

# Centre Piece

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Immigrant identity in Britain  
When central banks talk  
Educational controversies

Teaching values  
Trade winners and losers  
Blair's economic legacy

## MICROSOFT'S MARKET POWER



# CentrePiece

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## Editorial

As one prime minister hands over to his successor, there is much talk about the legacy of the former and the challenges facing the latter. As a contribution to this evaluation of past and prospective policies, the Centre for Economic Performance (CEP) is producing a new series of policy analyses around some of the defining slogans of New Labour: the priorities of 'education, education, education'; the goal of 'making work pay'; and the desire to be 'tough on crime, tough on the causes of crime'.

The first is available on our website – <http://cep.lse.ac.uk/briefings/default.asp> – and more will follow on these and other topics during the course of the transition to the new regime. Here, CEP's director John Van Reenen provides a broad overview of Tony Blair's economic legacy. One thing is for certain, he concludes: over the next two or three years, Gordon Brown will not have the luxury of being able to blame the policy mistakes of a previous government for any unfortunate economic news.

CEP also plans to take stock of its own performance, looking back at some of the big ideas that have emerged from the research and the stories of their subsequent impact on both scholarship and public policy. For example, studies of the causes and consequences of unemployment and inequality in the 1980s and 1990s not only changed the way economists think about these problems, they also led to the development of labour market policies like the New Deal and the minimum wage – and later, following their implementation, to evaluations of their effectiveness.

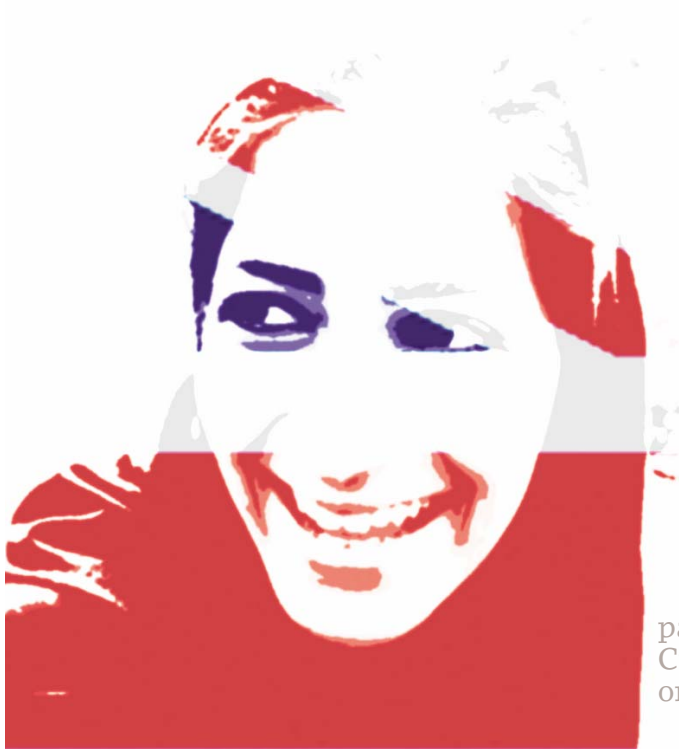
In the meantime, in this issue of *CentrePiece*, we showcase findings from all six of our major research programmes – labour markets; education and skills; productivity and innovation; globalisation; macroeconomics; and wellbeing.

Two articles look at current controversies in education: the effects on pupils' achievement of attending a grammar

school or a religiously affiliated school. Among the others, CEP researchers question if there really is a potential 'clash of cultures' in modern Britain; explore the effects of openness to trade; examine how markets react to monetary policy-makers' words and deeds; and call for schools to teach values.

And our cover story focuses on a product – Microsoft's Windows software – with which we are all familiar but whose ramifications are often obscure. A government's policies on technology and competition rarely have the public prominence of its policies on education, work and crime, but the consequences can be equally significant.

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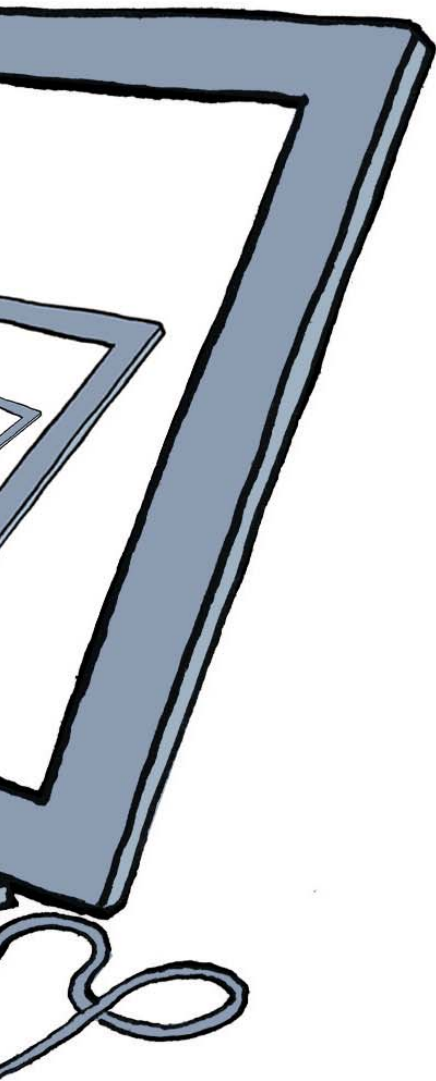
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The antitrust cases against Microsoft in the United States and Europe have been the most high profile implementation of competition law in the last 20 years. **Christos Genakos, Kai Uwe Kühn** and **John Van Reenen** look at the key economic issues, notably what they imply for the conduct of competition policy in high-tech industries dominated by rapid innovation.



# The European Commission versus Microsoft: competition policy in high-tech industries



**I**n the various Microsoft cases, antitrust authorities in the United States and the European Union (EU) took on one of the most valuable companies in the world and its CEO Bill Gates, the world's richest man. After five years of investigation, in March 2004, the European Commission held Microsoft guilty of abuse of its dominant market position under Article 82 of EU law and imposed the largest fine ever for such an antitrust violation in Europe: €497 million.

The Commission found that Microsoft had abused its monopoly of personal computer (PC) operating systems in two ways: 'deliberately restricting interoperability between Windows PCs and non-Microsoft work group servers, and by tying its Windows Media Player, a product where it faced competition, with its ubiquitous Windows operating system.' (Work group servers are computers that allow people to share files and printing, store and protect large amounts of data, access the internet, etc.)

The Commission also demanded major remedies, including compulsory licensing of intellectual property: 'within 120 days, to disclose complete and accurate interface documentation which would allow non-Microsoft work group servers to achieve full interoperability with Windows PCs and servers'; and 'within 90 days, to offer to PC manufacturers a version of its

Windows client PC operating system without Windows Media Player.'

This degree of intervention is highly unusual and has led to a continued conflict about the implementation of the remedies. The case also raises an important question about the conduct of competition policy in high-tech industries dominated by rapid innovation.

## Market power

In the server case, which we focus on here, the Commission's basic argument was that Microsoft extended its market power from PC operating systems (of which Windows controls over 95% of the market) into a complementary market – that of the operating systems for work group servers. How did it do this?

For server operating systems to be effective, they must be able to communicate easily with the PC operating system – what is known as 'efficient interoperability'. Microsoft's control of the PC operating system meant that it could limit the efficient interoperability between Windows and rival companies' server operating systems by manipulating the interfaces responsible for connecting Windows with other software.

The Commission argued that Microsoft had both short-run ('static') and long-run ('dynamic') incentives to 'foreclose' rivals from the server operating systems market in this way. The dynamic reasons are

probably most important, as Microsoft was clearly concerned that a strong presence of rivals in server operating systems could threaten the profits it enjoyed from its Windows monopoly of the PC market in the future.

For example, customers could reduce their reliance on PCs by running applications like spreadsheets, database management and banking software mostly on servers, leading to a decline of Microsoft's longstanding monopoly. By extending the Windows platform dominance from PCs to servers, Microsoft could extinguish this future threat.

Various internal emails by Microsoft senior executives suggest that this strategy was not the overzealous imaginings of Eurocrats. For example, in 1997, Bill Gates wrote: 'What we're trying to do is use our server control to do new protocols and lock out Sun and Oracle specifically... the symmetry that we have between the client operating system and the server operating system is a huge advantage for us'.

This may have just been cheap talk, but as Figure 1 shows, Microsoft's share of the server operating systems market did rise dramatically during the late 1990s: from about 20% at the start of 1996 to

over 60% in 2001. By this point, Novell, the combined UNIX platforms (IBM, Sun, etc.) and Linux could muster only about 10% each in market shares. The Commission argued that at least some of Microsoft's swift rise to power was due to anti-competitive actions.

There has been much debate over whether Microsoft was dominant in the work group server market. But the key issue in a 'leveraging' case like this is whether Microsoft had power over PC operating systems. Given their 95%-plus market share, even Microsoft's lawyers did not try hard to contest this point.

### Economic incentives to foreclose

So did Microsoft have an economic incentive to foreclose competition through leveraging? The key question is as follows: when firm A, the monopolist (Microsoft in PC operating systems), faces firm B in a complementary market (server operating systems), in what circumstances will firm A exclude firm B from the adjacent market? Microsoft's essential argument rested on the Chicago School view that a monopolist does not have incentives to monopolise a complementary market since all profits can be extracted at least as effectively by increasing the price of the monopoly product.

The Chicago argument – known as the 'one monopoly profit theory' – is that degrading interoperability would cost Microsoft lost revenues as consumers would

The Commission's remedy for foreclosure was to ask Microsoft to reveal information to enable server vendors to connect properly with Windows

not be willing to pay as much for a Windows operating system due to its lower performance with non-Microsoft servers. Instead of going to the expense of monopolising the new market through reducing rivals' quality, Microsoft could simply charge a higher price for its PC operating system and extract all the profits from the server market in this way. Consequently, the Chicago argument is that Microsoft must have benign reasons, such as its desire to end the excessive profits earned by other server vendors or the superior efficiency of Windows technology.

The modern economic theory of foreclosure suggests many reasons why this critique might break down. In Microsoft's case, it is useful to distinguish between dynamic and static incentives.

### Dynamic incentives to foreclose

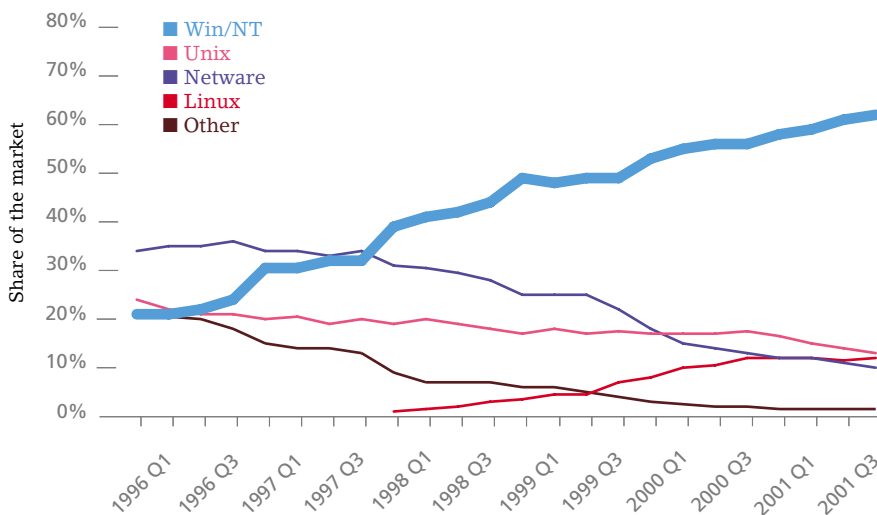
The lack of any long-run incentive to foreclose in the 'one monopoly profit theory' arises from the assumption that the monopolist has a permanent unchallenged position with no threat of future entry to the primary market. This is unlikely to hold for Microsoft's position in the PC operating systems market.

Although in the short run it was protected by strong barriers to entry, in the longer run, there were a variety of threats to Microsoft's juicy stream of profits. Consumers care about the software applications (spreadsheets, word processors, games, etc) that are written on a particular operating system. The main competitive advantage of Windows is the wide range of applications written on its platform (software developers write programs to work on the most popular platforms). But major platform threats emerged in the late 1990s associated with the growth of the internet.

One threat was that increasing numbers of applications could be delivered through servers. Server operating systems

### By degrading the ability of rival server operating systems to work with Windows, Microsoft 'foreclosed' the market

Figure 1: The growth of Microsoft's share in the work group server market 1996-2001



There are many reasons for believing that the remedy could have a positive effect on industry-wide innovation



typically run on open standards, so software developers could use these standards rather than Windows. This meant that the server operating system could become a potential non-Microsoft platform, directly challenging the stronghold that Microsoft had created on PC operating systems. If applications only needed a slimmed down version of a PC operating system, customers would not need to buy expensive Windows upgrades.

Effectively, a platform based on a server operating system could have become a potential competitor for the Windows operating system. One way to prevent this danger was for Microsoft to monopolise the server market – even if this meant sacrificing profits in the short run.

The key idea in dynamic foreclosure theory is that an action that shifts short-run market share can have long-run benefits to the monopolist through depressing rivals' incentives to invest and innovate. In many cases, these arguments may be suspect as there is no obvious mechanism whereby this could take place. But in Microsoft's case, the mechanism is clear and well established due to the 'applications network effect'. Shifts in share towards Microsoft in the server market (current and expected) will mean that developers start switching away from

writing to non-Microsoft platforms. Customers will shift away from rivals because there are fewer applications and this will further reduce developer's incentives to write software. This applications network effect makes foreclosure arguments much more plausible than in other industries.

### *Static incentives to foreclose*

The dynamic arguments for foreclosure work even though, in the short run, the monopolist may suffer some losses. But these arguments are even more compelling when there are short-run incentives to foreclose. One such incentive is the ability to price discriminate more effectively in the monopoly market (PC operating systems) by dominating the complementary market (server operating systems).

In Microsoft's case, imagine that there are two types of customers: large firms (which are less sensitive to the price of the PC operating system) and small firms (which are very sensitive to the price of the PC operating system). A monopolist would like to charge a high price to the large firms and a low price to the small firms. Microsoft finds this hard to do because the large firm can always pretend to be a small firm.

But imagine that large firms also place

a high valuation on a complementary product (servers), whereas small firms do not because the gains from sharing computing resources are much smaller. In this case, by monopolising the server market and charging a higher price for the PC and server operating systems bundle, Microsoft is able to extract more profits. Our research provides empirical evidence that these short-run incentives exist and that they have grown stronger over time.

### Remedies

Software markets are fast moving and highly innovative: many new economy advocates have argued that European competition law is inadequate in such markets. In particular, Microsoft argued that the proposed remedies of forced disclosure of interoperability information would have a severely negative effect on innovation, as it would lead to the wholesale cloning of Microsoft's valuable intellectual property. Whatever the supposed short-run gains, they argued that the long-run costs in terms of lower innovation by Microsoft would swamp these purported benefits.

These are difficult areas as the Commission was under no legal obligation to consider the effects on innovation, despite their economic importance. Nevertheless, the Commission argued that: 'a detailed examination of the scope of the disclosure at stake leads to the conclusion that, on balance, the possible negative impact on Microsoft's incentives to innovate is outweighed by its positive impact on the level of innovation of the whole industry'.

To assess this claim, we must investigate the Commission's remedies and their likely impact on innovation incentives on Microsoft, on its rivals and therefore on the market as a whole. The Commission asked Microsoft to reveal information necessary to allow rivals to interoperate with the Windows platform. This amounts to a compulsory licensing remedy. The Commission conceded that Microsoft could charge a reasonable fee for such licenses, reflecting the intellectual property embedded in the information.

There is an important distinction between demanding information to enable *interoperability* compared with *imitation*. The Commission wants the former to enable other firms to connect to Windows in the same way telecom

regulators force fixed line incumbents to share their network with mobile phone operators, even if the incumbent also offers these services.

If the remedy allowed *imitation* – for example, a complete copy of the key security features of the PC operating system – there would be a stronger concern over innovation. Consequently, the remedy *did not* require release of Windows source code – Microsoft’s ‘crown jewels’.

Interestingly, Windows source code is not what the rival server vendors wanted. Instead, they were after a detailed technical description of the interfaces to enable them to design their own code to interoperate with Windows. Microsoft’s description of the remedy as allowing cloning is therefore inaccurate.

### The impact on innovation incentives

What are the likely effects of the remedy on industry incentives to invest in research and development (R&D)? For Microsoft’s rivals, there are two effects:

- Having interoperability information increases the value and sales of their products. This will increase rivals’ returns

to R&D, as any innovation will be spread over a larger number of units sold. The remedy essentially reduces Microsoft’s tax on rival innovation and should increase incentives to innovate.

- Rivals no longer have to incur costs to overcome technical barriers to interoperability created by Microsoft’s disclosure policy. Overcoming such barriers is innovation of a sort, but it is duplicative and socially wasteful.

There are several potential effects of the remedy on Microsoft’s incentives to innovate:

- First, with better disclosure, rivals will be able to compete on a level playing field. To the extent that this reduces the expected market share and increases price competition from now higher quality rival products, the remedy may lead to some reduction in Microsoft’s incentive to invest. But unlike its rivals, Microsoft will still obtain substantial profits from general innovation in the PC operating systems market, where it will continue to enjoy a monopoly. There is therefore little reason to expect that Microsoft’s incentives to innovate on operating systems solutions would substantially fall.

- A further effect may also contribute strongly to increased innovation incentives. Through innovation, a firm can escape harsh competition with rivals and secure profits for a transitory period. This effect will tend to increase the investment incentives of all firms, including Microsoft. Economic research is somewhat ambiguous on the net impact of all of these effects, but on balance, it is believed that intensifying competition will usually lead to increased innovation.

- Finally, Microsoft may change the quality as well as the quantity of its R&D. There could be positive effects on quality because Microsoft will no longer have incentives to block innovations that raise quality but have high interoperability with non-Microsoft servers. There is some evidence that Microsoft has sacrificed its own innovative potential to protect the Windows desktop monopoly. This was known within Microsoft as the Windows ‘strategy tax’ – the need to close down research lines that, although leading to innovative products, could potentially weaken the lock-in of Windows.

In summary, there are likely to be positive effects on rivals’ innovation from the remedy and ambiguous effects on Microsoft’s incentives. While the eventual outcome is uncertain, it is far from clear that the remedy will reduce industry-wide innovation. On the contrary, there are many reasons to believe that it could have a positive effect on aggregate innovation.

### Interoperability at what price?

Following the Commission’s decision, the most contentious issue has been the conditions under which the interoperability information should be licensed and what information was necessary to achieve full interoperability. The Commission left the exact conditions out of its initial decision because it involved intricate review of technical information, which was delegated to an independent monitoring trustee.

Microsoft’s initial suggestions were unacceptable to the industry, the Commission and the independent monitoring trustee appointed to oversee the remedy. Microsoft proposed that the interface information could only be

Competition policy can deter anti-competitive behaviour without the need for ever taking legal action





purchased as one bundle and specified a license fee for each rival software copy shipped in the order of magnitude of the Microsoft software itself. This would have clearly continued the exclusionary effect simply through high prices.

Many industry insiders doubted that any innovation of significance was embedded in the interfaces themselves. They argued that just changing the language of the interface would not be a substantive innovation that had material value and that therefore it should not be compensated.

Indeed, to the extent that Microsoft has innovation embedded in processes that use the interfaces, such innovations should not matter for the assessment of the license fee because the interfaces themselves do not constitute the innovation. Typically such information in other software sectors is licensed at only nominal fees.

Another contentious issue was the amount and type of information that Microsoft had to provide. To interconnect with Microsoft's software, rivals needed information about how exactly the interface works. When the trustee found that Microsoft was not giving sufficient information to make this possible, the Commission stepped in with a 'statement of objection' and eventually a further large fine for non-compliance. But this tug-of-war has led to considerable delay in the effective implementation of the remedy.

## Conclusions

What more general lessons can be learnt from the Microsoft case about antitrust enforcement in high-tech markets and elsewhere? First, it is worth remembering that the case has gone on for nine years with four statements of objections issued and still no final resolution. This is partly a reflection of the complexity of the technical issues, the legal necessity of due process and Microsoft's financial strength. Many of its server rivals have long since died.

An obvious problem is that the legal timescale is so long compared with the rapid evolution of these markets. By the time a remedy is in place, the marketplace has moved quickly beyond the problems over which the case was fought: even if the judgement and remedy are appropriate, is it 'too little too late'? In our view, the Commission's decision on

Microsoft has had some impact since it is prospective and hence gives the Commission power over future versions of Windows.

Although caution is always warranted before intervention, antitrust authorities cannot take a completely *laissez faire* approach to innovation markets. Much of the positive impact of competition policy is through deterring anti-competitive behaviour without the need for ever taking legal action. And since software markets are replete with examples of similar issues, the case may have contributed to higher deterrence against anti-competitive exclusionary behaviour.

A second observation concerns the status of foreclosure theory. Part of the Commission's case was an explicit consideration of economic incentives and an analysis of the effects of the remedy on innovation. These are clearly important from an economic perspective, even though European legal practice is often ambivalent about getting into these issues.

Despite the difficulty of bringing empirical evidence to bear, consideration of innovation and foreclosure was unavoidable in making a credible economic case. One of the challenges facing modern economics is to develop guidelines for the type of empirical evidence that could be used to test the likelihood of foreclosure being a problem in different markets.

The Commission has been much criticised in its use of foreclosure theory in merger cases. For example, the proposed merger of General Electric and Honeywell was blocked after it had been cleared by the US authorities, only for the judgement (although upheld) to be severely criticised by the Court of First Instance in 2005. And in 2002, the Court actually overturned the Commission's blocking of the Tetra/Sidel merger in 2001, which was based on 'over-speculative' theories.

In a sense, foreclosure theory in a merger case is inherently speculative. Opponents of the merger must produce arguments that a particular type of foreclosure behaviour is more likely to occur as a result of the merger, although there are no exclusionary practices in the pre-merger situation.

The evidential position is better in an abuse of dominance case because the exclusionary behaviour is already alleged to have happened, so there can be an

empirical discussion over whether the behaviour has in fact occurred, whether it could be justified in terms of efficiency, and whether there has been any material effect on the marketplace as a result of this behaviour. This was the case with Microsoft where evaluation was possible. Furthermore, Microsoft's exclusionary mechanisms were lent credibility by the internal emails, the kind of evidence that is rarely seen.

Unfortunately, although foreclosure may be easier to detect in a case over abuse of monopoly power compared with a merger, remedying the problem is much harder. In a merger, there is always the clear choice of simply blocking the proposed transaction. Remedies for an existing monopolist are harder to frame and even harder to enforce.

The Commission and Microsoft have been wrangling for a long time over the terms of the disclosure remedy and it is still not perceived to be effective. Microsoft's main rivals have reached out of court settlements, so the concern may be that smaller firms and potential new entrants could be the main parties to suffer. We are unlikely to have heard the end of this case.

This article summarises 'The Incentives of a Monopolist to Degrade Interoperability: Theory and Evidence from the Personal Computer and Server Market' by Christos Genakos, Kai Uwe Kühn and John Van Reenen, CEP mimeo, and 'Some Economics of European Commission versus Microsoft' by Kai Uwe Kühn and John Van Reenen, forthcoming in *Cases in European Competition Policy: The Economic Analysis* edited by Bruce Lyons (Cambridge University Press).

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# Culture clash or culture club?

## The identity and attitudes of immigrants in Britain

Does Britain face a real threat from immigrants and minorities – particularly Muslims – who refuse to think of themselves as British?

**Alan Manning** and **Sanchari Roy** have analysed data on the national identity and values of both immigrants and British-born people – and they conclude that fears of a ‘culture clash’ are seriously exaggerated.



**M**any people in Britain consider immigration to be one of the most important issues facing the country today. Their concerns seem to be as much about the social impact of immigration as its economic impact, which economists typically conclude are small. It is not entirely clear what social consequences of immigration are feared – sometimes it is simply the dilution of ‘traditional’ culture; sometimes it is a more melodramatic fear that Britain is becoming a mix of mutually incompatible cultures, whose irreconcilable differences could end in a serious ‘culture clash’.

Of course, these concerns are not new. For example, in April 1990, Norman (now Lord) Tebbit cited his infamous ‘cricket test’. The former cabinet minister told the *Los Angeles Times*: ‘A large proportion of Britain’s Asian population fail to pass the cricket test. Which side do they cheer for? It’s an interesting test. Are you still harking back to where you came from or where you are?’

But the current concerns seem heightened, largely because of fears about the integration of Muslims into British culture. There is widespread belief that a growing fraction of Muslims who live (and in many cases were born) in Britain do not think of themselves as British, have no aspiration to do so and do not want their children to do so either. Instead, it is feared, they subscribe to some other identity, creating little enclaves that resemble, as far as is possible, the countries from which they came or a model of the good society very different from what is generally thought of as ‘Britain’.

Such fears tend to be magnified by the statements by some British Muslims, which appear explicitly to reject a British identity and affirm another one. One of the July 7 bombers appeared in a video saying ‘your democratically elected governments continuously perpetuate atrocities against my people and your support of them makes you directly responsible, just as I am directly responsible for protecting and avenging my Muslim brothers and sisters’. The use of the words ‘your’ and ‘my’ clearly expressed the people with whom he identified.

The problem is that most British

people know so little about Muslims that it is very hard to know how widespread these feelings are. Our research uses responses from the Labour Force Survey of almost one million individuals to the question ‘What do you consider your national identity to be?’ as well as data on people’s views of their rights and responsibilities from Home Office Citizenship Surveys. The answers give little support to the idea of a serious culture clash within British society.

### The British-born

Among those who were born in Britain, over 90% of all groups of whatever religion or ethnicity, think of themselves as British. In particular, there is no evidence that Muslims are less likely to think of themselves as British than other groups. Our interest in this topic began with the responses of Muslims, but we came to the conclusion that it was unfair to single them out for special attention as they do not stand out in any way.

Table 1:  
Percentage of British-born people reporting British as their national identity, by religion (controlling for ethnicity)

Religion	Percentage reporting British identity
Christian	99.1%
Buddhist	95.7%
Hindu	96.1%
Jewish	99.6%
Muslim	99.2%
Sikh	95.6%
Any other religion	97.0%
No religion	98.8%
<b>Total</b>	<b>99.0%</b>

Table 1 shows the proportions of British-born people of different religions, who think of themselves as British. Of those describing themselves as Christian, 99.1% report themselves as British. But of those describing themselves as Muslim, the proportion is slightly higher at 99.2%, exceeded only by those who are Jewish. Percentages reporting a British identity are lower for Buddhists, Sikhs and Hindus, but are above 95% for all groups. It is hard to look at these figures and see grounds for concern. Of course, this does not mean that the Muslims see themselves as British and not Muslim – it is just that they see no conflict in being both.

Ethnicity has a somewhat larger effect on British identity than religion, as can be seen from Table 2. All non-white ethnic groups report lower levels of British identity, but this is probably because many of them are second-generation immigrants. If we look at young people, those from ethnic minorities whose parents are British-born report the same

Table 2:  
Percentage of British-born people reporting British as their national identity, by ethnicity (controlling for religion)

Ethnicity	Percentage reporting British identity
White	99.1%
Mixed: White/Black Caribbean	97.6%
Mixed: White/Black African	95.3%
Mixed: White/Asian	95.2%
Mixed: Other	91.8%
Indian	94.2%
Pakistani	93.4%
Bangladeshi	94.9%
Other Asian	90.5%
Black Caribbean	93.5%
Black African	94.2%
Other Black	95.3%
Chinese	91.9%
Other	79.4%

Contrary to what many people seem to believe, Britain is not riven by a large-scale culture clash

levels of British identity as the white population.

There is, however, one group that stands out as having an extremely low level of British identity – Catholics from Northern Ireland. From our research, it appears that any identity conflict among British-born Muslims is an order of magnitude smaller than that among Catholics from Northern Ireland.

### Immigrants

So far, we have focused on people born in Britain, but what about immigrants? The fraction of immigrants who identify themselves as British varies a lot by country of birth. But there is a simple explanation for most of this variation – how long immigrants have been in the country?

Figure 1 shows that new immigrants almost never think of themselves as British, but the longer they remain in the country the more likely they are to do so. This process of assimilation is faster for some

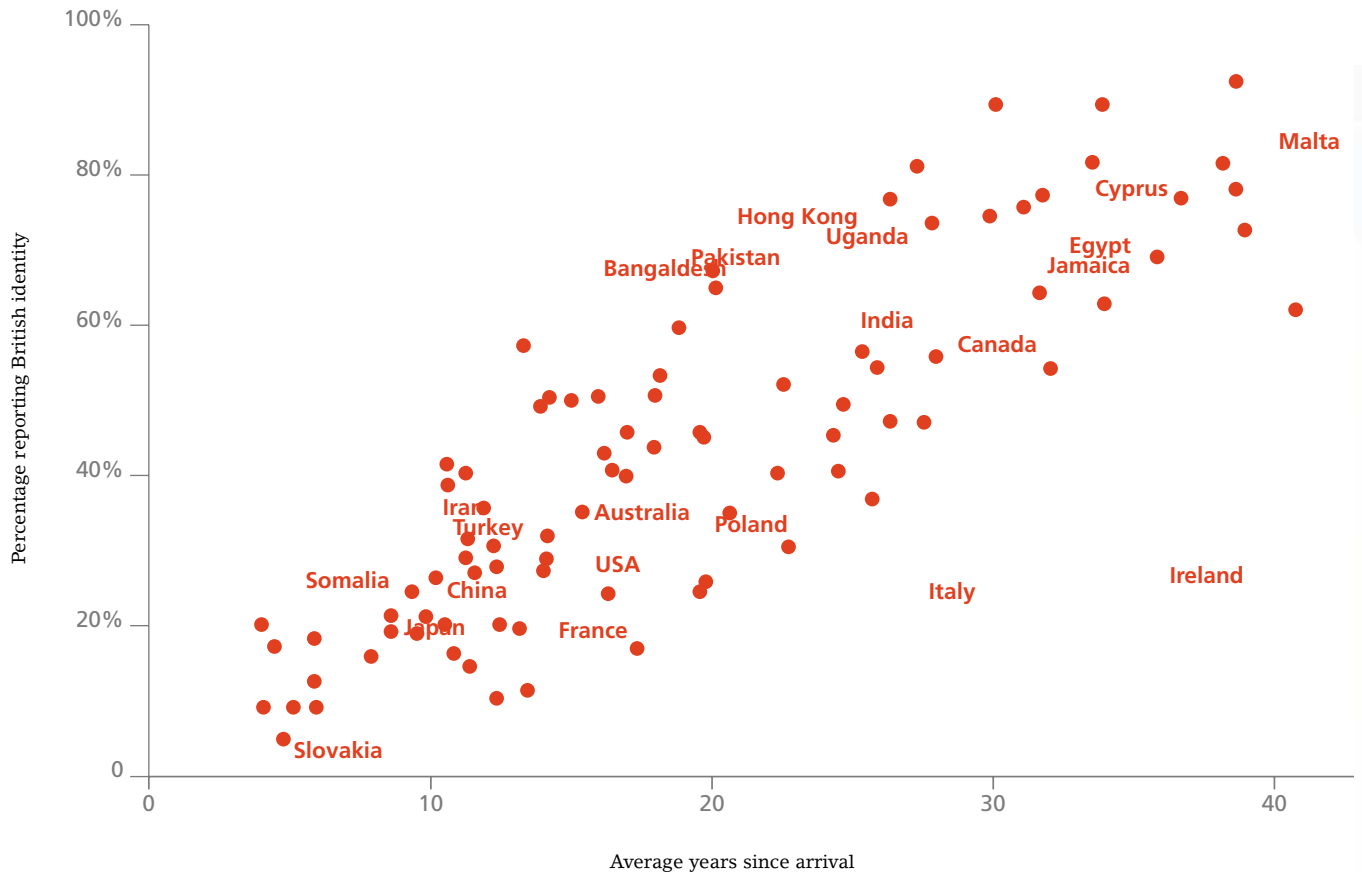
There is no evidence that Muslims are less likely to think of themselves as British than other groups

immigrant groups than others, but not in the way that might be expected. For example, Muslims are not less likely to feel British than those from other backgrounds, and immigrants from Pakistan and Bangladesh assimilate into a British identity much faster than the average, while those from Western Europe and the United States do so more slowly, with Italians and Irish standing out as the groups that assimilate least into a British identity.

We also find evidence that immigrants

The longer immigrants remain in Britain, the more likely they are to think of themselves as British

Figure 1: Immigrants' views of their national identity and years since arrival



from poorer and less democratic countries assimilate faster into a British identity. Part but not all of this can be explained by a greater tendency to take up citizenship.

### Rights and responsibilities

This last finding might lead one to argue that whether people think of themselves as British is not a meaningful indicator of whether they feel they belong, nor of their integration into British life and values. There is little concern about the fact that Italians rarely seem to come to think of themselves as British because it is felt that Italians have similar views on the way in which society should be run.

So it is conceivable that those born in Britain call themselves British because that is what their passports say they are but that they espouse a variety of diverse values. To examine the values that may lie behind notions of British identity, we also conducted an analysis of people's views on rights and responsibilities. Our findings

here are very similar to those on national identity: immigrants are very slightly less likely to have views on rights and responsibilities that the popular consensus holds to be 'desirable'.

But the differences are much smaller than the differences among the British-born population of different ages and with different levels of education. What's more, the immigrant groups who emerge as having different values from the British-born population are not the ones that have become the focus of most public concern. Muslims, for example, do not have significantly different values.

These findings strongly suggest that, contrary to what many people seem to believe, Britain is not riven by large-scale culture clash. This is not to deny the existence of some people who are prepared to use violence to further their agenda, but our evidence suggests that these are a tiny minority.

Our conclusion is supported by

evidence from the 2003 British Social Attitudes Survey, which asked respondents to say whether they agreed or disagreed with the statement 'Muslims are more loyal to Muslims than to Britain'. Of the non-Muslim respondents, only 9% disagreed with a further 25% neither agreeing nor disagreeing. But among the Muslim respondents (who we might expect to be better-informed on the subject) 45% disagreed, a significant difference.

The survey also found that 62% of non-Muslim respondents thought that there was a fairly or very serious conflict between Muslims and non-Muslims in Britain, compared with 27% of Muslims. A broader question about conflicts between Muslims and non-Muslims in the world as a whole found 85% of non-Muslims saying they thought that there was a fairly or very serious conflict, compared with only 67% of Muslims.

In presenting our research findings at various universities, we have been surprised by how many people react by saying our results are all wrong and that they 'know' that there is a serious culture clash. We should be seriously concerned that they maintain this stance even when faced with evidence against it. While there may not be much of a problem with immigrants and minorities in Britain not thinking of themselves as British, there may be a bigger problem in the refusal of the indigenous white population to see these groups as British.

## Immigrants from poorer and less democratic countries assimilate faster into a British identity

This article summarises 'Culture Clash or Culture Club? The Identity and Attitudes of Immigrants in Britain' by Alan Manning and Sanchari Roy, CEP Discussion Paper No. 790 (<http://cep.lse.ac.uk/pubs/download/dp0790.pdf>).

**Alan Manning** is professor of economics at LSE and director of CEP's research programme on labour markets. **Sanchari Roy** is a PhD student and research assistant at LSE.

in brief...

## Sharing the fruits of trade

One of CEP's core research themes is the impact of trade openness on countries, firms, regions, communities and sectors. Two recent studies confirm the gains from opening up trade – but recognise that addressing the uneven outcomes of globalisation is as big a challenge as pursuing liberalisation in the face of entrenched interests.

One of the defining features of globalisation is increasing openness to trade – the removal of a whole range of barriers to the free flow of people, goods, services and capital. Some of these trade barriers can take the form of duties and tariffs levied at national borders. Others are caused by standards – regulations covering labour, environmental issues and health and safety – which differ between countries and regions. Still others arise from geography, for example, inaccessibility or a lack of transport infrastructure.

As these barriers are dismantled by economic liberalisation, new transport networks and constant innovation in information and communications technologies, so the impact of trade openness on countries, firms, regions, communities and economic sectors is coming under closer scrutiny.

One CEP study of the effects of new transport infrastructure focuses on the US interstate highway system, spanning over 40,000 miles, and mostly

constructed between 1956 and 1975. The highways had three goals: to improve the connection between major metropolitan areas in the United States; to serve US national defence; and to connect with major routes in Canada and Mexico. As an unintended consequence of meeting these goals, the highways crossed many rural areas, making it possible for researchers to examine their causal impact on the local economy.

The research by Guy Michaels finds dramatic effects. A country where distances were long, travel was slow and most economic activity was highly localised began to integrate across its land mass. It soon became apparent that the new highways had a big impact not on passenger vehicles but on the large trucks that have become the primary mode of cross-county commerce.

The highways increased trucking income and retail sales by 7-10% per capita in the rural counties they crossed, relative to other rural counties. This suggests that highway counties took advantage of the reduction

Success breeds success, often  
for the vast majority – but  
the fruits of commerce are not  
always enjoyed by all





## Transport infrastructure like the US interstate highway system increases trade

in trade barriers to increase their trade with other countries.

More surprising perhaps are the findings on how the highways affected the demand for skills in rural areas. On average, the highways had no effect on the demand for high-skilled workers relative to low-skilled workers. But the highways increased the demand for high-skilled workers compared with low-skilled workers in counties where skills were abundant and reduced demand where skills were scarce.

In other words, by opening new markets, the highways disproportionately benefited high-skilled workers where skills were abundant and hurt them where skills were scarce. This finding is consistent with the view that trade increases the demand for the abundant factor.

Other CEP research on trade liberalisation – by Stephen Redding and colleagues – sheds more light on how the reduction in barriers to trade reallocates economic activity. Here too, the pattern that emerges is one of success reinforcing success.

At the most basic level, the researchers find that a reduction in trade barriers encourages simultaneous job creation and job destruction in all industries, but that gross and net job creation vary with country and industry characteristics.

Significantly, there is a net loss of jobs in industries with a comparative disadvantage (those where relative labour and non-labour costs are high), while industries with comparative advantage enjoy net job creation as job losses due to exiting firms are exceeded by jobs created by the entrance and expansion of high-productivity firms.

Likewise with productivity levels and average firm output: the gains from liberalisation are greatest in industries with comparative advantage. Interestingly, it is in these industries that the research finds the highest levels of 'creative destruction' of firms, which may explain why workers in these more dynamic sectors report higher levels of job insecurity.

That the overall effect of opening up trade is to increase

aggregate welfare is not in doubt, as both studies make clear. As average productivity increases, so the price of goods is driven down, reinforcing the virtuous circle. But welfare gains are not experienced uniformly, and just as some regions or sectors have to grapple with the handicaps of a low skills base or high input costs, so too do developed and less developed economies.

Contrary to the anti-globalisers, success breeds success not just for the few but for the many – and often for the vast majority. But the fruits of commerce are not always enjoyed by all. Addressing those uneven outcomes is as big a challenge for politicians as pursuing liberalisation in the face of entrenched interests. Most agree on the need to 'manage' globalisation. That shouldn't mean reining it back, but helping everyone to jump on board.

This article draws on research described in 'The Effect of Trade on the Demand for Skill – Evidence from the Interstate Highway System' by Guy Michaels, CEP Discussion Paper No. 772 (<http://cep.lse.ac.uk/pubs/download/dp0772.pdf>) and 'Comparative Advantage and Heterogeneous Firms' by Andrew B Bernard, Stephen J Redding and Peter K Schott, *Review of Economic Studies* 73(1): 31-66, 2007.

**Guy Michaels** is a lecturer in economics at LSE and a research associate in CEP's labour markets programme. **Andrew Bernard** is at Dartmouth College. **Stephen Redding** is research director of CEP's globalisation programme. **Peter Schott** is at Yale University.

What is the minute-by-minute effect of central bank communication on asset prices?

New research by **Carlo Rosa** and **Giovanni Verga** finds that the *unexpected* component of announcements by the European Central Bank has a sizeable impact on interest rate futures.

is our responsibility to be as clear and transparent as possible  
would say that the current suggestion is  
the perception that we do not increase rates



# Words

## market reactions when central banks talk

**D**o announcements by the European Central Bank (ECB) affect market expectations about the future direction of its monetary policy? And if so, how long does it take for these messages to be incorporated into asset prices?

Our findings suggest that when the tone of the press conference differs from what the market expects, there is a sizeable and immediate reaction in the price of three-month Euribor futures – widely traded futures contracts based on short-term interest rates in the eurozone – and the complete price adjustment usually takes no more than an hour. Therefore, central bank communication turns out to be a crucial and effective instrument for steering market interest rates.

The fact that market participants should react to central bank

announcements is quite surprising for academic economists, especially after the seminal work of Kydland and Prescott (1977). They were awarded the Nobel Prize in 2004 for showing, in a theoretical framework, that policy-makers face a severe problem of ‘time-inconsistency’ – they tend to renege systematically on their past promises – and so it is in the public interest to ignore their declarations.

Only 20 years ago, William Greider published his popular book *Secrets of the Temple* on the US Federal Reserve System. At that time, it was common practice for monetary policy to be surrounded by secrecy. But nowadays, it is clear that central banks increasingly emphasise verbal communication with the markets in an attempt to inform them of the likely direction of future monetary policy. This is very much the case with the ECB, which holds all-important news conferences at its

Central bank communication is a crucial and effective instrument for steering market interest rates



le with market participants, investors and savers. I would say that the current suggestions  
 regarding the high probability of an increase of the rates in our governing council  
 Frankfurt is equally probable at all the sentiment of the rates in our governing council

# and deeds:

Governing Council meetings, and it is also increasingly true of the Bank of England and the Fed.

But even though central bankers put great emphasis on verbal communication, economists have not yet systematically studied the relationship between central bank words and central bank deeds, and especially not the information content of central bank words elicited by the reaction of financial markets. Our study is an attempt to begin to fill this obvious gap in the research literature.

We examine the minute-by-minute effect of central bank announcements on asset prices. Contrary to what is commonly found in the literature of monetary economics, we show that market participants respond to *two different pieces of news* rather than just one piece of news. So in order to correctly describe the conduct of monetary policy, we find

that two dimensions are needed: central bank actions and, most importantly, central bank words.

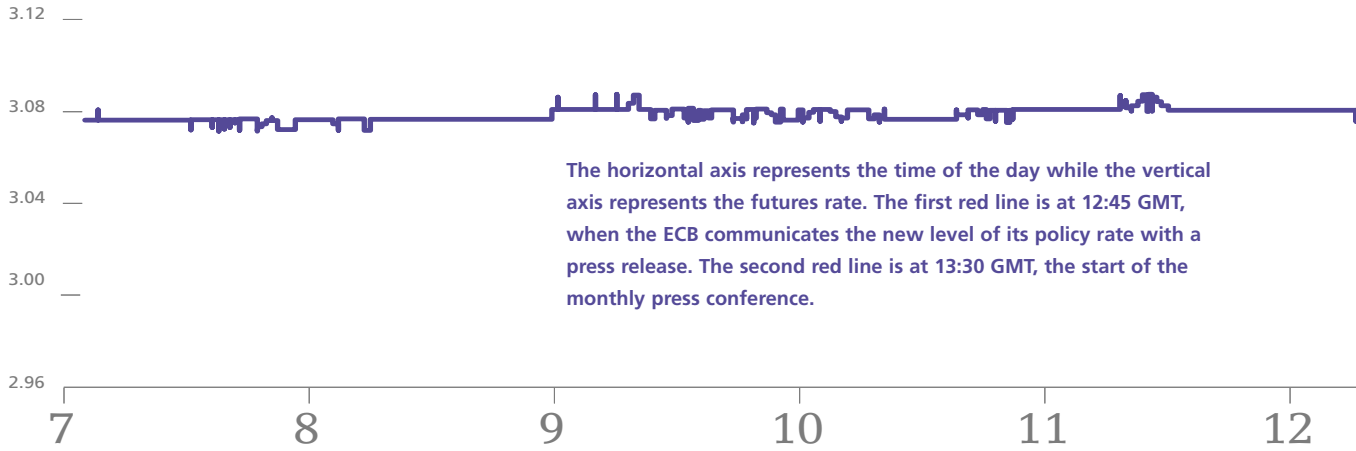
We apply our empirical analysis to the ECB's communication policy because of its unique institutional feature that on one day, at two different points in time, the Governing Council announces first its monetary policy decision, and then its likely future monetary policy stance. These events take place in sequence. At 12:45 GMT, the ECB communicates the new level of its policy rate with a press release. Then 45 minutes later, at 13:30 GMT, the monthly press conference starts and the ECB's president explains the monetary policy decision to the public, as well as the Governing Council's assessment of current economic developments. This speech is very important, especially for traders, because it conveys strong hints about the likely path of the ECB's future monetary policy.

The use of high-frequency intraday data rather than daily data to analyse central bank communication is crucially important because it allows us fully to exploit the unique institutional feature of ECB monetary policy conduct: we are able to disentangle the effects of one surprise – the monetary policy shock – from the other – the news shock.

The advantages of using high-frequency data are best illustrated by means of the example in Figure 1, where we consider the minute-by-minute movements of the three-month Euribor futures price on a specific Governing Council meeting day, 6 April 2006.

On that occasion, the ECB did not change its policy rate and this was fully anticipated by financial market participants. In fact, there is basically no market reaction at 12:45 (indicated in Figure 1 by the first vertical red line). On the other hand, the

Figure 1:  
Futures price dynamics on 6 April 2006



**In Frankfurt, Mr Trichet says 'strong vigilance' – and traders in London react immediately**

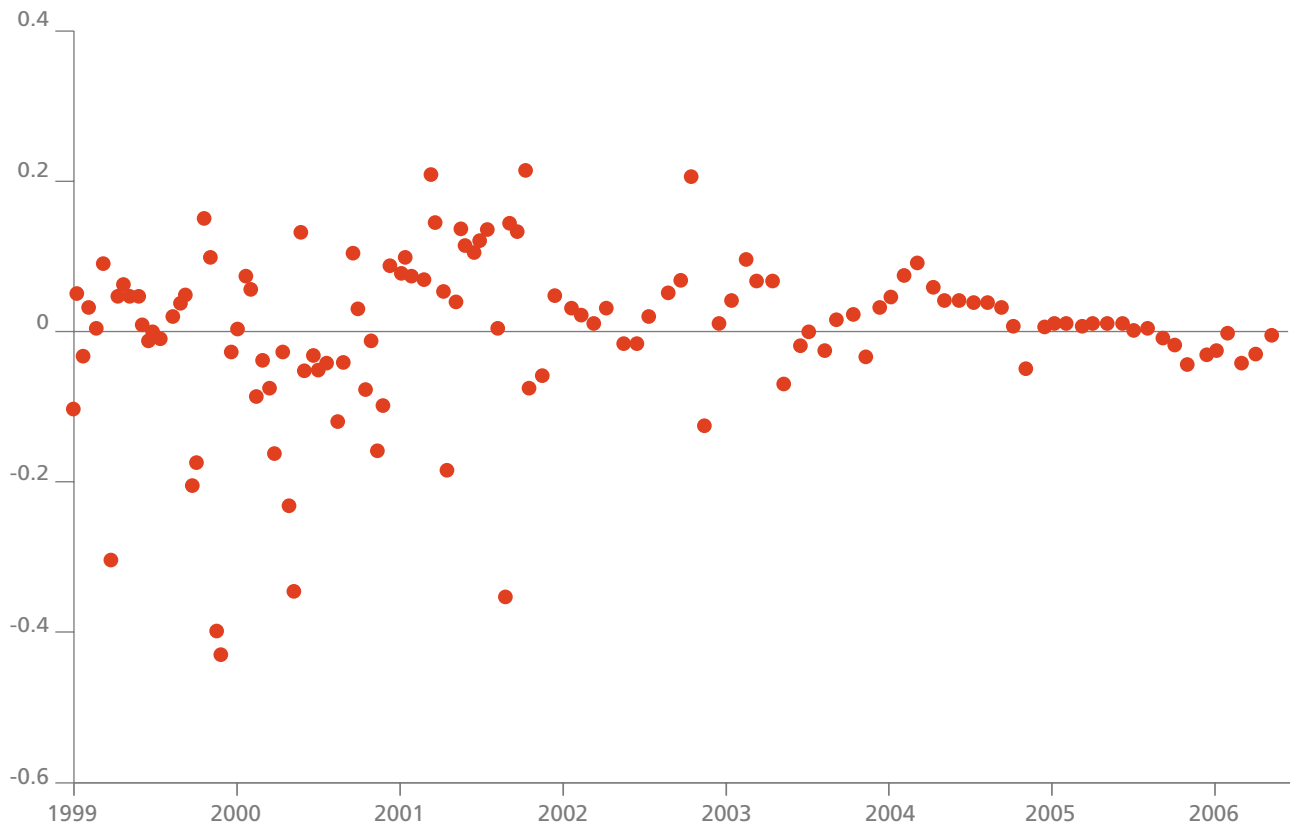
futures rate fell sharply at around 13:50. It took only twenty minutes: from 3.085 at 13:33, the futures rate fell to 2.98 at 13:56.

What explanation could there be for this quick market response? In his monthly introductory statement, the ECB's president Jean-Claude Trichet did not use the key

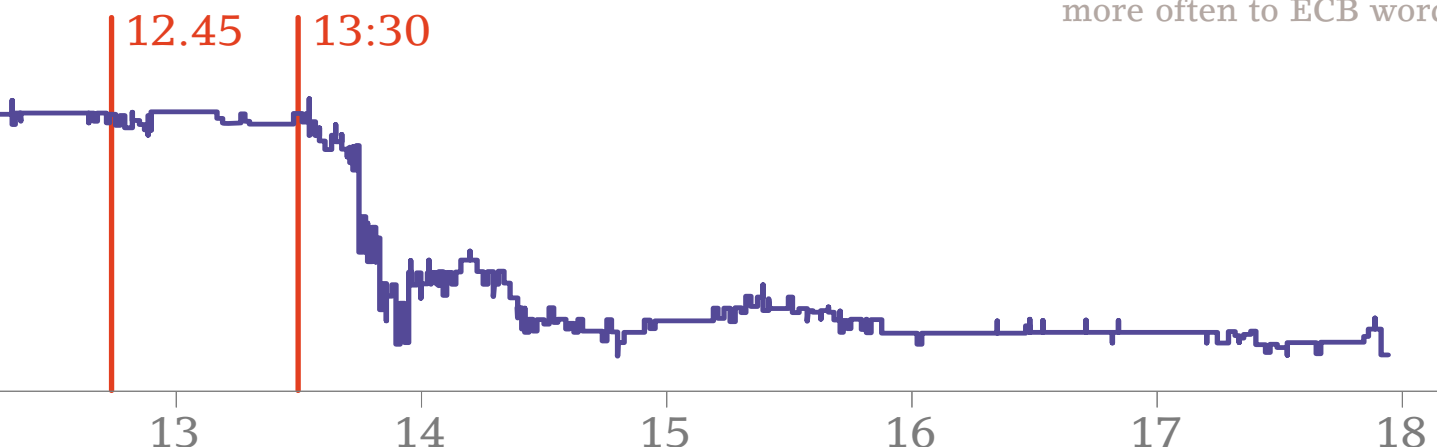
word 'strong vigilance', which seems to indicate a strong risk of policy rate spikes in the near future. This was a great *news shock* for traders in London, because they had expected a strong hawkish announcement such as the appearance of the signalling word 'vigilance' on their screens.

Figure 2:  
**Monetary policy shocks: market reactions to ECB deeds**

This chart plots the difference between the new policy rate communicated at 12:45, and the one-month Euribor rate quoted at 10:00. This quantity is normalised by adding the mean equilibrium (liquidity and risk) spread between the policy rate and the one-month Euribor rate, in the specific case 0.11.



Market interest rates  
now respond only very  
marginally to ECB deeds,  
more often to ECB words



Everything became clear when a journalist drew the president's attention to the matter by asking:

'Mr Trichet, the markets were expecting you to say vigilance in order to prepare them or prepare for an interest rate rise in May. *You did not say vigilance, was that deliberate?*'

To which Mr Trichet deftly replied:

'It is our responsibility to be as clear and transparent as possible with market participants, investors and savers. *I would say that the current suggestions regarding the high probability of an increase of rates in our next meeting do not correspond to the present sentiment of the Governing Council. I would also add that the sentiment that I see from time to time in some remarks or market literature concerning the perception that we do not increase rates when we are out of Frankfurt is equally not at all the sentiment of the Governing Council. (...) And it is true, vigilance is not mentioned in the introductory remarks, as you very wisely remarked.*' [Emphasis added]

Although the example in the figure is an exceptionally strong case, it serves to illustrate an important and more general point: the ECB is able to move asset prices using words alone, without any need for deeds. Obviously to maintain its credibility, the ECB ultimately has to

deliver what it says it will, that is, to match words with policy deeds.

In fact, to complete the story, in May 2006, there was no policy rate change by the ECB. But at the Governing Council meeting of June 2006, which was actually held outside Frankfurt (in Madrid), there was a policy rate increase of 25 basis points, as Mr Trichet fully signalled to the public in the April press conference.

The second main finding of our research is that central bank communication can affect asset prices permanently as well as transitorily. But it took around three years for traders to learn not only how to interpret ECB announcements but also to believe in them fully.

In this regard, it is revealing to see the changing pattern over time as displayed in Figure 2, which plots the difference between what the ECB does and what the market expects the ECB to do.

Nowadays, market interest rates respond only very marginally to ECB deeds because the current decision is completely expected most of the time and thus already priced in. Indeed, the true reaction takes place when the president himself makes statements, especially when their content differs from what the market expects, as shown in Figure 1. Nevertheless, changes in the ECB policy rate had a significant effect in the first years of the bank's life when the public was still in a learning phase.

We conclude by reiterating that central bankers' announcements are a very powerful tool in driving market expectations and even possibly in driving the evolution of the real economy.

This article summarises 'The Impact of Central Bank Announcements on Asset Prices in Real Time: Testing the Efficiency of the Euribor Futures Market' by Carlo Rosa and Giovanni Verga, CEP Discussion Paper No. 764 (<http://cep.lse.ac.uk/pubs/download/dp0764.pdf>).

**Carlo Rosa** is a research fellow at Ente Luigi Einaudi in Rome and an associate in CEP's macroeconomics programme. **Giovanni Verga** is a full professor of economics at the University of Parma.

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# Happiness

## and the teaching of values

A major purpose of schools must be to help develop good and happy people – especially at a time when growing numbers of children are suffering from emotional disturbance.

**Richard Layard** argues that we need a new cadre of teachers specifically trained to teach values and the ways to happiness.



**E**ver since I first read Jeremy Bentham, I have been convinced that the best society is one with the greatest happiness and (especially) the least misery. I have become even more convinced of this since modern neuroscience has shown that happiness and misery are objective phenomena and that what people say about themselves provides a great deal of evidence about what they actually feel.

So what do people say? It is not very encouraging. Despite huge increases in living standards, people in Britain, Japan and the United States report themselves no happier today than people did 50 years ago. Moreover, a variety of studies of depression and anxiety disorders in different countries suggest that these problems have probably increased in prevalence.

Evidence for Britain certainly indicates big rises in emotional disturbance. For example, the proportion of 16-year-olds with serious emotional problems rose from 10% in 1986 to 17% in 1999 (Collishaw et al, 2004). A study based in the West of Scotland showed similar changes over that period (West and Sweeting, 2003). And the latest research by Stephan Collishaw and his colleagues, which covers the whole country and comes right up to 2006, shows that things have continued to worsen.

So what is going on? In the most careful study of patterns of happiness, economist John Helliwell has used four



**It should be an explicit aim of each school to train character and provide moral education**

waves of the World Values Survey done in 46 countries over the last 20 years. He takes as his 'dependent variable' the average happiness in a country and explains 80% of the variance by six variables, four reflecting ethical values:

- The perceived trustworthiness of individuals.
- The trustworthiness of government and the courts.
- The community involvement of individuals.
- The divorce rate.

## Individualism and the fall in trust

I want to focus particularly on the trustworthiness of individuals. Each survey respondent is asked 'Do you think most other people can be trusted?' The proportions saying 'yes' vary enormously and are highly correlated with the results of a Reader's Digest experiment, which left wallets in the streets of different countries and then counted the number of wallets returned to their owners. Trust is very high in Scandinavian countries, and this helps to explain why these countries generally come out as the happiest countries in surveys.

Similar findings about personal decency emerge from a survey that asked 11-15-year-olds 'Are most of your classmates kind and helpful?' 70% or more said 'yes' in Scandinavian countries, but the figures were considerably lower for some other countries: 53% in the United States, 46% in Russia and 43% in Britain (UNICEF, 2007).

The sad fact is that in Britain and the United States, there has been an extraordinary fall in trust since 1960: from roughly 56% of the population trusting most other people to only 30% today. Levels of trust in Britain are particularly low among young people: only a quarter say 'yes' when asked if they trust most other people (Park et al, 2004). By contrast, there has been no fall in trust in any other European country since 1981 when the data were first collected. My explanation of this is the huge growth of individualism in the



United States, which has washed across the Atlantic like a tsunami, hitting Britain first and the rest of Europe much less, so far.

By individualism, I mean the view that a person's main goal should be to make the most of themselves or, more vulgarly, to be as successful as possible compared with other people. Put that way, it is of course a zero-sum game, and if that is what people value, there is no way our society can become happier. To do that, we have to move to a positive-sum game in which we each care positively about the well-being of others.

### Learning the ways to happiness

How can we do this? I think it requires an educational revolution in which a central purpose of our schools is to teach young people about the main secrets of happiness for which we have empirical evidence. Among these 'secrets', I would include:

- If you care more about other people relative to yourself, you are more likely to be happy (Lyubomirsky et al, 2005).
- If you constantly compare yourself with other people, you are less likely to be happy (Schwartz et al, 2002).
- Choose goals that stretch you, but are attainable with high probability (Nesse, 2000).
- Challenge your negative thoughts, and focus on the positive aspects of your character and situation (Seligman, 2002).



**For every subject – including the teaching of values – we should know from controlled trials what teaching methods work best**

These are not exactly novel thoughts. They are, if you like, the 'perennial philosophy', but rigorously established by modern psychology. The first principle is about compassion to others; the others are about compassion towards yourself. The principle of compassion for others cannot of course be based on self-interest – if it is, it will fail. Rather, it has to be realised through deliberate cultivation of the primitive instinct of empathy, which is latent to a varying degree in each of us.

These principles may seem obvious but they are not easy to put into practice.

Learning hard things takes an enormous effort. How can we expect people to learn to be happy without massive amounts of practice and repetition? Good parts of traditional religions (especially Buddhism) involve just such practice, but what institutions do we have today that can play this basic role?

I believe it can only be done by schools. Parents of course are crucial. But if we want to change the culture, the main organised institutions we have under social control are schools. So what should they do? Though I was once a school teacher, I certainly don't have a complete answer, but let me first report two suggestive experiments and then draw out some general principles.

### The Penn Resiliency Project

The first example is one of a number of programmes designed to build character, which have been subjected to controlled trials. The Penn Resiliency Project was designed by Professor Martin Seligman, the founder of 'positive psychology'. In it, 15 11-year-old students spend 18 classroom hours on such issues as understanding their own emotions and those of others, and developing concern for others. They are taught by one teacher, who has been trained in the method through eight hours of online self-study and 10 days of face-to-face training.

The programme has now been evaluated in 11 different studies and, except in one school where the training was inadequate, it has reduced the rate of teenage depression over the next three



years by on average one half. It has also reduced bad behaviour by one third (Reivich et al, 2005).

I believe this programme is an object lesson in how our educational system should develop. It has always amazed me how little the scientific method is applied in the classroom, except perhaps in the teaching of reading and number. In the last three years, I learned a lot about the results of psychological therapy, all of which are based on controlled trials – and I have become even more amazed at the scarcity of proper evaluation in education.

If something as sensitive as psychological therapy can be scientifically evaluated, surely the same should apply to classroom education? For every subject, we should know from controlled trials what teaching methods work best. And this applies as much to the teaching of values as to anything else.

The other lesson that emerges from the programme is the importance of detailed and systematic training of the teachers. As has been found with psychological therapy, the effectiveness of a given teacher will vary enormously according to how well they have been trained. We no longer need to rely on the inspired amateur.

Of course, controlled trials are one thing; delivery on a large scale is another. Having read these findings, it seems to me worthwhile to introduce the programme on a large scale in Britain. Compared with small-scale controlled trials, when half the children are excluded, large-scale delivery to every child in a community should have

bigger effects per child because each child taking the programme would interact with other children who had also taken it.

If this applied to all the children in a city, it should be possible to modify the whole youth culture of that city. I was therefore thrilled that the very imaginative local authority of South Tyneside has decided to implement the programme in all its schools, while Manchester and Hemel Hempstead are using it in a dozen further schools. The Department for Education and Skills (DfES) are paying for a full-scale evaluation.

If the programme is as successful as we expect, we hope it can contribute significantly to the first year curriculum for Personal, Social and Health Education (PSHE) in secondary schools, and can then be followed by programmes with older children.

### Values schools

The second experiment began in West Kidlington primary school in Oxfordshire and has now been copied in at least a dozen state primary schools that call themselves 'values schools'. The basic aim is to give the children control of their emotions by familiarity with uplifting ideas and the practice of silent reflection (Farrer, 2000)

The school has adopted 22 key value words – words like 'honesty', 'hope' and 'respect' – each taking a turn as the 'word of the month', with which teaching and discussion continually connect. Silent reflection is practised daily at the end of school assembly, and at the beginning of

most classes. The key question children are asked is 'What am I like when I most like myself?' Ancillary questions are 'What makes me happy?' and 'How can I make other people happy?'

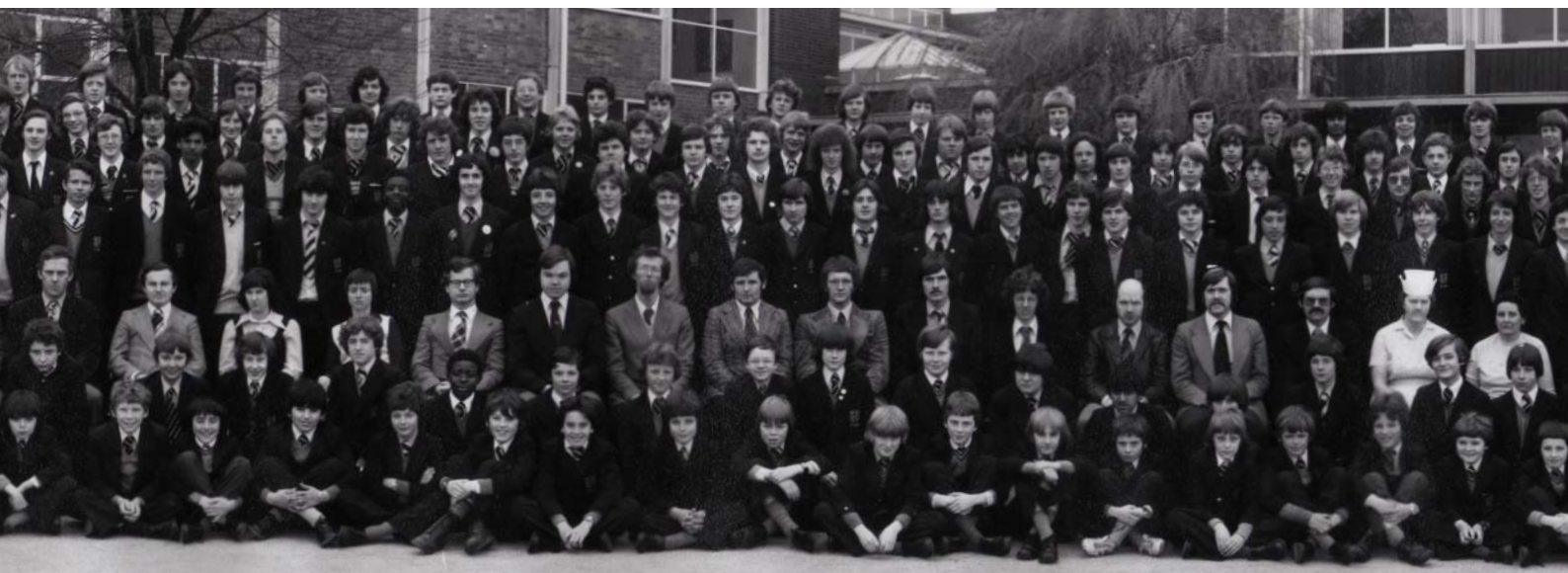
### Four principles of reform

With these two practical examples in mind, let me offer four principles that should govern the role of schools in character-building.

First, it should be an **explicit aim** of each school to train character and provide moral education. Teachers should stand for clear values and, when asked about moral questions, should make clear what they believe. It is not enough to treat moral issues as interesting topics for debate. It is more important to train up the emotions that support moral action than the intellectual skills involved, though of course both matter.

Second, each secondary school should have **specialists** in PSHE (or, as the subject might more appealingly be called, 'life skills'). And while the whole school should reflect the values taught in PSHE, there must be full-time professional leadership. It is no good having it taught mainly by part-timers without specialist training, though they can certainly help. This is one of the most difficult subjects to teach, and most people who teach it should have taken it as a specialism in their training. Without a cadre of specialist teachers acting as standard bearers of the movement, there is no chance of the educational revolution we need.

Third, there is no chance of success



unless the movement is grounded in science. We live in a scientific age, and, although pockets of fundamentalism remain, only **science** can and should persuade the young about the routes to a happy society. Now for the first time we have in positive psychology a science that provides the underpinning for morality and personal liberation.

Fourth, **the curriculum** should include: managing your feelings; loving and serving others; appreciating beauty; love, sex and parenting; work and money; a critical approach to media; political participation; and moral philosophy. The DfES has been active in curriculum development in this area, and the SEAL programme (social and emotional aspects of learning) is well-grounded, with excellent materials at primary school level.

But what I am proposing is something more campaigning and more high profile. We need a government commitment to producing a major specialism in this area, with a serious teacher training programme. Moreover, PSHE should continue up to age 18, and include projects that are graded by the school. It should also feature in the head teacher's report for every university applicant.

### Do we need it and can we succeed?

Clearly I am talking about a movement of moral reform. Do we need it, and can it succeed?

Let me remind you where we started. I think we have a pretty good society compared with most that have existed.

But we have not become happier in the past 50 years. We have made enormous progress in the mastery of nature but none in the mastery of ourselves – and if we want to make further progress in well-being, it has to come mainly from the latter. If we think we cannot afford the time because of the threat of global competition, we had better take an introductory course in economics.

On top of that general case, there is the specific worry these days about young people. Concerns about their behaviour has led to the Prime Minister's 'respect' programme, which so far has been more repressive than preventive. What I am suggesting would contribute significantly to prevention – and there is serious scientific evidence that young people are becoming more disturbed.

So what are our chances of success? Some people would say they are weak. Some programmes in schools focused on particular problems like drugs have had little success though there is some evidence that wider programmes based on the whole ethos of the school are more effective (Bonell et al, 2007; Weare and Gray, 2003).

But I am talking about something bigger than a programme; I am talking about the reversal of a major cultural trend towards increased consumerism, increased inter-personal competition and increased interest in celebrity and money.

Many people assume that cultural trends go on in the same direction forever. But that is not my reading of English history. I see something more like cycles:



We need to create a profession of fully trained PSHE teachers, giving evidence-based teaching that changes lives

increased Puritanism in the sixteenth century giving way to increased licence from around 1660; then from around 1830, increased Puritanism again and the growth of Victorian values; and in the twentieth century, again increased licence. So why not in the twenty-first century a shift away from 'anything goes' – or at least a shift towards a more compassionate society?

But how plausible is the education system as the main catalyst of change? Well, it has been so in the past. Universities played a major role in the





Puritan revolution of the sixteenth and seventeenth centuries, and Thomas Arnold of Rugby did more than anyone to convert the middle classes to Victorian values. Today, more people spend more of their life in the education system than ever before – so it is the natural catalyst for change. 50% of young people say that their main ambition is to be happy: it's the most commonly stated ambition and very sensible too (Park et al, 2004). Let's help them.

I have no doubt that new institutions will also develop for adults. In California, the psychologist Paul Ekman has suggested chains of 'compassion gyms', where you train your mind in compassion, just as you train your body in the physical gym. I also hope that the churches will do more to help people train their minds in the mental disciplines that we know can lead to serenity and compassion.

But from a public policy perspective, we must start with schools. This is a good moment. People are worried about young people from many angles. We have good tools with which to help them. The key need is to create a profession of PSHE teachers, who give evidence-based teaching that changes lives, and that goes on to 18.

## Further reading

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The government should commit to producing a major specialism in this area within the postgraduate certificate of education

Professor Lord **Richard Layard** is director of CEP's research programme on well-being. His book *Happiness – Lessons from a New Science* was published in 2005.

This article is an edited version of the 2007 Ashby Lecture, which he delivered at the University of Cambridge on 2 May.

in brief...

# Faith primary schools: better schools or better pupils?

Average levels of pupil achievement in religiously affiliated primary schools seem to be higher than in the secular sector. Research by **Stephen Gibbons** and **Olmo Silva** examines whether faith schools really are better or if their pupils are just different.

Government policy in many countries now favours policies based on incentives, governance, increased choice and competition. In England, this idea has come to be linked to the expansion of the faith school sector because it symbolises choice and diversity in the education system, it embodies the kind of practice in admissions and governance that policy-makers wish to promote, and – crucially – it offers, so many people claim, higher educational standards.

Arguments for expansion of the faith sector are usually supported by evidence of higher average levels of achievement in religiously affiliated schools compared with the secular sector. But the fact that we observe higher attainment in the faith sector has little bearing on the advantages offered by moving a 'typical' secular school pupil into the faith sector. This is because pupils currently attending faith schools are not 'typical'.

Pupils studying at religiously affiliated schools differ from pupils in secular schools along several dimensions, many of which – such as family background – are correlated with their academic achievement. These differences arise in part because the parents and pupils who choose faith schools may have different preferences and attitudes towards education; and in part because faith schools may have operated some forms of 'covert' selection in their admissions procedures.

Religious  
affiliation has  
little impact on a  
primary school's  
effectiveness at  
teaching core  
subjects



In our research, we investigate whether faith schools really raise pupil attainments more than other schools, or whether they simply enrol pupils with characteristics conducive to faster educational progress. We also try to understand whether any beneficial impact of attending a faith school comes from its religious affiliation or from specific governance arrangements.

To answer these questions, we consider pupils at the end of their primary schooling in England, when they have reached the age of 11. We make use of a large census that includes information on pupils' past and current achievements, school type and characteristics, place of residence (postcode) and schools attended.

Using this information, we compare the test results of 11 year old pupils who attend faith primary schools with those of pupils in secular primary schools with similar abilities (as measured by their achievement at the age of 7) and who seem to have similar preferences and family background – in particular because they live in the same street or block of housing and because they go on to attend the same secondary school.

In addition, we compare the attainments at the age of 11 for secular and faith primary school pupils who exhibit similar levels of commitment to religious schooling through their choice of secondary school.

The highlights of our research results are that:

- Faith primary schools only offer a very small advantage over secular schools in terms of test scores at the age of 11 in mathematics and English. Moving a 'typical' secular school pupil into the faith sector would push him or her up the test-based pupil rankings by less than one percentile.
- Any benefit of attending a faith primary school is linked to the more autonomous governance arrangements that characterise 'voluntary aided' schools (such as control over admissions procedures). Pupils in religiously affiliated schools that broadly fall under the control of the local education authority – that is, 'voluntary controlled' schools – do not progress faster than pupils in secular primary schools.
- All of the apparent advantage of faith school education

can be explained by unobserved differences between pupils who apply and are admitted to faith schools and those who do not. Pupils who do not attend a faith primary school up to age 11 but attend a faith secondary school thereafter perform just as well at age 11 as those who attended a faith primary school but then attend a secular secondary school.

On the basis of this evidence, it seems clear that whether or not a primary school is religiously affiliated has little bearing on its effectiveness in educating children in core curriculum subjects.

## Any benefit of attending a faith primary school is linked to their more autonomous governance arrangements

This article summarises 'Faith Primary Schools: Better Schools or Better Pupils' by Stephen Gibbons and Olmo Silva, Discussion Paper No. 72 from the Centre for the Economics of Education (CEE) at CEP (<http://cee.lse.ac.uk/cee%20dps/ceedp72.pdf>).

**Stephen Gibbons** and **Olmo Silva** are both CEE researchers and active members of CEP's wider research programme on education and skills.

What are the overall effects on educational attainment of widening access to the more academic track? Research by **Eric Maurin** and **Sandra McNally** investigates using the 'natural experiment' of the grammar school system in Northern Ireland, which has survived long after its dismantlement in England.

# Widening access to grammar schools: the educational impact in Northern Ireland

**I**t is difficult to know whether widening access to schools that provide a more academically orientated, general education makes a difference to average educational achievement. Although there has been a shift in this direction in many OECD countries, reforms have been difficult to evaluate because they are often accompanied by other important changes to the educational system or because they have been introduced at the same time everywhere so there are no comparison groups.

But the consequences of such reform are deeply controversial and very much a current policy issue. In particular, opponents argue that increasing access to the more academic track harms the quality of education for everyone without improving the prospects of those able to attend the academic track.

Our research makes use of a unique 'natural experiment' to identify the net effects on overall educational outcomes of widening access to schools that provide a

more academically orientated, general education.

Specifically, we consider the consequences of a reform that affected access to grammar schools in Northern Ireland, when England is used as the comparison group. The two regions of the UK differ in that the grammar school system has been retained in Northern Ireland whereas it was gradually dismantled in England in the 1960s and 1970s.

The hallmark of the grammar school system is that children are selected on the basis of measured ability at the age of 10 or 11 whereas in the comprehensive system, children of different abilities are educated in the same schools. The 'selective aspect' of the education system is currently under review by the new administration in Northern Ireland.

**Widening access to the more academic track can generate positive net effects**

Although the education systems of England and Northern Ireland are also different in other respects (for example, the schools in the latter are mostly segregated by religion), there are important similarities. The two regions have broadly the same curriculum and they have the same examinations for students at the ages of 16 (GCSEs) and 18 (A-levels).

The important considerations for our research are that the examinations are comparable across the two regions and that the reform only occurred in one of them. That reform consisted of widening access to the more academic track within Northern Ireland at the time of the 'open enrolment' reform in the late 1980s. This is the only differential change that happened across the two regions.

Our research shows that the reform enabled a very significant increase in the number of Northern Irish pupils who could attend the more academic track (grammar schools) at the end of primary school, between the pre-reform birth cohort

## When more pupils were able to attend Northern Irish grammar schools, overall educational attainment increased

(children born in 1978) and the post-reform birth cohort (those born in 1979). By comparing educational outcomes in Northern Ireland and England before and after the reform, we can identify the effect of widening access to the academic track on overall educational attainment.

Using administrative data before and after the reform, we find that the open enrolment reform of 1989 (which affected the 1979 birth cohort) had a clear impact in Northern Ireland relative to England. A 15 percentage point increase in the number of pupils enabled to attend grammar school (at the age of 11) was accompanied by shifts of similar magnitude in the number achieving five or more GCSEs at A\*-C and one or more A-level. This suggests a strong causal effect of expanding the more academic track on overall educational achievement.

Just before the reform, there was a change affecting admissions in a qualitative way. Up to 1988, girls and boys were assessed in different categories so that the same percentage of entrants to the admission test would obtain a given grade (determining whether or not they could be admitted to grammar school). Following a high court ruling in June 1988, this practice was discontinued and from then on, girls and boys were assessed together (affecting grammar school intakes in 1989, the 1978 birth cohort).

This change was to the advantage of girls since they outperformed boys on the verbal reasoning tests that were the basis of selection. The one-year gap between this qualitative change to admissions and the open enrolment reform generated significant upward and downward shifts in the relative proportion of girls enabled to attend grammar school across the cohorts born between 1977 and 1980.

We find that these shifts have been followed by parallel shifts in girls' subsequent relative outcomes at the ages of 16 and 18. This confirms the considerable effect of grammar school entry on educational outcomes using a different source of identification to that used for comparing outcomes over time



between England and Northern Ireland. We also replicate this latter analysis for boys and girls separately and confirm our earlier results.

Thus, whether we compare girls and boys within Northern Ireland or make comparisons by gender between Northern Ireland and England, it is clear that grammar school reforms have a strong impact on educational outcomes. Furthermore, the design of the educational system – in this case, the mechanism of entry into grammar schools – has consequences for gender differences in educational outcomes.

As well as considering the overall effect of expanding the academic track on educational outcomes, we are able to use the same experiment to consider whether the selective system is a contributory factor to observed inequalities between socio-economic groups with regard to later educational outcomes. Specifically, we can analyse the effect of the reform according to whether children are eligible for free school meals, which roughly corresponds to families in the bottom quarter of the income distribution.

We find that there were big differences

## Grammar school attendance had no less effect on relatively disadvantaged pupils than on more advantaged pupils

before and after the reform between the probabilities of lower-income groups entering grammar school and achieving good educational outcomes at the ages of 16 and 18. The reform had an equal impact on children with and without free school meals in terms of entry to grammar school and educational achievement at the ages of 16 and 18.

Hence, we conclude that grammar school attendance had no less effect on relatively disadvantaged pupils than it had on more advantaged pupils. Therefore, the barriers that make it difficult for children eligible for free school meals to enter grammar schools in the first place (such as lower test scores at the age of 11 because of lower parental resources) have a long-term effect on inequality due (in part) to the lower probability of children on free school meals entering grammar school.

Although this research cannot be interpreted as evaluating the overall effects of a comprehensive or selective ('tracked') system of education, it is an example of where widening access to the more academic track has generated positive net effects. It illustrates the high price that pupils pay for being excluded from the academic track, even when they are some way down the ability distribution within their birth cohort.

The study also provides clear evidence that selection into the more academic track really has a causal impact – the improvement in educational outcomes is not simply an artefact of the selection process.

This article summarises 'Educational Effects of Widening Access to the Academic Track: A Natural Experiment' by Eric Maurin and Sandra McNally, a forthcoming Discussion Paper from the Centre for the Economics of Education (CEE) at CEP.

**Eric Maurin** is research director at the École des Hautes Études en Sciences Sociales in Paris and professor at the Paris School of Economics. **Sandra McNally** is a CEP research fellow and CEE's deputy director.

in brief...

# Blair's economic legacy

Blair leaves behind an economy in better shape than any previous Labour leader

The economy is probably the most successful legacy of the Blair years. Ironically, New Labour's economic policies have been set by his heir, Chancellor Gordon Brown.

Britain has enjoyed 15 years of continuous growth combined with low inflation. The labour market has absorbed a large number of new entrants, especially from the wave of migration from Eastern Europe, yet unemployment has remained at historically low levels. Even on the Achilles' heel of productivity, Britain has narrowed the gap with her major competitors and kept up with the American productivity miracle.

So why does Labour have trouble converting these economic gains into the political currency of popularity? Leaving Iraq aside, forgetfulness, fiscal policy and fairness are the main reasons.

First, the public appears now to take economic prosperity for granted. People seem more likely to give credit for success to the Thatcher reforms, to the Bank of England, to being outside the euro or to cheap Chinese imports than to the government. With the exception of globalisation, however, these were policy choices of the government. Independence of the Bank was a bold and successful early move. Overall, Labour has accepted the importance of competitive markets and labour market flexibility for economic success.

Second, Labour has significantly raised tax as a share of national income and spent the money on public services. 'Tax and spend' is

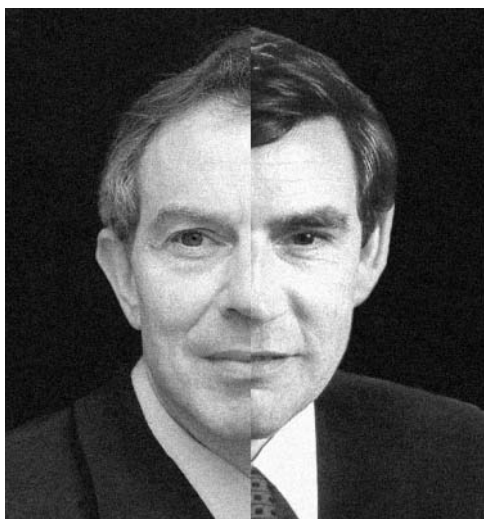
exactly what socialist governments are supposed to do, of course, but unlike previous Labour governments, neither Blair nor Brown have boasted about it. Nor have they overspent in the early years of power only to be forced by circumstances to cut back and increase taxes in later years (as happened most notoriously in 1976 when the then Labour Chancellor, Denis Healey, had to turn to the International Monetary Fund).

The government's problem is that the public expects greater improvements in hospitals, schools and policing from their tax pounds than they have seen. It also remains to be seen if the increased complexity of the tax system – coupled with more labour market regulation – could undermine long-term growth.

Third, unlike the 1980s, the long growth period has not been accompanied by rapidly growing inequality. There has been a panoply of redistributive policies such as the National Minimum Wage and tax credits for the low paid, which have reduced poverty, especially for working families. But although inequality in the bottom half of the income distribution has narrowed, inequality at the

top has continued to widen. On the left, this has led to pressures for more aggressive redistribution.

Blair leaves behind an economy in better shape than any previous Labour leader. But will the voters give his successor, the man who has overseen the current prosperity, the benefit of the doubt when the next recession comes? At the moment it looks unlikely.



Brown has overseen the current prosperity – the question is how voters will treat him when the next recession comes

John Van Reenen is director of CEP and professor of economics at LSE.

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