Income (wage) inequality

Measurement

Lorenz Curve (% of income earned by the nth percentile of workers)

Gini Coefficient: A summary statistic based on the Lorenz Curve
   0 is perfect equality
   1 is perfect inequality

Log wage gap at different deciles of the wage distribution

All measures point to increasing inequality in the US, UK but less so in Europe
Why has inequality increased in the US & UK?

Explanation 1. Changes in the Labour Supply

Immigration of unskilled workers leads to increased (relative) supply of unskilled labour. Implies lower (relative) wages

Problem – growth in higher education has outpaced immigration

Implies decreased relative supply & reduced inequality

Explanation 2. Increased openness

Heckscher–Olin: Developed world should import unskilled-labour intensive products, export technology intensive products. Openness allows greater specialization, international wage convergence (by type of labour)

Problem – The traded sector is too small to account for observed increases in inequality. Inequality has increased by similar (though slightly smaller) amounts in non-traded sector.
Explanation 3. Skilled biased technological change.

Recent technological advances such as computers are substitutes for unskilled labour, but complements for skilled labour.

This is plausible and there is some evidence to support this view (ex: high wages in high tech sectors)

Explanation 4. Institutions

Reganism and Thatcherism meant lower minimum wages and weaker unions.
International Differences in Income Inequality

Measurement using differences-in-differences

\( X_{90} = \) log wage at 90\(^{th}\) percentile of distribution in country X
\( X_{50} = \) log wage at median of distribution
\( X_{10} = \) log wage at 10\(^{th}\) percentile of distribution

\( Y_{90} = \) log wage at 90\(^{th}\) percentile of distribution in country Y
\( Y_{50} = \) log wage at median of distribution
\( Y_{10} = \) log wage at 10\(^{th}\) percentile of distribution

The 90–50 gap in Country X is \( X_{90} - X_{50} \)
The 50–10 gap in Country X is \( X_{50} - X_{10} \)
The 90–10 gap in Country X is \( X_{90} - X_{10} = (X_{90} - X_{50}) + (X_{50} - X_{10}) \)

The 90–50 gap reflects inequality at the upper end of the wage distribution

The 50–10 gap reflects inequality at the lower end of the wage distribution
To capture the difference in inequality in the two countries we use differences-in-differences

The 90–50 diffindiff is $X_{90} - X_{50} - (Y_{90} - Y_{50})$

The 50–10 diffindiff is $X_{50} - X_{10} - (Y_{50} - Y_{10})$

The 90–10 diffindiff is $X_{90} - X_{10} - (Y_{90} - Y_{10})$

A large positive number implies country X has a much more unequal distribution of income
Some International Evidence

General points

1. Greater Inequality in US than Europe
2. Growth of inequality
   A. US: high in both ends of distribution
   B. Europe: low in bottom of distribution
   C. Europe: Medium in top of distribution

50 – 10 Gap

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<tr>
<td>US</td>
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<td>2.14</td>
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<td>Germany</td>
<td>1.52</td>
<td>1.45</td>
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<td>Difference-in-difference</td>
<td>.43</td>
<td>.59</td>
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In country growth 1979-81 to 1994-98
US: .26, Germany: -.06

90 – 50 Gap

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<td>.14</td>
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In country growth 1979-81 to 1994-98
US: .31, Germany: .12
Why has inequality risen faster in the USA?

Explanation 1 – Supply and Demand Shocks

Technological change in USA is more skill-biased than in Europe. Tertiary education growing more rapidly in Europe.

Evidence: No. Blau & Kahn find that supply & demand alone implies that inequality should be growing more rapidly in Europe.
Explanation 2 – Institutional differences

Relative to the US (and UK) Europe has
1. greater centralisation of economic institutions
2. higher union density & collective bargaining coverage
3. stronger minimum wage laws
4. more restrictions on part-time employment, casual employment, etc.

These institutions have larger effect on the left tail of wage distribution.

Consequence: Greater wage rigidity in Europe.

Effect of a negative demand shock

US – Wages adjust downwards. Effect on employment likely to be small. Some unemployment if firms go bankrupt.

Europe – Wages can’t adjust downwards. Effect on labour market must be unemployment. Unskilled labour disproportionately bears burden.

Evidence: Higher participation and employment rates in USA, lower unemployment rates. Effects most pronounced in the left tail of wage distribution.