

# Falling Real Wages

Stephen Machin\*

\* Department of Economics, University College London and Centre for Economic Performance, London School of Economics

[This talk draws on and further develops joint work with Danny Blanchflower, Paul Gregg and Marina Fernandez-Salgado]

# Context

The UK has been experiencing unprecedented falls in real wages and living standards.

It is important to carefully document this and to place it into its appropriate historical context.

It is also important to try to understand why the recent real wage falls have happened.

And to consider what might end them and whether that is likely to happen.

# Structure of Talk

- 1). Document real wage trends from a number of alternative sources of earnings data and different measures of earnings.
- 2). Consider some implications of falling real wages and their connection to unemployment.
- 3). Consider 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

Study wage data from various sources over the past twenty five years.

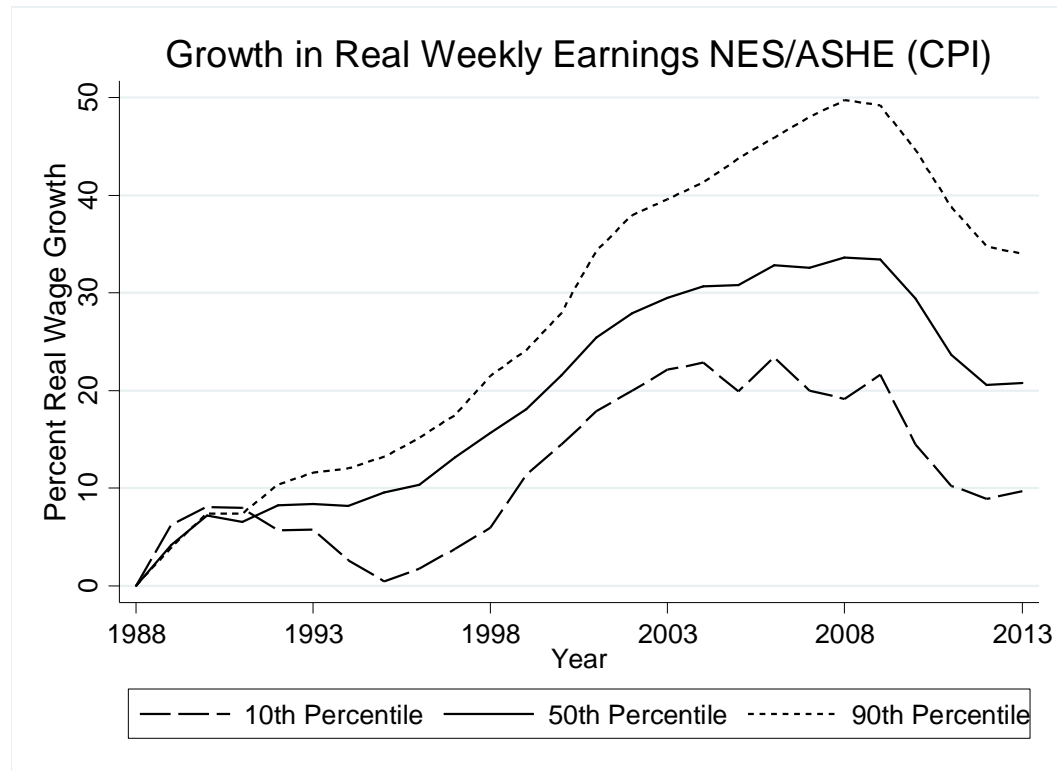
The start date is determined by the fact that 1988 is the first year where we have Consumer Price Inflation (CPI) data.

Data from:

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

And consider various different measures of earnings (weekly, hourly, annual) across different groups of workers.

# Real Wage Trends 2 – NES/ASHE



# Real Wage Trends 3 – Different Data Sources

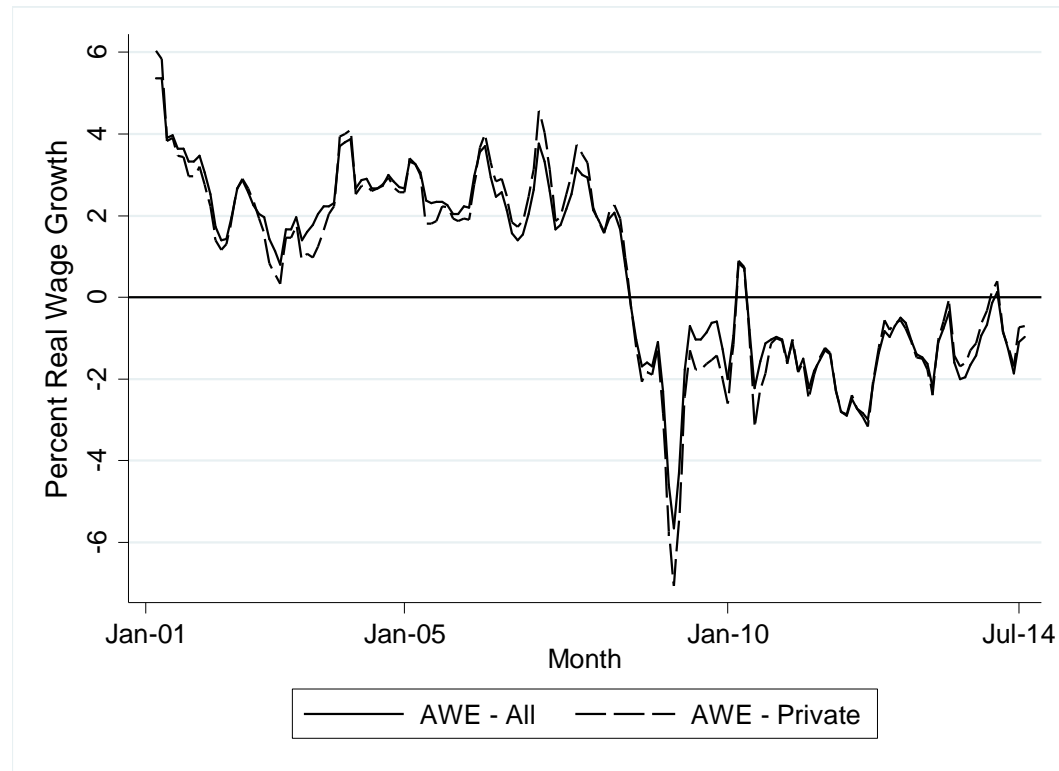
## The Rise and Fall of Real Wages

	Level (in £)		Percent Growth		
	April or Q2 2013	1988-2003	2003-2008	2008-2013	2013 Growth
<b>Median Weekly Earnings</b>					
ASHE	425	1.8	1.5	-1.6	0.2 (April)
GHS/LFS <sup>ii)</sup>	392	1.8	0.8	-0.7	-2.1 (Q3 and Q4)
ASHE basic <sup>iii)</sup>	397	2.3	1.5	-1.4	0.2 (April)
<b>Average Weekly Earnings</b>					
ONS AWE <sup>i)</sup>	484	2.3	2.0	-1.3	-0.9 (December)
ASHE	512	2.3	1.7	-1.7	-0.2 (April)
GHS/LFS	472	2.0	1.5	-1.2	-1.4 (Q3 and Q4)
ASHE basic	485	2.6	1.5	-1.4	-0.2 (April)
<b>Median Hourly Earnings</b>					
ASHE	11.70	2.2	1.9	-1.2	0.6 (April)
GHS/LFS	10.73	1.6	1.8	-0.8	-1.8 (Q3 and Q4)
<b>Average Hourly Earnings</b>					
ASHE	14.90	2.7	1.9	-1.2	-0.3 (April)
GHS/LFS	13.39	1.8	1.6	-0.7	-1.0 (Q3 and Q4)
<b>Annual Earnings<sup>iv)</sup></b>					
ASHE Median	22790		1.4	-1.9	-0.5 (April)
ASHE Average	28231		2.0	-2.2	-0.8 (April)

# Real Wage Trends 4 – Most Recent Numbers

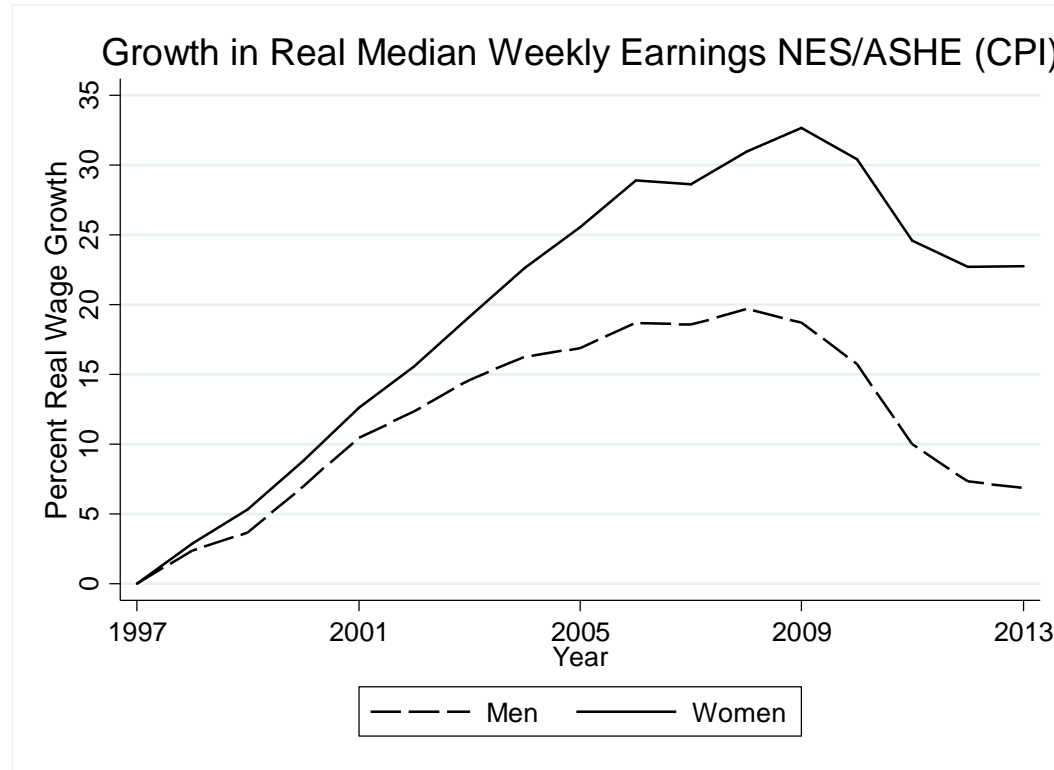
AWE:	August 2014 - £479; August 2013 - £475 % change = 0.8%
CPI:	Year to August 2014 = 1.5%
CPIH:	Year to August 2014 = 1.5%
RPIJ:	Year to August 2014 = 1.8%
LFS, FT median:	Apr-Jun 2014 - £481; Apr-Jun 2013 - £481 % change = 0.0%
CPI:	Year to Apr-Jun 2014 = 1.7%
CPIH:	Year to Apr-Jun 2014 = 1.6%
RPIJ:	Year to Jan-Mar 2014 = 1.8%

# Real Wage Trends 5 – 2000s Trends in Real AWE

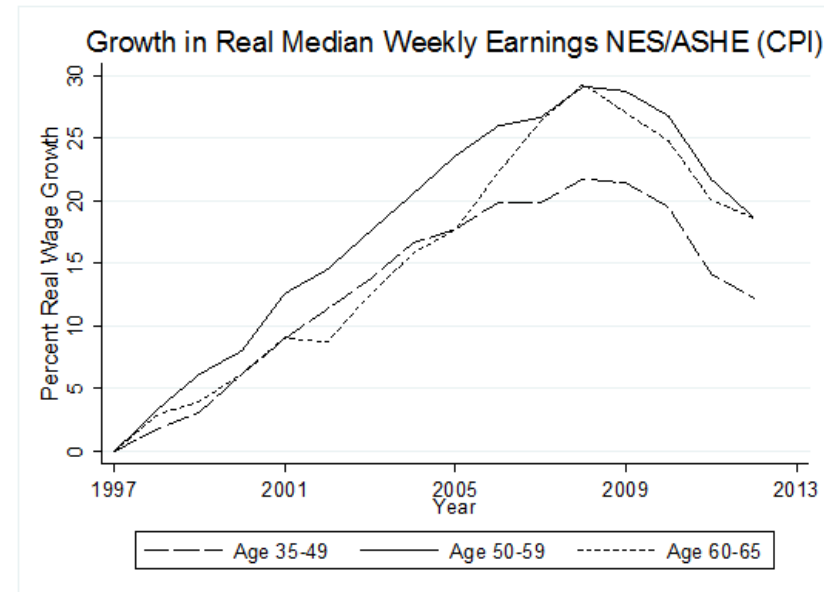
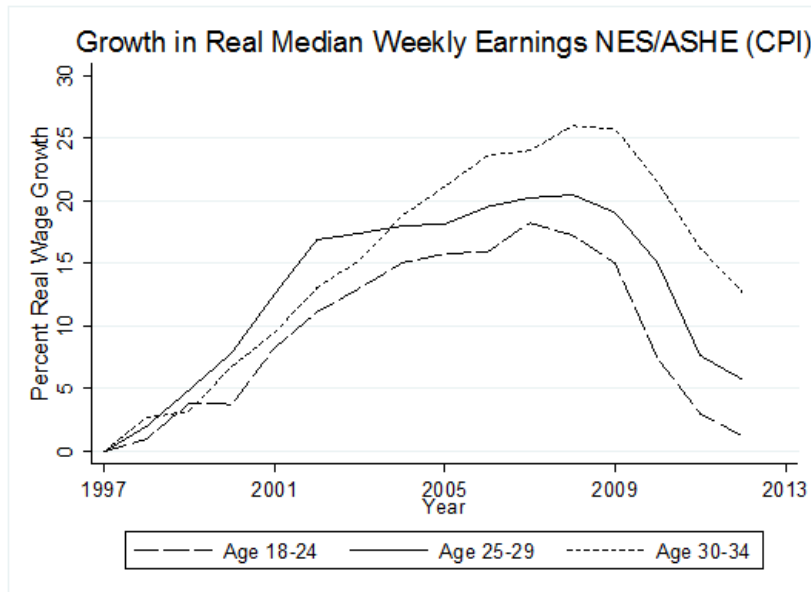




# Real Wage Trends 6 – By Gender



# Real Wage Trends 7 – By Age



## Real Wage Trends 8 – Percent Falls

ASHE % falls in median real weekly wages over 2008-2013.

All	-9
Men	-11
Women	-7
Young	-14

% falls across distribution.

10 <sup>th</sup>	-9
25 <sup>th</sup>	-10
75 <sup>th</sup>	-9
90 <sup>th</sup>	-10

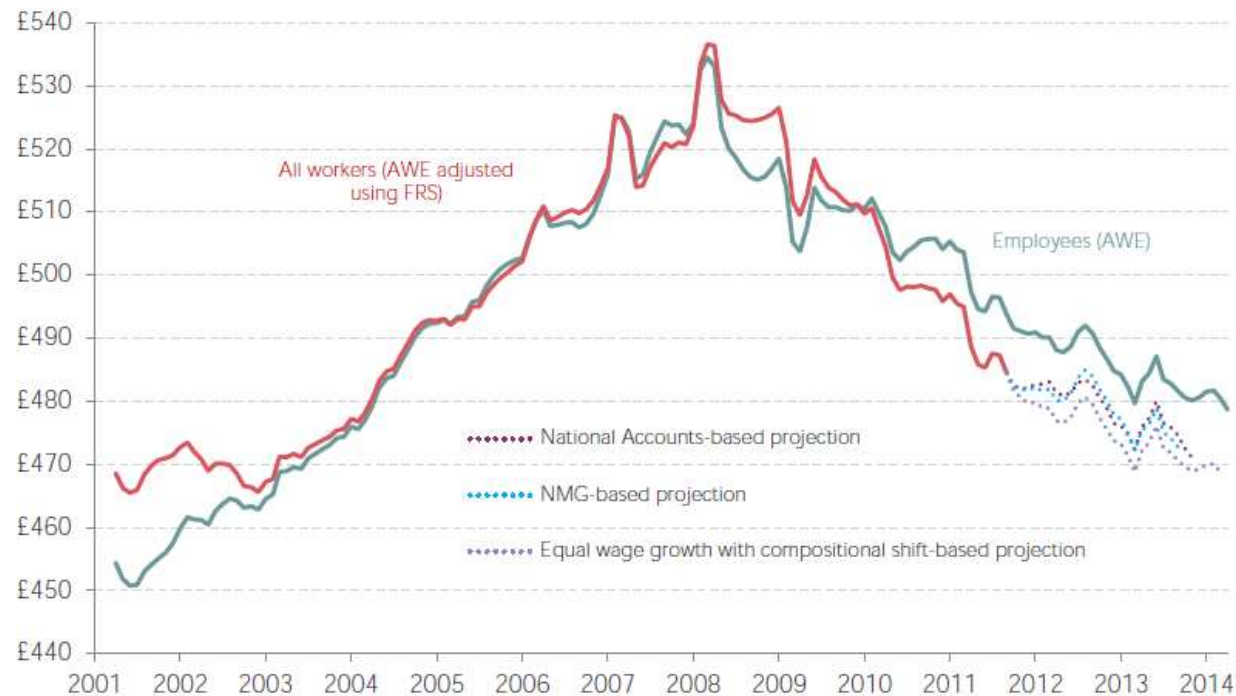
This is real wage falls. If calculate relative to 2 percent pa trend growth prior to early 2000s (in analogous way to lost output and productivity growth) more like 20 percent fall for All.

# Real Wage Trends 9 – Low Wage Self Employed

If do something to factor in wages of self employment (notoriously tricky), the picture gets even bleaker (Resolution Foundation report).

Figure 4:  
Estimated average weekly earnings of all workers

Average weekly earnings, total pay (CPI adjusted to April 2014 prices)



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

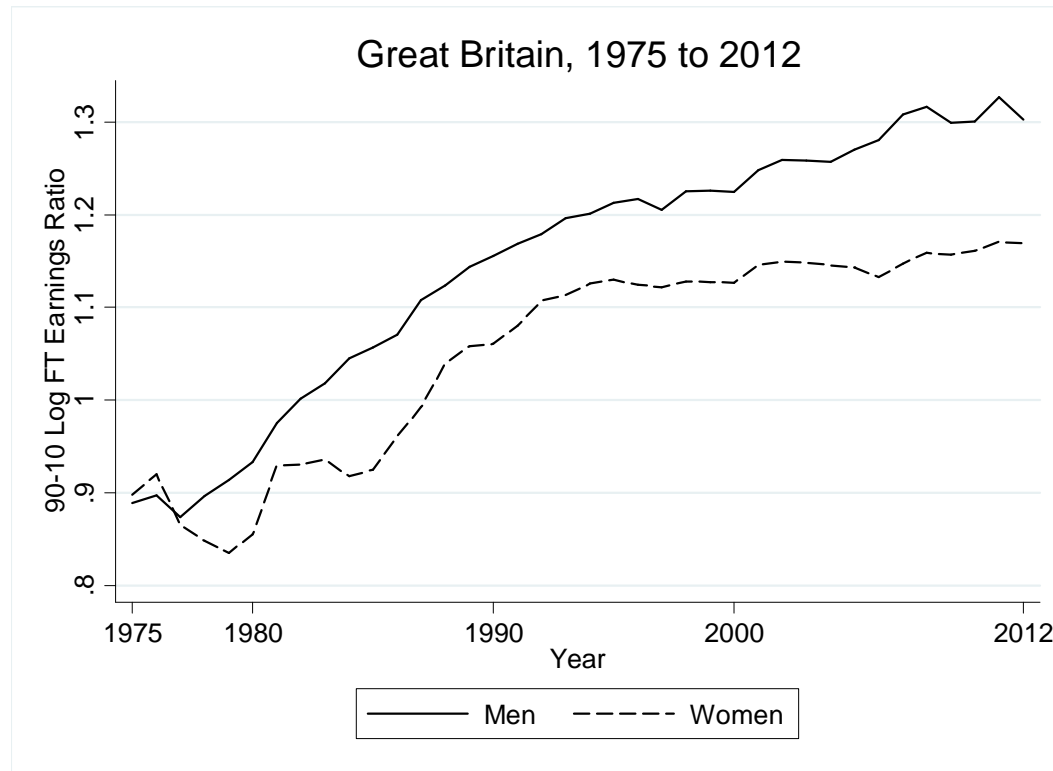
Notes: Data is averaged over three months

# Implications 1

There are a number of consequences of falling real wages:

- i) Rising wage inequality takes on a greater significance.
- ii) Negative real wage inflation raises questions of deflationary pressures at the macro level.
- iii) Despite noises being made about raising interest rates sooner than later (in part to choke off housing market), continually falling or stagnant real wages surely make this premature.
- iv) More fundamentally, have we moved to a new low wage growth equilibrium? If so, why?

# Implications 2 – Rising Wage Inequality



# Explanations 1

Three factors have been drivers of the 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 falls).
- ii) The extremely 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 are no longer keeping up with productivity gains made in the economy (the origin of this pre-dates the downturn).

# Explanations 2

---

## The Increased Sensitivity of Wages to 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

---



# Explanations 3

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

	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

## Explanations 4

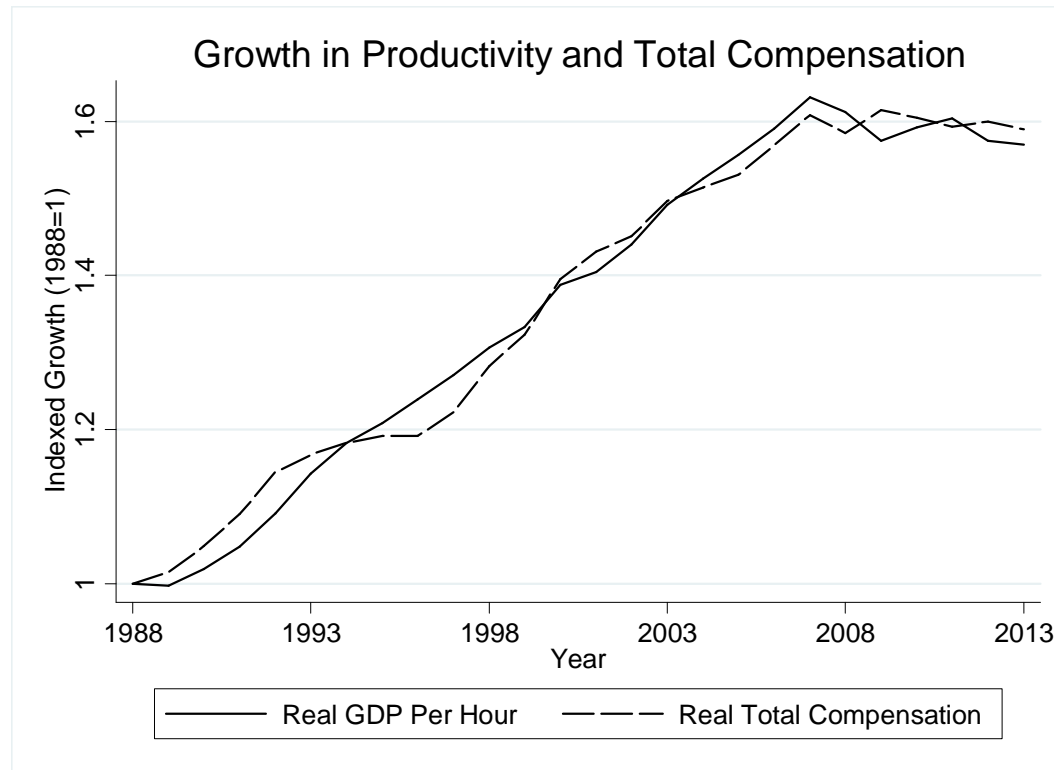
Question (answer yet to be determined) is whether the increased sensitivity is cyclical or reflects a structural shift.

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

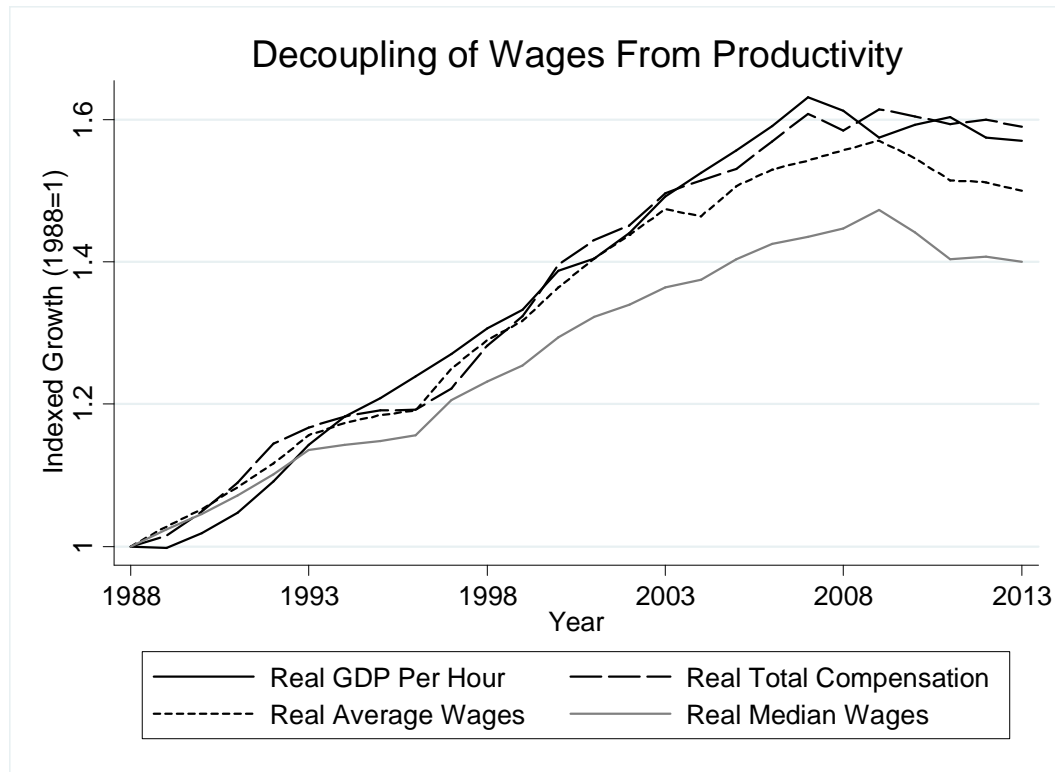
So does increased substitutability of the unemployed with low wage workers – driven by increase in ‘welfare conditionality’ and breaches are associated with sanctions, reductions in cash payments, which in turn have become more severe. At the same time has occurred the development of a system of tax 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.

# Productivity and Compensation

Labour Productivity and Annual Compensation, 1988 to 2013



# Decoupling of Wages



# Explanations 4

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).

# Prospects for Future Real Wage Growth 1

Lets begin with the forecasters.

They are mostly optimistic.

They have continually got it wrong on wages.

Even the better ones.

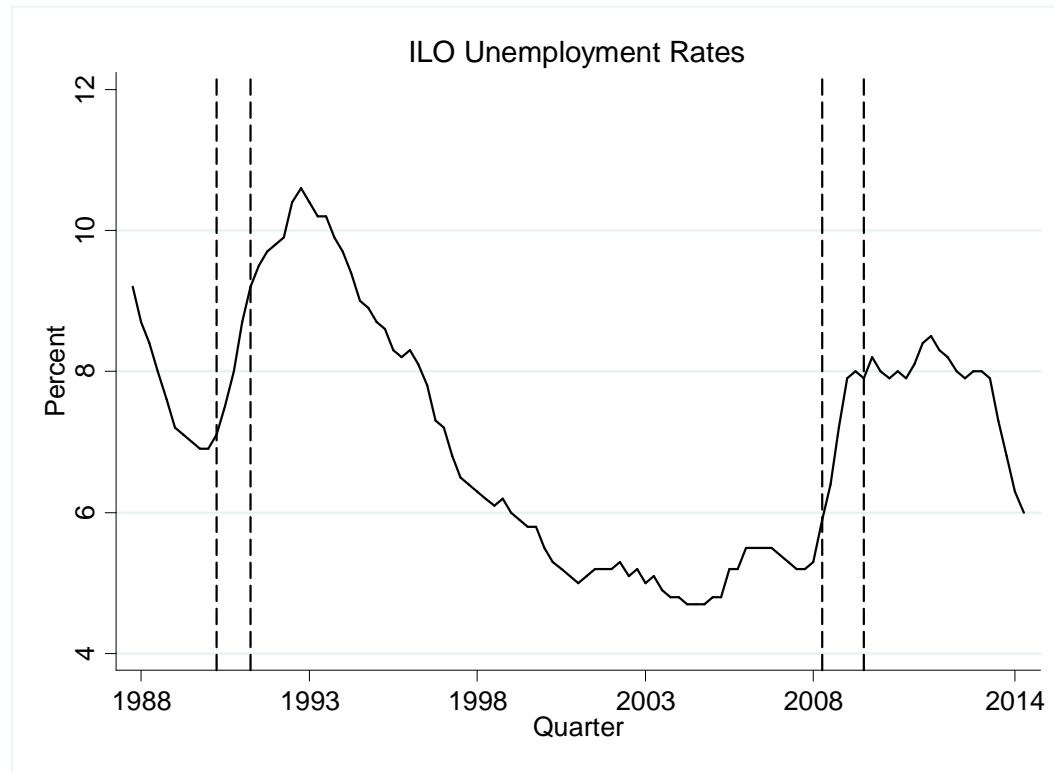
# Prospects for Future Real Wage Growth 3

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 4

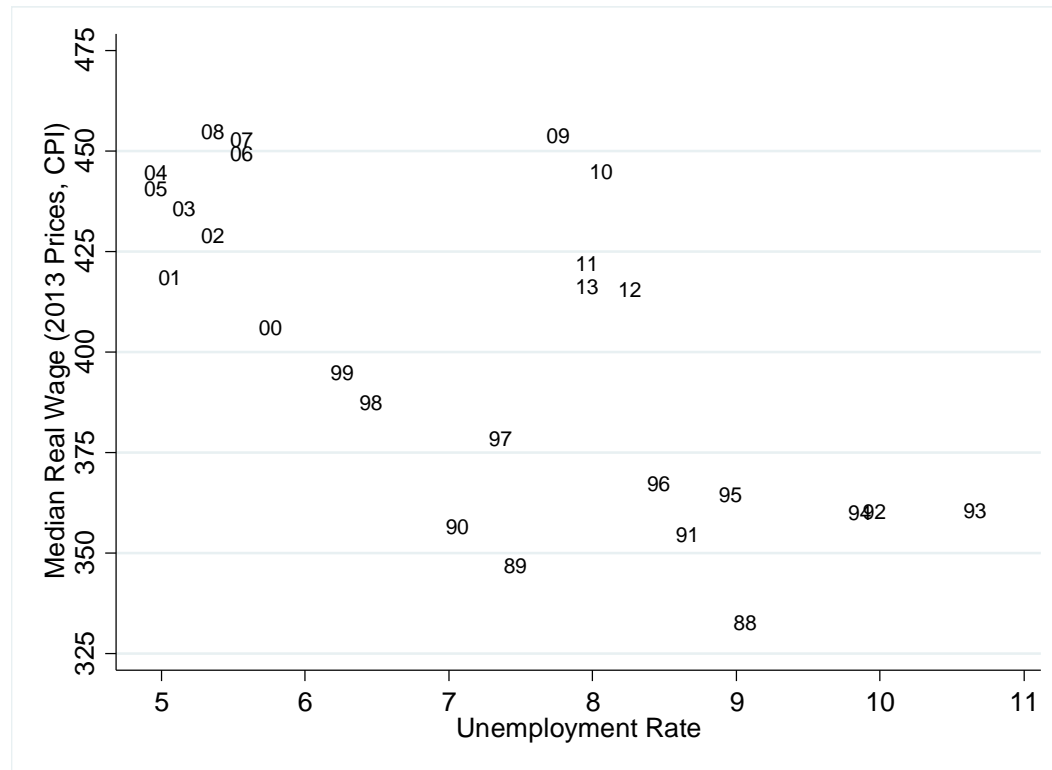
ILO Unemployment Rates, 1988-2014





# Prospects for Future Real Wage Growth 5

Median Real Wages and Unemployment, 1988 to 2013



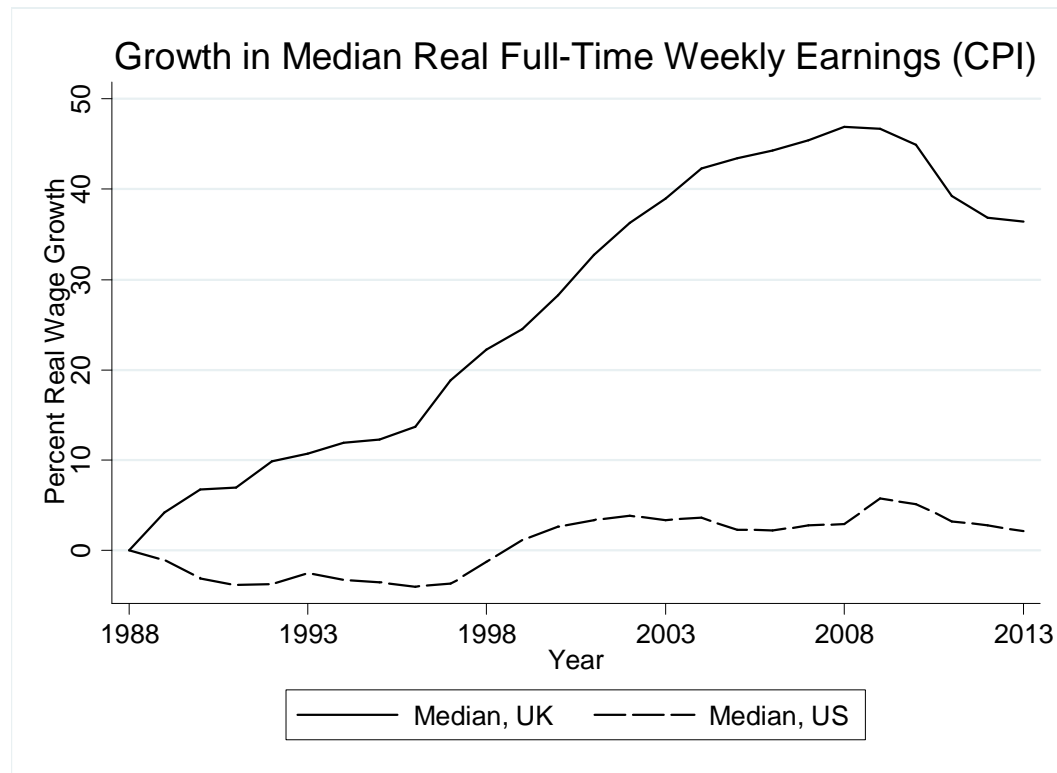
# **Prospects for Future Real Wage Growth 6 – There is More Slack Than the Unemployment Rate Suggests**

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 7 – 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 8

## – Historical Real Wage Falls

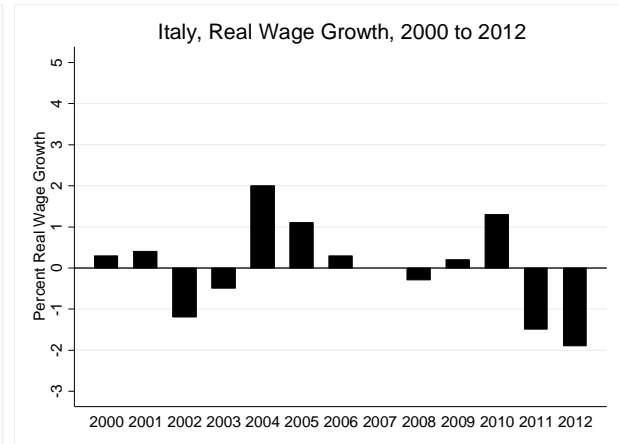
**Periods of Real Wage Falls Over Long Term, UK**

	<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>.

# Prospects for Future Real Wage Growth 9

## – Another Warning Sign?



# Prospects for Future Real Wage Growth 10 - Price Inflation

Finally, these cross-country patterns and the lack of inflationary pressure from wages does beg the question, why is price inflation higher in UK than in continental Europe and (until very recently) the US?

UK annual average CPI, 2008-2013: 3.1%

France annual average, 2008-13: 1.3%

Germany annual average, 2008-13: 1.4%

Italy annual average, 2008-13: 1.9%

US annual average CPI, 2008-13: 1.6%

More recent (annual to September 2014): UK 1.2%

[France 0.3%, Germany 0.9%, Italy -0.2%, US 1.7% (to August 2014)]

# Conclusions 1

Since 2008 median real wages have fallen by around 9 percent (with different measures and sources showing falls in the range of 4 to 11 percent). This (9 percent) equates to a fall of around £2000 for the typical (median) British worker.

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.

## 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 median real wages from productivity growth due to rising wage inequality; higher price inflation than international competitors.



## Conclusions 3

Real wage growth for the typical worker could reverse and start to grow if a recovery is strong, but even then getting back to the levels of the mid to late 2000s will require a considerable turnaround, and with the structural problems that have emerged (because of the wedge between compensation and average wage growth, and between average and median wage growth) it remains difficult to shy away from the bleak conclusion that low wage growth may be here for some time.

# Papers

Blanchflower, D. and S. Machin (2014a) Falling Real Wages, Vox EU, March.

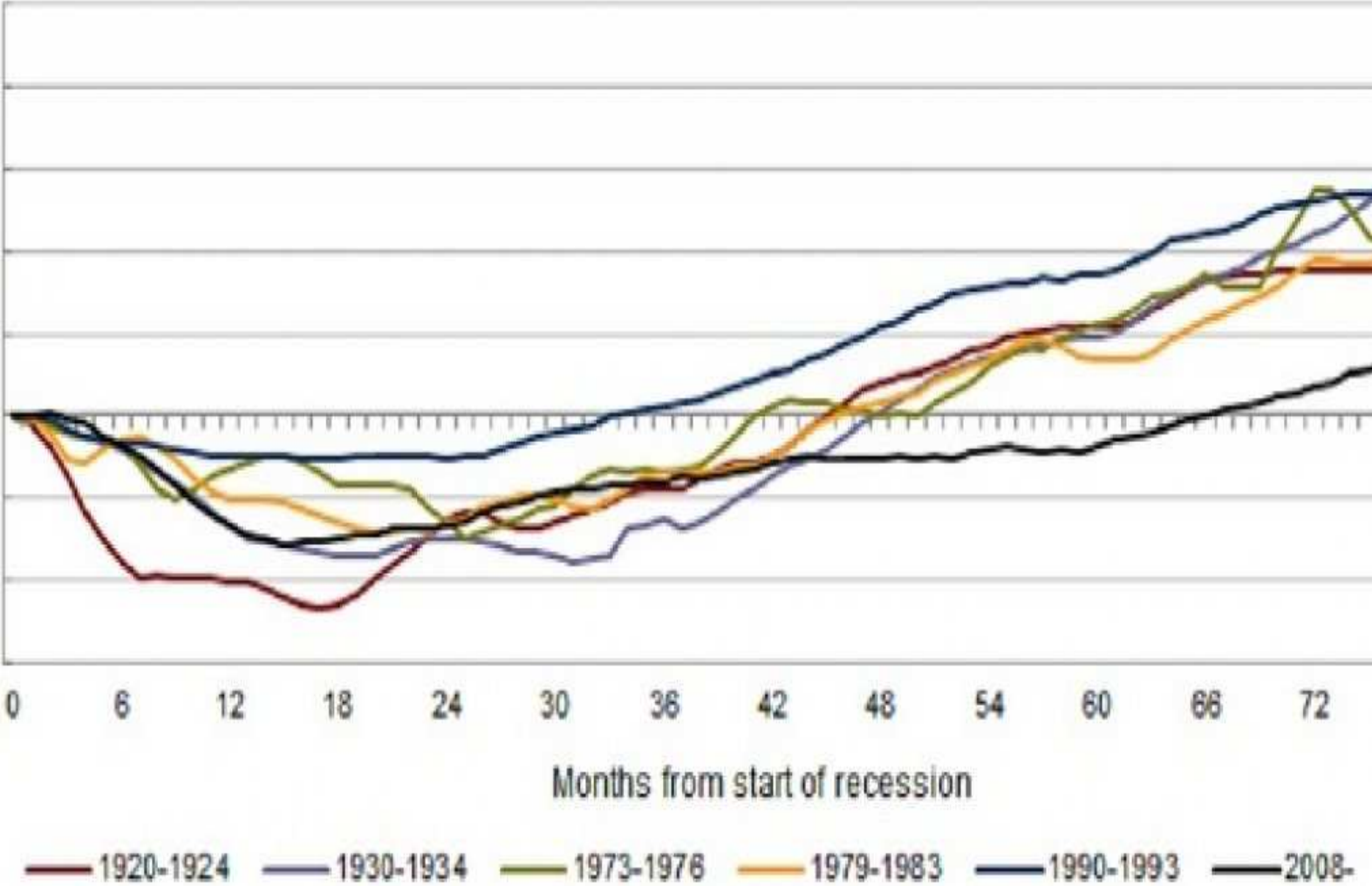
Blanchflower, D. and S. Machin (2014b) Falling Real Wages, Vox EU, October.

Gregg, P., S. Machin and M. Fernandez-Salgado (2014a) Real Wages and Unemployment in the Big Squeeze, Economic Journal, 124, 408-32.

Gregg, P., S. Machin and M. Fernandez-Salgado (2014b) The Squeeze On Real Wages - And What It Might Take To End It, National Institute Economic Review, 228, R3-16.

# Backup Slides

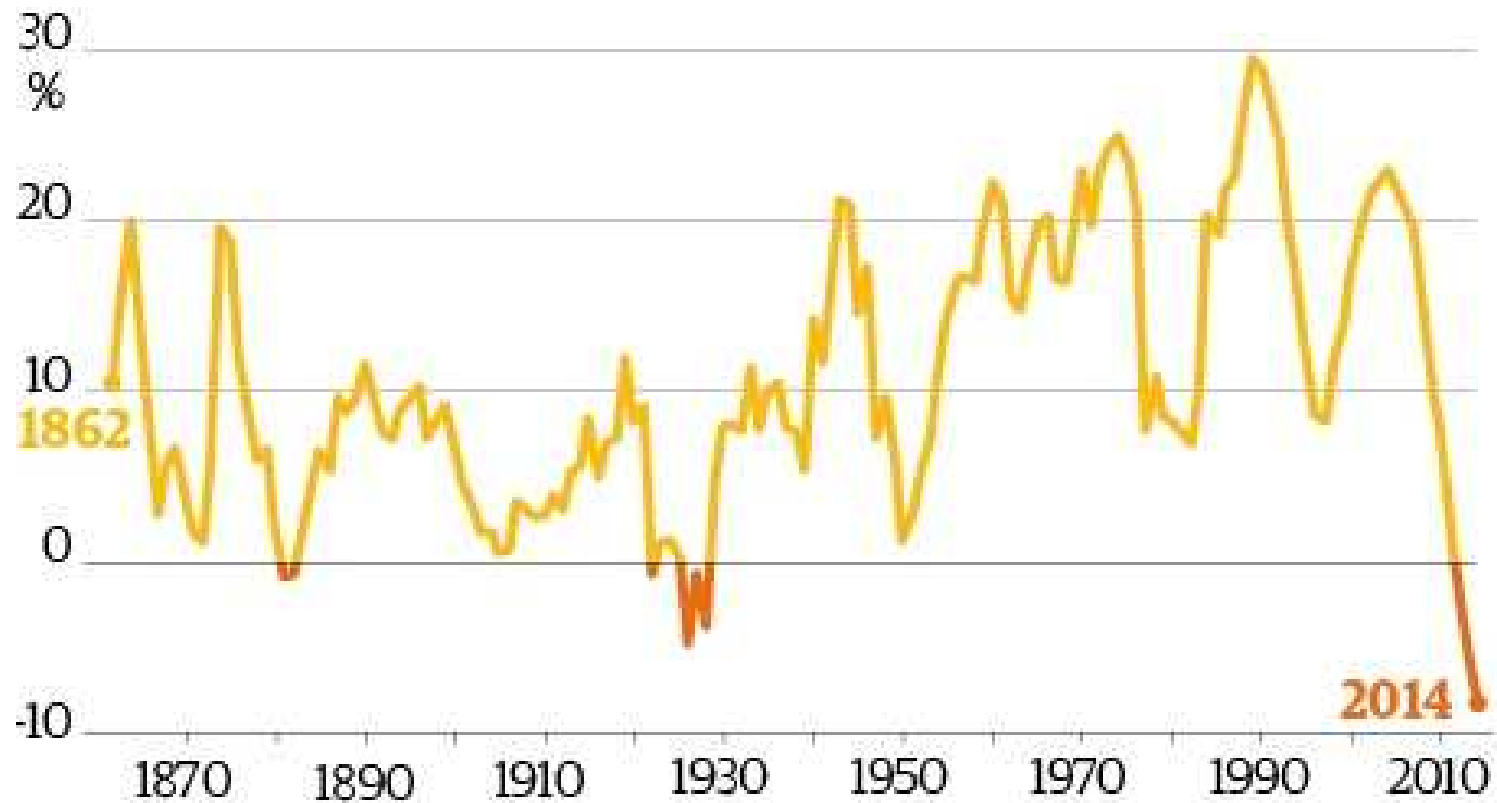
# Worst Recession ever? Cumulative GDP change from start of downturn



Source: NIESR, downloaded October 2014

# The longest real wage squeeze ever?

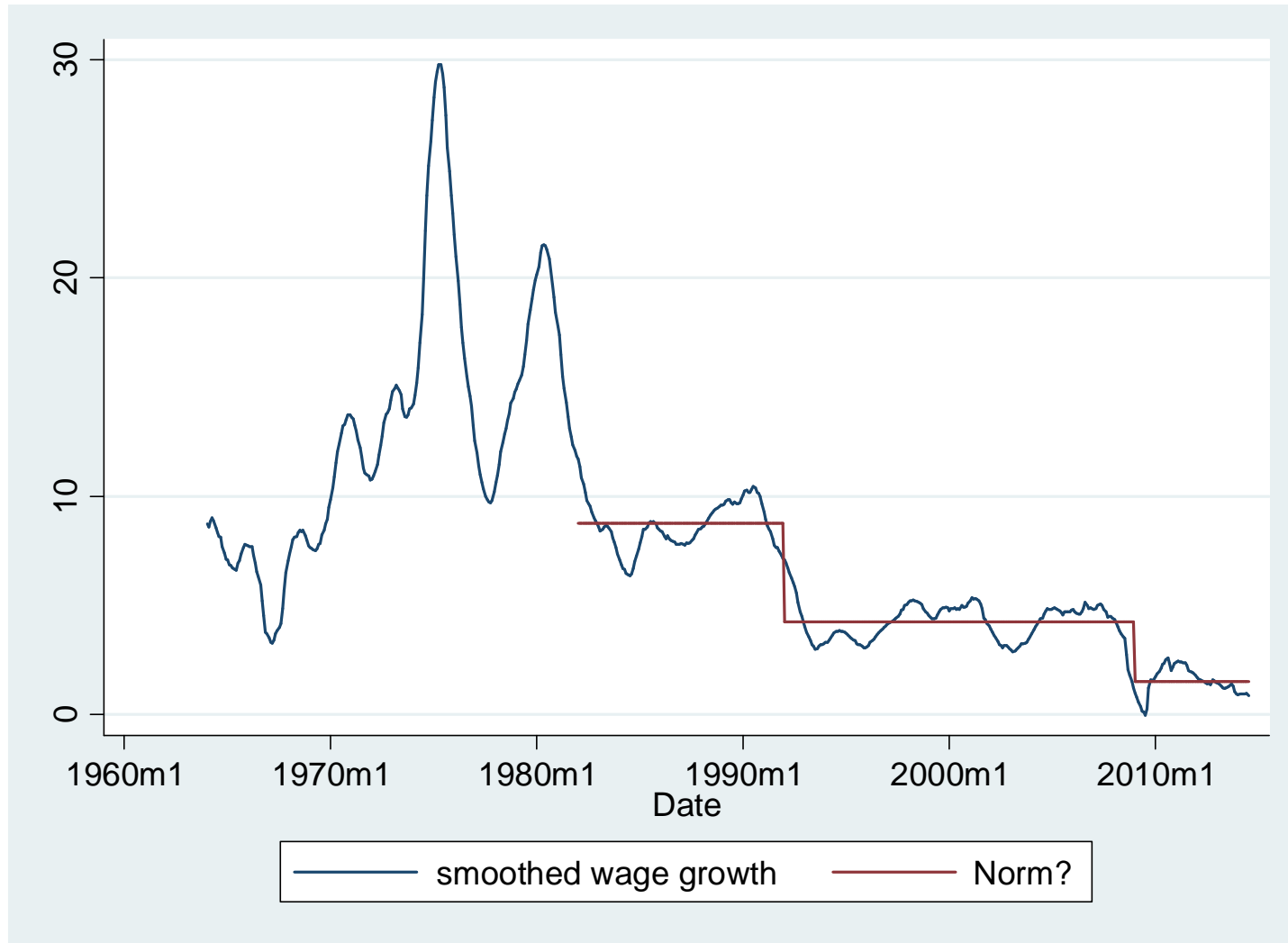
## UK real wages Change over previous seven years



OBSERVER GRAPHIC

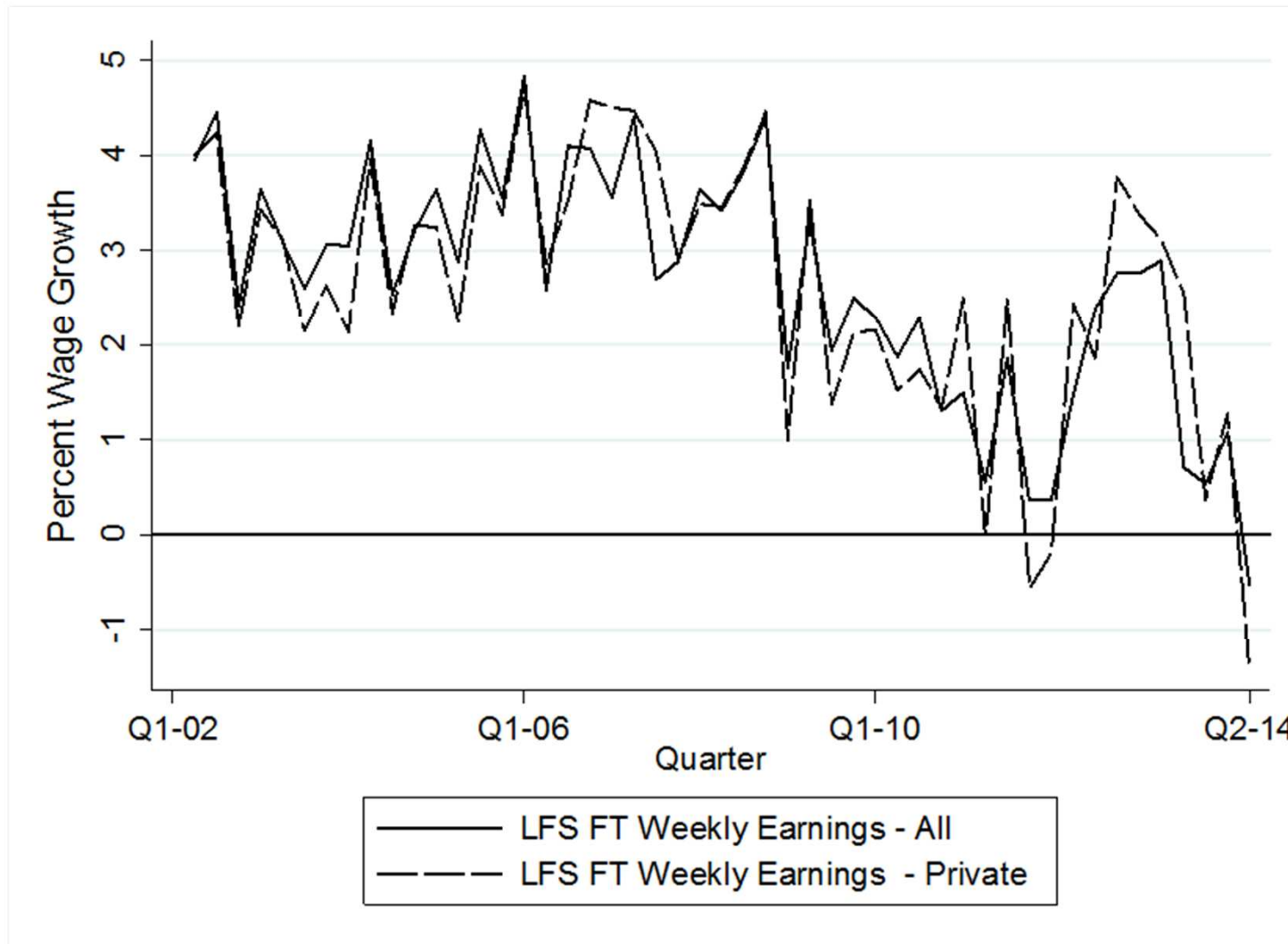
SOURCES: BANK OF ENGLAND, FT RESEARCH

# Nominal Annual Wage Growth (AWE), smoothed



Source: Manning (2014)

# LFS Annual Weekly Earnings Growth



Source: Blanchflower and Machin (2014)

# The UK jobs miracle?



Source: RF analysis of ONS, Labour Market Statistics



# Self-employment has played a major role in that resilience, though it *may* now have peaked

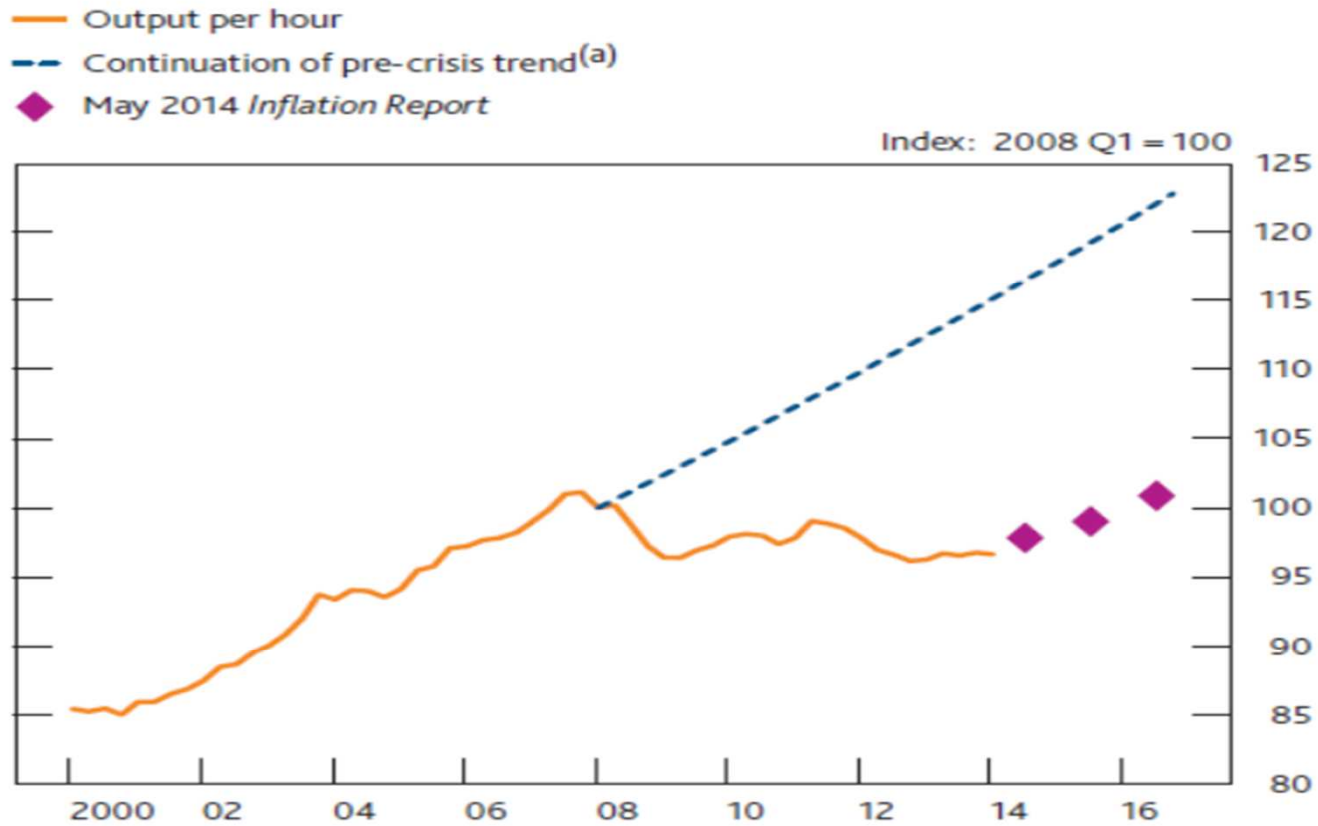


*The number of self-employed barely paused following the financial crisis and grew strongly even as the number of employees fell sharply*

*In total, self-employment has accounted for around two-thirds of the growth in employment since May 2008*

# The Productivity Puzzle

Chart 1 Whole-economy labour productivity per hour



Sources: ONS and Bank calculations.

(a) Pre-crisis trend growth is calculated between 1997 and 2008 Q1, and is projected forward from 2008 Q1.

**FIGURE 11: THE COLLAPSE OF REAL INVESTMENT,  
2008-2012 (2008Q2=100)**

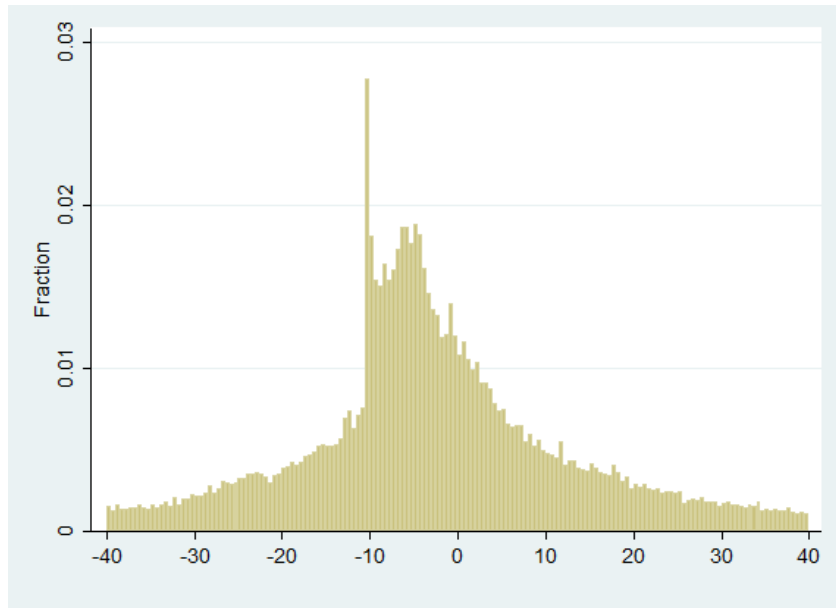


Source: ONS (August, 2013), GFCF chained volume 2010 reference year series NPQT

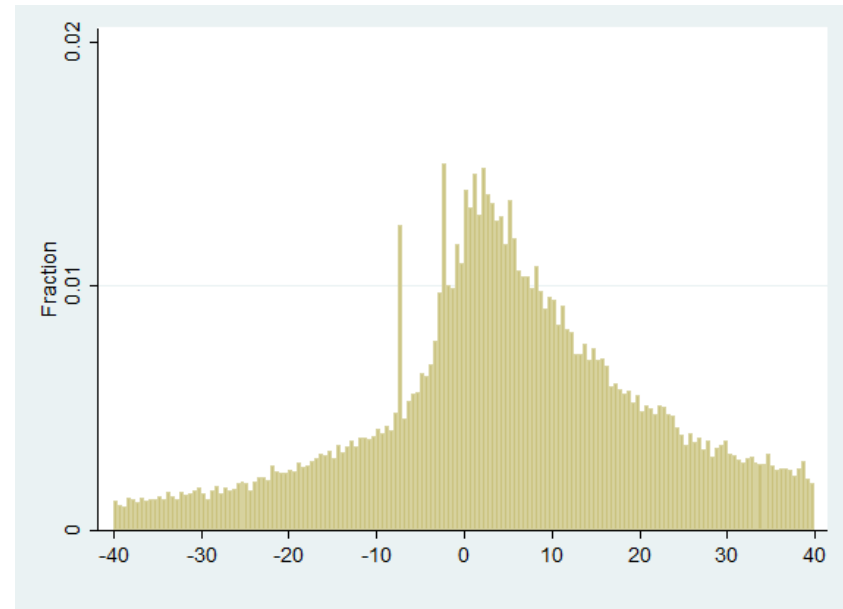
# Change in Individual Real Wages

Change in Individual Real Weekly Pay, ASHE 2005 to 2012

2009-2012



2005-2009



# Self Employment

Figure 1:  
Change in employment including and excluding the self-employed since 2008 peak

Change in employment since May 2008, thousands of workers



Source: Labour Force Survey, ONS

Notes: Both the 'all workers' and 'employees only' series include unpaid family workers and those on government employment and training schemes