CENTRE *for* ECONOMIC PERFORMANCE

US ELECTION ANALYSIS No. 4
Inequality and Opportunity: The Return of a Neglected Debate

- US income and wage inequality have risen dramatically since the 1970s. The share of the top 1% (those with incomes over $400,000) was as high in 2007 as at its historical peak in 1928. Income and wage differentials between the richest 10% and the poorest 10% have also risen in tandem.

- The US has the highest income inequality of all rich countries. The only OECD countries with a higher 'Gini coefficient' of inequality are Chile, Mexico and Turkey.

- Workers in the middle of the earnings distribution have fallen behind those at the top of the distribution over a period of 40 years. Those in the bottom 10% fell behind the middle until the mid-1990s.

- Median real hourly wages have risen by 20% since 1972, whereas productivity has risen by 85%. The difference in the growth of wages and productivity is mainly due to the rise in wage inequality and an increase in non-wage (especially healthcare) costs. But since 2000, profits have risen as a share of GDP as the growth of total labour compensation has lagged behind productivity.

- Social mobility over people's lifetimes has not increased to make up for the rise in inequality. In fact, social mobility between generations is worse in the US than in most countries where it is measured.

- President Obama wants to allow the Bush tax cuts to elapse for households on incomes over $250,000 (which would mean, for example, that the highest federal tax rate would rise from 35% to 39.6%). Increased inequality justifies higher tax rates on the rich but this only deals with the symptoms and not the causes of inequality.

- A major cause of increased inequality is that technology has raised the demand for skilled workers faster than the education system has delivered a bigger supply of skilled workers.

- Both presidential candidates want to increase trade protection against China. This would have little effect on inequality, but it would damage growth.

- The Republican candidate, Governor Mitt Romney, opposes tax increases on the rich, arguing that the disincentive effects are severe. He focuses on educational reforms to weaken teachers' unions and introduce more charter schools.

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Introduction

Issues of inequality and the distribution of income and wealth do not usually figure prominently in US elections. Compared with Europeans, Americans are generally more relaxed about large disparities of income and wealth, seeing high pay as the reward for effort and ability. Their emphasis is on greater equality of opportunity rather than greater equality of outcomes.

This time is different. The Occupy movement reflected the anger felt by many Americans towards the very rich, especially those working in the financial sector, who helped cause the Great Recession and yet were bailed out by the government. Increases in inequality might be tolerable at a time of growing consumption for all, but they become less acceptable when the unemployment rate has hit 10% and real wages continued to stagnate.

US inequality is higher than in any other rich country and differentials have widened over the last 40 years. Furthermore, median real wages have risen very slowly: the fruits of productivity growth have disproportionately gone to those in the upper part of the income distribution, into healthcare costs and, in the 2000s, into profits more than labour compensation. This has not been offset by more social mobility: in fact, the chances that those who are born poor will escape from poverty are lower in the US than in almost any other OECD country.

Tax reforms initiated by the Bush administration in 2001 are due to elapse in January 2013. A major difference between the two presidential candidates is whether the Bush tax cuts should be renewed (as the Republican candidate, Governor Romney, wants) or allowed to lapse only for households earning over $250,000 (as President Obama wants). Neither candidate is clear about how they would tackle the fundamental causes of the enormous shift in the US income distribution.

Inequality between people has risen a lot

Figure 1 plots the share of total income (labour and investment income) held by the top 1% and top 0.1% of the US population since 1918. Since the late 1970s, these shares have risen dramatically. For example, in 1975, the top 1% of the population had 7.8% of total income; by 2007, this group (in effect, those with earnings over $400,000) had 23.5% of total income. The only time that inequality has been at this level before was in 1928 on the eve of another great crash.

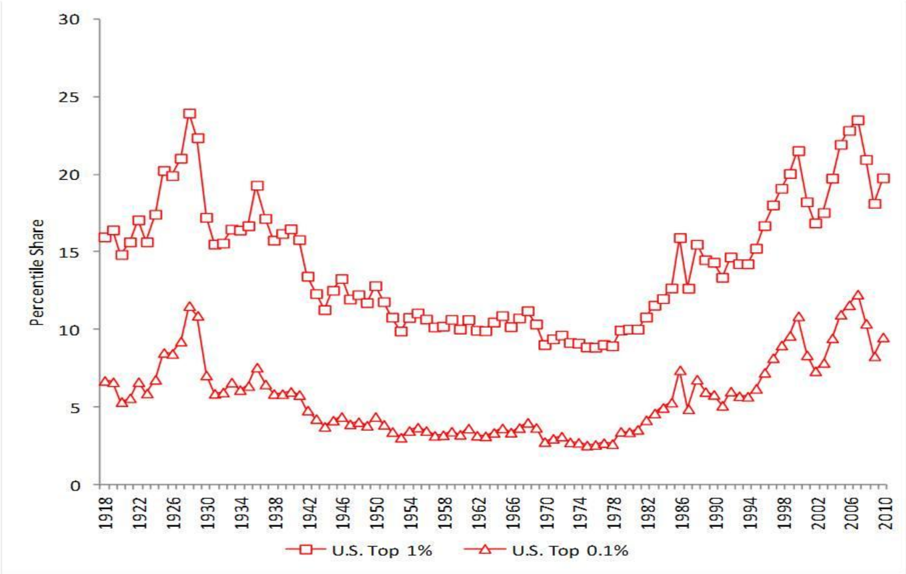
It is a similar story for the top 0.1%: in 2007, the richest one in a thousand Americans kept one in every ten dollars made. The crisis took its toll on these ‘super-rich’ people but by 2010, they appeared to be bouncing back.

In the 1920s and 1930s, most of the incomes of the rich came from capital, but today their incomes come mainly from wages. Wage inequality follows very similar patterns to income inequality. Figure 2 shows the difference in hourly earnings between workers at the 90th percentile (richest tenth) of the wage distribution and those at the 10th percentile (bottom tenth) – the ‘90-10 wage ratio’. In 1973, the 90th percentile man earned about 3.5 times as much as the 10th percentile man; by 2010, this ratio had risen sharply to 5.0 times (for women, it rose from 3.2 to 4.3 times).

Although overall inequality has increased since the 1970s, there is a distinct difference in the pattern of change for the top half compared with the bottom half. Figure 3 shows the 90-50 wage ratio, the difference between the richest tenth and the 'median' earner (that is, someone in the exact middle of the earnings distribution). This has risen almost continuously for both men and women since the 1970s.

For the bottom half of the distribution, as Figure 4 shows, male inequality rose a lot in the 1970s and 1980s. But since then, it has stabilised and even declined to some degree, leading some to describe this as 'polarisation', where the middle classes feel squeezed by both the top and the bottom (see Acemoglu and Autor, 2010).

Figure 1: Share of income by individuals in the top 1% and top 0.1%, 1918-2010



Source: Atkinson et al (2012) World Top Incomes Database.

Figure 2: Wage inequality: difference between the top 10% and the bottom 10% (90-10 hourly earnings ratios)

Source: Economic Policy Institute (2012) using CPS data.

Figure 3: Wage inequality: difference between the top 10% and the median (90-50 hourly earnings ratios)

Source: Economic Policy Institute (2012) using CPS data.

Figure 4: Wage inequality: difference between the median and the bottom 10% (50-10 hourly earnings ratios)

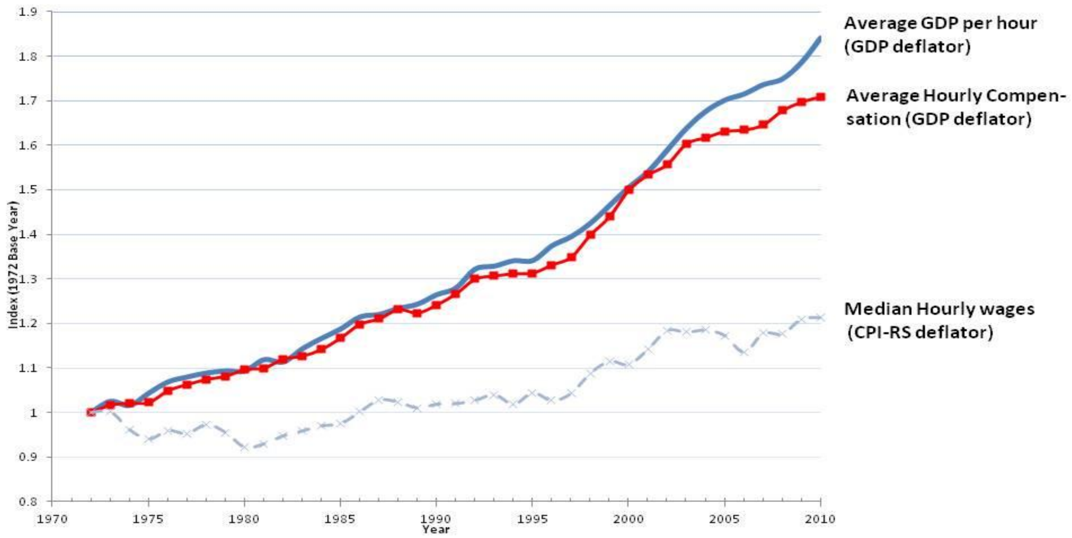
Source: Economic Policy Institute (2012) using CPS data.

Inequality between workers and businesses also rose in the 2000s

Figure 5 shows how much workers have benefited from the growth of national income. The top line shows that labour productivity as measured by real GDP per hour (deflated by the GDP deflator) grew by 85% between 1972 and 2010. The second line from the top is labour compensation (deflated in the same way as GDP), which has grown by 71%.

As might be expected, labour compensation follows productivity growth closely, but there is evidence of some 'decoupling' in the 2000s. The difference between the lines reflects the increasing share of national income that has been going to business profits since 2000. The lowest line is median wages (deflated by the consumer price index). This has risen by about 20% since 1972, much less than labour productivity or compensation.

Figure 5: Productivity growth and wage growth



Source: Pessoa and Van Reenen (2012)
Notes: GDP and compensation from NIPA, Wages from CPS

What is going on? First, there is the increase in wage inequality discussed above, which means that average wages have increased much faster than median wages. Second, non-wage parts of compensation, especially healthcare costs have risen dramatically[1]: this explains why mean wages have risen more slowly than mean compensation. These two factors account for most of the 'decoupling' between productivity growth and median wage growth.[2]

Social mobility is lower in the US than in most other countries

What matters to many Americans is not the level of inequality but equality of opportunity. The increasing income and earnings differences between people might simply be because there is a lot more mobility up and down the income ladder, meaning that the poor stay poor

[1] See CEP's US Election Analysis on healthcare reform.

[2] A third factor is that the consumer price index (CPI) has risen faster than the GDP deflator, mainly because goods with enormous price falls, such as computers, are more for investment (which enters the GDP deflator but not the CPI) rather than consumption.

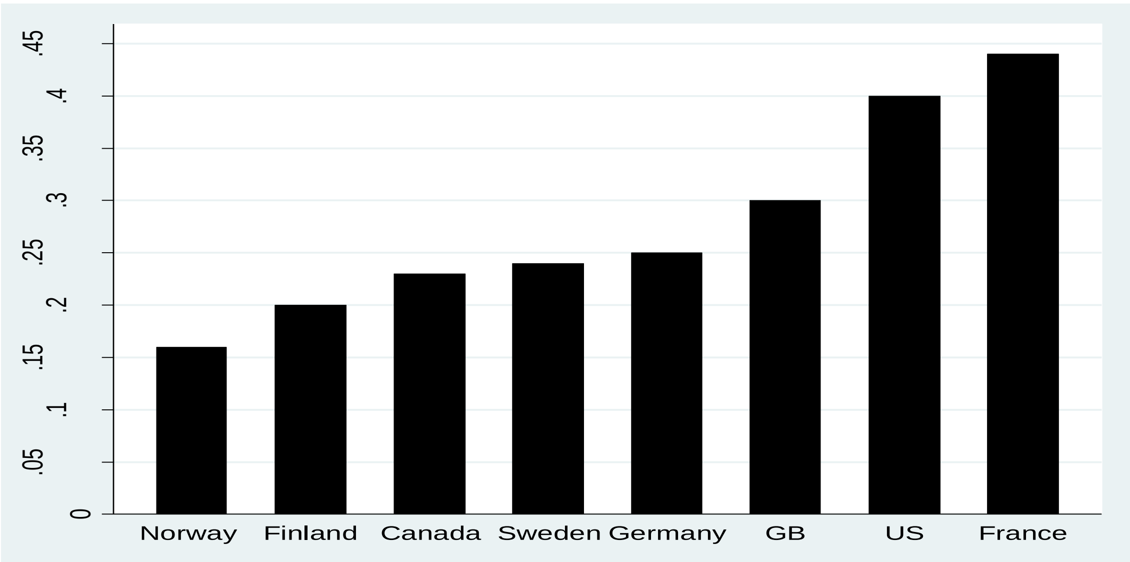
for less time (and the rich stay rich for less time). This greater mobility would imply fewer permanent lifetime income differences.
Unfortunately, there is no evidence of increasing short-term earnings mobility. Indeed, over longer periods within an individual's working life (for example, 15 years), there is a fall in earnings mobility for men, though there is an increase in mobility for women (Saez et al, 2010).

Another aspect of mobility is the extent of income and earnings movement between generations – intergenerational mobility. The US has a much higher degree of cross-sectional inequality than other rich countries (see Machin, 2011). The only OECD countries with a higher 'Gini coefficient' of inequality are Chile, Mexico and Turkey, which are middle-income countries.[3]

But the notion of the 'American Dream' has always been that it is much easier for the children of the poor to become rich in the US than in the supposedly class-bound societies of Europe. While this might have been true in the past, it is no longer true today.

One measure of intergenerational mobility is the correlation between a son's earnings and those of his father at a similar age. By this measure (see Figure 6), the US actually has one of the lowest degrees of mobility (that is, one of the highest father-son correlations).

Figure 6: Intergenerational correlation of earnings of sons and fathers (the higher the bar, the lower is social mobility between generations)



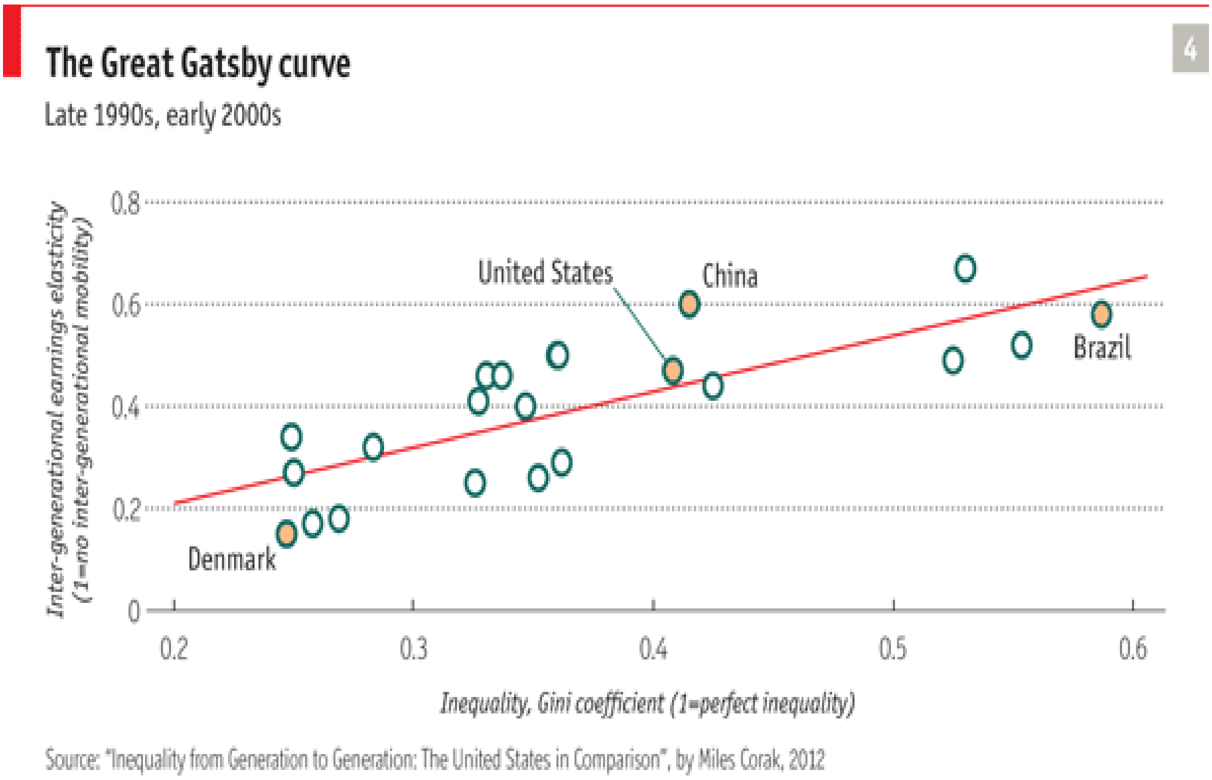
Source: These are the preferred estimates from Table 1 in Blanden (2011).

This fact seems to fly in the face of conventional wisdom that it is much easier to go from 'rags to riches' in the US than in Europe. Lower intergenerational mobility in the US may stem from the difficulty of accessing good quality education for children from low income households. It may also reflect the fact that cross-sectional inequality is so high in the US. If the rungs of the income ladder are very far apart, as in the US, then it is much harder to climb

3 http://en.wikipedia.org/wiki/List_of_countries_by_income_equality#Gini_coefficient.2C_after_taxes_and_transfers

to the top of the ladder. If the rungs are closer together, as they are in the Scandinavian countries, the mobility ladder is easier to climb (that is, there is less distance to travel to move up).[4] Figure 7, sometimes known as the 'Great Gatsby' curve, suggests that this is the case: countries with higher inequality also have lower mobility.

Figure 7: Countries with more inequality seem to have lower earnings mobility between generations



Men and women

One bright spot in the generally gloomy trends in inequality is the difference between men and women. The overall female/male wage ratio has improved over time, increasing from 63% in 1973 to 84% by 2011 (see Economic Policy Institute, 2012). On labour market entry, gender wage gaps are even narrower. Nevertheless, a gap between male and female pay seems to open up after women have children, even for very high fliers, such as Chicago MBAs (Bertrand et al, 2010).

[4] France would seem to be the exception with low intergenerational mobility in Figure 7 and a relatively equal income distribution. Wage inequality used to be much higher in France than other OECD countries, and it is almost unique in bucking the trend of rising inequality. Since intergenerational mobility reflects lagged inequality, this may account for the French *exceptionalisme*.

What are the causes of rising inequality?

There is a huge body of research on the causes of rising inequality (see Van Reenen, 2011). The consensus is that technological change has increased the demand for skilled workers faster than the supply of skilled workers has been able to keep up. Goldin and Katz (2008) show that the growth of US schooling slowed for people (especially men) entering the labour market in the late 1970s. As the supply of skills slowed down and the demand for skills continued to rise (due to technological change), the premium for having an education inexorably rose.

The main alternative explanation is that trade with low wage countries such as China has put downward pressure on the jobs and wages of unskilled workers. Although globalisation is the favourite culprit of many politicians and media pundits, the evidence for trade causing inequality is very weak. For example, inequality started to climb in the late 1970s, long before China and India began their trade liberalisation. Furthermore, the amount of trade is simply not large enough to explain the enormous increase in income disparities.

The decline in the real value of the US minimum wage and the virtual disappearance of trade unions in the US are institutional changes that are likely to have also played a role in widening wage inequality. But although wage floors can help to explain some of the changes in the bottom half of the wage distribution in Figure 4, they cannot really explain why upper half income inequality has risen so much.

Furthermore, other countries where institutional changes have been less dramatic than in the US (such as Germany and Scandinavia) have also experienced increases in the demand for skilled workers and increases in inequality since the 1990s, suggesting that more fundamental forces are at work.

Explanations for why the top 1% or top 0.1% have done so extraordinarily well are more controversial. It could be that the same forces of technology and globalisation have created more of a 'winner takes all' society where the prize for being a superstar is huge, whether this is in sport, financial markets or the film industry.

An alternative story is that weak regulation has allowed some individuals to capture excess profits. For example, top earners in the financial sector were able to exploit the government's implicit bailout guarantee – their organisations were 'too big to fail'. According to this view, lobbying efforts by the very rich meant that policy-makers turned a blind eye to the excesses of finance (Freeland, 2012).

What are the candidates' policies?[5]

Rather than talking about the underlying causes of increased inequality, the presidential candidates have focused on dealing with its consequences, particularly over taxes and benefits. The main issue has revolved around the expiration of the 2001 Bush tax cuts.

President Obama has pledged to keep the tax cuts except for those households earning over $250,000 a year (as well as restricting some tax deductions for those on over $1 million). For

[5] For more detail on the tax policies of the candidates, see CEP's US Election Analysis on taxes, spending and public debt; and http://www.taxpolicycenter.org/taxtopics/election_2012_tax_plans.cfm.

example, the top two rates of income tax will increase from 33% to 36% and from 35%[6] to 39.6%.

One criticism of this tax reform is that it only affects about 1.5% of US households and therefore does little directly about inequality across the great majority of Americans. Another criticism, focused on by Governor Romney, is that these tax increases will mean lower incentives for entrepreneurs and wealthier individuals to work hard and will therefore be a drag on growth.

Since inequality has undoubtedly risen, economic analysis would suggest that, all else being equal, the optimal rate of taxation for the richest should also rise. What the optimal level of taxation is for this group will also depend on the degree to which there is a behavioural response to reduce the amount of tax collected and the importance given to a marginal dollar for the rich compared with the poor. (The declining marginal utility of wealth means less importance is placed on a dollar for the rich than a dollar for the poor.)

Putting these together suggests that the level of taxation should be higher for the top 1% as inequality has risen, and incentive effects are not high enough to offset any tax increase. The key question is by how much total tax revenue falls as taxes on the rich rise. Using mid-range estimates of this elasticity, Diamond and Saez (2011) estimate a marginal rate of around 75% for the top 1%, which is much higher than the current rates.[7] But there is a range of lower estimates (see the Mirrlees Review, 2010).

Would reducing inequality stifle economic growth? Clearly, Soviet-style levels of equality stifle incentives and growth, but the US is a long way from this. Many have argued that high levels of inequality squander the productivity of talented but poor children, as suggested by Figure 7. Empirically, there is no robust relationship between the level of macroeconomic inequality and growth.[8] But it is plausible that extremes of equality and inequality both dampen growth – and the US seems to be moving closer and closer to extreme inequality territory.

The best policy approach is surely to deal directly with the root causes of inequality rather than just tackling the symptoms through redistribution. Given the failure of the supply of skills to keep up with the demand for skills, an important policy here would be to improve the quantity and quality of human capital through education.

Republicans have put a lot of emphasis on the charter school movement and there is evidence of its success in raising standards, although there is controversy over the effects on weaker students.[9] Republicans see the main barrier to improved education as teachers' unions and they propose much tougher legislation on public sector unions in general.

In his stimulus legislation (the American Reconstruction and Recovery Act of 2010), President Obama allocated a lot of extra federal money for schools to introduce common testing and performance measurement. There is evidence that such policies have been effective in some settings, particularly where teacher quality has been improved.

[6] This rises to 42.5% if Medicare tax and the average state taxes on income and sales are included (Diamond and Saez, 2011).
[7] This is using an elasticity of 0.25 (see Saez et al, 2012), that is, tax revenue falls by 2.5% when net tax rates increase by 10%.
[8] Banerjee and Duflo (2003) have a comprehensive analysis. Berg et al (2012) have some recent evidence.
[9] For example, Abdulkadiroglu et al (2011), Angrist et al (2010) and Angrist et al (2011).

But perhaps the main policy relating to inequality that has touted by both candidates is the desire to have tougher restrictions on imports from China. Governor Romney has vowed to label China a 'currency manipulator' on the first day of his presidency, which would trigger trade sanctions. And President Obama has been increasing the number of tariffs and anti-dumping actions against China.

In contrast with the widespread protectionism of the 1920s and 1930s, the US and the other rich countries have generally not raised trade barriers (although there have been a few exceptions, such as the tariffs targeted at Chinese tyres in 2010). But since the cause of rising inequality has not really been trade-related, China-bashing will not only damage economic growth more generally, but it would also be ineffective in tackling inequality.

Conclusions

Income inequality has been rising dramatically in the US for almost four decades: in 2007, the richest 1% of Americans took the highest share of income since the First World War, with the exception of 1928. This has mainly been caused by increased wage inequality, which has risen more or less continuously for the top half of the distribution.

The enormous increase in income disparities has not been counterbalanced by an increase in social mobility. Mobility within generations has been stable or declined and intergenerational mobility in the US is among the worst in the world. Profits have also increased as a share of national income since around 2000, though this 'decoupling' has been much less dramatic. Apart from inequality, median wages have risen much more slowly than compensation because of rising healthcare costs.

President Obama plans to increase taxes for people on incomes over $250,000 and tighten their tax loopholes. Governor Romney is against such 'class warfare' and focuses more on educational reforms, although the plans of both candidates are rather vague in this respect. Both have attacked China vigorously, but since there is little evidence that Chinese trade has been a cause of increased inequality, such policies will do more harm than good (Bloom et al, 2011).

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Further reading

Atila Abdulkadiroglu, Joshua Angrist, Susan Dynarski, Thomas Kane and Parag Pathak (2011) 'Accountability and Flexibility in Public Schools: Evidence from Boston's Charters and Pilots', *Quarterly Journal of Economics* 126: 699-748.

Daron Acemoglu and David Autor (2010) 'Skills, Tasks and Technologies: Implications for Employment and Earnings', in Orley Ashenfelter and David Card (eds) *Handbook of Labour Economics* 4, Elsevier.

Joshua Angrist, Susan Dynarski, Thomas Kane, Parag Pathak and Christopher Walters (2010) 'Inputs and Impacts in Charter Schools', *American Economic Review* 100: 239-43.

Joshua Angrist, Parag Pathak and Christopher Walters (2011) 'Explaining Charter School Effectiveness', National Bureau of Economic Research Working Paper No. 17332.

Anthony Atkinson, Thomas Piketty and Emmanuel Saez (2012) *World Top Incomes Database*.

Abhijit Banerjee and Esther Duflo (2003) 'Inequality and Growth: What Can the Data Say?', Journal of Economic Growth 8(3): 267-99.

Andrew Berg, Jonathan Ostry and Jeromin Zettelmeyer (2012) '**What Makes /growth Sustained?**', Journal of Development Economics 98(2): 149-66.

Marianne Bertrand, Claudia Goldin and Lawrence Katz (2010) 'Dynamics of the Gender Gap for Young Professionals in the Financial and Corporate Sectors', American Economic Journal: Applied Economics 2(3): 228-55.

Jo Blanden (2011) 'Cross-national Rankings of Intergenerational Mobility: A Comparison of Approaches from Economics and Sociology', *Journal of Economic Surveys* 25.

Nicholas Bloom, Mirko Draca and John Van Reenen (2011) 'Trade Induced Technical Change? The Impact of Chinese Imports on Innovation, IT and Productivity', Centre for Economic Performance Discussion Paper No. 1000, January.

Miles Corak (2012) 'The Economics of the Great Gatsby Curve'.

Peter Diamond and Emmanuel Saez (2011) 'The Case for a Progressive Tax: From Basic Research to Policy Recommendations', *Journal of Economic Perspectives* 25(4): 165-90.

Economic Policy Institute (2012) *The State of Working America*, 12th edition.

Chrystia Freeland (2012) *Plutocrats: The Rise of the New Global Super-Rich*, Penguin.

Claudia Goldin and Lawrence Katz (2008) *The Race Between Education and Technology*, Harvard University Press.

Mirrlees Review (2010) *Dimensions of Tax Design*, Institute for Fiscal Studies.

Stephen Machin (2011) ‘Changes in UK Wage Inequality Over the Last Forty Years’, in Paul Gregg and Jonathan Wadsworth (eds) *The Labour Market in Winter*, Oxford University Press.

Stephen Machin, Scott Murani and John Van Reenen (2012) ‘Trends in Individual Wage and Family Income Inequality’, CEP mimeo.

Joao Pessoa and John Van Reenen (2012) ‘Decoupling of Wage Growth and Productivity Growth: Myth and Reality’ (http://www.resolutionfoundation.org/us/downloads/decoupling-wage-growth-and-productivity-growth/Decoupling_of_wages_and_productivity.pdf).

Emmanuel Saez, Wojciech Kopczuk and Jae Song (2010) ‘Earnings Inequality and Mobility in the United States: Evidence from Social Security Data since 1937’, *Quarterly Journal of Economics* 125(1): 91-128.

Emmanuel Saez, Joel Slemrod and Seth Giertz (2012) ‘The Elasticity of Taxable Income with Respect to Marginal Tax Rates: A Critical Review’, *Journal of Economic Literature* 50(1): 3-50.

John Van Reenen (2011) ‘Wage Inequality, Technology and Trade: 21st Century Evidence’, *Labour Economics* 18(6): 730-41.