Getting back to growth remains an elusive quest across Europe. But beyond the short-term need to reduce high levels of unemployment, is increasing GDP – national output of goods and services – still the best measure of human progress? In a submission to the LSE Growth Commission summarised in this CentrePiece, Nicholas Oulton provides a combative response to those who question the desirability of GDP growth. He argues that GDP remains a valuable indicator of the overall wellbeing of society and that rising GDP remains a policy objective that the majority of people support.

A key element of growth, especially in the UK, is the housing market. In our cover story, Henry Overman evaluates the wide variety of proposals to address the big problem of ‘not enough houses of the kind people want in the places where they want to live’. The solution, he concludes, is simply to build more houses; the challenge is to develop a planning system that allows the construction industry to respond to demand.

Another topic of constant public concern is immigration. Here, David Metcalf, chair of the Migration Advisory Committee and a stalwart of the Centre for Economic Performance (CEP), outlines the current policy framework. He notes that there is a new focus on the gains from immigration to UK residents rather than simply to GDP.

One high-profile immigrant in 2013 will be the Canadian Mark Carney, the next governor of the Bank of England. CEP’s director John Van Reenen has welcomed the appointment: ‘It signals that top jobs in Britain are open to talent from all over the world – the openness that makes our universities and football clubs successful. Let’s hope that the government’s crazy net immigration target doesn’t mean that he’s denied a work visa!’

Elsewhere in this issue, we report research findings on whether home-working is a good idea; on gender gaps in nineteenth century factories and twenty-first century universities; and on the value of ending conflict as reflected in house prices. The ‘peace dividend’ study is co-authored by Tim Besley, John’s co-chair of the Growth Commission, which will publish its recommendations at the end of January.

The start of the new year may also be when the US economy falls over the so-called ‘fiscal cliff’. Our final article explains what’s going on and why it threatens a return to recession. That outcome would be yet another constraint on Europe’s ability to return to sustainable growth.
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The UK is facing not one but two housing crises, according to Henry Overman. The first is a short-term fall in prices and construction – which is both driven by and driving the recession. The second and more profound is the overall shortage of housing and the problems of affordability that this generates.

The UK’s housing crises
Reduced demand during the recession has been reflected in falling house prices outside London and the South East and a slump in construction everywhere. Data from the Department for Communities and Local Government show that between their peak in 2007 and 2011, house prices fell by 12% in the North East and by 10% in the North West. Between September 2011 and September 2012, land registry data show further price falls of 3.2% in the North East and 2.2% in the North West.

There has also been a severe slump in construction in these parts of the country. In the North East, construction (measured as permanent dwellings completed) has fallen by 36% from its 2007/08 peak. In the North West, construction has fallen by 47%.

Prices have held up much better in London and the South East. A large initial fall in London (9.3%) was quickly offset by subsequent rises, leading to an overall increase of 3.8% between 2007 and 2011. The South East saw a similar initial fall and a slightly weaker recovery, but prices still increased by 1.4% between 2007 and 2011. Between September 2011 and September 2012, land registry data show a continued recovery with prices rising by 5.5% in London and by 2.3% in the South East.

Despite these different price trajectories, construction has still slumped, even if the impact is somewhat less pronounced: 12% down from the peak for London; and 19% down from the peak for the South East. While we should not downplay short-term concerns about the impact of falling house prices on consumer demand, it is the construction figures that are most worrying. The UK’s more profound housing crisis is the overall shortage of housing and the problems of affordability that this generates (see, for example, Hilber and Vermeulen, 2012).

These problems, already acute in the South East, can only be exacerbated by recent trends of slow income growth, falling construction and rising prices. Even with the general price falls in Northern regions, affordability remains a problem for the more successful cities, such as Manchester.

Focusing on the short-run slump also distracts from the longer-run problem that the UK was building very few houses even during the good times. At the height of the boom, England was building 170,000 new homes a year. The annual average between 1998 and 2007 was 150,000 new homes.

To put these numbers in perspective, note that between 2001 and 2011, about 1.4 million new homes were built in England, while the population rose by just under four million. With an average household size of a little over two people per household, it is not surprising that prices rose so sharply. The now defunct National Housing and Planning Advice Unit suggested that we would need to build around 270,000 homes a year just to stabilise (not reduce) prices.

Managing the demand for housing
So what can be done? Some have called for the problem to be tackled ‘head-on’ by rent control measures to restrict rising prices. That would be great for people who get rent-controlled houses, awful for everyone else. In the long run, it would also massively distort the rental sector (because it reduces the returns to renting and increases the cost of moving). Quite simply, this is a very bad option.

Instead of intervening directly to control prices, an alternative set of measures aims to intervene on the demand side of the housing market. These measures are of two broad kinds. The first seeks to dampen demand, for example, through changes in the way in which housing is taxed. Subjecting housing to capital gains taxes would be a good if very unpopular example.

To the extent that these arguments are about reducing the pro-cyclicality of the housing market (the tendency for demand to rise very rapidly as the economy booms), there is something to recommend them. It is less clear to what extent they would solve the fundamental problem because most suggestions would have little effect on existing homeowners, but instead reduce demand from younger generations (or renters). With the overall supply of housing fixed, measures to improve affordability need to have precisely the opposite incidence.

This leads to the second kind of demand-side intervention: policies to increase demand. As with policies to dampen demand, whether this helps in terms of affordability depends on the extent to which it redistributes the ability to demand housing from the house ‘rich’ to the house ‘poor’.
Once again, many recommendations are likely to work in the wrong direction. For example, the Smith Institute has suggested that the government should consider tax concessions along the lines of mortgage interest tax relief (Miras, which was abolished for principal residences in 2000) to encourage access to home ownership.

Unfortunately, US evidence suggests that there is only a very weak link between mortgage interest relief and home ownership (Hilber and Turner, 2010). In fact, in tightly regulated housing markets, relief has a negative effect on home ownership because the price effect (through increased demand) more than offsets the income effect (from the tax deduction). In less regulated markets, relief does have a positive effect on home ownership rates, but only for higher income groups.

As the UK market is very highly regulated, these findings suggest considerable caution in using Miras as a means to increase home ownership. Reintroducing it could prove to be a costly and ineffective intervention, which has the opposite impact of that intended.

Unfortunately, many other demand-side proposals do not stand up to even the most basic scrutiny. The most recent example is Nick Clegg’s suggestion that parents should be allowed to use their pension to help younger people buy property. A two-step assessment of this policy (which can, of course, be applied to many other housing policy initiatives) would run as follows.

First, how many people are likely to be affected? This can be tricky to work out precisely, but for Clegg’s announcement – as with a number of recent schemes – the conclusion from a rough estimate seems to be ‘not many’. Second, if the policy does affect relatively large numbers of people, what will be the likely impact on the market?

This second step involves applying some basic insights from supply and demand. There are essentially two ways to help people struggling to get a toehold in the housing market. One is to increase the supply of (suitable) housing. The other is to redistribute some of the existing housing stock from older people to younger people. Nick Clegg’s proposal does neither of these things – so even if it were to ‘work’, it would not ‘help’.

If it is hard to formulate good demand-side measures when the market is left to its own devices, then another possibility is to intervene directly to redistribute housing. Two popular examples here relate to ‘empty bedrooms’ and ‘empty houses’.

The Intergenerational Foundation has called for the government to adopt measures to stop older people from ‘hoarding’ housing. Based on an assessment of housing ‘need’, policies like this argue that we should take bedrooms from people who currently ‘under-occupy’ their houses and give them to those who live in overcrowded conditions. In practice, this tends to mean getting old people to move out of large houses.

Ironically, the fact that planning decisions are made on the basis of ‘need’ but housing is allocated through the market is one of the reasons why the housing market is in such a mess. Markets seek to balance supply and demand (rather than need) and it turns out that as societies get richer, they unsurprisingly tend to demand more space not less.

One response would be to switch to a ‘needs’-based mechanism for allocating housing. My colleague Paul Cheshire has light-heartedly suggested one option: ‘If we are intent on allocating land for each use without regard to price, then logically we need to introduce space rationing. If price does not determine the supply of land, then price must not determine its consumption. Each adult could, for example, have a ration of, say, 40 square metres with dependent children having, say, another 20 square metres each. We could, if we wanted, even introduce a trading system so young adults or those willing to live in more cramped conditions could sell some of their space ration, perhaps buying back space in later life’ (Cheshire, 2009).

The Intergenerational Foundation suggests something that seems less extreme: measures to encourage homeowners to consume less space. These would be of two kinds. The first would strongly penalise people who ‘over-consume’ space. Such penalties build up from a logic of housing need and are problematic for all the reasons that space rationing would be: who decides how much space is enough?

The second approach would be to remove barriers and distortions that encourage people to over-consume housing. I would have no problems with such measures apart from the fact that they would be highly costly and remarkably ineffective.

Take, for example, the idea of removing stamp duty on people downsizing. At the moment, the huge wealth gain that they would get by moving into a smaller house is insufficient to offset the benefits of staying put. Removing stamp duty would change this balance for a small number of people at the margin, but it would be at a huge cost to the public finances.

Removing single person allowances on council tax or removing universal benefits for those in valuable houses would have a similarly small impact on the number of people willing to downsize. But it would impose high costs on a small number of people who are income-poor and who do not want to move for whatever reason. For more wealthy people, this would essentially be an irrelevance.

Changing the treatment of capital gains tax would provide a disincentive for ownership (which may or may not be a good thing) but it would dampen the incentives to downsize. An annual capital gains tax would constitute a punishment based on arbitrary decisions on how much space is enough.

What about empty homes? In England, there are around 280,000 homes that are empty for more than six months. But for 2011, the data show that only 29,500 of
Policies on ‘empty homes’ and ‘empty bedrooms’ do not offer a long-term solution to the housing crisis

These long-term empty homes were in London, with another 32,500 in the South East. In other words, in high demand areas, very few houses are empty.

Using empty homes will (sometimes) make sense, but it will not do much to solve the UK’s housing problem. Just as with empty bedrooms, the reallocation of empty homes does not represent a long-term solution to the housing crisis.

So what can be done? The short answer is that we must do things to increase the supply of housing.

Increasing the supply of housing

The under-supply of housing in the UK has been a long-term problem, which the previous government was unable to tackle effectively. Labour was slow to recognise that something needed to be done about the planning system. Once the problem became clear, top-down regional plans were introduced, which tried to force local authorities to build more housing.

These plans were very unpopular with local authorities in parts of the country that needed more housing and were quickly abolished by the coalition government. The new ‘national planning framework’ intends to replace the top-down system with more ‘localism’ and a package of financial incentives to encourage development – with a target of 240,000 new homes to be built each year (see Nathan and Overman, 2011).

These reforms should be welcomed for a number of reasons, but the government may yet regret the immediate abolition of regional plans. Uncertainty creates problems for developers who tend to respond by postponing investment until that uncertainty is resolved. Add to this the effects of the recession and you have two underlying reasons for concerns about the supply of housing.

In addition to these short-term issues, there is the longer-term issue of what the government will do if its package of financial incentives is insufficient to encourage more development. With the new system yet to bed in, it could be a few years before the government is able to assess whether the system is working. The assessment is likely to be close to an election, when a change of government could see a change of policy and yet more uncertainty for developers.

Another area with which the previous government struggled was its insistence on high brownfield targets. There are some problems with these targets, but they remain very popular. This means that there is a danger that the coalition government will not be able to resist calls to strengthen constraints on building on greenfield land. The government has already committed to maintaining green belts, but there are many other categories of ‘protected land’ where long-term policy remains uncertain.

But truly dealing with the problem of affordability requires a market-led response in the areas of highest demand. This in turn requires the planning system to allow a proper supply response. Addressing long-term affordability is not a matter of short-term stimulus. Instead, it requires a private sector response when the market finally picks up. Developing a planning system that allows that to happen is the real challenge.

In all the debate around the government’s planning reforms, we are in danger of losing sight of the fundamental problem: the current system has failed to deliver enough houses of the kind people want in the places where they want to live. Supposedly ‘radical’ solutions are either insufficiently important to make much difference (empty homes) or so radical that it is hard to believe they represent a good solution (empty bedrooms). The real solution is straightforward: build more housing.

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For more commentary on housing and other urban and regional policy issues, see the SERC blog: http://spatial-economics.blogspot.co.uk/

Further reading


The real solution to the UK’s housing crisis is straightforward: build more houses.
The idea of having GDP growth as the main target of economic policy has been under attack in recent years. Nicholas Oulton answers some of the criticisms and argues that continued GDP growth would be good for the UK – and not just in the short term to reduce high levels of unemployment.

The much-loved poet John Betjeman is reported to have said on his deathbed that the one thing he regretted in his life was not having had more sex. This reminds us that there is more to life than just buying and consuming stuff. And that is what GDP measures: the output of goods and services on which we collectively spend our income.

Many people today would say that promoting the growth of GDP is undesirable or even irresponsible. Here I consider three common criticisms of GDP as a target of policy and explain why I think they are wrong:

- The first criticism is that GDP is hopelessly flawed as a measure of human welfare. For example, the argument goes, it takes no account of pollution.
- The second criticism is that GDP ignores distribution. In a rich country like the United States, some say, the typical person or family has seen little or no benefit from growth since the 1970s. At the same time, inequality has risen sharply.
- The third criticism is that above a certain level, a higher material standard of living does not make people happier. This view concludes that we should stop trying to raise GDP and look instead for policies that promote happiness.

‘GDP is a flawed measure of human welfare’
GDP has always been a measure of output, not of welfare. Using current prices, it measures the value of goods and services produced for final consumption, private and public, present and future. (Future consumption is covered since GDP includes output of investment goods.) Converting to constant prices makes it possible to calculate the growth of GDP over time or the differences between countries across space.

But although GDP is not a measure of human welfare, it can be considered a component of welfare. The volume of goods and services available to the average person clearly contributes to welfare in the wider sense, though of course it is far from being the only component. So it is possible to imagine a social welfare function that has GDP as one of its components alongside health, equality, human rights, etc.

GDP is also an indicator of human welfare. In cross-country data, GDP per capita is highly correlated with other factors that are important for welfare. In particular, it is positively correlated with
life expectancy and negatively correlated with infant mortality and inequality. Since parents naturally feel grief for children they have lost, infant mortality might be thought of as an indicator of happiness.

Figures 1-3 illustrate these facts for large samples of countries, plotting household consumption per capita (which closely tracks GDP per capita) against three measures of human welfare. They show that richer countries tend to have greater life expectancy, lower infant mortality and lower inequality. Of course, correlation is not necessarily causation, although there is a strong case for the view that higher GDP per capita leads to improved health (Fogel, 2004).

According to the Commission on the Measurement of Economic Performance, policy should be concerned with wellbeing, which encompasses many dimensions, including material living standards, health, education, political voice, social relationships and the environment (Stiglitz et al, 2009). In response to the Commission’s report, both the OECD and the UK’s Office for National Statistics are now developing measures of these aspects of life.

Few will disagree that these dimensions of life are important for human welfare and no one can object to improved measurement. But for the UK, I question whether the ONS is capable of taking on a potentially vast new programme when even the basic economic statistics on which GDP rests are not fully in accordance with the OECD’s best practices for measuring productivity and capital (Oulton, 2004a).

What’s more, we can go a long way towards measuring welfare just using the apparatus of the national accounts. Martin Weitzman’s concept of Net National Product (NNP) is key here. It is defined in real terms as consumption plus net investment (gross investment less depreciation), all deflated by the price index for consumption. Weitzman (1976) showed that his NNP could be thought of as the yield on society’s wealth and was therefore equal to the maximum sustainable level of consumption.

It is fairly simple to calculate Weitzman’s NNP from published national accounts (Oulton, 2004b). In principle, we would want to include the net change to all assets that are relevant to human welfare, including environmental stocks. In practice, we are a long way from achieving this: for example, the UK’s national accounts include mineral oil exploration as part of gross investment but depletion of oil and gas stocks by extraction is not included in depreciation and so official NNP is overstated.
Yet the statistical infrastructure built to estimate GDP can be used to estimate a welfare measure such as Weitzman’s NNP. So GDP retains its usefulness as a measure of output and as a welfare indicator.

'Most people don’t benefit from GDP growth'

Many people assert that the typical US household’s living standards have stagnated since the 1970s, despite the relatively rapid growth of labour productivity and GDP per capita. But while it is uncontroversial that US income inequality has been rising for decades, does this mean that the typical household has received no benefit from growth? The results of a comprehensive recent examination of these issues reveal quite a different picture (Wolff et al, 2012).

The measure of household welfare that this study uses is what is known as the Levy Institute Measure of Economic Wellbeing (LIMEW). Table 1 shows the growth rates of median and mean LIMEW (and GDP per capita) over the period 1959-2007 and sub-periods within that near half-century. The difference between the growth rates of mean and median LIMEW is an indicator of changes in inequality: if the mean rises faster than the median, then inequality is increasing.

Over the whole period, equivalent median LIMEW grew at an annual rate of 1.01%. The period 1959-72, supposedly the golden age of economic growth, was actually a comparatively poor one for households. And it was followed by a fall in living standards over 1972-82.

Far and away the best time for households was the period 1982-89, which coincides roughly with the Reagan administration. True, this excludes the Volcker deflation and recession of 1980-81: GDP per capita was 2.8% below its 1979 level in 1982, which helps to explain some of the subsequent rapid growth. But GDP per capita still grew at 2.43% a year during the period 1980-88, which is faster than in any sub-period except 1959-72. Since 1989, the growth rate of living standards has been declining, but it has still been positive, even in 2004-07.

Table 1 also shows that equivalent median LIMEW grew less than half as fast as GDP per capita, which grew at 2.18% a year. What accounts for this huge gap? It is partly due to rising inequality since for nearly the whole period, the mean was growing faster than the median, the exception again being during the Reagan administration.

But this only accounts for a small proportion of the gap. Most of it is accounted for by three factors. First, the study deflates household incomes by the consumer prices index: arguably, a better choice would have been the price index for consumption from the national accounts, which rises about 0.5% a year more slowly. Second, GDP includes investment as well as consumption – and investment tends to rise more rapidly. Third, LIMEW

**Table 1:**

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<tr>
<td>1. Equivalent median LIMEW</td>
<td>0.94%</td>
<td>-0.13%</td>
<td>3.22%</td>
<td>0.97%</td>
<td>0.84%</td>
<td>0.42%</td>
<td>1.01%</td>
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<tr>
<td>2. Equivalent mean LIMEW</td>
<td>1.11%</td>
<td>0.14%</td>
<td>3.27%</td>
<td>1.94%</td>
<td>0.10%</td>
<td>0.93%</td>
<td>1.31%</td>
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<tr>
<td>3. GDP per capita</td>
<td>2.73%</td>
<td>1.34%</td>
<td>3.37%</td>
<td>2.03%</td>
<td>1.26%</td>
<td>1.58%</td>
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Notes: LIMEW (Levy Institute Measure of Economic Wellbeing) is defined as income minus taxes plus cash and non-cash benefits plus individual public consumption plus household production, with property income valued on an annuity basis, per household.

'Equivalent' means that household income is measured after adjusting for household size and composition.
includes a slow-growing component, household production, which GDP excludes.

The typical US household has therefore gained significantly from growth since 1959 and also since 1980. This remains the case even though the median household would have gained more (to the extent of 0.30% a year) if inequality had not widened. But most of the gap between the growth rates of GDP per capita and median LIMEW is not due to rising inequality but to other factors.

What’s more and contrary to the common view, there were large gains in the 1980s, which continued, albeit at a slower rate, in the 1990s and even into the 2000s.

‘GDP growth doesn’t make people happier’

Surveys of wellbeing or happiness repeatedly find that in any given country at any point in time, richer people report themselves to be happier than poorer people do. But when the same survey is repeated in the same country over time, there is no rise in the average level of happiness, despite the fact that per capita income has gone up. Most of this time series evidence (which is disputed by Stevenson and Wolfers, 2008) is for the United States and the result is known as the ‘Easterlin paradox’ (Easterlin, 1974).

The most common explanation for the paradox, suggested by Richard Easterlin himself, is that at least above a certain level of income, people care more about their relative position in the income scale than they do about their absolute position. They are motivated less by pure desire for stuff and more by envy, by the pressure of ‘keeping up with the Joneses’ and by the satisfaction of looking down on the less successful.

This explanation reconciles the cross-section and time series evidence. But it leaves the implication that stopping growth would have no effect on happiness. It also suggests that more redistribution from rich to poor would raise overall happiness (provided it did not reduce GDP too much through adverse effects on people’s incentives).

I find the results of these happiness surveys puzzling because they are inconsistent with other facts about people’s behaviour. First, if people care mainly about their relative position, why has there been so much fuss about the financial crisis? After all, for most people in the UK, the drop in income has been (on this view) trivially small, no more than 8% – and at least initially, it fell disproportionately on the rich.

Second, if people care about their relative position, why does this have to be expressed in terms of annual income? After all, most workers today can work part-time if they want. So why can’t A boast that his daily rate of pay is higher than B’s even if B’s annual earnings are higher and this is because smart A works only three days a week while poor dumb B, a slave to the rat race, works five?

Yet surveys of part-time workers regularly show that many would like to work longer hours if only they could. And while it is true that some leisure activities like skiing require a lot of complementary expenditure on stuff, many other activities – watching TV, surfing the internet, chatting with friends in pubs or cafés or avoiding Betjeman’s regret – do not.

In fact, people’s leisure choices provide powerful evidence against the view that only relative position matters. The classical economists argued that the amount of time people were prepared to work depended on the range of goods and services people’s choices between work and leisure show that they value higher consumption in absolute terms not just relative to others.
available for consumption. John Stuart Mill, for example, wrote this in his Principles of Political Economy, first published in 1871:

‘A people may be in a quiescent, indolent, uncultivated state, with all their tastes either fully satisfied or entirely undeveloped and they may fail to put forth the whole of their productive energies for want of any sufficient object of desire. The opening of a foreign trade, by making them acquainted with new objects or tempting them by the easier acquisition of things which they had not previously thought attainable, sometimes works a sort of industrial revolution in a country whose resources were previously undeveloped for want of energy and ambition in the people: inducing those who were satisfied with scanty comforts and little work, to work harder for the gratification of their new tastes and even to save and accumulate capital, for the still more complete satisfaction of those tastes at a future time.’

Let’s perform a simple thought experiment. Imagine that over the 220 or so years since the Industrial Revolution began, process innovation has taken place at the historically observed rate but that there has been no product innovation in consumer goods (though I allow product innovation in capital goods).

UK GDP per capita has risen by a factor of about 12 since 1800 (Maddison, 2003). So people today would have potentially vastly higher incomes than they did then. But they can only spend their incomes on the consumer goods and services that were available in 1800.

In those days, most consumer expenditure was on food (at least 60% of the typical family budget), heat (wood or coal), lighting (candles) and clothing (mostly made from wool or leather). Luxuries like horse-drawn carriages were available to the rich and in my imaginary world, they would now be available to many more people. But there would be no cars, refrigerators, washing machines or dishwashers, no radio, cinema, TV or internet, no rail or air travel and no modern healthcare such as antibiotics and antiseptics.

How many hours a week, how many weeks a year and how many years out of an expected lifetime would the average person be willing to work? My guess is that in this imaginary world, people
would work a lot less and take a lot more leisure than real people do today.

After all, most consumer expenditure nowadays goes on products that were not available in 1800 and a lot goes on products not invented even by 1950. Today, only about 10% of the family budget goes on food – and even within the food basket, many items (such as microwave-ready chicken tikka masala, the UK’s national dish) were not available in 1800.

In summary, people’s choices between labour and leisure demonstrate that they value higher consumption in an absolute sense, not just a relative sense. So rising GDP per capita would be in accordance with people’s desires and preferences. Philosophers and social critics may object that the average person’s desires and preferences are trivial, ill informed and misguided (an attitude which can be traced back at least as far as Plato’s *Republic*). But in a democracy, people’s preferences should be respected.

**Further reading**


This article summarises ‘Hooray for GDP!’ by Nicholas Oulton, CEP Occasional Paper No. 30 (http://cep.lse.ac.uk/pubs/download/occasional/op030.pdf) and a submission to the LSE Growth Commission.

Nicholas Oulton is a senior visiting research fellow at CEP.


Changes in the UK labour market brought about by immigration over the past 15 years always rank high among the public’s concerns. David Metcalf, chair of the Migration Advisory Committee and an active CEP researcher for three decades, sets out the numbers on net inward migration and outlines recent changes in the regulatory framework and other major policy initiatives.

Immigration and the UK labour market

Net migration (immigration minus emigration) into the UK over the last seven years totals around one million. In the period since 1997, the annual immigration inflow has doubled from around a quarter of a million to over half a million. Relative to the size of the total population, such numbers are only matched by the inflows of the seventeenth century, when the Protestant Huguenots were expelled from France.

Figure 1 shows inward and outward migration over the last half-century. The statistics are based on the United Nations definition of a migrant: an individual intending to alter his or her country of residence for over one year. In the UK, these data are collected by the Office for National Statistics (ONS) through its International Passenger Survey (IPS).

For the period 1964-82, net migration was negative except for one year. In the last three decades, net migration has been positive in all bar three years. But the story is much richer than this: in the first half (1983-97), net inward migration was never greater than 80,000; by contrast, in the second half (1998-2011), it was always above 80,000. In four of those most recent years, the number was over 200,000.

Initially, the higher inflow since 1998 consisted of more workers from outside the European Economic Area (EEA) coming to jobs in restaurants, health and care work and information technology. Then in 2004, when eight central and east European countries (the so-called A8) joined the European Union (EU), work restrictions on their nationals were lifted, again boosting the inflow. Finally, in the period since 2005, the inflow of non-EEA students has doubled.

Institutions

Net migration is the outcome of three distinct reasons for migration – work, study and family (including asylum) – from three different geographical sources – the UK, the EU and outside the EU. This produces a three-by-three matrix and each of the nine cells has both an inflow.
and an outflow. The government can only directly control the flows in the three non-EU cells. In broad terms, the net inflow from the EU equals the net outflow of UK citizens – so the non-EU net figure is similar to aggregate net migration.

In the mid-2000s, after almost a decade of rising inflows and substantially higher net migration, the then-government decided to alter both the regulations around non-EU migration and the institutions central to the often heated and sometimes toxic debate about migration.

First, the ‘points-based system’ (PBS) was introduced for economic migration incrementally from 2008. The PBS replaced the previous 80-plus immigration routes and it initially consisted of five tiers.

Tier 1 covered highly skilled workers who could come to the UK without a job offer to search for skilled work. This was a supply-side initiative designed to boost the stock of human capital in the UK workforce.

Tier 2 was a demand-side scheme, covering skilled workers with a job offer who filled a vacancy the employer otherwise could not fill from the UK and EU labour markets. Tier 2 now has three main routes:

- The ‘shortage occupation list’ route as defined by the MAC (for example, MAC, 2011). This covers skilled jobs that are in shortage and where it is sensible to fill the vacancy with a worker from outside the EU. At present, the list covers jobs where the number of employees (not immigrants) totals less than 1% of the UK workforce.
- The ‘resident labour market test’ route. This is where an employer advertises the vacancy in the UK and/or the EU and if no suitable worker responds, the firm can then fill the vacancy from outside the EU.
- The ‘intra-company transfer’ route. Traditionally this involved, for example, a Japanese auto engineer from Toyota coming to work at the Toyota plant in Derby for a few years. But in recent years, the intra-company transfer route has been dominated by information technology workers coming mainly from India to work as third-party contractors.

Tier 3, which has never been activated, was for low-skilled workers. Tier 4 covers the study route into further and higher
education. And Tier 5 covers temporary and youth mobility.

Each tier had points attached to characteristics. For example, for Tier 2, points initially varied according to age, qualifications and pay. The potential migrant had to pass a particular points threshold and have a certificate of sponsorship (similar to the old work permit) from a sponsor licensed by the UK Border Agency.

The second change in the regulatory framework was the establishment of the Migration Advisory Committee (MAC) to provide independent, evidence-based and transparent advice on migration issues. The MAC is economics-oriented with four academic economists plus the chair. The UK Commission for Skills and Employment is also represented on the MAC.

The key to the MAC’s modus operandi is that the government decides which questions and issues it wishes to be investigated. For example, successive governments have wanted greater selectivity in non-EU migration. The MAC was asked to implement this, not to debate whether such selectivity is desirable. Nevertheless, the MAC was centrally involved in each of the three major policy initiatives discussed next.

**Major policy initiatives**

Under the coalition government, there have been three major policy initiatives around non-EU work migration. These involve greater selectivity, limits on migrant numbers and a re-examination of the impact of immigration. The imperative is strong for the coalition government because it has set a target for net migration of below 100,000 by the end of this parliament in 2015. This implies nearly halving the most recent figure of 183,000 for the year ending March 2012.

**Skill and pay thresholds**

When the PBS was implemented in 2008, the minimum skill level for migrant jobs was set at NQF3 (which is roughly equivalent to two A-levels). Subsequently, the threshold has been ratcheted up, first in 2011 to foundation degree (NQF4) and in 2012 to degree level (NQF6). The minimum pay threshold for Tier 2 jobs has been raised in tandem with skills. All Tier 2 migrants now have a default minimum of £20,000 a year, but the codes of practice specify substantially higher minima for many occupations and jobs.

Occupations skilled to graduate level are defined by the MAC according to three measurable criteria: pay; the proportion of the occupation qualified to at least NQF6; and the skill level of the occupation as determined by the ONS (MAC, 2012c). On this basis, 97 of the 369 four-digit occupations in the 2010 Standard Occupation Classification count as skilled to graduate level. These 97 occupations employ roughly six million full-time workers.

There are around 28,000 job titles defined within the 369 occupations. Under the shortage route, stakeholders can argue that a particular job title is skilled to graduate level even though the occupation is not. Such arguments turn on innate ability and the training and experience required for a job. Examples include chefs at the top restaurants and ballet dancers in leading companies such as Ballet Rambert or the Royal Opera House.

The focus on skilled workers under Tier 2 is sensible. Skilled workers are more likely than low-skilled workers to be complementary with capital and other labour. In addition, they may well have dynamic effects, for example, raising the productivity of colleagues and innovating. And on average they make a much stronger contribution to the public finances than the unskilled.

The emphasis on skills also suggests that the EU will continue to be the source for any non-UK, low-skilled workers. Some sectors that previously relied on less skilled non-EU migrants must now train UK workers or look to the EU. Previously, a high proportion of employees in, for example, Asian restaurants, care homes and work riders in racehorse training were non-EU migrants.

**Limits on migrant numbers**

As part of the initiative to reduce net migration, the MAC was asked in 2010 to recommend a limit on numbers entering the UK for work under Tiers 1 and 2. We suggested that the work route take its pro rata share of any reductions in immigration (with the family and study routes taking their pro rata shares) and that any such reductions were spread equally over the four-year period 2011-15 (MAC, 2010).

We recommended that the number of entry clearance visas issued in 2011/12 for Tiers 1 and 2 combined should be reduced by between 6,000 and 13,000. (Any cut in entry visa numbers is larger than the reduction in the IFS numbers because some visas are not used and some migrants come for under one year.) We recommended that between 37,000 and 44,000 entry clearance visas be available. Drawing on stakeholder evidence, we suggested that Tier 1 should have a larger proportionate cut than Tier 2.

The government essentially adopted the MAC’s recommended reduction in aggregate, but the cake was cut a little differently.

First, the government largely shut down Tier 1. This route was designed for highly skilled people without a job offer, but it also permitted any student graduating with a bachelor degree to stay in the UK for two years to search for a skilled job – the ‘post-study work’ (PSW) route. There was some tentative evidence that many Tier 1 entrants and PSW students were working in low-skilled jobs.
Closing Tier 1 provided extra headroom for Tier 2.
Second, a limit of 20,700 was put on Tier 2 General (shortage and resident labour market test routes), but the intra-company transfer route was not limited by quantity but by price. The minimum annual pay thresholds were raised from £20,000 to £24,000 for intra-company transfer workers coming for under a year and to £40,000 for those coming for more than a year.

In the event, only half of the 20,700 certificates of sponsorship available were taken up in 2011/12 (roughly 1,500 for the shortage route and 8,500 for the resident labour market test route). Therefore, the MAC recommended that the limit be unchanged for 2012/13 (MAC, 2012b). The government adopted this recommendation and also announced that this limit would remain for 2013/14.

Figure 2 shows the impact of the policy initiatives on selectivity and limits.

**The impact of immigration**
Most government policy initiatives require an ‘impact assessment’. The MAC was asked to analyse the approach taken in recent immigration impact assessments (MAC, 2012a). Our recommendations, which have been adopted, will not influence immigration levels in the immediate future, but they may well do so over the longer term.

Impact assessments concerning alterations to immigration had previously focused on GDP and therefore suggested gains from greater immigration and losses from lower levels. This approach neglected two key features of immigration: it involves a change in population as well as output; and most of the gains go to the migrant.

The MAC therefore suggested a more nuanced approach that focuses on the gains or losses to UK residents (however defined). This will normally involve analysing five questions:

- What are the dynamic benefits? These include innovation and raising the human capital and productivity of co-workers. Such benefits are elusive to measure, but they may be of major importance.
- What is the contribution of the migrant
to the public finances? Skilled workers generally contribute more than low-skilled workers and those coming for family reasons. The duration of the stay matters too.

Do the migrants displace UK workers? This is a controversial area. The MAC report suggested evidence of displacement in recession periods.

Do migrants impose ‘congestion costs’? This involves examining any extra burdens on the UK’s health, education, housing and transport systems.

What are the distributional effects on UK residents of particular migrants? This is a rather neglected topic, but we need a better understanding of whether it is high- or low-income groups that gain or lose, or whether distribution is unaffected. Similarly, the distribution of gains between capital and labour are important.

Other policy changes

The MAC has produced a number of other reports whose recommendations – adopted by the government – will influence immigration and the labour market.

Regulations around settlement (‘indefinite leave to remain’) in the UK have gradually been tightened. On the issue of work routes to settlement, the MAC was asked what level of pay a migrant should be earning if and when he or she applies for settlement after five years or so working here. We suggested a range between £31,000 and £49,000, reflecting different points on the pay distribution of skilled workers. The government opted for £35,000, a higher pay threshold that may raise the outflow of migrants.

Immigration for family reasons can have an indirect impact on the labour supply. The MAC was asked to recommend a minimum income level required to sponsor a spouse, so that the new family unit would not be a burden on the state. We analysed the pay at which income-related benefits terminate (£18,600) and the pay required for a neutral impact on the public finances (£25,700). The government chose the lower figure, but even this pay requirement excludes nearly half the current sponsors.

When the A8 countries joined the EU in 2004, the UK put no restrictions on their nationals’ right to work. Because most other EU countries did restrict work rights, the A8 inflow was much greater than expected. Therefore, restrictions were put on Bulgarians and Romanians when those countries joined the EU in 2007. In two reviews (required by EU law), the MAC recommended retaining these restrictions on the grounds that lifting them would potentially exacerbate the already seriously disturbed labour market.

But all such restrictions must end in December 2013. This raises a conundrum. The main source of work for Bulgarians and Romanians is the ‘seasonal agricultural workers scheme’ (SAWS), largely picking fruit and vegetables.

The National Farmers Union is concerned that when the restrictions are lifted, the SAWS workers will instead choose to work in other sectors, such as construction and hospitality.

The NFU is therefore suggesting a replacement scheme involving non-EU workers, perhaps from Ukraine. This would imply a de facto opening of a less skilled labour route – albeit only for temporary migration – at a time when 25 million people are unemployed in the EU. The MAC will report on this matter in the spring of 2013.

Conclusions

Non-EU work immigration is under control. Greater selectivity has boosted the skill level and cut the numbers. This greater selectivity, coupled with the recession, largely explains why only half the certificates of sponsorship available for Tier 2 are currently being used. Intra-company transfers in the information technology sector continue to require careful monitoring, but limiting them by price (minimum pay thresholds) is operating well.

The MAC has been commissioned to analyse whether there should be a sunset clause for jobs on the shortage occupations list for more than a certain period of years. Thus, skills policy remains central to ensuring that business, health and education can meet their labour requirements.

Finally, the new focus on gains from immigration to UK residents, rather than simply GDP, puts the onus on firms and analysts to demonstrate that dynamic and fiscal benefits from skilled immigration outweigh any displacement and congestion costs.

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This article summarises a longer report, Work Migration from Outside the European Union: Fifteen Years of Turnabout, which will be available in 2013.

Further reading

Migration Advisory Committee (2010) Limits for Tier 1 and Tier 2 for 2011/12 and Supporting Policies, November.


Migration Advisory Committee (2012a) Analysis of the Impacts of Migration, January.

Migration Advisory Committee (2012b) Limits on Migration: Limit on Tier 2 (General) for 2012/13 and Associated Policies, February.

Migration Advisory Committee (2012c) Analysis of the Points Based System: List of Occupations Skilled at NQF Level 6 and Above and Review of the Tier 2 Codes of Practice, October.

All these documents are available here:
www.ukba.homeoffice.gov.uk/mac
More than half of employees in the UK say that they would like the chance to work from home, according to a YouGov survey conducted during the London Olympics. But while large numbers of office staff believe that working from home would improve their productivity, most admit that their firm does not allow it.

Firms elsewhere in the world have also been slow to adopt this management practice. Indeed, there are widely different practices even among firms operating in the same industry in the same country. In the US airline business, for example, Jet Blue allows all regular call-centre employees to work from home; Delta and Southwestern have a policy of no home-working; while United has experimented with a mix of practices.

In our research, we have had the opportunity to evaluate one such experiment. The firm, Ctrip, is China’s largest travel agent with 13,000 employees and a nearly $3 billion valuation on NASDAQ. The firm wanted to experiment with home-working before deciding whether to roll it out across its whole operation.

The motivation was both to reduce office costs, which were becoming an increasingly high share of total costs due to rising rental rates at the firm’s Shanghai base, and to reduce the firm’s high annual rate of staff turnover (50%). On the downside, the management was concerned that allowing employees to work at home away from the supervision of their managers could have a negative impact on their performance.

The experiment is unusual because one of our research team is also the co-founder and chairman of Ctrip. This has naturally provided us with excellent access to both the experimental data and also to the management’s views on working from home. As such, the experiment provides an insight into the adoption of a modern management practice by a large publicly listed firm, helping to address some of the questions about why so many firms fail to adopt potentially beneficial management practices.

Ctrip decided to run a nine-month experiment with the Airfare and Hotel divisions in the firm’s Shanghai headquarters. All employees with at least six months’ experience with the firm and their own room at home were offered the option to work there for four days each week. Of the 508 eligible employees, 255 asked to work from home and after a lottery draw, those with even-numbered birthdays were selected for home-working while those with odd-numbered birthdays stayed in the office to act as a ‘control group’.

Both home- and office-based employees worked the same shift period in the same teams under the same manager as before, logged on to the same computer system with the same equipment and the same work order flow. The only difference between the two groups was the location at which they worked.

So what were the results of Ctrip’s experiment? First, the performance of the home-workers went up dramatically, increasing by 13% over the nine-month experiment. This improvement came mainly from a rise in the number of minutes they worked during each shift, which was due to a reduction in the number of breaks and sick days that they took. The home-workers were also more productive per minute worked, answering more calls, presumably because of the quieter working conditions at home.

Second, there were no negative effects on the employees left working in the office: there was no change in the performance of the control group. Third, the rates of staff turnover fell sharply for the home-workers, dropping by almost 50% compared with the control group. The home-workers also reported substantially higher work satisfaction and less ‘work exhaustion’ in a psychological attitudes survey.

At the end of the experiment, Ctrip’s management team was so impressed by the success of home-working that they decided to roll it out to the entire firm. They also
offered both the original home-workers and the control group a fresh choice of working arrangements.

To their surprise, a half of the home-workers changed their minds and returned to the office, citing the loneliness of working at home. At the same time, three quarters of the control group – who had initially all requested to work from home – decided to stay in the office. This outcome suggests that before the implementation of these types of management practices, their likely effects are as unclear to employees as they are to managers. It may also help to explain the typically slow adoption of such practices.

How do our findings compare with previous research? There is an extensive body of case studies of individual firms that have adopted home-working programmes, and they tend to show large positive impacts. But the robustness of these results are hard to evaluate because of the non-randomised nature of the programmes, both in terms of the selection of firms into programmes and the selection of employees to work at home.

This self-selection effect is evident even in the case of CTrip: when the firm allowed a general roll-out of home-working, employees performing well at home typically chose to stay home while employees performing badly returned to the office. We are continuing to collect data on both current and former employees to evaluate longer-run impacts on recruitment, promotion and other work and non-work outcomes.

This article summarises ‘Does Working from Home Work? Evidence from a Corporate Experiment’ by Nicholas Bloom, James Liang, John Roberts and Zhichun Jenny Ying (www.stanford.edu/~nbloom/WFH.pdf).

Nicholas Bloom, a professor of economics at Stanford University, is a research associate in CEP’s productivity and innovation programme. James Liang is the co-founder and chairman of CTrip. John Roberts and Zhichun Jenny Ying are at Stanford University.
Employers have paid men more than women since the beginning of time: according to the Bible, the Lord told Moses to value a female servant at three-fifths the value of a male servant. But economists don’t see such headline wage differentials as proof that there is sexism in the labour market. After all, men and women may have different levels of productivity.

One reason for productivity differences is that men are typically stronger than women. This allows them to earn a premium, particularly in the past when strength was often important. In many jobs, experience helps and men – who are less likely to take time out to bring up children or to care for the elderly – have generally worked longer. This affects the jobs that men can get and the wages they receive for any given job.

It can be hard therefore to work out whether a particular wage differential represents sexism or not. Many jobs are undertaken almost exclusively by one gender or the other. Even when both genders work alongside each other, productivity is often hard to measure.

But in recent research, we have been fortunate enough to get access to just such measurements. In 1898, the Swedish government commissioned a remarkable survey, in which statistician Henning Elmquist and his team interviewed every firm and every employee in the country’s tobacco industry. We know the job each worker did, the hours they worked and the earnings they received. In addition, we know a host of other details – the workers’ ages, their experience on the job, whether they had children, whether they were union members and so on. All of the individual data survive, giving us a high quality employer-employee matched data set.

Cigar-making is a good industry to investigate. Strength wasn’t important, but experience did matter. Rolling cigars was skilled work, even if you were using a wooden mould to help you. A few factories were exclusively male and a few were exclusively female, but in most cases men and women worked alongside each other doing exactly the same job.

Our study uses a modern analytical technique to calculate whether men and women were paid fairly, given their levels of experience and so on. In essence, this means we work out what women would have been paid had they been paid the same as men of the same age, experience and so on. We can assess the extent of discrimination by comparing what they ‘should’ have been paid with what they were actually paid.

Some workers were paid by the hour – those preparing the raw tobacco, for example. Here we find clear evidence of sexism. Men were paid ‘men’s wages’ and women were paid ‘women’s wages’ – and there was a big difference between the two.

Other workers were paid a piece rate, notably cigar-rollers, who were paid by the cigar. Here we find a completely different result: all of the difference in the earnings of men and women can be explained by differences between the characteristics of men and women rolling cigars. Men were older, more experienced and more productive. As a result, they produced more cigars per week and earned more per week in direct proportion to their additional output.

What’s more, we find that men and women were equally likely to get promoted to cigar-rolling, given their characteristics. Experienced workers got offered these positions, irrespective of gender. There was no gender bar or discrimination against women at this level. There was a ‘glass ceiling’, but it was higher up: all of the supervisors and managers were male.

These results show that the Swedish tobacco firms were internally inconsistent. They were sexist when it came to paying workers by the hour. But they were gender-blind when it came to putting the best workers into their piece rate sections and paying them equally well. In all cases, the magnitudes are sufficiently large that firms must have been aware of the inconsistencies in their behaviour.

Pay rates and pay systems don’t operate in a vacuum because firms don’t operate in a vacuum. For men paid by the hour, firms had to pay the economy-wide ‘going rate’ for male labour. If they didn’t, the men would have left for other jobs. So even though cigar-making didn’t require strength, most men would be able to get a job that did and therefore commanded the ‘strength premium’ even when their strength wasn’t used.
In contrast, women’s primary alternative employment was as domestic servants, where wages were low. Firms were able to attract women even when they offered pay rates far lower than those paid to men.

Men paid by the hour represented bad value for money to the firms that employed them because they were paid a disproportionately large premium relative to their productivity advantage. Firms seem to have recognised this: the industry was almost all male in 1860, but it feminised steadily thereafter.

The presence of more than 50 Swedish tobacco firms was sufficient to make the industry reasonably competitive, even though imports were low. After all, cigars are light and cheap to transport.

Economists have always instinctively believed that competition disciplines firms. A firm that employs unsuitable workers or pays a wage disproportionate to their productivity will increase its costs and lower its profits. This means that a firm takes a hit every time it discriminates. The implication is that firms that employed a disproportionately large number of men would have higher costs, lower profits and thus be less likely to survive.

Using data on firm survival rates, we are able to test the effect on firm survival of a more feminised workforce. The results are clear: the more men that a firm employed, the more likely it was to go out of business between 1863 and 1915. Employing men made bad commercial sense.

In this way, product market competition imposed a discipline on firms. At the going male pay rate, they couldn’t employ men without risking their firm’s very survival. But we shouldn’t get too excited about the effect on women’s lives. Product market competition may have created jobs for women, but this only happened because women’s wages in the wider labour market were lower than those for men. The market delivered more jobs for female cigar-makers, but it didn’t deliver equal pay.


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Gender differences have disappeared in many educational settings, yet male and female students remain strongly segregated across what Americans call their ‘majors’, the main subject they study at university. Of the US workforce with a background in science, technology, engineering and maths (STEM), only a quarter are women. And in the UK, the Institute of Physics recently reported that physics is the fourth favourite A-level subject for boys but only the nineteenth most popular among girls.

Understanding the origin of these discrepancies is important from an economic perspective. Gender differences in entry into science as opposed to non-science careers account for a significant part of the gender pay differential among graduates. They may also reduce aggregate productivity because of misallocation of talent.

The reasons for the under-representation of women in science have been debated in research papers and government reports. We know that gender differences in maths and science test scores at 15 years old have fallen in recent decades and, according to the OECD’s Programme for International Student Assessment (PISA), they are now very small in most developed countries. (PISA also shows that the UK’s gender differences in maths are among the highest, probably because of early specialisation.)

These small gender differences in ability cannot explain the gender gap that emerges later on in young people’s science careers. For example, even looking at students with identical abilities, women are still between 50% and 70% less likely than men to complete a degree in the STEM subjects.

So what explains the gender gap in science? A potential explanation is that women are discouraged or even discriminated against by professors when they choose to study science at university. Evidence certainly indicates that professors influence students’ educational choices by serving as role models: having a female teacher in traditionally ‘masculine’ subjects strongly increases female students’ attainment and their likelihood of majoring in science.

Other studies also suggest that gender stereotypes – such as ‘boys excel at maths and science while girls do better in other subjects’ – may serve as the basis for steering young women towards more ‘female’ occupations and be partly responsible for gender gaps at university and in the labour market.

But to date, there is almost no evidence of a direct link between stereotypes and discrimination. We don’t really know how professors in different subjects evaluate their students. Do science professors want female students? This is a key concern if we are to ensure that young men and women are given equal opportunities and are equally treated when they make their educational and career choices.

In our research, we use a unique dataset on the entrance exam for a leading higher education institution in France – the École Normale Supérieure (ENS) – to investigate the potential links between gender stereotypes and discrimination. To get into the ENS, each student is tested on subjects where boys are usually thought to be better than girls – maths and physics, for example – as well as on subjects that are assumed to be better suited for girls – for example, biology and foreign languages.

This specific context enables us to identify precisely how both the direction and degree of gender discrimination vary with gender stereotypes. We use the fact that candidates to get into the ENS have to take both a blind written test (their gender is not known by the professor who marks the test) and a non-blind oral test.

The ‘difference-in-differences’ between the young men and women in the blind and the non-blind test scores gives a measure of professor-driven gender discrimination in a given subject. Moreover, since students are tested in more than one subject, it is possible to investigate how professors’ gender bias varies across subjects for the same candidate.

We find that discrimination goes systematically against gender stereotypes: the more masculine a subject is thought to be, the more favoured are the female candidates. In maths and physics tests, for example,
young women overtake about 10% of the young men due to discrimination while the exact opposite happens in biology and foreign languages tests.

This implies that the demand for students in different majors is biased in favour of the minority gender: for example, the share of female students who are admitted to major in maths and physics jumps from 8% to 12%. These results show that professors’ evaluations are not directly driven by simplistic stereotypes such as ‘girls are no good at science’.

Having seen that professors react to gender stereotypes ‘in opposition to them’, we may wonder how candidates themselves react to these gender stereotypes. After all, our study focuses on a very competitive contest: it may be that the female candidates at the ENS feel especially self-confident in maths, which explains their good performance in the oral tests.

But this is not what we find. The performance of the female candidates we analyse is consistent with what is usually found in other contexts: although the differences are small, female candidates tend to perform slightly worse in written tests in more male-dominated subjects (such as maths) and slightly better in more female subjects (such as foreign languages). What’s more, when they have to choose an additional test, females are a lot less likely to choose the most masculine one. This is true even comparing candidates with the same ability.

These results imply first, that in opting for non-science subjects, young women behave exactly as the stereotypes would predict; and second, that this choice is irrational given professors’ actual evaluations of their performance in masculine subjects. To maximise their chances of success, young women should choose masculine subjects more often and benefit from professors’ seeming bias against gender stereotypes.

Different mechanisms could explain the fact that professors tend to favour young women in typically male-dominated subjects. One is that we may simply observe ‘affirmative action’ to produce more equal sex ratios in the different majors. But unlike in the United States, there is no legal base for affirmative action in France. The ENS is also one of the most prestigious higher education institutions in the country and it has a strong reputation for rewarding pure talent only. Thus, there are probably no coordinated decisions among the professors towards favouring female candidates for science majors.

This leaves us with two other possible explanations. The first is pure preference-based discrimination: maths professors are just happier when they have the unusual occasion to interview a female candidate; and the same is true for literature professors with respect to male candidates.

The second and more plausible mechanism is directly linked to students’ abilities. Paradoxically, professors may rationally favour young women in science even if they have negative stereotypes about their abilities. For a given test performance, the professor may think that the female candidates signal higher effort, self-investment or perseverance and they therefore reward these non-cognitive attributes.

These mechanisms need to be investigated further. But we already know that stereotypes do not always harm young women, which can be seen as good news about the capacity of our societies to move quickly from awareness to action against longstanding imbalances. It would be valuable to know if such behaviours are already widespread and to what extent they may help to reduce the very large gender gap in science that still exists in most countries.


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When Nobel peace prize-winner Archbishop Desmond Tutu delivered a sermon for South Sudan’s first birthday in July 2012, he told the nation’s leaders: ‘stop fighting and wealth will follow’. But what is the evidence that ending conflict can deliver economic regeneration? And might the possibility of a ‘peace dividend’ itself contribute to lasting peace?

The peace process in Northern Ireland provides an opportunity to estimate the value of peace. Violent conflict flared up there in the late 1960s and ultimately claimed around 3,500 lives before the Downing Street Declaration was signed nearly 20 years ago in December 1993. The conflict caused major economic dislocation, but as peace took hold, the economy began to be repaired.

In a recent study, we use house prices to measure the peace dividend. Our basic idea is that willingness to pay for a house will reflect investors and homeowners’ perceptions of the value of peace. Between 1992 and 2009, the average house price in Northern Ireland more than quadrupled. But before assuming this represents the value of peace, we need to recognise that the period saw prices rising similarly in England and indeed across the British Isles.

We know that while some regions in Northern Ireland were heavily affected by the violence, others were peaceful throughout the conflict. We can therefore drill down into the housing data to compare prices in violent and non-violent regions before and after the cessation of violence.

It turns out that after the peace process began, house prices started to converge (as Figure 1 illustrates). The peace dividend can then be measured as the difference in house prices between the violent and peaceful regions during the conflict.

One of the biggest concerns during any peace process is the chance of a relapse. Despite the Omagh bombing in 1998, which killed 29 people, Northern Ireland saw a fairly permanent shift away from violence after 1993. This matters for estimating the peace dividend, especially when people are making long-term investment decisions such as buying houses.

At what stage did expectations about the future change and by how much? Research methods developed for analysing business cycles can be used to deal with the problem that we don’t know exactly when peace arrived
in Northern Ireland and whether its timing varied across regions. Data on killings are potentially informative about what people care about – peace or conflict – so they can measure expectations about peace.

This approach can be used to explore the size of the peace dividend region by region. We find that Belfast benefited most with an increase in house prices of between 6% and 17%. Mid- and Southwest Down and Londonderry/Strabane experienced house price increases of between 2% and 8%. Other regions – North Down, for example – were largely unaffected by the conflict and therefore did not benefit as much.

Did the peace dividend help to build peace? Anecdotes suggest that even Republican sympathisers were gambling on houses on Belfast’s sectarian dividing lines in the 1990s. We have heard of one who bought six houses nearby, paying around £7,000 per house in the belief that if he spent £3,000 on each and the peace process held, then they would be worth about £35,000 apiece. If the peace process didn’t hold, the investment would become worthless. In this way, the possible dividends helped to create a vested interest in peace and might have helped to stabilise it.

Every conflict is different, but what might our findings imply elsewhere? Baghdad, for example, is a city 10-15 times the size of Belfast and where the current level of violence per capita is around 2.8 times higher than in Belfast during the 1980s. But the mixture of insurgency and sectarianism has parallels with Northern Ireland.

We can use our estimates from Northern Ireland to ask what would happen if Baghdad entered a phase of peace comparable to the peace in Belfast. These suggest that the peace dividend in Baghdad would be between 16.4% and 46.4%.

Stretching our argument even further, we can get an idea of the economic effects of current events in Syria. The city of Homs experiences violence per capita more than 48 times as intense as Belfast in the 1980s. If there were a functioning housing market, our estimates suggest a collapse in house prices to only an eighth to a third of what they were before the conflict started. Reversing this collapse suggests a sizeable stake for citizens in ending the conflict if only this could be engineered.

So the example of Northern Ireland is not only useful for calibrating the peace dividend: it can also give hope to other places where long conflicts have reduced the quality of life. The potential gains and losses in the value of fixed assets vividly illustrate Archbishop Tutu’s maxim: stop fighting and wealth will follow.

The possibility of a peace dividend can itself help to build peace


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There is cross-party consensus in the United States that public debt levels are a serious problem, at least in the medium term. Debt levels rose significantly in the Great Recession (see Figure 1), but much of the increase can be explained by the automatic responses of public spending and taxes to the state of the business cycle.

The more worrying fact is that the long-run debt trend is clearly upwards. Public spending has risen secularly over the past decades, due to increases in public healthcare (Medicare for the elderly and Medicaid for the poor) and social security (pensions), up from 3% of GDP in the 1950s to almost 12% today and projected to rise to 16% by 2037. Since tax revenues have not kept up with these spending trends, public debt has been marching upwards. In contrast, public consumption as a share of income has not increased since the 1950s and public investment has actually declined (see Figure 2).

In December 2010, the bi-partisan National Commission on Fiscal Responsibility and Reform (known as ‘Simpson-Bowles’ after the two co-chairs) released a majority report proposing a mixture of cuts in entitlement spending and tax reform, backloaded to avoid exacerbating the recession (see Table 1).

The commission recommended eliminating most tax deductions, increasing revenue by about $1.1 trillion. Part of this higher revenue would be used to reduce tax rates and overall tax revenues would be targeted as less than 20% of GDP in the long run. The remainder would be allocated to debt reduction.

Social security would be brought into balance through broadening payroll tax bases and increasing the retirement age. Simpson-Bowles recommended setting targets to contain Medicare’s growth beyond 2020 (unfortunately without much detail) and containing discretionary spending growth to half the rate of inflation.

Although the Commission’s proposals are broadly seen as the starting point for any serious reform, President Obama has not fully embraced them and Paul Ryan, a commission member and the defeated
vice-presidential candidate in November’s election, explicitly voted against the majority report. Simpson-Bowles did not obtain the super-majority required to bring forward legislation.

Political conflict peaked in the summer of 2011 over the ‘debt ceiling’. Due to (outdated) rules from the early twentieth century, Congress is required not only to approve tax and expenditure laws in its budget but also, in separate legislation, to set a limit on total government debt. As US federal debt approached this limit in July 2011, Congress was unable to reach an agreement on a change to the debt ceiling.

Republicans demanded that increases in the debt ceiling be linked to legislation on spending restraint. Democrats insisted that the debt ceiling be increased unconditionally or for the agreement to include tax increases. With no ‘grand bargain’ on resolving longer-term debt problems, agreement was reached to raise the debt ceiling temporarily and to find a compromise on longer-term challenges over the coming year.

To give incentives to both sides to arrive at a long-term compromise, the tax rises and spending cuts of the fiscal cliff would almost certainly plunge the US economy into recession.
Table 1: The Simpson-Bowles proposals

**TAX POLICY**

**Income taxes**
Eliminate most ‘income tax expenditures’, that is, all deductions from income taxes. Current income tax expenditures are estimated at $1.1 trillion annually. Use part of the savings to lower tax rates, limiting the top income tax rate to 29% and maintaining or increasing the progressivity of the tax code.

**Payroll taxes**
Broaden the base of social security taxes to apply to 90% of personal income by 2050.

**Corporate taxes**
Lower the corporate tax rate to no higher than 29%. Eliminate all ‘tax expenditures’ for businesses. Move to a territorial tax system.

**Revenues**
Revenues to increase gradually, stabilising at just under 20% in the long run.

**EXPENDITURE POLICY**

**Discretionary**
Hold spending in 2012 equal to or lower than spending in 2011 and return spending to 2008 levels in real terms in 2013. Limit future spending growth to half the projected inflation rate through 2020. Require equal cuts from both security and non-security spending.

**Medicare and social security**
The commission only proposes small fixes to Medicare in the short run, while setting targets to contain the programme’s rate of growth after 2020. Increase the social security retirement age to 67 by 2027 and index the retirement age to average life expectancy thereafter. Index social security benefits to chain-indexed CPI. The plan is projected to close the social security shortfall over a 75-year horizon.

**DEFICIT**
Reduce the deficit gradually to 2.3% by 2015, with most deficit reductions scheduled to coincide with economic recovery. Put in place a credible plan to stabilise the debt over time, with debt (held by the public) stabilising at around 65% of GDP in 2020, after peaking at 72% in 2013.

Table 2: The fiscal cliff: changes in tax and expenditures policy scheduled in current law

**TAX POLICY**

**Revenues**
Total revenue as a share of GDP projected to rise from 15.7% of GDP (2012) to 18.4% (2013) and 20.3% (2015). Personal income tax take to increase by 1.8% of GDP; social security taxes by 0.5% of GDP and corporate income taxes by 0.4% of GDP.

**Income taxes**
Scheduled to rise automatically from 2013, reversing the 2001 tax cuts. Tax rates to rise from 10-15%, 25%, 28%, 33% and 35% to 15%, 28%, 31%, 36% and 39.6% respectively.

**Payroll taxes**
Temporary payroll tax cut of 2 percentage points is set to lapse.

**Capital gains taxes**
Scheduled to rise from 15% to a maximum rate of 20% for most taxpayers from 2013.

**EXPENDITURE POLICY**

**Total**
Total outlays projected to fall from 22.9% of GDP (2012) to 22.4% (2013) and 21.5% (2015). The Budget Control Act has defence and non-defence budgets falling by $55 billion each year from 2013 to 2022 (0.7% of GDP in 2013).

**Defence**
$55 billion of cuts, almost entirely discretionary spending, amounting to 10% of discretionary defence spending in 2013. These cuts are not restored in future years but, as the economy and the size of the defence budget grow, they fall to 8.5% of the planned discretionary defence budget in 2022.

**Medicare, Medicaid and social security**
Medicare is shielded from cuts: 90% of Medicare spending can only be cut by a maximum of 2%; a further 9% is exempt entirely. Medicare and social security are exempt from cuts. In January 2013, doctors’ payments under Medicare are due to fall by 27%. These cuts have been reversed by Congress each year since 2003 (the ‘doc fix’). Under current law, these cuts to payments would reduce expenditures by $10 billion.

**Unemployment benefits**
Extensions in emergency unemployment benefit are set to lapse. Total expenditure on unemployment benefit is set to fall by over a third from $94 billion to $60 billion in 2013, despite a baseline CBO scenario that has unemployment rising over the course of the next year.

**The fiscal cliff does not address the root causes of the US debt problem – healthcare and pensions**

This article is an extract from a briefing published as part of CEP’s series of US Election Analyses: ‘Recession and Recovery: The US Policy Debate on Taxes, Spending and Public Debt’ by Ethan Ilzetzki and Jonathan Pinder (http://cep.lse.ac.uk/pubs/download/cepusa001.pdf).

Ethan Ilzetzki is an assistant professor in LSE’s economics department and a research associate in CEP’s macroeconomics programme. Jonathan Pinder is a PhD student at LSE.
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CEP PUBLIC LECTURE

Eurozone Deadlock – Finding a Path Out of the Crisis

Speaker: Professor Luis Garicano
Chair: Professor Francesco Caselli
Date: Wednesday 23 January 2013
Time: 6.30-8.30pm
Venue: Sheikh Zayed Lecture Theatre, New Academic Building, LSE

It is still possible, both economically and politically, to find a way out of the eurozone crisis if policy-makers separately address two problems: dealing with the legacy costs of the initially flawed design of the eurozone; and fixing the design itself. In this lecture, Luis Garicano will discuss how these solutions can be implemented.

Luis Garicano is professor of economics and strategy in LSE’s management department, a research associate in CEP’s productivity and innovation programme and co-editor of NadaesGratis.es, the most widely read economics blog in Spanish.

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During the 2012 US presidential election, CEP published a series of briefings to provide non-technical, evidence-based and politically neutral introductions to the main economic issues facing the American people:

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- Economic recovery and policy uncertainty
- Healthcare reform
- Inequality and opportunity

The relevance of the analyses extends far beyond the presidential election: as the economically largest and most powerful nation on the planet, what happens in the United States has a profound influence on the rest of the world.

CEP’s US Election Analyses are available here:
http://cep.lse.ac.uk/_new_publications/series.asp?prog=CEPUSA

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