

Understanding the Great Recession: From Micro to Macro Conference,  
Bank of England, September 23 and 24 2015

# **Real Wage Trends**

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## **Context and Motivation**

The UK has been experiencing unprecedented falls in real wages and living standards. From a research and public policy perspective, it is important to carefully document this and to place it into an appropriate historical and international context.

It is also important to try to gain an understanding both of why the recent real wage falls have happened and to explore the subtext of real wage falls in the context of longer run increases in wage inequality.

And finally to consider what this says about the prospects for future real wage growth.

# Structure of Talk

- 1). Document patterns of real wage growth from a number of alternative sources of earnings data and different measures of earnings.
- 2). Consider some implications of stagnant and falling real wages in the light of longer run increases in wage inequality.
- 3). Consider some reasons why most workers have experienced real wage falls in the recent past.
- 4). Assess the likelihood of an improvement in real wages.

# Real Wage Trends 1

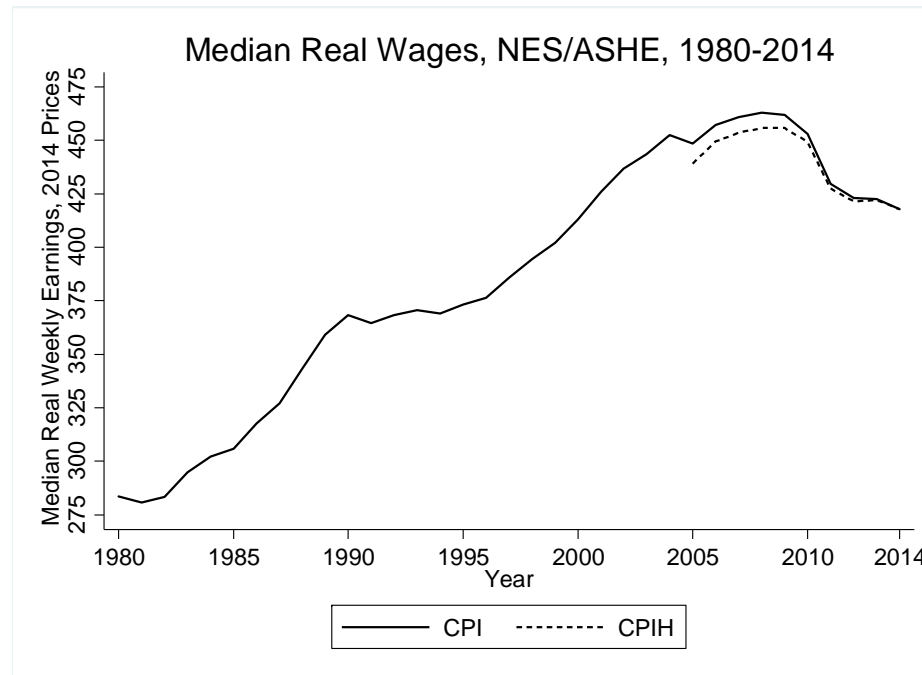
Begin with study of UK wage data over the past thirty five years (and where relevant in comparison with other countries).

UK wage data from a variety of sources:

- i) New Earnings Survey/Annual Survey of Hours and Earnings;
- ii) Labour Force Survey;
- iii) ONS Average Weekly Earnings.

And can consider what has happened to various different measures of earnings (weekly, hourly, annual) across different groups of workers.

## Real Wage Trends 2 – NES/ASHE Median

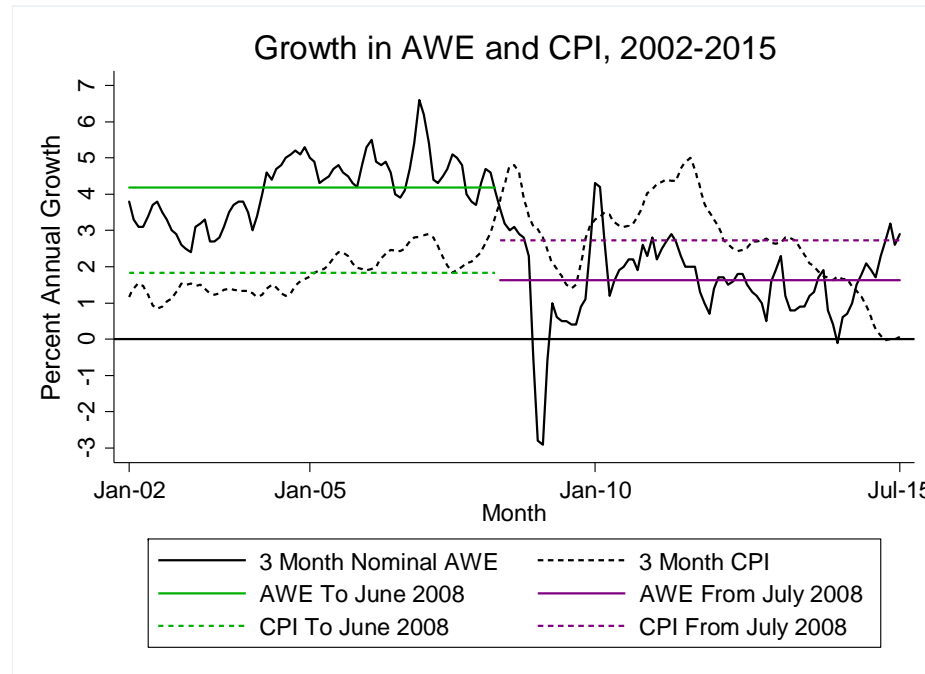


Notes: Annual Survey of Hours and Earnings (ASHE) weekly earnings numbers, updated from Gregg et al (2014a, 2014b), deflated by CPI and CPIH (from 2005).

# Real Wage Trends 3 – Different Data and Measures

<b>The Rise and Fall of Real Wages</b>				
	Level (in £)	Annualised Percent Growth		
	April 2014	1988-2003	2003-2008	2008-2014
<b>Median Weekly Earnings</b>				
ASHE	418	1.8	1.5	-1.7
GHS/LFS	400	1.8	0.8	-0.8
ASHE basic	391	2.3	1.5	-1.5
<b>Average Weekly Earnings</b>				
ONS AWE	482	2.3	2.0	-1.7
ASHE	510	2.3	1.7	-1.7
GHS/LFS	514	2.0	1.5	-0.4
ASHE basic	476	2.6	1.5	-1.4
<b>Median Hourly Earnings</b>				
ASHE	11.61	2.2	1.9	-1.2
GHS/LFS	10.81	1.6	1.8	-0.9
<b>Average Hourly Earnings</b>				
ASHE	15.11	2.7	1.9	-1.2
GHS/LFS	14.08	1.8	1.6	-0.5
<b>Annual Earnings</b>				
ASHE Median	22044		1.4	-2.0
ASHE Average	27271		2.0	-2.2

# Real Wage Trends 4 – 2000s Trends in Real AWE



## Real Wage Trends 5 – Percent Falls

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Percent Changes in Real Weekly Wages,  
2008-2014, (CPI Deflator)

Median	-10%
Male Median	-12%
Female Median	-7%
Age 18-24	-16%
Median	
10 <sup>th</sup> Percentile	-10%
90 <sup>th</sup> Percentile	-11%

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Notes: Updated CPI deflated ASHE numbers from Gregg et al (2014b).

This is real wage falls. If calculate relative to 2 percent pa trend growth prior to early 2000s (in analogous way to lost output and productivity growth) more like a 20% fall for All.



# Real Wage Trends 6 – Family Income, NMW

Some groups have fared better, for wages or family incomes:

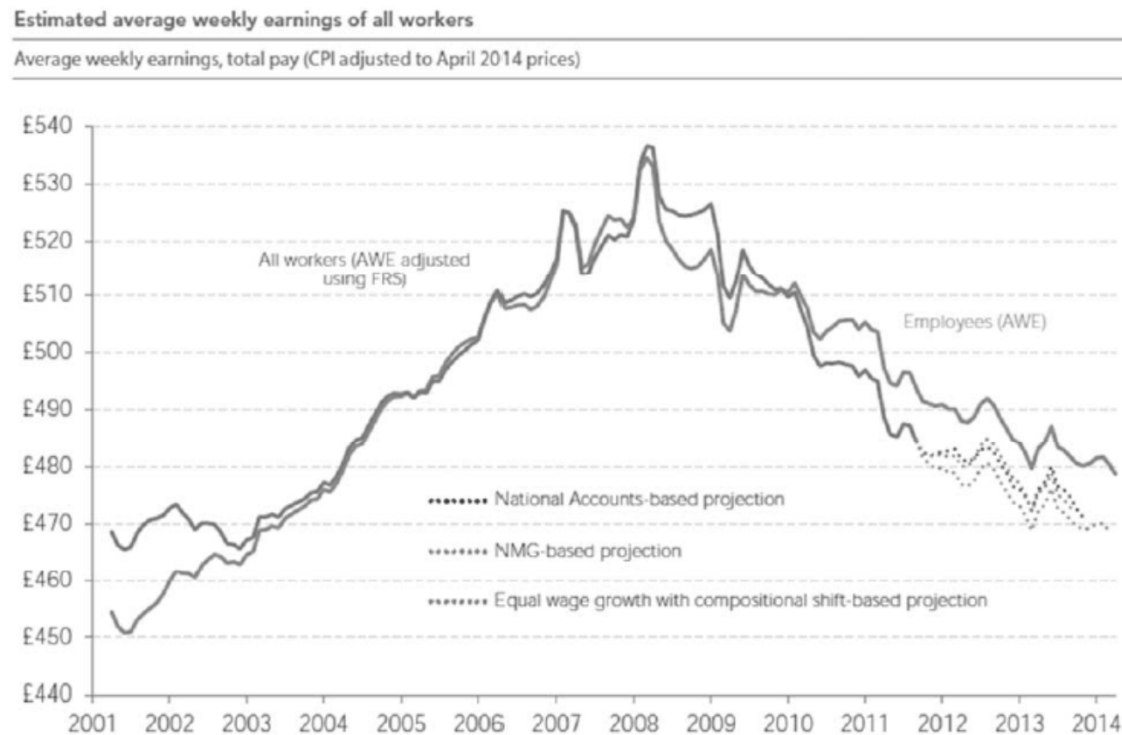
Percent Changes in Real Hourly Wages, 2008-2014, (CPI Deflator)		Percent Changes in Real Median Family Income, 2007/08 to 2012/13 (CPI Deflator)	
Median	-8%	All	-4%
Male Median	-10%	Working age families	-7%
Female Median	-5%	Pensioner families	+4%
10 <sup>th</sup> Percentile	-6%		
90 <sup>th</sup> Percentile	-9%		
NMW Adult Rate	-4%		

Notes: Based on Family Resources Survey, from Belfield et al (2014) with additional numbers provided by Robert Joyce. Calculations of the percentage falls in median real income are after tax and before housing costs.

Notes: From ASHE data.

# Real Wage Trends 7 – Low Wage Self Employed

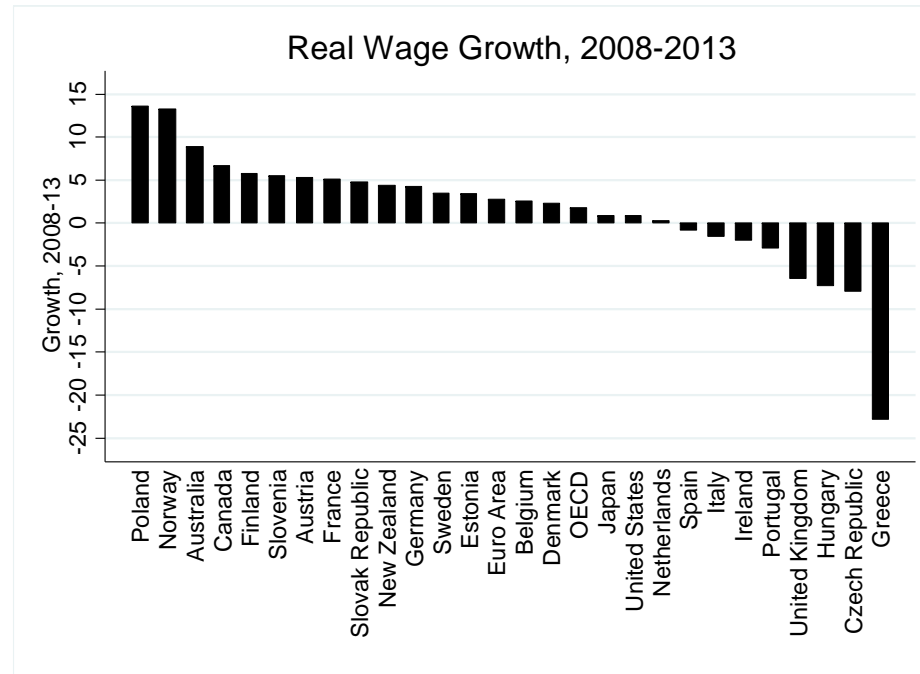
If try to factor in wages of self employment (notoriously tricky), the recent picture worsens (Resolution Foundation).



Source: Average Weekly Earnings, Family Resources Survey, Labour Force Survey and National Accounts, ONS; NMG Consulting Survey, Bank of England; Resolution Foundation calculations

Notes: Data is averaged over three months

# Real Wage Trends 8 – Falling UK Real Wages in International Context

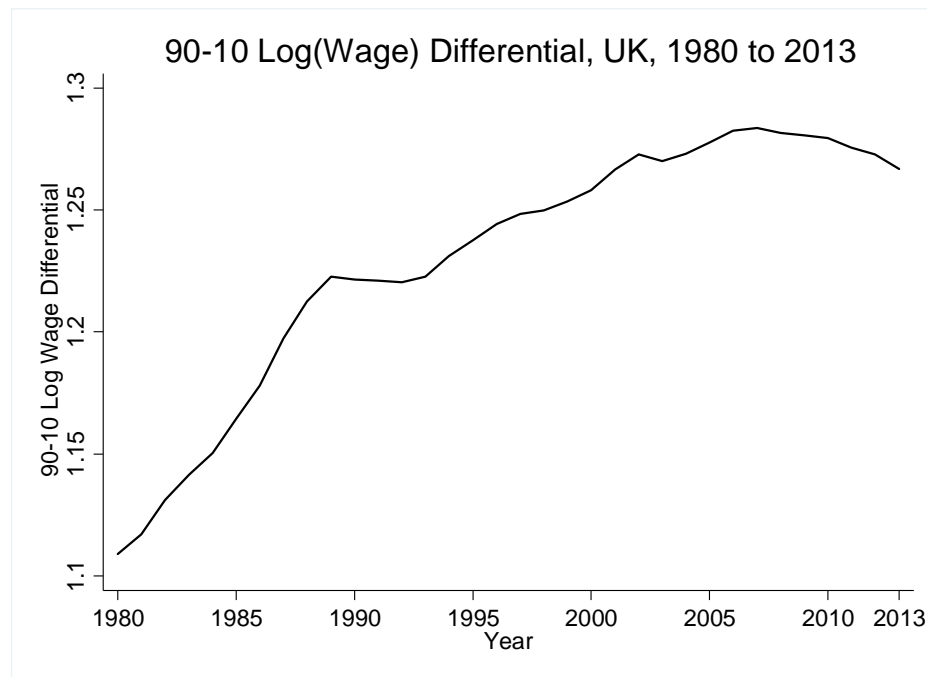


## Real Wage Trends 9 – Consequences

There are a number of consequences of falling real wages:

- i) Rising wage inequality takes on a greater significance in the presence of weak real wage growth.
- ii) Negative real wage inflation (did) raise questions of deflationary pressures at the macro level. But price inflation has now stagnated, and with it there has been a blip up in real wage growth.
- iii) Raises a more fundamental question, have we moved to a new low wage growth/high wage inequality equilibrium? And, if so, what are the reasons why?

# Real Wage Trends 8 – Rising Wage Inequality



## Real Wage Trends 9 – International Comparison (Male FT 90-10 Ratio)

	1980	1990	2000	2013
Australia	2.7	2.7	3.1	3.6
Finland	2.4	2.6	2.5	2.6 <sup>a</sup>
France	3.4	3.4	3.3	3.2 <sup>b</sup>
Japan	2.6	2.8	2.8	2.9
Sweden	2.0	2.0	2.4	2.4 <sup>a</sup>
UK	2.7	3.3	3.5	3.7
US	3.6	4.4	4.8	5.4

Notes: 90-10 male full-time weekly earnings ratio. From OECD Stat Extracts database. All countries with data for 1980, 1990, 2000 and 2013 (a superscript denotes 2012, b superscript denotes 2010).

## Real Wage Trends 10 – International Comparison (Male FT 90-10 Ratio)

	2000	2013		2000	2013
Australia	3.1	3.6	Italy	2.5	2.4
Belgium	2.4	2.5 <sup>a</sup>	Japan	2.8	2.9
Canada	3.5	3.7	Korea	4.1	4.7
Czech Rep	3.5	3.7	New Zealand	2.7	3.2
Denmark	2.5	2.9 <sup>a</sup>	Poland	3.8	4.7
Finland	2.5	2.6 <sup>a</sup>	Sweden	2.4	2.4 <sup>a</sup>
France	3.3	3.2 <sup>b</sup>	Switzerland	2.5	2.7 <sup>b</sup>
Germany	3.0	3.4	UK	3.5	3.7
Hungary	5.2	4.2	US	4.8	5.4
Ireland	3.4	4.2			

Notes: 90-10 male full-time weekly earnings ratio. From OECD Stat Extracts database. All countries with data for 2000 and 2013 (a superscript denotes 2012, b superscript denotes 2010).

# Explanations 1 - Factors

(At least) three factors have been drivers of the recent unprecedented real wage falls:

- i) As it rose, unemployment exerted larger downward pressure on wages than in previous recessions (but see later discussion about recent unemployment falls not driving real wages back up).
- ii) The poor productivity record through the recession and recovery has not created room for wage rises, though it has been good news for jobs.
- iii) Wages of typical British workers have not been keeping up with productivity gains made in the economy (the origin of this pre-dates the downturn).



# Explanations 2 – Regional Wage Curves

	Regional Panel of Real Wages and Unemployment		
	1988-2002	2003-2012	Change Between 1988-2002 and 2003-2012
<b>A. Trend Specification</b>			
$\Delta\text{Log}(\text{Unemployment Rate}[t])$	-0.013 (0.010)	-0.012 (0.019)	0.001 (0.021)
$\text{Log}(\text{Unemployment Rate}[t-1])$	-0.066 (0.009)	-0.137 (0.021)	-0.071 (0.023)
Trend	0.008 (0.002)	0.006 (0.002)	-0.001 (0.003)
Region Dummies	Yes	Yes	Yes
Regional Controls	Yes	Yes	Yes
R-Squared	0.988	0.965	0.986
Sample Size	165	110	275
<b>B. Year Dummies Specification</b>			
$\Delta\text{Log}(\text{Unemployment Rate}[t])$	-0.018 (0.012)	-0.011 (0.013)	0.007 (0.017)
$\text{Log}(\text{Unemployment Rate}[t-1])$	-0.022 (0.010)	-0.058 (0.012)	-0.036 (0.016)
Region Dummies	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes
Regional Controls	Yes	Yes	Yes
R-Squared	0.994	0.995	0.996
Sample Size	165	110	275

Notes: From Gregg et al (2014a).

## Explanations 3

Question (answer yet to be fully determined) is whether the increased sensitivity is cyclical or reflects a structural shift.

Long term union decline leading to increased labour market flexibility points to latter.

So does increased substitutability of the unemployed with low wage workers – driven by increase in ‘welfare conditionality’ and breaches are associated with sanctions, reductions in cash payments, which in turn have become more severe. At the same time has occurred the development of a system of tax credits which supplement low wages mainly for those with children. The increased pressure to take low waged work and compensation for doing so may have increased the willingness of workers to trade lower wages for employment, and also their substitutability for low wage workers.

# Explanations 4 - Union Decline

Very sharp drops in membership density (and coverage), in particular now very low by historical standards in private sector):

## **All**

GB, 1979: 58.3

GB, 2013: 25.6

## **Private**

GB, 2013: 14.4

# Explanations 5 – Union Decline

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**Sample Split Based on Coverage of National Collective Agreements (1986-2004) or National  
Collective Agreements or National Company Pay Structures (2005-2012)**

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	1986-2004		2005-2012	
	Covered	Uncovered	Covered	Uncovered
$\Delta \text{Log}(\text{Unemployment Rate}[t])$	0.009 (0.015)	0.001 (0.018)	0.016 (0.017)	-0.030 (0.020)
$\text{Log}(\text{Unemployment Rate } [t-1])$	0.024 (0.016)	-0.021 (0.016)	-0.006 (0.015)	-0.075 (0.024)
Region Dummies	Yes	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes
Regional Controls	Yes	Yes	Yes	Yes
R-Squared	0.973	0.984	0.991	0.994
Sample Size	209	209	88	88

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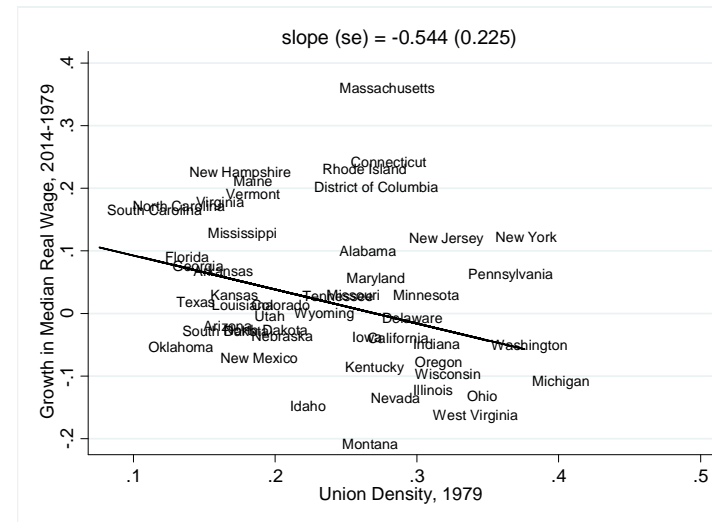
# Explanations 6 – Median Real Wage Growth and Unions

UK Labour Force Survey



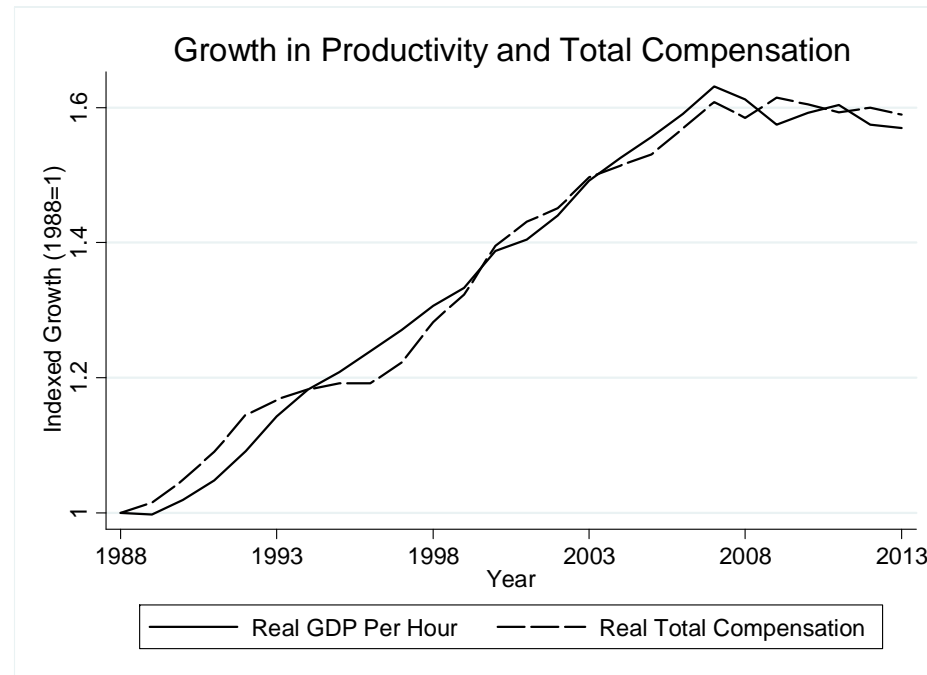
Notes: LFS FT weekly earnings. CPI deflator. Union data from LFS 1993 and 2014.

US Current Population Survey

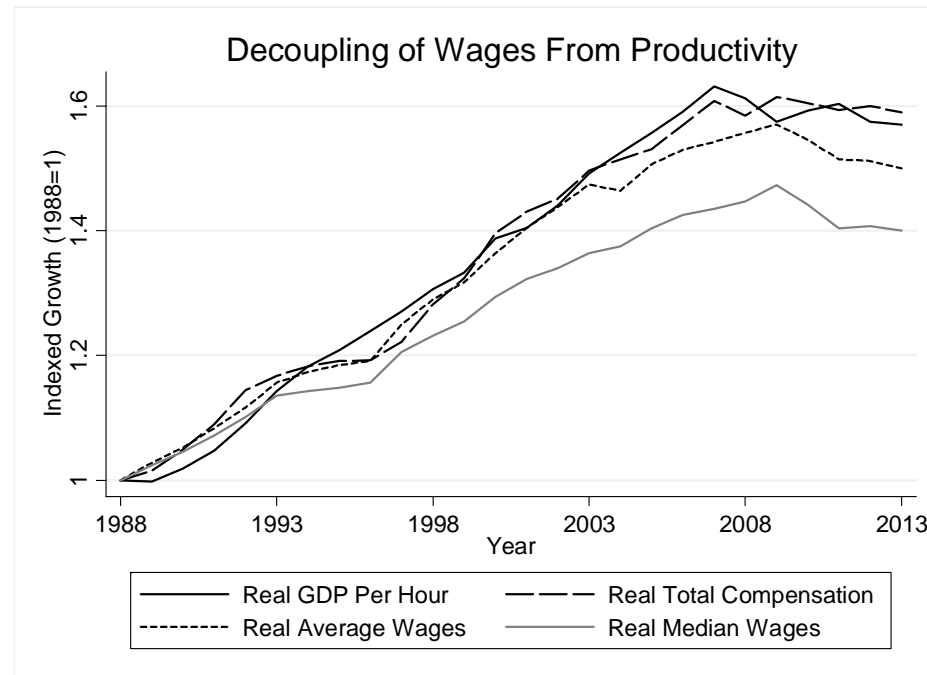


# Explanations 7 – Productivity and Compensation

Labour Productivity and Annual Compensation, 1988 to 2013



# Explanations 8 – Decoupling of Wages From Productivity



## Explanations 9

Thus the gains from productivity have not been shared out equally.

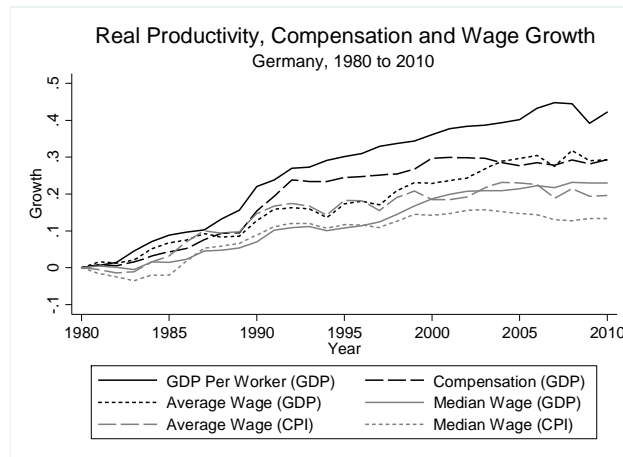
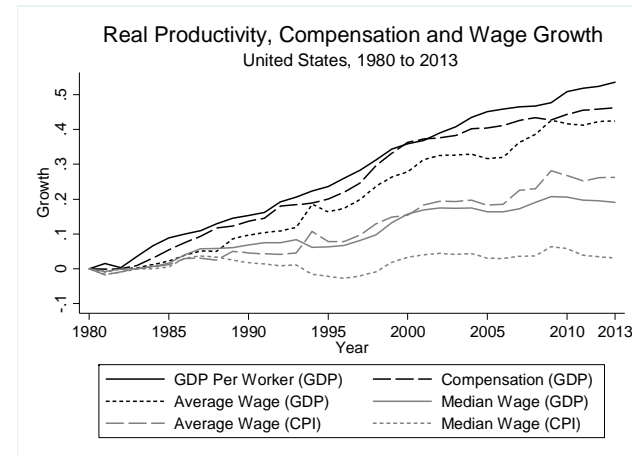
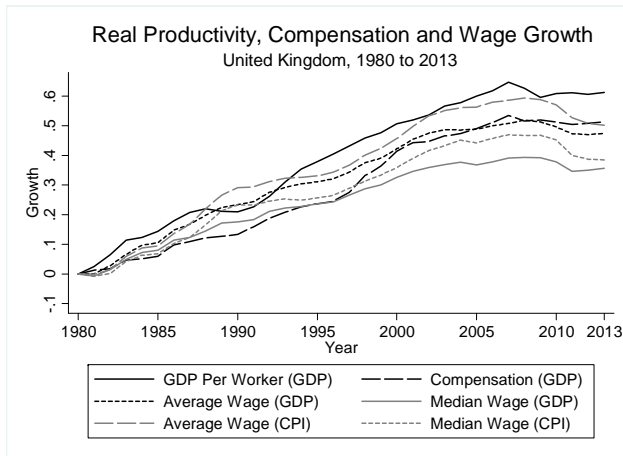
There are two main dimensions to this:

- i) The gap between average wages and total compensation per hour suggests that non-wage labour costs, mostly pensions, have taken a growing share of the productivity growth that has been achieved.
  
- ii) The opening of the gap between mean and median wages is because of rising wage inequality. As top earners had faster wage growth that pulled the average (mean) wages up at a faster rate than the median wages (of the middle or typical worker).



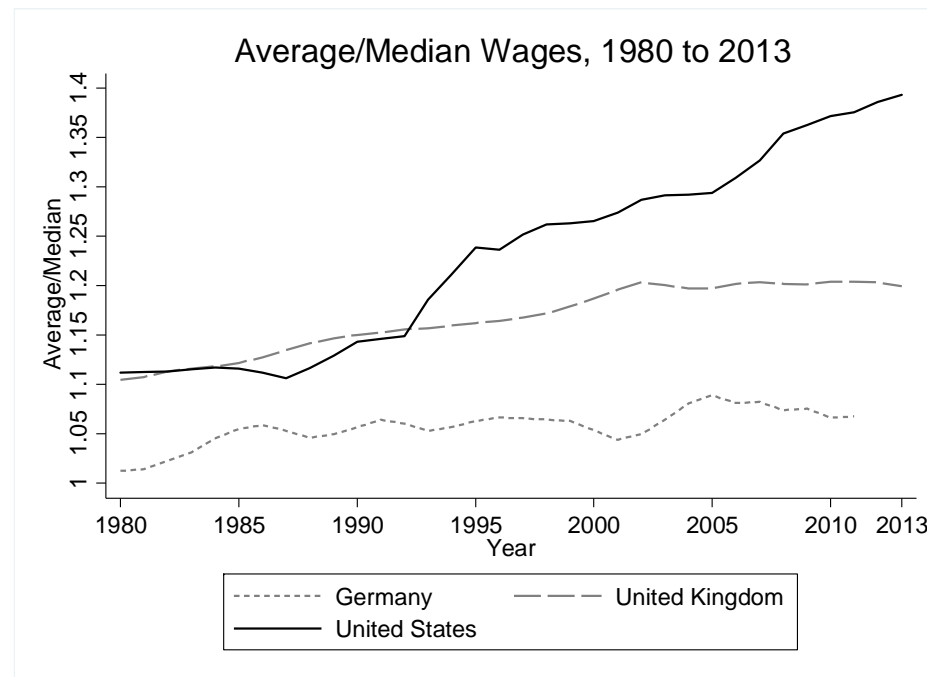
# Explanations 10

Decoupling has also occurred in other countries, but with some notable differences.



# Explanations 11

The impact of inequality as a driver through faster wage growth at the average compared to the median is evident:



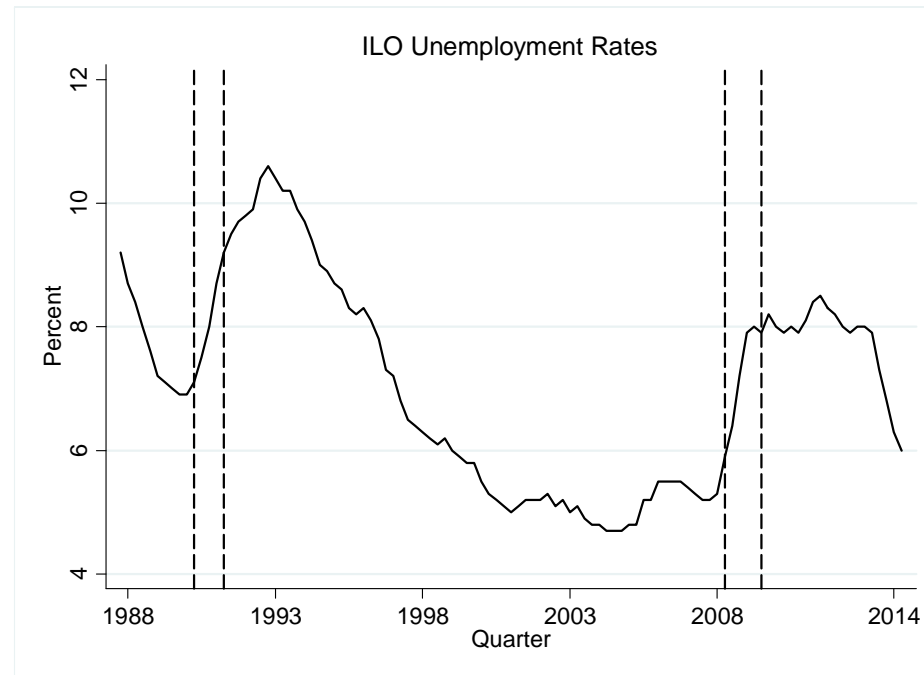
# Prospects for Future Real Wage Growth 1

Are there plausible prospects of a return to real wage growth?

- i) Falling unemployment in a recovery ought to generate real wage gains (for a while). But unemployment has not risen by so much this time around. And there remains a lot of slack in the labour market.
- ii) Productivity growth will generate real wage gains, but so far productivity has remained very sluggish (no 'springboard' as in previous recessions, secular stagnation).
- iii) Productivity growth is necessary, but not sufficient. If productivity gains continue their (pre-recession) trend of not being shared out, then there is no reason why the median worker will gain.

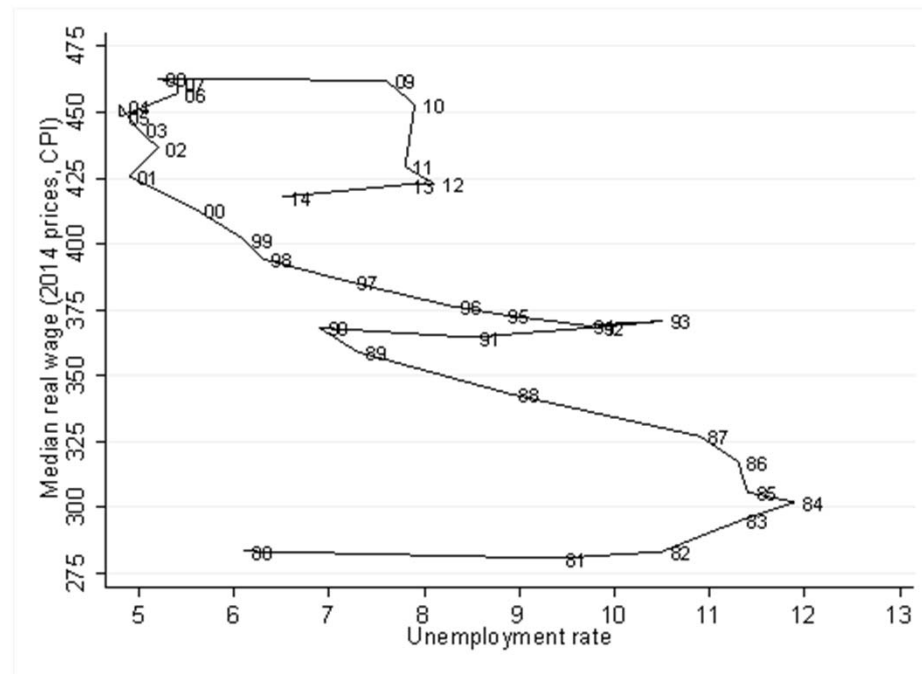
# Prospects for Future Real Wage Growth 2

ILO Unemployment Rates, 1988-2014



# Prospects for Future Real Wage Growth 3

Median Real Wages and Unemployment, 1988 to 2014



Notes: Median wages from ASHE, ILO unemployment rates from ONS.

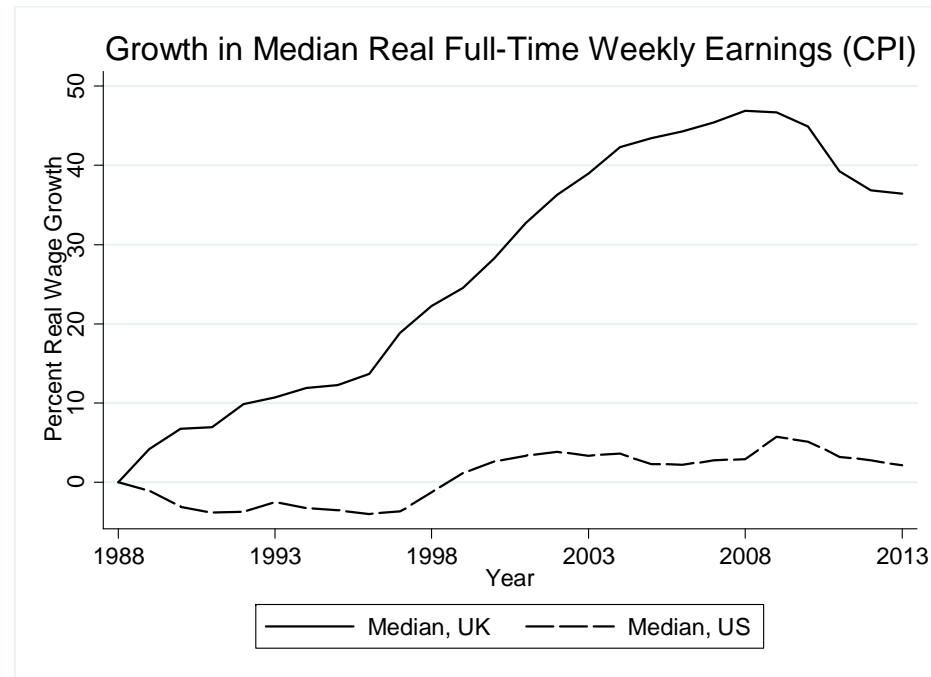
# **Prospects for Future Real Wage Growth 4 – There may be More Slack Than the Unemployment Rate Suggests**

More slack due to a number of factors (preventing real wage gains to occur from falling unemployment):

- i) Rise of low wage self employed (as described above).
- ii) Under-employment indexes (number of part-time employees who report wanting full-time work) has risen sharply (and stayed up).
- iii) Rise in employment of older workers.

# Prospects for Future Real Wage Growth 5 – A Warning Sign?

Real Wage Growth at the 50<sup>th</sup> Percentile, Weekly Wages, UK and US 1988-2013



# Prospects for Future Real Wage Growth 6 – Historical Real Wage Falls

## Periods of Real Wage Falls Over Long Term, UK

	<b>1865-67</b>	<b>1874-78</b>	<b>1921-23</b>	<b>1976-77</b>	<b>2007-14</b>
Duration (years)	2	4	2	2	7
Depth (%)	-10	-1.7	-8.2	-6.6	-8.2
Recovery (%)	12.8	0.6	4.5	14.5	n.a.
Total change over seven years (%)	1.2	-1.1	-4.0	6.9	-8.2

Source: Trade Union Congress. Notes: taken from 'UK workers suffering the most severe squeeze in real earnings since Victorian times', Labour Market and Economic report, available at <http://www.tuc.org.uk/economic-issues/labour-market-and-economic-reports/economic-analysis/britain-needs-pay-rise/uk>.



# Conclusions 1

Key issues in international labour markets have been rising wage inequality and real wage stagnation. How they connect is understudied, even though in the presence of no real wage growth rising wage inequality takes on an extra significance.

Since 2008 median real weekly wages in the UK have fallen by around 10 percent (with different measures and sources showing falls in the range of 4 to 11 percent). Real wages falls have been widespread and have occurred right across the wage distribution. Some groups have been particularly hard hit, most notably the young.

At the same time wage inequality is at its highest level of the post WWII time period.

## Conclusions 2

The real wage falls have come about for a number of reasons:

- an increased sensitivity of real wages to unemployment as unemployment rose (which probably reflects increased labour market flexibility);
- poor productivity performance;
- a decoupling of growth in median real wages from productivity growth due to rising wage inequality.

Real wage growth for the typical worker has picked up and could grow more if any recovery that might come is strong, but even then getting back to the levels of the mid to late 2000s will require a considerable turnaround.

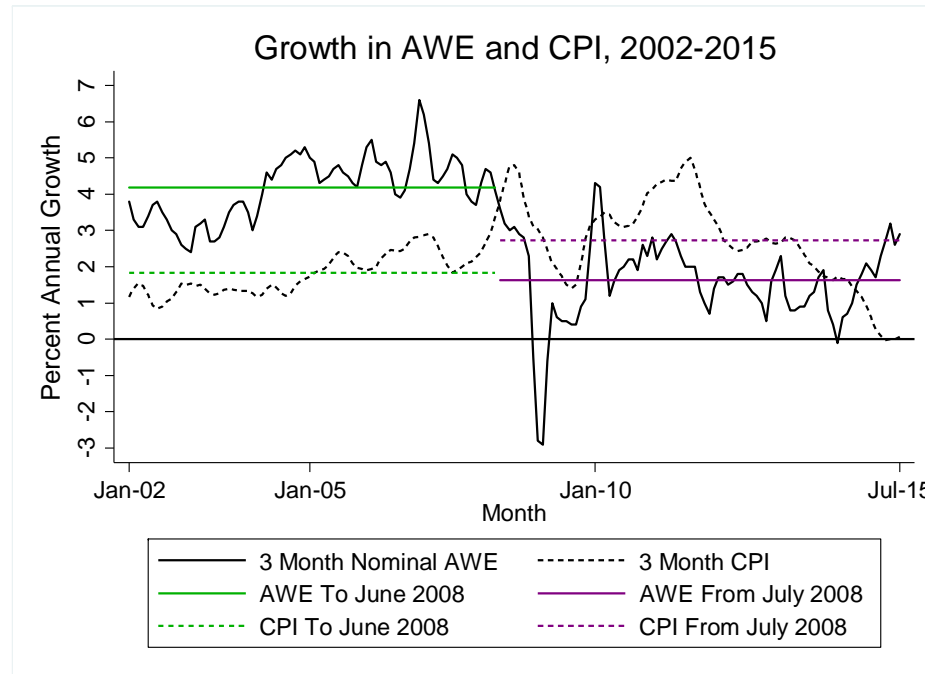
## Conclusions 3

With the structural issues that have emerged (because of the wedge between compensation and average wages, and between average and median wage growth), reduced influence of collective bargaining and lacklustre productivity growth it may be that low real wage growth, coupled with high levels of wage inequality, is here for some time to come.

This is what has happened in the labour markets of a number of the UK's competitors for some time, specifically with weak real wage growth predating the economic downturn.

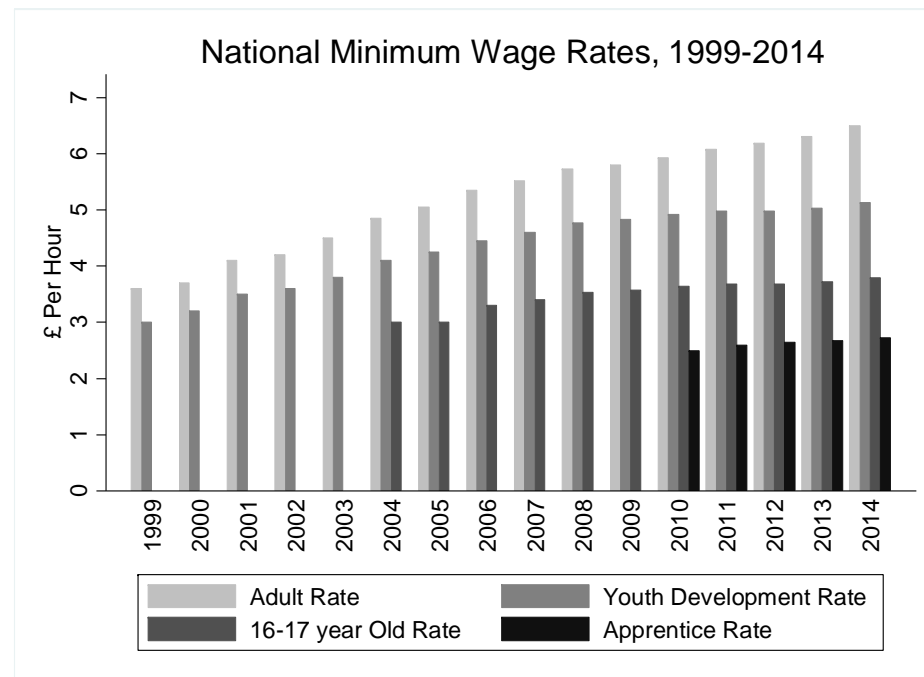
And so a final important question is how much of the recent blip up in real wage growth is due to strength returning to wages or rather because of stagnant prices.

# Real Wage Trends 4 – 2000s Trends in Real AWE





# NMW Levels



# NMW Changes

