoid disrupting charitable activity. Within the US, the lotteries that do not fund education often fund a bundle of causes; this could explain why the figure above reveals very little evidence of a drop in giving to non-education organisations when a non-education lottery is introduced.

Outside of the US, large-scale lotteries like the UK National Lottery and the Dutch Postcode Lottery often provide funding for a huge number of charities across a variety of causes. Without constant reminders that a *particular* cause is being supported, these lotteries might be immune to the crowd-out observed here. Indeed, in an analysis of UK charities that have received lottery grants, Andreoni et al. (2013) find no evidence of crowd-out. Thus, while earmarking lottery revenues for a particular cause does enhance the profitability of the lottery (Landry and Price (2007)), this benefit comes at the cost of disrupting private charitable support.

A lottery supporting good causes but without loudly highlighting any one cause in particular may avoid disrupting charitable activity.

Figure 1
Change in donations received by non-profits after a lottery is introduced



Y: Percent change

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Further reading

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SWEET ANYONE?

USING BEHAVIOURAL ECONOMICS TO ENCOURAGE CHARITABLE GIVING

In May 2013 the CMPO, Cabinet Office Behavioural Insights Team and the Charities Aid Foundation published a report entitled "Applying Behavioural Insights to Charitable Giving" the main core of which was a set of five randomised controlled trials aimed at encouraging giving. **Michael Sanders**, a CMPO PhD student working with the team, discusses the results of these trials.

Charities are important for the current coalition government, with the provision of more public services by charities and other voluntary bodies forming an important plank of David Cameron's "Big Society" agenda. This agenda faces a serious challenge in achieving a step change in levels of giving, as research by Cowley et al (2010) shows that giving has been flat as a share of consumption spending for much of the last 30 years. There is, therefore, little to suggest that voluntary donations of money and time will rush to fill the void left by a shrinking state.

As well as public service provision, work by Elizabeth Dunn from the University of British Columbia, and Michael Norton from Harvard Business School, suggests other reasons why governments may wish to increase giving. They find that people given money and told to spend it on someone else are significantly happier than people who were told to spend it on themselves, who were no happier than people not given any money at all. In the workplace, they found that this same experiment increased not just happiness but productivity, making a strong business case for this kind of workplace giving.

In addition to dramatic changes in the way in which people give, smaller changes to the way in which donation decisions are presented, or the incentives are offered, can also make substantial differences. Behavioural economics offers several insights into how people might be encouraged to give (Smith and Sanders 2011). The efficacy of different interventions to encourage donations was tested using a series of randomised controlled trials, or field experiments.

'Automatic escalation is a viable option.'

Trial 1: Testing automatic increases

The first trial was with the insurance company Zurich. Every year Zurich runs a fundraising campaign among its staff to ask them to sign up to matched, tax effective donations through their pay. This trial was conducted with the Zurich Community Trust, the company's charitable trust, on its current pool of donors and was designed to test responses to automatic annual increases in giving. Some people were given the chance to make a one-off increase in their donations, while others were offered regular, annual increases.

The company is large and geographically dispersed so the fundraising campaign is conducted through email. For the October 2012 campaign employees who currently give monthly to charity were sent one of three emails asking them to increase the amount they donate. All three emails were identical except in the way in which donors were asked to increase their donation.

The first set of employees were given a standard escalation option. They were provided with information about the charitable work their donations achieved and asked to increase their donation by £1, £2, £3, £5 or £10. The `pitch' component of the email was phrased:

> "To ensure we continue to support disadvantaged people in our communities and to protect against the effects of inflation over time, would you be prepared to give a little extra each month from 25 January 2013?"

We then have two treatment groups of employees – both offering annual increases, but with two different pitches or 'frames'. Employees were provided with the same information about the charitable work of their donations, and asked to commit to increasing their donations every year from now on from a list of the same five buttons. The text for this treatment group read:

> "To ensure we continue to support disadvantaged people in our communities and to protect against the effects of inflation over time, would you be prepared to give a little extra each month from 25 January 2013 **and commit to increasing your donation by the same amount on an annual basis?**" (emphasis added)

In the second treatment group (Frame 2), employees received an email which was identical in its wording to those in the first annual increases treatment. They were, however, offered a different `menu' of choices (£2, £4, £6, £8 and £10), which is less skewed towards the lower end of the donation range than was the first frame.

This trial had 702 participants, split across 30 clusters. All participants were employees who currently gave through payroll giving to the Zurich Community Trust charity.

Overall, levels of responses to treatment did not differ systematically between groups, with three per cent of donors responding in all three groups. There are weak indications of a decline in the size of average increases chosen under the first annual increase treatment, from £5.57 in the control group to £2 in the first frame group, suggesting that people may be averse to the uncertainty about the future. However, the second treatment framing group increase donations by £4.98 on average, which is not significantly different to the control group.

We are cautious about reading too much into the results of this trial. Overall levels of response were particularly low in the 2012 cohort: three per cent compared with roughly 10 per cent in previous years. This limits our capacity for inference, as the three per cent of responders may differ in important ways to the seven per cent who would ordinarily have responded but in this year did not. Importantly, this reduction in participation also reduces our statistical power.

However, based on the results we do find, the proportion of donors choosing to increase their donations does not appear to be influenced by offering them annual rather than one-off increases. For those donors who engage with requests to increase their donations automatic escalation is clearly a viable option and ensures for those donors that donations are not eroded by inflation. We also find a slight increase in the size of donations made under frame 2 compared with frame 1, suggesting that menu effects may play a role here.

Active opting out, rather than opting in, resulted in the proportion of donors signing up to annual increases rise from 6% to 48%.

Trial 2: Automatic enrolment into automatic escalation

Trial 1 has shown that donors do not choose automatic increases in giving any less often than they choose one-off increases in their giving.

However, the proportion of donors choosing increases of any kind is very low. One possible explanation for this is that the method of approach: sending an email to people who already choose to donate lacks salience to many donors; employees may be busy and receive many emails a day; or may be fatigued, having been approached for donations the same way many times.

If people's inertia prevents them from increasing their donations periodically throughout their life as a regular giver, through payroll giving or direct debit, the behavioural science literature offers a powerful tool for helping them to increase their donations – changing the default.

Working with Charities Trust and Home Retail Group, we tested a change in the default for annual increases. Employees already signing up for payroll giving had previously been given the choice to opt-into the "Xtra Factor", which committed them to automatic three per cent per annum increases in their donations. After the change, new donors would need to opt-out of these increases.

On the old design of form Xtra Factor was introduced with the wording:

> "Indicating the Xtra Factor YES box authorises Home Retail Group to increase your donation each year in June by a nominal 3%, so for every £1 you give will increase by £0.03."

By ticking the ''yes'' box donors would opt into annual increases.

In the new form Xtra Factor was introduced with the wording:

> "By signing up to Xtra Factor, your donation will be increased by a nominal 3%. So every £1 you give will be increase by 3p. If you don't want to be included in the Xtra Factor, tick here."

By ticking the box donors would opt out. This change in wording, from an opt-in to an opt-out, was the only substantive change in the structure of the form.

These forms were gradually disseminated from August 2012 onwards. From October only the new forms were available and were also used by Hands On Helping, a professional fundraising organisation responsible for fundraising in Home Retail Group.

This small change yields very positive results. We find that roughly half of people opt-out, increasing participation in automatic escalation by 42 percentage points. We also find that no fewer people sign up for payroll giving (as a portion of those approached by Hands On Helping) and that the average donation size does not decline over this period.

Including a picture of a person doubled the number of HMRC staff that signed up for donations.

Trial 3: Peer effects & faces

This trial was designed to test if the use of photographs of individuals vs. a named person has any effect on people's giving. It was conducted on staff of HMRC's Southend Centre. The trial was conducted using a custom-built website. Over the course of the trial participants were invited by posters and an email to visit this website to view a winter greetings card from an HMRC colleague.

On visiting the website and entering their email address they are randomly assigned to one of the greetings cards and one of two treatments.

Cards seen by the control group displayed the winter greetings card to which they had been randomly assigned, a brief description of the donor who had written the case study ("Harriet, a fellow HMRC employee from Bristol"), and two links: one to sign up for payroll giving, and another for more information.

Other participants were allocated to a "picture" treatment. Participants allocated to this group received the same information as those in the control group, but alongside the case study was a picture of the donor who had written it, with their name underneath.

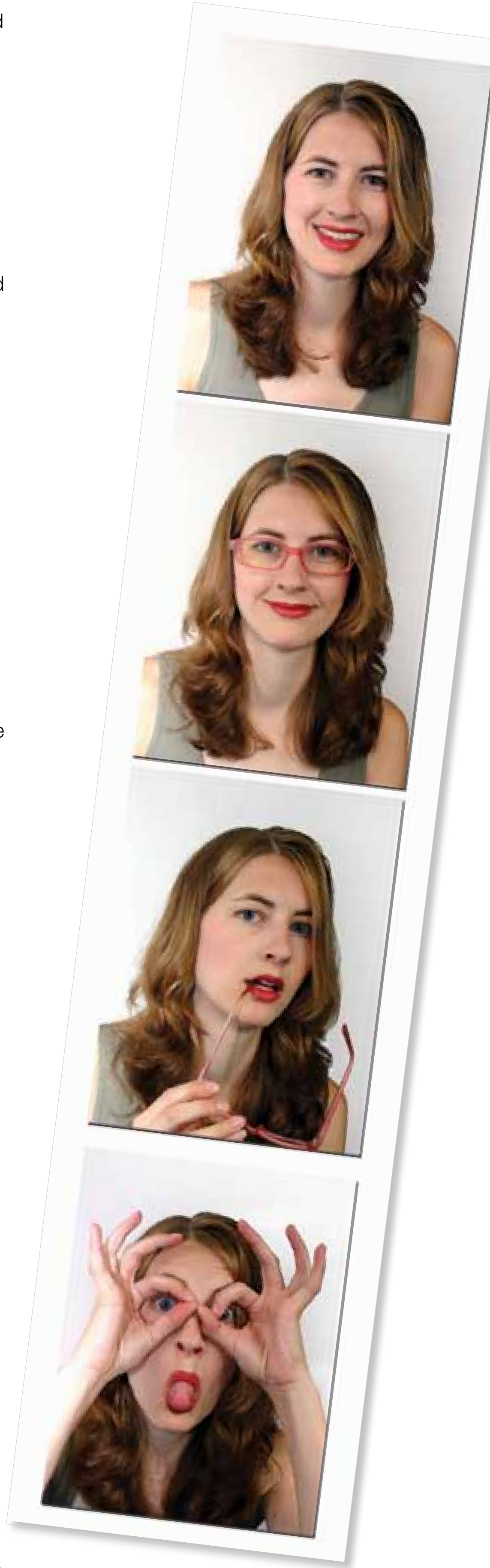
Comparing sign-ups based on the properties of cards to which people were randomly assigned, we find two points of interest. First, that geographic proximity to the case study donor, which we thought might be influential, has absolutely no effect. The picture of a face, however, has a large effect, roughly doubling the proportion of people signing up from 2.9 per cent to 6.4 per cent.

Staff respond positively to personalisation of email.

Trial 4: Personalisation, social influence, and reciprocity

The trial with Deutsche Bank tested donors' reciprocity to a small gift (a packet of sweets), and whether they were influenced more by a personalised email from the firm's CEO than by an impersonal one. Around 6000 employees were asked to donate a day's salary to two charities – Help a Capital Child, and Meningitis Research UK.

Individuals' donations are strongly influenced by the behaviour of those around them. This trial investigates the role of workplace networks in charitable giving through two treatments. In the first, employees are allocated either to receive a personalised or an impersonal email from the firm's CEO, testing whether or not decreasing social distance in this way increases people's tendency to donate in this environment. In the second, employees are given a gift, of a small



packet of sweets, and asked to donate.

Participants in the control group received an email similar to that used in previous years asking them to donate money to charity. Specifically, participants are invited to donate a day's pay to charity. To do this they could either respond directly to the email or via a website. Participants in the control group received the same body text addressed to "Dear Colleague", while the treatment group received an email addressed to them personally, for example "Dear Dave".

Information about the campaign was also distributed around offices and varied between offices. Offices received one of three treatments: either posters displaying information about the campaign, or volunteers offering information on fliers, or volunteers offering both information and a small packet of sweets worth approximately £1.50.

Due to the relatively detailed information provided by Deutsche Bank, we are able to identify whether people in different positions in the company, ranging from analysts at the bottom to managing directors at the top, respond differently to the treatments in the campaign.

We find that people at both the top and the bottom of the firm responded positively to the personalisation of the email, with the overall effect being a 6.9 percentage point increase in donations compared to 8.7 per cent in the control group. Offices where volunteers had fliers performed no better than those with no volunteers, but the gift of a small packet of sweets increased the proportion donating by a further 6.3 percentage points. In this case, no subgroups were affected by the volunteers at all, but the effect of the sweets was declining the further up the company we look.

A small packet of sweets increased the proportion of employees donating by 6.3 percentage points.

Trial 5: Legacy giving

For this trial, we worked with Cooperative Legal Services (the legal branch of the Cooperative), and Remember a Charity, a part of the Institute of Fundraising, to help encourage people to make a donation to charity through their will. Thirty-five per cent of people would like to leave a gift to charity in their will, but only seven per cent of people end up doing so.

Here, we test the effect, first of a simple prompt during their first phone call – asking people whether they would like to give any money to charity through their legacy – compared to no prompt. Further to this, we tested the effect of a small 'emotive' prompt, which asks donors whether there are any causes they are particularly passionate about. These prompts fall within Co-Operative Legal Services' public pledge to ask all of their customers whether they would like to leave a legacy gift to charity. Importantly, these are very 'light-touch' asks of customers, who are on the end of the phone, rather than writing their will in person.

This trial, conducted on 2150 customers of CLS' will-writers, shows a few interesting results. First, the effect of priming people, by asking them to think about leaving a legacy gift to charity during their first phone call, is close to zero. However, when donors are asked whether or not they would like to donate to charity during the will writing process itself, twice as many (10 per cent vs. five per cent) leave a gift to charity. Using the emotive norm statement increases this again, to 15 per cent of customers leaving a legacy gift, at the same time as increasing average donation size from £4000 to £6000. Perhaps even more interesting is that these effects do not seem to significantly decline with an estate's value – meaning that the effect of an emotive norm prompt on the likelihood of donating for a millionaire appears to be the same as for everyone else.

Asking people if there were any causes they were passionate about tripled legacy gifts.

Conclusion

These trials add to our understanding of human behaviour, particularly the way in which we are often self-sacrificing for the good of others, and will contribute to the already large literature on behavioural economics and charitable giving. However, there is much work still to be done in this area, and we hope to continue conducting more trials in the near future.

Michael Sanders is a PhD Student at the University of Bristol studying the implications of behavioural economics for charitable giving. He is also Head of Research at the Cabinet Office Behavioural Insights Team.

Further reading

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Smith and Sanders (2011), *New directions for giving: Raising levels of giving in the UK?*, Voluntary Sector Review Vol.2(3) p415-424.

SMALL STEPS: BIG CHANGES

Governments have traditionally made use of three tools to induce desired behaviour from citizens – regulation, taxation, and provision of information. In June 2010, the coalition government established the Behavioural Insights Team, based in No.10 Downing Street and the Cabinet Office, with a mandate to help citizens to make better decisions for themselves by adding a fourth tool, the application of psychology and behavioural economics.

Calling upon the vast academic literature looking at 'non-standard' decision making, beliefs and preferences, the team has since worked across almost every area of domestic policy. Drawing insights from this literature, it is often possible to make seemingly trivial changes to a policy and produce large results.

For example, around a million self-assessment taxpayers are late in filing each year and are contacted by HMRC with a reminder. Although many people are late in payment, the vast majority of people pay on time, something which late payers may not be aware of. When reminder letters were modified to include a simple message – that "9 out of 10 people in your town have already paid their tax" – 83 per cent of people who received this letter responded, compared to 67 per cent of those who received the old letter. Just this small change, which cost close to nothing to implement and little to test, could save the Exchequer £30 million a year.

Developing this kind of behavioural intervention is not sufficient. They must be tested and for that reason the use of randomised controlled trials (RCTs) to evaluate our interventions is one of the team's most important roles. Now, through our "Test, Learn, Adapt" paper, the cross-government Trial Design Advisory Panel, and the new "What Works" network, these techniques are being adopted more widely across governments both in the UK and elsewhere.

Despite the team's successes there is much work left to be done. Human behaviour is a wonderful and complex thing, and understanding its origins and how it can be changed to "improve health, wealth and happiness", is a monumental task that requires engagement not just with the academic literature, but with academics themselves – from eminent professors to PhD students at the cutting edge.

For the last year and a half the team has run a Research Fellow programme. The aim of the scheme has been to get some of the brightest PhD students, whose research interests aligned with the team's work programme, directly involved in government policy. PhD students, usually in their second and third years, join the team for three months and work alongside one of the Behavioural Insights Team's full time behavioural economists or policy advisors. Typically, Research Fellows will help develop new policies by drawing on their and the team's knowledge of the behavioural literature, and will then support the team to run randomised controlled trials, often in partnership with another organisation or government department.

The programme has been fantastic for the Behavioural Insights Team, demonstrated by the fact that several former Research Fellows now work (part-time) for the team. The CMPO's Michael Sanders and Raj Chande have been particular stars of the Research Fellowship programme and have helped to push forward work in areas as diverse as charitable giving, access to higher education, employment and growth.

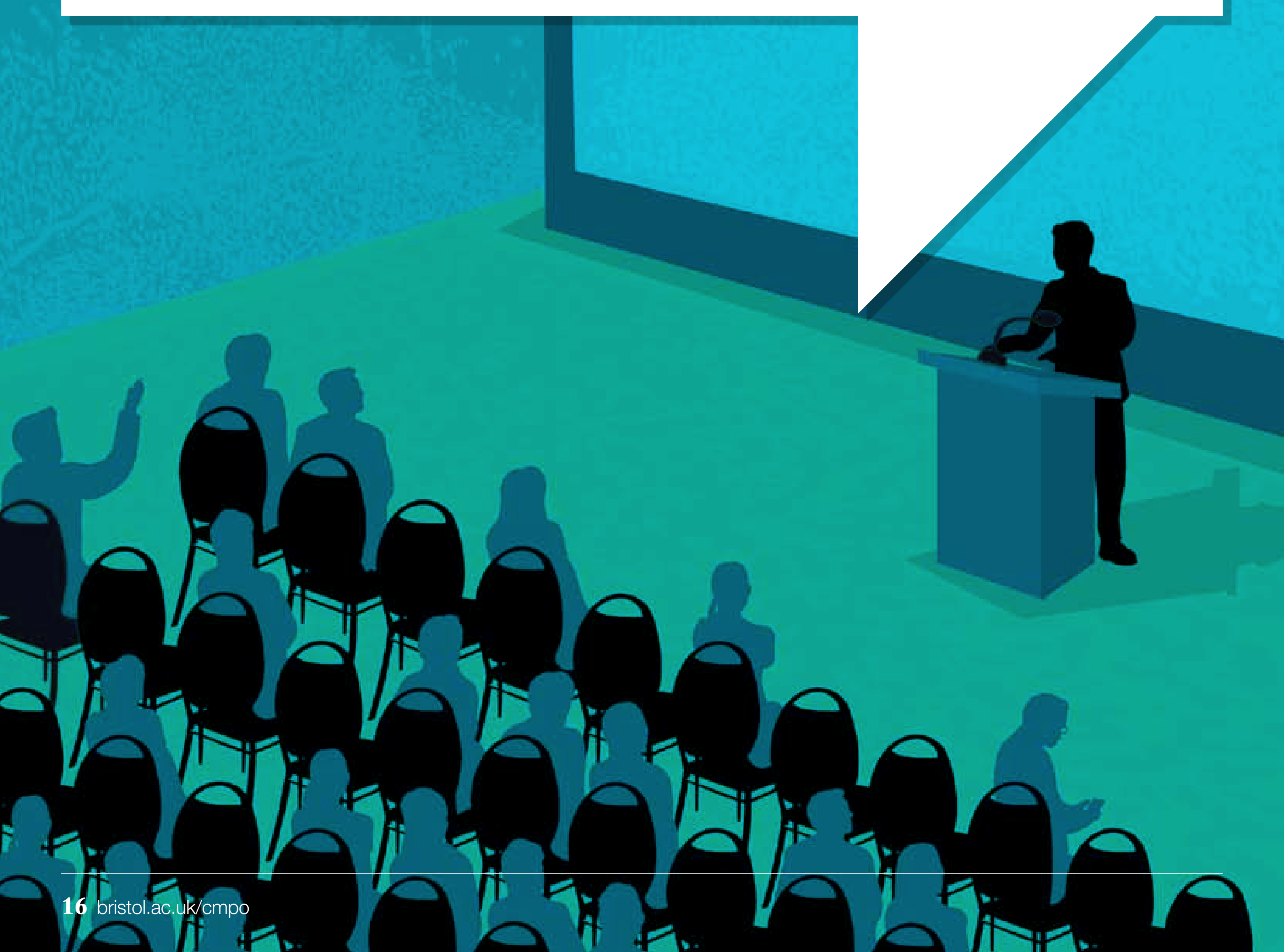
Dr David Halpern is Director of the Cabinet Office Behavioural Insights Team (BIT).

CMPO CONFERENCE:

ECONOMICS OF PUBLIC SERVICE REFORM

On 23 and 24 May 2013 CMPO hosted a conference entitled the Economics of Public Service Reform. It brought together economists representing among others the World Bank, LSE and Columbia University. Each day of the conference focused on a different theme: Day 1 explored the role of choice and competition and Day 2 examined the use of incentives and motivation as tools to enhance productivity and performance.

The next few pages give you a flavour of the papers presented and the different views expressed at the policy panel sessions. The sessions were written up by **Raj Chande** and **Chris Rose**, CMPO PhD students.



...allowing US healthcare providers to share in cost savings appeared to lead to a reduction in costs without compromising quality.

CHOICE AND COMPETITION IN HEALTHCARE

The issue of choice and competition within the healthcare sector was discussed from a number of perspectives at the conference. Kate Ho (Columbia University) presented evidence that allowing US healthcare providers to share in cost savings appeared to lead to a reduction in costs without compromising quality. Carol Propper (CMPO) then showed that increasing patient choice in the UK appeared to lead to improvements in surgery outcomes. Both presentations indicated that market based reforms could improve the quality and efficiency of healthcare provision, while adding caveats that these results may not apply to other aspects of healthcare provision. These caveats were discussed in more detail, along with other reasons that competition and choice might not always have such desirable effects, in the Policy Panel (see page 18).

Incentive payments in the US

Kate Ho's research examined the impact of giving Accountable Care Organisations (ACOs) a share of any cost savings made. An ACO is a group of doctors and hospitals that provides care to blocks of patients (at least 5000). Incentive payments to ACOs based on cost savings are contingent on certain quality-based benchmarks being met. This structure was devised with the aim of improving quality and efficiency by avoiding duplication and aiding the flow of information when multiple providers are involved in the care of a single patient.

Ho exploited the variation in the use of such incentive plans across different insurers to analyse their impact on the quality and cost of care provided, focussing specifically on births and post-natal care. Ho found that where such incentives were in place, patients were admitted to lower-priced hospitals. Ho also found that this did not lead to a fall in quality, but rather that these patients were asked to travel to an equivalent standard hospital that was further away.

Right to choose

Propper's research analysed reforms introduced in 2006 that granted UK patients the right to choose the hospital in which they would be treated. Focussing on elective coronary artery bypass graft (CABG) surgeries, Propper found that patients appeared to respond to information on mortality rates by choosing better hospitals and that low-performing hospitals appeared to improve their quality in response. Propper's work indicated that extending patient choice improves outcomes via both demand-led and supply-response mechanisms.

Concerns that only more affluent patients were capable of utilising their choice effectively were then addressed. Not only was it found that this was not the case, but it also appeared that the sickest patients were the most responsive to information on mortality rates. Propper concluded by presenting estimated benefits accrued from the reforms. While acknowledging the inherent problems of such calculations, Propper estimated that 12 lives had been saved by the improvements in patient outcomes and ended by noting that, contrary to the opinion of the BMA, choice and competition can play an important role in the provision of healthcare.

However, both presenters emphasised that the success of choice and competition as a policy lever is contingent on numerous aspects of the healthcare market's structure. The Policy Panel then elaborated on this point, discussing the views of different players in the sector.

Papers

Gaynor, M., Propper, C., & Seiler, S. (2011), *Free to choose: Reform and demand response in the British National Health Service*, Unpublished manuscript, Stanford University.

Ho, K., & Pakes, A. (2012), *Hospital Choices, Hospital Prices and Financial Incentives to Physicians*, Working Paper, March 2012.

Large providers tend to treat patients in an undifferentiated way, so those with particular needs will often receive a low quality service.

POLICY PANEL

CHOICE AND COMPETITION IN HEALTHCARE

The healthcare policy panel discussion was chaired by Carol Propper and the panel members were Fiona Scott Morton (Yale), Matthew Bell (Frontier Economics) and Catherine Davies (Monitor).

Fiona Scott Morton discussed the implications of the 'Obamacare' reforms, focussing on the need for a strong and competent regulator to monitor anti-competitive behaviour in particular. Catherine Davies of Monitor, the UK's healthcare regulator, then outlined her organisation's three objectives: aiding the proliferation of best practice, creating an environment that fosters innovation, and creating an environment in which high quality service providers are incentivised to expand.

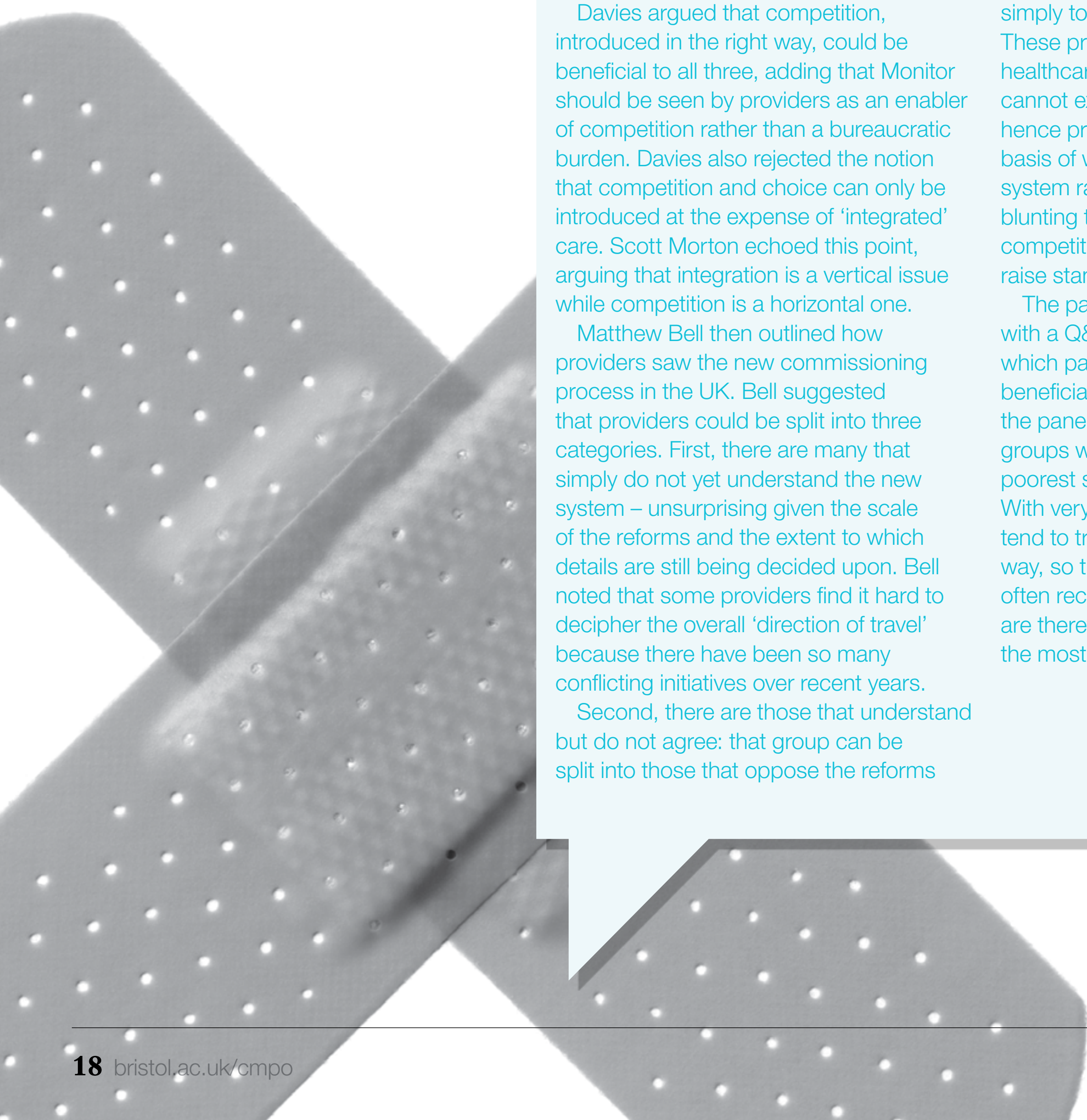
Davies argued that competition, introduced in the right way, could be beneficial to all three, adding that Monitor should be seen by providers as an enabler of competition rather than a bureaucratic burden. Davies also rejected the notion that competition and choice can only be introduced at the expense of 'integrated' care. Scott Morton echoed this point, arguing that integration is a vertical issue while competition is a horizontal one.

Matthew Bell then outlined how providers saw the new commissioning process in the UK. Bell suggested that providers could be split into three categories. First, there are many that simply do not yet understand the new system – unsurprising given the scale of the reforms and the extent to which details are still being decided upon. Bell noted that some providers find it hard to decipher the overall 'direction of travel' because there have been so many conflicting initiatives over recent years.

Second, there are those that understand but do not agree: that group can be split into those that oppose the reforms on ideological grounds and those who are sceptical of the academic evidence because they believe the data collection processes that such research is based on is severely flawed. Bell also argued that there is frequently a disconnect between providers' views of what motivates them and the incentive structures policymakers implement to raise productivity.

Lastly, there are providers who believe the academic evidence on choice and competition but are not sure exactly what the new commissioning landscape is incentivising them to do. Foundation Trusts have a constitution that tells them to deliver healthcare services 'effectively, economically and efficiently', but these concepts are not defined any further, and so in the end providers see their role as simply to provide healthcare services. These providers also report that buyers of healthcare services are so weak that they cannot exert a true competitive pressure, hence providers make decisions on the basis of what is right for the healthcare system rather than their own interests, blunting the mechanism via which competitiveness is meant to raise standards.

The panel's discussion concluded with a Q&A session. When asked which patients would be the most likely beneficiaries of market-based reforms, the panel appeared to agree that small groups who previously received the poorest service had the most to gain. With very little competition, large providers tend to treat patients in an undifferentiated way, so those with particular needs will often receive a low quality service. These are therefore the patients that can benefit the most from innovation.



CHOICE AND COMPETITION IN EDUCATION

Simon Burgess and Rebecca Allen (2010) have previously argued that extending parental choice in order to prompt competition between schools can only increase standards under the following conditions:

- first, parents must be able to observe and care about school quality;
- second, parents must be able to make meaningful choices between schools;
- finally, good schools must have incentives to meet extra demand by increasing capacity.

In their presentations, **Ellen Greaves** (Institute for Fiscal Studies) and **Simon Burgess** (CMPO) argued that competition does not currently work well in the school market in England because these conditions do not hold.

School quality

First, Greaves argued that not all parents appear to value academic performance to the same degree. Although, on average, parents are indeed more likely to apply to a primary school with better exam results, parents value attributes other than school quality such as social composition and proximity.

More importantly, the highest socio-economic status (SES) parents appear to value exam results more than low-SES parents, who instead place a greater weight on the probability of admission, which is itself determined by the school's distance-based catchment area. These findings imply that if a school improves its exam results and attracts more local high-SES applicants, lower SES-parents might fear rejection and be less likely to apply. Putting aside social mobility concerns, this effect is likely to reduce the net increase in demand for places at that school, undermining any positive demand effects resulting from improved results.

Greaves did note that this research uses a specific measure of school quality, 'raw exam scores', which may not be as important to lower-SES parents as 'value-added' scores or Ofsted ratings. Therefore, it is possible that low-SES parents are more responsive to alternative measures of quality. In a question and answer session following the presentation, Greaves noted that the effect of improving the quality of information available to parents is an area that warrants further research.

School choice

Burgess then discussed the extent to which parents have meaningful choices between schools and whether high performing schools have sufficient incentives to expand. Burgess noted that children from low-SES families tended to end up in low performing schools and offered two possible explanations. The first of these is that low-SES parents do not have the same choice sets as high-SES parents. Improvements in school quality might increase the number of local applicants, causing the school to shrink its catchment area. This might then increase housing costs to a level that low-SES parents cannot afford. Alternatively, this segregation could be the consequence of low-SES parents simply preferring schools that happen to be low-performing because they value proximity and social composition above all else. This narrative would also require that school performance is solely determined by SES intake.

Burgess went on to present evidence from the Brighton admissions process that the former narrative is more plausible. The difference between average school quality available to low-SES families and high SES families was a third larger when 'available' is defined by catchment area rather than 'within feasible travelling distance'. Burgess then estimated that 17 per cent of parents in the lowest SES quintile would have chosen another school if catchment areas were not an issue, compared to 11.6 per cent from the top SES quintile. Burgess concluded schools should consider alternative admissions systems such as a lottery.

Expansion

Burgess then went on to discuss the general problem of good schools being oversubscribed. For competition to 'work' in the education market, schools must respond to extra demand from parents by expanding capacity, while less popular schools shrink. Burgess demonstrated that this simply does not happen.

Application ranking data is rarely given to schools. Hence, schools have little idea of how popular (or unpopular) they are. That Local Authorities used to even out applications between schools only worsened the information schools had regarding their popularity. Burgess noted that this issue does not exist for Academies and that recent structural changes in the education market will allow interesting future research in this area.

Additionally, school heads do not appear to value school size, nor does anyone else. Reputations are built on school quality, not size, hence increasing capacity is not an attractive option for high-performing schools. With this in mind, Burgess suggested considering paying schools for results or improvements rather than just 'warehousing', although he acknowledged that devising a system that does this effectively will certainly be challenging.

Papers

Allen, R. and Burgess, S. (2010), *The future of competition and accountability in education*. Mimeo, CMPO. http://www.bristol.ac.uk/cmpo/publications/other/competition.pdf.

Burgess, S. et al (2013), *Preferences, competition and reform in the education market in England*, Working Paper.

Greaves, E. (2012), *Parents' preferences for school attributes: A discrete choice model incorporating unobserved heterogeneity*, Working Paper.

INCENTIVES AND MOTIVATION

Day 2 of the conference explored the use of incentives in the public sector. Three studies were presented that examined the use of workforce incentives in the UK, Nigeria and Zambia with varying degrees of success.

A vast body of research studies the impact of workplace incentives on performance. From a theoretical perspective, countless permutations of principal-agent models investigate the relationship between incentives and performance across a range of contexts and information structures. A wide array of empirical studies has sought to test the predictions of these models. Overall, there is strong consensus that incentives matter and that the appropriate set of incentives can often lead to improved performance.

Herding cats: incentives in UK universities

John McCormack, Carol Propper and Sarah Smith (University of Bristol) study the variation in management practices in UK universities and the relationship between practice and performance. The paper highlights the unique challenge in the university sector where managing creative, intrinsically motivated employees can often be difficult, especially in an environment in which many incentives are defined by the wider academic community.

The authors employ the management survey developed in Bloom and Van Reenen (2007) to collect data on management practices at 158 universities, both at the central and departmental level. The survey quantifies practices in four key areas: operations, monitoring, targets and incentives. The performance indicators are the ranking in the 2008 Research Assessment Exercise (RAE), the overall student satisfaction score as measured by the National Student Survey and the Complete University Guide (CUG) ranking, which incorporates both research and teaching.

The paper finds that UK universities have greater mean scores than manufacturing firms or UK hospitals. In addition, scores across departments in the same university are weakly correlated, with the central services adopting better practices than individual departments. These differences are driven primarily by variation in the strength of performance incentives. The study unearths a positive correlation between each performance indicator and the quality of management practice. This finding is robust to inclusion of observable characteristics such as expenditure, size and past performance. The strongest factor in determining performance is the strength of performance incentives, with the carrot playing a greater role than the stick. Half a standard deviation increase in the management score is associated with a one place improvement in the RAE/CUG ranking.

The study unearths a positive correlation between each performance indicator and the quality of management practice.

Nigerian civil service: incentivising middle-tier managers

In their study Imran Rasul (UCL) and Daniel Rogger (UCL) explore autonomy and incentives for middle-tier bureaucrats in the Nigerian civil service. They adapt the management practice survey in Bloom and Van Reenen (2007) so as to construct measures of the strength of autonomy and incentives across a range of government departments. Autonomy is singled out for study partly due to scarce evidence on its role, and partly to shed light on the relative merits of rules and discretion. Whilst incentives have been studied both in the private sector and among front line public sector staff, no previous study has looked at middle-tier bureaucrats. Rasul and Rogger proceed to study the correlation between autonomy and incentives and the completion and quality of projects undertaken by different departments. In all, there are 11 types of project, ranging from construction to training.

A series of empirical challenges are discussed, including self-selection of bureaucrats into different departments, non-random assignment of projects to departments, reverse causation between project outcomes and management practices and omitted organisational characteristics.

Rasul and Rogger find that whilst autonomy is positively related to project completion and project quality, incentives exhibit a negative association. Results are robust to inclusion of covariates such as project complexity and other observed department characteristics. The latter result is puzzling at first, though the authors argue that it has a root in

Papers

Ashraf, N., Bandiera, O. & Lee, S., *Mission Incentives: Experimental Evidence on Selection, Performance and Retention among Health Workers in Zambia*, Working Paper.

Bloom, N. & Van Reenen, J., (2007), *Measuring and Explaining Management Practices Across Firms and Countries*, Quarterly Journal of Economics, 122, 1351-1408.

Holmstrom, B., & Milgrom, P., (1991), *Multitask principal-agent analyses: Incentive contracts, asset ownership, and job design*, JL Econ. & Org., 7, 24-52.

Martimont, D., (1986), *Exclusive Dealing, Common Agency and Multi-principals Incentive Theory*, Rand Journal of Economics, 27, 1-31.

McCormack, J., Propper, C. & Smith, S., *Herding Cats? Management and University Performance*, Working Paper.

Rasul, I. & Rogger, D., *Management of Bureaucrats and Public Service Delivery: Evidence from the Nigerian Civil Service*, Working Paper.

multi-tasking and multiple principal theories. The multiple task explanation suggests that when faced with multiple tasks, employees direct too much effort towards incentivised tasks, compromising overall performance. The multiple principal theory suggests that if an agent faces multiple principals with different objectives, the incentives offered to him may clash, leading to inefficiencies. Rasul and Rogger's finding contradicts that of McCormack et al., though clearly the contexts are far from comparable.

...when faced with multiple tasks, employees direct too much effort towards incentivised tasks, compromising overall performance.

Mission incentives: health workers in Zambia

Nava Ashraf (Harvard), Oriana Bandiera (LSE) and Scott Lee (Harvard) conduct a field experiment in Zambia looking at mission incentives. The study randomly varies recruitment posters for Community Health Workers to have either a 'private' or 'public' mission. The public mission poster suggests that the role is important to the community whilst the private mission poster emphasises training and career development. The authors study the effects of the different missions on the application process, candidate selection, training and subsequent performance.

Whilst the number of applicants and gender composition was similar for both missions, the number of completed applications was greater for the public mission. However, those who applied for the public mission were less qualified on average. The applicants' motivations were measured through questioning at the interview stage and two tests during training. Those on the public mission were more likely to state that they saw themselves as a Community Health Worker in five years' time and placed more weight on social motivations in both tests.

The interview panels were aware of the missions but not of the experiment. The authors postulate that the panel may select applicants whom they feel more suited to each mission. This is supported by the data; community motivated individuals were more likely to be selected for the public mission. Moreover, the panel were more likely to appoint females for the public mission, generating gender differences not present at the application stage. Finally, selection of better qualified candidates for the public mission negated the skill gap in the pool of applicants.

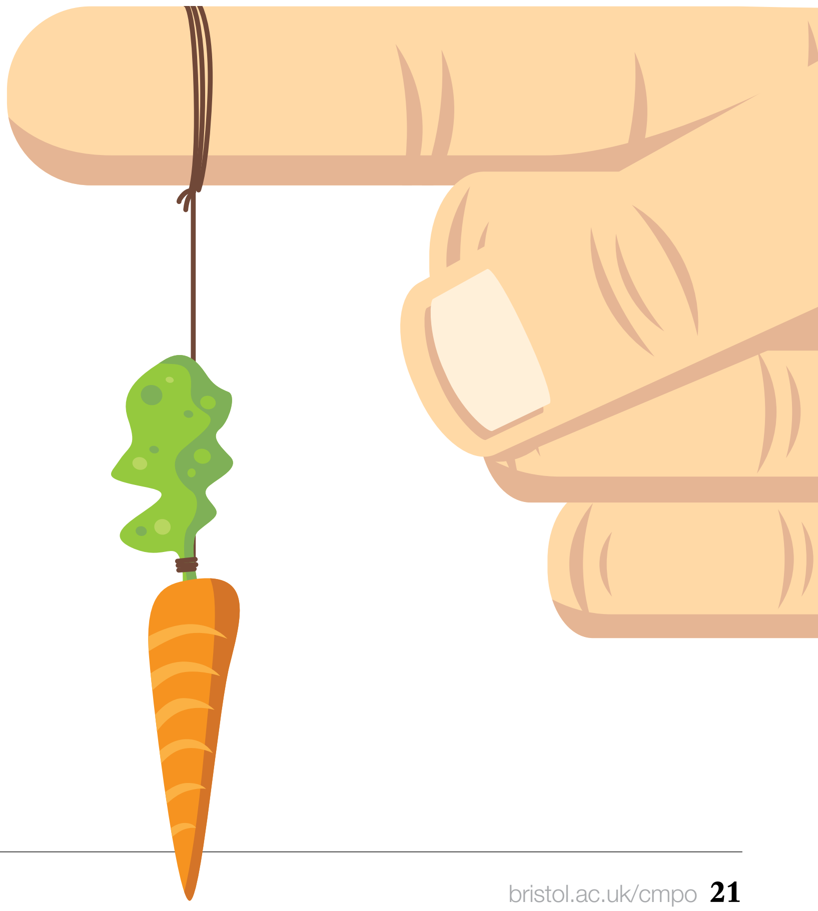
The study proceeds to evaluate performance for each mission type. The authors find substantial evidence that community health workers on the private mission outperform their public mission counterparts by a substantial margin, making 25 per cent more home visits on average. This may indicate that the private mission provided stronger performance incentives, though it could also be driven by differences between the two groups.

Conclusion

The three papers each study workplace incentives from different perspectives and in different contexts. McCormack et al. document a strong positive association between workplace incentives and output in the UK university sector, whilst Rasul and Rogger find the opposite in the Nigerian civil service. The discrepancy is likely to be attributable to the different environments studied; however causality is uncertain in both papers. Ashraf et al. show that mission incentives play an important role at each stage of the employment cycle, though the extent to which their results apply to other contexts is uncertain.

INCENTIVE THEORY

The purpose of any incentive scheme is to align the interests of the agent with those of the principal. This is achieved through giving the agent a stake in some observable measure of performance, provided that he is able to influence this measure through his own behaviour, and that the reward is sufficiently large to overcome any associated costs. The appropriate incentive scheme depends on the structure of information and the context. Whilst standard incentive theory predicts that rewarding good performance ought to enhance outcomes, a number of theories exist in which incentives may have the opposite effect. One factor which may cause schemes to fail is that incentives may crowd out intrinsic motivation. Another owes to multi-tasking: if performance depends on the agent's completion of multiple tasks and incentives target specific tasks, the agent may neglect the non-incentive tasks in favour of the incentive tasks, compromising performance (Holmstrom and Milgrom; 1991). Incentives may also fail in a multiple principal environment if the principals do not share a common objective (Martimont; 1986). The net-impact is then context specific, depending on the applicability of these theories and the relative magnitudes of any opposing effects.



The presence of social barriers may restrict information transmission if the agent and potential recipient are from different social classes.

PERFORMANCE PAY IN THE PUBLIC SECTOR: TWO FIELD EXPERIMENTS FROM INDIA

Performance pay is common in the private sector, yet surprisingly rare in the public sector. One reason for this may be that there is little evidence on the effects of performance pay in improving public service delivery. Others include a lack of profit incentive on the part of the decision maker, potential resistance from unions and implementation issues. Field experiments have played an important role in determining the extent to which incentive pay can improve performance. **Karthik Muralidharan** (University of California, San Diego) and **Erlend Berg** (Oxford) presented the findings of two such experiments recently conducted in India.

Public health information

Whilst much attention has been devoted to the supply side, comparatively few studies have considered frictions on the demand side. Berg et al. postulate that the intended recipients often do not have sufficient information to take advantage of public services. The paper seeks to ascertain whether performance pay is able to enhance the dissemination of information through knowledge agents. (A knowledge agent is an individual employed to spread information about public services to the eligible audience.) The presence of social barriers may restrict information transmission if the agent and potential recipient are from different social classes. The authors explore whether social barriers inhibit information transmission and the extent to which financial incentives may be used to overcome this obstacle.

The service considered is a public-private health insurance scheme for the poor. The experiment was conducted across 151 villages in the southern district of Karnataka. A knowledge agent was employed in 112 randomly selected villages with instructions to disseminate information about the scheme to eligible households. All knowledge agents were local females. There were two randomly assigned employment contracts: a flat-pay contract and a performance pay contract. Performance was ascertained through testing a random selection of eligible households. Data on program knowledge, take-up and household characteristics were collected in three post-intervention surveys. From this information, the authors construct a measure of social distance between household and agent based on wealth, education and caste.

The study finds that knowledge agents only improve information dissemination if their remuneration is performance related. Take-up and knowledge are positively associated, suggesting that information costs impede demand. Finally, social distance restricts information transmission, though performance pay counteracts the effect.

In the classroom

Arguably the most important form of information dissemination occurs in the classroom. Much debate has centred on the most cost effective means of improving education delivery. Traditional policies include reducing class sizes or increasing teachers' wages in order to attract higher calibre applicants. However, performance related incentives are relatively uncommon. Using data from a field experiment conducted across 300 primary schools in the state of Andhra Pradesh, Muralidharan considers the impact of performance pay for teachers on test-scores from independently administered maths and language tests.

Schools were randomly allocated to one of three groups: a control group, a group in which teacher pay depended on the average score of their class, and a group in which teacher pay depended on the average score of their school. The experiment ran for five years, providing data on the impact of performance pay for cohorts exposed for the duration of their primary education.

In the fourth year of the study, the incentives were randomly removed in half of the schools. The existence of test-score decay implies that the net and gross effects of an intervention are not equivalent. Whilst the net effect is obtained through comparing the scores of the treated group and the control group, the gross effect is obtained by comparison of the treated group and the discontinued group. The random removal of incentives permits estimation of the gross effect in addition to the net effect.

The study finds that for the cohort who completed their entire primary education under the scheme, class-level performance pay lead to net gains of 0.54 of a standard deviation for maths and 0.35 for language. Moreover, performance improved in non-incentive subjects such as science and social studies. The gross effects were estimated at 0.17 and 0.11 standard deviations per year for maths and language respectively.

School-level performance pay resulted in net gains of 0.12 and 0.14 standard deviations respectively, indicating that group incentives are weaker than individual incentives. Comparing his findings to other studies, Muralidharan estimates that the adoption of class-level performance pay is around 15-20 times more cost effective than reducing class sizes.

Conclusion

Together, the papers suggest that performance pay is an effective means of improving public service delivery in the contexts studied. The applicability of these results to other contexts is less clear cut. A potential concern is that performance pay may lead to undesirable behaviour. For example, a teacher may choose to focus his attention on borderline students at the expense of others or a parent may respond to improved teacher performance by investing less effort in their child's education. Whilst the findings are encouraging, these considerations merit further attention.

Papers

Berg, E., Ghatak, M., Manjula, R., Rajasekhar, D., Roy, S., *Motivating Knowledge Agents: Incentive Pay vs Social Distance*, Working Paper.

Muralidharan, K., *Long Term Effects of Teacher Performance Pay: Experimental Evidence from India*, Working Paper.

POLICY PANEL

PUBLIC SERVICES IN DEVELOPING COUNTRIES: WHAT HAVE WE LEARNT FROM FIELD EXPERIMENTS AND WHAT REMAINS TO BE LEARNT?

The conference concluded with a policy panel discussion. The topic under consideration was the contribution of field experiments to our knowledge of what works in developing countries' public service delivery. **Sonia Bhalotra** (CMPO) chaired the panel, which consisted of **Jishnu Das** and **Jed Friedman** (both Senior Economists at the World Bank) and **Marcos Vera-Hernandez** (UCL).

Das commenced the discussion by presenting short summaries of his recent work on the education sector in Pakistan and the healthcare sector in India, before then considering how these projects illustrate the substantial benefits of field experiments. Developing countries offer an invaluable opportunity to study public service delivery because one often finds market structures that simply do not exist in OECD countries.

Das highlighted three aspects of developing countries' public services: market determined pricing in private schools and health clinics; closed markets in schooling; some de jure but almost zero de facto regulation. Das also argued that these markets are unlikely to resist regulation or subsidisation for long hence the current opportunity to study how health and education markets react to changes in institutions could be immensely fruitful for academic research. Ironically, it is the simplicity of the village economies being analysed that allows economists to deploy more sophisticated models that interact demand and supply responses to variations in market structure.

Nonetheless, conducting such studies is not easy. Das and other speakers at the conference highlighted the lack of quality administrative data in developing countries as the primary constraint for researchers. Karthik Muralidharan (University of California, San Diego) echoed this point, arguing that good quality data collected by universal service providers could make randomised control trials immeasurably easier and thus reap substantial benefits.

Muralidharan also spoke of his frustration at the level of disconnect between academic research and the policy agenda. In particular, Muralidharan highlighted the dominance of public sector provision of education in the development discourse. The research largely shows that public sector provision is so poor that governments can't even give public schooling away for free, while demand for private sector schooling has increased exponentially in the last two decades, yet the solutions offered by policymakers usually involved greater public provision. Das argues this disconnect will continue as long as researchers work and live so far away from where policy decisions are actually being made. The demand for evidence from policymakers might be puzzlingly low, but so too is the appetite among academics to go and work in policy.

Jed Friedman then presented a staunch defence of performance related pay (PRP) in developing countries. Friedman noted that the concept of PRP has come under attack in recent years, in particular because of counter-productive effects on intrinsic motivation found in lab experiments (Deci, Koestner and Ryan (1999) provide a meta-review). Daniel Ariely has been one of the most prominent critics of such payment structures, analogising that offering a dinner party host $10 for cooking a wonderful meal isn't likely to lead to further invitations.

However, as Friedman pointed out, while this analogy might be entertaining, it doesn't particularly translate well to the labour market environment in developing countries. Unlike Ariely's dinner party host, public sector employees are already being incentivised to work, they are just receiving wages instead of bonus payments. Friedman also pointed out that the majority of the lab experiments that showed extrinsic rewards crowd out intrinsic motivation compare PRP to no payment at all, whereas the choice available to policymakers is PRP versus some other system of payment.

In fact, Deci Koestner and Ryan's meta-review found PRP to have the least detrimental effect on intrinsic motivation of three payment systems examined. Friedman argues that more research is needed on PRP in the public sector, especially regarding long-term dynamic effects such as crowd-out or even potential crowding-in of intrinsic motivation. Lab experiments on rich Western psychology undergraduate students are unlikely to capture the thought process of public service workers in developing countries hence further field experiments are needed.

A Zambian clinician had this to say about PRP: *"I like this new program because it makes me feel that the people in charge of the system care about us."* This clinician worked in a facility that rarely received supervision, was 25 per cent likely to have no functioning water source, regularly ran out of key medicines, offered low salaries and suffered high rates of staff turnover. Friedman proposed that in such difficult circumstances, the paid incentive might be perceived by the worker as an expression of appreciation and confidence.

Marcos Vera-Hernandez concluded the conference with some suggestions for future research. While interventions designed to spread knowledge often had desirable outcomes, economic research generally struggles to explain why these effects often decay (Chetty et al 2011). Vera-Hernandez suggested that further studies into why some effects endure could be particularly useful for development economists.

Papers

Chetty, R., Friedman, J. N., & Rockoff, J. E. (2011), *The long-term impacts of teachers: Teacher value-added and student outcomes in adulthood* (No. w17699). National Bureau of Economic Research.

Das, J., Holla, A., Das, V., Mohanan, M., Tabak, D., & Chan. B. (2012), *In Urban And Rural India, A Standardized Patient Study Showed Low Levels Of Provider Training And Huge Quality Gaps. Health Affairs*, 31(12), 2774-2784.

Deci, E. L., Koestner, R., & Ryan, R. M. (1999), *A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation*. Psychological bulletin, 125(6), 627.

Woolhandler, S., Ariely, D., & Himmelstein, D. U. (2012), *Why pay for performance may be incompatible with quality improvement. BMJ: British Medical Journal*, 345.

Das, J., Andrabi, T., Ijaz Khwaja, A., (2013) *Report Cards: The Impact of Providing School and Child Test-scores on Educational Markets, Working Paper.*

THE IMPACT OF PROVIDING SCHOOL AND CHILD TEST-SCORES ON EDUCATIONAL MARKETS

Economists generally theorise that the proliferation of information will lead to improvements in the quality of public services, but the empirical evidence is less conclusive (for example, Jacob and Levitt, 2003). Prior analyses have usually focussed on markets with restricted pricing. When prices can move and quality is unobserved, the theoretical literature (Wollinsky 1993) states that prices can act as a substitute for information i.e. high quality schools will charge significantly higher prices to differentiate themselves from lower quality schools. For prices to effectively signal quality, they must be widely dispersed. Hence, medium quality schools are not possible as such a school will not be able to effectively signal that it is not of poor quality.

Jishnu Das presented the results from an experiment conducted rural Pakistan's education market. Randomly selected villages implemented a report card system allowing parents to observe school quality and their own child's absolute and relative performance. Children in all villages were tested at the start of the experiment and again a year later. It was found that in the report-card villages, the low-quality schools improved whereas the low-quality schools in the control group villages did not. These improvements were entirely driven by increases in school effort, rather than changes in enrolment or parental efforts.

Consistent with the 'price as a signal' theory outlined by Das at the beginning of his talk, the distribution of school fees was indeed compressed in the report card villages. All schools reduced prices, but the high quality schools reduced their prices the most as they no longer needed to distinguish themselves using the mark-up.

Papers

Andrabi, T., Das, J., & Khwaja, A. I. (2009), Report cards: *The impact of providing school and child test scores on educational markets.* Unpublished Working Paper.

Wolinsky, A. (1993), *Competition in a market for informed experts' services*, RAND Journal of Economics 24, 380-398.

PUBLIC SECTOR WAGE POLICY AND LABOUR MARKET EQUILIBRIUM: A STRUCTURAL MODEL

Governments across the developed world are seeking to drastically reduce spending so as to bring government debt under control. However, the impact of such policies on economic prosperity remains a contentious issue. This paper presented by **Fabien Postel-Vinay** contributes to the policy debate through explicitly modelling the relationship between the public and private sectors. This is important since the sectors differ fundamentally in their objectives and hence in their employment policies.

A search-theoretic framework is developed in which the public and private sectors compete in a labour market characterised by job-search frictions. There are many small profit-maximising firms and a single large public sector. Workers search for jobs and accept employment offers if the wage is sufficiently high. The framework can be used to understand the impact of public sector wage and hiring policy on wages and employment throughout the economy.

The model is fitted to the UK using data from the British Household Panel Survey. The wage data show that whilst average earnings are higher in the public sector, wage dispersion is greater in the private sector. The framework is able to match these features closely. The model can be used to simulate the effects of three different policies geared towards reducing the public sector wage bill: redundancies of existing employees, hiring fewer new employees and decreasing wages. The results of this analysis are still being formulated. One drawback of the approach is that it is a model of the long-run and hence cannot be used to predict the short-run impact of austerity policies.

Paper

Bradley, J., Postel-Vinay, F. & Turon, H., *Public sector wage policy and labor market equilibrium: A structural model*, Working Paper.

IS THERE A PPP INTEREST RATE PREMIUM?

Eduardo Engel (University of Chile and Yale University) presented a paper that examines how risk is assessed in public-private partnerships (PPP) that deliver large infrastructure projects for governments such as motorways, airports and bridges. A PPP is a venture in which a private firm finances, builds and operates the project and is compensated either through user fees or government transfers. Previous research has documented that finance is more costly to obtain through a PPP than through a publicly managed project: interest rates are typically 2-3 percentage points higher. This has led to the conclusion that a PPP ought only to be used if efficiency gains from the involvement of a private enterprise outweigh the increased cost of finance.

Infrastructure projects are risky in that future demand for them is uncertain. This paper shows that risk may offer an explanation for the observed interest rate premium, and that correcting contracts to take risk into account may reduce the premium. Contracts for PPPs are often fixed-term, allowing the private company to profit from the project for a finite period. This implies that private firms are exposed to more risk than if the contract were flexible and guaranteed a fixed present value of return. The increased risk makes finance more costly, and hence offers an explanation for the interest rate premium. The premium could be reduced through adopting flexible contracts.

The paper also shows that a PPP is superior to public delivery since the private firm has an incentive to invest in quality if it is able to profit from it in the future.

Paper

Engel, E., Fischer, R. & Galetovic, A., *Is there a PPP interest rate premium?*, Working Paper.

COLLAPSING MORALE IN BUREAUCRATIC ENVIRONMENTS

Paul Grout's paper seeks to explain how seemingly irrelevant changes can have a large impact on the morale of individuals and thus performance. He gave the example of Carver High School in Atlanta. In the early 1980s the school was failing and teachers were demoralised. However, the appointment of a new principal lead to a dramatic turnaround despite little tangible change. From an economic perspective, it is not clear how appointing a new principle with similar objectives and constraints can lead to such an improvement.

Grout explains the effect using a model to show how the hierarchical structure of a bureaucracy is sensitive to change; both individuals or small shifts in power. In a hierarchy consisting of a worker, a bureaucrat and a higher authority production relies on the worker's (or in this case the teacher's) efforts and this level of effort is in turn dependent on the support he receives from his superiors. If the teacher judges that the support he is receiving is not sufficient he asks for more. If this does not result in more support the teacher can either threaten to go over the bureaucrat's head and seek support from a higher authority or simply not bother and put in less effort. The first option is costly in time and effort for the teacher, and the second is demoralising.

In the Carver High School example replacing the principal had a dramatic positive effect. The new principal (a bureaucrat) was more supportive to his staff and was able to use his power and influence to appeal to the higher authority on behalf of his teachers to obtain results.

Paper
Grout, P. & Schnedler, W., *Collapsing Morale in Bureaucratic Environments*, Working Paper.

HOW DOES WOMEN'S POLITICAL PARTICIPATION RESPOND TO ELECTORAL SUCCESS?

Sonia Bhalotra's paper compares female voter turnout and female candidacy in India. Women currently hold 11 per cent of seats in India's national parliament, the Lok Sabha, half that of the House of Commons (22 per cent). The degree of female representation is of substantial importance as previous studies have shown that the gender composition of legislatures has significant effects on policy choices.

Bhalotra examined female turnout and candidacy in states where women had previously narrowly won elections and states where women had narrowly lost. The premise for such an analysis is that to all extensive purposes, such states are largely comparable and those elections had been decided by such small margins that the whether a woman won or lost was essentially random. This strategy allows the researcher to estimate the impact of a woman winning an election on future female political participation.

In states where women narrowly won elections, the share of women candidates increased by two percentage points (from a mean of 11.7 per cent), driven by a substitution away from male candidates. These effects endured for up to 10 years and were largely found within incumbent parties i.e. female candidacy among opponent parties did not change at all. Additionally, it was found a woman winning an election did not increase female turnout in subsequent elections, nor did male turnout decrease. Bhalotra argued that these results indicate that the female political representation is held back by party rather than voter bias.

Paper
Bhalotra, S., Clots-Figueras, I., & Iyer, L. (2012), ***Path-Breakers: How Does Women's Political Participation Respond to Electoral Success?***, Working Paper.

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