

Income inequality in the UK

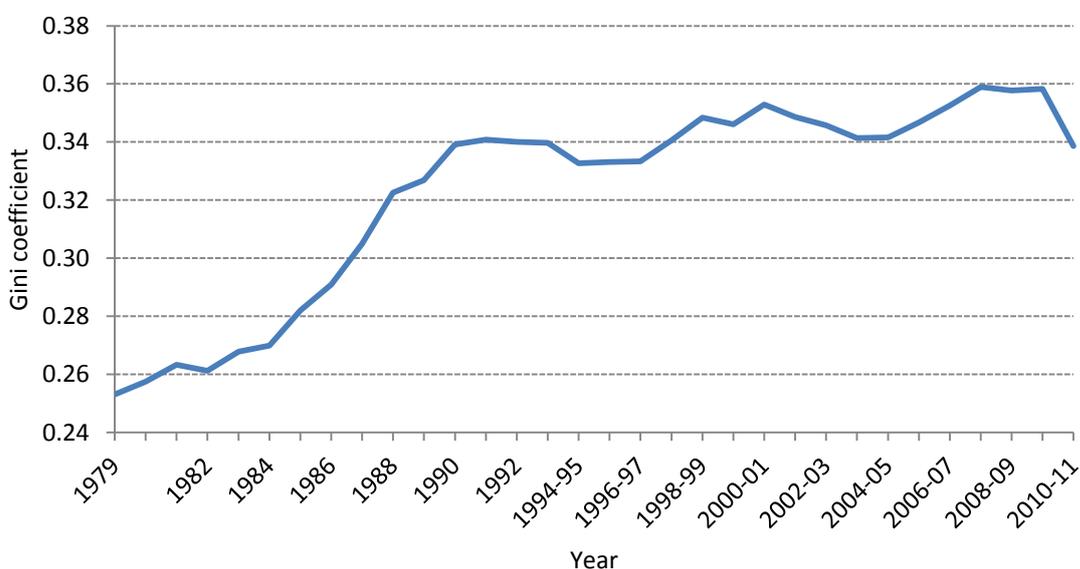
Jonathan Cribb, of the Institute for Fiscal Studies (IFS), discusses what has happened to income inequality in the UK and what economists can explain about these changes.

It seems difficult to open a newspaper nowadays and not find a story on inequality, whether it be about the differences in school results for poor and rich children or the difference in pay between Chief Executives and their employees. Economists are interested in inequalities in health, consumption, housing and educational performance, to name just a few, but it is inequalities in income that perhaps get the most attention. In the UK, the median full time salary in 2010-11 was £26,200 per year, but someone working full time for the minimum wage would only earn around £11,000, while the top 10% earned over £52,600. Given the intense interest in income inequality, what can economists say about this phenomenon?

What has happened to income inequality?

First, it is important to be clear about how we actually measure income inequality, since there are many different ways of doing so. A commonly used method to measure inequality is the **Gini coefficient**, which summarises the degree of inequality in the income distribution in one number. The Gini coefficient takes a value of between 0 and 1, where the higher the value, the higher is inequality. Figure 1 shows income inequality in the UK as measured by the Gini coefficient. By this metric, inequality increased rapidly in the 1980s, with the Gini rising from 0.25 in 1979 to 0.34 in 1991. During the 1990s and 2000s inequality fluctuated and rose slowly to reach a peak in 2007-08, when the Gini coefficient reached 0.36.

Figure 1: Inequality as measured by Gini coefficient 1979 to 2010-11

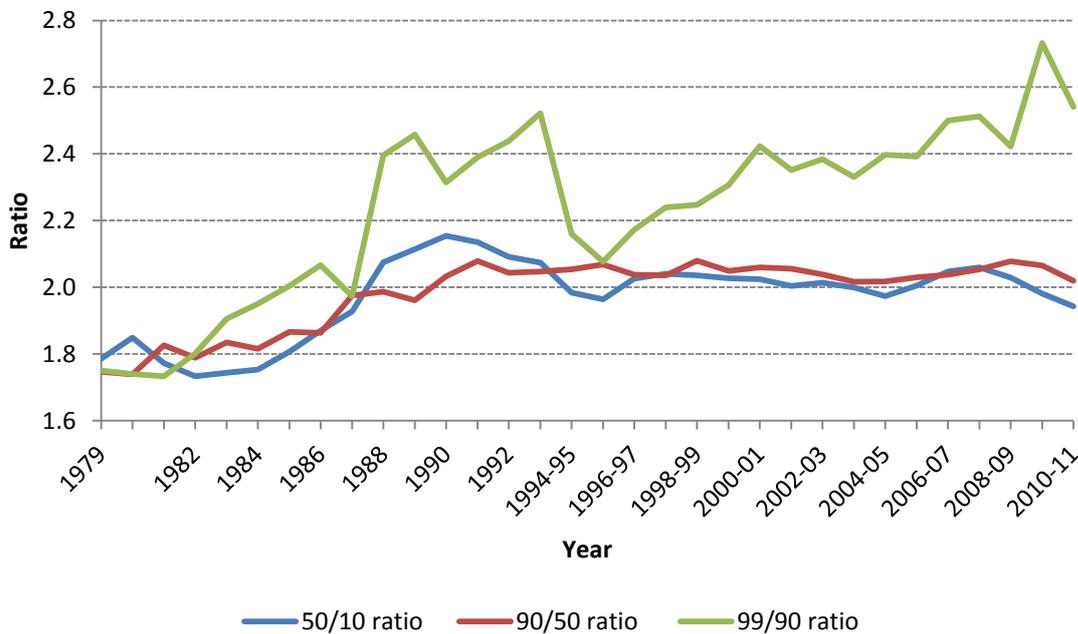


Source: Author's calculations using the Family Resources Survey and Family Expenditure Survey, various years.

However, summarising inequality in just one number can mask different patterns in changing inequality. To illustrate this, Figure 2 shows the change in the ratio of income at different points in the income distribution over time. For example, the **90/50 ratio** is the level of income at the 90th percentile (the level of income that 90% of the population fall below and 10% of the

population fall above) divided by the level of income at the 50th percentile (the median). Again a higher number indicates greater inequality.

Figure 2: Income inequality as measured by the 50/10, 90/50 and 99/90 ratios



Source: Author's calculations using the Family Resources Survey and Family Expenditure Survey, various years.

In 1979, a household at the 90th percentile had an income 1.8 times higher than a household at the median (a 90/50 ratio of 1.8), which in turn had an income almost 1.8 times greater than a household at the 10th percentile (a 50/10 ratio of 1.8). Over the 1980s the 90/50 and 50/10 ratios increased, indicating rising inequality, while from the 1990s both measures stayed largely stable. However, income inequality at the very top of income distribution (comparing the 99th to the 90th percentile) continued to rise throughout the 1990s and 2000s, with the 99/90 ratio rising from 2.0 in 1988, to over 2.5 in 2010-11. Research at the IFS has shown that even looking within the top 1%, the incomes of the richest had grown fastest, with income growth at 99.9th percentile even higher than at the 99th.

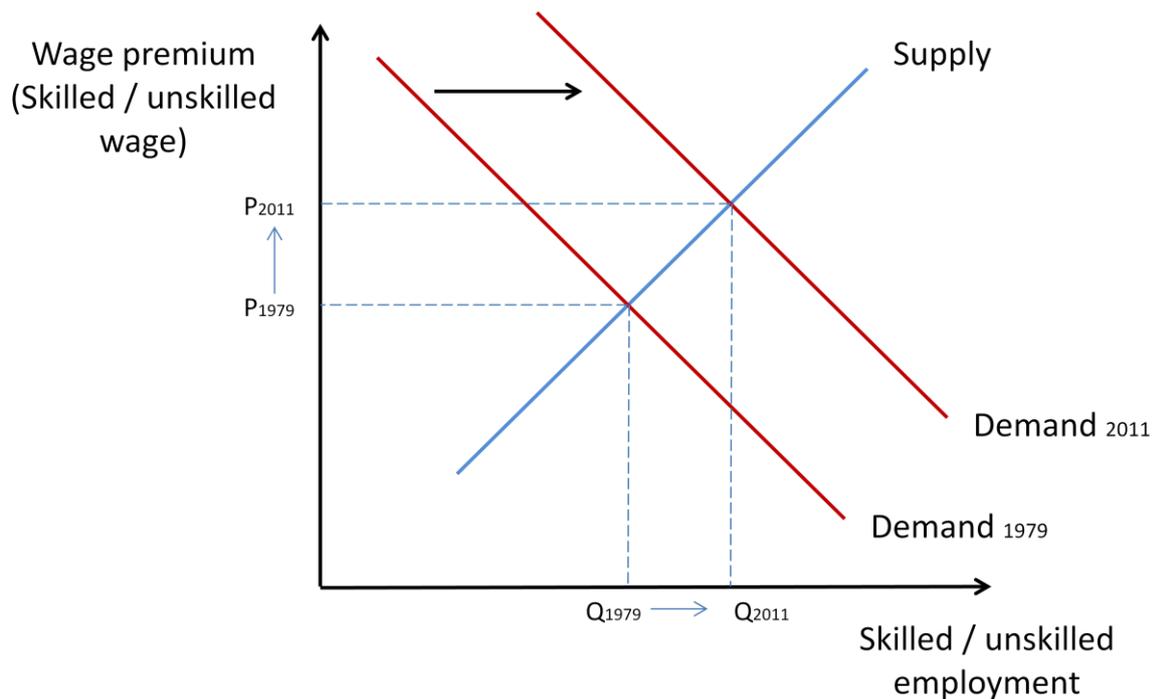
Why has income inequality risen?

It is important to note that the UK is not alone in seeing rises in income inequality. Most industrialised countries saw increases in inequality between the mid 1980s and the late 2000s, although English speaking countries like the United States, the UK, Australia and New Zealand have higher inequality than most continental European countries. So what might have caused these increases?

Unsurprisingly, there are a range of explanations that economists use to explain the changes in inequality. These include (but are not limited to): increases in the returns to education, the effects of trade liberalisation, changes in government tax and welfare policy and changes in employment patterns.

That technological progress has increased the **financial returns to education** in the labour market is a leading explanation for rising inequality, associated in particular with American economists Claudia Goldin and Lawrence Katz. The financial returns to education can be thought of as the **wage premium** that more highly skilled workers enjoy over their less skilled counterparts. We can use a simple demand and supply diagram to illustrate how technological progress might cause the wage premium to rise, as in Figure 3. The figure shows a downward-sloping demand curve for skilled labour relative to unskilled labour since, all else equal, demand is higher when skilled labour is cheaper relative to unskilled labour (i.e. when the wage premium of skilled workers is lower). The supply curve is upward-sloping, since more people will be encouraged to acquire better skills if there is a high wage premium for skilled workers, increasing the supply of skilled relative to unskilled labour.

Figure 3: Effect of rising relative demand for skilled labour on the wage premium



Suppose that supply and demand in 1979 resulted in a wage premium of P_{1979} , and employment of skilled relative to unskilled labour of Q_{1979} . Then, between 1979 and 2011, technological change that favours the use of higher skill levels (for example, increasing dependence on sophisticated information technology) shifts the demand curve to the right. There would be more skilled labour demanded than supplied at the old equilibrium wage premium, causing the skilled wage to rise relative to the unskilled wage until the supply and demand for skilled workers are equal once more in the new equilibrium – a higher wage premium of P_{2011} and relative employment level of Q_{2011} . Technological change can therefore increase the wage premium, and a higher wage premium results in greater income inequality between skilled and unskilled labour.

Another possible explanation for the increase in inequality is **trade liberalisation**. Standard trade theories imply that as trade liberalisation occurs between developing countries (with relatively abundant *unskilled* labour) and developed countries (with relatively abundant *skilled*

labour), inequality rises in developed countries. This is because as trade is liberalised, the goods produced by the unskilled workers (that can be produced more cheaply in developing countries) can be imported into the developed countries, reducing the price of those goods. This leads to lower wages for unskilled workers in developed countries, and a decline in the unskilled wage without a comparable decline in the skilled wage would imply an increase in inequality. In practice however, evaluating this explanation is very difficult and the role of globalisation and trade liberalisation in driving inequality is still a widely debated topic with no clear consensus.

Changes in **government tax and welfare policy** may be part of the reason for increased inequality in net incomes (income after tax has been paid and including any welfare benefits). Before the election of the Conservative government in 1979, the top rate of income tax was 83% on earned and 98% on unearned income. Successive cuts to the top rates of tax during the 1980s directly boosted net incomes at the top of the income distribution, and increased the incentives to work for people earning very high salaries, which increased the very highest incomes relative to the rest of the population during the 1980s. However, since then changes in government tax and benefit policies have actually mitigated increases in inequality. Overall the changes made to the tax and benefit system under the Labour government between 1997- 2010 meant that inequality was lower than it would have been under the system it inherited.

Changing family **employment patterns** may also be important for income inequality. Between the mid 1970s and mid 1990s there has been an increase in the number of families with no working adults in them – in part due to the increase in the number of workless single parent households. At the same time, the overall increase in female employment rates has increased the number of households with two earners. Together these two trends result in what is known as **employment polarisation** – households are now more likely than previously to have either none or all adults in work. This acts to increase income inequality between households, with joint earner families in general enjoying much higher incomes than workless families.

Why are top incomes racing away?

All of the above explanations probably have some part to play in explaining the increase in inequality in the UK over the 1980s. However it is not clear which, if any, provide a good explanation of why inequality at the very top of the income distribution has continued to rise compared to other measures of inequality.

In many countries incomes have risen for the top 0.1% even faster than the top 1%, suggesting this might be part of a global phenomenon rather than something specific to the UK. British economist Tony Atkinson argues that globalisation and international labour mobility has led to an international market for “global stars”, where firms will pay very high salaries to attract the world’s best. In sports, entertainment, business, and even academia, there can be very large pay differences for relatively small differences in ability. He also suggests that **social norms** which limited the pay differential between top and middle earners have eroded.

These are plausible explanations but, as yet, there is little evidence to show how much these factors might have contributed to the increase in inequality. Despite recent media attention on the incomes of those at the very top of the income distribution, and the fact that the increasing inequality began over a decade ago, the continued rapid growth in top incomes is still only beginning to be understood by economists.