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CentrePiece

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Integrating immigrants
Energy-efficient firms
The resource curse
NHS management
Swedish schools
Violence in Iraq
Job guarantee
UK inequality

DOOMSDAY CYCLE

CentrePiece

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Editorial

'It was the best of times, it was the worst of times…' Charles Dickens' opening line of *A Tale of Two Cities* feels strangely appropriate for the economics profession right now. Widely criticised in the media for apparent failures to foresee the financial crisis, economists nevertheless have rarely been busier as sources of research-based advice for policy-makers. The researchers at the Centre for Economic Performance (CEP) are as involved as any, and this *CentrePiece* showcases a selection of the latest work.

Our cover story – 'The doomsday cycle' – focuses on the pressing question of financial regulation. CEP researcher Peter Boone and his US-based colleague Simon Johnson (former chief economist at the International Monetary Fund) call for much more radical reform than is currently being considered. 'We must stop sending the message to bankers that they can win on the rise and also survive the downside', they argue.

Boone and Johnson's blog, The Baseline Scenario, has been highly influential in discussions of the global crisis. Boone is also a member of the LSE's Future of Finance Group, convened by CEP's founder director Richard Layard and Paul Woolley of the Centre for the Study of Capital Market Dysfunctionality. The group will be presenting its findings at a major conference in July on 'The future of finance – and the economic theory that underpins it'.

Layard is also contributing to policy responses to the recession. Noting the evidence on the human cost of past recessions – people being permanently 'scarred' by a period out of work – he and Paul Gregg have called for a 'job guarantee' to prevent long-term unemployment worsening after the recession ends. As their article here indicates, the government is acting to help unemployed young people, but more could be done.

CEP's work is not limited to the study of money and jobs. Radha Iyengar, for example, sheds light on the potential impact of the Chilcot inquiry on military success in Iraq. CEP's techniques for analysing management practices are being applied to issues of energy efficiency (Ralf Martin) and hospital management (John Van Reenen). And as a member of the National Equality Panel, CEP's research director Stephen Machin has been deeply involved in public debate about UK inequality.

The UK general election, due by the spring, will be a battleground for these and many other issues. CEP intends to play a role in the debate by publishing a new series of Election Analyses, looking at the research evidence in some of the key policy areas. For more information on this project and much more on CEP's research, visit our website: http://cep.lse.ac.uk/

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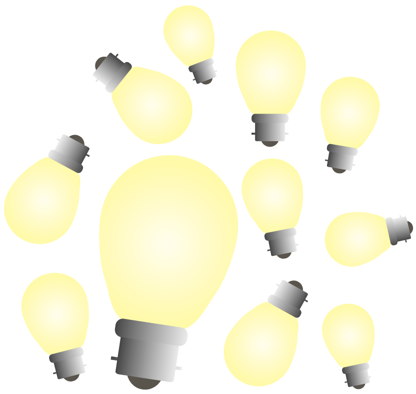


Contents

in brief...

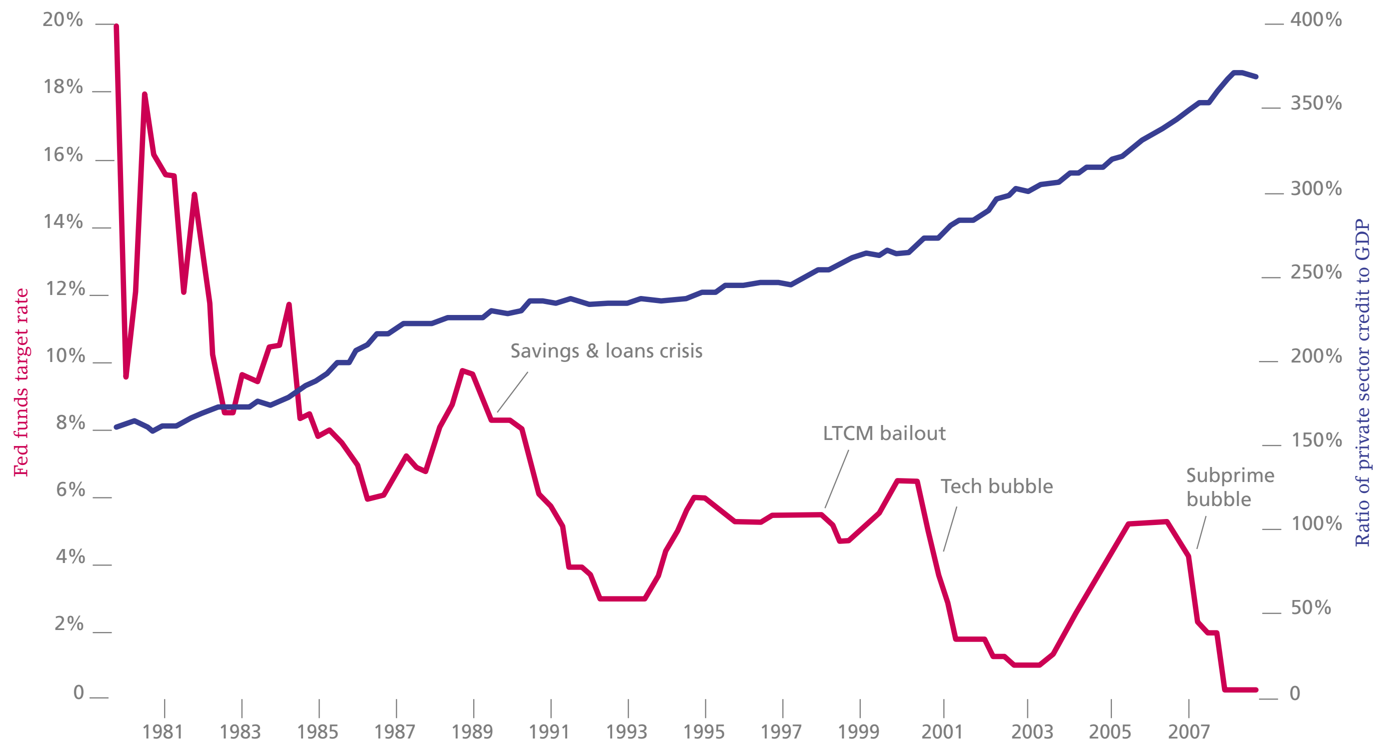
Over the last 30 years, we have built a financial system that threatens to topple our global economic order unless decisive measures are taken. That is the contention of **Peter Boone** and **Simon Johnson**, who describe a 'doomsday cycle' that could lead to economic disaster after the next financial crisis.

The doomsday cycle

Over the last three decades, the US financial system has tripled in size, as measured by total credit relative to GDP (see Figure 1). Each time the system runs into problems, the Federal Reserve quickly lowers interest rates to revive it. These crises appear to be getting worse and worse – and their impact is increasingly global. Not only are interest rates near zero around the world, but many countries are on fiscal trajectories that require major changes to avoid eventual financial collapse.

What will happen when the next shock hits? We believe we may be nearing the stage where the answer will be – just as it was in the Great Depression – a calamitous global collapse. The root

Figure 1:
Private sector credit/GDP just keeps growing, while the Fed funds target rate is now near to zero
Source: Bloomberg, US Department of Commerce



problem is that we have let a 'doomsday cycle' infiltrate our economic system (see Figure 2).[1]

The doomsday cycle has several simple stages. At the start, creditors and depositors provide banks with cheap funding in the expectation that if things go very wrong, our central banks and fiscal authorities will bail them out. Banks such as Lehman Brothers – and many others in this past cycle – use the funds to take large risks, with the aim of providing dividends and bonuses to shareholders and management.

Through direct subsidies (such as deposit insurance) and indirect support (such as central bank bailouts), we encourage our banking system to ignore large, socially harmful 'tail risks' – those risks where there is a small chance of calamitous collapse. As far as banks are concerned, they can walk away and let the state clean it up. Some bankers and policy-makers even do well during the collapse that they helped to create.

Regulators are supposed to prevent this dangerous risk-taking. Adair Turner, chairman of the Financial Services Authority, is calling for more radical change than most regulators. But banks wield substantial political and financial power, and the system has become remarkably complex, so eventually regulators become compromised.

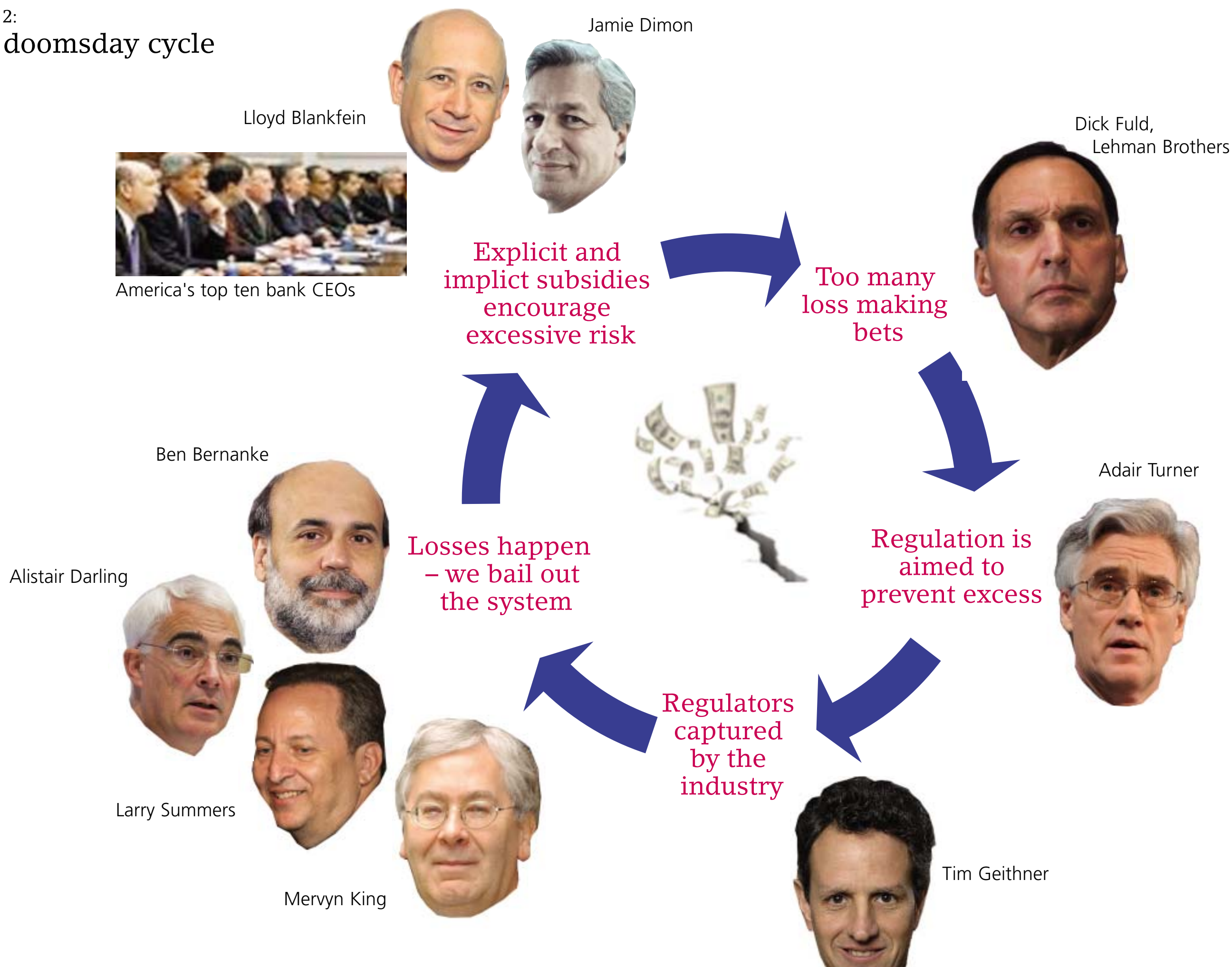
The extent of regulatory failure ahead of the current crisis was mind-boggling. Many banks, including Northern Rock, convinced regulators that they could hold just 2% of capital against large and risky asset portfolios. The whole banking system built up many trillions of dollars in exposures to derivatives. This meant that when one large bank failed, it could bring down the whole system.

Given the inability of our political and social systems to handle the hardship that would follow economic collapse, we rely on our central banks to cut interest rates and direct credits to bail out the loss-makers. While the faces tend to change, each central bank and government operates similarly. This time, it was Mervyn King, Gordon Brown, Tim Geithner and Ben Bernanke who oversaw policy as the bubble was inflating – and are now designing our rescue.

When the bailout is done, we start all over again. This has been the pattern in many developed countries since the mid-1970s – a date that coincides with significant macroeconomic and regulatory

Stopping the doomsday cycle requires major reform with policies implemented across the G-20

Figure 2:
The doomsday cycle



1 Andrew Haldane, executive director for financial stability at the Bank of England, has written an excellent paper describing a similar idea – the 'doom loop' (http://www.bankofengland.co.uk/publications/speeches/2009/speech409.pdf).

change, including the end of the Bretton Woods fixed exchange rate systems, reduced capital controls in rich countries and the beginning of 20 years of regulatory easing.

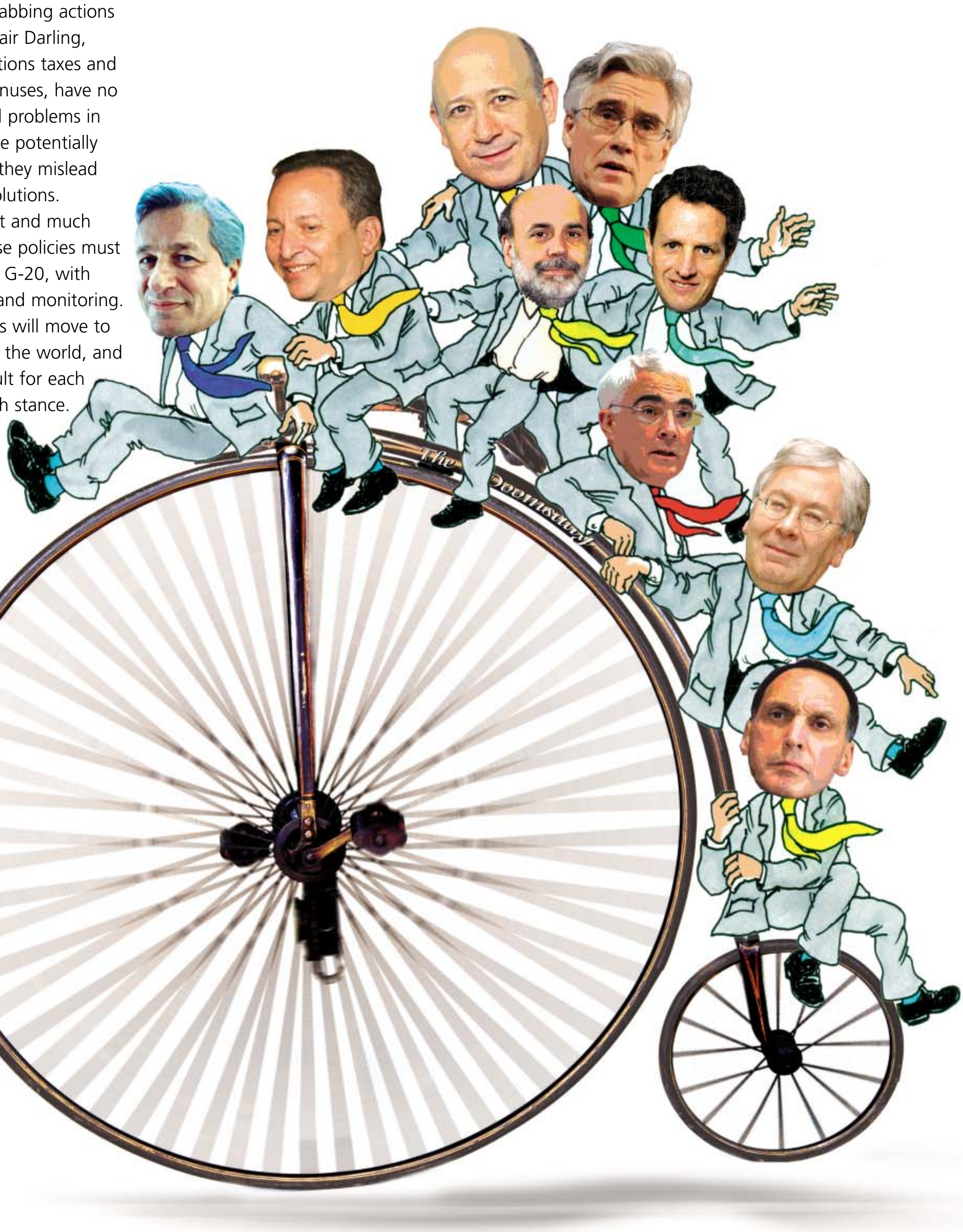
The real danger is that as this cycle continues, the scale of the problem is getting bigger. If each cycle requires greater and greater public intervention, we will surely eventually collapse.

Stopping the doomsday cycle

To stop the doomsday cycle, we need far greater reform than is currently under discussion. The headline-grabbing actions of Gordon Brown and Alistair Darling, calling for financial transactions taxes and a one-year super tax on bonuses, have no impact on the fundamental problems in our system. Indeed, they are potentially harmful to the extent that they mislead taxpayers who want real solutions.

We need quite different and much more focused policies. These policies must be implemented across the G-20, with international coordination and monitoring. Otherwise, financial services will move to the least regulated parts of the world, and it will be much more difficult for each country to maintain a tough stance.

The best route to creating a safer financial system is to have very large and robust capital requirements



Tackling regulatory failure

So what should be done? First, consider the regulatory problem: there are two broad ways to view past regulatory failure that has helped us arrive at this dangerous point. One is to argue it is a mistake that can be corrected through better rules.

That has been the path of successive Basel committees, which are now designing comprehensive new rules to ensure greater liquidity at banks and to close past loopholes that permitted banks to reduce their core capital. We both worked for many years in formerly communist countries, and this project reminds us of central planners' attempts to rescue their systems with additional regulations until it became all too apparent that collapse was imminent.

In our view, the long-term failure of regulation to check financial collapses reflects deep political difficulties in creating regulation. The banks have the money, they have the best lawyers and they have the funds to finance the political system. Politicians rarely want strong regulators – except after a major collapse. So politics rarely favours regulation.

There are also big operational problems: how should regulators decide the risk capital that should be allocated to new and arcane derivatives, which banks claim will reduce risk? When faced with rooms full of papers describing new instruments, and their risk assessments, regulators will always be at a disadvantage compared with banks.

The operational difficulties are further complicated by the intellectual undercurrents: when the economy is booming, driven by more leveraged bets, there is a tendency for the academic world to provide theories that justify status quo policies. This is clear from the growth of efficient markets theories, which infiltrated regulators' decision-making during the boom ahead of this crisis.

No wonder that Tim Geithner, while president of the Federal Reserve Bank of New York, or Alan Greenspan and Ben Bernanke, as Fed chairman, did little to arrest the rapid growth of derivatives and off-balance sheet assets.

It requires a strong leap of faith to believe that our regulatory system will never again be captured or corrupted. The fact that it has spectacularly failed to limit costly risk should be no surprise. In our view, the new regulations discussed in Basel 3 will fail, just as Basel 1 and Basel 2 have failed.

The proposals sound smart because they are correcting egregious errors of the past. But new errors will surface over the next five to ten years, and these will be precisely where loopholes remain, and where the system gradually becomes corrupted, again.

We believe that the best route to creating a safer system is to have very large and robust capital requirements, which are legislated and difficult to circumvent or revise. If we triple core capital at major banks to 15-25% of assets, and err on the side of requiring too much capital for derivatives and other complicated financial structures, we will create a much safer system with less scope for 'gaming' the rules.

Once shareholders have a serious amount of funds at risk, relative to the winnings they would make from gambling, they will be less likely to gamble. This will make the job of regulators far easier, and make it more likely our current regulatory system could work.

Changing incentives

Second, we need to make the individuals who are part of any failed system expect large losses when their gambles fail and public money is required to bail out the system. While many executives at bailed-out institutions lost large amounts of money, they remain very wealthy.

Some people have clearly become winners from the crisis. Alistair Darling supported the appointment of Win Bischoff, a top executive at Citigroup in the run-up to its spectacular failure, to be chairman of Lloyds. Vikram Pandit sold his hedge fund to Citigroup, who then wrote off most of the cost as a loss, but Pandit was soon named their CEO.

Jamie Dimon and Lloyd Blankfein, CEOs at JP Morgan and Goldman Sachs respectively, are outright winners from this process, despite the fact that each of their banks also received federal bailouts. Goldman Sachs was lucky to gain access to the Fed's 'discount window', so averting potential collapse.

We must stop sending the message to our bankers that they can win on the rise and also survive the downside. This requires legislation that recoups past earnings and bonuses from employees of banks that require bailouts.

> It is hard to believe that regulatory reform will succeed this time, when it has failed so enormously – and repeatedly – in the past

The role of policy-makers

Third, we need our leading fiscal and monetary policy-makers to admit their role in generating this doomsday cycle through successive bailouts. They need to develop solutions so that their institutions can credibly stop this cycle. The problem is simple: most financial institutions today have now proven too big to fail, as our policy-makers have bailed them all out. The rules need to change so that creditors do not expect another bailout when the next crisis happens.

There is some encouraging progress with plans for 'living wills' and measures to reduce the interdependency of financial institutions. But the litmus test for this will be when our leading policy-makers start calling for the break-up of large financial institutions and permanent crude limits on their size relative to the economy in the future.

Smaller institutions are naturally easier

The failure of regulation to check financial collapses reflects deep political and operational difficulties in creating regulation

to let fail, and this will make creditors nervous when lending to them, so we can have more confidence that creditors will not lend to highly risky small institutions. There are feasible ways of doing this: for example, we could impose rising capital requirements on large institutions over the next five years, thus encouraging them to develop orderly plans to break up and shrink their banks.

Prospects for effective reform

So where are we going with our current reforms? It is now obvious that risk-taking at banks will soon be larger than ever. Central banks and governments around the world have proved (once again) that they are willing to bail out banks at enormous public cost when things go wrong. Markets are now again providing very cheap loans to banks, with the comfort that the state will bail them out.

Today, Bank of America and the Royal Bank of Scotland are each priced to have just 0.5% annual risk of default above their sovereigns during the next five years in credit markets. This is a remarkably low implied risk considering that both banks were near to collapse just a few months ago. Creditors are clearly very confident that they will be bailed out again if necessary. Indeed, they are more comfortable lending to large risky banks than to many successful corporations.

There is no doubt that the regulatory environment is going to be tougher for the next few years. But nothing has changed to make us believe the regulatory system will succeed this time, when it has failed so enormously – and repeatedly – in the recent past. To bring about the dramatic change that is needed also requires international cooperation and consistency.

Many of our current policy-makers – Ben Bernanke, Mervyn King, Alistair Darling and Gordon Brown – are the same ones that inflated the last bubble. So we know with great confidence that they are the types that will bail us out each time things go wrong. They are all currently on course for seeding our next rise and collapse: cheap rates and credit, with large moral hazard, are the initial stages of each cycle. Very few of these people, apart from Mervyn King, appear prepared to recognise their past role in creating our current problems and then to discuss resolutely how to change it.

The danger this system poses is clear, as Figure 1 shows. With our financial system now well-oiled to take on very large risk once again, and to gamble excessively, can we be sure that we can continue this cycle of bailing out eventual failures? At what point will the costs be so large that both fiscal and monetary policies are simply incapable of stopping the collapse?

Last year, we came remarkably close to collapse. Next time, it may be worse. The threat of the doomsday cycle remains strong and growing.

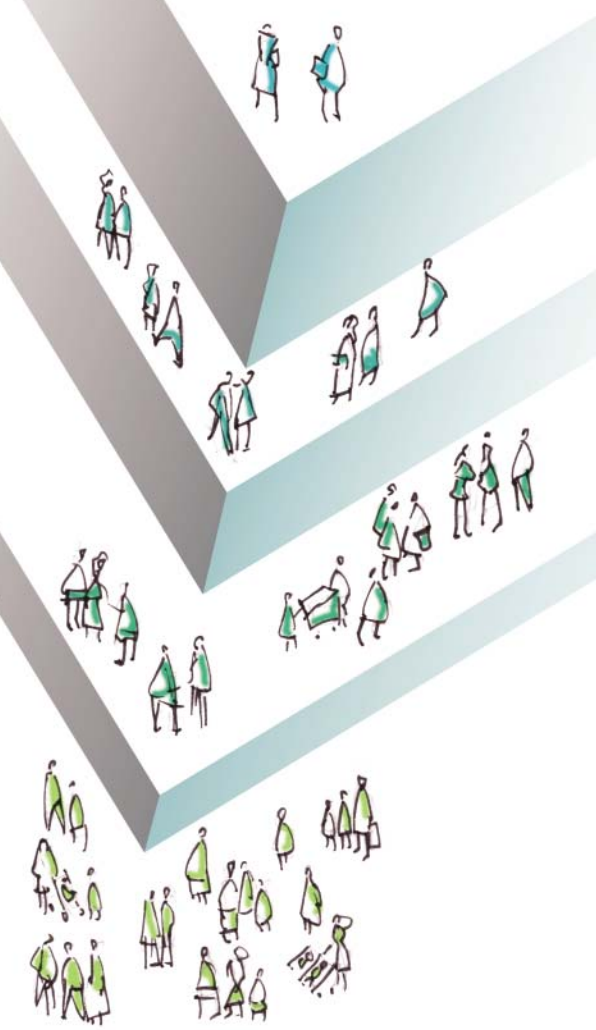
Peter Boone is a research associate in CEP's globalisation programme and chairman of Effective Intervention (http://www.effint.org), a charity based in Britain. He is also a principal at Salute Capital Management.

Simon Johnson is a professor at MIT's Sloan School of Management, a senior fellow at the Peterson Institute for International Economics and a member of the Congressional Budget Office's Panel of Economic Advisers.

They are co-founders of The Baseline Scenario, a leading economics blog (http://baselinescenario.com), and co-authors of 'Our Next Financial Crisis', published in *The New Republic* in September 2009 (http://www.tnr.com/article/economy/the-next-financial-crisis).

The rules need to change so that creditors do not expect another bailout when the next crisis happens

in brief...
Economic inequality in the UK



The independent National Equality Panel was set up to examine how inequalities in people's economic outcomes – such as earnings, incomes and wealth – are related to their characteristics and circumstances – such as gender, age or ethnicity. CEP's research director Stephen Machin, one of the panel members, summarises its report.

Inequalities in earnings and incomes are high in the UK, both compared with other industrialised countries, and compared with 30 years ago. That is the central finding of *An Anatomy of Economic Inequality in the UK*. Over the most recent decade, earnings inequality has narrowed a little and income inequality has stabilised on some measures, but the large inequality growth of the 1980s, where all parts of the distribution significantly widened, has not been reversed.

The report finds that some of the widest gaps in outcomes between social groups have narrowed in the last decade, particularly between the earnings of women and men, and in the educational qualifications of different ethnic groups. But deep-seated and systematic differences in economic outcomes remain. Despite the elimination and sometimes even reversal of the qualification differences that often explain them, significant differences in employment rates and relative pay remain between men and women and between ethnic groups.

Differences in outcomes between the more and less advantaged within each social group, however the population is classified, are much greater than differences between social groups. Even if all differences between groups were removed, overall inequalities would remain wide. The inequality growth of the last 40 years is mostly attributable to growing gaps within groups rather than between them.

Many of the differences examined tend to accumulate across the lifecycle, especially those related to socio-economic background. Economic advantage and disadvantage reinforce themselves across the lifecycle, and often on to the next generation. Policy interventions to counter this are needed at each lifecycle stage. Achieving 'equality of opportunity' is very hard when there are such wide differences between the resources that people and their families have to help them fulfil their diverse potentials.

One part of the report looks at how changes to taxes and benefits since 1996/7 have affected households. The analysis suggests that compared with unchanged policies that involved price indexation, those who would have been in the poorest half of the income distribution were better off under the actual structures of 2008/9 – by up to 25% for those who would have been in the poorest tenth of the population. Against an earnings-linked base, those who would have been in the poorest three tenths were still better off on average, but to a smaller extent – by up to 8% for the bottom tenth.

Overall, the report brings together and interprets a sizeable body of empirical evidence, painting a picture of key aspects of economic and social inequality over time. It offers the kind of evidence base that policy-makers from all political parties really need to make progress in formulating coherent policies – policies to tackle the negative effects that increased inequality has caused.

The report of the National Equality Panel, *An Anatomy of Economic Inequality in the UK* (http://sticerd.lse.ac.uk/case/_new/publications/NEP.asp), was published in January 2010.

CEP researchers **Sandra McNally, Richard Murphy** and **Jonathan Wadsworth** contributed to the report along with CEP's research director **Stephen Machin**, who is a member of the National Equality Panel.

Brazil has recently discovered huge new oilfields off its coast – but will these natural resources be a blessing or a curse? **Francesco Caselli** and **Guy Michaels** investigate whether it has been the Brazilian people or their locally elected representatives who have benefited most from past oil windfalls.

A resource curse? The impact of oil windfalls on living standards in Brazil

When a country or a community discovers oil in their subsoil or off their coast, should they rejoice or mourn? Should citizens be thrilled or worried when their governments receive fiscal windfalls? It might seem that the answers to these questions are obvious: how could finding an abundance of natural resources or stumbling on greater resources for the government to spend in the community be anything other than wonderful news?

Yet economists are increasingly sceptical and many of them openly entertain the seemingly paradoxical notion that resources and windfalls may actually be bad news. In fact, some go so far as to speak of the 'curse of natural resources'.

Before dismissing this as yet another instance of the economics profession's disconnection from the real world, consider the following list: Angola, Congo, Nigeria, Venezuela and the Middle East. What these places have in common is an abundance of natural resources coupled with varying degrees of abject poverty, state failure and civil war, rampant corruption and political repression.

Think also of the many anecdotes linking foreign aid to dependency and corruption. It is true that a few countries seem to have managed their natural resources fairly well – Norway is the oft-cited example. But overall the general impression is certainly not one of resources being an undisguised blessing.

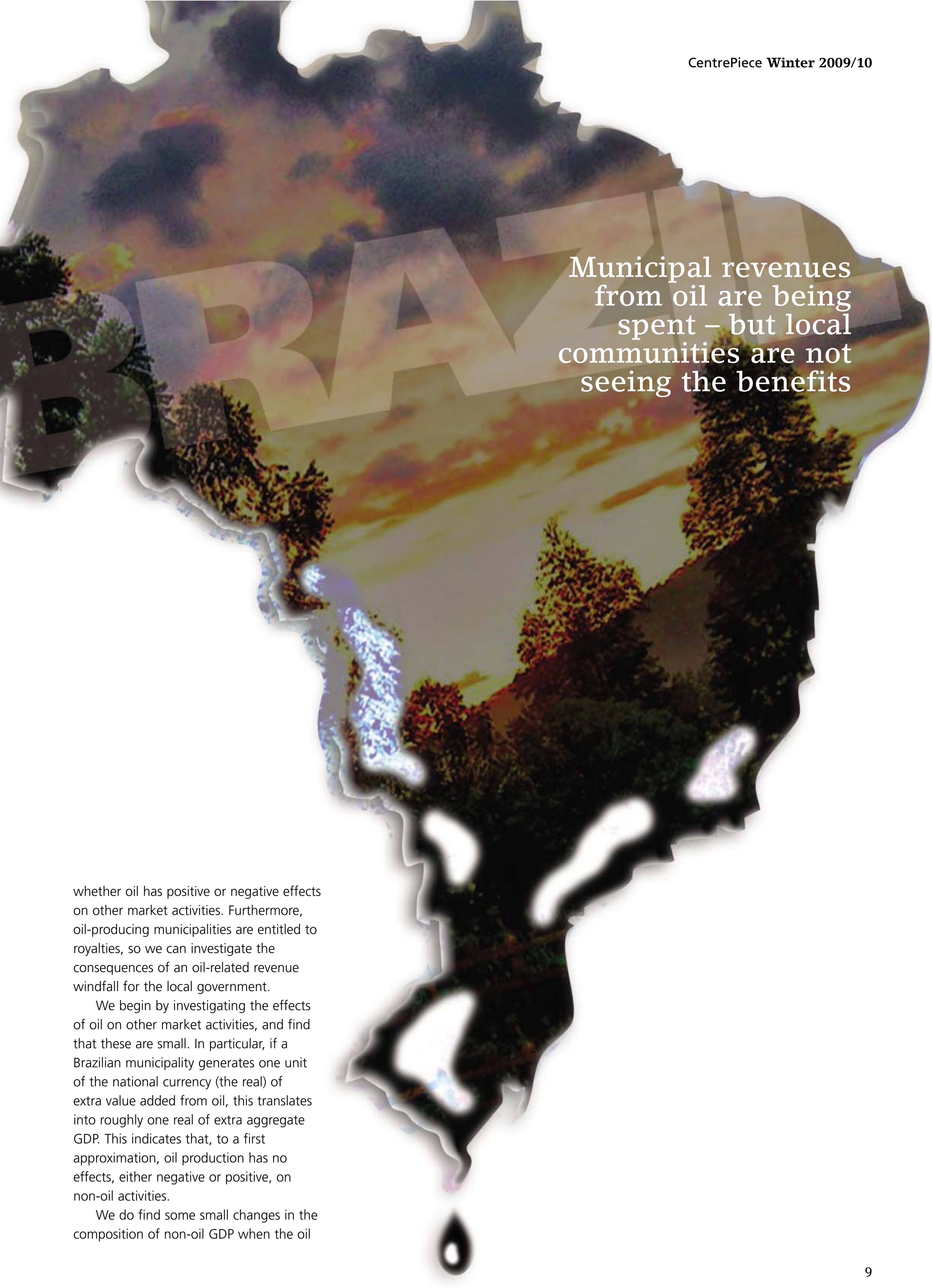
The problem with drawing conclusions from comparisons of resource-rich countries with resource-poor countries is that many other differences can give the appearance of a causal relation where in fact there is none. So while it is true that the Middle East grows (typically) slowly and has lots of oil, the region also differs from the rest of the world in a myriad other social, cultural and institutional dimensions. We cannot be certain that oil – as opposed to one or more of these other characteristics – is the main cause of low growth.

Another problem with cross-country comparisons is that resource abundance tends to be measured by flows of natural-resource exports (often as a share of GDP or total exports). But perhaps poor countries are dependent on resource exports because they are poor rather than being poor because they are dependent on resource exports.

Our research attempts to bypass these difficulties in interpreting cross-country comparisons by looking at Brazilian municipalities, which are administrative units similar in size to the UK's counties. Oil endowments, and hence oil production, vary widely across municipalities, and we show that oil output is not correlated (conditional on a few geographical controls) with other municipal characteristics.

In other words, oil-rich municipalities differ from oil-poor municipalities only because the former have oil and the latter do not. This makes it possible to ask

> Brazilian oil windfalls translate into little improvement in public goods provision or people's living standards



Municipal revenues from oil are being spent – but local communities are not seeing the benefits

whether oil has positive or negative effects on other market activities. Furthermore, oil-producing municipalities are entitled to royalties, so we can investigate the consequences of an oil-related revenue windfall for the local government.

We begin by investigating the effects of oil on other market activities, and find that these are small. In particular, if a Brazilian municipality generates one unit of the national currency (the real) of extra value added from oil, this translates into roughly one real of extra aggregate GDP. This indicates that, to a first approximation, oil production has no effects, either negative or positive, on non-oil activities.

We do find some small changes in the composition of non-oil GDP when the oil

is located onshore: the manufacturing sector shrinks and the service sector expands. (These effects are probably due to an expansion of services to oil operations and oil workers.) But offshore oil has little impact on non-oil GDP or on its composition.

We turn next to the revenue windfall. We confirm that municipal revenues increase significantly with oil production, and that oil royalties account for the bulk of this increase. This makes it clear that royalty payments are not undone by offsetting changes in other transfers from the state or federal governments (or by tax cuts) – in fact, they are somewhat reinforced.

The increase in municipal revenues arising from oil is matched by a corresponding increase in reported municipal expenditures. Municipalities that receive oil windfalls report significant increases in spending on a variety of goods and services, such as housing and urban infrastructure, education, health, transport and transfers to households.

Given the significant expansion in reported spending, we might expect sizable improvements in living standards for the local population. We therefore look at measures of housing quality and quantity, the supply of educational and health inputs, road infrastructure and welfare receipts.

The results paint a complex picture, with no apparent changes in some areas, small improvements in others and a small worsening in yet others. On balance, however, the data appear to suggest that the actual flow of goods, services and transfers to the population is not quite commensurate with the reported spending increases stemming from the windfall. This shortfall we dub 'missing money'.

To confirm that the windfall does not trickle down to the population through other channels, we look at household income and find only minimal improvements. We also show that oil-rich municipalities did not experience a differential increase in population. This implies that our results are not driven by a dilution of the benefits of oil abundance. Furthermore, the fact that people do not flock to oil-rich communities reinforces our message that oil abundance has not been viewed as particularly beneficial.

Our finding that oil windfalls translate into little improvement in the provision of public goods or the population's living standards raises a key question: where are the oil revenues going? As a way of addressing this question, we put together a few pieces of tentative evidence:

- First, we find that oil revenues increase the size of municipal workers' houses (but not the size of other residents' houses).
- Second, Brazil's news agency is more likely to carry news items mentioning the mayor and alleged embezzlement, fraud or corruption in municipalities with very high levels of oil output (on an absolute, though not per capita, basis).
- Third, federal police operations are more likely to occur in municipalities with very high levels of oil output (again in absolute terms).
- And finally, we document anecdotal evidence of alleged scandals involving mayors in several of the largest oil-producing municipalities, some of which also involve large sums of money.

Oil royalties seem to be somehow more 'stealable' than other types of revenues

How could senior municipal workers have thought that they could 'get away' with large-scale alleged theft in a country where local elections are held regularly? As a partial answer, we note that a survey in the largest oil-producing municipality found considerable ignorance among residents about the scale of the municipal oil windfall.

How much can we generalise from our findings to other settings?

We acknowledge that what might be true for Brazil need not apply to other countries. More importantly, there are a number of prominent explanations for the 'resource curse' that might only operate at the national level.

For example, some argue that resource abundance leads to an overvalued nominal exchange rate, with deleterious consequences for competitiveness. Naturally, this cannot show up across municipalities, which do not print their own currencies. Similarly, our analysis cannot test the hypothesis that resource abundance is a cause of political violence and civil war.

But our results do lend some credence to the view that oil royalties are somehow more 'stealable' than other types of revenues. When we look at the usage and effects of municipal revenues coming from other sources, we find significant differences relative to revenue coming from oil, and the puzzle of 'missing money' is less severe.

This may be because citizens themselves are more tolerant of embezzlement when the money does not come from tax revenues. Or it may be because they have less accurate information on the amounts flowing to the government in the form of oil royalties. We cannot explore these possibilities with our data.

But our findings do suggest that it may be somewhat unwise to channel revenues from oil operations directly to local governments, at least if the officials are not properly monitored and accountable. For Brazil, this may be an especially important consideration as the system of property rights and royalties will probably be overhauled in response to the recent discovery of huge new offshore oilfields.

Indeed, the issue is clearly of political relevance, with several major federal legislative proposals to reform the royalty system currently pending. Interestingly, most proposals tend to reduce both the share of royalties going to local governments and the discretion that these governments have in using the revenues. In the summer of 2009, the federal government issued its own proposals for the property rights regime of the newly discovered 'pre-salt' giant oilfields.

More generally, our results may inform the debate about increasing transparency requirements both in poor, resource-abundant countries and in countries that receive aid. In particular, it is increasingly common for conditionality-based programmes to feature stringent reporting requirements from multinational oil companies and recipient governments.

Our results suggest that accounting transparency per se may be insufficient. Reporting schemes should document the actual effective disbursement of sums, and not merely their recording on balance sheets.

This article summarises 'Do Oil Windfalls Improve Living Standards? Evidence from Brazil' by Francesco Caselli and Guy Michaels, CEP Discussion Paper No. 960 (http://cep.lse.ac.uk/pubs/download/dp0960.pdf).

Francesco Caselli is a professor of economics at LSE and director of CEP's research programme on macroeconomics. **Guy Michaels** is a lecturer in economics at LSE and a research associate in CEP's labour markets programme.

Oil revenues should not be channelled directly to local governments if officials are not properly monitored and accountable

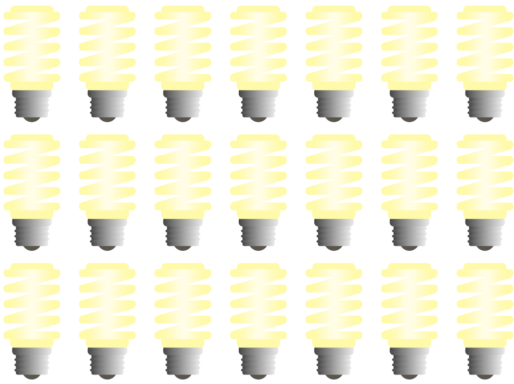
in brief...

Modern management: good for the environment or just hot air?

Using CEP's extensive survey data on management practices around the world, **Nick Bloom** and colleagues examine whether well-managed firms are more or less energy-efficient than badly managed firms.

Well-managed firms tend to have better economic performance and offer a more desirable work-life balance for their employees, according to a series of recent CEP studies. But in a world dominated by debates about climate change and energy savings, a broader question is whether these superior results come at the expense of the environment.

On the one hand, better-managed firms should be able to reduce energy use through more efficient production techniques. On the other hand, the higher productivity that good management involves may also require more physical capital and potentially higher energy usage. So the relationship between management practices and energy intensity is, *a priori*, ambiguous.



Going from 'bad' to 'good' management is associated with a 17.4% reduction in energy intensity

We have gathered the first systematic evidence on how the quality of management relates to firms' energy intensity, a key driver of greenhouse gas emissions. To measure management practices, we use an interview-based evaluation tool that defines and scores from one ('worst practice') to five ('best practice) 18 basic practices. The evaluation tool, which was developed by an international consulting firm, scores these practices in three broad areas.

The first is monitoring: how well do companies track what goes on inside their firms, and use this information for continuous improvement? The second is target-setting: do companies set the right targets, track the right outcomes and take appropriate action if the two don't tally? The third is incentives: are companies promoting and rewarding employees based on performance, and systematically trying to hire and keep their best employees?

We have applied the tool to thousands of medium-sized manufacturing firms around the world to compare management practices and energy use across firms and countries. The UK is particularly well suited for this exercise as both its management score and its carbon dioxide emissions are close to the average in our sample.

We match information on management practices in a sample of around 300 UK manufacturing firms with new data on energy efficiency from the Census of Production for the establishments owned by these firms.

The results indicate that well-managed firms are substantially less energy-intensive than badly managed firms. Going from the 25th to the 75th percentile of management practices – moving from 'bad' to 'good' management – is associated with a 17.4% reduction in energy intensity.

The reduction in energy intensity associated with good management is robust to a variety of controls for industry, location, technology and other factor inputs. And it is large: given that carbon dioxide emissions are growing at about 3% a year globally, a 17.4% reduction is equivalent to about six years' growth.

The main reason that better management reduces energy use is that modern management systems, like Toyota's 'lean manufacturing system', explicitly promote waste reduction. One of the four buzzwords that any visitor to a Toyota plant learns is 'Muda' or waste. (The others are 'Kaizen', continuous improvement; 'Andon', the cord used to stop the line after a defect; and 'Kanban', the replenishment signal system used to minimise inventories.)

Toyota employees are trained and rewarded for continuously reducing 'Muda' throughout the factory. They do so with the aim of cutting costs and increasing profits, rather than from any strong environmental concern. In contrast, badly run firms are simply not able to achieve energy efficiency. Think of the Soviet-era factories with their terrible management practices producing huge amounts of pollution.

So how can governments help firms to improve management practices and reduce energy use? We have identified several key factors that appear to play an important role in shaping management practices – and which can also play an important role in reducing pollution while delivering economic growth.

We find that product market competition is associated with significantly better management practices. In particular, the tail of badly managed firms shrinks in highly competitive markets. Badly managed firms appear to improve their management practices or exit in competitive markets.

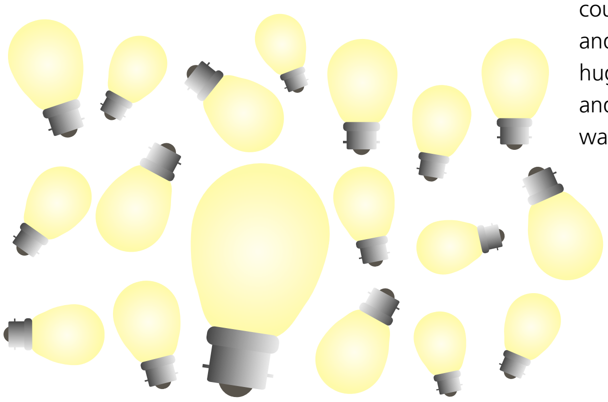
Thus, the highly competitive product markets in the United States have led to almost no badly managed firms left in operation. In contrast, many product markets in Brazil, China and India have limited competition due to entry barriers, trade regulations and high transport costs, enabling badly managed firms to survive.

Multinational status also appears to play an important role in determining firms' management practices. Multinationals tend to be well-run whether they are located in Brazil, India or the United States.

In other work, we show that the affiliates of US multinationals located in Europe are able to use their managerial advantage to make better use of information technology (IT) to raise productivity. We argue that multinationals are excellent vehicles for transporting productive and energy-efficient management practices across countries.

Our results suggest that policies aimed at improving management practices – such as encouraging competition by removing barriers to market entry, reducing trade barriers and promoting multinational ownership – will also improve environmental outcomes.

Improving management may provide a way both to increase economic growth and to reduce environmental damage. And while this particular research focuses on the UK, the potential appears far greater in developing countries such as Brazil, China and India, where there is a huge tail of badly managed – and presumably energy-wasteful – firms.



Improving management may provide a way both to increase economic growth and to reduce environmental damage

This article summarises 'Modern Management: Good for the Environment or Just Hot Air?' by Nick Bloom, Christos Genakos, Ralf Martin and Raffaella Sadun, CEP Discussion Paper No. 891 (http://cep.lse.ac.uk/pubs/download/dp0891.pdf).

CEP research on management, economic performance and work-life balance is summarised in previous issues of *CentrePiece*: 'Bossonomics' (http://cep.lse.ac.uk/pubs/download/cp293.pdf) and 'Work-Life Balance' (http://cep.lse.ac.uk/pubs/download/cp202.pdf). CEP research on US firms' use of IT is summarised in 'It Ain't what You Do, It's the Way that You Do I.T.' (http://cep.lse.ac.uk/pubs/download/cp188.pdf).

Nick Bloom is a professor of economics at Stanford University. **Christos Genakos** is a lecturer in economics at Cambridge University. **Ralf Martin** is a research economist at CEP. **Raffaella Sadun** is an assistant professor at Harvard Business School. All are part of CEP's research programme on productivity and innovation.

Are second-generation immigrants more integrated into European societies than their parents? **Alan Manning** and colleagues look at evidence on economic integration for France, Germany and the UK.

The integration of immigrants and their children in Europe

Immigration is currently high up the political agenda in most European countries as they struggle to deal with the increased flow of migrants that many have experienced in recent years. Many countries have a sizeable fraction of the population who are hostile to immigration, especially to immigrants from poorer countries or those of a different ethnicity to the majority.

In this climate, it is critically important to understand more about how immigrants fare – and not just the first-generation immigrants but their children too. After all, the longer-run effects of immigration are probably much more influenced by how the descendants of immigrants fare than the immigrants themselves.

In a recent study, we compare the experiences of first- and second-generation immigrants in France, Germany and the UK in terms of their education, earnings and employment. These countries all experienced large-scale immigration in the 1950s and 1960s so that enough time has elapsed to be able to evaluate how the immigrants' children are getting on.

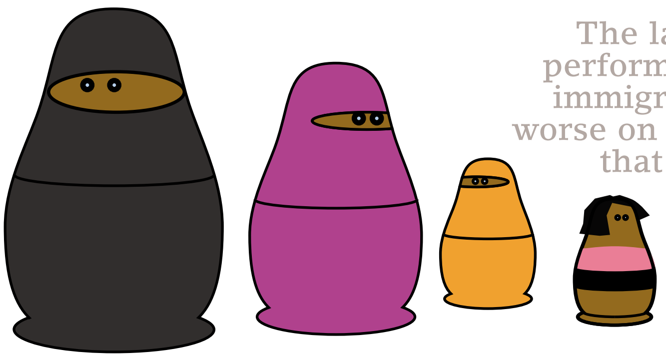
Although these countries have all had sizeable immigrant populations for a considerable time, they also differ in important ways. First, the ethnic composition of immigrant inflows is different: immigrants in France and the UK came from former colonies of those countries, while Germany employed immigrants from southern Europe and Turkey.

Second, these countries have adopted very different policies towards the integration of immigrants. Put very crudely, the UK has sought to accommodate and celebrate cultural and ethnic diversity, while France has sought to deny its existence (at least in the public sphere) in the interest of 'equal treatment'. The proposed banning of the burqa is a good example of the latter approach.

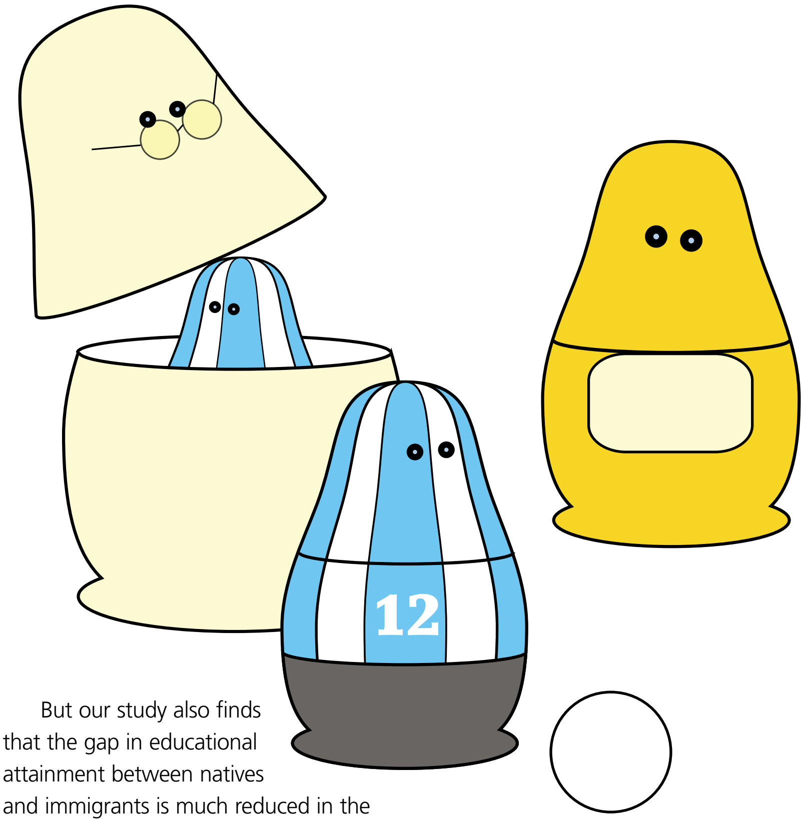
In contrast with both these countries, which typically granted immigrants full citizenship, Germany did not, until relatively recently, give citizenship to immigrants or their children who were not ethnically German. Long after it was clear that they had come to stay, Germany thought of its immigrants as only temporary residents.

Other European countries with more recent immigration are considering which, if any, of these models would be the best one to adopt to facilitate the integration of immigrants and their children. So it is important to know how immigrants have fared in France, Germany and the UK.

The central finding of our research is that in all three countries, the labour market performance of most immigrant groups as well as their descendants is, on average, worse than that of the native population (after controlling for education, potential experience and regional allocation).



The labour market performance of most immigrant groups is worse on average than that of the native population



But our study also finds that the gap in educational attainment between natives and immigrants is much reduced in the second generation compared with the first generation. While there is considerable heterogeneity across immigrant groups and the children of immigrants still do worse than the children of native-born parents, they often do better than their own parents. This suggests perhaps that education systems are working to integrate the children of immigrants though it is much harder to say whether progress is as fast as it could be.

Evidence of progress in labour market performance is not the same for all countries and all immigrant groups. For immigrants' net earnings, the UK stands out as having particularly large differences for the first generation but also much improved outcomes for the second generation.

In France and Germany, differences are not so clear-cut. The difference in male employment rates between immigrants and natives in Germany and the UK seem similar for first- and second-generation immigrants, but France has a number of groups in which the second-generation immigrants seem to be doing worse than the first. For women, the patterns are similar but there is clearer general evidence of a reduction in employment gaps for the second generation, especially for those immigrant groups where female employment rates are very low in the first generation.

In all countries, there is considerable heterogeneity in outcomes across immigrant groups, and any sensible account of immigrant disadvantage must pay attention to the fact that immigrants cannot be treated as an undifferentiated lump.

Does the French, German or British model of attitudes to immigrants appear more favoured by these findings? The answer is that no simple link appears. France, which until recently has been accused of sticking its head in the sand over the existence of poor outcomes for immigrant groups, does not seem to have worse outcomes than the UK, which has had anti-discrimination legislation for over 40 years. The UK, often accused now of paying insufficient attention to the assimilation of immigrants, has, if anything, the largest improvement from the first to the second generation.

One possible explanation for our inability to paint a simple picture is that government policy is much less important than many people think. In day-to-day life and economic activity, it is the behaviour and aspirations of immigrants and their children – and how they are treated by those with whom they interact – that is important in determining economic outcomes.

By a stroke of a pen, governments may be able to pass anti-discrimination legislation or prevent Muslim schoolgirls wearing the hijab. But it is much harder to change attitudes – and it is these attitudes that ultimately determine outcomes.

This article summarises 'The Economic Situation of First- and Second-generation Immigrants in France, Germany and the United Kingdom' by Yann Algan, Christian Dustmann, Albrecht Glitz and Alan Manning, which is published in the February 2010 issue of the *Economic Journal* (http://www.res.org.uk/economic/ejtoc.asp?ref=0013-0133&vid=120&iid=542&oc=0). An earlier version is available as CEP Discussion Paper No. 951 (http://cep.lse.ac.uk/pubs/download/dp0951.pdf).

Yann Algan is at Sciences Po in Paris. **Christian Dustmann** is director of the Centre for Research and Analysis on Migration at University College London. **Albrecht Glitz** is at Universitat Pompeu Fabra. **Alan Manning** is professor of economics at LSE and director of CEP's research programme on labour markets.

The children of immigrants do worse than the children of native-born parents – but they often do better than their own parents

How well are NHS hospitals managed – and what could be done to improve this? **CEP researchers** have conducted a unique survey of clinicians and hospital managers to address these questions, and to explore the impact of competition on management practices in the NHS.

Management practices in the NHS

The performance of hospitals within the National Health Service (NHS) varies considerably. This is true irrespective of the measure used: mortality rates, waiting times, patient satisfaction and other indicators all show a wide spread of performance between hospitals.

The variation in performance parallels other parts of the economy, where there are astounding differences in productivity across firms and plants, even within narrowly defined sectors. There has long been speculation that management practices might play a role in explaining this dispersion, a view confirmed by a series of recent CEP studies.

Might the same be true for the performance of NHS hospitals? In a new study, we apply to hospitals a modified version of the methodology for measuring management practices that we have used successfully in the manufacturing and retail sectors.

We interviewed doctors and managers in orthopaedics and cardiology in acute hospitals (those intended for short-term medical and/or surgical treatment and care) in England, using an evaluation tool that defines and scores 18 different management practices from one ('worst practice') to five ('best practice'). We developed this survey through discussion with management and healthcare experts and we score management practices within three broadly defined areas:

- **Monitoring:** how well do hospitals track the steps along a patient's path through the NHS system, and do they use this information for continuous improvement?
- **People:** do hospitals actively promote and reward their employees based on performance? Are staff doing the roles they are best trained to perform? Is there a systematic process of hiring and keeping the best people? Are under-performers retrained or moved to a different role where they can perform better?

Better management is strongly correlated with better hospital performance measured by both clinical and financial outcomes

- **Target setting:** do hospitals set the right targets and track the right outcomes? Do they take appropriate action if targets are not met?

To obtain accurate responses from hospitals, we interviewed managers and clinicians using a ‘double-blind’ technique. Interviewees were not told in advance that they were being scored, nor were they shown the scoring grid. Similarly, to avoid prejudice, the interviewers were not given information on hospital quality.

To run this blind scoring, we used open questions. For example, the first incentives question was ‘How does your appraisal system work? Tell me about your most recent round’, rather than closed questions such as ‘Do you promote high performers [yes/no]?’

We obtained a high response rate – 61% of all acute hospitals in England – interviewing a total of 161 clinicians and managers.

Management practices and hospital performance

In our first analysis of the data, we look at whether our measure of management quality is correlated with standard measures of hospital performance. Hospitals with higher management scores have better clinical outcomes (for example, lower mortality rates from emergency heart attacks), shorter waiting times, better financial performance and higher staff satisfaction.

For example, we find that a one standard deviation improvement in management is associated with a fall in the death rate from heart attacks from 17% to 16%. Such an improvement would result in around 400 fewer deaths a year in our sample from this condition alone.

Another general indicator of hospital performance is the overall rating from the Healthcare Commission (the former regulator of the sector, now replaced by the Care Quality Commission), which, as Figure 1 shows, clearly rises with better management practices.

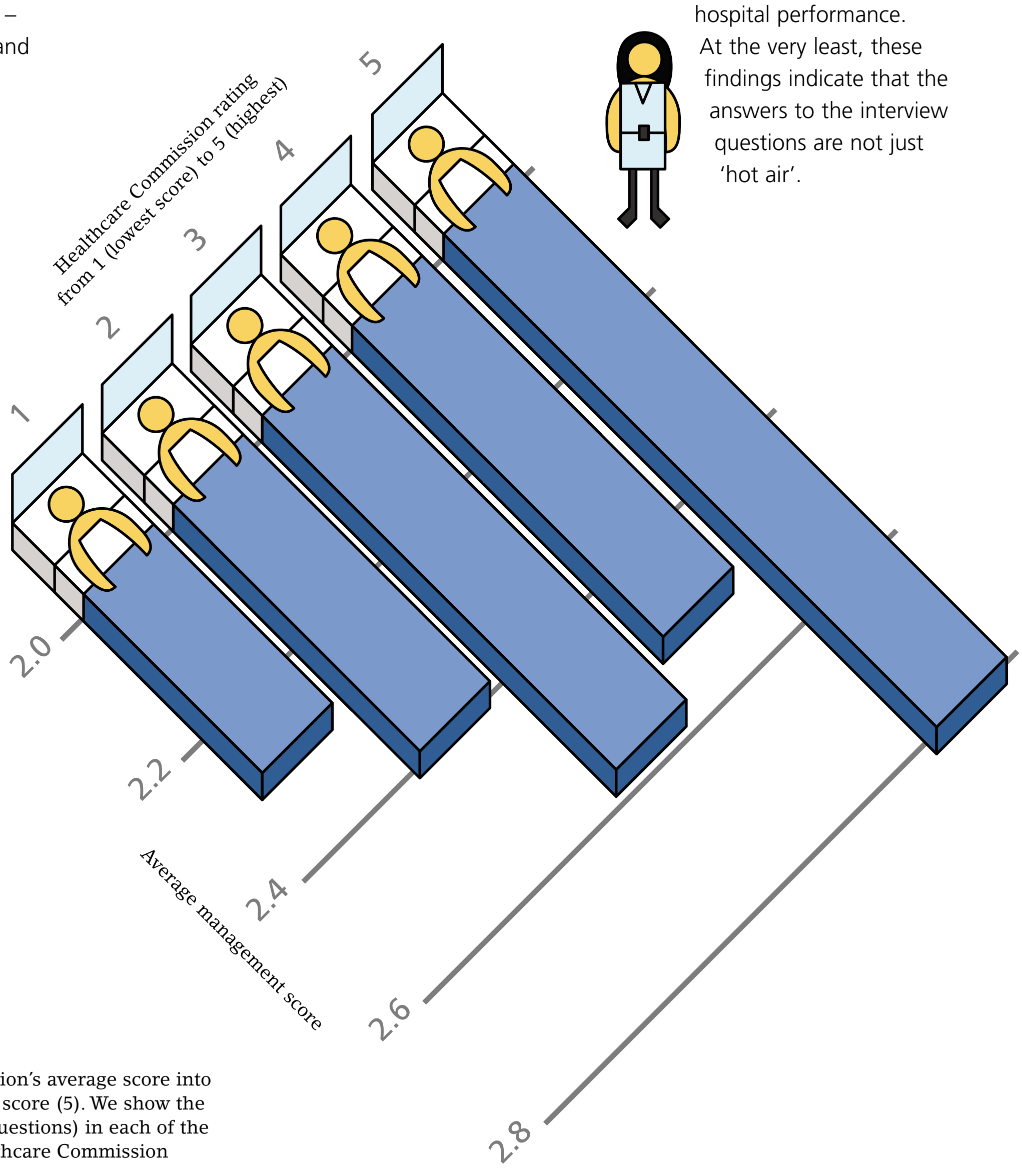
Although we cannot be sure that these are causal effects, the strength of the correlation is suggestive of important effects of management practices on hospital performance.

At the very least, these findings indicate that the answers to the interview questions are not just ‘hot air’.

> A one standard deviation improvement in management is associated with 400 fewer deaths from heart attacks a year in the surveyed hospitals

Figure 1:

Healthcare Commission ratings are higher in hospitals with higher quality management



Note: We divide the Healthcare Commission’s average score into quintiles from lowest score (1) to highest score (5). We show the average management score (over all 18 questions) in each of the quintiles. The hospitals with higher Healthcare Commission ratings have higher management scores.

Comparing management practices in the NHS

We find that there is large variation in management practices between hospitals, as Figure 2 shows, a phenomenon also observed in other sectors of the economy.

Although comparing across sectors is fraught with difficulty, we find that the average management scores in NHS hospitals look lower than in the private sector (manufacturing, retail and private hospitals). The main difference lies in people management, with the NHS doing particularly badly in this dimension.

Competition and management practices

With management scores varying dramatically across hospitals, which factors lead to better management practices?

Several interesting findings emerge from our research. For example, management appears to be better in hospitals where senior managers have some clinical training. This makes sense as such managers are better able to understand, communicate with and challenge powerful senior doctors. Drawing more senior managers from clinical ranks, as is done in the United States, would be a good policy move.

We also investigate the impact of competition on hospital management. There have been many policy reforms in recent years to increase patient choice between hospitals and create more effective competition. And one of the strongest findings from our work on the manufacturing sector is that competition stimulates better management and higher productivity.

In healthcare, competition is based on geography – hospitals tend to compete with other local hospitals. We find that hospitals with many other hospitals nearby tend to have significantly better management practices.

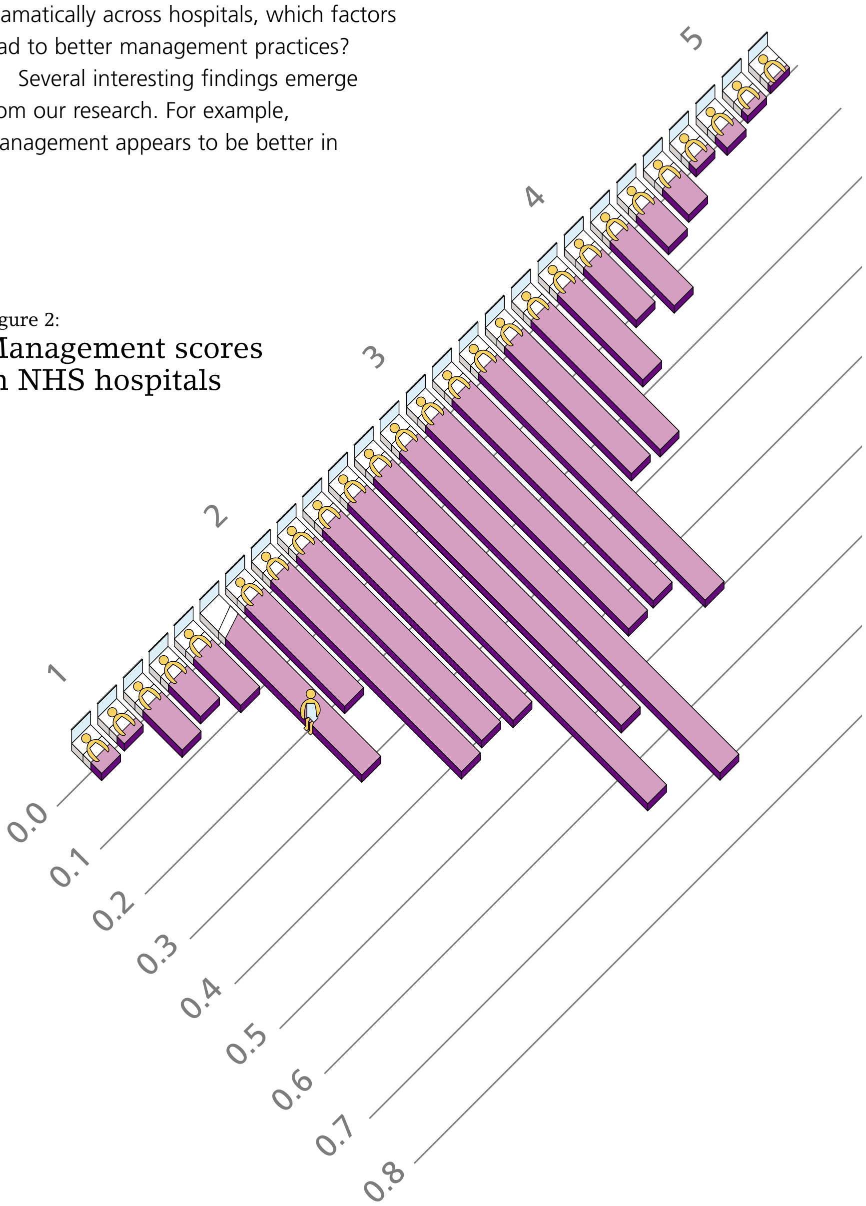
But how do we know that it is really the number of rival hospitals driving up management quality rather than some other factor? For example, a larger share of elderly people in a particular part of the country will increase demand for hospital services. This will increase the number of hospitals without necessarily increasing competitiveness.

We try to control for as many of these factors as possible. We know, for example, the characteristics of patients coming to the hospital, the healthiness of the local area and so on. But of course there may always be something we miss. To deal with this problem, we use the fact that the number of hospitals in an area has a large political component. In particular, the closure of a hospital is usually highly contentious. We show that, all else equal, hospitals located in marginal constituencies are much less likely to be closed than hospitals in safe seats.

Thus, the political structure of constituency boundaries becomes a 'natural experiment', which we can use to compare some areas with more hospitals (where political competition is fierce and no one wants to be blamed for hospital closure) and other near-identical areas with fewer hospitals (where there is little political competition).

Using this experimental approach only strengthens our conclusion that competition has a large effect in improving managerial quality in hospitals.

Figure 2:
Management scores in NHS hospitals



Note: This is the distribution of the average management score by hospital from 1 (=worst practice) to 5 (=best practice). The management scores are based on 161 interviews of NHS managers and clinicians in 100 English acute hospitals.

Just as in the manufacturing sector, there is large variation in management practices between hospitals

We asked our interviewers to note some of the most surprising comments they hear. This quote was horrifyingly illustrative of the badly managed hospital it came from:

Interviewer:
'Do staff sometimes end up doing the wrong sort of work for their skills?'

NHS mxanager:
'You mean like doctors doing nurses' jobs, and nurses doing porter jobs? Yeah, all the time. Last week, we had to get the healthier patients to push around the beds for the sicker patients.'

Future directions for research

With the data available to us so far, we have established that competition improves the quality of hospital management. But how does it have this effect?

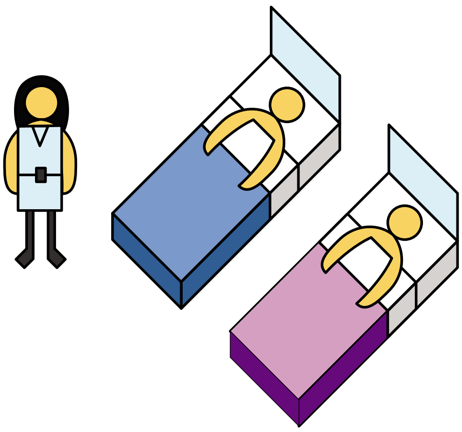
One possibility is that the channel works simply through product market competition: as recent reforms have tried to implement a 'quasi-market' for healthcare services, hospitals now have an incentive to provide better care to attract patients. In a more competitive environment, hospitals will therefore have a stronger incentive to improve the quality of their management practices.

Even in a regulated environment, where monitoring agencies and regulators decide how well a hospital is performing, the number of hospitals will have an impact. In an area with many hospitals, it is easier to assess the performance of each hospital by comparing it with its neighbours.

Finally, a more competitive environment might provide a more attractive labour market for high-quality managers. With more hospitals nearby, it is easier for managers to look out for better employment opportunities.

But whatever the exact mechanism, having more local rivals does appear to have advantages for management and patient care.

Hospitals faced with a larger number of nearby competing hospitals have much better management practices



Management seems to be better in hospitals where managers have some clinical training

This article summarises a forthcoming CEP Discussion Paper: 'The Impact of Competition on Management Practices in Public Hospitals' by Nick Bloom, Carol Propper, Stephan Seiler and John Van Reenen.

The research on management in manufacturing is detailed in: 'Measuring and Explaining Management Practices across Firms and Countries' by Nick Bloom and John Van Reenen, *Quarterly Journal of Economics* 122(4): 1351-1408 (earlier version available as CEP Discussion Paper No. 716: http://cep.lse.ac.uk/pubs/download/dp0716.pdf). More recent work is in the latest issue of the *Journal of Economic Perspectives*.

Nick Bloom is a professor of economics at Stanford University and a research associate in CEP's productivity and innovation programme. **Carol Propper** is at the Centre for Market and Public Organisation at the University of Bristol and the Healthcare Management Group at Imperial College London. **Stephan Seiler** is an occasional research assistant in CEP's productivity and innovation programme. **John Van Reenen** is director of CEP.

in brief...

A Swedish model for UK schools?

Educational reforms in Sweden have been held up as a potential model for improving the performance of UK schools. **Helena Holmlund** and **Sandra McNally** examine the evidence.

In Sweden, reforms enacted in the early 1990s allowed new schools to be set up that are independent of government control. A variety of educational providers stepped in, ranging from non-profit co-operatives and faith groups to for-profit corporations. These organisations are now running schools funded with public money through a voucher system.

The Swedish system has been strongly praised by Conservative politicians, whose 'Advancing Opportunity' agenda proposes 'freeing up the system whereby new schools are established, to allow charities, livery companies, existing school federations, not-for-profit trusts, co-operatives and groups of parents to set up new schools in the state sector'. It has been suggested that an extended and reformed academies programme (initially introduced by the Blair government) would be the way to implement this approach in the UK.

For some years, school choice and competition have been advocated as a mechanism for improving educational standards. It is argued that schools in the public sector might lack the right incentives to provide the best possible education, and the idea is that competition should put pressure on these schools to improve. But the evidence on this is mixed, and the most detailed study for England, carried out at CEP, finds no effect of choice and competition on primary school performance (Gibbons et al, 2008).

There have been a number of studies of the effects of the Swedish reform. The most recent and careful study is by Anders Bohlmark and Mikael Lindahl (2008), who find evidence of only small positive effects. They speculate that one reason for this could be the fact that the entry of new private schools has not been followed by the closing down of state schools. It may be that increasing shares of school budgets have been devoted to the maintenance of poor quality state schools.

This points to a general weakness in the application of market economics to the public sector. There is no natural mechanism for closing down poor schools (they do not literally go bust). Closing down schools can be slow, political and unpopular. The reality that governments will have to support simultaneously the new schools and the older 'bad' ones, and that the latter will not exit at an efficient rate, needs to be factored into the expected cost-effectiveness of a 'school creation' policy.

Creating new schools can also be an expensive policy if large capital outlays are required. This is the case with academies in the UK, although not for the new independent schools in Sweden. The latter are usually small and often use empty office buildings or former schools. This raises several big questions for all political parties.

Importing the Swedish model may not make very much difference to the UK's educational status quo

In a climate of tight public expenditure, is capital spending really the most efficient use of funds? What about all the evidence on other things that work to improve educational performance, such as teacher quality, reducing class size, etc? And what about recent research that evaluates the academies programme? Stephen Machin and Joan Wilson (2009) find evidence that new academies have not performed very much better than other similar schools.

Of course, not everything is about money. The main reason why the Swedish model is praised is because the schools are free from political control. But this is only true up to a point. For example, the new Swedish schools have to follow the national curriculum. This is not the case for academy schools in the UK, where it is only a requirement for English, maths, science and information and communications technology. The sponsor also chooses the subject specialism (since all academy schools are 'specialist').

Although, as in Sweden, state schools are not allowed to select pupils by ability, specialist schools are allowed to select 10% of pupils by 'aptitude' in their specialist subject. In practical terms, how does a school select by aptitude and not by ability? Is it right that sponsors should have so much power in deciding how pupils are taught? How can other aspects of policy be imposed (synthetic phonics, for example) while allowing independence from political control?

Helena Holmlund is a research fellow at the Swedish Institute for Social Research, Stockholm University, and a research associate in CEP's education and skills programme. **Sandra McNally** is director of CEP's education and skills programme.

It is not at all clear in principle or practice how far the provision of education can or should be independent from the political process. This is partly a question of empirical research. If 'autonomy' is shown to be a good feature of aspects of school governance, then why not extend this privilege to all schools? This is not an argument for brand new schools.

Furthermore, importing the Swedish model may not make very much difference to the UK's educational status quo. In the early 1990s, Sweden started from a position of no school choice: all pupils had to attend the state school in their neighbourhood. In the UK, however, there is already much school choice and a diversity of provision.

The problem – as research at CEP has shown - is that not all people in the UK are empowered to exercise choice because they do not have the money to move to an area with popular schools or the personal resources to access and understand information about school quality. Therein lies another challenge.

Creating new schools will be expensive if large capital outlays are required and 'bad' existing schools remain open

Further reading

Anders Bohlmark and Mikael Lindahl (2008) 'Does School Privatisation Improve Educational Achievement? Evidence from Sweden's Voucher Reform', IZA Discussion Paper No. 3691.

Stephen Gibbons, Stephen Machin and Olmo Silva (2008) 'Choice, Competition and Pupil Achievement', *Journal of the European Economic Association* 6(4): 912-47.

Stephen Machin and Joan Wilson (2009) 'Academy Schools and Pupil Performance', *CentrePiece*, Spring 2009 (http://cep.lse.ac.uk/pubs/download/cp280.pdf).

Does public debate about the pros and cons of the UK's involvement in Iraq undermine the chances of military success? **Radha Iyengar** examines the incentives of Iraqi insurgent groups to commit acts of violence, their responses to public opinion in the West, and the lessons for both communications policy and counter-insurgency strategy.

Violence in Iraq:
the impact of public debate during wartime

The Chilcot inquiry into the UK's involvement in Iraq between 2001 and 2009 is unique in its breadth of coverage: from the evidence available in the public domain for entering the conflict and the subsequent military action to the political and social aftermath, both in Iraq and at home. A central question is whether information to justify the UK's involvement was withheld or presented to the public in a misleading way.

Of potentially equal significance is the fact that the Iraq inquiry is available live via the internet and satellite television. A concern commonly cited across many similar conflicts is the extent to which such open debate in democracies can reduce the chances of a successful military outcome. Is it possible that public debate over the progress and plans for war may be sending information to opponents in conflict areas that may undermine the chances of military success by damaging the credibility of a nation's long-term commitment to persist until victory?

This concern is amplified in insurgent conflicts, in which guerrilla tactics are used to try to overthrow an incumbent government. Studies by conflict experts James Fearon and David Laitin have shown that insurgent groups operate using political as well as military techniques. These seek to 'delegitimise' the existing government. This is typically accomplished through the use of violence, which makes it difficult for existing political parties to govern effectively and maintain public support (Fearon and Laitin, 2003).

Such insurgencies tend to result in protracted conflicts with neither insurgent nor counter-insurgent forces achieving a decisive victory. As Eisenstadt and White (2005) show, the average duration of insurgencies in the twentieth century is approximately nine years, with about half resulting in success for the government. This gives time for insurgent forces to disseminate alternative political scenarios and win over the civilian population whose government they are attempting to overturn.

Concerns about domestic debate

hindering military success are particularly relevant to insurgent conflict in Iraq (and now, of course, in Afghanistan) for two reasons:

- First, public debate may create the perception that the UK and its allies appear responsive to attacks by insurgents. Changing strategy in response to insurgent violence may increase the perceived benefits to that action. This may increase the willingness of insurgents to engage in greater levels of violence, endangering both civilians and military personnel.
- Second, individual Iraqis, and particularly those as yet uncommitted to either side in a conflict, may be less likely to collaborate with the UK or its allies by providing information if pro-government forces cannot credibly protect them from retribution by insurgent groups.

Incentives for insurgents

To think about these issues systematically, it is useful to consider insurgent groups in Iraq as strategic actors who respond to incentives created by the policies of the coalition and the emergent Iraqi national government. That makes it possible to discuss how information on the counter-insurgent forces' commitment affects their perceived costs and benefits.

By all definitions, the UK and its allies have faced a devastating insurgency in Iraq since overthrowing the previous regime in mid-2003. Although the major conflict phase of military operations lasted until 1 May 2003, substantial military forces remain engaged in low-level conflict. Until very recently, the UK and its allies remained largely responsible for maintaining Iraq's internal and external security. Figure 1 shows the trends in violence in Iraq between 2003 and 2008.

It is in this context that the Iraqi insurgency steadily grew in size and capability from 2003 onwards. Unlike nationalist or secessionist insurgencies that are initiated and led by a single, unified group, the insurgency in Iraq that emerged after the invasion and occupation of Iraq was fractionalised between the separate ethnic and religious communities that make up Iraq's population.

The result has been organisations and networks that are local and decentralised, small in scale and with loose or non-existent ties between them. This lack of centralisation of the insurgency in Iraq bears directly on the effect of new information on violence. In a centralised insurgency, two types of action may be predicted:

- First, insurgent groups may decide whether to wait out the occupying forces by restraining violence until they withdraw.
- Second, insurgent groups may increase the scale of violence in an attempt to induce withdrawal. The option to attack involves a decision of not only how much to attack but also where attacks might be most strategically advantageous.

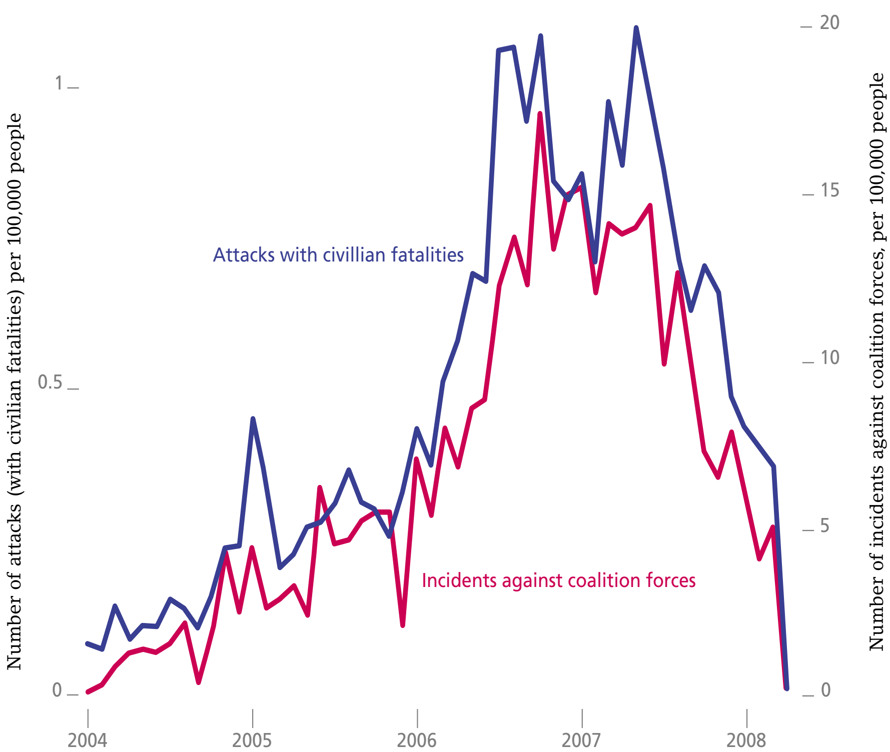
In contrast, the strategy of reducing violence levels and waiting it out is not an option available to competing insurgent groups, which must situate themselves not only relative to the occupying forces but also relative to other insurgent groups. This is because insurgent groups are competing among themselves to maximise their power and influence over the state and society. They may use violence and terrorism not only to impose costs on the occupying force, but also as a tactic to establish dominance over competing groups.

In short, in a competing insurgency, the various groups compete for relative position using violence as their major tool. This results in a complex and selective pattern of violence in contrast to centralised insurgencies.

Military strategists need to understand the role that competition between insurgent groups plays in generating violence

Figure 1:

Trends in attacks and fatalities after the invasion of Iraq



Note: The number of attacks per province-week is defined as non-criminal acts that result in the death of one or more persons. The data do not distinguish between Sunni insurgent attacks and Shia militia attacks. Attacks that result in only injuries are not included.

The impact of information on violence

We can now start to consider the role of information, as provided by public debate, on violence levels in the conflict. To do this, we can consider the objectives of the groups and the role that violence plays in achieving those objectives, and then consider how information affects the perceived rewards to violent actions.

A commonly suggested objective for a group in a decentralised insurgency is to maximise their influence as the influence of the occupying force declines or withdraws completely.

Under conditions where some groups have information about the potential actions of the occupying force and others do not, changes in behaviour might be expected of the groups that have information. This is more likely to be the case with information relevant to whether the counter-insurgent forces' commitment is changing. Here are two hypothetical cases of how this might work:

- First, suppose the occupying force is unambiguously dominant. Then, there are smaller returns to being in any insurgent group, as the chance of the insurgency winning power is very low. Similarly, there is less incentive to compete over relative position between insurgent groups, as the relative gain of being the top versus the second-best insurgent group is also small.
- Second, suppose the occupying force is believed to have declining or lower levels of influence. The chances of influencing the civilian population and having meaningful political power for any insurgent group are higher than in the first case, especially where government counter-insurgency operations are weaker. So here, each insurgent group also has a larger incentive to strengthen their position relative to the other insurgent groups.

In this framework, attacks in Iraq targeted at the coalition military offer an opportunity for insurgent groups to demonstrate both absolute strength vis-à-vis a foreign occupier and relative strength with respect to other insurgent groups, and to increase the costs of continued military involvement. Attacks targeted at civilian settings establish relative strength too, but they also impose costs on civilians themselves.

The trade-off that insurgents face is the greater ease but lower return of civilian attacks versus the greater cost (and risk) but higher return of military attacks. In a competitive framework where insurgents seek to win the support of the population, such civilian attacks may become increasingly costly and military attacks increasingly desirable as the returns to establishing absolute dominance increase.

This theory generates two testable empirical implications:

- First, insurgent-initiated attacks should differ depending on the locally available information about potential future coalition behaviour. If there are spatially different responses to information, this implies a geographically decentralised insurgency in Iraq with between-group competition.
- Second, insurgent-initiated attacks should increase with respect to military targets and decrease with respect to civilian targets. This is because the value of civilian and military targets is different.

Insurgents use violence not only to impose costs on the occupying force, but also as a tactic to establish dominance between competing groups

If there is a shift in targeting, this may imply competition between groups in the insurgency. This assertion is premised on the theory that new information about coalition involvement may change insurgent groups' incentives. The individual insurgent groups are motivated to impose greater damages on military targets to try to achieve dominance. Think of this as similar to a situation in which multiple interest groups or political parties vie for influence or share of the vote.

Conflict in the age of high-speed communications

Generally, the response of insurgent behaviour has been difficult to verify empirically because information on public support for war or dissatisfaction with the military's performance was difficult to obtain by insurgent groups on the ground. In the last decade, however, information technologies have dramatically changed that, enabling remote regions of the world to have near real-time access to information.

The conflict in Iraq represents the first major military engagement in which high speed international communications, such as satellite television, have been broadly and commercially available, making real-time information available to all. The sale of satellite dishes in Iraq 'skyrocketed in

the months following the invasion, leading to one of the highest penetration rates in the world in just two years' (Cochrane, 2006).

Nevertheless, 'while nearly all (93%) Iraqis report owning a television, only about a third (33%) have access to a satellite dish', according to a media poll by the UK's Office of Intelligence and Research. Access varied dramatically by regions, largely based on pre-war infrastructure and regional weather conditions, and I have exploited such variations to test the relationship between access to news about US politics across Iraq's 18 provinces and patterns of insurgent violence.

Specifically, I combine data on US military and Iraqi civilian fatalities resulting from insurgent violence, the release of polls on US public opinion towards the Iraq war and access to satellite television media in Iraq.

With the assumption that provinces with greater access to satellite television have greater and more rapid exposure to US news, I investigate whether insurgent groups in these areas responded differentially following the release of US public opinion polls. I use a technique that makes it possible to control for many other variables between the provinces and over time.

Tracking the responses to polls released over a two-year period, I find that the frequency of attacks increased by between 5% and 15% in high satellite areas compared with low satellite areas in the two weeks following the release of new public opinion polls in the United States.

The analysis also shows that the number of military fatalities increased by between 40% and 50% in the weeks following poll releases, while the number of Iraqi civilian casualties decreased by between 20% and 30%. As Figure 2 shows, this difference dissipates by the fourth week.

These two independent findings are consistent with the original hypothesis that in a decentralised insurgency, individual insurgent groups act in a competitive manner both to gain dominance among groups and to increase local public support. Supporting the latter conclusion is my finding that attacks following poll releases shift from civilian targets and towards military targets.

Public debate in democratic societies

Before considering recommendations for policy based on these findings, it is important to note that the results do not represent a full analysis of the costs and benefits of an open public debate about military strategy. My study does not address the issue of whether criticism of war strategies brings sufficient extra benefits to society to make such costs acceptable.

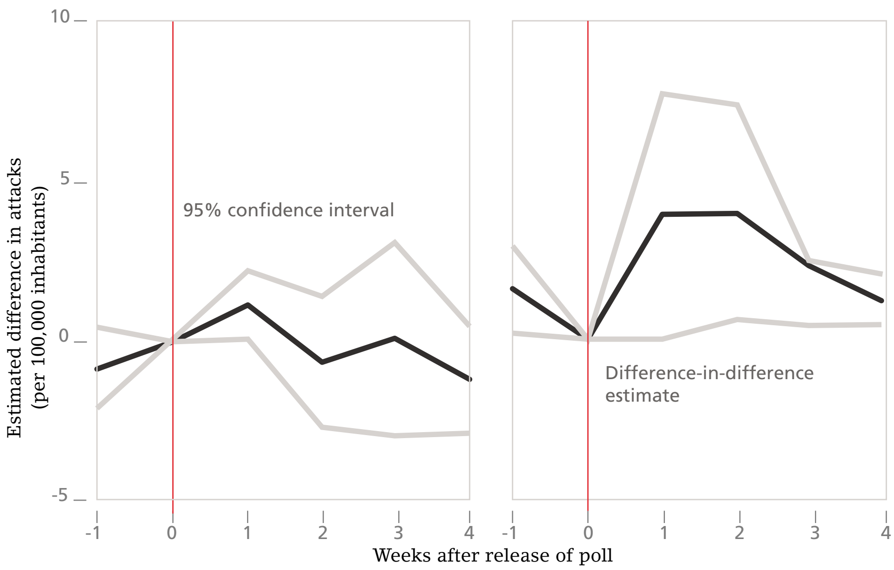
Extensive empirical research suggests that open debate, independent scrutiny of official policy and transparency improves the quality of decisions in democracies relative to closed political systems and may at times be necessary to force changes in war strategy (Kaufman, 2004; Snyder, 1991). Public criticism and policy reviews may therefore be beneficial overall if the resulting improvements in strategy produce a real reduction in attacks and fatalities.

But in democratic societies where public debate cannot, and should not, be limited, it is important to recognise the important role that information plays in affecting the behaviour of insurgent groups. It is also important to recognise that the concept of 'domestic' debate that remains unavailable to other non-domestic participants in a conflict no longer exists.

Debates on military strategy and public opinion are now internationally available. While they can and should occur, it is important to recognise that they will also be available to insurgent groups – and that discussion should therefore be responsibly managed by media organisations.

An important consideration may be the type of coverage, be it print, broadcast or satellite. Information available on the internet and via satellite has much broader and more rapid international diffusion than traditional broadcast television or print

Figure 2:
Difference in attacks after poll information is released on satellite television



Note: The number of attacks per province-week is defined as non-criminal acts that result in the death of one or more persons. The data do not distinguish between Sunni insurgent attacks and Shia militia attacks. Attacks that result in only injuries are not included.

media. Media companies may wish to consider what information to include in which communication form.

Strategies to reduce insurgent violence

Any conclusions for military strategy should be taken with a cautionary note. Given the complex nature of insurgencies and the limited empirical information available, further research is needed to identify more precisely the channels through which various counter-insurgent activities affect insurgent behaviour. With this caveat, I suggest that the following recommendations arise from the existing evidence.

If a short-term change in information changes the strategy of competing insurgent groups, then it may be possible to use both outgoing information and competition between groups to combat violent insurgent activity more effectively. Strategies may be used to take advantage of inter-group rivalry and the need to compete for public support. The following strategies could be tried:

- Providing rewards for cooperation with counter-insurgency operations: there is some supporting empirical evidence for this approach in Iraq from recent empirical work (Berman et al, 2008). In Iraq, government and coalition provision of public services, such as schools and hospitals, are associated with lower levels of violence.
- Increasing penalties for cooperation with any insurgent group: while there are often harsh penalties for cooperation, there is not a well-defined set of penalties for different levels of cooperation. My research in the context of US crime, as well as previous research on the economics of deterrence, suggests that such penalties are critical to reducing participation (Iyengar, 2008).

There is also supporting evidence for this in the context of political violence from Israeli penalties for Palestinian suicide bombers. Recent work suggests that house demolitions reduce suicide attacks (Benmelech et al, 2009). This suggests that even apparently extreme forms of political violence may be somewhat open to deterrence.

In addition, these results help to identify which strategies are likely to be unsuccessful. For example, if insurgent groups are decentralised, then counter-insurgent strategies based on identifying and incapacitating a single command-and-control operation will be ineffective.

Instead, approaches need to parallel policing strategies. Targeting lower level operatives and exposing individual groups requires increased patrols, community participation and even negotiated deals with former insurgents. Programmes such as the Sons of Iraq follow this line of reasoning and have been largely thought to be effective (though no formal evaluations have been undertaken).

Even if counter-insurgency strategy overall does not change, military strategists should now consider the returns to various operations, understanding the role that competition between groups plays in generating violence.

Attacks following the release of opinion polls shift from civilian targets and towards military targets

Radha Iyengar is an assistant professor of economics at LSE and a research associate in CEP's labour markets and productivity and innovation programmes.

Further reading

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Eli Berman, Jacob Shapiro and Joseph Felter (2008) 'Can Hearts and Minds Be Bought? The Economics of Counter-insurgency in Iraq', NBER Working Paper No. 14606.

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in brief...

Job guarantee: a new promise on long-term unemployment

The UK needs a 'job guarantee' for jobseekers who have been out of work for 12 months. According to CEP's founder director **Richard Layard**, such a measure would prevent long-term unemployment worsening after the recession ends.

Previous recessions show that the main danger is the build-up of long-term unemployment. Once people are long-term unemployed, they become increasingly difficult to place back into work. So the build-up of long-term unemployment makes it difficult to have a quick recovery that is not also inflationary.

One significant new policy that could make a big contribution here would be the introduction of a 'job guarantee'. This would be a system of placements in temporary jobs, created and paid for by the government.

The 'activation' approach to unemployment – in which after some point it becomes impossible to receive support except through activity – has been shown to be effective in reducing overall unemployment.

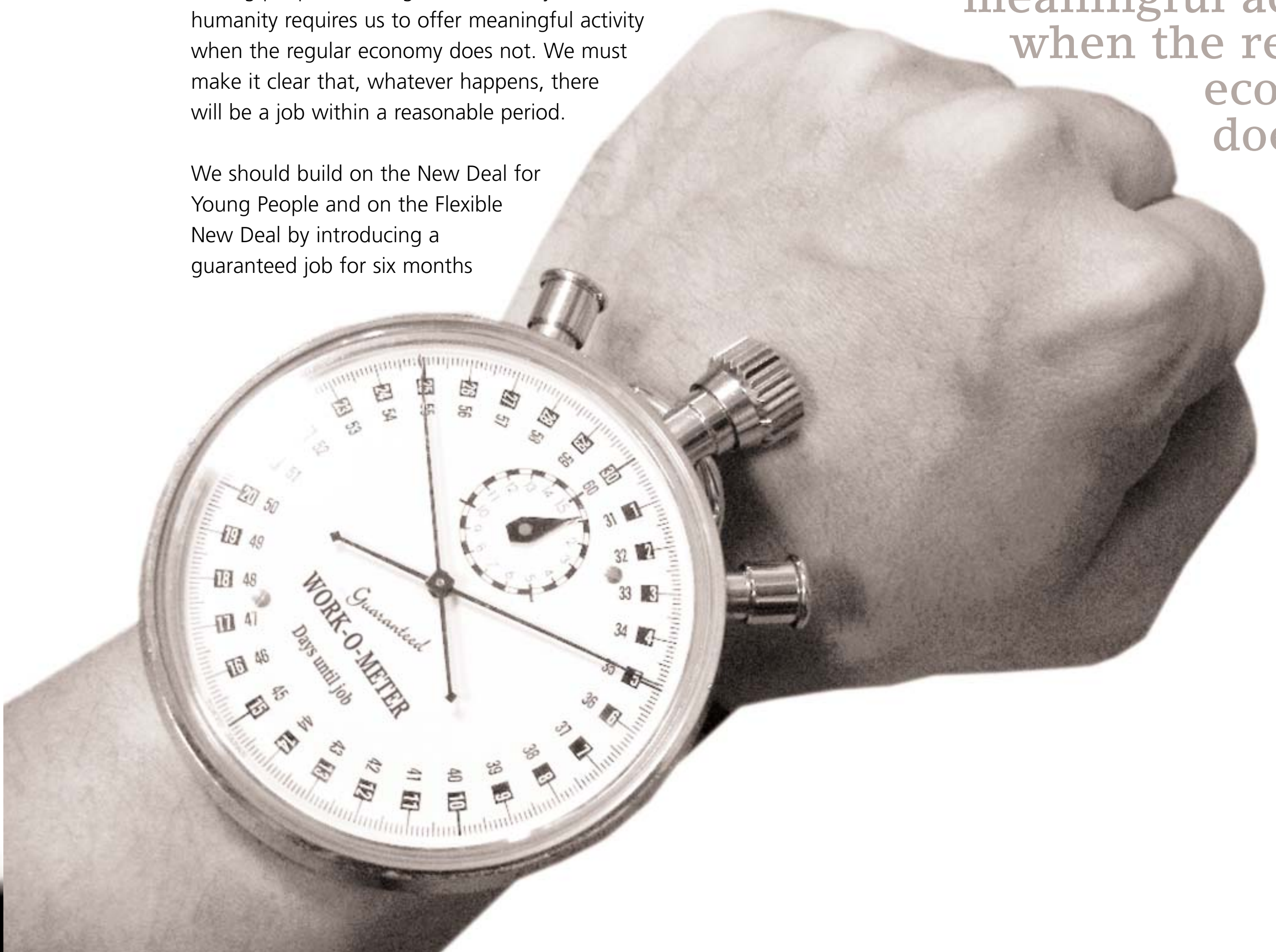
A job guarantee could help prevent negative attitudes to the job search process, and avoid an increase in misery among people suffering from inactivity. Common humanity requires us to offer meaningful activity when the regular economy does not. We must make it clear that, whatever happens, there will be a job within a reasonable period.

We should build on the New Deal for Young People and on the Flexible New Deal by introducing a guaranteed job for six months after 12 months unemployment for 18-25 year olds, and after 18 months for those over 25. The whole aim is to get people off benefits and into regular jobs. Only if this fails would we provide fallback jobs through the job guarantee.

Jobs created under the job guarantee must meet two important criteria:

- They must of course be useful. Possible areas of work could include maintenance for public housing, schools, hospitals and roads, or social care activities, such as home help. The work needs to be managed

Common humanity requires us to offer meaningful activity when the regular economy does not



There is work that needs to be done and people wanting to do it – let's bring them together

professionally with a visible leader at the centre, and continued job search should be encouraged.

- Workers must be paid the rate for the job. This is essential for credibility. If the worker were paid benefit-plus, the image would be one of workfare: 'You are only entitled to your dole money if you work for it'. If the job were waged, the image would be: 'You are now entitled to a job and you get paid for it'.

Based on experience in the early 1990s, we could expect the scheme to apply to roughly 250,000 people aged 18-25 (unemployed for 12 months) and 350,000 people over 25 (unemployed for 18 months).

Assuming the job guarantee job is 30 hours a week at the minimum wage, the cost for six months is £4,500 (also assuming no one who starts a guaranteed job leaves within the six months, which would reduce costs). Adding in the cost of supervision and materials brings the gross cost to the Exchequer to around £7,000 per person.

Of course, during the same time the person would have mainly been on benefits (though on average I assume four months, since some would find work). The savings from keeping someone off Jobseekers' Allowance for four months, coupled with the increase in taxes paid per worker, amount to £2,300 per person (with another £1,500 from younger people not being on the Flexible New Deal), giving a net cost for the scheme of roughly £2.45 billion each year.

The benefits to society from this measure are much greater than the Exchequer costs. They include:

- The output produced by these jobs.
- The greater personal wellbeing of people otherwise unemployed, through providing hope at a time of potential despair.
- Improved job search prospects and future work skills.
- The prevention of persistent long-term unemployment.
- A significant boost in general reflation, through spending by people with a high marginal propensity to consume.

These proposals were put forward to the government by Paul Gregg and myself in March 2009. The part relating to young people is now being implemented through the Future Jobs Fund. But people over 25 matter too. The misery caused by unemployment is no respecter of age – and long-term unemployment when over 25 has a permanent 'scarring' effect on a person's happiness and income prospects.

So all political parties should support introducing a job guarantee for adults over 25 within at least 18 months of them becoming unemployed. There is work that needs to be done and people wanting to do it – let's bring them together. A crisis is a good moment to do this. But it should be a permanent feature of our labour market policy.

Jobs created under the scheme must be useful and workers must be paid the rate for the job

Professor Lord **Richard Layard** is director of CEP's research programme on wellbeing. **Paul Gregg** is a professor of economics at the University of Bristol and a senior research fellow in CEP's labour markets programme.

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SERC ANNUAL CONFERENCE 2010

Thursday 6 May and Friday 7 May

Call for papers from postgraduate researchers

The Spatial Economics Research Centre (http://www.spatialeconomics.ac.uk) was launched in April 2008 to provide high quality independent research on why some regions, cities and communities prosper more than others, and to mobilise international expertise to enhance UK policy-makers' capacity to diagnose and tackling such differences.

One significant part of SERC's mission is to contribute to capacity-building in this field by working and networking with young researchers, both within and outside SERC.

To pursue this aim, the Centre's second annual conference is being held over two days in May, with the first half of the programme devoted to presentations based on current/recent PhD research, and the second to papers by SERC staff and affiliates, relating to the Centre's own research.

Submissions are invited for papers to be presented in the PhD/young researcher sessions. Topics should reflect SERC's broad research agenda and relate to one (or more) of its five programme areas:

- The scale and nature of UK spatial disparities
- The causes of place-based effects
- Housing and land markets
- The structure and evolution of the spatial economy
- Spatial economic policy

Successful applicants will be invited to attend both days of the conference. Financial support for authors of those papers selected for presentation (covering economy travel and budget hotel) will be provided by SERC. The choice of papers will be based on 500 word abstracts, which should be sent via email by **Friday 19 March** to Jo Cantlay at the Centre (serc@lse.ac.uk), together with information about the author's affiliations, status and date of PhD submission (if awarded in the last three years).

Authors will be notified of decisions by Wednesday 31 March 2010.

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