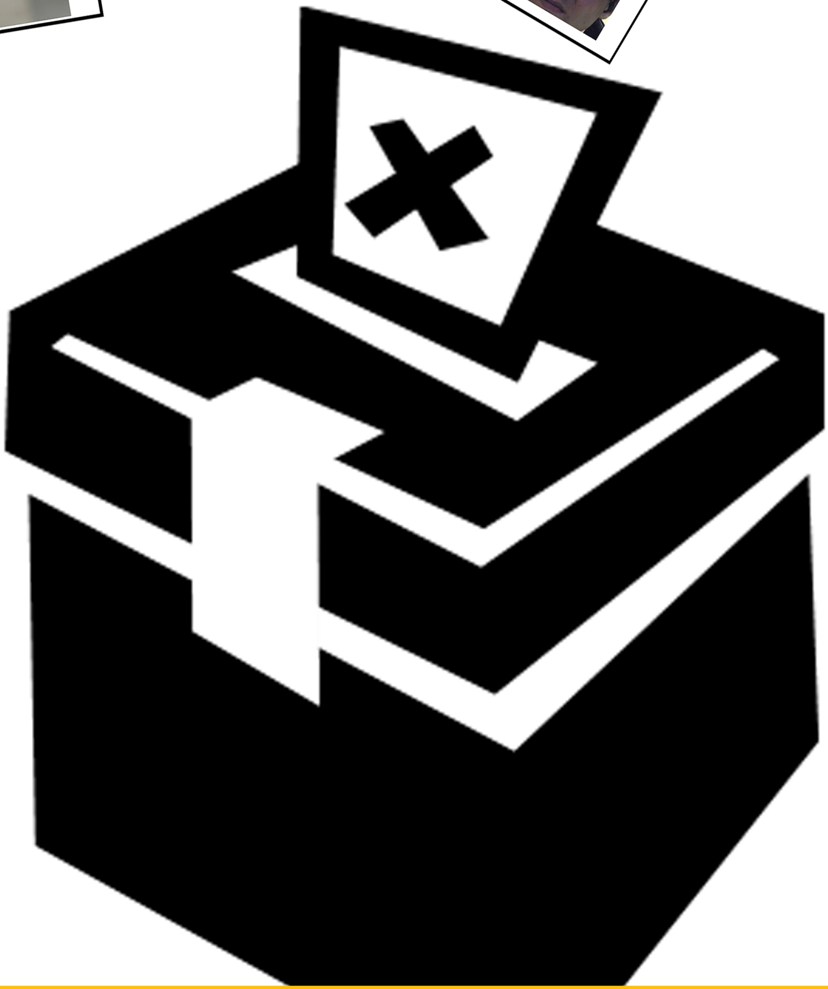
CENTRE *for* ECONOMIC PERFORMANCE

Election Analysis 2010

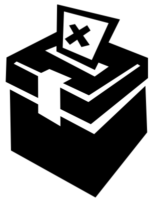


A series discussing the research on some of the key policy battlegrounds of the 2010 General Election

Centre for Economic Performance

http://cep.lse.ac.uk

LSE



CEP ELECTION ANALYSIS

A series discussing the research evidence on some of the key battlegrounds of the 2010 General Election

April 2010

CENTRE *for* ECONOMIC PERFORMANCE

Centre for Economic Performance
London School of Economics and Political Science
Houghton Street London WC2A 2AE
Tel: +44 (0)20 7955 7673 Fax: +44 (0)20 955 7595
Email: cep.info@lse.ac.uk Web: http://cep.lse.ac.uk

THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

Contents

An Introduction to the 2010 CEP Election Analysis Series

The 2010 General Election is shaping up to be the closest in living memory with a three-horse race between the main parties. It is also an extremely important election as there are tremendous economic problems facing the UK, and the victors of the election will face a series of major challenges as the economy tries to climb out of the deepest recession since the war.

At this critical juncture, it is important to give UK voters the hard information based on rigorous economic analysis that they need to make a reasoned decision on whom to vote for. There is a surfeit of spin from the parties, lobbyists, newspapers and pressure groups with axes to grind and agendas to push.

At the Centre for Economic Performance (CEP), we want to give, to the best of our ability an informed and balanced view of the evidence on the major issues facing the electorate. The CEP has no 'corporate view' and each of the 11 election analyses expresses the independent views of the authors.

The mission of the CEP since it was established two decades ago has been to conduct world-class and policy-relevant research. We have drawn on our work and our expertise on the best of other research to identify and carefully to interpret the raw facts.

We do not ask you to vote for any particular party, but we would urge you to vote; and to vote wisely considering some of the research evidence we present here.

Each analysis begins with a single page of bullet points summarising key findings followed by 5-10 pages of more in-depth briefing. Dedicated readers are encouraged to follow the references at the end with even more information regularly updated from the website.
http://cep.lse.ac.uk/_new/publications/series.asp?prog=CEPEA

The following summary draws out some key facts across all the election analyses.

We hope you enjoy the debates.

S. Machin John Van Reenen

Stephen Machin and John Van Reenen

Directors of the Centre for Economic Performance

Summary of Election Analyses

- *Debt and deficits:* The greatest challenge facing the next government is how to reduce the budget deficit and stabilise net public debt, which currently stands at £890 billion (£14,500 per person). No party has outlined more than £10 billion of spending cuts when cuts of £37 billion will be needed by 2014 to halve the deficit.

- *Getting and spending:* Before the recession, Labour increased taxes (by 2.3% of GDP between 1997 and 2007) and spending (by 1.2% of GDP). The higher spending on police, education and hospitals has reduced crime and improved schools and healthcare – but public sector productivity has fallen.

- *Financial regulation:* The roots of the global crisis lie in the financial sector where governments were forced to bail out banks deemed 'too big to fail'. Bankruptcy risk must be made credible by reducing the systemic risk of large banks, for example, through steeply progressive taxes on bank size.

- *Inequality:* Global forces such as technological change have pushed up inequality pressures. Labour's policies have constrained the growth of inequality, but not reduced its level. The richest 10% have increased their share of income by £20 billion since 1998 – largely because of bankers' bonuses.

- *Jobs:* Since the recession began, unemployment has risen from 5% to 8% – far less than expected given the huge fall in GDP (over 6%). Unemployment rose faster for youths than adults, but this always happens in recessions. Although the New Deal has helped to contain unemployment, youth joblessness started rising from 2004 – four years before the recession began.

- *Education:* A pupil premium for disadvantaged pupils would help raise standards. City academies and Swedish-style 'free schools' are unlikely to raise overall school performance.

- *Health:* Since 1997, huge increases in NHS spending have helped reduce the inequality of health outcomes by social class. Reforms that increased competition improved hospital quality.

- *Crime:* Crime has fallen since 1997, although 75% of people think it is rising. More police and targeting prolific offenders have helped reduce crime, as have improved opportunities at the lower end of the labour market.

- *Immigration:* The proportion of immigrants of working age rose from 8% in 1995 to 14% by 2009. Immigrants are less likely to be in social housing than the UK-born and are, on average, younger and better educated.

- *Urban renewal:* There is no convincing evidence that area-based initiatives, such as the New Deal for Communities, have reduced differences between rich and poor areas.

- *Environment.* In line with the Kyoto protocol, compared with 1990, UK emissions have been reduced by more than 12.5% since 1990. But the UK has failed to meet its own target of a 20% cut by 2010. To meet the targets efficiently, carbon prices must rise.

CEP ELECTION ANALYSIS

Immigration and the UK labour market: the evidence from economic research

Jonathan Wadsworth

CENTRE *for* ECONOMIC PERFORMANCE

ELECTION ANALYSIS

Immigration and the UK Labour Market: The Evidence from Economic Research

- Immigration to the UK had been rising from 1995 to 2008. Inflows to the UK had been falling since 2006 and now the stock of immigrants has also fallen back. This is because immigration almost always falls during a recession.

- By late 2009, 14% of the UK's working age population had been born abroad, up from around 8% in 1995. There are now 5.3 million adults of working age in the UK who were born abroad.

- The UK has a lower share of immigrants in its total population (10.2%) than Australia (25%), Germany (12.9%) or the United States (13.6%).

- Immigrants are arriving from many more countries than in the past. Poland, India and Pakistan are now the countries that contribute the biggest proportion of new arrivals, followed by South Africa and the United States.

- Compared with the UK-born, immigrants are younger and better educated. The most recent immigrants are even more educated. Immigrants are concentrated in London. About 60% of Brent's working age population was born overseas compared with under 3% in Knowsley.

- Aside from arrivals from other members of the European Union (EU), the number of new immigrants who are allowed to work in the UK is now controlled by the government through a 'points' system.

- Immigrants, on average, are *less* likely to be in social housing than people born in the UK, even when the immigrant is from a developing country. Only immigrants who became UK citizens are neither more nor less likely to be in social housing than UK-born individuals.

- There are potential economic benefits associated with migration, especially to fill gaps in the UK labour market – where there are shortages of workers, whether high- or low-skilled. While there may be costs to particular groups, there is little evidence of an overall negative impact on jobs or wages.

Introduction

There is little doubt that the share of immigrants in the UK's working age population is now higher than in the past (see Figure 1). Fifteen years of rising immigration between 1993 and 2008 means that there are now 6.8 million individuals (and 5.3 million adults of working age) living in the UK who were born abroad, up from 2.9 million in total (and 2.3 million of working age) in 1979.

Over the same period, the UK-born population grew from 52 million to 54.2 million (and from 30.3 million to 32.7 million of working age).

Since the fourth quarter of 2008, there has been a decline in the stock of immigrants living in the UK (see Figure 1). Just as happened in previous economic downturns, part of the explanation may be the onset of the latest recession.

The stock of immigrants is affected by both the size of inflows and the duration of stay, which in turn is related to the number of outflows of immigrants. Data on inflows come from two sources: the Labour Force Survey (LFS) and the International Passenger Survey (IPS).

According to the LFS, the inflow *rate* of immigrants into the UK has been falling since 2006. According to the IPS, immigrant inflow numbers have been broadly stable from 2006 to 2009. Moreover, *net* annual inflows (inflows minus outflows) have been on a downward trend since 2007, from a peak of over 200,000 to the current level of 147,000.[1]

At the same time, there has been a fall in the number of new asylum-seekers. These people form a group that is distinct from immigrants: asylum-seekers cannot legally work until their application has been granted. Asylum applications rose from 32,500 in 1997 to reach a peak of 84,130 in 2002 before falling back to 24,000 in 2009.

The stock of immigrants in the UK is influenced both by the UK's economic performance relative to other countries and by immigration policy. Just as in Canada and Australia, the UK now has a points-based immigration system, which seeks to restrict immigration from outside the European Union (EU) to skilled individuals. In practice, the number of arrivals who come from outside the EU to study or for family reunion every year still exceeds those arriving for work-related reasons.

Immigration has risen in almost all industrialised countries over the past decade, where the average share of immigrants in the population has increased from 10.7% to 13.8% between 1998 and 2007.[2] Spain, Austria, Ireland and the United States have all experienced similar-sized proportionate increases in immigration in recent years.

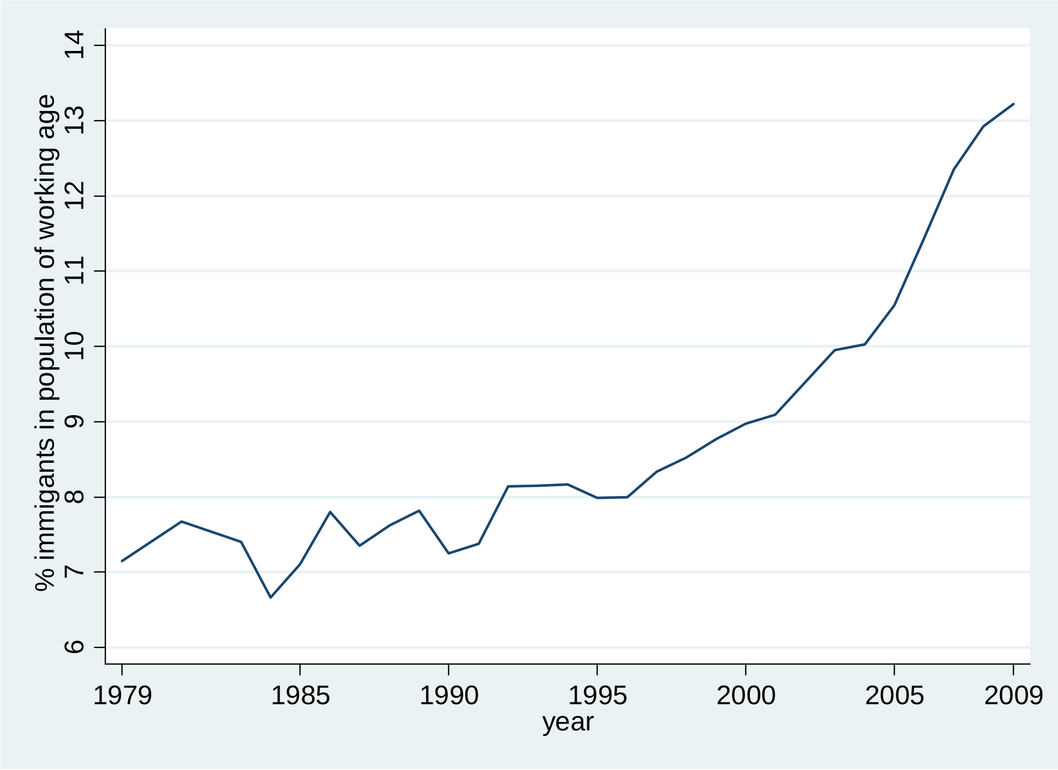
The UK is still a middle-ranking country in terms of how many immigrants live here. The OECD's internationally comparable figures for 2007 indicate that 10.2% of the UK's total population was foreign-born. This is below countries like Canada (20.1%), Germany (13%), the Netherlands (10.7%) and Sweden (13.4%).[3]

---

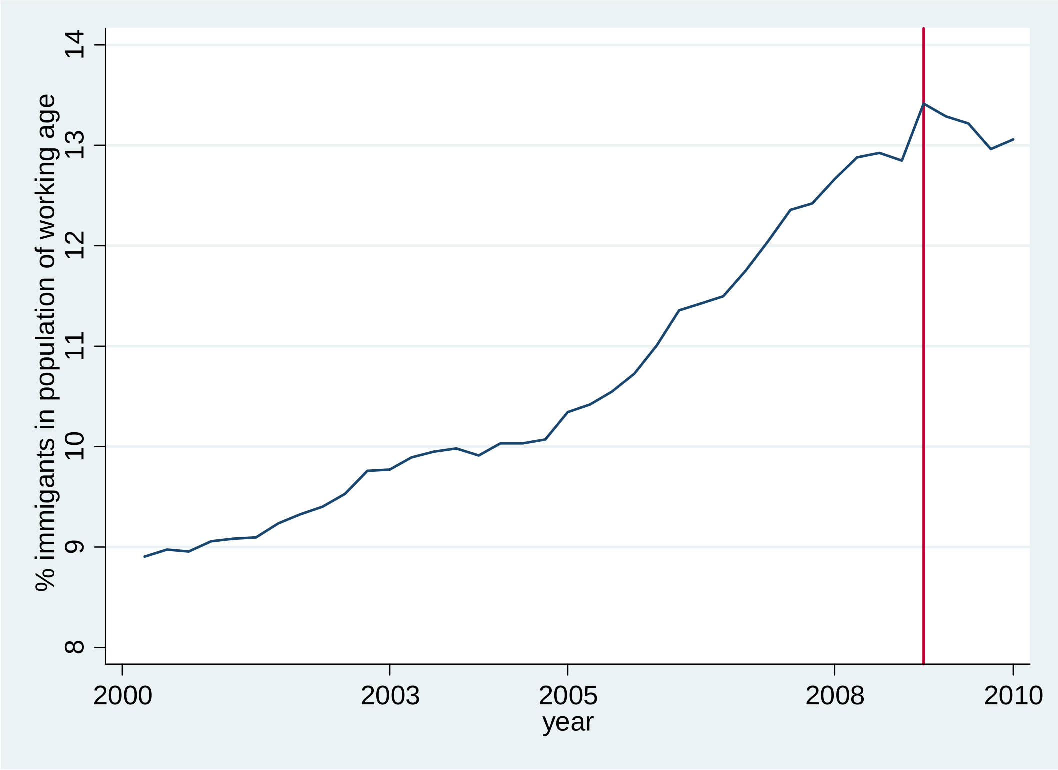
[1] http://www.statistics.gov.uk/pdfdir/mig0210.pdf.
[2] OECD, *International Migration Outlook 2009.*
[3] OECD, *International Migration Outlook 2006.*

Figure 1: The share of immigrants in the UK's working age population

A. Long run – percentage of immigrants in working age population, 1979q2-2009q2



B. Short run – percentage of immigrants in working age population, 2000q1-2009q4



Source: Labour Force Survey.

Which countries do immigrants come from?
Table 1 shows the country of origin of the top five 'sender' countries in 2009 for the stock of existing immigrants and the flow of new immigrants. Many new immigrants – those who have been in the country for less than a year – are not primarily from the poorest countries, but from developed countries or wealthier emerging countries like South Africa.

The sender countries are much less concentrated than in the past. Twenty years ago, one third of all immigrants came from just two countries, Ireland and India. Now these two countries account for just 12% of all immigrants. The top three sender countries for the new arrivals to the UK in 2009 were Poland, India and Pakistan.

Table 1: Country of origin of immigrants to the UK (percentage share in brackets)

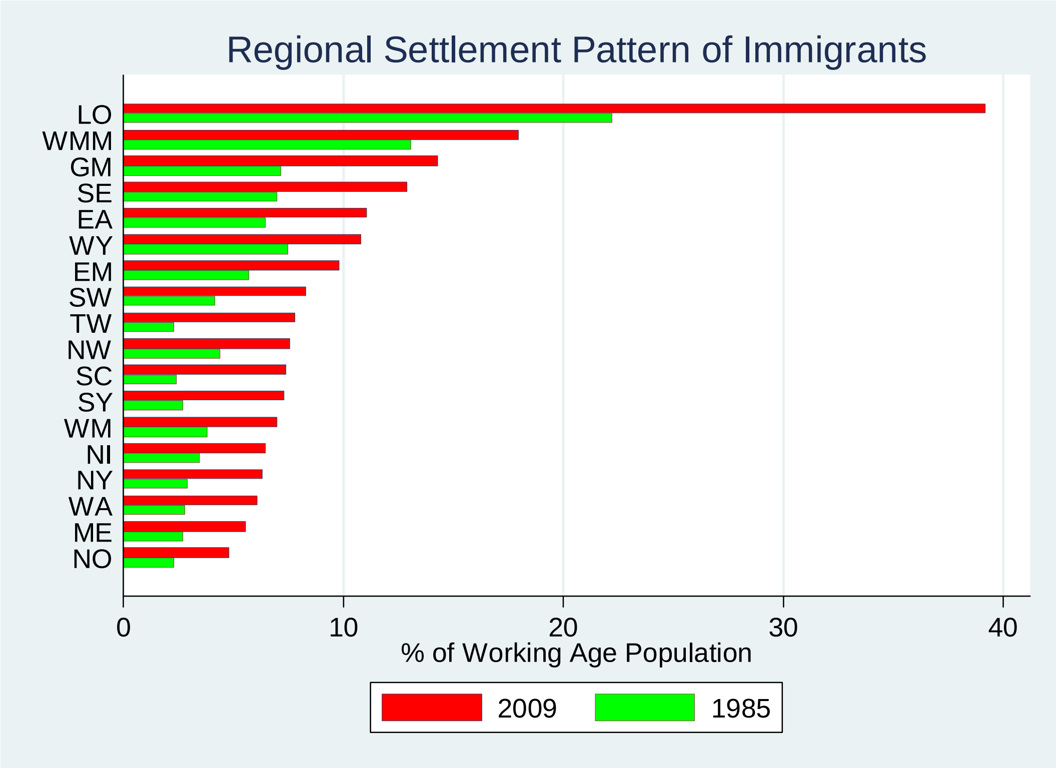
Largest senders	1985	2009
All immigrants		
1	Ireland (16.5%)	India (10.7%)
2	India (13.5%)	Poland (7.9%)
3	Pakistan (6.9%)	Pakistan (7.2%)
4	Jamaica (5.1%)	Germany (5.1%)
5	Germany (4.6%)	South Africa (3.4%)
New immigrants (arrived in last year)		
1	United States (20.6%)	India (11.4%)
2	Ireland (10.6%)	Poland (8.9%)
3	India (5.2%)	United States (5.6%)
4	Pakistan (4.1%)	South Africa (3.9%)
5	Germany (3.9%)	France (3.5%)

Source: Labour Force Survey.

Where do immigrants settle?
While the stock of immigrants has risen in all regions over time, it has risen most in London. Although there is some evidence to suggest that new immigrants are more regionally dispersed than in the past, immigrants constituted 39% of London's population in 2009 (see Figure 2).

The geographical dispersion of immigrant share across local areas is much larger. Around 60% of the working age populations of Brent and Westminster were born overseas compared with less than 3% of the populations of Knowsley or Redcar & Cleveland.

Figure 2: Immigrant share of regions' working age populations



Source: Labour Force Survey.

Note: LO=London, WMM=West Midlands Met., GM=Greater Manchester, SE=South East, EA=East Anglia, WY=West Yorkshire, EM=East Midlands, SW=South West, TW=Tyne & Wear, NW=North West, SC=Scotland, SY=South Yorkshire, WM=Rest of West Midlands, NI=Northern Ireland, NY=North Yorkshire, WA=Wales, ME=Merseyside, NO=North of England

What skills do immigrants have?

Immigrants are, on average, more educated than their UK-born counterparts, and the educational attainment gap has been rising over time since more recent immigrants are more educated, on average, than other immigrants (see Table 2).

While more than half of the UK-born workforce left school at 16 or earlier, fewer than one in six new immigrants finished their education by the age of 16. Just under one in five UK-born members of the workforce finished education at 21 or later compared with more than one in three immigrants and more than 50% of all new immigrants.

Table 2: Education and immigrant status (working age population), 2009

	Percentage of group with each level of education		
Age finished education	UK-born	All immigrants	New immigrants
16 or under	53.1%	24.8%	15.4%
17-20	28.2%	36.5%	34.0%
21 or older	18.7%	38.7%	50.6

Source: Labour Force Survey.

Education partly reflects immigrants' occupation and industry. There is a larger share of immigrants than UK-born working in professional occupations. But there are more immigrants, particularly new immigrants, in the elementary occupations (such as bar work and waiters) than might be expected given their qualifications (see Table 3).The hotel and restaurant sectors employ relatively more migrant workers than other sectors. The agriculture and energy sectors employ relatively fewer migrant workers than other sectors (see Table 4).

Table 3: Occupational distribution of immigrants and UK-born, 2009

	Percentage of group in each occupation		
	UK-born	All immigrants	New immigrants
Managerial	16.4%	12.6%	8.7%
Professional	13.1%	16.5%	18.9%
Assistant professional	14.7%	14.2%	8.7%
Administrative	11.6%	8.3%	5.7%
Skilled trades	10.8%	9.1%	8.3%
Personal service	8.8%	8.7%	11.0%
Sales	7.4%	6.5%	7.6%
Processing	6.9%	8.5%	2.7%
Elementary occupations	10.4%	15.7%	28.4%

Source: Labour Force Survey.

Table 4: Industrial distribution of immigrants and UK-born, 2009

	Percentage of immigrants in each industry	
	All immigrants	New immigrants
Agriculture	6.3%	0.2%
Manufacturing	11.1%	0.5%
Energy	6.7%	0.1%
Construction	8.3%	0.2%
Retail	11.0%	0.5%
Hotels and restaurants	22.7%	2.0%
Transport	14.7%	0.3%
Finance	13.3%	0.8%
Public administration	7.8%	0.2%
Education	9.2%	0.3%
Health	14.1%	0.5%
Other	8.6%	0.4%

Source: Labour Force Survey.

Some costs and benefits of immigration

There are many potential benefits of allowing the mobility of labour across international borders, just as there are benefits from the trade of goods, services and capital.

First, economic immigrants can ease shortages in the job market. Until 2008, the UK had a buoyant labour market and still has relatively low unemployment. There remain labour shortages in some areas such as the high turnover retail and hospitality sectors and high demand for very skilled workers as indicated by the growth in the wage premium for people with a university education since 1980 despite large increases in the number of university graduates.

Second, immigrants are typically younger than average, which can help with filling particular niches and balancing the generational gap in financing pension provision.

Although immigration will help keep the economy growing through the provision of goods and services that may not have been produced in the absence of immigration, there may be costs for particular groups. Simple economic analysis predicts that immigration may put downward pressure on the wages of workers who are in direct competition with immigrants.

Equally there may be costs to increased immigration if there is increased pressure on housing, health and welfare services.

Unlike in the United States, where the skill composition of immigrants is tilted towards the unskilled, the skill composition of immigrants to the UK is more biased towards skilled workers.[4] It might be expected therefore that there would be more pressure on wages among skilled workers in the UK, unless immigrants look for jobs that are not commensurate with their skills or it is harder to transfer certain acquired skills from one country to another.

Furthermore, if demand for labour is rising, there may be no effects of immigration on wages and employment. An open economy may adjust by means other than wages: one such mechanism is adjustment by changing the mix of goods the economy produces.

A recent study of the fiscal impact of immigration of workers from the eight EU accession countries of Central and Eastern Europe (the A8) concludes that because this group of immigrants are more likely to be in work and make less use of welfare and other public services, their net contribution is positive.[5]

What is the evidence on the labour market benefits and costs of immigration?

As ever, it is useful to consider the evidence rather than rely on perceptions about the effects of immigration. Recent empirical research on the labour market effects of immigration to the UK finds little evidence of overall adverse effects of immigration on wages and employment for people born in the UK.[6]

Nevertheless, there may be some downward pressure in the low wage labour market where (despite their higher relative education levels) many new immigrants tend to find work. There may also be a positive effect on wages in the high wage labour markets where it may take more time for the skills that immigrants bring to transfer.[7]

Population pressures
There has been some concern that rising immigration puts extra pressure on schools and on the housing market. These are areas in which there is still little hard evidence.

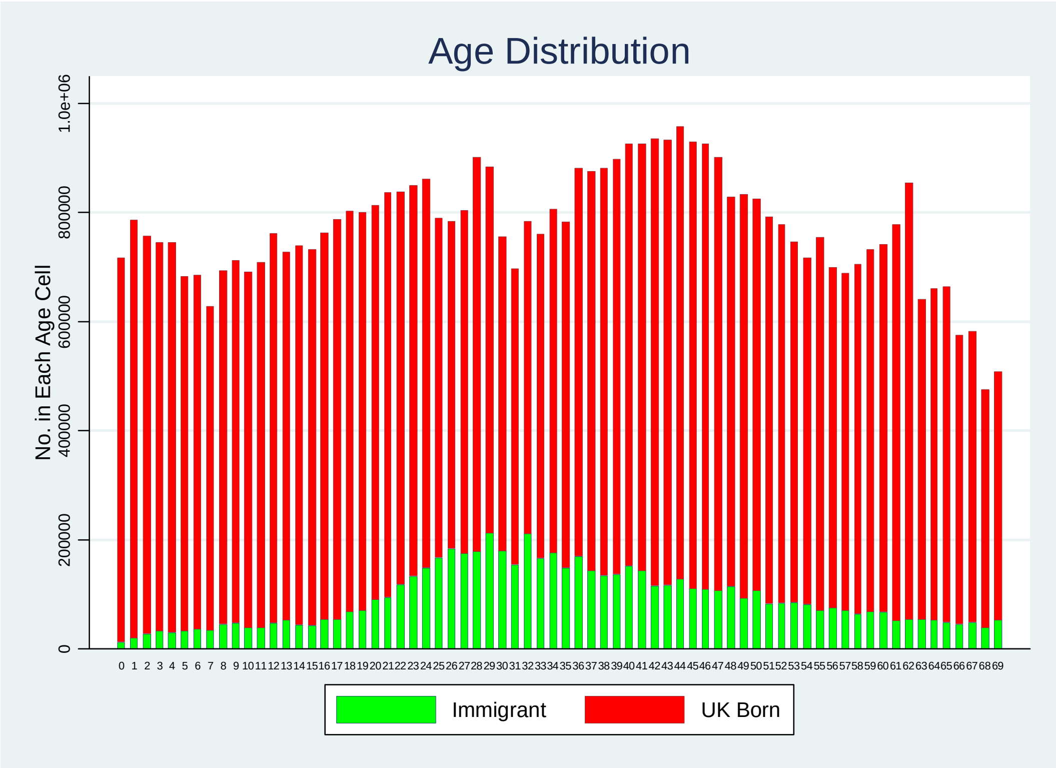
---

[4] Dustmann et al (2005).
[5] Dustmann et al (2009).
[6] Manacorda et al (2007).
[7] Dustman et al (2007).

Figure 3 compares the numbers of immigrants in each age group with the numbers of UK-born individuals in the same age group. Since most immigrants to the UK arrive as young adults, there are few children among the stock of immigrants and hence the numbers of children born abroad are small compared with the numbers of children born in the UK, which have also been declining because of a falling birth rate.

Together these demographic pressures on schooling resources should, on average, be small. But there may be more pressure in a few areas of the country, such as London, where immigration is concentrated. In 2009, more than one quarter of all 25-30 year olds (and 55% of all 25-30 year olds living in London) had been born abroad.

Figure 3: Numbers of immigrants by age group, 2009 (men and women), thousands



Source: Labour Force Survey.

Housing

Concerns have also been raised that rising immigration may be putting pressure on the housing system. Any increase in population means increased demand for housing services and if supply does not meet demand, this could lead to rising prices or increased queues for social housing.

There is, as yet, no evidence of the effect of immigration on house prices and rents, though we do know that immigrants are much less likely to be in owner occupation and much more likely to be in private rental accommodation (see Table 5).

With regard to social housing, new immigrants from outside the EU have no entitlement to social housing. Entitlement depends on citizenship, which in turn depends on years of residency in the UK, and then household needs.

Table 5 summarises the percentage point differences in the effect of immigrant status relative to UK-born individuals on the chances of being in social housing accommodation after controlling for age, qualifications, labour force status, marital status, number of children and region of residence. Table 5 also gives estimates for all immigrants and then for different groups of immigrants – immigrants who are now UK citizens, EU citizens, immigrants from the OECD and other immigrants.

Table 5: Immigration and housing tenure

	Percentage point difference relative to UK-born individuals, net of controls		
	Owner occupation	Private rental	Social housing
All immigrants	-38	+43	-5
Effect of one extra year in the UK	+1	-1	+ 0.1
Of which:			
UK citizens	+6	-6	0
EU citizens	-27	+33	-6
OECD immigrants	+4	+4	-8
Other immigrants	-19	+21	-2

Source: Annual Population Survey 2008, Population of Working Age.

The column on social housing shows that immigrants, on average, are 5 percentage points *less* likely to be in social housing on arrival. Thereafter, the chances of being observed in social housing rise by around 0.08 percentage points each year. A positive effect of years of residence is to be expected, since this is correlated with residency conditions and increased entitlement to welfare services.

Overall this suggests that immigrants are, on average, less likely to be in social housing. Disaggregating the stock of immigrants by country of origin, Table 5 shows that immigrants from the EU, from the OECD and other immigrants are all less likely to be in social housing. Only immigrants who became UK citizens are neither more nor less likely to be in social housing than UK-born individuals.

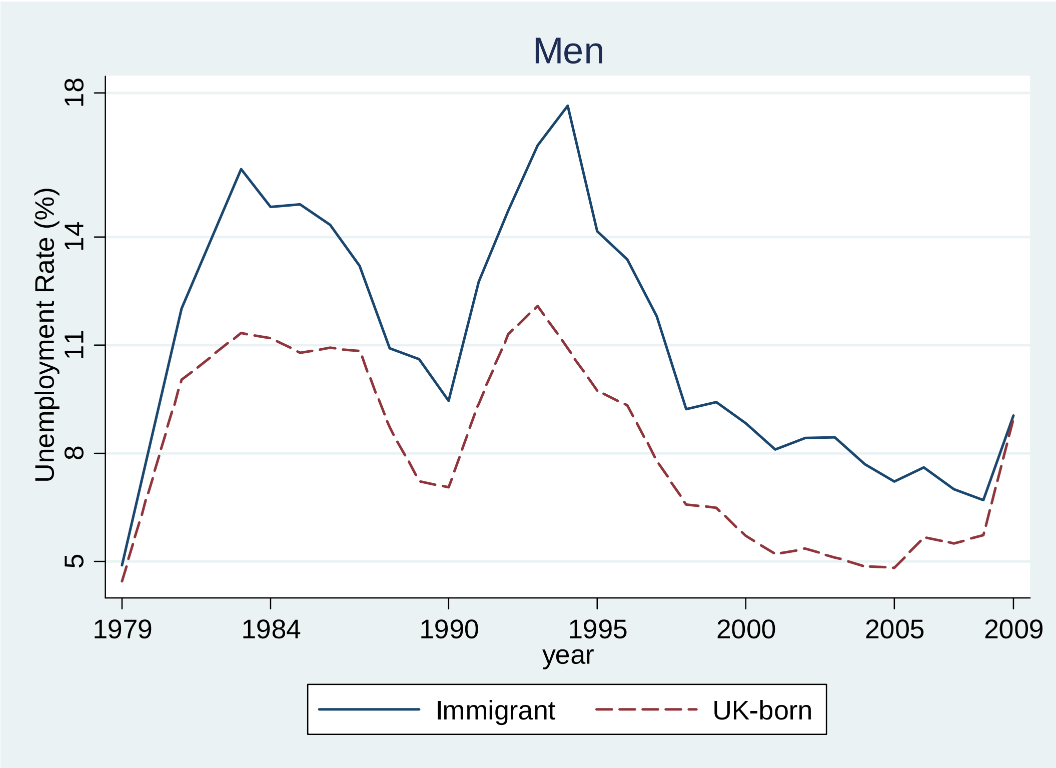
How do immigrants fare in the labour market?
For policy purposes, it is important to know whether immigrants benefit from economic conditions in the host country and, if so, how quickly they adapt and how this adaptation process changes with time or across policy regimes. The evidence suggests that over time, relative wage and employment prospects for immigrants to the United States appear to have deteriorated in a way that is not as apparent in the UK.[8]

Equally, there appear to be very few wage and employment effects of rising immigration on UK-born workers, on average. There are some hints in the data, that immigrants can put some downward pressure on the employment and job prospects of some of the less skilled.[9]

[8] Schmitt and Wadsworth (2007).
[9] Dustmann et al (2008).

There is now very little difference between the employment rates of immigrant and UK-born men. Historically the employment gap has widened in recessions and narrowed in economic recoveries. This has not been observed during the latest recession. Unemployment rates for immigrants and UK-born have risen together by similar amounts (see Figure 4).

Figure 4: Unemployment for immigrants and UK-born men



Source: Labour Force Survey.

In 2009, 81% of working age immigrant men had jobs compared with 79% of working age UK-born men (excluding students). Immigrant males are, on average, a little more likely to be unemployed but less likely to be economically inactive.

The higher average unemployment rate of immigrants was explained in part by the fact that many of them were employed in casual and insecure jobs: anyone who is in this sort of job faces much higher risks of subsequent unemployment. New immigrants cannot claim state benefits unless they are working or have paid sufficient contributions when in work.

Labour market performance is strongly influenced by age and education, which are factors that also determine the chances of coming to live in the UK. Table 6 gives a sense of the extent to which country of origin differences in employment rates can be accounted for by differences in age and education.

Among men, many immigrant groups have higher employment rates than UK-born men. Differences in age and educational attainment can account for much of the better relative employment performance among Indian immigrants and immigrants from the OECD, but not immigrants from elsewhere.

Table 6: Differences in employment rates between immigrants and UK born

	Percentage point difference in 2009 employment rate compared with UK-born			
	Men		**Women**	
	No controls	Controls for age and education	No controls	Controls for age and education
India	+4.4	0	-15.1	-14.2
Pakistan	-6.6	-6.5	-54.5	-41.5
Bangladesh	-9.0	-9.3	-56.2	-42.6
A8 accession	+12.8	+10.7	0	+4.8
Other EU	+4.0	+2.5	0	-3.8
OECD	+7.0	0	0	-5.7
Other immigrants	-2.5	-5.9	-12.0	-12.3

Source: Labour Force Survey.

Among women, there are much lower employment rates for some immigrant communities compared with UK-born women. Age and education can account for around one quarter of these differences among women born in Pakistan and Bangladesh, but more research is needed to understand the reasons for these differences.

Conclusions

During periods of strong economic growth, migration is and has always been important for filling gaps in the labour market. On balance, the evidence for the UK labour market suggests that fears over the consequences of rising immigration have been exaggerated. It is hard to find evidence of much displacement of UK workers or lower wages, on average. Immigrants, especially in recent years, tend to be younger and better educated than the UK-born and are less likely to be unemployed. They certainly do *not* receive preferential access to housing.

But there have been some effects. The less skilled may have experienced greater downward pressure on wages and greater competition for jobs than others, but these effects still appear to have been relatively modest. Unfortunately we don’t know much about whether the effects of immigration are different in downturns. We also need to understand more about how capital and sectoral shifts in demand respond to immigration over the longer run.

Future migration trends will, as ever, depend on relative economic performance and opportunity. But we still need to know more about the effects of rising immigration beyond the labour market in areas like prices, housing, health, crime and welfare.

References

Dustmann, C., F. Fabbri and I. Preston (2005) 'The Impact of Immigration on the UK Labour Market', CReAM Discussion Paper No. 01/05 (http://www.econ.ucl.ac.uk/cream/pages/CDP/CDP_01_05.pdf).

Dustmann, C., T. Frattini and C. Halls (2009) 'Assessing the Fiscal Costs and Benefits of A8 Migration to the UK', CReAM Discussion Paper No. 18/09 (http://www.econ.ucl.ac.uk/cream/pages/CDP/CDP_18_09.pdf).

Dustmann, C., T. Frattini and I. Preston (2008) 'The Effect of Immigration along the Distribution of Wages', CReAM Discussion Paper No. 03/08 (http://www.econ.ucl.ac.uk/cream/pages/CDP/CDP_03_08.pdf).

Manacorda, M., A. Manning and J. Wadsworth (2007) 'The Impact of Immigration on the Structure of Male Wages: Theory and Evidence from Britain', Centre for Economic Performance Discussion Paper No. 754 (http://cep.lse.ac.uk/pubs/download/dp0754.pdf).

Schmitt, J. and J. Wadsworth (2007) 'Changes in the Relative Economic Performance of Immigrants to Great Britain and the United States, 1980-2000', *British Journal of Industrial Relations*, Volume 45, Issue 4, pp. 659-686, December 2007.

CEP ELECTION ANALYSIS

Reducing Crime:

More police, more prisons or more pay?

Olivier Marie

ELECTION ANALYSIS

Reducing Crime: More Police, More Prisons or More Pay?

- Just over 4.7 million crimes were recorded by the police force of England and Wales in 2008/09, of which 72% were property crimes and 21% were violent crimes.

- The British Crime Survey, which asks consistent questions over time, shows that overall crimes *committed* have fallen by almost half since 1997.

- Overall *recorded* crime has also fallen since the early 1990s. The introduction of better recording practices in 1997 and 2002, however, make it difficult to assess recent trends in violent crime although it has clearly been decreasing in the past five years.

- Despite this fall in crime rates, three quarters of the public still think the national picture is worsening.

- Several crime-fighting strategies work. First, increases in police numbers, combined with new policing strategies such as the Street Crime Initiative, have reduced robberies. Second, targeting prolific offenders is an effective tool for reducing crime. Third, recent evidence suggests that early release on electronic monitoring helps reduce recidivism rates of ex-prisoners.

- There is no clear evidence that the large increase in locking people up has reduced crime, especially in terms of its long-term impact on offending behaviours.

- Poor education and bad labour market opportunities are associated with higher levels of crime. Government policies aimed at improving education and ‘making work pay’ can have indirect effects on crime reduction.

Introduction

Crime is usually high on the list of voter concerns. This might seem surprising since total crime has fallen significantly since the mid-1990s. Yet three quarters of the population think that crime is rising nationally.[1] Politicians must take account of the public's false perception of increasing levels of crime, which seems to be sustained even in years when both recorded crime and victimisation surveys point to reductions in overall crime.

The total economic and social cost of crime was estimated to be just above £35 billion by the Home Office for 2003/04, the latest year for which figures are available.[2]

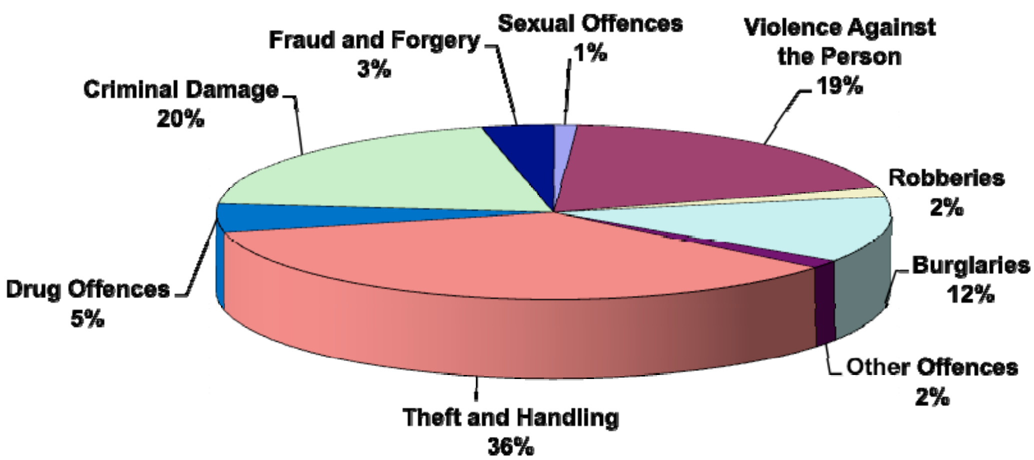
All the political parties promise to be 'tough on crime' and to protect central police funding from cuts. The opposition parties also stress freeing up police time spent on administrative 'red tape'. The Conservatives promise to increase the number and length of custodial sentences, while the Liberal Democrats put the emphasis on rehabilitation. The Labour government likes to highlight policies to tackle economic and social deprivation.

This Election Analysis describes crime trends and research evidence relevant to the parties' proposed policies.

What has happened to crime over time?

The police recorded just over 4.7 million crimes in England and Wales between April 2008 and March 2009. The three main types of property crimes – theft and handling, burglaries and criminal damage – account for 68% of the total; while violent crimes – sexual offences, violence against the person and robbery – account for a little more than 20% of all recorded crimes (see Figure 1).

Figure 1: Recorded crime categories 2008/09



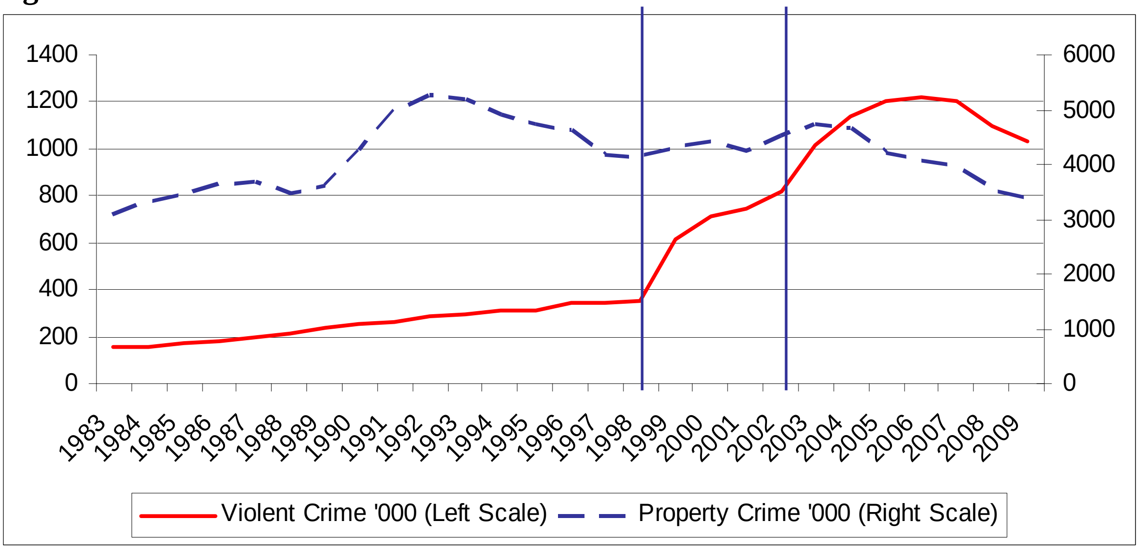
Source: Crime in England and Wales 2008/09

[1] This is on a par with what the public thought in 1996. But the proportion of people who think crime is getting worse at their local area has decreased from 55% to 36% over the same period (Crime in England and Wales 2008/09).
[2] Dubourg et al (2005).

There has been a clear reduction in *recorded* property crime since it peaked in the early 1990s (see Figure 2). The introduction of two successive police recording practice changes in 1998/99 and 2002/03 makes it harder to compare what has happened since Labour came to power.

The two change years are highlighted in Figure 2 with vertical lines and show that the earlier changes strongly affected violent crime, which now includes some previously unrecorded categories. In recent years though, both property and violent recorded crimes appear to have been decreasing, despite the recording rule adjustments.

Figure 2: Recorded crime trends 1983-2009



Source: Recorded Crime Statistics 1983/84-2002/03 (http://www.homeoffice.gov.uk/rds/pdfs/100years.xls) and Crime in England and Wales 2008/09 (http://www.homeoffice.gov.uk/rds/pdfs07/hosb1107chap2.xls)
Note: vertical lines denote a break in the series

The British Crime Survey (BCS) is better for looking at trends, as it was not affected by the recording practice changes. This victimisation survey also offers a useful counterpoint to administrative crime data to get a better picture of offences committed but possibly not recorded. This gap is very important as Table 1 shows: only a quarter of comparable violent crimes and two thirds of property crimes were recorded in 1997.

Overall the number of crimes committed since 1997 appears to have fallen by almost half – from 6.3 million in 1997 to only 3.3 million in 2008. The fall in 1997-2002 was faster for property crime than violent crime, but after 2002, both types of crime have fallen by about a quarter.

Table 1: Comparing committed crimes (British Crime Survey), recorded crimes and changes in the fear of crime over time

	1997	2002	2008	Percentage change 1997-2008
	All comparable property crime			
Crimes recorded by the police (thousands)	2,330	2,080	1,391	- 40%
Estimate of crimes committed (thousands)	6,294	4,435	3,270	-48%
Percentage of crimes recorded	37%	47%	43%	+6%
Percentage very worried about crime	21%	16%	12%	-9%
	All comparable violent crime			
Crimes recorded by the police (thousands)	290	330	515	+78%
Estimate of crimes committed (thousands)	1,138	1,003	738	- 35%
Percentage of crimes recorded	25%	33%	70%	+45%
Percentage very worried about crime	25%	22%	15%	-10%

Source: Crime in England and Wales 2008/09 – the 'all comparable property crime' category includes burglary, all vehicle thefts (excluding interference and tempering), bicycle theft and theft from the person; the 'all comparable violent crime' includes less serious wounding and robbery. Worry about property crime is based on burglaries and vehicle crime; worry about violent crime is based on all violent crimes. Note that there are breaks in series for recorded crime (see below).

Trends in recorded crime are harder to judge because of improvements in the way crime is measured, as noted above. For example, only 25% of violent crimes committed were recorded in 1997, but 70% were recorded in 2008. Thus, although recorded violent crime appears to have increased (as committed crimes fell), this is due to changes in reporting and is therefore misleading[3]. Consistent with this interpretation, the proportion of people who say they are very worried about crime has also fallen by around 10% since 1997, even for violent crime.

Reducing crime: more police?

Since 1997, a net total of 17,000 extra police have been hired. There is a strong public perception that more police makes a society safer. But the impact of increasing police on reducing crime is hard to unravel: if more police are hired to combat crime, then crime may appear to be higher when there are greater numbers of police.

Examination of the Street Crime Initiative in 2002 suggests that more police resources can significantly reduce crime.[4] This policy allocated extra funds[5] to 10 of the 43 police force areas of England and Wales with a remit to use the funds to try to combat robbery. Because the Street Crime Initiative was introduced in certain areas and not in

[3] Although the last change was in 2002, it seems that it took some time before the Home Office systems fully adjusted, so some of the apparent rise post 2002 is likely still linked to this change.
[4] Machin and Marie (2005).
[5] Just under £50 million over two years, mainly spent on police staffing.

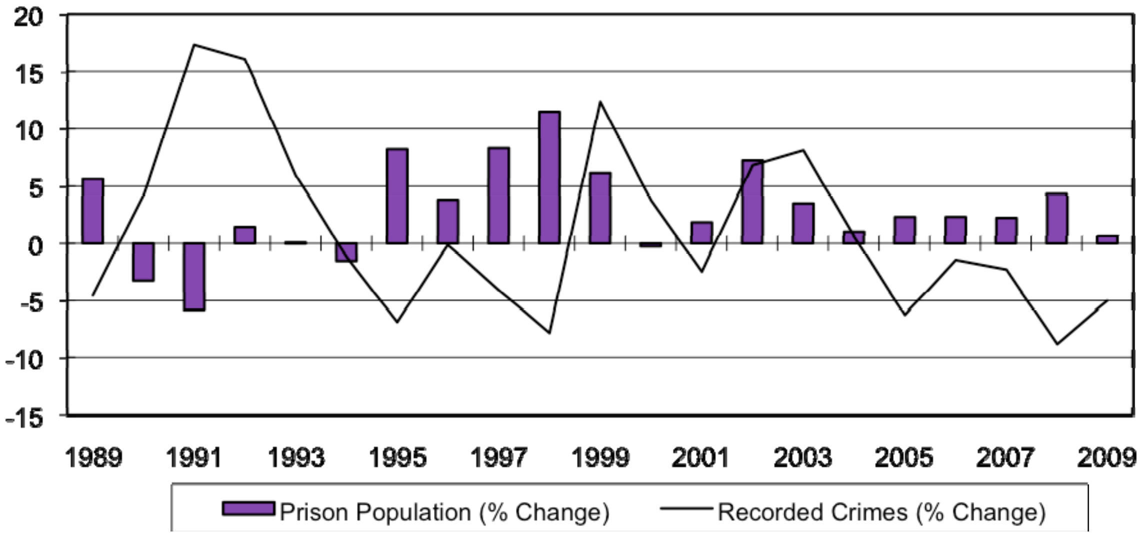
others, it is possible to compare what happened to robberies before and after the introduction across areas.

The research finds that these extra police resources did have a strong impact, reducing robberies by about 20%. The initiative was highly cost-effective with a net social benefit estimated at between £100 and £170 million a year. Key to this outcome seems to be a combination of extra manpower with the introduction of innovative police practices such as greater and more systematic inter-agency co-operation.

Reducing crime: more prisons?

In December 2009, there were just over 84,000 individuals in custody in England and Wales, which represents 153 prisoners per 100,000 members of the population. The prison population has almost doubled in 20 years and the incarceration rate is 60% higher than that in France or Germany.

Figure 3: Changes in prison population and recorded crime 1989-2009



Source: Offender Management Caseload Statistics 2008, Recorded Crime Statistics 1989-2002/03, and Crime in England and Wales 2008/09

Imprisonment can reduce crime through two channels. First, as offenders are in custody, they are removed from the street and unable to commit other crimes – the 'incapacitation effect'. Second, the increased threat of punishment deters potential criminals from committing offences.

Figure 3 plots changes in prison population against changes in recorded crime. Although crime does appear to decrease when incarceration levels increase, there may be other factors driving both outcomes.

These figures also ignore re-offending rates, which may be better measures of the effectiveness of prison, especially in comparison with rehabilitation programmes. Recent research has, for example, shown that a large early release scheme in England

and Wales (Home Detention Curfews) was successful in significantly reducing re-offending rates.[6]

There is also evidence that targeting and monitoring individuals who are responsible for committing large volumes of offences in their communities can reduce crime.[7] Examination of the effect of early introduction of the Prolific Offender Strategy in certain areas of the UK before it was rolled out in 2004 indicates that it had a substantial impact in reducing burglaries, the crime these type of offenders are most likely to commit.

Reducing crime: the impact of education and labour market policies

A large body of evidence suggests that education and labour market opportunities influence criminal activity. Someone with a poor education and bleak labour market opportunities is more likely to commit a crime. This may be because, for property crimes, the potential financial gains outweigh the risks.

Most research findings point to a strong impact of economic conditions, in particular income inequalities, on crime. For example, in the 1980s, there were larger increases in crime in areas where low wages deteriorated most strongly.[8] The introduction of the national minimum wage in 1999 also appears to have reduced crime by improving the relative pay of the worst off workers.[9] By contrast, the relationship between crime and unemployment is more uncertain.[10]

Labour market policies are also potentially important for crime since they have the potential to alter economic incentives. Machin and Marie (2004) study the introduction of more stringent unemployment benefit requirements with the 1996 introduction of the Jobseeker's Allowance. There was a substantial drop in unemployment, but some of these individuals dropped out of the labour market and shifted into criminal activities.

Research also shows that improved education opportunities can reduce crime. Since the UK has one of the lowest post-compulsory participation rates in education in Western Europe, this could well be linked to higher crime rates for 16 to 18 years olds. There is research evidence that increases in the school leaving age in England and Wales (in 1947 and 1972) has had important long-term crime reduction effects.[11]

The Labour government has introduced the Education Maintenance Allowance, which pays low-income pupils to stay in school, and this policy has had some success in improving their staying on rates.[12] An additional benefit is that in areas where the allowance was first introduced, juvenile property crime rates fell by more than in areas where it had not yet been introduced.[13]

Improving people's education opportunities therefore emerges as an important crime reduction policy. This works in two ways: first, by reducing crime by increasing

---

[6] Marie (2009).
[7] Machin and Marie (2007).
[8] Machin and Meghir (2004).
[9] Hansen and Machin (2002)
[10] Freeman (1999), Machin and Marie (2004).
[11] Machin et al (2010).
[12] Dearden et al (2009).
[13] Feinstein and Sabates (2005).

people’s potential future income; and second, by reducing crime participation while individuals stay involved in the education system.

Conclusions

Total crimes committed have significantly fallen under the Labour government. This is due to important reductions in property crimes, which represent the majority of offences committed. Fear of crime has also receded in lockstep with this.

The apparent increase in recorded crime for serious offences is due to improvements in the way that crime is recorded by the police – 70% of serious crimes committed were recorded in 2008 compared with only 25% in 1997. Thus, looking at trends in recorded crime is highly misleading.

One central crime-fighting election pledge from all parties is to keep central police funding at least at its current level. Recent research shows that spending on police resources does reduce certain types of crime when linked to the introduction of new police practices. Improving the education and labour market position of the unskilled can also help, especially in the long run.

There is less evidence to support the proposal to increase the prison population so as to reduce crime, although certain early release packages appear to reduce re-offending behaviour successfully. Recent research also finds that targeting prolific offenders does reduce the rate of crimes they are most likely to commit in their community.

High income inequality and low education opportunities have emerged as important factors explaining the causes of crime. Certain policies introduced by the Labour government to tackle those causes appear to have had an indirect beneficial effect of reducing crime rates.

April 2010

References

Dearden, L., C. Emmerson, C. Frayne and C. Meghir (2009) ‘Condition Cash Transfers and School Dropout Rates’, *Journal of Human Resources* 44(4): 827-857.

Feinstein, L. and R. Sabates (2005) ‘Effect of Government Initiatives on Youth Crime’, *Oxford Economic Papers* 60(3): 245-262.

Freeman, R. (1999) ‘The Economics of Crime’, in O Ashenfelter and D Card (eds), *Handbook of Labor Economics*, Elsevier Science.

Hansen, K. and S. Machin (2002) ‘Spatial Crime Patterns and the Introduction of the UK Minimum Wage’, *Oxford Bulletin of Economic and Statistics* 64: 677-697.

Machin, S. and O. Marie (2004) ‘Crime and Benefit Sanctions’, CEP Discussion Paper No. 645 (http://cep.lse.ac.uk/pubs/download/dp0645.pdf).

Machin, S. and O. Marie (2005) ‘Crime and Police Resources: The Street Crime Initiative’, CEP Discussion Paper No. 680 (http://cep.lse.ac.uk/pubs/download/dp0680.pdf).

Machin, S. and O. Marie (2007) ‘Reducing Crime by Targeting Prolific Offenders’, CEP mimeo.

Machin, S., O. Marie and S. Vujic (2010) ‘The Crime Reducing Effect of Education: New Evidence from Britain’, CEP mimeo.

Machin, S. and C. Meghir (2004) ‘Crime and Economic Incentives’, *Journal of Human Resources* 39(4): 958-979.

Marie, O. (2009) ‘Early Release and Recidivism: A Regression Discontinuity Approach’, CEP mimeo.

Walker, A., J. Flatley, C. Kershaw and D. Moon (2009) ‘Crime in England and Wales 2008/09’, *Home Office Statistical Bulletin* 11/09.

CEP ELECTION ANALYSIS

Education:

Evaluating education policies: the evidence from economic research

Sandra McNally

CENTRE for ECONOMIC PERFORMANCE

ELECTION ANALYSIS

Evaluating Education Policies: The Evidence from Economic Research

- Educational expenditure in the UK has increased enormously – but it is still only just above the OECD average. In 1997/98, expenditure on education and training as a percentage of GDP was 4.9% (the same level as in 1987/88) whereas in 2006, it was 5.9% of GDP. There is robust evidence that the increase in school expenditure between 2002 and 2007 led to a modest increase in educational attainment.

- Exam performance has improved over time for secondary schools. But the improvement in primary schools since 2000 has been more muted. Exam performance has improved at a faster rate for poorer pupils, although the gap between rich and poor pupils is still substantial.

- A 'pupil premium' that would follow disadvantaged pupils would help to correct inequities in how funding gets allocated to schools. Research evidence suggests that economically disadvantaged pupils benefit disproportionately from rises in general school expenditure.

- Early evidence on the effects of the academies programme suggests that the growth in educational attainment for pupils attending academies is no different than for pupils attending other similar schools. Evidence for Sweden does not suggest that the application of a similar system in the UK would raise overall educational attainment.

- Increasing the entry-level qualifications for teachers is a difficult challenge in view of the high labour market returns available to graduates and the continuing need for more teachers to replace those who leave the profession. Research evidence suggests that 'teacher quality' is important for their pupils' results, but it does not suggest that there is a relationship between 'teacher quality' and teachers' own educational credentials.

Introduction

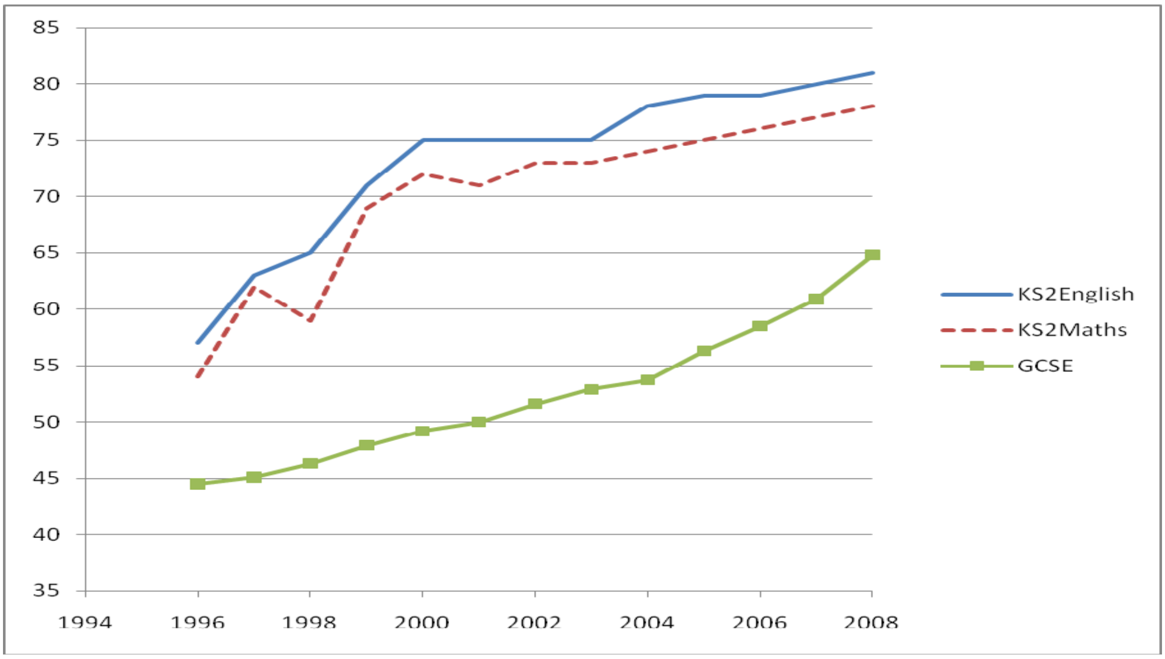
Education is a top issue on the agenda for all political parties. This Election Analysis gives an overview of key issues that are likely to be important in the election campaign.

How is England performing?

Educational performance has improved since 1997 and moved England up the international league tables for secondary school pupils.

Educational performance in England is usually measured by the percentage of pupils attaining five or more GCSEs at grades A*-C at the end of compulsory schooling. With regard to primary education, the indicator is the percentage of pupils achieving the required standard (as defined by the National Curriculum) at the end of key stage 2. Both measures suggest massive improvement over time (see Figure 1).

Figure 1: Improvements in educational achievements



But critics allege that grade inflation, ‘teaching to the test’ and attempts by schools to manipulate their performance (for example, by encouraging pupils to take easier subjects) can account for a lot of this improvement. A different criticism is that roughly a fifth of primary school children still do not achieve the required standard by the end of primary school despite the improvements. All this prompts people to look at how England performs internationally.

There are three international tests of relevance here: Progress in International Reading Literacy (PIRLS), conducted in 2001 and 2006 for pupils of about 10 years old; the Programme for the International Student Assessment (PISA), conducted in 2000, 2003 and 2006 for 15 year olds; and Trends in International Mathematics and Science Study (TIMSS), conducted in 1999, 2003 and 2007 for pupils of about age 10 and age 14 (that is, years 5 and 9 in England).

Take first the surveys for secondary school pupils. TIMSS is more curriculum-based and closer to what is measured in national key stage tests. PISA measures the application of knowledge in everyday situations.

The latest PISA suggests that scores for England are close to the OECD average. But PISA should *not* be used to measure change over time because of problems with the English entry in both 2000 and 2003.[1]

In TIMSS, England is one of the top performers and there has been a significant increase in test scores over time. Hence, TIMSS suggests that the improvement over time in national tests is not just an artefact of grade inflation. But the fact that England is only an average performer on PISA should guard against any complacency about educational standards.

The latest PIRLS study shows that England is significantly above the international average for the reading abilities of 10 year olds. But this is below some major European countries (including Italy and Germany) and there has been a decline in performance since 2001.

As explained by Twist et al (2006), the change over time is sensitive to the methodology for linking data. Their alternative methodology suggests that the fall over time might be smaller than what appears in the main study. But even in the national data, it is hard to see evidence for much improvement in this particular time period.

Taken together the evidence suggests that any improvement in primary school achievement since 2000 has been modest, at best.

Of course, one of the biggest issues in UK education policy is its role (or potential role) in influencing social mobility. The lack of social mobility in the UK is well-known and is reflected partly in the strong relationship between poverty and educational attainment.

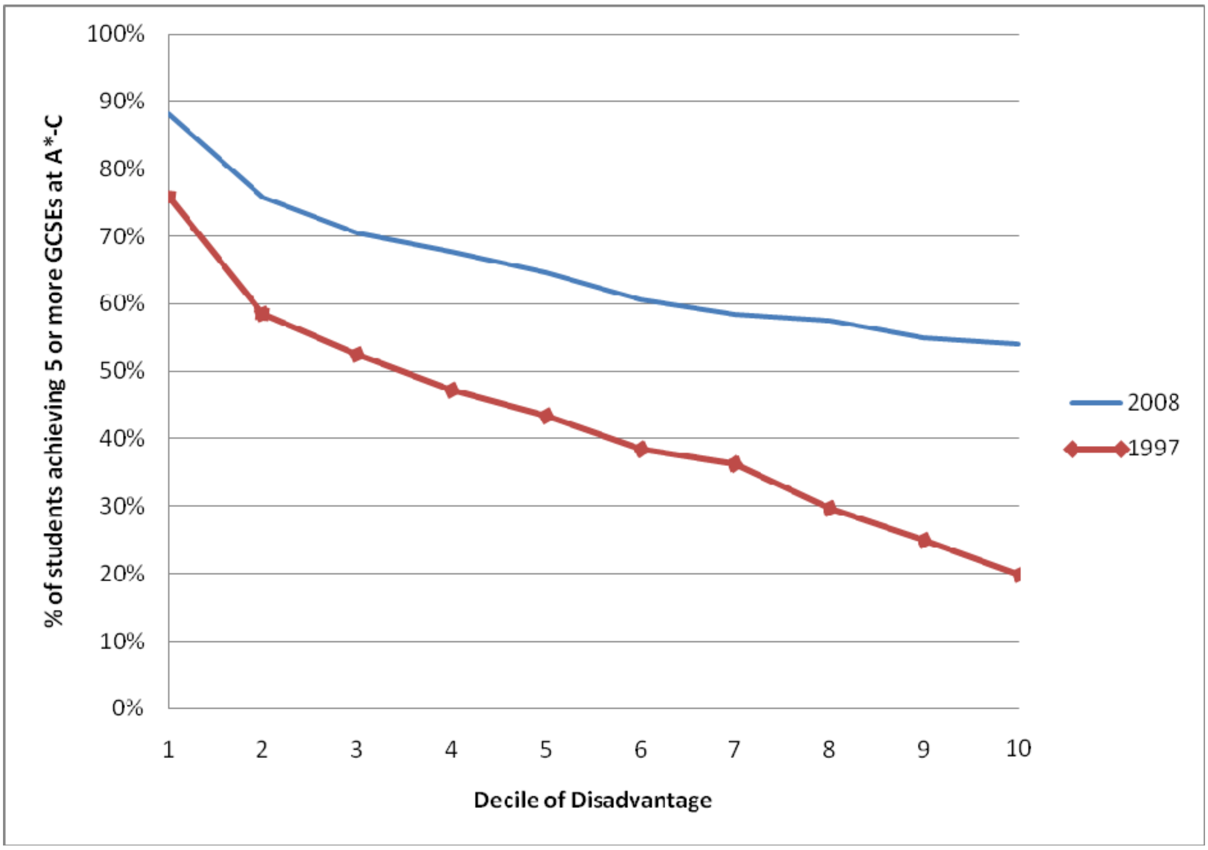
Figure 2 shows that educational attainment at GCSE (measured at school level) is strongly related to schools' concentration of poor pupils (as measured by eligibility to receive free school meals). But the relationship is weaker than it was back in 1997 because of catching up among schools serving poor pupils. A similar phenomenon is found at pupil level for 2003/04 to 2008/09.[2]

---

[1] England did not meet the OECD school response rate for PISA 2000. In 2003, participation rates both at school and pupil level did not meet OECD requirements and England was excluded from international comparisons.

[2] Chowdry et al (2010).

Figure 2: Average performance of schools by decile of disadvantage



Note: Average performance is measured by the percentage of pupils achieving five or more GCSEs at A*-C. Schools divided into 10 equal deciles, depending on their disadvantage in each period, as measured by the percentage of pupils eligible to receive free school meals (where decile 1=most advantaged; decile10=most disadvantaged).
Source: derived from the Annual School Census and the School Performance Tables

Has it been worth the money?

Yes, the rise in expenditure has been cost-effective. There is clearly much more that could be done.

It is easy to point to problems in the comparability of tests over time and therefore difficult to measure progress. But there is no such problem in measuring the costs. Since 2000, school expenditure has increased by about 40% in real terms for both primary and secondary schools. In 1997/98, expenditure on education and training as a percentage of GDP was 4.9% (the same level as 1987/88) whereas in 2006, it was 5.9% of GDP. This brings the UK to just above the OECD average.

The increase in expenditure has partly been used to bring pupil-teacher ratios down. It fell from 18.6 in 1997 (for all primary/secondary/nursery schools) to 16.9 in 2008. The UK still has high primary class sizes compared with other OECD countries (see Table 1).

Table 1: International comparisons of education spending and class size

	Expenditure on all levels of education as a percentage of GDP (2006)	Average class size in primary education (2007)
UK	5.9%	24.6
United States	7.4%	23.1
Germany	4.8%	22.1
France	5.9%	22.6
Sweden	6.3%	-
Finland	5.8%	19.8
OECD average	5.7%	21.4

Source: OECD *Education at a Glance*, 2009

Within the UK, there is an enormous difference between the resources provided to the state sector and what is offered in the private sector. Although average class size is 24.6 overall in primary schools, it is only 13.1 in private (primary) schools.

Not surprisingly, there is a high wage premium in the labour market for people who attended private school (even controlling for background characteristics). Machin and Murphy (2010) show that three and a half years after graduation, men and women who went to private school earn more than those who went to state schools by 8% and 6% respectively.

Would even more investment in the state sector help to close this gap? To answer this question, it is useful to ask whether the additional resources given to state schools in recent years have helped to improve educational attainment.

Holmlund et al (2009) analyse the relationship between pupil expenditure and attainment in key stage 2 tests of English, maths and science, after taking account of pupil-level and school-level characteristics (including all effects that could be attributed to schools which do not vary over time). They find that pupil expenditure has a positive and significant effect on all tests. The order of magnitude is fairly modest but is sufficient for likely benefits to outweigh costs. Table 2 summarises evaluation studies conducted at CEP.

Table 2: CEP evaluation of government policies: evidence of effects on pupils' educational attainment

Policy	Sector	Project	Positive	Little or no effect	Additional comments
Choice and competition	Primary	Gibbons, Machin and Silva (2006, 2009)		√	Suggestion that small effect might be possible in schools with greater autonomy
Increasing overall school expenditure	Primary	Holmlund, McNally and Viarengo (2009)	√		Modest effects but large enough to be cost-effective – effects 20-40% higher for disadvantaged pupils
Literacy and Numeracy Strategies	Primary	Machin and McNally (2008, 2010)	√		Moderate effects at very low cost
Academies	Secondary	Machin and Wilson (2009)		√	Early days in the evaluation of this policy
Excellence in Cities	Secondary	Machin, McNally and Meghir (2007)	√		Modest effects but large enough to be cost-effective – effects are highest for the most able pupils in schools with highest rate of deprivation

Pupil premium?

A pupil premium attached to poor pupils would help to address inequalities in the current system.

One of the issues that has been flagged up by both the Conservatives and the Liberal Democrats is the possibility of a pupil premium whereby money would follow economically disadvantaged children to the schools they attend.[3] This would address a problem that has been recognised about the current system: local authorities are less redistributive in how they

[3] The proposals have been evaluated in detail by the Institute for Fiscal Studies in a recent study (Chowdry et al, 2010). Labour have also said they would introduce a 'pupil premium' though it is not clear to what extent their proposal differs from existing policy.

allocate resources to schools than central government is in how it allocates resources to local authorities.[4]

This arises because local authorities decide on their own funding formulae for schools. Although they have to take account of deprivation, they can decide how to do it and to what extent. The result is that schools facing the same level of deprivation receive different amounts of funding, depending on where they are located.

Holmlund et al (2009) show that some of the most advantaged schools in the country have the same level of per pupil expenditure as some of the most disadvantaged schools. It is relevant to note that schools have much freedom in deciding how to use their funding once it gets devolved to them. Therefore, there is no guarantee that individual pupils from disadvantaged socio-economic backgrounds benefit from the extra school funding even if the 'pupil premium' were to be adopted.

However, Holmlund et al (2009) show that increasing overall per pupil expenditure has a larger impact on economically disadvantaged pupils (about 20-40% higher than other pupils). And in an evaluation of Excellence in Cities, Machin et al (2007) show that the largest effects were for pupils of high ability in the most disadvantaged schools.

Furthermore, efforts to make the school funding system more equitable might help to improve the UK's record on social mobility since this is correlated with inequality. There has been much work at CEP showing the UK's poor record on social mobility.[5] Early indicators suggest that this has at least not got worse in the last 10 years, although there are mixed results on whether things have improved or stayed the same.[6]

But efforts to tackle inequality need to do more than address school-related policies. Many studies show that family background is the most important determinant of educational attainment. For example, Kramarz et al (2008) show the high relative importance of family background and early educational experiences for primary school children in England.

Furthermore, the recession may have made matters worse. Tominey (2010) shows that unexpected changes in family income can strongly influence whether children subsequently drop out of education or go on to university (especially if these income effects are long-term and they happen when children are young). Therefore, policies directed at families are very important in attempts to equalise educational opportunities.

Academies and 'free schools'

There is no evidence that an expansion of the academies programme or the introduction of Swedish-style 'free schools' would improve average educational attainment.

Perhaps the most radical school initiative to address disadvantage is the creation of academies. These schools were originally designed to replace failing secondary schools located in socially disadvantaged urban areas. But their coverage is now spreading geographically and also to different sorts of predecessor schools (not just the absolute worst schools in the local authority).

---

[4] West (2009).
[5] See Blanden (2009) for a review.
[6] Blanden and Machin (2008); Gregg and Macmillan (2009).

Academies are publicly funded institutions that are largely run by sponsors (individuals, businesses or other groups) outside the public sector. Unlike most other publicly funded schools, academies are completely independent of the local authority. The board of governors has full responsibility for the school. This covers matters such as the hiring of teachers, their conditions of service, and the content of the curriculum outside core subjects.

This Labour policy creation has been embraced by the Conservatives who want to expand it and waive the requirement for private sector sponsors to contribute towards the capital costs (which is 10% of building costs or £2 million). The Swedish reforms of 15 years ago are taken as the model for the 'free schools' that would be created.

What is the evidence for the success of these 'new independent schools' either in the UK or in Sweden? Machin and Wilson (2009) consider some early evidence on academies. They compare the growth in GCSE performance for schools that became academies with a comparison group of similar schools. While there was an improvement in the GCSE performance of schools that became academies, it was no different from the improvement for schools in the comparison group.

But it is still too early for the academies programme to be fully appraised on the basis of GCSE results. Another important issue (currently under investigation) is the effect of academies on the performance of schools in the same local areas. It seems sensible to take account of such analysis (available in the next few months) before expanding the programme.

There have been a number of studies of the effects of the Swedish reform. The study with the most convincing methodology and looking at long-term as well as short-term effects is by Bohlmark and Lindahl (2008). They use the differential increase in the new independent schools across municipalities to see whether the increase is associated with any change in overall performance of the municipality.

They find evidence of only small positive effects in the short-term, which do not persist. They speculate that one reason for this could be the fact that the entry of new private schools has not been followed by the closing down of state schools.

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

Furthermore, importing the Swedish model may not make very much difference to the status quo. Fifteen years ago, Sweden started from a position of no school choice: pupils had to attend the state school in their neighbourhood.

In the UK, parents have had the right to apply to any school for many years. The problem is with people's empowerment to exercise choice and not with their legal right to use it. Some people have greater empowerment than others, and this works against lower income families and those with difficulties in accessing and understanding information. There is good evidence that higher income parents move to locations with better schools and that this is reflected in house prices.[7]

The question about ‘free schools’ or expansion of the academies programme is whether such initiatives are likely to provide disproportionate benefits to parents who currently have least choice. In theory, a pupil premium for disadvantaged pupils should give an incentive for new schools to recruit such pupils. But as discussed by Chowdry et al (2010), the premium would need to be very high to reduce the disincentive for schools to attract such pupils.

Furthermore, the current school admissions code does not allow schools to use socio-economic background as a basis for selection. Any weakening of the admissions code in this respect could work against pupils from poor backgrounds. Moreover, if ‘free schools’ have greater freedom to exclude pupils than other state schools, then the latter will bear the full cost of educating children with the greatest social problems.

The creation of new schools does not, of course, directly deal with problems in the rest of the state sector. ‘New school’ advocates argue that the increased competition will generate increased competition between schools and therefore lead to improvements in the system as a whole. But CEP research finds no evidence of a link between choice and achievement and only a small positive (non-causal) association between competition and school performance.[8] International evidence on this issue remains mixed.

Telling schools what to do?

In practice, all parties have some policies that give schools autonomy and others that ‘tell schools what to do’. The key question is when autonomy is appropriate.

School autonomy is used in political rhetoric. But the truth is that the political parties advocate a mixed combination of policies – some allowing schools greater autonomy on particular issues and some effectively telling schools what to do. The academies programme is an example of the former, whereas examples of the latter include introducing phonics programmes (advocated in policy documents by both Labour and the Conservatives) and ‘setting’ in secondary schools (advocated by the Conservatives).

There has been research on the relative merits of allowing schools to be autonomous versus imposing more centralised control.[9] While school autonomy allows better use of decentralised knowledge, it might increase the potential for teachers to pursue agendas that are not in pupils’ interests.

In a cross-country analysis, Wößmann (2003) finds that school autonomy in setting educational standards and the size of the school budget is negatively related to pupil performance. The opposite is true of school autonomy in personnel management and process decisions, for example, hiring teachers and setting salaries. Thus, school autonomy is efficient in some areas of decision-making but not in others – and the issue is much broader than simply whether or not to allow new types of school.

[7] Gibbons and Machin (2003) and Gibbons et al (2009).
[8] Gibbons et al (2008); Gibbons and Silva (2006).
[9] For example, Wößmann (2003).

Which category does pedagogy fall into? On the one hand, teachers can use their own knowledge of their pupils to decide on what teaching method works best. On the other hand, teachers may not be equipped with the knowledge of how different methods work and what works best.

It was the poor teaching of literacy and numeracy in some inner city schools in the early 1990s that prompted the introduction of the literacy and numeracy hours in primary schools in the mid-1990s (originally known as the National Literacy and Numeracy Projects, started by the Conservatives; then as the National Literacy and Numeracy Strategies, started by Labour). In each case, the literacy or numeracy hour was quite prescriptive in terms of the content and structure of the daily hour.

CEP research suggests that these pedagogies were very successful in raising standards of literacy and numeracy.[10] It is particularly striking that England overtook Wales at the point at which these strategies were applied in comparable tests. In Wales, local authorities were allowed to do their own thing and thus there was far more decentralisation than in England.

This example shows that a centralised approach can be more effective than the alternative when there is a sound evidence base and when teachers are not fully informed of the relative merits of different pedagogies.

Would this also apply to 'setting'? This means that pupils are allocated to different classes for particular subjects at school on the basis of ability. Currently schools may use setting (and many do), but no one is sure of how much of this goes on because available data sets do not record the class in which the pupil is taught.

But there have been a number of studies using English data to examine the likely importance of peer group effects. If the ability of peers matter a lot to a pupil's attainment, this would help make the case for 'setting' to be more widely applied in schools.

Although peer group effects have been found to be important in other countries (for example, Goux and Maurin, 2007, for Paris, and Ammermueller and Pischke, 2009, using international data), studies using English data have not found peers to matter very much for average educational attainment.[11]

The one proviso is that Lavy et al (2009) find effects that are highly heterogeneous. In brief, very low ability peers (in the bottom 5% of the distribution) can negatively affect pupils. Very high ability peers (top 5%) have a positive effect on girls but not on boys. Given such heterogeneity in the effects, it could well be that schools (and not central government) are better placed to decide on whether and how to use setting.

[10] Machin and McNally (2008; 2010).

[11] For example, Gibbons and Telhaj (2008); Lavy et al (2009); and Kramarz et al (2008).

Getting the best teachers?

Teacher quality (but not their qualifications) matters for pupil attainment. Attracting 'high quality' graduates is a challenge in the public sector because of higher earnings' possibilities elsewhere.

The Conservatives aim to make teaching an 'unashamedly elitist profession'. By this they mean raising the standard of entry in terms of academic qualifications. Labour are also trying to increase the status of teaching by introducing a new licence to practice – aspiring to put teaching on the same footing as high-status professions like doctors and lawyers.

There are a number of challenges to these aspirations. First, there is currently a shortfall of teachers in England (although this is relatively small – 0.7% of the total); the Secondary Initial Training intake has been below the number of allocated places every year since 1993/94; and a large number of people leave teaching every year (18,000 in 2007/08 – over half due to retirement). Therefore the new schemes proposed by the Conservatives need to attract highly qualified people in quite large numbers.

The much-admired scheme to attract graduates into teaching ('Teach First') may be the largest recruiter of graduates. But the number of graduates placed (500 in 2009) is small in relation to the overall need for teachers.

An interesting article about the pros and cons of 'Teach for America' (TFA) was published in the journal *Education Next* (Mikuta and Wise, 2008).[12] Research evidence on whether TFA teachers are more or less effective than other teachers is quite mixed. The high qualifications of graduates on the TFA programme need to be set against the fact that most do not stay in teaching for very long (in a context where teaching experience is an important determinant of pupil outcomes).[13]

Second, although teachers' salaries have increased in recent years, secondary school teachers earn slightly below the national average for graduates, and primary school teachers earn about 13% less. Doctors and lawyers earn far more than either.[14] Furthermore, the average returns to higher education are extremely high. Wage differentials for graduates have not diminished in the 2000s despite the increase in supply.[15]

A consequence of the increase in graduate opportunities over recent decades (especially for women) is that it is more difficult to attract highly qualified people into teaching. For example, Nickell and Quintini (2002) show that teachers are being drawn from further down the distribution of educational achievement than they were in the past. In this context, attracting more highly qualified people into teaching in sufficient numbers is a difficult challenge.

[12] http://educationnext.org/teachers-for-america/

[13] But even the more critical author suggests that a positive impact from TFA may come from 'the creation of a new education and societal leaders with abiding interest and direct experience in the problems of educating our nation's disadvantaged'.

[14] The average annual salary of doctors, lawyers, secondary school teachers and primary school teachers is £73,598, £55,723, £33,985, and £30,030 respectively (ASHE, 2009 Table 14.7a). The average graduate salary in the Labour Force Survey (2008) is £34,443.

[15] Machin and Van Reenen (2008).

Does this matter for educational performance? Research shows that teacher quality matters but not necessarily educational qualifications. Unfortunately, data for the UK are not suitable for analysing this question.

The best studies are in the United States where 'total teacher effects' are measured by looking at differences in the growth rates of pupil achievement across teachers. As explained by Hanushek (2008), such studies show that 'teacher quality' is very important for pupil achievement but 'teacher quality' is not associated either with educational credentials or salaries. In contrast, a recent study looks at cross-country data and finds evidence of a positive relationship between teachers' salaries (and relative salaries) and pupil performance.[16]

Improving behaviour

Research evidence suggests that voluntary programmes to encourage parental involvement can improve the behaviour of the entire class.

A reason why teachers quit is sometimes reported as poor pupil behaviour. Tackling this issue might help to retain teachers as well as being important in itself. Policy proposals by both Labour and the Conservatives reflect their belief that involving parents is central to this.

The 'behaviour contracts' proposed by the Conservatives and the 'home school agreements' proposed by Labour aim to make clear what is expected of parents (with sanctions for those who do not meet expectations).

Recent research in Paris shows the potential effects of encouraging parents to become more actively involved in their children's education (by voluntary means rather than compulsion). Avvisati et al (2010) show that parents' involvement can be increased through relatively simple information programmes, even in deprived areas. These programmes consist of an invitation to three meetings for parents of 11 year olds where the topics were about how parents should help their children.

The really important finding of this research is that informing and motivating a relatively small set of parents led to an improvement in the overall behaviour and educational performance in the class (not just for the children of the parents who volunteered).

It might also be that attempts to improve pupil wellbeing directly (advocated by Labour in the Every Child Matters agenda) have a knock-on effect on their behaviour. One in-school approach has been a trial of the Penn Resilience Programme, which involves the development of a special curriculum to build resilience and to promote optimistic thinking, adaptive coping skills and social problem-solving among children. This is an intensive programme, requiring teacher training and 18 hours of workshops.

It is early days in the evaluation so it is not yet known whether pupil behaviour has been affected. But interim findings show significant positive impacts in terms of improving indicators of pupils' mental health.[17]

---

[16] Dolton and Marcenaro-Gutierrez (2010).
[17] Challen et al (2009).

Higher education

Research evidence suggests that higher fees can be justified, though it is important to have a well-understood support system in place.

So far, all the discussion has been about schools. But an issue that politicians will want to avoid in the election campaign is what to do about university fees and whether to raise the cap. The review of university fees will not happen until after the election. The Liberal Democrats are the only major political party aiming to scrap tuition fees. The other two have not said what they would do about the cap on fees.

The economic case for having university fees is clear-cut. On average, there is a large wage return to having a university degree. For example, detailed research using the cohort studies suggests that the average return from going to university compared with leaving school with one or more A-levels is of the order of 15% – and higher for women.[18]

Given that graduates receive such large private returns, it is difficult to see why people who have not gone to university (the vast majority) should subsidise those who have – especially in view of the fact that people who go to university in the first place are over-represented among the relatively well-off.[19]

On the other hand, there does need to be some means of supporting young people to go to university because no one is able to get a large loan from a bank on the strength of potential future earnings. Furthermore, piling up of debt at an early point of a person's career might put-off those from relatively poor backgrounds from going to university at all.

The government response to this has been to set up a generous system of loans and grants. It is very important that the loan is payable only after university when a person is earning a salary of at least £15,000. The repayment is then 9% of earnings over that amount. Given these very generous terms, media reports of university graduates saddled with thousands of pounds of debt are grossly misleading.

Given likely cuts in university funding, it will probably be necessary to raise the cap on university fees. Currently most universities charge the maximum (£3,225 per year). An important question is whether there is justification for large differential fees for different universities and courses.

There are many studies showing that subject studied and the institution attended matter greatly for how much graduates earn.[20] Recent evidence suggests that institutional quality has a premium in the labour market and this is likely to be particularly high for top institutions.[21]

Such research suggests that there is indeed justification for allowing fees to vary by university institution and course. But in cases where university fees are high, it will be important to offer differential subsidies to avoid putting off the highly able but least well off pupils from applying to top universities and courses.

Conclusions

[18] Blundell et al (2000); Bratti et al (2005).
[19] Chowdry et al (2008).
[20] For example, as reviewed in Machin and McNally (2007).
[21] Hussain et al (2009).

Analysis of recent experience suggests that resources matter for educational attainment and results would suffer if the sector had to face cutbacks. Tackling inequality of opportunity in education requires programmes that are directed at families as well as schools because family background is the most important determinant of educational outcomes.

Claims that the introduction of more new schools (whether ‘free’ or ‘academy’) would improve average educational attainment have been greatly exaggerated. The most relevant research evidence does not support this conclusion. A research finding that some independent schools improve performance is not the same thing as a research finding that says that more independent schools would improve the educational system overall.

There are important interactions between different parts of the education system. In particular, the thorny issue of how to close schools (whether ‘free’ or ‘non-free’) when they are seen to fail needs to be addressed. But there is an important debate to be had about areas in which school autonomy and parental participation in schooling can be increased. This is a different debate from one that focuses exclusively on whether or not there should be more ‘free’ or ‘academy’ schools.

Whatever position is taken on the ‘school creation’ or school autonomy debate, attracting high-quality teachers to the profession is a top priority. Research suggests that high-quality teaching matters hugely but that this is not measured by teacher qualifications. The challenge of attracting and retaining more highly able teachers in the context of a competitive labour market should not be underestimated. This does not come cheap.

April 2010

References

Ammermueller, A. and J. S. Pischke (2009) 'Peer Effects in European Primary Schools: Evidence from the Progress in International Reading Literacy Study', *Journal of Labor Economics* 27(3): 315-348.

Avvisati, F., M. Gurgand, N. Guyon and E. Maurin (2010) 'Does Parental Involvement Make a Difference?', mimeo, Paris School of Economics.

Blanden, J. (2009) 'Big ideas: intergenerational mobility', *CentrePiece* 13 (3), Winter 2008/09.

Blanden, J. and S. Machin (2008) 'Up and Down the Generational Income Ladder in Britain: Past Changes and Future Prospects', *National Institute Economic Review* July: 101-116.

Blundell, R., L. Dearden, A. Goodman and H. Reed (2000) 'The Returns to Higher Education in Britain', *Economic Journal* 110: F82-F89.

Bohlmark, A. and M. Lindahl (2008) 'Does School Privatisation Improve Educational Achievement? Evidence from Sweden's Voucher Reform', IZA Discussion Paper No. 3691, Institute for the Study of Labor, Bonn.

Bratti, M., R. Naylor and J. Smith (2005), 'Variations in the Wage Returns to a First Degree: Evidence from the British Cohort Study 1970', IZA Discussion Paper No. 1631.

Challen, A., P. Noden, S. Machin and A. West (2009) 'UK Resilience Programme Evaluation – Interim Report', DCSF – RB094.

Chowdry, H., C. Crawford, L. Dearden, A. Goodman and A. Vignoles (2008) 'Widening Participation in Higher Education: Analysis using Linked Administrative Data', Institute for Fiscal Studies Report R69.

Chowdry, H., E. Greaves and L. Siebieta (2010) 'The Pupil Premium: Assessing the Options', Institute for Fiscal Studies Commentary C113.

Dolton, P. and O. Marcenaro-Gutierrez (2010) 'Cross Country Analysis of Teacher Pay and Pupil Performance', CEP mimeo.

Gibbons, S. and S. Machin (2003) 'Valuing English Primary Schools', *Journal of Urban Economics* 53: 197-219.

Gibbons, S., S. Machin and O. Silva (2009) 'Valuing School Quality Using Boundary Discontinuity Regressions', Spatial Economics Research Centre Discussion Paper No. 0018.

Gibbons, S., S. Machin and O. Silva, (2008) 'Competition, Choice and Pupil Achievement', *Journal of the European Economic Association* 6: 912-947.

Gibbons, S. and O. Silva (2006) 'Competition and Accessibility in School Markets: Empirical Analysis Using Boundary Discontinuities', in T. J. Gronberg and D. W. Jansen (eds), 'Improving School Accountability: Check-Ups or Choice?', *Advances in Applied Microeconomics* Vol. 14, Elsevier.

Gibbons, S. and S. Telhaj (2006) ‘Peer Effects and Pupil Attainment: Evidence from Secondary School Transition’, Centre for the Economics of Education Discussion Paper No. 63.

Goux, D. and E. Maurin (2007) ‘Close Neighbours Matter: Neighbourhood Effects on Early Performance at School’, *Economic Journal* 117: 1-24.

Gregg, P and L Macmillan (2009) ‘Family Income and Education in the Next Generation: Exploring Income Gradients in Education for Current Cohorts of Youth’, Centre for Market and Public Organisation Discussion Paper No. 09/224

Hanushek, E. A. (2008) ‘Education Production Functions’, in SN Durlauf and LE Blume (eds), *The New Palgrave Dictionary of Economics*, Palgrave Macmillan.

Holmlund, H., S. McNally and M. Viarengo (2009) ‘Does Money Matter for Schools?’, Centre for the Economics of Education Discussion Paper. No. 105.

Hussain, I., S. McNally and S. Telhaj (2009) ‘University Quality and Graduate Wages in the UK’, Centre for the Economics of Education Discussion Paper No. 99.

Kramarz, F, S Machin and A Ouazad (2009) ‘What Makes a Test Score? The Respective Contributions of Pupils, Schools and Peers in Achievement in English Primary Education’, Centre for the Economics of Education Discussion Paper No. 102.

Lavy, V., O. Silva and F. Weinhardt (2009) ‘The Good, the Bad and the Average: Evidence on the Scale and Nature of Ability Peer Effects in Schools’, NBER Working Paper 15600.

Machin, S. and S. McNally (2007) ‘Tertiary Education Systems and Labour Markets’, a report prepared for the OECD (http://www.oecd.org/dataoecd/55/31/38006954.pdf).

Machin, S. and S. McNally (2008) ‘The Literacy Hour’, *Journal of Public Economics* 92: 1141-1462.

Machin, S. and S. McNally (2010) ‘The Three Rs: The Scope for Literacy and Numeracy Policies to Raise Achievement’, CEP mimeo.

Machin, S, S McNally and C Meghir (2007) ‘Resources and Standards in Urban Schools’, Centre for the Economics of Education Discussion Paper No. 76

Machin, S. and R. Murphy (2009) ‘Differences in Labour Market Gains from Higher Education Participation’, Report to the National Equality Panel (http://www.equalities.gov.uk/pdf/Variation%20in%20gains%20from%20university%20education.pdf).

Machin, S. and J. Van Reenen (2008) ‘Changes in Wage Inequality’, in S. N. Durlauf and L. E. Blume (eds), *The New Palgrave Dictionary of Economics*, Palgrave Macmillan.

Machin, S. and J. Wilson (2009) ‘Academy Schools and Pupil Performance’, *CentrePiece*, Spring.

Mikuta, J. and A. E. Wise (2008) ‘Teachers for America: Catalysts for Change or Untrained Temporaries?’ *Education Next*, Spring 2008.

Nickell, S. and G. Quintini (2002) ‘The Consequences of the Decline in Public Sector Pay in Britain: A Little Bit of Evidence’, *Economic Journal* 112, F107-F118.

Tominey, E. (2010) ‘The Timing of Parental Income and Child Outcomes: The Role of Permanent and Transitory Shocks’, mimeo, CEP and UCL.

Twist, L., I. Schagen and C. Hodgson (2006) ‘PIRLS Readers and Reading, National Report for England’, National Foundation for Educational Research.

West, A (2009) ‘Redistribution and Financing Schools in England under Labour: Are Resources Going to Where Needs are Greatest?’, *Education Management Administration and Leadership* 37(2): 158-79

Wößmann, L. (2003) ‘Schooling Resources, Educational Institutions and Student Performance: the International Evidence’, *Oxford Bulletin of Economics and Statistics* 65(2): 117-170.

CEP ELECTION ANALYSIS

Higher spending has improved quality, but productivity must increase

Zack Cooper and Alistair McGuire

CENTRE *for* ECONOMIC PERFORMANCE

ELECTION ANALYSIS

Health: Higher Spending has Improved Quality, But Productivity Must Increase

- UK healthcare spending has increased by nearly 7% a year in real terms in the last decade – the largest ever sustained increase in the history of the National Health Service.

- Spending on the NHS will slow in the next decade, making it necessary to achieve significant improvements in productivity. Neither of the major political parties has been explicit about their budget proposals for the NHS or provided specific plans to improve the productivity of the health service.

- Since taking office in 1997, the Labour government has implemented a combination of market-based reforms to the hospital sector and performance management for general practitioners (GPs) and waiting times.

- Clinical performance and patient satisfaction have increased substantially and waiting times have dropped significantly since Labour has been in power.

- The NHS still lags behind other European countries on several quality indicators and in particular on cancer mortality.

- A key battleground in the General Election will be over the centralisation of the health service. The opposition parties want to abolish targets and the Conservatives are also proposing to limit political involvement by creating an independent NHS board.

- There has been a rush of policy proposals in the run-up to the election. Recently, the Labour government has proposed paying for social care for anyone in care for more than two years. Likewise, the Conservatives have proposed guaranteeing all NHS patients access to any cancer medication that has been approved since 2005. Neither party has directly addressed how to pay for their proposals.

LSE Health

Introduction

The National Health Service will be a central issue in the 2010 General Election. Over the last decade, the Labour government has nearly doubled NHS spending in real terms and has introduced significant reforms across the health service. During the same period, the NHS has improved considerably on most measures of quality and patient satisfaction, although it still lags behind a number of comparable European countries on cancer survival and the quality of stroke and heart attack care.

Both major parties have pledged to continue to increase NHS funding in real terms going forward. However, the rate of real terms increases from 2010/2011 onwards will be significantly slower than the increases from the last decade. This slowdown in NHS spending increases will place considerable pressure on the health service to become more productive. Thus far, neither party has been explicit about their plans either to rein in healthcare spending or to make the NHS more efficient.

A focal point of the debate between the two major parties is likely to be over the degree of centralisation of the health service. The Conservatives have pledged to create an independent NHS board that will lead the management of the NHS, shift the Department of Health’s focus onto public health and abolish the centrally set targets created by Labour. The Labour party will campaign on their existing record with the health service, advocate continuing reform and introducing into law key patient ‘rights’, such as maximum waiting times.

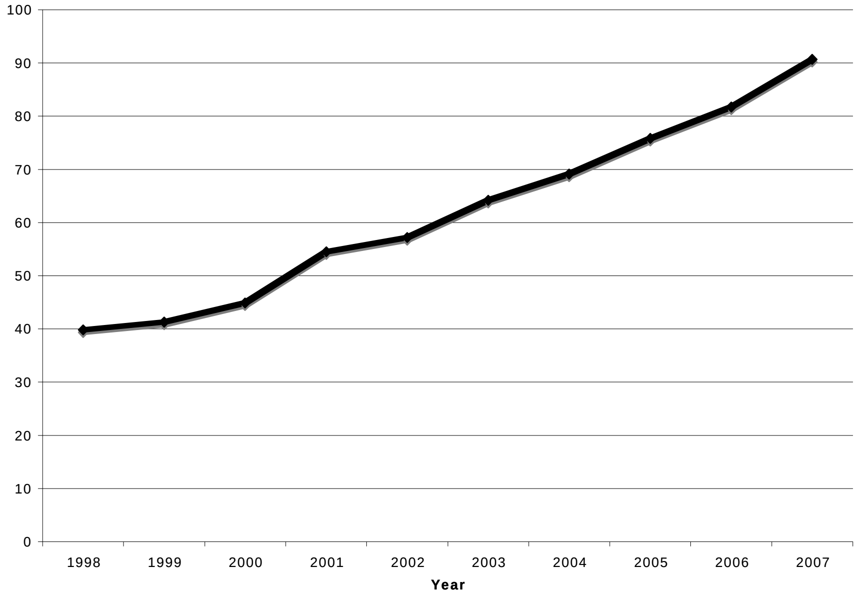
NHS spending 1997-2010

Since 1997, NHS spending has increased at a faster rate than at any other period in time to £127 billion in 2010/11 (see Figure 1). NHS spending increased by 4% annually over the lifetime of the NHS, but since 2000 it has increased by approximately 7% in real terms.

The Labour government increased funding as part of a concerted effort to raise healthcare spending in the UK as a proportion of GDP up to the European average. Healthcare expenditure is estimated to be 9.3% of GDP in 2010/11, with the NHS accounting for approximately 18% of UK public expenditure.

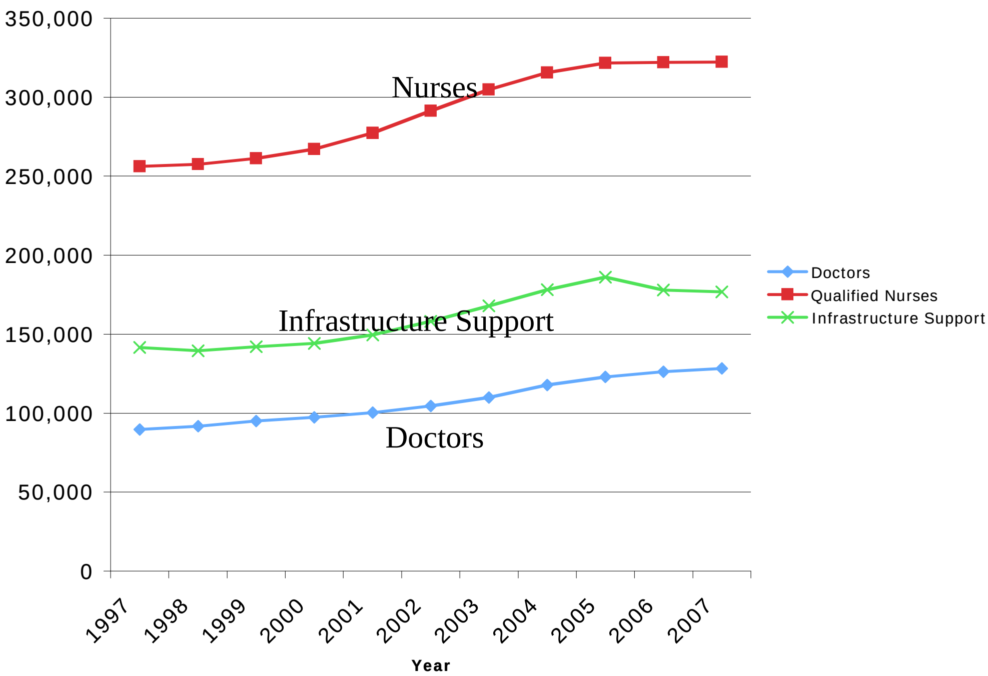
This rise in spending has resulted in a 2.8% increase in total NHS staff; a 4.8% increase in NHS consultants; and a 2.3% increase in nurses since 1996 (see Figure 2). In addition, NHS infrastructure has expanded greatly, staff salaries have risen and the number of patients treated in the NHS per year is significantly higher today than it was in 1997. It is worth noting that the NHS in England currently employs approximately 1.3 million people, which means that over 2% of the English population works for the health service.

Figure 1: Annual spending on the NHS (£ billion)



Source: Department of Health.

Figure 2: Staff numbers in the English NHS



Source: NHS Information Centre.

The need to increase productivity

The NHS will face considerable pressure to become more productive over the next 10 years. Both major parties have pledged to continue to raise NHS spending in real terms. But it is highly unlikely that the rate of growth in the next decade will come close to the 7% annual increases that the NHS has seen since 2000. To maintain a modest increase in spending on the NHS, other departments across Whitehall will need to slow their spending or the government will need to increase taxes.

Demographic changes will require 1.1% annual increases in NHS spending to maintain the current levels of quality and outputs, on top of additional spending necessary to adopt new technology and cater to the rising demand for healthcare across the population.[1] Between 2009 and 2017, the population of England is projected to grow by approximately 6.3% and it will age substantially, placing additional pressure on the NHS. Because of this rising pressure on the NHS, both major parties will need to be explicit about their plans to make the NHS more efficient.

A decade of reform – mobilising the spending

To take advantage of the increase in spending, there have been three central themes to the Labour government's healthcare reforms:

- An increase in centrally set targets, particularly in relation to waiting times.
- A new general practitioner (GP) contract that enables providers to earn additional revenue by achieving various clinical and service related quality targets.
- An increase in patient choice and a new activity-based reimbursement system for providers, which has created significantly more competition between hospitals.

From 2000 onwards, the government created a range of centrally set government targets and published a number of quality indicators, including hospital waiting times. There was significant punishment doled out to poorly performing hospitals, including the sacking of senior management as well as public 'naming and shaming'.

In contrast, hospitals that met the centrally set targets were eligible for increased fiscal and managerial autonomy and could eventually earn 'foundation trust' status – essentially become a local cooperative that was exempt from many government targets.

Research comparing waiting times in Scotland (which did not introduce targets) and England (which did introduce targets) finds that the targets had a significant impact on

[1] Appleby et al (2009).

shortening waiting times.[2] Unfortunately, the reliance on targets likely led to significant 'gaming' of waiting times figures, and they have also frustrated the medical profession.

The second theme of the Labour government's reforms was the new GP contract, created in 2004. The contract, known as the Quality and Outcomes Framework (QOF), allowed GPs to earn additional revenue by meeting set criteria related to their clinical performance, patient experience and managerial competence.

A typical QOF clinical measure would be the percentage of patients with coronary heart disease who had their cholesterol measured during the year. Under the scheme, GPs could earn up to an additional 25% on top of their base salary. As GPs reacted with vigour to these financial incentives and met far more of the targets than the government initially expected, the plan cost approximately £2 billion more than planned.

The third theme of the reforms involved increasing patient choice and introducing hospital competition. To create competition, every patient in England was allowed to select where they could receive secondary care and the government introduced a reimbursement scheme that paid hospitals a fixed fee for each patient they treated.

There was an increase in publicly available data on clinical performance to inform patients' choices, and the government encouraged private sector providers to enter the market and compete with traditional NHS hospitals. Beginning in 2006, every patient in the NHS was offered a choice of at least four providers and from April 2008 onwards, patients could choose to be treated at any facility in England, public or private, as long as it met minimum quality standards and was paid for using the NHS tariff.

Initial evidence suggests that hospital competition has created incentives for providers to improve their clinical performance. After the reforms were introduced in January 2006, hospital mortality has decreased more quickly in hospitals located in more competitive markets.[3]

In addition, CEP research suggests that one mechanism through which higher competition improves clinical outcomes is by fostering better management practices.[4] Nevertheless, the Labour government has begun to shy away from competition. The government has become increasingly critical of private sector providers, arguing that traditional NHS hospitals should be the preferred providers for NHS patients.

Have the investments and reforms paid dividends?

On virtually every measure of quality, the NHS has improved considerably since 1997. The NHS has also become more equitable as regularly published NICE (National Institute for Health and Clinical Excellence) guidelines have helped to prompt a more uniform uptake of new drugs and technology across the country. Nevertheless, on some

---

[2] Propper et al (2008).
[3] Cooper et al (2010).
[4] Bloom et al (2010).

measures of clinical performance, particularly in relation to cancer survival, the UK does not compare favourably with levels of performance in North America and continental Europe.

The continued rise of international comparisons will put significant pressure on NHS policy-makers to improve their performance relative to their European neighbours. Similarly, in addition to their significant policy successes, the Labour government has had some dramatic failures, such as the £12 billion information technology project that was recently scaled back by Chancellor Alistair Darling.

Waiting times and patient satisfaction

The government has made significant progress on hospital waiting times and the waiting times for care in Accident and Emergency departments. The number of patients on waiting lists has decreased by approximately 600,000 patients since 1997 and average waiting times have fallen substantially.

In addition, the distribution of waiting times across different socio-economic groups has become more equitable. In 1997, the poorer you were, the longer you waited. By 2007, there was almost no variation in waiting times across different socio-economic groups (see Figure 3).

Patient satisfaction with the NHS is at its highest point in 20 years. In 2008, 51% of people in Britain were 'very satisfied' or 'quite satisfied' with the NHS, an increase of 9 percentage points since 2000 and 17 percentage points since 1997.[5]

NHS productivity

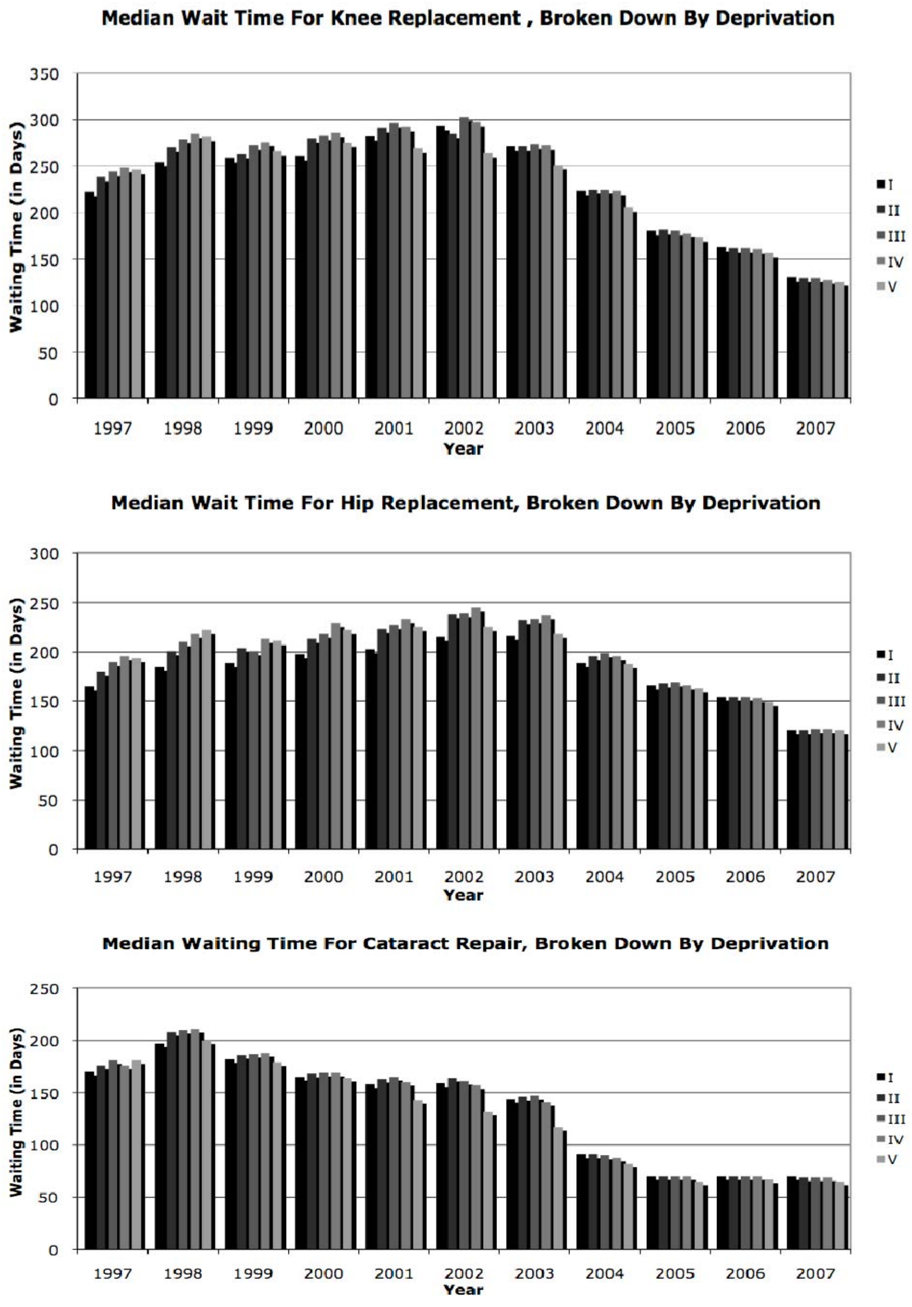
According to the Office for National Statistics, NHS productivity fell over the period 1995-2008.[6] This reduction was largely driven by the tremendous increases in staff numbers during the period that was not matched by increases in outputs.

But recent research finds that from 2004/5 onwards, NHS productivity increased.[7] These results have been driven by increases in the number of patients treated in the NHS, improvements in the quality of care delivered to patients and a decrease in the use of temporary staff.

Some of the additional spending during this period went towards hiring new, more qualified management teams and bringing in outside contractors to improve NHS hospital management. As the House of Commons Public Accounts Committee has highlighted, historically lacklustre hospital financial management was a source of inefficiency and it is likely that the current increases in productivity have been driven by recent improvements in management quality (see Bloom et al, 2010).

[5] Appleby and Phillips (2009).
[6] ONS (2010).
[7] Street and Ward (2009).

Figure 3: Median waiting times in England 1997-2007



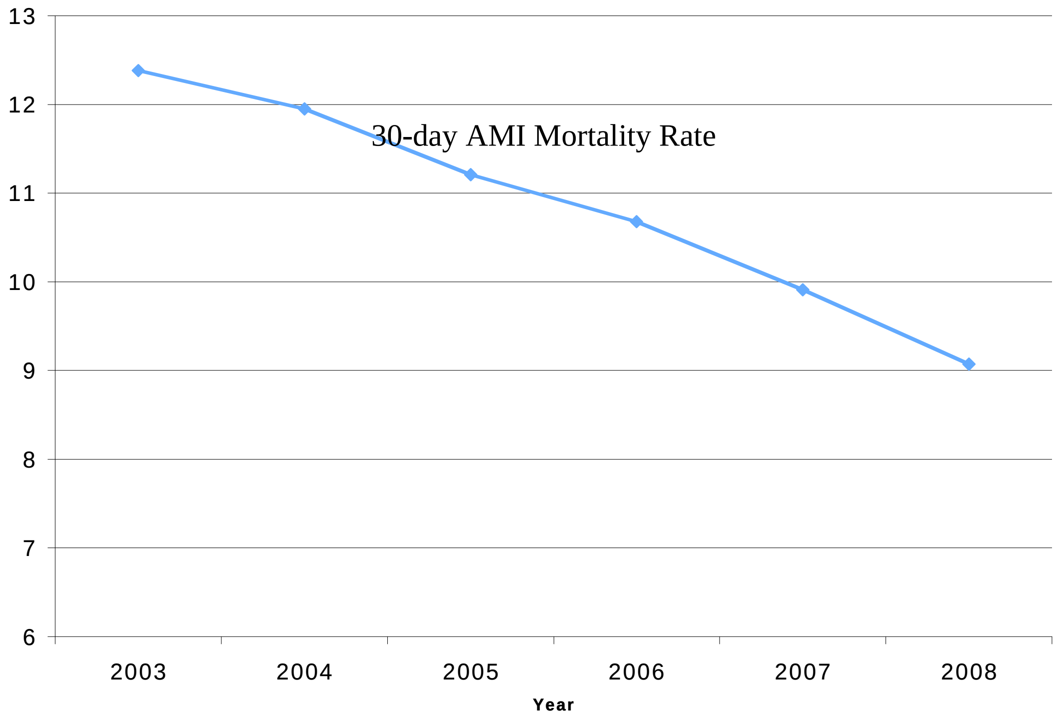
Notes: I = least deprived quintile of the population; V = most deprived quintile of the population' deprivation is measured using Carstairs Index of Deprivation, measured at the output area.
Source: Cooper et al (2009).

Death rates from heart attacks

Between 2003 and 2008, the mortality rate for patients admitted to hospital with a heart attack has fallen by approximately 20% (see Figure 4). This reduction in mortality has been driven partly by an increase in the speed that patients with a heart attack are treated with best practice interventions (thrombolysis or angioplasty).

Because the elements that make for high quality heart attack care, such as better organisation within the hospital, lead to better care for other clinical conditions, improvements in heart attack care are likely to reflect improvements in care that are happening across hospitals.[8]

Figure 4: 30-day in-hospital mortality rate in the English NHS



Source: MINAP (2009).

International comparisons

Despite significant improvements in clinical performance across the NHS, health outcomes in the UK, particularly for cancer, strokes and heart attacks, still do not compare favourably with other European countries or the United States (see Figure 5).

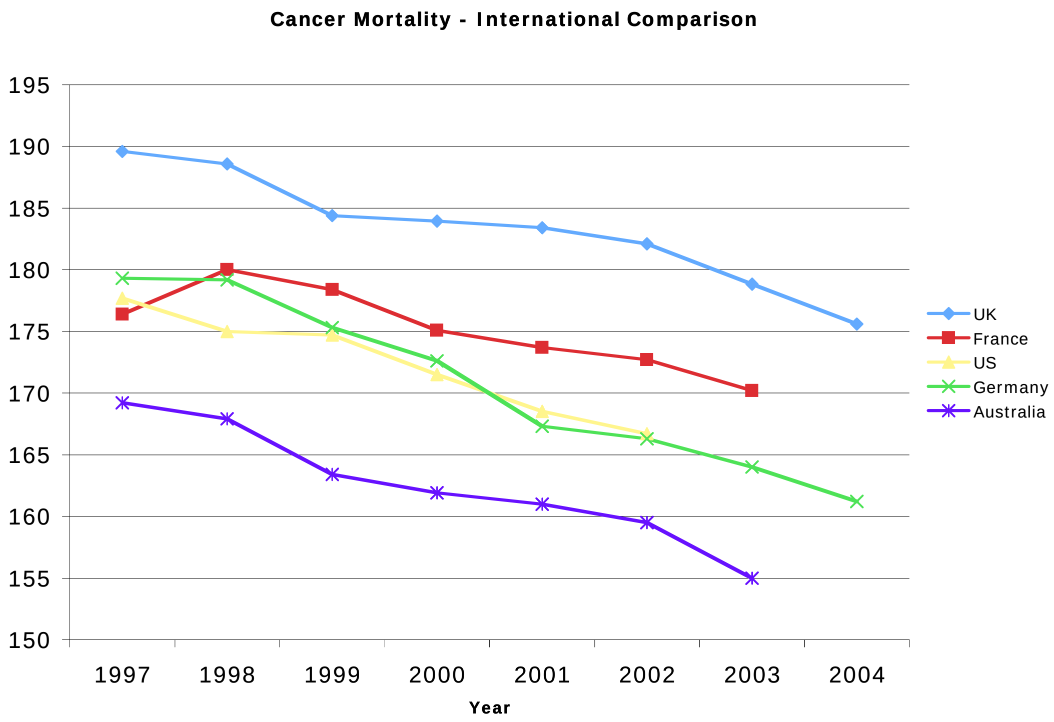
According to a recent study in *Lancet Oncology*, the five-year breast cancer survival rate in the United States is 83.9%, compared with a UK five-year survival rate of 69.7%. For prostate cancer, US five-year survival is 91.9%, compared with a five-year survival rate in the UK of 51.1%.[9]

---

[8] MINAP (2009).
[9] Coleman et al (2008).

The reason why the UK falls behind on cancer mortality is likely to be because of differences in the speed of access to diagnostic services, the UK's waiting times to treatment and delayed access to some new medications.

Figure 5: Cancer mortality in five OECD countries



Source: OECD (2007).

Policy differences between the parties

The Conservatives will focus on improving public health and decentralising the NHS. They will advocate creating an independent NHS board that manages the health service and is accountable to parliament, but is not composed of elected officials. Their hope is that an NHS board will insulate politicians from the day-to-day running of the NHS and allow policy-makers to make difficult decisions, which are often not politically popular.

Creating an NHS board, the Conservatives argue, would also allow them to shift the focus of the Department of Health from managing the day-to-day running of the health service to concentrating on public health. But every opposition party argues for the merit of increasing the autonomy of the NHS, but realises soon after taking power that political realities often make it impossible to do so.

In addition, the Conservatives plan to create a larger role for GPs in purchasing care and being responsible for improving public health. They have announced plans to expand the

GP QOF contract to include significantly more public health measures that GPs would be responsible for achieving.

All three of the main parties have placed strong emphasis on the need to publish data on hospital quality and provider performance and continue to provide patients with a choice of where they receive care.

A key difference between the parties is that both the Liberal Democrats and Conservatives plan to abolish targets, whereas Labour intends to reduce the number but continue them in certain key areas. The Labour government has been working to put into law key ‘rights’ that NHS patients should expect. The rights will be added to the NHS Constitution, which outlines what healthcare workers, patients and the public can expect from the health service.

As the election has drawn near, the Labour government and the Conservatives have begun to introduce significant policy proposals designed to reverberate with the electorate. Recently, the Labour government introduced a White Paper outlining a proposal to pay for social care for anyone in care for longer than two years.[10] Along the same lines, the Conservatives have outlined plans to spend £200 million on funding cancer medications that are licensed but not approved for use by NICE.

Neither party has described their policies in detail, nor have they concretely outlined how they will pay for their proposals. For a complete list of Labour and Conservative policy proposals, see Figure 7.

Conclusions

Labour has dramatically increased NHS funding and introduced significant reforms across the NHS during their time in government. They have aimed to mobilise the 7% real annual growth in NHS spending by creating a new GP contract that links pay to performance and introducing market-based reforms to the hospital sector.

Thus far, there has been little research that has directly linked Labour’s reforms to improvements in outcomes. But research that is beginning to emerge is demonstrating that Labour’s various reforms have probably made a positive difference on quality, efficiency and equity.

On virtually every measure of performance, the NHS has improved significantly since 1997, making the decade a transformative period for the health service. But despite such significant improvements, on several key indicators of clinical quality, the NHS still does not compare favourably with other European countries.

The NHS will face substantial financial constraints in the next decade, which make it necessary for the health service to become significantly more efficient. Both major political parties will campaign to continue to raise NHS spending in real terms. But the

[10] Secretary of State for Health (2010).

rate of spending increase will pale in comparison to what the health service has seen in the last decade, regardless of who wins the General Election.

April 2010

Figure 7: Key Labour and Conservative policy proposals[11]

Labour Policy Proposals		
Policy	**Description**	**Source**
Creating more foundation trusts	The government has pledged to continue to give high-performing hospitals increased managerial and fiscal autonomy by granting foundation trust status. Failing hospitals will have their management teams replaced.	http://www2.labour.org.uk/manifesto-splash
Include the right to treatment within 18 weeks within the NHS Constitution	Proposing to make 18-week time to treatment a guaranteed, legal right in the NHS constitution.	http://www.dh.gov.uk/en/Consultations/Liveconsultations/DH_108012
Include the right to cancer test results within one week within the NHS Constitution	Would guarantee patients a right to have diagnostic tests for cancer carried out and reported back to them within seven days.	http://www.guardian.co.uk/politics/2005/sep/26/speeches.labourconference
Include the right to five-year physicals for everyone age 40-74 within the NHS Constitution	Proposes to require every adult from age 40-75 to have the ability to access a 'health check'.	http://www.number10.gov.uk/Page14171
Choice of GPs	Proposal to abolish GP catchment areas so that patients can register with the practice of their choice.	http://www.dh.gov.uk/en/MediaCentre/Speeches/DH_105366
Reforming social care	The government has proposed creating a national care service funded by compulsory contributions. Recently, the government pledged to begin by making care free for those in care for over two years.	http://careandsupport.direct.gov.uk/consultation/ http://careandsupport.direct.gov.uk/the-white-paper-and-supporting-documents/

[11] The information in this table is derived from the King's Fund election webpage (http://www.kingsfund.org.uk/general_election_2010/).

Conservatives		
More patient choice and information	The party has proposed to give patients more choice and continue to promote publicly available information on quality.	http://www.conservatives.com/~/media/Files/Green%20Papers/A%20Healthier%20Nation.ashx?dl=true
More competition	The party will place more emphasis on competition between providers and will allow NHS patients to have more access to care at non-profit and private facilities.	http://www.conservatives.com/Policy/Where_we_stand/~/media/Files/Draft%20Manifesto/DraftHealthManifesto.ashx
Plan to withhold hospital payment if patient acquires hospital avoidable acquired infection	The party has pledged to withhold payment for cases where the patient acquires an avoidable infection in the hospital.	http://www.conservatives.com/Policy/Where_we_stand/~/media/Files/Draft%20Manifesto/DraftHealthManifesto.ashx
NHS Independent Board	The party will create an NHS board to allocate resources and manage the NHS.	http://www.conservatives.com/Policy/Where_we_stand/~/media/Files/Draft%20Manifesto/DraftHealthManifesto.ashx
Re-introduce GP-commissioning	The party will give GPs the ability to hold resources and purchase services for their registered patients.	http://www.conservatives.com/Policy/Where_we_stand/~/media/Files/Draft%20Manifesto/DraftHealthManifesto.ashx

References

Appleby, J, R Crawford and C Emmerson (2009) *How Cold Will It Be? Prospects for NHS Funding: 2011-2017*, The King's Fund.

Appleby, J. and M. Phillips (2009) 'The NHS: Satisfied Now?', in *British Social Attitudes: 25th Report*, Sage.

Bloom, N., C. Propper, S. Seiler and J. Van Reenen (2010) 'Does Competition Improve Management Quality? Evidence from English Public Hospitals', *CentrePiece* (http://cep.lse.ac.uk/pubs/download/cp305.pdf).

Coleman, M, M Quaresma, F Berrina et al (2008) 'Cancer Survival in Five Continents: A Worldwide Population-Based Study (Concord)', *The Lancet Oncology* 9(8): 730-756.

Cooper, Z., S. Gibbons, S. Jones and A. McGuire (2010) 'Does Hospital Competition Save Lives? Evidence from The NHS Patient Choice Reforms', LSE Health Working Paper.

Cooper, Z, A McGuire, S Jones and J Le Grand (2009) 'Equity, Waiting Times and the NHS Reforms: Retrospective Study', *British Medical Journal* 339: b3264.

MINAP, Myocardial Ischaemia National Audit Project (2009) *How the NHS Manages Heart Attacks – 8th Public Report*.

ONS, Office for National Statistics (2006) *Public Service Productivity (Health) Bulletin.*

OECD, Organisation for Economic Cooperation and Development (2007) *OECD Health Data 2007: Statistics and Indicators for 30 Countries.*

Penaloza, M., M. Hardie, R. Wild and K. Mills (2010) 'Government Activity. Public Service Output, Inputs and Productivity: Healthcare', Office for National Statistics (http://www.statistics.gov.uk/articles/nojournal/healthcare-productivity-2010.pdf).

Propper, C, M Sutton, C Whitnall and F Windmeijer (2008) 'Did "Targets and Terror" Reduce Waiting Times in England for Hospital Care?' *B.E. Journal of Economic Analysis and Policy* 8(2): Article 5.

Secretary of State for Health (2010) *Building the National Care Service*, Department of Health (http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/documents/digitalasset/dh_114923.pdf).

Street, A. and P. Ward (2009) *NHS Input and Productivity Growth 2003/4-2007/8*, Centre for Health Economics, University of York.

CEP ELECTION ANALYSIS

Bankers' Bonuses

Brian Bell

ELECTION ANALYSIS

Bankers' Bonuses

- Over the decade from 1998, the top 10% of workers in the UK saw their share of total annual wages rise from 27% to 30%. The majority of this went to the top 1% and can be mainly accounted for by bonuses to financial sector workers. By 2008, the increased share that bankers were taking amounted to an extra £12 billion per year in wages alone.

- The size of these bonuses and their structure may have been a contributing factor to the financial crisis. Bankers paid large cash bonuses on the basis of short-term returns often unadjusted for risk have incentives to take on excessive risk.

- All the parties have attacked bankers' bonuses – the Liberal Democrats have said that they would ban all bonuses to board members and force all bonuses above £2,500 to be paid in shares.

- It is unclear why shifting away from cash toward equity-based compensation would alter any perverse risk incentives since unlike a CEO (chief executive officer), an individual banker typically has only a small effect on the share price.

- Another proposal is to 'claw back' bonuses if performance is sub-standard in the future. Unlike simply deferring bonuses, this in principle could improve incentives.

- The government has increased the marginal tax rate to 50% for those earning over £150,000 and introduced a one-off 50% tax on bankers' bonuses over £25,000 for the 2009/10 pay period. The Conservatives do not pledge to reverse the first policy and the second will theoretically have been completed by the time of the election.

- There is very little evidence whether such tax rises will cause a significant number of firms and workers to leave Britain. In any case, highly paid workers are likely to change their behaviour to minimise the impact of the tax rises and so reduce the expected revenue gains to the Exchequer.

Introduction

During the campaign, all major parties have attacked bankers with the Liberal Democrats referring to them as 'Scargills in pinstripes'. The size of bonuses in the financial sector has exploded in the last decade and has been highlighted as one of the contributing factors to the financial crisis. In the UK, the vast majority of the gains at the top of the income distribution have come from 'bankers' bonuses', that is, bonuses paid to workers in financial services.

The focus on the remuneration of bankers is a consequence of the broader issue surrounding the 'moral hazard' that arises as a result of bailouts. Major financial institutions (and the market) have an expectation that the taxpayer will bail out bondholders (and possibly even shareholders) if major losses occur that threaten financial stability. This expectation encourages excessive risk-taking since the upside accrues entirely to the employees and shareholders of the bank while the downside is limited by the taxpayer.

This problem of moral hazard suggests that while bankers' pay will continue to receive substantial focus from politicians and regulators, it is only one of the many fronts that must be tackled from the perspective of financial stability. This Election Analysis addresses four questions:

- Why bonuses may encourage excessive risk-taking by bank employees?
- Are there are changes that could be made to mitigate these effects while still providing incentives to workers?
- What role can the tax system play in charging banks for the guarantees and subsidies provided by the taxpayer?
- Will financial talent be driven offshore by recent tax changes?

The size of bonuses and the gains to bankers

The sheer scale of the income gains that the best paid workers, and particularly financial sector workers, experienced over the course of the last decade is almost unprecedented. Figure 1 shows the total gains (as a share of the aggregate wage bill) going to the top groups within the wage distribution between 1998 and 2008.

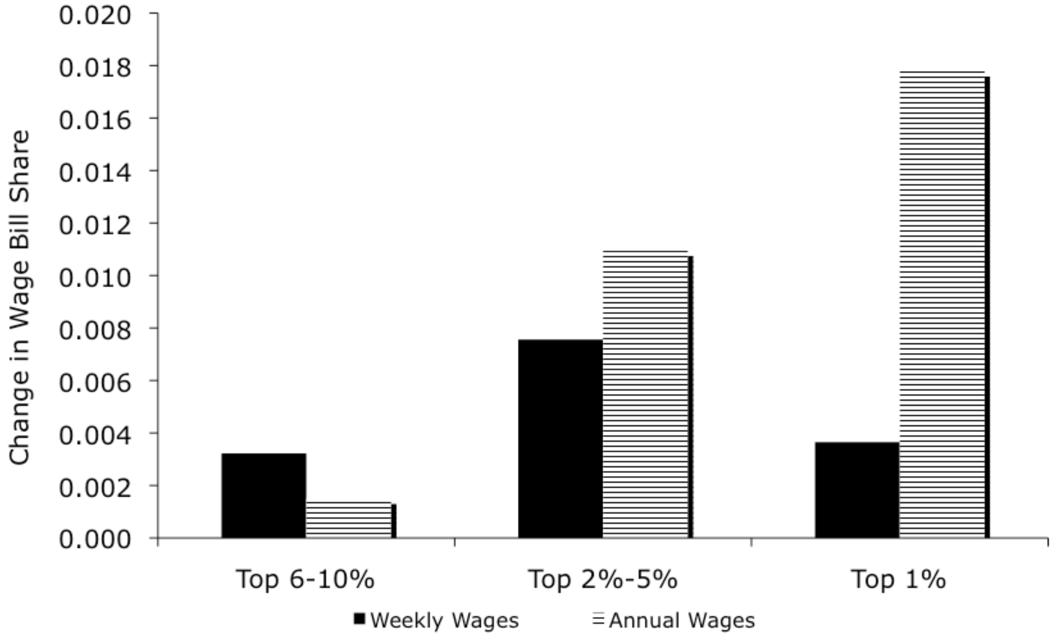
Workers in the top 10% gained an extra three percentage points of the wage bill over this period. The majority of these gains went to the top 1% of workers, and finance workers accounted for almost three quarters of these gains. In contrast to previous decades, this expansion of inequality at the very top of the distribution was not matched by rising inequality at lower levels.

The increased share that bankers were taking amounted to an extra £12 billion per year by 2008, and almost all the gains accrued as a result of bonuses rather than increases in basic pay.[1] Even these figures underestimate the gains since we have no reliable data on bonuses

[1] See Bell and Van Reenen (2010) for a full accounting and discussion of the role of financial bonuses in the wage distribution over the last decade.

paid in restricted stock and stock options. Accounting for these would certainly make the gains at the top even more extreme.

Figure 1: The change in share of all income going to the top 1%, 2-5% and 6-10%



Notes: Figures are computed from the Annual Survey of Hours and Earnings, ONS.
Source: Bell and Van Reenen (2010).

Why should bonuses have contributed to the financial crisis?

Bonuses are generally thought to improve incentives for workers since, in theory, they aim to link pay more closely with performance. In a classic piece-rate scheme such as those used on production lines, there is accurate monitoring of individual or group output and bonuses are paid for past output. Workers in these environments cannot in any sense produce negative output going forward.

Bonuses for traders in financial markets encourage risk-taking since such risk-taking is instrumental in producing high returns. Risk-taking is desirable in the financial sector; indeed, it is a key reason to encourage performance-related pay. The downside, however, is that traders paid bonuses on the basis of the annual profits of their book have an incentive to search for short-term profits and to maximise the risk they can take at the expense of the long-term interests of the firm.

These effects become magnified during a period in which the low policy interest rates of the major central banks encourage risk-taking and leverage. This is particularly so for traders who make money in aggregate only by luck and have no ability to outperform the market in the long run.[2] The worst that can happen to such traders is that they lose their jobs but keep the bonuses they had previously received.

All this suggests that to mitigate the excess risk-taking that bonuses can induce, bonuses in the sector need to be based on risk-adjusted performance and either to be based on long-run performance or to be subject to 'clawback' if future performance declines.

Altering the mix of bonus compensation

The mix of cash and equity in bonus compensation has been highlighted as an important area for reform and regulation. It should be recognised, however, that many investment banks have historically paid bonuses in a combination of cash and restricted equity.

A fairly typical example might be a trader receiving a £500,000 bonus composed of perhaps £250,000 cash and £250,000 in equity. The equity would need to be held over a three-year period, with a third allowed to be sold at the end of each subsequent year. The proportion paid in cash versus equity tended to fall as the size of the bonus rose.

The motivation for such a bonus structure was to tie top performing workers into the firm by raising the costs to the worker of changing firms. Workers who had such a bonus payment and decided to leave the firm before the full three-year 'vesting' period would lose any remaining unvested equity.

The renewed focus on equity-based compensation focuses on the potential to align workers' incentives more closely with the long-run interests of the firm rather than their lock-in properties. Economists have long argued that incentives for chief executive officers (CEOs) are more in line with those of shareholders if a substantial proportion of their remuneration is in the form of restricted stock and stock options.

The basic intuition is simple. The CEO takes actions that affect the value of the firm but shareholders do not clearly observe these actions. To ensure that the CEO takes the actions that maximise shareholder value, it is necessary for shareholders to link CEO remuneration directly to the value of the firm. But crucial to this argument is that the CEO's actions have at least some effect on the share price – if not, shareholders should have no interest in sharing the value of the firm with the CEO.

But this is not obviously true for other employees, whose activities almost certainly result in at most only a small change in the bottom line for their employer. So it is unclear why a worker would alter their risk-taking behaviour only as a result of receiving more remuneration in equity than cash. While workers are subject to the same type of 'principal-agent' problems that afflict top management, simply copying the remuneration strategies from one to the other is unlikely to be effective.

[2] There were a number of reports of trading desks that made substantial profits for many years and received large bonuses on such profits only to incur huge losses (sometimes as large as the total cumulated profit of the preceding years) in the crisis but obviously not to repay the bonuses they had received.

Clawback agreements in bonuses

Clawback agreements allow for bonus payments to be recovered from the employee if future performance falls below pre-specified standards. These are likely to be particular useful in the financial sector because the existence and size of 'alpha' (that is, investment returns due to the worker's true ability) is surely only observable in the long run.[3] As Rajan points out, 'compensation structures that reward managers annually for profits, but do not claw these rewards back when losses materialise, encourage the creation of fake alpha'.

Such clawback arrangements are envisaged in the remuneration code recently implemented by the Financial Services Authority (FSA),[4] though the teeth of such regulations are an open question. The code proposes that a significant proportion of any bonus should be deferred for at least three years *and* a significant proportion of this deferred bonus should be 'linked to the future performance of the firm' and 'the business undertaken by the employee'.

An example of such a bonus system is that now operated by UBS.[5] Senior bankers were allocated a bonus pool of 900 million Swiss francs, which would pay out in equal parts in 2010, 2011 and 2012 provided explicit profit targets were met. Following a loss for the 2009 fiscal year, UBS clawed back 300 million from the pool.

For clawback contracts to be practical, they must be based on explicit formulae of readily observable and verifiable measures of performance since more arbitrary clawback would be liable to challenge in the courts. It remains unclear whether such contracts can be successfully written for traders based on individual risk-adjusted performance rather than simply the overall performance of the firm.

Taxing the gains from guarantees and subsidies

One argument in favour of a tax directed explicitly at bankers is to recover the profits that primarily occur as a result of both the explicit guarantees (such as deposit insurance) and implicit guarantees (for example, 'too big to fail') that the sector enjoys from the taxpayer and the implicit subsidy provided by central bank liquidity policy.

Ideally, we would like to estimate the benefit of these guarantees and subsidies to individual institutions and charge them appropriately – presumably at some rate going forward as capital is replenished.[6] This may be unrealistic, in which case a strong argument can be made to use the tax system to recover these gains.

It is, however, unclear why it makes sense to tax bonuses rather than impose a windfall tax or subsidy charge on the sector. This second option is essentially what the Obama administration has proposed with the Financial Crisis Responsibility Fee, imposing a levy based on the size of the balance sheet of large financial firms.

---

[3] Rajan (2008).
[4] Financial Services Authority (2009).
[5] http://www.bloomberg.com/apps/news?pid=20601085&sid=aXPA95YPD4.0.
[6] We do not here consider the alternative approach of dealing with the 'too big to fail' problem – namely regulating to make sure they are not too big in the first place.

Increasing taxes on high earners?

In addition to regulating the mix, deferral and clawback of bonuses, there has also been a more general focus on the issue of raising marginal tax rates on higher earners – either in general or directly focused on bonuses. Such a focus is hardly surprising given both the fiscal outlook and the dramatic gains that have accrued in recent years to those at the very top of the wage distribution.

The government has moved on both the general front and on bonuses in particular. The 2009 Budget introduced a new 50p marginal tax rate on those earning over £150,000 (roughly the top 1% of wage earners) and tapering the tax relief on pension contributions for these workers to the basic tax rate. In the November 2009 Pre-Budget Report, the government imposed a 50% tax rate on *employers* for any bonus paid to an employee in excess of £25,000 for the current tax year only. The Conservatives do not propose to reverse the first tax increase and the second will already be completed before the election.

There are two common arguments against raising marginal tax rates on bankers (or indeed more generally on high-skilled high-earners). First, it is suggested that the behavioural responses of labour supply and effort, changes in the form in which compensation is taken and reduced compliance will result in the tax yield being significantly lower than expected. Evidence suggests that such responses are larger for highly paid workers facing higher marginal tax rates.[7]

Second, such workers are alleged to be highly mobile and would rapidly relocate to lower tax jurisdictions.[8] There has been much anecdotal reporting of London-based hedge funds scouring Switzerland for suitable premises.

There is, however, very little robust empirical evidence on international mobility and income tax differentials. One notable recent analysis[9] suggests that the location choice of football superstars in Europe responded strongly to marginal tax rates – though it is a matter of some debate as to how workers in London investment banks and hedge funds truly correspond to soccer stars. More generally, policy-makers must decide whether such potential flows out of London are a price worth paying.

Conclusions

The financial crisis raised awareness of the sheer size of bankers' bonuses over the last decade. This group of workers have been the biggest gainers in the labour market, and they have significantly increased their presence at the top of the income distribution.

The structure of bonuses has come in for sustained criticism as it allegedly increased risk-taking in the financial sector to dangerous levels and contributed to the unravelling in 2007/8. The evidence suggests that simply changing the cash/equity split of such payments will not solve these problems nor will deferral if not associated with clawbacks.

[7] Gruber and Saez (2002) suggest that the overall elasticity of taxable income with respect to marginal tax rates lies between 0.4 and 0.6, with higher elasticities for the highest earners.
[8] Separately, it is argued that tighter financial regulation will encourage firms to relocate to countries with looser regulation.
[9] Kleven et al (2009).

The sharp rebound in bonuses during 2009/10 is likely to increase the popularity of higher marginal tax rates – or special bonus taxes – in spite of the potential negative effects from international mobility of workers and firms.

April 2010

References

Bell, B. D. and J. Van Reenen (2010) ‘Bankers’ Pay and Extreme Wage Inequality in the UK’, CEP Special Report.

Financial Services Authority (2009) *Reforming Remuneration Practices in Financial Services*, FSA Policy Statement 09/15 (http://www.fsa.gov.uk/pubs/policy/ps09_15.pdf).

Gruber, J. and E. Saez (2002) ‘The Elasticity of Taxable Income: Evidence and Implications’, *Journal of Public Economics* 84: 1-32.

Kleven, HJ, C Landais and E Saez (2009) ‘Taxation and International Mobility of Superstars: Evidence from the European Football Market’ (http://personal.lse.ac.uk/KLEVEN/Downloads/MyPapers/workingPapers/FootballTax_Dec09.pdf).

Rajan, R. (2008) ‘Bankers’ Pay is Deeply Flawed’, *Financial Times,* 8 January.

CEP ELECTION ANALYSIS

Financial Regulation:

Can we avoid another great recession?

Luis Garicano

ELECTION ANALYSIS

Financial Regulation: Can We Avoid Another Great Recession?

- The Great Recession of 2008-2010 had its roots in the crisis of financial markets, which spread to the real economy.

- The structural problem with the financial sector is that there is strong ‘contagion’ between institutions within the financial sector and also between the financial sector and other parts of the economy. A large bank can pull down the financial sector, which can, in turn, pull down large parts of the rest of the economy in a ‘domino effect’.

- Because of these contagion effects, governments will inevitably bail out banks; and because banks know this, they take excessive risks. This structural ‘moral hazard’ problem has not been dealt with by the existing regulatory regime.

- To deal with the problem, we need to (a) make bankruptcy more credible; (b) shrink the size of banks so that there are fewer organisations that are ‘too big to fail’; and (c) improve existing regulations in a variety of ways.

- Most current proposals do not deal with this fundamental problem. Improving corporate governance, reforming bankers’ pay and crude taxes on all banks and/or financial transactions are mainly distractions.

- Without reform, the risks of a repeat financial crisis have increased. There is *less* uncertainty that governments will bail out banks, and key sectors like investment banking are more concentrated.

Introduction

The fall in the UK's GDP since the start of the recession in 2008 has been greater than any other since the Great Depression. The global Great Recession originated in the financial services sector, especially after the collapse of Lehman in September 2008.

Although there were many catalysts – such as the global macroeconomic imbalance between high spending America and high saving Asia, and inflated property markets – these problems became toxic because of the financial sector. There was an extraordinary mispricing of risk, which led, in crisis, to massive state support and the subsequent deterioration of the public finances.

This Election Analysis examines what went wrong with the regulatory system for finance and how can it be fixed.

The fundamental problem

There are two key economic considerations:

First, liquidity problems in some financial institutions can spread very quickly through other institutions. This is what is called the within-industry 'contagion' effect: when the system is interconnected, 'systemic risk' is high, and the whole system can collapse. What makes this is a particular problem is that all businesses rely on finance to function – when the sector contracts, it pulls down the real economy with it. Crises in other industries are painful – car manufacturing, for example – but not fatal to the health of the economic system.

Second, there are excessive incentives for risk-taking in financial institutions. This is the result of the government offering (explicit or implicit) protection for financial institutions against bankruptcy. This in turn protects lenders – and not just depositors, but largely all lenders – from bad decisions. This is the 'moral hazard' problem.

The moral hazard issue is largely a result of an effort to avoid the contagion effects: avoiding panics requires insuring depositors and other players, and this requires regulating the industry to avoid excessive risk. In other words, if we are going to provide rescues and bailouts, we have to limit risk-taking. Unfortunately, these regulatory safeguards did not work.

The essence of capitalism is that people accept responsibility for the risks they take – they enjoy the upside wins, but also suffer the pain if the bet goes the wrong way. Without this, we get the moral hazard problem as the downside protection encourages firms to take excessive risk. In other words, 'heads, I win; tails, society loses'.

Narrow banking and the Volcker Rule

A large part of the initial reform push has focused on the 'Volcker rule'. This is the suggestion made by President Obama is that 'Banks will no longer be allowed to own, invest, or sponsor hedge funds, private equity funds, proprietary trading operations or for their own profit, unrelated to serving their customers.'[1] This has been enthusiastically embraced by the UK opposition parties.

Although the proposal tackles one aspect of the problem – a bank gets cheap money thanks to deposit insurance, and then uses it to gamble on the casino of 'proprietary trading' – it has two shortcomings.

The first shortcoming is that 'prop trading' is not the only way financial institutions take excessive risks; in the recent past, the largest problems have been in their 'plain vanilla' loan portfolios – banks can take too much risk in simple mortgage-backed real estate loans. In fact, several of the key institutions that collapsed – AIG, Lehman, Northern Rock and Bear Stearns – would have been left completely unaffected by the Volcker rule.

A second shortcoming of the proposal is that its implementation would be extremely complicated. Separating hedging activities from pure speculation has always been extraordinarily difficult.

Making bankruptcy credible

The solution must lie in reinstituting some fundamental discipline: if a company has too much debt and becomes insolvent, taxpayers have no responsibility. The company suspends payments, it closes and its shareholders and creditors lose their money.

How can this threat be reinstituted and become credible for financial institutions after Lehman? To make bankruptcy attain the role of disciplining managerial behaviour, two changes need to take place:

(1) Financial institutions must be of a size, complexity and interconnectivity that allows the regulator to promise credibly that they will be allowed to fail. In other words, there must be no banks 'too big to fail'. As US Congressman Sanders and Bank of England Governor Mervyn King put it: 'if you are too big to fail, you are too big to exist'. This can be done through a tax that grows with the size of assets or a literal limit to the size of the balance sheet.

(2) Living wills[2] must be credible and real, so that any financial institution can disappear in a weekend without creating chaos – unlike in the post-Lehman disaster.

Of course, size is not the only characteristic that defines a systemic institution, but it must be one of the relevant criteria. First, size should be size in the country. For example, while Deutsche Bank (DB) has a balance sheet in the billions of dollars, similar to the Royal Bank of Scotland (RBS), home assets of DB are only 16% of German GDP while for RBS, they are 71% of UK GDP.[3]

Second, the diversity and complexity of activities within a bank and the interrelationships between them should also be critical criteria in establishing the systemic risk of an

[1] http://www.whitehouse.gov/the-press-office/remarks-president-financial-reform
[2] A living will is a clear statement over what would happen to the assets of a bank were it to fail. Thus it forces transparency on the counterparty risks of different positions held by the bank. These need not necessarily be made public, but they must be available in a timely fashion to the regulator.
[3] JP Morgan Europe Equity Research, 'Global Banks: Too Big to Fail?', 27 February 2010, p9

institution. If investors and counterparties cannot have a view of what the institution is doing, any problem in any activity may raise doubts about the viability of the whole institution. But complexity also makes it hard for the supervisor to predict the consequences of failure, and thus makes it more likely that intervention will be needed.

Third, the centrality of the institution matters. An institution that is very closely connected to others in the system will be more likely to bring others down in case of bankruptcy.

Finally, there are institutions that by their peculiar sphere of action and the novelty of their activities, either by the use of financial innovations or simply expanding their business activities, may pose more systemic risk.

Once identified, systemic institutions require unique regulatory solutions. Ideally, no institution should be systemic. Credible bankruptcy requires that no institution is too big, too complex or too central; regulators should ensure that this is the case.

Taxing bank size

An alternative approach to dealing with size is by taxing it – by imposing a cost on the institutions that grow too large so that institutions may be forced to internalise the externality they impose on the system due to the lack of bankruptcy threat. This would allow extremely efficient banks to grow large as they would be willing to bear the costs of a highly progressive tax.

A particularly appealing form (and related to the Obama tax proposals) would be to tax institutions as a function of the amount of short-term financing they are using. This is a variant of the Obama tax on bank non-deposit liabilities, which was proposed in the United States only provisionally (to recoup TARP) but which could have a wider economic aim: it would simultaneously discourage excessive size and wholesale financing, two of the key causes of the crisis.

New regulations, better regulators

Making bankruptcy more credible is the essential step that would lead to a more efficient and less risky and fragile financial system. But better regulation and regulators are also necessary. These should involve three main steps:

1. *Centralised derivatives markets*: A complement to making bankruptcy more credible would be greater transparency. A centralised payment system allows managers access to information on the risk exposure of individual institutions.

It is hard to understand why the standard contracts currently traded on over-the-counter (OTC) markets are not being traded in centralised markets. Centralised markets would have reduced many of the uncertainties that took place after the Lehman collapse and would allow investors and supervisors to understand better the evolution of derivative markets.

2. *Higher liquidity and solvency requirements*: A key axis of the current reform proposals is increasing solvency requirements. Concerning capital requirements, the main proposal here is increasing solvency requirements through contingent capital – debt that would be transformed into equity automatically when certain triggers are reached, which could be market triggers (such as credit default swap prices[4] reaching a certain level) or regulatory triggers (core or tier 1 capital reaching a certain minimum).

These proposals have merit, but as the crises tend to be liquidity driven, and they do not really generate 'true' new capital, they are unlikely to solve a crisis.

As for liquidity, a key problem was excessive short-term financing of long-term liabilities. The tax mentioned above on wholesale or short-term financing would also help to deal with this problem.

3. *Systemic supervisors*: A big push here involves the creation of a new set of worldwide systemic supervisors with the function of looking at the 'forest' of systemic risk, rather than the 'trees' of how each individual bank is performing.[5] It is essential that supervisors have real teeth, including ability to impose penalties on non-complying financial institutions.

One question is the extent to which the systemic supervisor role must coincide with the central banking function and be undertaken by a central bank. Synergies between both functions are important as Northern Rock showed.[6]

Exercising the 'lender of last resort' functions (which only central banks can do) requires knowing the state of the banks that may have to be rescued, while the information about the state of lending and asset quantities and prices held by the banks is an invaluable tool of monetary policy.[7] Whether this requires merging the Financial Services Authority (FSA) back into the Bank of England (as the Conservatives propose) or improving co-operation is less clear.

Some non-solutions to the regulation problem: corporate governance and bankers' bonuses

Many of the proposed 'solutions' to the problem of financial regulation by the main parties are wide of the mark and risk distracting us from the major reform tasks.

Often, policy-makers talk of improved corporate governance to stop senior managers and CEOs from 'ripping off' shareholders. But for firms relying on the protection of taxpayers, the conflict of interest is *not* fundamentally between bank managers and shareholders because the manager wants to earn too much or wants to build an empire or to own a private jet.

Instead, the conflict is between, on one side, managers and shareholders and, on the other side, taxpayers. Both managers and shareholders (and even holders of corporate debt) take advantage of the protection of the state to take excessive risks, since it is the taxpayer who ends up paying. Therefore proposals to improve transparency and corporate governance are completely useless for solving these problems.

[4] A method based on credit default swap prices has been proposed by Hart and Zingales (2009).
[5] See Goodhart (2009)
[6] See Shin (2009)
[7] For a clear statement, see the very well argued testimony of Anil Kashyap (2010) to the US Congress; see also *The Squam Lake Report* (2010) and Garicano and Lastra (2010).

Exactly the same argument goes for proposals to align pay more effectively with shareholder interests. The structure of annual bonuses for traders and managers in the financial sector does encourage an emphasis on short-term excessive risk-taking. But this is likely to be a consequence of structural moral hazard not the cause. It is dealing with the symptom and not the disease (see Bell and Van Reenen, 2010).

Third, generalised taxes on banks (as proposed by the Conservatives) or global financial transactions (proposed by Labour) are not well-targeted at the problem of systemic risk. Focusing on a more targeted tax regime to reduce the 'too big to fail' problem would be a better way to go.

Finally, further competition authority investigations into banking as proposed by the opposition parties will tell us what we already know. These have become very concentrated industries that threaten welfare – not for the usual reasons (high prices and low innovation) but rather for the risks of a further financial meltdown. The cause comes from the problem of structural moral hazard and the solutions cannot be delegated to the competition authorities.

Conclusions

The financial meltdown led to the worst post-war recession experienced by the UK and other advanced economies. The fundamental regulatory problem in the financial system is that the government will bail out the banks because of the risk of contagion from organisations that are 'too big to fail' to the rest of the economy. This structural moral hazard problem causes large financial firms to take excessive risks.

To deal with this we have to operate on the fundamental problem, which means increasing the real threat of bankruptcy and shrinking down the organisations that pose such systemic risks. We should not get distracted by reforms such as changes in corporate governance, bankers' pay, bank levies, Tobin taxes or competition inquiries.

April 2010

References

Bell, B. and J. Van Reenen (2010) 'Bankers' Bonuses and Extreme Wage Inequality in the UK', CEP Special Report No. 21 (http://cep.lse.ac.uk/_new/publications/abstract.asp?index=3570).

Garicano, L. and R. Lastra (2010) 'Towards a New Architecture for Financial Stability', forthcoming in *Journal of International Economic Law*.

Goodhart, C. A. E. (2009) 'The Role of Macro Prudential Regulation', LSE mimeo.

Hart, O. and L. Zingales (2009) 'A New Capital Regulation for Large Financial Institutions', FEEM Working Paper No. 124.

Kashyap, A. (2010) 'Examining the Link Between Fed Bank Supervision and Monetary Policy', testimony to the US House Financial Services Committee, 17 March 2010.

Shin, H. S. (2009) 'Reflections on Northern Rock: The Bank Run That Heralded the Global Financial Crisis', *Journal of Economic Perspectives* 23(1): 101-119.

The Squam Lake Report: Fixing the Financial System (2010) Princeton University Press.

CEP ELECTION ANALYSIS

Jobs and Youth Unemployment:

It's bad, but not as bad as you might think

Barbara Petrongolo and John Van Reenen

CENTRE *for* ECONOMIC PERFORMANCE

ELECTION ANALYSIS

Jobs and Youth Unemployment:
It's bad, but not as bad as you might think

- The Great Recession of 2008-2010 has inflicted a larger cumulative loss of UK output than any of the other post-war recessions. Nevertheless, unemployment is much lower than we would have expected given past experience.

- Young people have fared badly during the recession, with larger increases in their unemployment rates than adults. But young people always do worse in downturns, and there is no evidence that they are doing relatively worse this time round than in previous recessions.

- Youth unemployment has fallen since the last recession, but then rose after 2004 *prior* to the onset of the current recession. The weakening of the adult labour market can only account for part of this rise. Increased immigration, the minimum wage, skill demand changes and schooling are other possible explanations – but there is little compelling evidence for any of these factors.

- Labour's welfare reforms – such as the New Deal for Young People introduced in 1998 – have had a positive impact on jobs. But after 2004, the Employment Service put less emphasis on the young unemployed compared with other groups (such as lone parents and people on incapacity benefits), and this may be a factor in the post-2004 rise in youth unemployment.

- The trends for 18-24 year olds 'not in employment, education or training' (NEETs) follow the same pattern as youth unemployment. NEET rates for 16-17 year olds are very high (and rising) only if we include all part-time students. When these are removed, teenage NEET rates are more like 10%.

- There is substantial consensus between the main parties on jobs and youth. An unanswered question for all parties is: if they think the current system is not working, then how will 'more of the same' radically improve things?

Introduction

Unemployment is a perennial policy concern, and youth unemployment is a particular worry because of the 'scarring effects' of joblessness, which can persist for a long time in an individual's life.[1]

When Labour came to power in 1997, one of the party's five pre-election pledges was to 'get 250,000 under 25 year olds off benefit and into work'. Following on from the previous government's efforts, policies such as the New Deal for Young People emphasised the importance of job search. But the new policies went beyond Jobseeker's Allowance (JSA) by guaranteeing some activity (either subsidised employment, a government job or education/training) for all young people who were on JSA for more than six months.

Despite this policy activism, youth joblessness remains a problem – on some measures, youth unemployment is higher today than in 1997.[2] Furthermore, youth joblessness has risen dramatically since the recession began in 2008. We argue that this is to be expected as 'marginal' groups almost always fare worse during recessions.

The more surprising fact is that the youth labour market worsened between 2004 and 2007 – *before* the start of the current downturn. This is harder to explain – it is partly linked to the sluggishness of the whole labour market, but it may also be linked to changes in the priorities of the Employment Service.

The trends for 18-24 year olds 'not in employment, education or training (NEETs) follow the same pattern as youth unemployment. The NEET rates for 16-17 year olds are extremely high – one in five and rising – but *only* if we include all part-time students. When these are removed, teenage NEET rates are more like 10%.

The Great Recession of the late 2000s

GDP and aggregate unemployment in the last three recessions

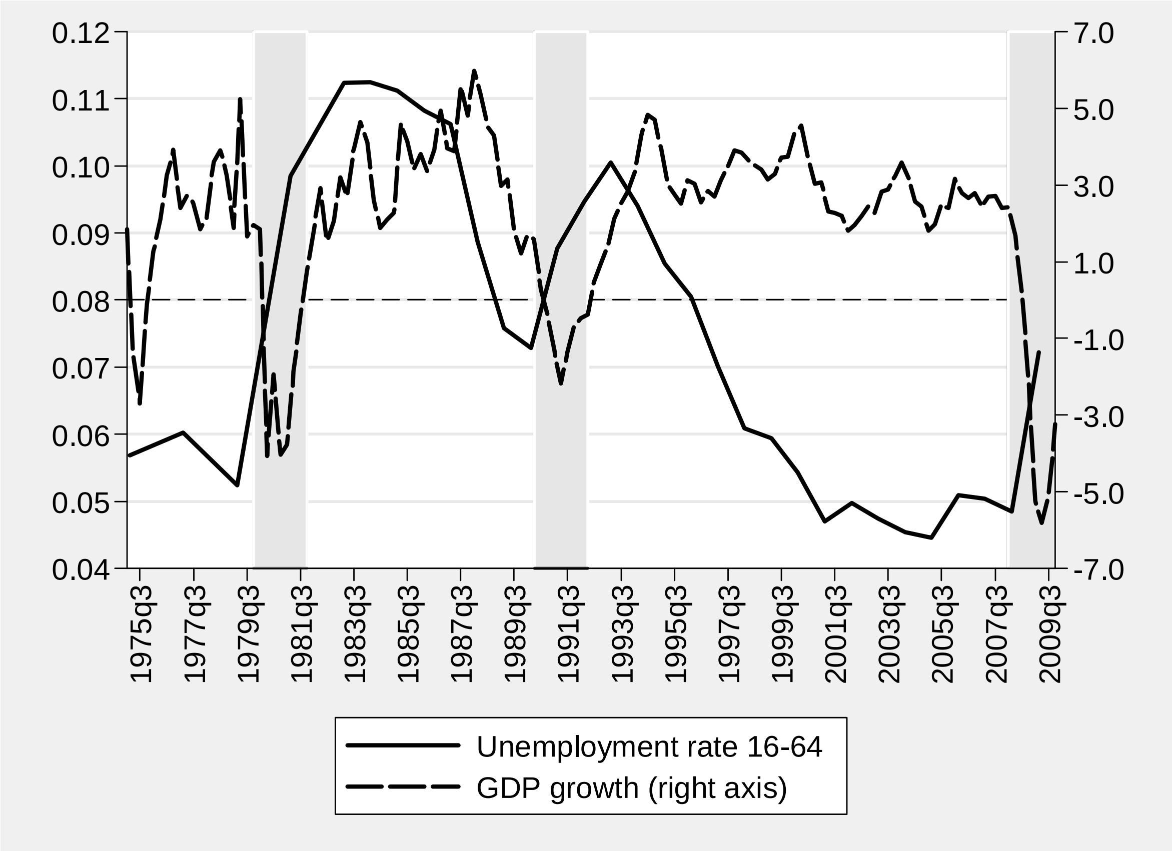
Figure 1 plots GDP growth and the unemployment rate since 1975 – we use the ILO (International Labour Organisation) definition of unemployment from the Labour Force Survey (LFS) unless otherwise stated. The shaded areas denote the timing of the last three recessions: the latest one, the last one (1990s) and the earliest (1980s).

Unemployment rose sharply in all recessions, peaking at over 11% in 1983 and 10% in 1992. After the 1990s recession, unemployment fell steadily, levelling off at historically low rates of around 5% in the mid-1990s. When the latest recession hit in 2008 and 2009, unemployment climbed to 8% by the first quarter of 2010.

Figure 2 plots the cumulative loss of GDP since the start of each of the last three recessions. The 1980s recession was worse than the 1990s recession. But despite getting off to a slightly slower start, the latest downturn has seen a larger cumulative fall of output than even the 1980s recession – a 6% or more fall in GDP.

[1] von Wachter et al (2009) and Gregg and Tominey (2005).
[2] http://www.guardian.co.uk/politics/2009/nov/11/cameron-brown-pmqs-youth-unemployment.

Figure 1: UK unemployment and annual GDP growth rate, 1975-2009



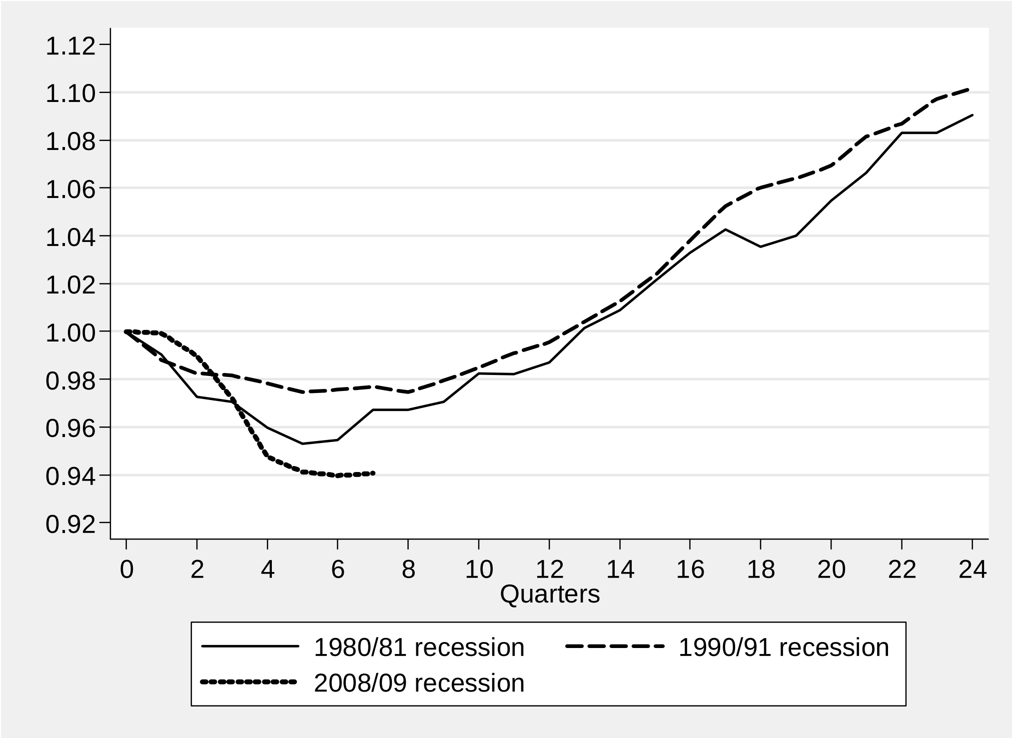
Source: Annual LFS 1975-91 and calendar quarters 1992q2 to 2009q3. ONS GDP from 1975q1 to 2009q4 (http://www.statistics.gov.uk/statbase/). Annual GDP growth. Unemployment rate (ILO) is measured yearly in March/April/May and linearly interpolated.

Unemployment by age group

Figure 3 plots the unemployment rates for the population of working age (16-64) and for three subgroups – prime age (25-49), young (18-24) and teenagers (16-17). The prime age group follows the general pattern of the aggregate labour market, but it is clear that the young are much more sensitive to the state of the business cycle. The unemployment rate is higher for the younger groups, and the magnitude of this disadvantage widens during a recession.

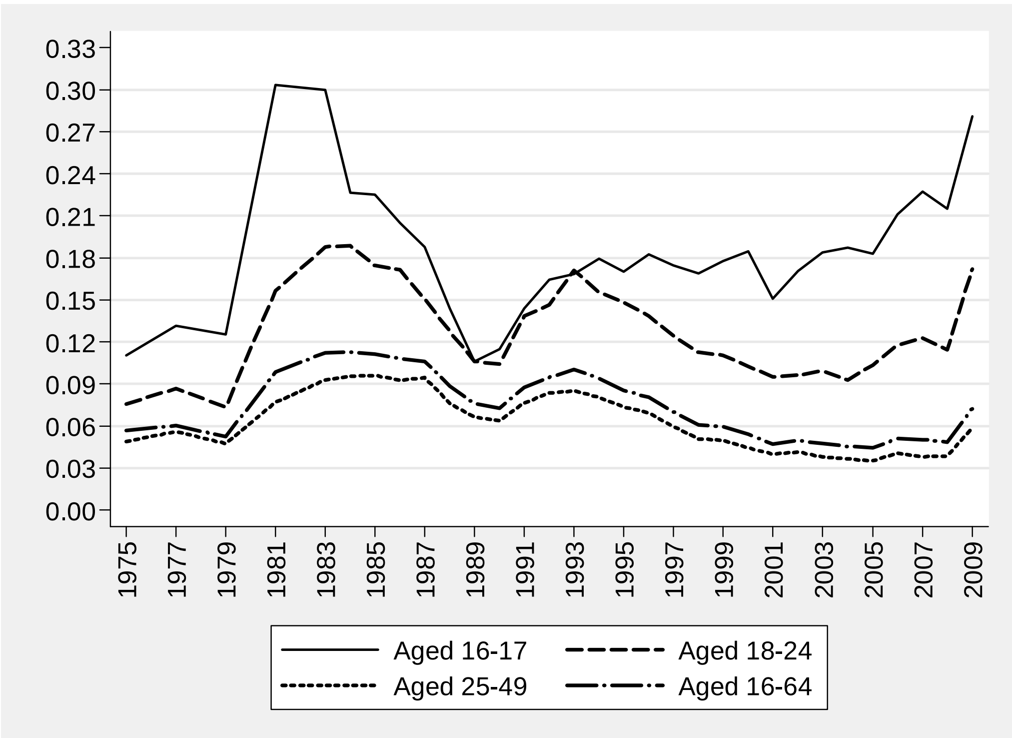
This outcome is unsurprising as employers will be reluctant to lose more experienced workers who have firm-specific skills (and also greater redundancy costs), so the burden of adjustment typically falls on low wage workers, such as young people. (Minorities and the less educated also tend to fare worse during downturns.)

Figure 2: Cumulative growth of GDP in the last three recessions



Source: ONS GDP from 1975q1 to 2009q4. We normalise to 1 the quarter before the start of each recession (dates as first GDP decrease) 1979q4, 1990q2 and 2008q1.

Figure 3: Unemployment rates by age group, 1975-2009

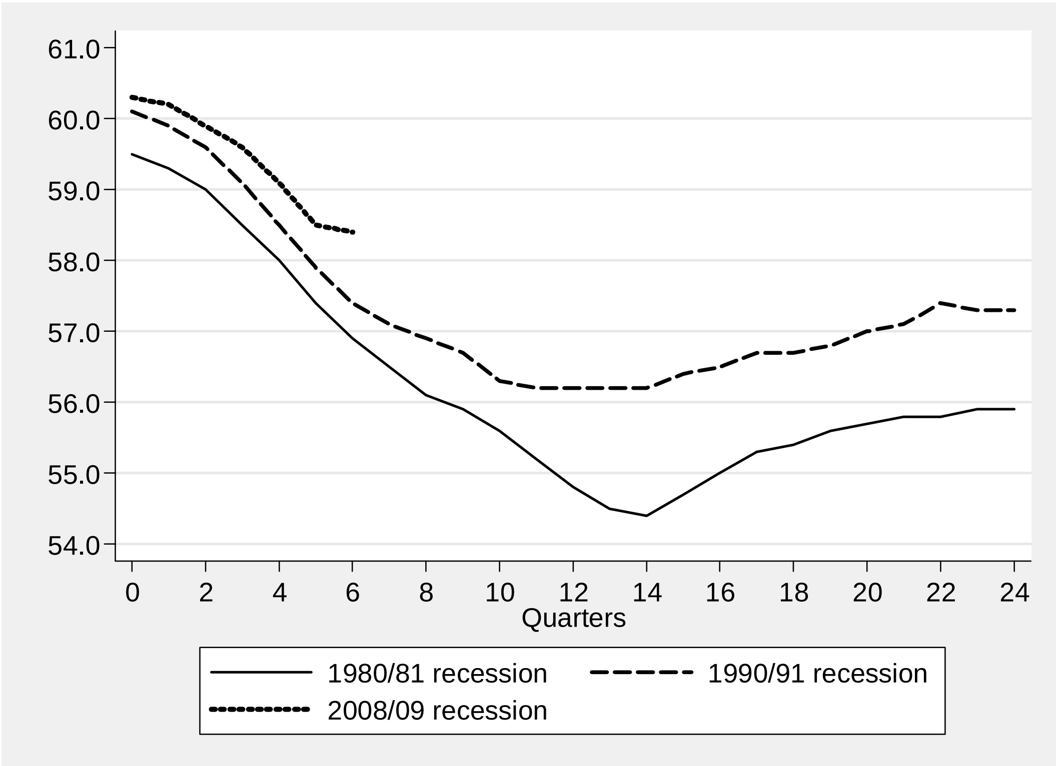


Source: Annual LFS 1975-91 and calendar quarters 1992q2 to 2009q3. Unemployment rate (ILO) is measured yearly in March/April/May and linearly interpolated.

The teenagers do not appear to have experienced the same falls in unemployment after the 1990s recession as older groups. But this trend conceals important selection effects, as increasing numbers of non-employed teenagers are staying in education. We discuss them in more detail below.

Figure 4 plots the employment rate for each of the three recessions. The employment rate was at historically high rates in 2007 prior to the latest recession, yet despite the much larger fall in output shown in Figure 2, the employment rate has fallen by less than in the previous two recessions. This is the sense in which the labour market appears to be performing better than in the past.

Figure 4: Employment rates in the last three recessions



Source: LFS employment rate from 1971q1 to 2009q3. UK, all individuals aged 16 and over, seasonally adjusted (MGSR) (http://www.statistics.gov.uk/statbase/). Reference quarters 1979q4, 1990q2 and 2008q1 (first quarter before GDP decrease).

There are a number of possible explanations for this, including:

- A genuine improvement in the way job 'matches' are made through a more effective Employment Service. This is the 'optimistic' story that the cumulative reforms made since 1997 – such as the New Deal and Job Centre Plus – have helped to improve matching in the labour market. For example, the ability (and incentive) to switch from JSA to incapacity benefit has been much reduced, which is a positive move as exit rates from disability benefits are much lower than from JSA (in part due to less emphasis on helping people look for jobs).

- Greater wage moderation ('wage flexibility'), which reduces the need for employers to shed jobs.

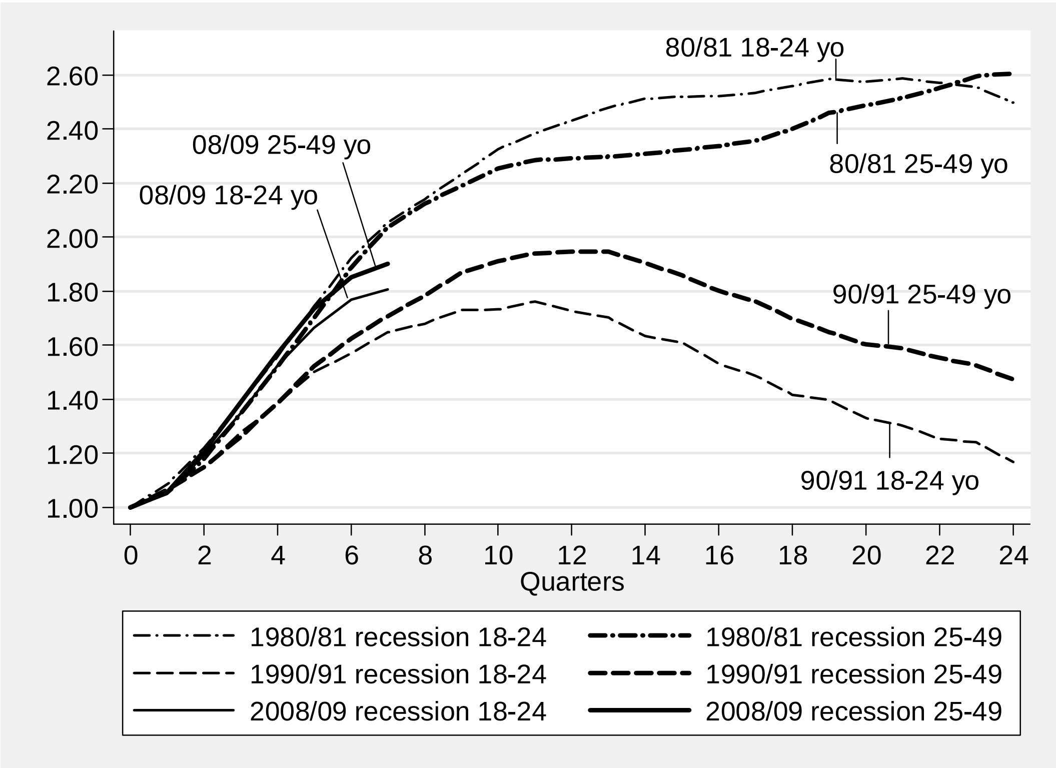
- The industrial composition of the shock has been in sectors that have high capital-labour ratios (for example, finance and manufacturing), so the GDP fall has been disproportionately greater than the jobs fall.

- Higher unemployment is still to come (for example, when public sector employment starts to fall with planned spending cuts).

But has the recent recession hit young people much worse than in the past? Figure 3 shows that the unemployment rate for the young has increased by more than the unemployment rate for older groups since the onset of the current recession.

Furthermore, hourly wages appear to be falling for the younger groups more than the older groups; and even for those who are employed, average hours worked fell by more for the younger groups than the older groups. This all seems to indicate that young people have been bearing the brunt of the adjustment.

Figure 5: Proportionate growth in claimant count by age in the last three recessions



Source: ONS claimant count current data up to 2009q4 (1985-2009), historical data (1983-85) and registrants (1979-82) by age band (February 2010). Reference quarters 1979q4, 1990q2 and 2008q1 (first quarter before GDP decrease). Historical data are for a given calendar month, a monthly time series has been created by linear interpolation, leading to the quarterly data, which were seasonally adjusted.

But it could be said that this has been the general pattern in all recessions (‘twas always thus’). The unemployment rate for young people is about the same as its 1990s highpoint and better than the 1980s peak, despite the fall in GDP being deeper. (The higher absolute number of young unemployed is due to the larger labour force and so is not really a relevant comparison.)

Figure 5 examines this more formally, breaking down the claimant count by age group in each recession.[3] The growth of youth unemployment (relative to the old) in this recession looks no worse than previous recessions – if anything slightly better.

We conclude that the available information does not suggest that there is a special problem of youth unemployment in this recession compared with past experience. The fact that young people suffer more during downturns is quite consistent with what has happened in previous recessions in the UK and elsewhere. A bigger problem is what was happening before the recession. We now turn to this issue.

Why did youth unemployment rise before the Great Recession?

Prime age unemployment in the UK has been falling dramatically since the early 1990s – from nearly 9% in 1993 to 3% in 2005, after which it broadly stabilised and then rose again in 2008. But for the 18-24 age group, unemployment started rising in 2004, several years in advance of the recession. Thus there seems to be a component of the adult-youth unemployment differential that does not seem to be purely explained by the stronger impact of cyclical downturns on young people.

Despite several forces that may be in theory related to the poor performance of the youth labour market in recent years, the bulk of the rise in youth unemployment between 2004 and 2008 remains largely unexplained. We examine several factors: immigration, unemployment benefit reform, the minimum wage and skill demand.

Rising immigration
As the rise in youth unemployment dates back to 2004, the year of European Union enlargement to take in eight countries of Central and Eastern Europe (plus Cyprus and Malta), it would be natural to think that the increase in youth unemployment is related to stronger competition from immigrant labour.

The UK has experienced a record increase in immigration in the past few years. The proportion of foreign-born population was below 6% in the early 1990s, but is currently about 10%. In London, this proportion rose from 28% to the current level of around 40%. If immigration has an effect on the labour market prospects of natives, it may hurt youths more strongly than adults. Immigrants who are less skilled than natives will be closer substitutes for inexperienced youths.

Although youth unemployment is positively correlated with the share of immigrants in the regional labour market, this result is driven solely by the contrast between London and the rest of the UK (as London experienced particularly high rates of immigration and a relatively higher increase in unemployment). This raises the suspicion that other factors may explain this correlation. Overall, there is no compelling evidence of a causal impact of higher migration on youth unemployment (Card, 2009).

[3] The LFS was only annual prior to 1992, so we cannot do ILO quarterly unemployment rates for earlier recessions.

Unemployment benefits

The poor showing of the youth labour market is particularly worrying given the considerable policy reform to the Employment Service (especially for young people) in the last two decades.

Jobseeker's Allowance (JSA) was introduced in 1996 as the main form of unemployment benefit and greatly increased the job search requirements for receiving benefits. It did appear to reduce the claimant count, but few of those leaving seemed to find sustainable jobs. JSA did not seem to improve the overall employment rate significantly (Manning, 2009) and may even have reduced it for the young (Petrongolo, 2009).

While the claimant count and LFS unemployment have been very close until October 1996 for the population over 18 years old, LFS unemployment remained well above the claimant count in the post-JSA period.[4] Thus there is evidence of increasing numbers of workers who left the unemployment register but did not find jobs. About half of the 18-24 LFS unemployed do not claim JSA (compared with a third for 25-49 year olds). When dropping out of the welfare system, individuals may become more detached from the labour market and spend less effort on job search than while on unemployment benefits.

The New Deal for Young People was introduced in 1998 with the aim of improving the incentives and prospects for young workers to find jobs. All 18-24 year olds on JSA for six months now receive help with job search from a dedicated personal adviser. So there is some 'carrot' of job search assistance as well as a tougher 'stick' of stricter monitoring.

Rigorous evaluations show that job finding rates increased by about 20% as a result of the policy (Blundell et al, 2004, di Giorgi, 2005). These evaluations exploit the fact that there was a large difference in treatment between 24 years olds who were in the programme (the 'experimental group') and 25 year olds who were not (the 'control group'). Blundell et al (2004) also use the fact that the New Deal was piloted early in some areas and showed very similar programme effects.

Around 2004, the Employment Service was incentivised to focus less on young people on JSA and relatively more on other groups such as lone parents and those on incapacity benefits (through a system of 'job points'). This was because the problem of long-term youth unemployment was thought to have been broadly solved. Although there is no rigorous evaluation of this change, the timing does make one suspect that this may have been a cause.

A further problem is that the increasing numbers of LFS unemployed who are not claiming JSA separate them from any direct effect of the New Deal and the Employment Service in general.

The minimum wage

The National Minimum Wage was introduced in the UK in April 1999, but 16-17 year olds were exempt. In October 2004, the minimum wage was extended to cover workers aged 16-17 who are not apprentices, and this coincides with a strong increase in their unemployment rate.

[4] One possible reading of these series is that the JSA removed from the register those who were not really looking for work or claiming fraudulently. Another interpretation is that the non-claimant unemployed simply have a level of search effort above the ILO/LFS threshold, but below the JSA threshold.

Research in the UK has generally found few jobs effects of the wage floor.[5] For example, Dickens and Draca (2005) find that the 2003 increase in the minimum wage had insignificant employment effects for all demographic groups including youths. Furthermore, if minimum wages were to blame, we would expect a positive jobs impact on teenage apprentices, who were exempt from the 2004 legislation. In fact, the job rates for 16-17 year olds *fell* from 15% in the first quarter of 2003 to 13% in the first quarter of 2007,[6] casting doubt on the minimum wage explanation.

Falling demand for low skilled workers
There has been a large increase in wage inequality over the last three decades in the UK. The wage premium for being educated has risen despite a huge increase in the supply of college-educated workers, which implies that there has been an increase in the demand for skills. This is probably due to new 'skill-biased' technologies, but trade with less developed countries like China and India and falls in union power may also play some role. There are similar rises in the demand for skills in the United States and other countries (see, for example, Machin and Van Reenen, 2008).

A rise in demand for human capital may disproportionately hurt the young because they have less experience. This secular explanation is not so persuasive as youth unemployment was falling from 1992 to 2004 (and for parts of the 1980s) in the face of this rising demand for skill, so skill biases in labour demand are unlikely to be the explanation.

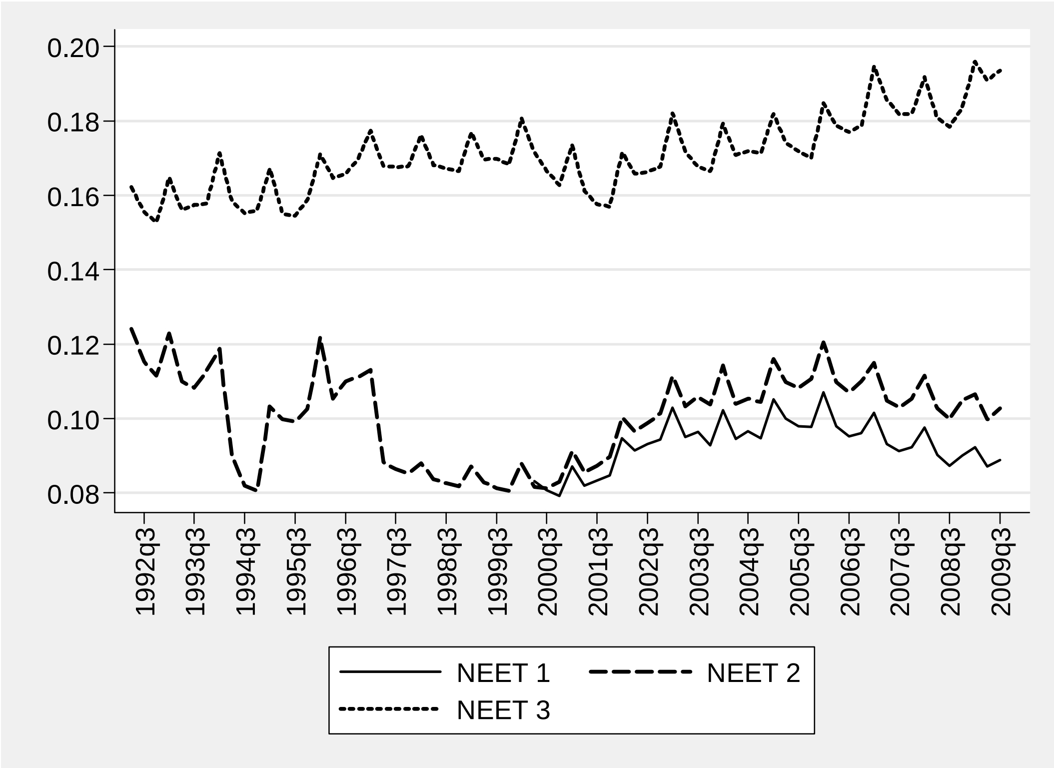
One possibility is that the quality of education for the type of young people likely to be unemployed may have declined. Although standards as a whole appear to be rising, it is possible that targets have led schools to neglect some of the 'hard to reach' young people who may end up as non-employed.

Idle youth? What about the young NEETS?

Unemployment rates may give a misleading impression of the labour market because of the large increase in the fraction of young people staying in full-time education. An alternative indicator is the proportion of the age group who are NEETs – 'not in employment, education and training'. Reducing the number of young NEETS has been a priority of the Department for Children, Schools and Families.

[5] Machin et al (2003) detect a mild reduction in employment in the care homes sector after the introduction of the minimum wage. As the care homes sector is particularly vulnerable to the introduction of the minimum wage given the low starting level of wages, their estimates may be interpreted as an upper bound for the aggregate employment effects of the minimum wage. Stewart (2004a, 2004b) finds neither the introduction of the minimum wage nor the 2000 and 2001 upratings had significant employment effects for adults (aged 22+) or youths (18-21).
[6] The data source is the LFS individual record files.

Figure 6: NEET rates 1992-2009 (aged 16-17)



Source: LFS calendar quarters 1992q2 to 2009q3. NEET1 defines as NEET ('not in employment, education or training') all those who are not working, are not enrolled in either education or training, and declare that they are not working or studying towards a qualification. This latter information is only available since 2000. NEET2 defines as NEET those who are not working or enrolled in either education or training. NEET3 defines as NEET those whose main economic activity is not education, training or work.

Although the *levels* of NEET differ for 18-24 year olds, they all show the same trends as the youth unemployment rates discussed above – a steady fall from the 1990s recession and then a rise starting in 2004 and accelerating in 2008.

Even prior to the most recent recession, several media reports expressed worries that large proportions of 16-17 year olds were 'doing nothing' (that is, they were NEETS). But measuring the number of NEETS precisely is not straightforward because of the ambiguity of whether someone is 'really' in education or training (for example, they might say they are at school but never turn up).

The 'narrow' definition (defined like the official rate) excludes those who are in any type of education or training from NEET. According to this definition, at the end of 2009, about 9% of all 16 and 17 years olds were NEET (see Figure 6, series 'NEET1'). But if we include in the NEET count all those who say they are in education or training but would accept a job offer, this number leaps to 19% (series 'NEET3').

The difference is mainly in the fact that there are a lot of students looking for part-time jobs – and thus it is incorrect to classify them all as NEET or 'doing nothing'. But at the same time, it may be plausible that some of those who declare themselves to be receiving some kind of education and looking for jobs have essentially dropped out of the education system – thus the 'narrow' 9% figure underestimates the NEET rate.

Figure 6 shows the evolution in alternative NEET measures over time. The 'narrow' definition ('NEET1') is only available since 2000, as it is based on a question about whether an individual is 'working or studying towards a qualification'. To obtain a longer time series, we can use information available since 1992 on school attendance and enrolment in training programmes ('NEET2'). For the time span when both measures are available, NEET2 is not more than a percentage point above NEET1 and the trends move in an identical way.

The true trends of teenage NEETs are hard to gauge, partly because there is a lot of seasonal variation. On the broad definition, the numbers have stayed high since the 1990s recession. The narrow series is only available for a shorter period of time, but here there does seem to be some improvement in the post-2005 period with little effect in the recession.

This suggests that many more teenagers are choosing to stay at school rather than face a hostile labour market. The planned extension of compulsory schooling will cement these trends.

Party policies: spot the difference

There is substantial consensus between the main parties on jobs and youth. All agree on the need to guarantee some activity to young people and to integrate the treatment of those on unemployment benefit with those on other forms of welfare such as incapacity benefit. Labour has pledged a 'job guarantee' to all unemployed under 25 year olds[7] after six months claiming JSA, which seems strikingly similar to the New Deal.

The Conservatives promise to 'scrap Labour's failing employment schemes and create a single Work Programme', which seems almost identical to the current set-up.[8] The Liberal Democrats are more vague, but it seems likely that they would have a similar guarantee for young people after three months.[9] The nuances are that the Conservatives seem keener on paying third-party providers rather than the Employment Service to place job seekers and perhaps being less generous with wage rates for government jobs.

An unanswered question for all parties is: if they think the current system is not working, then how will 'more of the same' radically improve things?

Conclusions

The UK labour market has held up surprisingly well so far given the depth of the current recession. Young people, however, have fared much worse than other groups with larger increases in their unemployment and bigger falls in hours and wages.

We argue that, unfortunately, this is to be expected as young people always suffer worst during downturns, and it does not seem that (relatively) they are doing particularly badly in the latest recession compared with the 1980s and 1990s recessions.

---

[7] http://www2.labour.org.uk/uploads/TheLabourPartyManifesto-2010.pdf, p.2:2.
[8] http://media.conservatives.s3.amazonaws.com/manifesto/cpmanifesto2010_hires.pdf, p.15.
[9] http://www.libdems.org.uk/siteFiles/resources/PDF/Election%20Policy/05%20-%20Jobs%20that%20last.pdf.

More worrying, however, is that the fact that youth unemployment and NEET rates were bad going into the recession having been rising since 2004. The existing evidence does not allow us to give a firm answer as to why, after over a decade of steady improvement, youth unemployment started rising in the mid-2000s.

We think that part of it was due to some softening of the overall labour market, and part of it was due to changes in the Employment Service, which targeted other ‘at risk’ groups with greater vigour. The other suspects – immigrants, the minimum wage and skill demand – do not seem to blame.

Finally, the refrain of ‘idle youth’ is overstated as the young NEET numbers typically include a large number of students who are seeking part-time jobs.

April 2010

References

Blundell, R., M. Costa Dias, C. Meghir and J. Van Reenen (2004) 'Evaluating the Employment Impact of a Mandatory Job Search Assistance Programme', *Journal of the European Economics Association* 2(4) 569-606.

Card, D. (2009) 'Immigration and Inequality', NBER Working Paper No. 14683.

Dickens, R. and M. Draca (2005) 'The Employment Effects of the October 2003 Increase in the National Minimum Wage', CEP Discussion Paper No. 693.

Di Giorgi, G. (2005) 'The New Deal for Young People Five Years On', *Fiscal Studies*, 26(3): 371-383.

Gregg, P. and E. Tominey (2005) 'The Wage Scar from Youth Unemployment', *Labour Economics* 12(4): 487-509.

Machin, S., A. Manning and L. Rahman (2003) 'Where the Minimum Wage Bites Hard: Introduction of Minimum Wages to a Low Wage Sector', *Journal of the European Economic Association* 1(1): 154-180.

Machin, S. and J. Van Reenen (2008) 'Changes in Wage Inequality', in *The New Palgrave Dictionary of Economics*.

Manning, A. (2009) 'You Can't Always Get What You Want: The Impact of the UK Jobseekers' Allowance', *Labour Economics* 16: 230-250.

Petrongolo, B. (2009) 'What are the Long-term Effects of UI? Evidence from the UK JSA Reform', *Journal of Public Economics* 93: 1234-1253.

Stewart, M. (2004a) 'The Impact of the Introduction of the UK Minimum Wage on the Employment Probabilities of Low-wage Workers', *Journal of the European Economic Association* 2: 67-97.

Stewart, M. (2004b) 'The Employment Effects of the National Minimum Wage' *Economic Journal* 114: C110-116.

Von Wachter, T., J. Song and J. Manchester (2009) 'Long-term Earnings Losses due to Mass Lay-offs During the 1982 Recession: An Analysis using US Administrative Data', mimeo, University of Columbia.

CEP ELECTION ANALYSIS

Macroeconomics and Public Finances:

The worst is yet to come

Tom Cunningham and Ethan Ilzetzki

CENTRE *for* ECONOMIC PERFORMANCE

ELECTION ANALYSIS

Macroeconomics and Public Finance: The worst is yet to come

- The Great Recession of 2008-9 caused a big drop in UK national output, perhaps a permanent 5% drop in GDP. The average household's wealth fell from £375,000 to £330,000 between 2007 and 2008 alone. But unemployment, currently 8%, has been low compared with previous recessions.

- From 1997 to the eve of the recession, Labour boosted public spending by 1.2% of GDP and raised taxes by 2.3% of GDP, reducing the structural deficit. But since 2007, the recession blasted a hole in the public finances and, without action, the deficit would remain unsustainably high at around 7-9% of GDP.

- Public sector net debt is currently £890 billion. Under Labour's plans to cut spending and raise taxes, this will peak at 76% of GDP in 2014, then decline to around 70% by 2018, up from a recent average of around 40%.

- The UK's long-term structural fiscal challenges notwithstanding, market prices do not indicate neither an imminent Greek-type fiscal crisis in the short run nor extreme inflation. But market appetite for gilts may decline if current debt trends continue and when short-term interest rates begin to rise.

- All the political parties are signed up to major cuts in spending and increases in taxes to reduce the deficit, but none have put forward a comprehensive plan to meet the challenge. The manifestos are broadly similar with the Conservatives planning to put a slightly greater emphasis on spending cuts (one fifth of the fiscal squeeze will be in higher taxes rather than one third under Labour).

- How soon can we start credibly reducing the deficit without risking the recovery? The Conservatives propose to cut government spending by £6 billion more than Labour's plans this year. Regardless of whether these are really 'efficiency savings', this still withdraws demand from the economy. This means spending cuts in real terms of 5.1% in all departments except health and overseas aid.

- The Conservatives would have a lower increase in National Insurance after 2011 (costing £6 billion) and the Liberal Democrats would increase personal allowances (costing £16.8 billion). These policies would further raise the deficit unless there are offsetting cuts in spending or increases in taxation.

Introduction

The economy seemed to have had a near death experience during the Great Recession of 2008-2010. This Election Analysis describes where we are now in terms of macroeconomic performance and the impact on the public finances. We then look at the policy options, focusing on debt reduction and economic recovery, and compare the parties' positions.

All main parties are promising huge cuts in spending and tax increases, but they are not really specifying where these will come from. The debates have focused on the narrower question of the speed with which deficit reductions will kick in, which are relatively minor. This raises the danger that the public will resist the unpleasant medicine that is coming in the next few years.

This analysis starts with where we are now, then addresses the future of public debt before analysing the policy positions of the major parties.

Where are we now?

A permanent fall in GDP?

From the early 1990s to 2007, the UK economy had a very smooth and buoyant ride: GDP grew steadily at around 3% a year, house prices grew at an average of 10% and unemployment fell from 10% to 5%. Although share prices fell sharply between 2000 and 2002, the effects on the rest of the economy were mild.

In the middle of 2007, these trends suddenly reversed. Compared with the summer of 2007, GDP has fallen by 4%, unemployment has risen to 8%, house prices have fallen by 15% and share prices have fallen by 20%.

Typically, recovery from a recession is sufficiently strong so that GDP and other variables entirely make up the lost ground and return to their earlier trajectories. There are some concerns that this may not occur in the aftermath of the 2008-10 recession. The 2010 Budget predicts a 5% permanent drop in output.

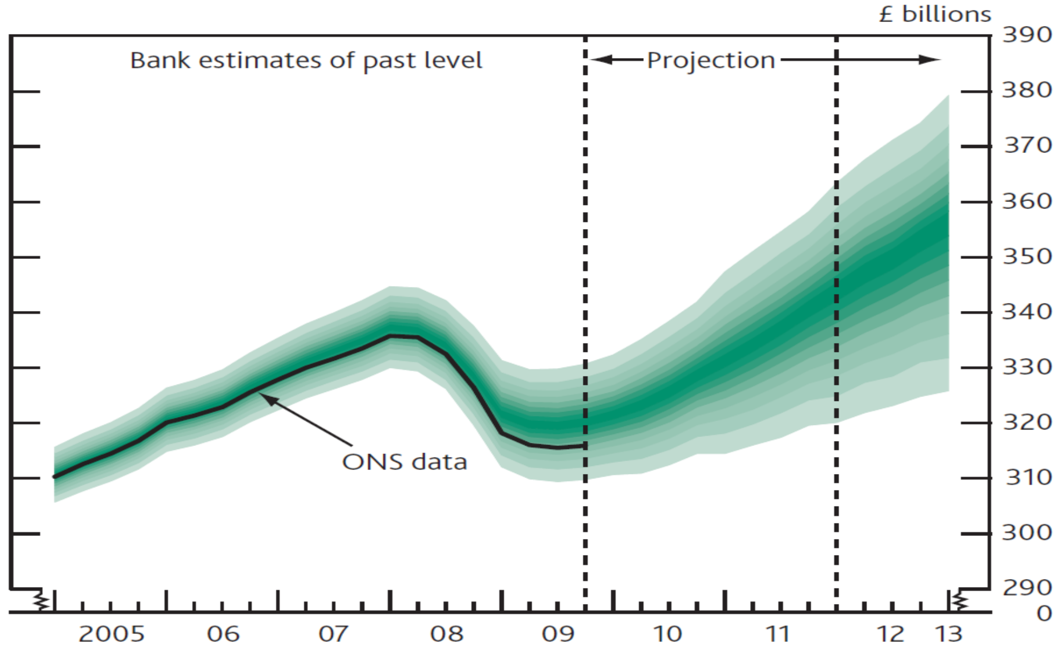
Charts showing historical and projected GDP are shaped like lightning bolts: a downward zag during 2008 and 2009, returning to an upward zig that never meets the old path (see Figure 1). Concerns about output loss are based on historical evidence that financial crises can cause permanent effects on GDP. But the magnitude is highly uncertain; for example, the OECD estimates a loss of 2-4% and the IMF a loss of 10%.

Unemployment up, but by less than expected

Figure 2 shows unemployment rates and GDP growth since 1974 (recessions in grey). Although the latest figures show we appear to be out of recession, the cumulative fall in output during the most recent recession has been greater than in the 1980s and 1990s. But unemployment has risen by less and still stands well below the peaks of the 1980s and 1990s. Part of this may be due to an improvement in the functioning of the labour market with a more effective Employment Service and programmes like the New Deal.[1]

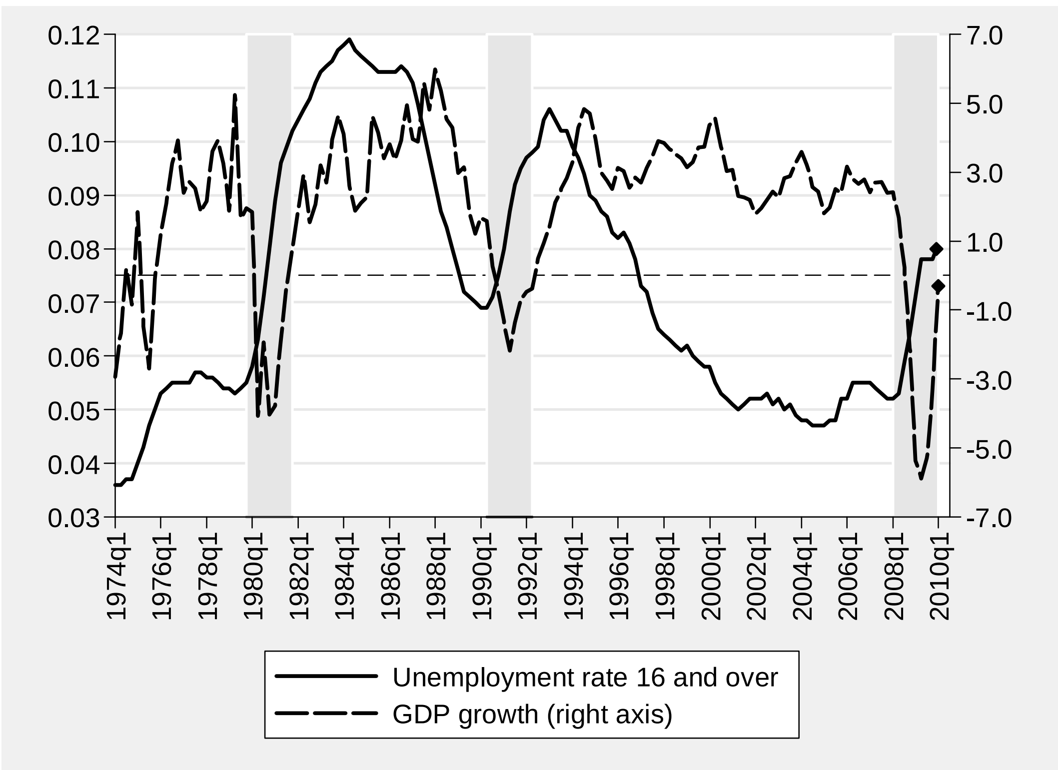
[1] See CEP Election Analysis on jobs and youth unemployment (http://cep.lse.ac.uk/_new/news/year.asp?yyyy=2010#2015).

Figure 1: GDP, historical and projections by the Bank of England



Source: Bank of England *Inflation Report*, February 2010.

Figure 2: UK unemployment and annual GDP growth rate, 1974-2010



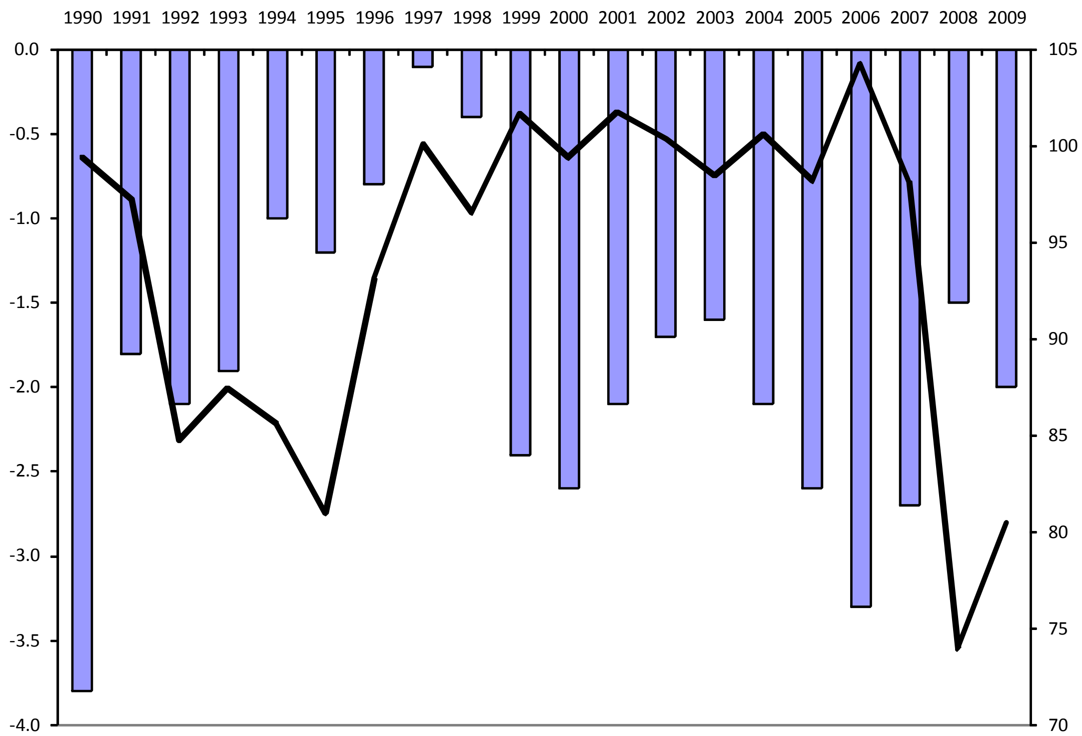
Source: ILO quarterly unemployment rate for 16 and over from 1974q1 to 2010q1 – the last point is the rolling average for 12/2009-02/2010. ONS GDP from 1974q1 to 2010q1: annual GDP growth – the last point is the GDP preliminary estimate for the first quarter 2010.

Assets down, savings up
The recession hit the UK harder than some other countries because asset prices (house prices and shares) were overvalued, household debt was particularly high and the financial sector is very large – employing one in five of the workforce and responsible for more than half of the jobs increase since 1995.

The UK's private savings ratio (the proportion of private disposable income that is not spent) fell from 12% in the early 1990s to zero in 2008, but jumped to 9% in 2009.[2] An important reason for the decline in savings rates was the growth in house prices. Household net worth fell from £7.5 trillion to £6.6 trillion between 2007 and 2008, which is a fall from £375,000 to £330,000 – more than a year's income.

External imbalances and sterling
With low savings rates and stable investment of around 15% of GDP, the boom was accompanied and funded by a current account deficit. For the past 20 years, the UK ran trade deficits most years ranging around 3% of GDP in recent years (see Figure 3). Historical experience shows that deep recessions caused by financial crises tend to end with export booms.[3] While sterling significantly weakened during the crisis and the current account deficit initially narrowed to 1.5% of GDP in 2008, it then widened to 2% in 2009 and the trade deficit has widened further in the first few months of 2010.

Figure 3: Current account deficit as a percentage of GDP (bars, left-hand scale) and Effective Exchange Rate Index (line, right-hand scale)



Source: Bank of England and IMF *World Economic Outlook.*

[2] http://www.statistics.gov.uk/STATBASE/tsdataset.asp?vlnk=221&More=N&All=Y.
[3] IMF *World Economic Outlook* (WEO), April 2009.

Public finances: deficits and debt

From 1997 to 2007, the public deficit was reduced by Labour by about 1.1 percentage points of GDP. Government spending increased dramatically after 2000, raising the share of public spending in GDP to 41.1%, an increase of 1.2 percentage points. These have improved outcomes in health, education and crime.[4] But Labour also increased tax revenues by 2.3 percentage points to 38.7% of GDP.[5]

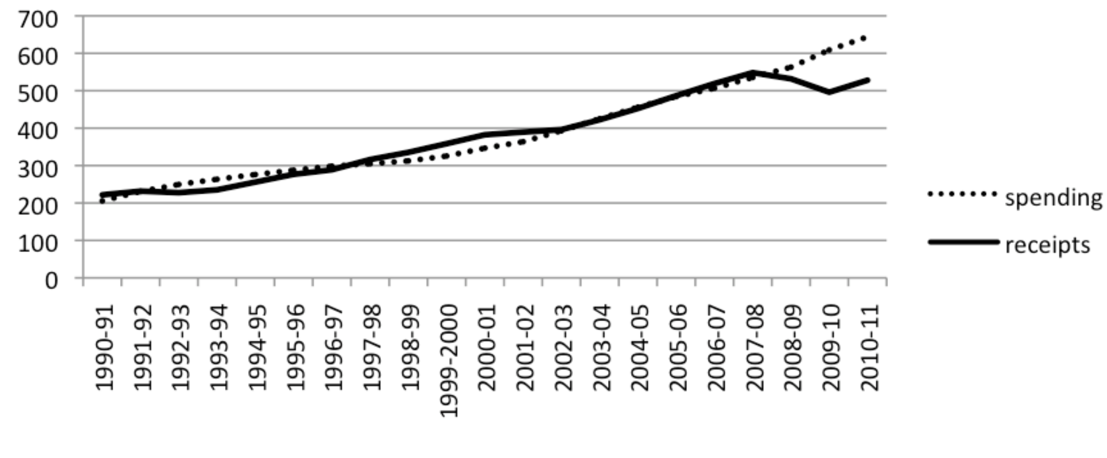
Since 2007, tax revenues have followed the zigzag pattern of GDP but government spending has continued along a rising path. This has opened up a gap between expenditure and revenue equalling around 10% of GDP (see Figure 4).

In thinking about the current fiscal deficit, three factors are important:

First, during recessions, tax revenues decline and government expenditures rise due to 'automatic stabilisers'. Unemployment benefits and other forms of social spending tend to increase while revenues decline more than proportionally due to the progressivity of the tax code. *This automatically re-adjusts as the economy recovers.*

Second, governments may increase expenditures and reduce tax rates through temporary discretionary policies, aimed at counteracting the recession or limiting its social costs. This also reflects a temporary component of the deficit insofar as the discretionary measures undertaken are truly temporary. The reduction in the VAT rate has already been reversed. The deferral of business taxes has not only been reversed, but will contribute to added revenues in 2010-12. On the other hand, the discretionary increases in expenditures involved across-the-board increases in public expenditures that may be more difficult politically to reverse.

Figure 4: Budget spending and receipts



Source: HM Treasury. Current spending and public sector total receipts, in £ billion

Third, a permanent decline in output causes a permanent decrease in tax receipts, requiring a commensurate decrease in expenditures, if long-term budget balance is to be achieved.

[4] See CEP Election Analyses in each area (http://cep.lse.ac.uk/_new/publications/series.asp?prog=CEPEA).
[5] HM Treasury, *Public Finances Databank*, March 2010.

This has the most significant long-term impact, as it implies a permanent increase in the deficit. Estimates of the 2009-10 structural deficit range from 7.8% to 9%, second only to Ireland among advanced economies.[6]

On the other hand, public sector wages have historically matched the trends of private sector wages and are therefore likely to decline in upcoming years. Thus the structural deficit may overstate the actual fiscal difficulties that the UK will face.

The main consequence of high deficits is an increase in public indebtedness. The recent sequence of large government deficits has been funded by borrowing from financial markets, thereby increasing total government debt. During its first decade in power, the Labour government kept net public debt below 40% of GDP, but it is now projected to increase to 76% of GDP by 2014 (see Figure 5). Only around one tenth of that increase is due to financial sector interventions; most is due to the permanent fall in tax revenue while government expenditure has continued to rise.

There has been considerable argument over whether the UK will suffer because of its large debt and how urgently the government should attempt to close the deficit. The answer turns largely on how financial markets perceive the future credibility of the UK in repaying this debt.

In 2009, the UK had the second highest budget deficit among the members of the G7 (11% of GDP; the United States was first with 12%). In contrast, net debt has remained relatively low (44% of GDP in 2009) and even in 2014, when UK debt is projected to hit 76%, it will have much less debt than Italy or Japan (at 125% and 143% respectively).[7]

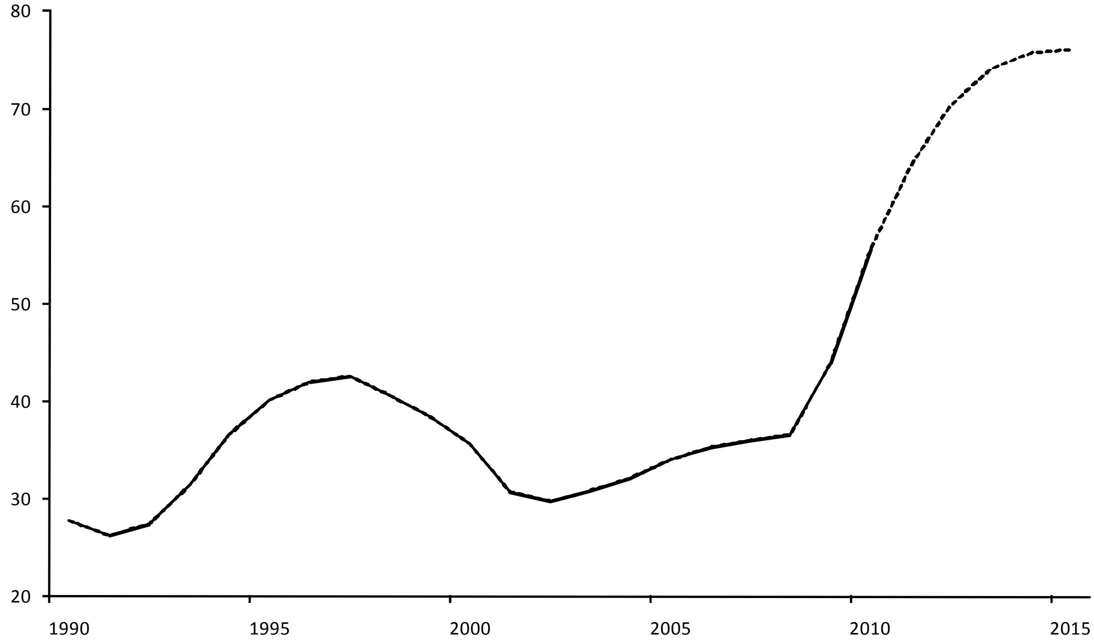
Perhaps because of this, at present markets seem to be fairly sanguine: the government is currently able to borrow for 10 years at 4%, a low interest rate by historical standards and a rate no different from what has been available to the government since the mid-1990s. Spreads between interest rates on UK bonds relative to US or German bonds are insignificant.[8]

Short-term interest rates are significantly lower than they have been at any time in recent history due to the effectively zero short-term interest rate set by the Bank of England. Inflation expectations have also been low during the crisis, implying limited market concern that the real size of government debt will be reduced through the use of inflation. But inflation expectations have risen and currently stand at close to 3.5%.

There is some economic evidence that deficits affect yields on government debt even after controlling for the total stock of debt,[9] as deficits tend to be persistent and politically difficult to unwind. The IMF estimates that the UK government will need to run structural budget surpluses of 5% throughout the 2020s to bring the public debt stock down to 60% of GDP. This would require a 12.8 percentage point adjustment in the structural deficit as a proportion of GDP in the upcoming decade – one of the largest fiscal adjustments in recent history.[10]

[6] Estimates from IMF (2009), and the 2009 Pre-Budget Report.
[7] Data from the IMF's WEO, October 2009.
[8] See Figure 6 in IMF (2009).
[9] IMF (2009).
[10] Table 9 in IMF (2009).

Figure 5: Net public debt, historical and projections (percentage of GDP)



Source: HM Treasury *Public Finance Database*

Another potential required adjustment is in the maturity of public debt. The maturity of outstanding debt has shortened with short-maturity gilts now comprising close to 20% of gross public debt, compared with 15% in the recent past. This may reflect the Treasury's desire to take advantage of low short-term interest rates. But modest increases in interest rates could significantly increase the cost of maintaining this level of debt.

Policy options and party proposals

The medium term: To the end of the next parliament and beyond

In the 2009 and 2010 Budgets, Labour announced long-term plans to resolve the deficit by (a) halving capital expenditure between 2009 and 2012; (b) reducing general departmental funding by 2% a year from April 2011 (compared with historical growth of around 4%); and (c) from April 2011, introducing a 50% income tax bracket on earnings exceeding £150,000 and restricting tax allowances for those over £100,000. Labour also announced a public wage freeze for high-income public employees.

The Conservatives have proposed[11] (a) a one-year public pay freeze in 2011; (b) bringing forward the date at which the state pension age starts to rise to 66 to no earlier than 2016 for men and 2020 for women; (c) stopping tax credits to families with incomes over £50,000; (d) cutting spending on Child Trust Funds for all but the poorest third of families and families with disabled children; and (e) balancing the structural current budget by the end of the forecasting horizon (2015-16).

A more detailed analysis of the parties' specific proposals and other deficit reduction options is in Table 1. There is substantial overlap in the macroeconomic policies of all parties: all are proposing stringent cuts to the deficit. The government is proposing to stablise the debt to

[11] http://media.conservatives.s3.amazonaws.com/manifesto/cpmanifesto2010_hires.pdf, p.8.

GDP ratio in 2016/17 whereas the Conservatives say they will do it a year earlier by 2015/16. The government is proposing to split the deficit reduction one third in tax rises and two thirds in spending cuts, whereas the Conservatives would do one fifth in taxes and four fifths in spending cuts.

These plans are not specific enough to be credible. The Liberal Democrats have identified more concrete savings (such as not replacing Trident) but even these amount to only £6.5 billion. They have also pledged to increase personal allowances to £10,000, which would give away £16.8 billion in 2011/12. This would be paid for by various other tax measures, such as ‘anti-avoidance’ measures, which realists would argue are highly unlikely to work.

The short run: what happens over the next year?
Even though most pain has been deferred until after the election, the government has started to tighten the fiscal belt this year, for example, by increasing taxes on those over £100,000, withdrawing the VAT reduction and reducing capital expenditure. Some economists have voiced concerns that the required adjustment in the structural deficit is so large that some immediate measures must be taken to lower the deficit. Others worry that starting the cuts too soon (say in 2010/11) could push the UK back into a recession.[12]

The Conservatives have been arguing for swifter action to reduce the deficit, but the concrete measures proposed amount to a reduction of only £6 billion in spending in 2010/11 compared with Labour. On top of this, they propose to restrict the planned increases in employer’s National Insurance from 2011, which will lead to lower tax revenues of £6 billion. The magic circle is squared through pointing to an additional £12 billion of ‘efficiency’ savings. The government itself has pencilled in £11 billion of these for 2011, but we should be sceptical – efficiencies are elusive and hard to achieve.

In any case, a reduction of spending remains just that, whether achieved ‘painlessly’ through efficiency gains or more painfully from a fall in the quality of public services. It will reduce demand and endanger the recovery if it really is so fragile.

Conclusions

There are initial signs of recovery from the deep recession of 2008 to 2009. But the recovery may be slow and there is still no sign of a significant reversal in the current account deficits that the UK has run for the past two decades. These problems may be compounded by large deficits and the medium-term challenge of public debt reduction.

All parties have been vociferous in their rhetoric on public debt reduction. Deficit and debt reduction will be painful, with the agony unequally distributed across the electorate. The parties have articulated specific targets and piecemeal measures to address the public debt challenge, but no party has put forward a comprehensive plan to address the structural deficit challenges that are likely to be central to the economic policy agenda of the elected government.

April 2010

[12] For example, see the exchange of letters between 80 economists in the *Sunday Times* (13 February 2010) and the *Financial Times* (19 February 2010).

References

HM Treasury (2010) *Draft Code for Fiscal Stability*

IMF, International Monetary Fund (2009) *The State of Public Finances Cross-Country Fiscal Monitor*, November.

Table 1: Dealing with the deficit?

Policy	Party proposals	Potential impact
INCREASING TAXES		
Increasing taxes on high-income earnings	From April 2010, there is a new 50% income tax bracket, restricted tax allowances on pension contributions for people earning above £150,000 and withdrawal of personal allowances for those earning above £100,000. The other parties will keep these measures in place.	The 50% income tax bracket is projected to yield revenues of approximately 0.1% of GDP and thus will not bring a significant long-run decrease in the deficit.[13]
National Insurance	From April 2011, Labour will increase employer and employee National Insurance (NI) by 1p. This is combined with an increase in the point at which lower earners pay NI to £1,170, meaning that low earners will pay less NI. The Conservatives will restrict the increase in NI so there will be less NI levied on workers earning under £45,400.	Labour plans will raise about £6.3 billion, just about all of which will be lost under Conservative plans. Employers' NI will translate through to lower wages.
Personal allowances	The Liberal Democrats will raise the income tax personal allowance to £10,000	This would cost about £16.8 billion in 2011/12
Increasing the VAT rate or broadening the VAT base	While VAT is a popular tax among economists, due to its relatively non-distortionary nature, neither party has proposed an increase in VAT.	The VAT rate of 17.5% is below the European level of 19.5%, indicating that tax increases on this front are feasible. A 3.5% increase in the VAT would raise around 1% of GDP in tax revenues.[14] Broadening the VAT base and eliminating exemptions could increase revenues by up to 3% of GDP a year.
Cutting tax credits	The Conservatives have proposed stopping tax credits for households earning in excess of £50,000.	This is a relatively progressive way to increase tax revenues. But it is likely to yield less than £100 million of new revenues.[15]

[13] 2009 Budget.
[14] IFS (2010).
[15] Author's estimate: the Treasury estimates that approximately 153,500 with incomes above £50,000 receive the Child Tax Credit, some of whom would still receive under the Conservatives' plan. They receive less than the standard rate of £545, putting an upper bound of £82 million on savings due to this proposal.

Policy	Party proposals	Potential impact
Bank taxes	The Liberal Democrats will put an additional 10% tax on UK banks (raising £2.2 billion), the Conservatives a £1 billion levy. Labour wants an international deal on a financial transactions tax.	Bank taxes levied solely in the UK (as the opposition parties propose) could lead to banks relocating away from the UK. Crude bank taxes by themselves will do little to deal with the problem of financial regulation that caused the crisis – see CEP Election Analysis on Financial Regulation (http://cep.lse.ac.uk/pubs/download/ea011.pdf).
Other taxes	The Liberal Democrats will (i) reform air passenger duty and introduce taxes for domestic flights (£3.3 billion); (ii) introduce 1% tax on domestic property values over £2 million ('mansion tax') – £1.7 billion; (iii) reduce capital gains allowances (£1.9 billion).	
CUTTING GOVERNMENT EXPENDITURES		
Public sector wages	Labour and the Conservatives have proposed public sector pay freezes. The Conservatives have also proposed capping public sector pensions for public employees with earnings in excess of £50,000. The Liberal Democrats have proposed a £400 pay raise cap for all public employees.	When public expenditures cuts are necessary during recessions, public wage freezes or cuts are particularly attractive options. They help cut government expenditure in real terms but have more limited macroeconomic and social costs relative to cutting public good provision or public investment. They may lower the fiscal deficit with a limited reduction in the provision of public goods; at the same time, they do not add workers to the unemployment pool and public workers are less likely to leave public service for private sector jobs. The long-run fiscal benefit of such cuts depends on whether they cause a permanent decline in public wages. Labour's wage freeze is projected to reduce expenditures cumulatively by 0.2% of GDP, which has a negligible effect on long-run debt and will only have a small and temporary impact on the budget deficit.
Slowing the growth of public expenditures	Labour has proposed cutting departmental funding by 2% a year in real terms in 2011 to 2014 and halving public investments. The Conservatives have proposed cutting spending on Child Trust Funds for all but the poorest third of families and families with disabled children. Liberal Democrats have proposed to end government payments into Child Trust Funds.	Labour's proposal could have a significant impact on public debt, but lacks specifics in how such radical cuts will be achieved. Drastic cuts in public investments could have an impact on economic growth in the medium term.
Structural policies		

Policy	Party proposals	Potential impact
Increasing the retirement age	The Turner review, overseen by the Blair government in 2004, proposes increasing women's retirement age to 65 by 2020 and raise both sexes' retirement age to 66 in 2026.[16] The Conservatives have proposed bringing forward the date at which the state pension age starts to rise to 66, to no earlier than 2016 for men and 2020 for women.	It is estimated that increasing the full pension age to 68 for men and women by 2030 would give (cumulative) savings of 0.6% of GDP. As this reform is more ambitious than proposed by either party, it gives an upper bound to the potential revenues that are available through pension reform.
BUDGETARY INSTITUTIONS		
Fiscal rules versus fiscal committees	Both parties have considered institutional arrangements that might help control deficits in the future and serve as a check on the Treasury in the budgetary process. Labour's approach has been 'rule-based' in that it attempts to limit future deficits through a form of fiscal rule. In February, Labour passed a Fiscal Stability Act, which updated the draft Code for Fiscal Stability.[17] The Conservatives have instead proposed an institutional arrangement in the form of a Budgetary Responsibility Committee, which would produce medium-term budget forecasts and assess the long-term sustainability of the public finances.[18]	There is limited economic research on the relative advantages of rules and committees in the fiscal process. IMF research has shown that fiscal rules have been helpful in fiscal consolidation, but do not compare rules to the alternative proposal.[19] The common argument in favour of a fiscal council is that it allows some discretion (based ideally on professional expertise rather than political considerations) in reacting to new conditions. Another argument is that it is very common for fiscal rules to be violated.[20] Proponents of institutional arrangements argue that the force of the moral suasion of a fiscal council exceeds the quasi-legal force of a fiscal rule. Proponents of a fiscal rule argue that it provides a clear target and that an institution like a fiscal council is likely to be subject to political pressure. In practical terms, the devil is likely to be in the details. The effectiveness of a fiscal committee depends on its institutional structure, authority, and degree of independence. The effectiveness of a fiscal rule depends on enforcement mechanisms.

[16] http://www.guardian.co.uk/politics/2009/oct/06/retirement-age-david-cameron.
[17] http://www.hm-treasury.gov.uk/d/fiscal_stability_draft_code.pdf.
[18] http://www.ft.com/cms/s/0/8b4fa40e-fa4c-11de-beed-00144feab49a,s01=1.html.
[19] IMF (2009).
[20] Think of the case of Greece: officially it was bound by the eurozone's Stability and Growth Pact, which limits deficits to 3% of GDP, but in practice Greece ran deficits in excess of 9% and has violated the terms of the pact every year.

CEP ELECTION ANALYSIS

Urban Renewal and Regional Growth:

Muddled objectives and mixed progress

Henry Overman

CENTRE for ECONOMIC PERFORMANCE

ELECTION ANALYSIS

Urban Renewal and Regional Growth: Muddled Objectives and Mixed Progress

- Since 1997, Labour has committed to improve the UK's 'underperforming' neighbourhoods, cities and regions.

- The public service agreement on regional growth commits the government to 'improve the economic performance of all English regions and reduce the gap in economic growth rates between regions'. There is little evidence of *significant* progress against this objective.

- The role played by the regional development agencies (RDAs) is hard to assess. There is no compelling evidence on whether RDAs are a good or bad thing.

- The government has also committed considerable resources to trying to improve outcomes in deprived neighbourhoods. Expenditures have provided important public goods, for example, improved social housing. But there appears to have been little progress in narrowing the gap between the outcomes for the most seriously disadvantaged individuals and the rest.

- As with RDA expenditure, it is difficult to get compelling evidence on the impact of these initiatives. Based on the best evidence that we have available (for the New Deal for Communities), a reasonably well-funded 'area-based initiative' has not, on average, improved individual outcomes in targeted areas.

- Some argue that there can be no assumption that 'success' is best measured by what happens to individuals as opposed to what happens to areas. Most economists would disagree with this suggestion: they view improving places as a means to an end rather than as an end in itself.

- Understandably, constituency-based politicians often care about area outcomes irrespective of the effect on individuals. Add to this the fact that voluntary 'sorting' in response to initiatives makes their impact very hard to evaluate and it is clear why the thinking of all political parties on the objectives for – and effectiveness of – spatial policy remains muddled.

Introduction

Since its election in 1997, the Labour government has been committed to improving the fortunes of the UK's 'underperforming' neighbourhoods, cities and regions. It has used a complex array of policy initiatives to try to achieve this objective.

This Election Analysis considers the evidence on the effects of some of these initiatives, with a focus on the role of 'area-based initiatives', which try to improve outcomes in particular areas. It also considers the overall impacts.

The evidence suggests that progress against objectives has been mixed. This is unsurprising. The economic processes that drive spatial differences are poorly understood and what evidence we do have has played little part in the formulation of policy. As a result, there is confusion about what urban and regional policy could and should try to achieve. This confusion is shared by all political parties.

Regional policy

Places throughout the UK – regions, cities and neighbourhoods – appear very unequal. This is true if we look at average earnings, employment, education and almost any other socio-economic outcome.

For example, in 2005, in terms of gross value added (GVA) per person, the highest ranked (NUTS 3) regions in the UK were West Inner London and Berkshire with GVAs of £44,050 and £39,850 respectively. The lowest ranked were Liverpool and Blackpool, with GVAs that were half of those in London and Berkshire: £19,800 and £21,050.

These individual examples are representative of a broader trend – the top ranked 10% of UK (NUTS 3) regions have GVA at least 50% higher than the bottom ranked 10%.

The public service agreement on regional growth commits the government to 'improve the economic performance of all English regions and reduce the gap in economic growth rates between regions'. To help achieve this objective in England, the government created regional development agencies (RDAs) in 1999.[1] The devolved administrations all have agencies with broadly similar objectives.

There is little evidence of *significant* progress against this objective. The most recent assessment (August 2009) by the Department for Business, Innovation and Skills (BIS), reports 'some progress'. Between 2002 and 2007, five regions improved on baseline (1990-2002) while four regions saw weaker growth.

In terms of narrowing differences in growth rates, assessment is based on the gap between the Greater South East and the North, Midlands and South West. Again, comparing up to 2007 against the 1990s baseline suggests a small improvement: the gap has fallen from 0.6 to 0.5 percentage points. But add in the 2008 downturn and the gap *rises* to 0.7.[2]

[1] The London Development Agency was created in 2000.
[2] Data taken from 'Key Indicators' (http://stats.berr.gov.uk/reppsa2/), accessed 25/01/10.

The role played by the RDAs in these developments is hard to assess. PriceWaterhouseCoopers found that every £1 spent by the RDAs added £4.50 to regional GVA. These numbers seem very high, reflecting the fact that the evaluation almost certainly attributes things to RDA activities when they (or something else that generates value) would have happened regardless.

Estimating the 'additionality' of government interventions is difficult. But it would be fair to say that the approach adopted by most evaluations of RDA expenditures (asking project managers or recipients) is close to the bottom of the ranking in terms of rigour.

In short, there is no compelling evidence as to whether the RDAs are a good or bad thing. Labour is committed to them; the Conservatives and Liberal Democrats are (probably) committed to abolishing them. It should be clear that these positions cannot truly reflect evidence-based positions on RDAs' effectiveness.

The Conservatives' concerns are mostly around RDAs' new regional planning role (they think powers should rest with local authorities) and the fact that they are unelected 'quangos'. The Liberal Democrats share concerns about accountability, but say that they will look at value-for-money on a case-by-case basis.

Deprived neighbourhoods

Turning to smaller neighbourhoods, the government has again committed considerable resources to trying to improve outcomes. The National Strategy for Neighbourhood Renewal (2001) focused on deprived neighbourhoods and aimed to ensure that within 10 to 20 years, no one would be seriously disadvantaged by where they live.

As well as directing mainstream funding, specific programmes have been associated with this objective: the New Deal for Communities (NDC), the Neighbourhood Renewal Fund (NRF) and, slightly later, Housing Market Renewal Pathfinders. New initiatives continue to appear, for example, the Working Neighbourhoods Fund. Unsurprisingly, given the complexity and the state of government finances, we do not know what the policy mix in this area will look like in the next parliament.

Working out the overall impact on deprived neighbourhoods from existing interventions is difficult. Expenditures have clearly provided important public goods to deprived areas, for example, in the form of improved social housing and public spaces.

But aside from the consumption value of these goods, there appears to have been little progress in narrowing the gap between the outcomes for the most seriously disadvantaged individuals and the rest.[3]

Of course, this does not mean that policy has had no impact: things may have been worse without them. But as with RDA expenditure, it is difficult to get compelling evidence on the impact of these initiatives.[4]

[3] National Equality Panel (2010).

The evaluation of the NDC is more rigorous.[5] The NDC is a 10-year policy, which spends £400 per household per year in 39 of the most deprived areas of the country. Evidence on its impact to date is disappointing. According to the summary of the recent evaluation:

> 'NDC areas are experiencing positive change, some of which is over and above that occurring in the comparator areas.' Specifically, '[a]fter controlling for base characteristics, residents in NDC areas have on average seen statistically greater positive change in relation to their satisfaction with the area compared with comparator residents […]. This is not, however, the case when a respondent's initial level of satisfaction is included.'

In the full report, it appears that (controlling for socio-demographic factors) individuals in NDC areas did *worse* on between two and seven out of 15 indicators (depending on the time period). In other words, based on the best available evidence, a reasonably well-funded area policy has not, on average, improved individual outcomes in targeted areas.

The report leaves some wriggle room. There may be area policies in the comparison areas that are just as successful – although it seems unlikely that they could be as costly as the NDC. It is also early days for the NDC – although the evaluation also suggests that the largest gains came first.

The report itself suggests that:

> 'There can be no assumption that "success" is best measured in relation to what happens to individuals as opposed to what happens to these areas over time'.

This argument is simply baffling. If such policies have equity objectives – for example, helping the disadvantaged – then we should care about what happens to individuals *not* areas. The fact that the NDC evaluation can suggest the exact opposite highlights confusion about what urban and regional policy could and should try to achieve.

What can and should spatial policy do?

As should be clear, the evidence on the impact of UK area policies is mixed and there is certainly scope for improving the rigour of the methods used to assess the impact of policy. Unfortunately, the situation is not much better looking outside the UK.

For example, two recent evaluations of Empowerment Zones in the United States go some way towards addressing methodological concerns. But while one of them finds large positive effects of the zones, the other finds almost no effects.[6]

A recent study provides a useful summary of existing US evidence.[7] It suggests that:

---

[4] For example, the recent evaluation of the NRF states that: 'There is very limited data available to evidence outcomes at a local level. Therefore we provide comment on who benefited from NRF based on how funds have been targeted and stakeholder perceptions of the outcomes arising.'
[5] See http://extra.shu.ac.uk/ndc/.
[6] See Busso et al (2009) and Kolko and Neumark (2009).
[7] Bartik (2003).

(i) Tax incentives seem to work and are most effective at redistributing *within* urban areas. But they are costly and easily offset if labour or land costs in poorer areas are kept relatively high (as a result of, for example, national pay-setting or local land regulations).

(ii) 'Extension' activities to improve productivity through, for example, benchmarking can be relatively cost-effective.

(iii) There is limited evidence on the benefits of 'cluster' approaches or focusing on high-technology industries.

(iv) The evidence for targeting small businesses is not particularly compelling because so many of these businesses sell locally so displacement of existing businesses is a real risk.

(v) Evidence on Enterprise Zones or other policies targeted at deprived neighbourhoods is mixed.

In the light of this mixed evidence base on the effectiveness of many interventions, some economists have begun to argue for trying alternative approaches. One possibility is to try to address the problem that *relatively* expensive land and labour costs provide a disincentive for firms to relocate activity to deprived neighbourhoods.

In the UK, national pay structures for public sector workers ensure that their salaries do not show as much spatial variation as private sector wages. Given that the public sector is disproportionately large in deprived areas (for example, it is approximately 32% in Newcastle, 36% in Liverpool and 42% in Hastings compared with 27% for the GB average), these higher public sector wages may crowd out private sector employment.

The Conservatives' manifesto (and subsequent interviews with David Cameron) have emphasised the need to increase the share of the private sector in some areas. Interestingly, while the Conservatives appear to be suggesting that public sector employment crowds out private sector employment in deprived areas, the recent Smith report for HM Treasury assumes the opposite (so that moving jobs out of affluent areas has no effect on employment because they are simply replaced by private sector jobs).[8] Unfortunately, there is essentially no evidence available to distinguish between these claims.

National pay structures also have a variable impact on the quality of public services across regions. Propper and Van Reenen (2010) show that the national pay system in the NHS decreases service quality (as measured by hospital death rates) in high cost areas, such as London, without increasing quality much in the low cost areas.

Land use controls that make commercial property expensive in deprived areas also act to reduce employment further. For example, commercial rents in Birmingham are *twice* those in San Francisco. This is mostly because Birmingham's planning restrictions are more restrictive than San Francisco, itself a highly regulated city by US standards.[9]

[8] Smith (2010).
[9] Cheshire and Hilber (2008).

Another possibility, although one that is even less popular with politicians than suggestions to liberalise land planning, is to encourage greater mobility *out of* deprived areas.[10]

Understanding what drives spatial disparities

Given the conflicting evidence base, one thing that is needed is much greater clarity about the way spatial disparities arise and what, if anything, policy should do about them. Here, the academic research literature can help. Spatial policy at all scales is largely based around concerns about 'area inequalities'. But area outcomes are simply aggregates of the outcomes for people who live and work in these places.

Without further information, we do not know whether the economic outcomes for people currently living in West London would be any different if they lived and worked in Newcastle. We have no way of knowing if the productivity of West London and Newcastle would change if these movements of people took place. Similarly, we do not know whether replicating the economic, policy, institutional and environmental regime of West London in Newcastle would change anything without moving people.

In short, while it is relatively easy to measure aggregate economic differences between places, it is much harder to work out what these differences mean in terms of the economic advantages and disadvantages that a place offers to the people who live and work there.

It is also easy to assume from looking at these overall figures for different areas, that inequalities between places are big drivers of individual inequality. But this clearly need not be the case. For individuals, the differences between those living and working within the same local area may far exceed the differences between the average worker in different areas.

Knowing whether 'between-place' inequalities or 'within-place' inequalities dominate is thus crucial to understanding the role that spatial policy might play in addressing individual inequality. Evidence increasingly points to the fact that within-place inequalities play a much more important role than between-place inequalities.

Even when we are able to address between-place inequalities (for example, through improving public spaces in specific areas), the location decisions of individuals, coupled with the working of the housing market, often mean that poorer individuals quickly become priced out of much improved areas.

This is one of the key reasons why economists tend to argue for a policy focus on people over place.[11] That is, they argue for viewing improving places as a means to an end rather than as an end in itself. From this viewpoint, it would be very odd to see as successful a policy that improved average outcomes in a neighbourhood simply by moving out some of the disadvantaged inhabitants.

Unfortunately, but unsurprisingly, constituency-based politicians (from both local and national government) sometimes care about area outcomes irrespective of the effect on individuals. Add to this the fact that voluntary sorting in response to initiatives makes impact

[10] Leunig and Swaffield (2008).
[11] See, for example, Glaeser and Gottleib (2008).

very hard to evaluate, and it is clear why the thinking of all political parties on the objectives for – and effectiveness of – spatial policy remain muddled.

Conclusions

The Labour government has spent considerable sums trying to narrow the gap between poor areas – neighbourhoods, cities and regions – and the rest. We have very little compelling evidence on the impact of these initiatives.

This means that the parties' positions on regional and urban economic policy tend to be based on belief rather than evidence. In addition, policy is often confused about why we care about spatial disparities and what, if anything, will be the impact on individuals of addressing them.

April 2010

References

Bartik, T. (2003) ‘Local Economic Development Policies’, Upjohn Institute Staff Working Paper No. 03-91.

Busso, M., J. Gregory and P. Kline (2009) ‘Assessing the Incidence and Efficiency of a Prominent Place Based Policy’, *Quarterly Journal of Economics.*

Cheshire, P. and C. Hilber (2008) ‘Office Space Supply Restrictions in Britain: The Political Economy of Market Revenge’, *Economic Journal.*

Glaeser, E. and J. Gottleib (2008) ‘The Economics of Place Making Policies’, *Brookings Papers on Economic Activity*, Washington D.C.

Kolko, J. and D. Neumark (2009) ‘Do California’s Enterprise Zones Create Jobs?’, Public Policy Institute of California.

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

Leunig, T. and J. Swaffield (2008) *Cities Unlimited*, O. M Hartwich (ed.), London: Policy Exchange.

Propper, C. and J. Van Reenen (2010) ‘Can Pay Regulation Kill? The Impact of Labor Markets and Skills on Hospital Productivity’, Centre for Economic Performance Discussion Paper No. 843 and forthcoming in *Journal of Political Economy.*

Smith, I. R. (2010) ‘Relocation: Transforming Where and How Government Works’, HM Treasury (http://www.hm-treasury.gov.uk/budget2010_smith_review.htm).

CEP ELECTION ANALYSIS

Inequality:

Still higher, but labour's policies kept it down

Stephen Machin and John Van Reenen

ELECTION ANALYSIS

Inequality: Still Higher, But Labour's Policies Kept it Down

- Overall income and wage inequality has risen dramatically in the UK over the last three decades. Although the fastest increase was during the 1980s, there was still some (small) increase after 1997.

- In 1979, a man in full-time work at the 90th percentile (10% from the top of the distribution) earned 2.5 times more per week than a man at the 10th percentile (10% from the bottom of the distribution). In 2009, the equivalent figure was 3.7 times more per week.

- The increase in wage inequality between 1980 and 1990 was much stronger in the UK and the United States than elsewhere. Since 2000, there have been increases in inequality across all richer countries (except France).

- Inequality is a tale of two halves. The top half of the wage distribution has continued to become more unequal steadily throughout the last three decades. The bottom half of the wage distribution ceased to become more unequal after 1997.

- The top 1% of the population has become considerably richer and this has had a large effect on the 'Gini coefficient', a widely used measure of overall inequality. In the decade since 1998, most of this change has been driven by the financial sector, especially bankers' bonuses.

- The changes in tax and spending policies that the Labour government has introduced since 1997 have significantly redistributed income to the less well off. Inequality would have been much higher otherwise.

Introduction

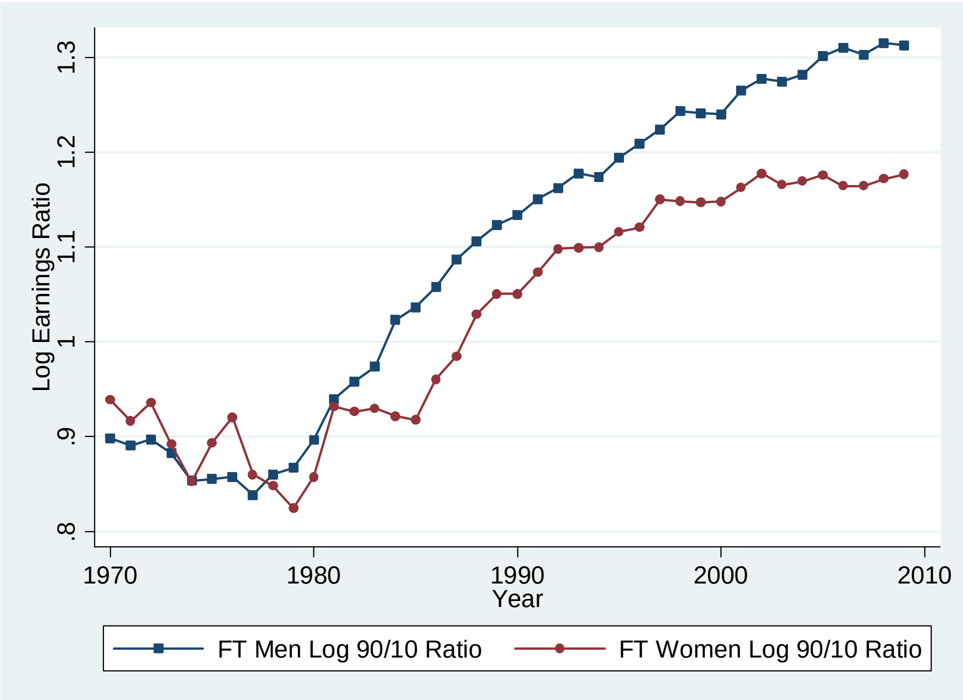
The Labour party came to power in 1997 partly in response to the sense that inequality had risen too much under 18 years of Conservative rule. So it must have been deeply shocking to many in the Labour party when David Cameron announced during the 2009 Conservative party conference that inequality had risen since 1997.

So what has happened? Individuals' pre-tax and benefit incomes mainly come from their activities in the labour market – that is, their wages. The government has some influence on these sources, for example, through minimum wage policies. But the government has a much greater influence through changing the tax and benefit system, which generally redistributes towards the poor and away from the wealthier.

The rise in UK wage inequality: a tale of two halves

Figure 1 displays the evolution since 1970 of the 90-10 earnings differential for men and women in full-time work. The figure of 0.9 in 1979 means that a man at the 90th percentile (just in the richest tenth of workers) earned 2.5 times (0.9 log points) more than a man at the 10th percentile (just in the poorest tenth of workers). By 2009, the richer man would earn 3.7 times (1.3 log points) more than the poorer man.

Figure 1: Difference in wages between the richest tenth and poorest tenth (90-10 log weekly earnings ratios), full-time men and women, 1970-2009

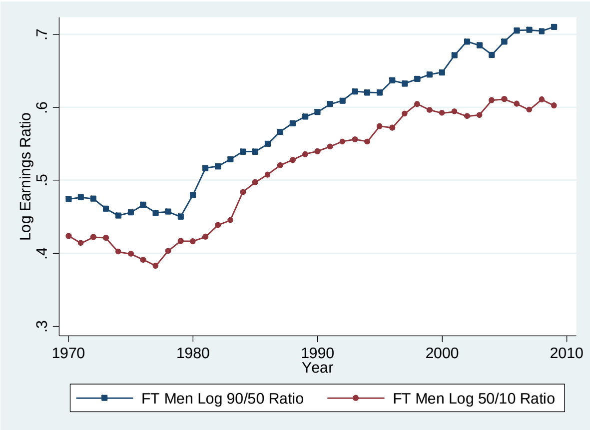


Source: Machin (2010): National Equality Panel Analysis; 1968-96 New Earnings Survey (NES) and 1997-2009 Annual Survey of Hours and Earnings (ASHE)

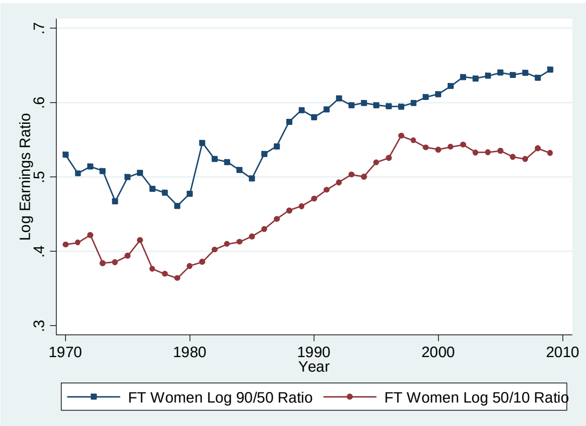
Figure 2 considers the upper and lower halves of the distribution separately. For men, the top half of the wage ladder (measured by the 90-50 wage ratio) rises sharply from the late 1970s, and this continues consistently throughout the entire period up until 2009. By contrast, the bottom half of the wage distribution (measured by the 50-10 wage ratio) increases until the mid-1990s and then flattens out.[1] The story for women from Figure 1 and 2 is similar to that for men, although the rise is inequality is more muted.

Figure 2: Upper half (90-50 log earnings ratio) and lower half (50-10 log earnings ratio) inequality, full-time men and women, 1970-2009

a) Men



b) Women



Source: Machin (2010)

After 1990, wage inequality rises throughout the richer countries

Table 1 shows data on male 90-10 wage ratios in 1970, 1980, 1990, 2000 and 2008 (or the closest year to that) for 12 countries. As is well known, during the 1980s, the United States and the UK stand out as having a very large increase in wage inequality.

By contrast, over the period 1990-2008, *every* country has experienced some increase in wage inequality (with the exception of France). Although the UK has the third highest level

[1] Similar patterns are evident in other data sources. Brewer et al (2009) find that in the 2000s, the Family Resources Survey suggests that the 50-10 differential is constant for full-time men and actually falls by 0.3 percentage points a year (up to 2008) for full-time women.

of inequality at the end of the period, the magnitude of the increase in pay gaps since 1990 is in line with the OECD averages.

Table 1: Male 90-10 wage ratios across countries, 1970-2008

	1970	1980	1990	2000	2008
Australia	2.4[a]	2.7	2.7	3.1	3.5
Denmark		2.1	2.2	2.5	2.7[e]
Finland	-	2.5	2.5	2.4	2.6[e]
France	3.7	3.3	3.3	3.0	2.9[d]
Germany	-	2.5[b]	2.5	2.8	2.9[d]
Japan	2.6[a]	2.6	2.8	2.8	2.9
Netherlands	-	2.3[b]	2.5	2.9	2.9[d]
New Zealand	-	2.2	2.5	2.7	3.1
South Korea	-	4.1[b]	3.2	3.7	4.7
Sweden	2.2[a]	2.1	2.1	2.4	2.4[c]
UK	2.7	2.7	3.3	3.4	3.7
United States	3.4	3.6	4.4	4.8	5.0

Source: OECD Stat Extracts website, http://stats.oecd.org/index.aspx. Data are from different years to the column header for some countries a – 1975; b – 1984; c – 2004; d – 2005; e – 2007

This suggests that there are similar global underlying forces driving up inequality. The fact that the supply of education has risen alongside increased wages for the university educated indicates that there has been an increase in the demand for skills. The obvious culprits are new technologies, which skilled workers find easier to use, or increased competition with developing countries like China.

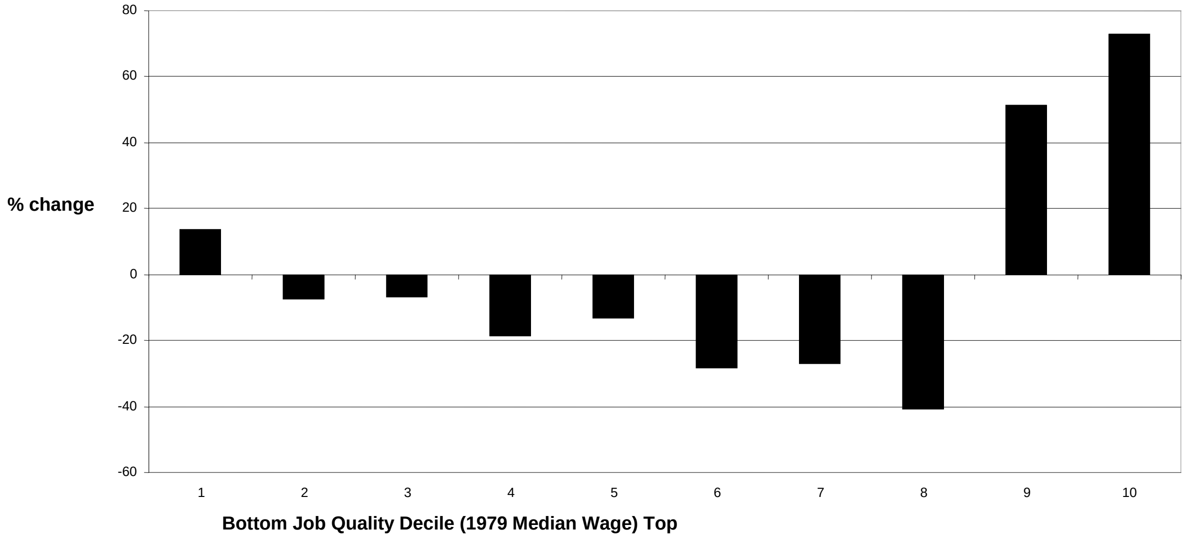
Machin and Van Reenen (1998, 2008) have argued that increases in the demand for skills are mainly due to new technologies, such as information and communication technologies (ICT). For example, throughout the developed world, the industries that have experienced the greatest increase in the demand for skills are also those that invested the most in ICT, not those with the greatest exposure to trade (Michaels et al, 2010).

On top of these structural factors, labour market policies can make a difference. The decline in unions and the fall in the real value of the minimum wage undoubtedly accelerated the increase in inequality in the United States and the UK in the 1980s. Similarly, the introduction of the UK’s first National Minimum Wage in 1999 helped those near the bottom of the wage ladder.

Polarisation

Figure 3 shows that increasingly, the middle group of workers is losing out to those at the bottom end and the top end. There is very rapid employment growth over time in the top two deciles of job quality (as measured by median occupational wages in 1979). Employment actually fell in the middle deciles but grew in the bottom decile.

Figure 3: Polarisation of the UK labour market, 1979-2008



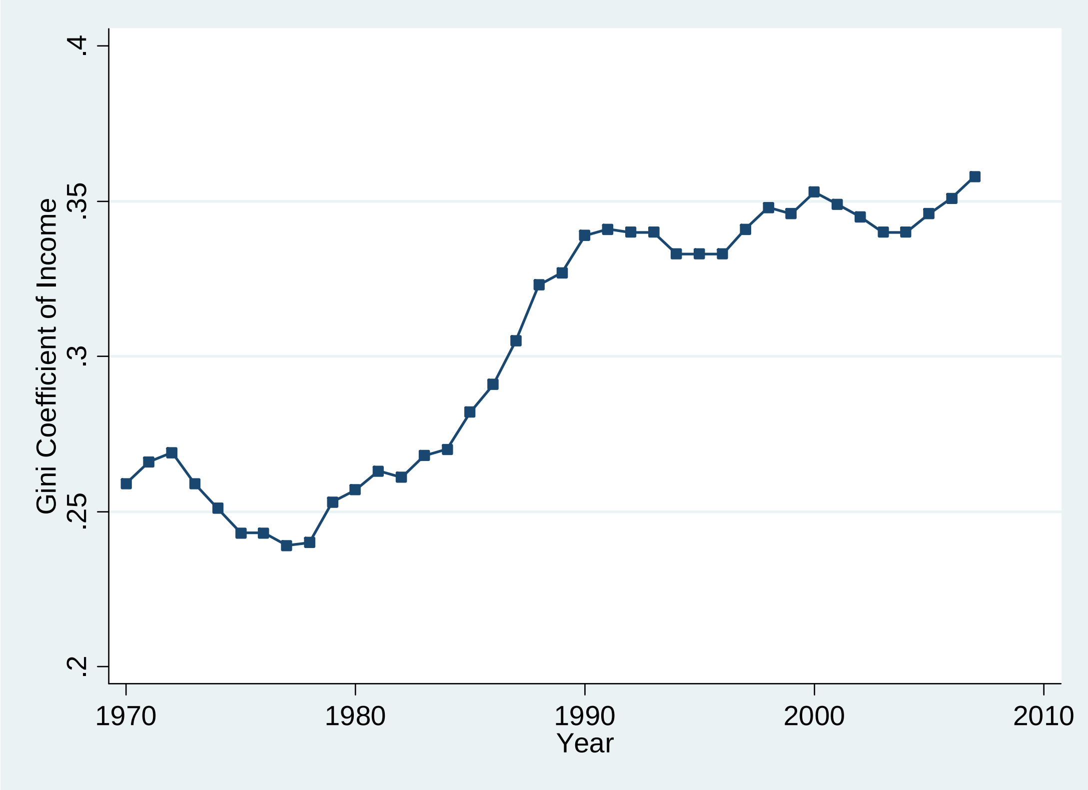
Source: Mieske (2009); percentage changes are for the entire period

Household income

Household net income is a better measure than wages of the resources available to families for consumption (for example, it takes taxes and benefits into account). Figure 4 shows the trends for the Gini coefficient, which is an overall measure of inequality equal to 1 for complete inequality and zero for complete equality. Like wages, this shows some edging up of inequality under Labour, but nothing like the huge rise in the 1980s.

The Gini coefficient is heavily influenced by income growth among the top 10% of the distribution, and with more rapid income growth the higher the percentile point. Bell and Van Reenen (2010) show that the richest 1% of the population have increased their share of total income from 10% to 13% between 1998 and 2008, and this was mainly due to bonuses for financial sector workers.

Figure 4: Trends in household income inequality, 1979-2008, Gini coefficient



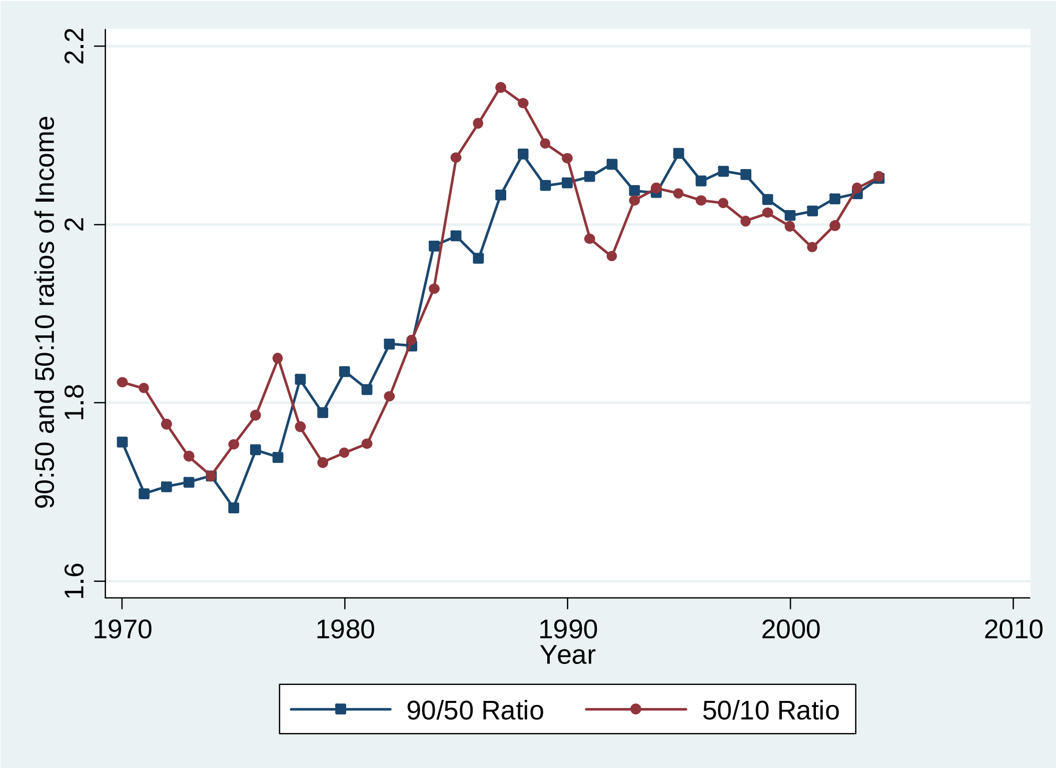
Source: IFS, http://www.ifs.org.uk/bns/bn19figs.zip, as used in Figure 2.13 of NEP (2010)

Figure 5 splits the income inequality trends into upper and lower halves, as Figure 2 did for wages. Unlike wages, the difference between the top half of the household income distribution did not continue to rise after the 1980s; in fact, it seemed to fall somewhat from the mid-1990s. Could Labour's policies be having a redistributive effect, mitigating the secular increase in wage inequality?

What has been the effect of Labour on inequality?

The fact that inequality of the bottom half of the wage distribution and top half of the income distribution stopped growing after 1997 is suggestive of a policy shift. In terms of low wages, the main effect is likely to have been the National Minimum Wage introduced in 1999, which appears to have had a large effect in raising the wages of low earners without many appreciable negative effects on jobs (see Stewart, 2010).

Figure 5: Household income, trends in household upper half (90-50) and lower half (50-10) income inequality, 1970-2008



Source: IFS, http://www.ifs.org.uk/bns/bn19figs.zip, as used in Figure 2.13 of NEP (2010)

For net household income, there have been many policies aimed at redistribution:

- the working families tax credit (now the Child and Working Tax Credits), an in-work benefit;
- increases in benefits levels, especially for families with children such as lone parents;
- increases in taxation on the relatively better off, such as the abolition of the upper earnings limit for individual National Insurance;
- more generous increases in pensions (for example, the Pensions Credit);
- and expansion of personal allowances, which disproportionately benefits those on lower earnings.

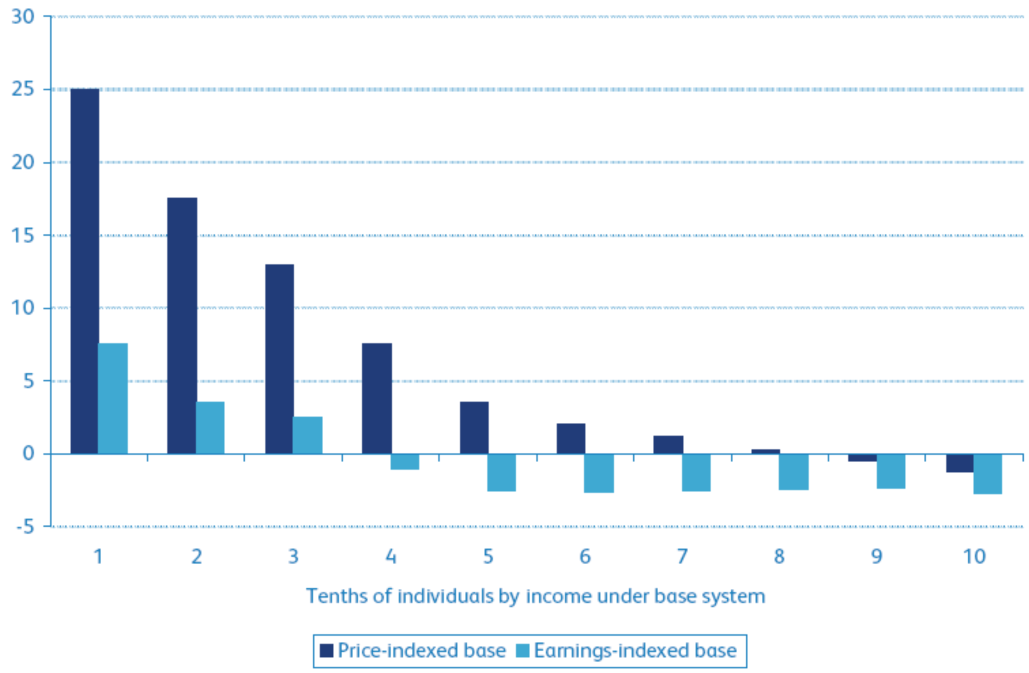
It is complex to factor in all these changes, but the report of the National Equality Panel (2010) attempted to do so. Figure 6 illustrates what the overall distributional effects of tax and benefit policy changes have been comparing 2008 with 1997.

This is done by making an assumption about how policies would have evolved in the absence of the Labour government. The net effect of changes introduced by the previous Conservative policies 1979-97 was to redistribute income towards richer groups (for example, the reduction of the highest 60% marginal rate of taxation to 40%).

But a fairer benchmark is perhaps to assume that benefits would simply have risen with prices. The darker shaded columns show that the sum of Labour's policies implies substantial increases in distribution towards poorer people. The bottom tenth is 25% better off under

Labour's policies than they would have been under the 'business as usual' case of benefits simply rising with prices.

Figure 6: Overall distributional effects of Labour's tax benefit policies 1996/97 to 2007/08 compared with price and earnings indexation (percentage change in disposable income)



Source: Sefton, Hills and Sutherland (2009), figure 2.5.

An alternative benchmark would be to assume that benefits rose in line with wages. This certainly has not been the stated aim of the Conservatives, but may be more realistic. This is shown in the lighter shaded columns in Figure 6. There is also much redistribution, but in this case the costs to the richer are greater and the benefits to the poorer are smaller.

Figure 6 does not include the withdrawal in personal allowances for those earning over £100,000 nor the new 50% tax rate on those earning over £150,000 (beginning April 2011). Although these changes only affect 2% of households, if these were also factored in, then there would be much larger losses for the top decile and even more redistribution.

Conclusions

Overall wage and income inequality rose slightly under the Labour government since 1997. This was driven by the top half (especially the top 10%) of the income distribution. There was no change in inequality (and even falls on some measures) for those in the bottom half of the distribution.

The increase in wage inequality is an international phenomenon driven by increases in the demand for more skilled workers. There is relatively little that any government can do about this in the long term: the best policy is to keep improving the skills of the workforce through education and training.

The tax and benefit policies of the Labour governments have meant that inequality is considerably lower than it would have been under the previous Conservative administration, especially for those in the bottom 20%.

But since the inequality ‘escalator’ of pre-tax earnings has been moving upwards, the policies have at best kept inequality stable rather than significantly reducing it.

April 2010

References

Bell, B. and J. Van Reenen (2010) 'Bankers' Bonuses and Extreme Wage Inequality in the UK', CEP Special Report No. 21 (http://cep.lse.ac.uk/_new/publications/abstract.asp?index=3570)

Brewer, M., A. Muriel and L. Wren-Lewis (2009) 'Accounting for Changes in Inequality since 1968: Decomposition Analysis for Great Britain', Institute for Fiscal Studies Report for the National Equality Panel.

Machin, S. (2010) 'Changes in Wage Inequality over the Last Forty Years', forthcoming in P Gregg and J Wadsworth (eds) *The State of Working Britain 2010.*

Machin, S. and J. Van Reenen (1998) 'Technology and Changes in Skill Structure: Evidence from Seven OECD countries', *Quarterly Journal of Economics* 113: 1215-1244.

Machin, S. and J. Van Reenen (2008) 'Changes in Wage Inequality', in *The New Palgrave Dictionary of Economics*, Basingstoke: Palgrave Macmillan.

Michaels, G., A. Natraj and J. Van Reenen (2010) 'Has ICT Polarized Skill Demand? Evidence from 11 Countries over 25 Years', CEP mimeo.

Mieske, K. (2009) 'Low-skill Service Jobs and Technical Change', unpublished MSc dissertation, University College London.

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

Sefton, T., J. Hills and H. Sutherland (2009) 'Towards a More Equal Society? Poverty, Inequality and Policy since 1997', Policy Press.

Stewart, M. (2010) 'The National Minimum Wage After a Decade', Warwick University mimeo.

CEP ELECTION ANALYSIS

Consensus on the long-run targets – but will we get policies that deliver?

Ralf Martin

ELECTION ANALYSIS

Climate Change:
Consensus on the long-run targets – but will we get policies that deliver?

- To favour action on climate change is part of the political consensus across all major parties. All have signed up to legally binding targets for greenhouse gas emissions of a 34% reduction by 2022 and an 80% reduction by 2050 relative to 1990 levels.

- In line with the Kyoto protocol, compared with 1990, UK emissions have been reduced by more than 12.5%. But the UK has failed to meet its own target of a 20% cut by 2010. Things look even worse if the measure of carbon emissions includes consumption by UK residents, rather than simply emissions occurring in the UK.

- To meet the targets efficiently, carbon prices must rise. While the UK has various policy initiatives to establish such a price signal, the price incurred by different types of emitters differs widely. Even the strongest price signals are relatively weak, and there is considerable uncertainty about the future path of carbon pricing.

- The reform plans of the Climate Change Levy proposed by the Conservatives and the Liberal Democrats would address some of these concerns by creating a floor price for the European Union's Emissions Trading Scheme. The LibDems' plans are more radical – extending the levy to non-business users. Both parties stop short, however, of specifying how high this floor price should be.

- All parties have proposals for 'clean' generation technologies with varying levels of support depending on the type of technology. Labour and the Conservatives support further nuclear power plants whereas the LibDems are opposed to nuclear.

- Giving differential support to different technologies risks inefficiencies and unnecessary costs. Support for renewable technologies could be integrated with establishing a carbon price. The floor for the carbon price could be indexed to fossil fuel prices, both to hedge the risk and to avoid excessive profits in the event of future oil price hikes.

- A carbon price will be fiscally regressive and the parties lack practical proposals to address this. The simplest measure could be to channel all revenue arising from carbon back to UK residents in form of a lump sum rebate – akin to a 'poll subsidy'.

Introduction

To be in favour of action on climate change is clearly in the mainstream. This is reflected not only in the policy positions of the parties, but also in construction activity at the party leaders' homes – David Cameron temporarily installed a wind turbine on his house a couple of years back while Gordon Brown says he has been experimenting with solar panels.

Labour's plans were outlined in a White Paper in 2008, which subsequently led to various bills in parliament that were supported by the opposition parties. The Conservatives' 'Low Carbon Economy Security, Stability and Green Growth'[1] and the LibDems' 'Zero Carbon Britain – Taking a Global Lead'[2] papers are often hard to distinguish from similar government material.[3] But there are some important differences, and a high degree of harmony between the parties does not mean that there is no room for improvement.[4]

The performance so far

The overall shape of UK climate change policy is currently outlined by the 2008 Climate Change Act, which was backed by the opposition parties. The act requires a 34% reduction in greenhouse gas emissions by 2022 and an 80% reduction by 2050 relative to 1990 levels.[5]

The act was clearly an important milestone both nationally and internationally in climate change policy-making in that it made greenhouse gas targets legally binding and established an independent expert panel – the Committee on Climate Change[6] – to monitor progress towards these targets and propose more specific policies needed to meet them. Nevertheless, it remains to be seen if the commitment continues as the costs to UK voters increase.

Compared with 1990, the UK has reduced greenhouse gas emissions by more than 12.5%, which is in line with the target under the Kyoto protocol. But the UK has failed to meet a separate target – proposed by the government – to reduce carbon emissions by 20% in 2010.

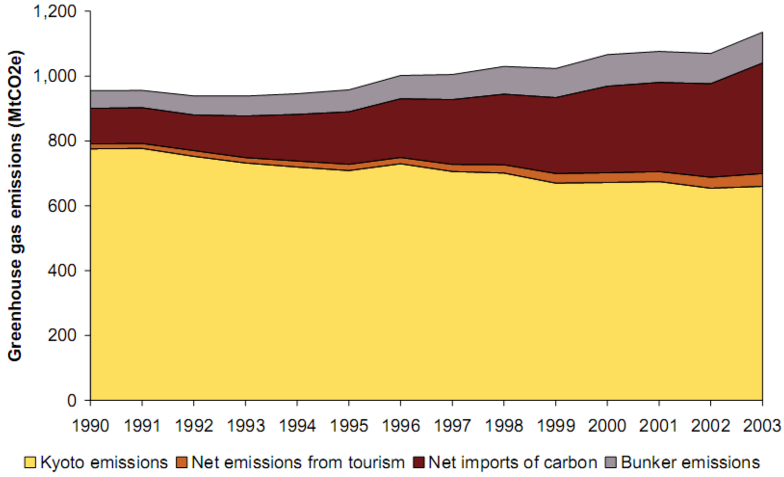
The performance of the UK looks dramatically worse when taking account of emissions from tourism and emissions embedded in trade. Many goods imported to the UK, such as manufactured goods from China, are energy-intensive in production, and it makes sense to count the emissions that UK residents consume rather than simply the emissions that actually arise on UK territory.

According to some estimates, UK greenhouse gas emissions may have risen by 19% or more since 1990. Figure 1 shows the path of greenhouse gases emitted on UK territory as well as the implied greenhouse gas emissions caused by UK residents.

---

[1] http://www.conservatives.com/~/media/Files/Green%20Papers/Environment_Policy_Paper.ashx?dl=true
[2] http://www.libdems.org.uk/siteFiles/resources/PDF/Zero_Carbon_Britain.pdf.
[3] For example, the 'Low carbon transition plan' (http://www.decc.gov.uk/en/content/cms/publications/lc_trans_plan/lc_trans_plan.aspx).
[4] There is also some last minute repositioning. For example, 'Rebuilding Security – Conservative Energy Policy for an Uncertain World' from Spring 2010 contradicts in parts the strategy outlined in 'Low Carbon Economy Security, Stability and Green Growth'. The remarks in this briefing refer to the more recent statements in those cases (http://www.conservatives.com/~/media/Files/Green%20Papers/Rebuilding-Security.ashx?dl=true).
[5] 1990 is the reference year used in the Kyoto Protocol.
[6] http://www.theccc.org.uk/.

Figure 1: UK Greenhouse gas emissions since 1990 by various measurement approaches



Note: Bunker emissions refer to emissions from international shipping and aviation departing from the UK.
Source: Helm et al, 2007.

The quest for a stable, single and sufficiently high carbon price

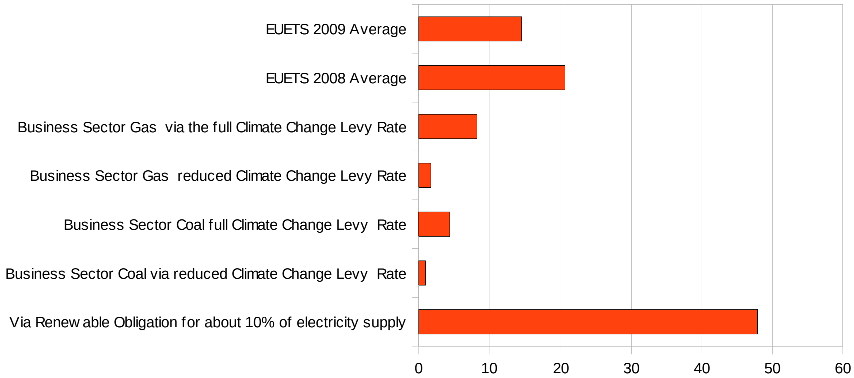
From an economic point of view, the most important policy measure to address climate change is imposing a price on greenhouse gas emissions using a carbon tax or a cap-and-trade scheme. This forces consumers and businesses rather than governments to figure out the most efficient way to achieve a given reduction in emissions using their private knowledge of costs and opportunities.

Thus consumers might choose to consume less of certain products or switch from a petrol-driven car to an electric vehicle. Businesses might decide to adjust their input mix or seize the opportunity and invest in research and development (R&D) to invent new less polluting products for which there is now a market. Because a given unit of emissions has the same effect on global warming irrespective of where it is emitted, the price imposed on a given unit should be the same globally as far as is possible.

Considering the current state of the global negotiations after the United Nations Climate Change Summit in Copenhagen in December 2009, we are still a long way from a globally harmonised price. But even within the UK, there is huge variation in the price imposed on different units of emissions.

Figure 2 shows the implied cost per tonne of CO2 for a number of different types of CO2 emissions by industry. The variation is even wider when other types of emissions are considered: for example, residential gas faces no carbon penalty at all.

Figure 2: Selected costs per tonne of CO2 (£/tonne of CO2) in the UK



Source: author's calculations based on EU ETS data, DEFRA data

One important argument for differential pricing is that some sectors would suffer in their competitiveness since not all countries have such stringent measures. Thus many companies enjoyed a reduced Climate Change Levy (CCL)[7] under a scheme known as Climate Change Agreements (CCA). This explains the difference between the reduced and full rates for gas and coal in Figure 2. The most comprehensive econometric evaluation study of the CCL finds no support for this argument (Martin et al, 2009).

Generally, carbon prices in the UK are fairly low. For example, even the highest carbon cost reported in Figure 2 of £48 (buyout price under the 'renewable obligation' scheme) is only about half of the lowest similar scheme in Germany.

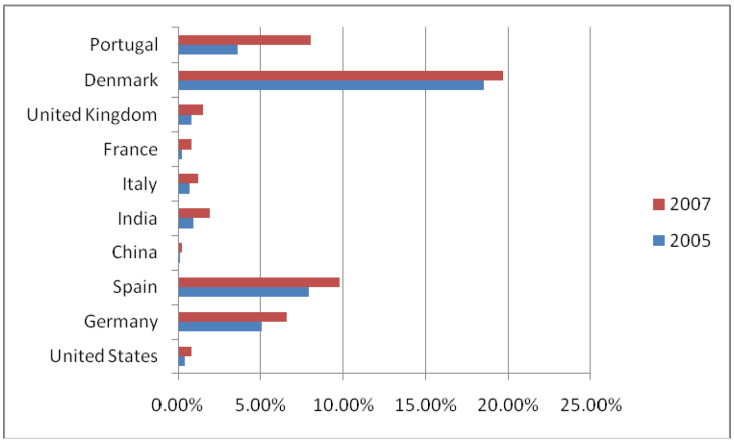
The renewable obligation is a requirement for electricity suppliers to source a fraction of their electricity from renewable energy. But instead of actually sourcing renewable energy, they can simply pay the government a fixed rate per kWh of electricity, which translates into the rate shown in Figure 2 using the carbon emitted on average from non-renewable electricity.

Germany uses instead a system of 'feed-in tariffs' whereby grid operators are required by a law to pay renewable energy suppliers a fixed rate for electricity that they supply to the grid. This rate varies by type of renewable energy. But even for onshore wind, which receives the lowest support, the implied cost per tonne of carbon is around £100.

The low support rate, coupled with the option of being able to buy out rather than deliver, is the likely reason why – despite having some of the best renewable resources in Europe, such as wind – the UK is not only lagging far behind other countries in the share of electricity sourced from renewables but also behind the relatively modest targets set by the government in the past (Figure 3).[8]

[7] The CCL is a key part of the UK government's efforts to curb business sector emissions. It implies various taxes on fuel inputs for businesses and was introduced in 2001. For more details, see Martin et al (2009).
[8] This is not to say that the UK should introduce a German-style feed-in tariff system, which has supported some types of renewable generation technologies too excessively (see http://repec.rwi-essen.de/files/REP_08_040.pdf).

Figure 3: Share of electricity produced from wind power in selected countries



Source: http://en.wikipedia.org/wiki/Wind_power#cite_note-wwea-0

Another concern about carbon prices is their volatility, in particular, within the European Union's Emissions Trading System (ETS).[9]

Figure 4 gives some idea of this uncertainty by reporting the distribution of price estimates reported in interviews with almost 800 managers in six European countries.[10] Note that while the average price is almost £40 per tonne of CO_2, the 90th percentile price expectation is more than three times that of the 10th percentile.

The problem with such uncertainty is that an efficient response to climate change requires huge sunk investments, both in R&D but also in fixed assets such as new power generation plants. Private investors will rationally respond to this uncertainty by delaying investment and innovation decisions.[11] Reducing uncertainty of the price signal should be an important part of climate change policy-making.

There are at least three elements to this volatility:

- First, narrow carbon market uncertainty – that is, uncertainty about the carbon needs and behaviour of other carbon market participants.
- Second, uncertainty about the wider economic environment – for example, the business cycle, oil prices etc.
- And third, uncertainty over the entire future direction of climate change policy.

While wider economic volatility cannot be easily influenced by the government, the other types of volatility are directly under its remit. In particular, carbon market uncertainty would almost disappear completely if instead of using a carbon trading system, the government simply imposed a carbon tax. To reduce uncertainty over future climate change policy, government credibility is important so legally binding targets, the Committee on Climate Change and cross-party support are all helpful.

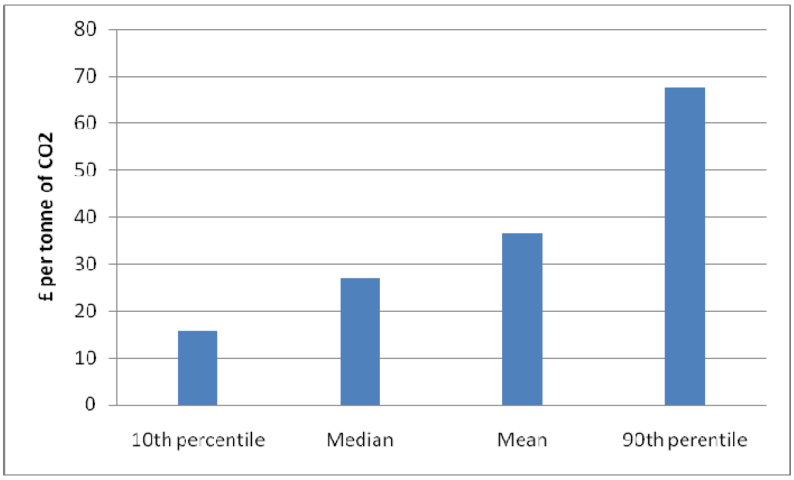
---

[9] Figure 2 gives a flavour of this by showing that the average price for 2008 was almost 50% higher than for 2009.
[10] This is based on the study reported in more detail in Anderson et al (2010).
[11] CEP research shows large "delay" effects of uncertainty on investment and R&D (e.g., Bloom et al, 2007).

Providing direct funding for particularly large and fixed elements of the required investments – for example, investments in electricity grid infrastructure – similarly send a signal of policy commitment to the private sector.

A more radical idea[12] to reduce uncertainty is for the government to issue options contracts that can be exercised if certain elements of climate change legislation are not enacted or the price of carbon drops below a certain level.

Figure 4: Carbon price expectations by European industry in 2020



Source: 800 managers were asked to estimate what they expected the price of carbon to be in 2020. Author's calculations based on CEP's climate change management interviews

In the proposals of all the main parties, there are statements suggesting that a carbon price is an important element of climate change policy-making. In the case of Labour, this is confined to support for the EU's ETS as well as maintaining the CCL in its current form.

Both the LibDems and the Conservatives[13] go further in that they want to reform the CCL into a genuine carbon tax – that is, with the tax rate set in relation to the carbon content of energy fuels – and to use the CCL as a tool to create a floor price for carbon to the extent that the EU ETS does not deliver a meaningful price.

The Conservatives want to maintain, however, the current exemption of the non-business energy consumption from the CCL as well as the exemptions granted under the CCA. The LibDems are suggesting removing these exemptions. The LibDems' plans would therefore go furthest in establishing a more homogenous carbon price. Both LibDems and Conservatives stop short, however, of announcing what the floor price path would be or how exactly it would be determined. So it remains an open question whether any of these plans would establish a carbon price high enough to induce change.

There is broad support across the parties for direct government support in expanding the electricity grid – to make it more accessible for far off renewable power locations – as well as transforming it into a 'smart grid', easing the demand-side balancing of more volatile renewable electricity supply. As argued above, such measures can be a helpful, signalling

[12] Neuhoff and Ismer (2009), Mainelli and Onstwedder (2009).
[13] As detailed in 'Rebuilding Security – Conservative Energy Policy for an Uncertain World' (http://www.conservatives.com/~/media/Files/Green%20Papers/Rebuilding-Security.ashx?dl=true).

long-term government commitment for a specific policy path, thereby reducing avoidable uncertainty.

Selling climate change policy to voters

The prime driver for climate change policy is to mitigate the risk of costs of the order of 20% of GDP or more[14] arising within the next five to ten decades by spending a much smaller cost today. The fundamental problem with this is that the people who are supposed to incur that smaller cost today are not the same ones who are going to benefit in the future.

The parties are therefore motivating their push for climate change policies by suggesting that the UK can benefit even in the short run by becoming a global leader in clean technologies and reaping growth and employment benefits from selling those technologies to the rest of the world. How likely is this?

- First, there is a lot of competition for this global leader position, and the UK is coming rather late to the game as Figure 5 shows. In terms of patents in clean technologies, the UK is currently in sixth position, with innovators from countries such as Germany, Japan or the United States holding more than three times as many patents as UK innovators. Worse, when looking only at the more recent period 2002-07, the UK is even falling behind China and South Korea.

- Second, even if UK innovators are ahead in some technologies, it is not clear that this will lead to dramatic employment or productivity gains for the UK. Manufacturing of those technologies might still take place elsewhere.

- Third, employment and growth in clean technology areas, while good for people specialised in these areas, does not necessarily imply welfare gains – *in the short run* – for the population as a whole or relative to a scenario where perhaps other new sectors[15] would have grown much faster. Politicians therefore need to be careful in overselling green growth arguments as it might lead to a backlash against climate change policies if these promises do not materialise.

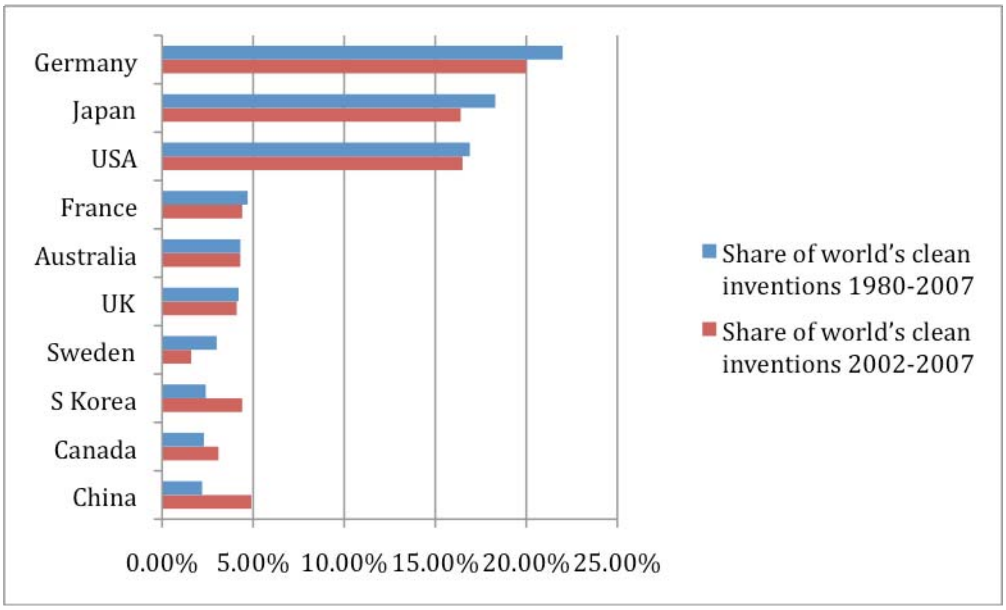
An even more fundamental question concerns the overall effectiveness of climate change policy considering that emerging economics such as India and China may not curb emissions. Since the UK is only responsible for about 2% of global emissions, unilateral policies will have little influence if others do not follow suit.

One important channel that allows the UK to punch above its carbon weight is again technology. The adoption of climate change policies will not only reduce UK pollution but also induce innovation in clean technologies.[16] To the extent that this makes those technologies cheaper or more user-friendly, it also facilitates their introduction to emerging economies. While this entails the possibility of a net cost for UK voters in the short run, it

[14] According to the Stern Review (2007).
[15] For example, biotechnology.
[16] Although not necessarily for UK innovators or to the net short-term benefit of UK residents as argued earlier. Related to this, see Dechezleprêtre (2009), which shows that climate change policy in one country can have as much of an effect on foreign innovators as on domestic ones.

could be justified on the grounds of historical responsibility and the greater current capabilities of rich countries such as the UK.

Figure 5: Share of clean energy patents



Note: the figure reports the average share in patents across 15 climate change related technology categories
Source: Dechezleprêtre and Martin (2010)

Another important concern for political feasibility is the distributional consequences of climate change policies. It is well established that carbon prices on their own have a regressive effect because the spending of lower income groups implicitly contains more carbon.[17] A related concern is that carbon-pricing schemes are perceived as yet another government scheme to extract money from taxpayers. To address both concerns, additional revenue from carbon pricing should be channelled back into the economy in a revenue-neutral and progressive way – that is, so that lower income groups benefit more.

While current carbon pricing revenues are by and large revenue-neutral, they are not necessarily progressive. The revenue from the CCL is used to lower employers' national insurance contribution as well as to fund a number of energy efficiency programmes that the government is running.

Within the EU's ETS, emissions permits have so far been by and large handed out for free to the most carbon-intensive businesses, rather than auctioned so that taxpayers could benefit. Despite the European Commission's stated to goal to auction most permits, free allocation of a large share of the permits will continue for the foreseeable future under current plans.[18]

The UK political parties discuss the regressive implications of carbon pricing under the heading of 'fuel poverty'. To address it, they propose a variety of measures focused on making the homes of low-income groups more energy efficient. These range from outright grants (for example, the government's Warm Front Programme) and subsidised credit schemes for energy efficiency improvements (for example, the Conservatives' 'Just do it' Scheme or the LibDems' Energy Mortgages) to obligations for energy suppliers to ensure

[17] See, for example, Grainger and Kolstad (2009).
[18] See Martin et al (2010) for details.

installation of a certain amount of energy saving measures among energy customers (a scheme currently dubbed Carbon Emission Reduction Target, CERT).[19]

Generally these schemes appear very bureaucratic with considerable effort by government to establish who is qualified and which measures qualify. There are also concerns that these programmes target the wrong people.[20]

Moreover, these schemes can only address adverse effects related to direct energy consumption. But the regressive effects of carbon prices operate equally through the carbon content of the goods that low-income groups consume. As carbon pricing policies become more stringent, it would therefore seem necessary to have schemes in place that more broadly and more simply ensure revenue neutrality as well as correction of distributional effects. A very simple and effective measure could be to re-distribute directly any revenues in the form of a uniform fixed rebate – that is, akin to a 'poll subsidy'.[21]

Supporting technology and innovation

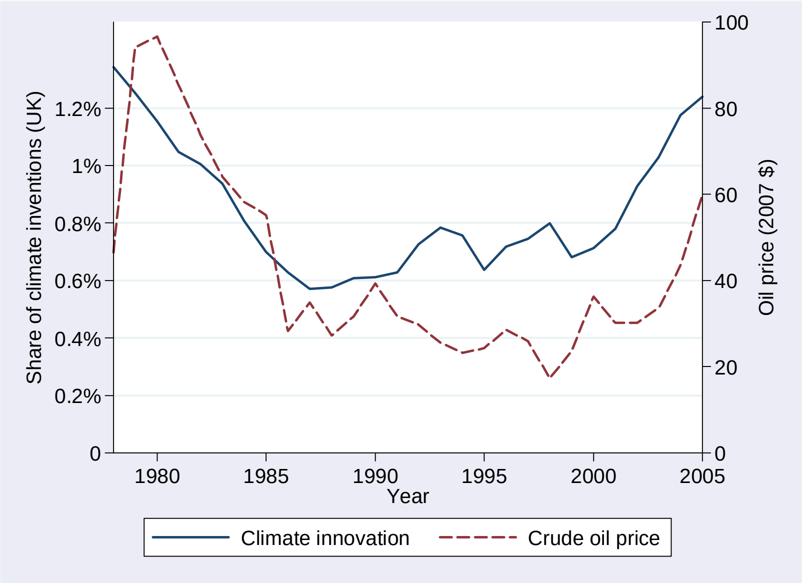
If supporting clean technology is a key objective of climate change policy, are there lessons for policy design? From an economic point of view, a stable and sufficiently high carbon price is the best instrument. High prices induce upfront R&D investments and allow businesses rather than bureaucrats to choose the best way to get green technologies.

Some evidence that stringent carbon pricing is likely to work comes from the much higher rates of clean innovation during the oil price hikes of the early 1980s (see Figure 6).[22] In addition, directly subsidising R&D is justified on the grounds that there are spillovers associated with an innovation – that is, benefits arising from the innovation for which the innovator is not rewarded appropriately.

Another motivation for measures beyond the carbon price could be credit constraints, that is, where firms or individuals cannot pursue a high value innovation because they cannot obtain the necessary credit; importantly, not because the innovation is not promising but because creditors have difficulty establishing the potential of the innovation.

[19] This legislation is the driving force behind the eagerness of a wide range of companies and charities to give away energy saving light bulbs for free.
[20] See the evaluation of the Warm Front Programme by the National Audit Office (http://www.nao.org.uk/publications/0809/the_warm_front_scheme.aspx).
[21] Hence unlike Mrs Thatcher's plans for a poll tax, which would have been very regressive, a poll subsidy would give lower income groups a larger fraction of their income back, thereby acting progressively.
[22] See Popp (2002) for more systematic evidence.

Figure 6: Clean innovation and energy prices



Source: Dechezleprêtre and Martin (2010).

Factors such as these would suggest that any such funding should be channelled to basic research and areas where knowledge spillovers and credit constraints are more likely to arise. A glance at the project portfolio of the Energy Technology Institute, the main government outlet for such research money, would suggest that this is not the case at the moment.[23]

Another concern is that there is not much evidence that knowledge spillovers or credit constraints are more of an issue for clean technologies than other technologies. The question therefore arises why it is necessary to create new institutions that specifically deal with research funding in this area rather than channelling such funding through established channels.

All parties express the goal of being technology-neutral when it comes to supporting new clean technologies. Despite this stated objective, there appears to be quite a bit of technology tinkering in the proposals. The Labour government has recently introduced the 'banding' of the renewable obligation, implying that different technology types attract different amounts of 'renewable obligation certificates' per unit of supplied electricity.

The Conservatives are now following the LibDems in their plans to abandon the renewable obligation scheme altogether and to replace it with a system of feed-in tariffs – that is, a guaranteed price for renewable electricity supplied to the grid that is above normal market prices. Similar to the banding introduced by Labour, different types of technology would attract different feed-in tariff rates.

Either scheme implies that different types of renewable technology get different levels of support per kWh of electricity produced, depending on what the government deems a more established as opposed to an emerging technology. Such differentiation is unhelpful in that it makes it more difficult to establish which technologies are actually the cheapest, it leads to misallocation of investments and it creates special interests that are likely to lobby for prolonged support of those special handouts.

[23] http://www.energytechnologies.co.uk.

The same holds for plans put forward by all parties to introduce more generous feed-in tariffs for small-scale renewable electricity production (for example, via rooftop solar panels). Any bureaucratic barriers that make it difficult for small-scale suppliers to connect to the grid should be removed. But providing them with an implicit subsidy higher than for other renewable types is likely to lead to unnecessary additional costs.

Nuclear power – a dividing line between the parties

A major difference between the main parties' proposal on electricity generation technologies concerns the treatment of nuclear. Both Labour and the Conservatives support new nuclear power plants whereas the LibDems categorically oppose the nuclear option. In principle, there is no need for governments to be either in favour or against nuclear as long they create a level playing field relative to other generation technologies without government subsidies, which nuclear attracted plentifully in the past.

Labour and the Conservatives pay lip service to this idea. But there are several aspects affecting the costs of nuclear generation potentially creating implicit hidden subsidies that still have to be addressed. The first is the question of nuclear waste, where the government has not yet worked out a long-term strategy for underground storage of such waste. Costs arising from this would need to be fully borne by the operators of any new nuclear plants.

The second is the question of liability in case of a major accident in a nuclear installation. It appears that the UK has a rather lax approach by limiting operator liability at a low level compared with other countries, which often impose unlimited liability and more stringent requirements on securing these obligations (see Table 1). This would render costs of nuclear lower for the operators than they are in reality.

Besides keeping the costs between different renewable generation technologies level – that is, within the power sector – it would also be advisable for efficiency and transparency to equalise the carbon costs between the power sector and other sectors of the economy. Thus, rather than creating a separate system, such as either the renewable obligation or a feed-in tariff, clean generation technologies could derive their support from a reformed and vastly more stringent[24] CCL as discussed above.

To minimise uncertainty, such a tax could be designed to guarantee a minimum price for the main fossil energy carriers, that is, coal and gas. Thus the government would guarantee[25] that the gas price after carbon tax would never drop beyond a certain level.[26]

To fine-tune this policy, a body such as the Climate Change Committee could tighten the guaranteed level over time if the initially suggested level turns out to be insufficient to meet the challenges. Such a policy – where the carbon tax target is linked to the price of fossil fuels – would not only hedge against general uncertainty in fossil fuel markets but also against deliberate attempts of fossil fuel producers to sabotage climate policy by price

[24] That is, on the order of £40 or more per tonne of CO2 rather than £6 as it is now.
[25] Potentially by issuing appropriate option contracts (See footnote 13).
[26] Indexing the carbon price to the fossil fuel price would also address recent concerns about excess profits for renewable operators in the event of oil price hikes (see Ofgem: http://www.ofgem.gov.uk/Media/PressRel/Documents1/16662-R5.pdf).

reductions.[27] Of course as discussed above, any proceeds from such a tax should be channelled back to taxpayers in a revenue-neutral way.

Table 1: Operator liability in case of a nuclear accident in various countries

Country	Damage Limitation for Operator [million €]	Security or Insurance Requirements [million €]
UK	168	168
Germany	∞	2500
Finland	∞	700
Switzerland	700	700
Japan	∞	540
Ukraine	180	180
China	35	35

Notes: These figures are per major nuclear facility.

Source: Hore-Lacy, Ian (2009)

Risking competitiveness and jobs?

Strong unilateral climate change policy entails the risk that firms might shift production to jurisdictions without such regulation, thereby leading to job loss. This would also jeopardise the objective of inducing innovation: rather than inventing new technology, firms simply use the old technologies abroad.

Anderson et al (2010) examine the likelihood of downsizing or outsourcing arising from climate change policies, and find very few sectors where this is a big problem. What's more, compared with other major European economies such as France or Germany, this risk appears lower in the UK.

Conclusions

There is a great deal of overlap between the parties' proposals on climate change policy. The 2008 Climate Change Bill, which was backed by the opposition parties, has created a sensible overarching framework for climate change policy-making. This framework must now be filled with more detailed policy measures that can induce change.

From an economic point of view, it is central that a uniform, sufficiently high and predictable carbon price signal is established. Through a variety of policies, usage of carbon and other greenhouse gases is already costly to emit in the UK. But these prices differ greatly depending on where such emissions occur. There is also much uncertainty over what these carbon costs will be in years to come.

There is some sensitivity in the parties' proposals to these issues, particularly with the Conservative and LibDem plans to reform the Climate Change Levy into a genuine carbon tax and use it to hedge against uncertainty in the European Union's Emissions Trading Scheme. The LibDems' plans – to extend the levy to the non-business sector and crack down

[27] See Sinn (2007) for a discussion.

on various other exemptions currently granted – are most comprehensive proposal to create a homogenous carbon price. Both parties are stopping short, however, of specifying how high this floor price should be.

The parties should be careful in overselling the short-run benefits in terms of job creation and growth from climate change policies.

All parties have proposals for differential treatment of different 'clean' generation technologies. Labour and the Conservatives support further nuclear power plants whereas the LibDems are opposed to nuclear. Giving differential support to different technologies risks inefficiencies and unnecessary costs.

Rather than creating a separate system, demand-side support for renewable technologies could be integrated with wider efforts to establish a carbon price. The suggested price floor for carbon could be indexed to fossil fuel prices, both to hedge the risk for the 'clean' technology and generation industry and avoid excessive profits in the event of future oil price hikes.

Any meaningful carbon price will be fiscally regressive unless accompanied by compensating measures. The current plans of the parties lack practical proposals to address this. The simplest measure could be to channel all revenue arising from carbon back to UK residents in form of a lump sum rebate – akin to a 'poll subsidy'.

April 2010

For further information

Contact Ralf Martin (r.martin@lse.ac.uk); or Romesh Vaitilingam on 07768-661095 (romesh@vaitilingam.com)

References

Anderson, B., J. Leib, R. Martin, M. McGuigan, M. Muûls, L. de Preux and U. J. Wagner (2010) 'Climate Change Policy and Business in Europe: Evidence from Interviewing Managers', forthcoming CEP Discussion Paper.

Bloom, N., S. Bond and J. Van Reenen (2007) 'Uncertainty and Company Investment Dynamics: Empirical Evidence for UK Firms', *Review of Economic Studies* 74: 391-415.

Dechezleprêtre, A. (2009) 'Does Foreign Regulation Influence Domestic Inventors? The Case of Renewable Energy Innovation', LSE mimeo (http://personal.lse.ac.uk/dechezle/foreign_regulation_innovation_AD.pdf).

Dechezleprêtre, A. and R. Martin (2010) 'Top of the Cleans – Who is Winning the Race for Clean Technology Leadership?', forthcoming CEP Discussion Paper.

Grainger, C. A. and C. D. Kolstad (2009) 'Who Pays a Price on Carbon?', National Bureau of Economic Research Working Paper No. 15239.

Helm, D., R. Smale and J. Phillips (2007) 'Too Good to be True – The UK's Climate Change Record' (http://www.dieterhelm.co.uk/sites/default/files/Carbon_record_2007.pdf).

Hore-Lacy, I. (2009) 'Civil Liability for Nuclear Damage', in *Encyclopedia of Earth*, National Council for Science and the Environment (http://www.eoearth.org/article/Civil_liability_for_nuclear_damage).

Ismer, R. and K. Neuhoff (2009) 'Commitments through Financial options: An Alternative for Delivering Climate Change Obligations', *Climate Policy* 9: 9-21.

Mainelli, M. and J-P. Onstwedder (2009) 'Can Index Linked Bonds Save the Carbon Market?', Ecosystem Market Place (http://www.ecosystemmarketplace.com/pages/dynamic/article.page.php?page_id=6658&section=news_articles&eod=1).

Martin, R., L. de Preux and U. J. Wagner (2009) 'The Impacts of the Climate Change Levy on Business: Evidence from Microdata', CEP Discussion Paper No. 917.

Martin, R., M. Muûls and U. J. Wagner (2010) 'Still Time to Reclaim the European Emissions Trading System for the European Tax Payer', CEP Policy Brief.

Popp, D. (2002) 'Induced Innovation and Energy Prices' *American Economic Review* 92(1): 160-80

Sinn, H-W. (2007) 'Public Policies against Global Warming', National Bureau of Economic Research Working Paper No. 13454.

Stern, N. (2007) *The Economics of Climate Change: The Stern Review*, Cambridge University Press (http://www.hm-treasury.gov.uk/sternreview_index.htm).

CENTRE *for* ECONOMIC
PERFORMANCE

Centre for Economic Performance
London School of Economics and Political Science
Houghton Street London WC2A 2AE UK
Tel: +44 (0)20 7955 7673 Fax: +44 (0)20 7955 7595
Email: cep.info@lse.ac.uk Web: http://cep.lse.ac.uk

THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE