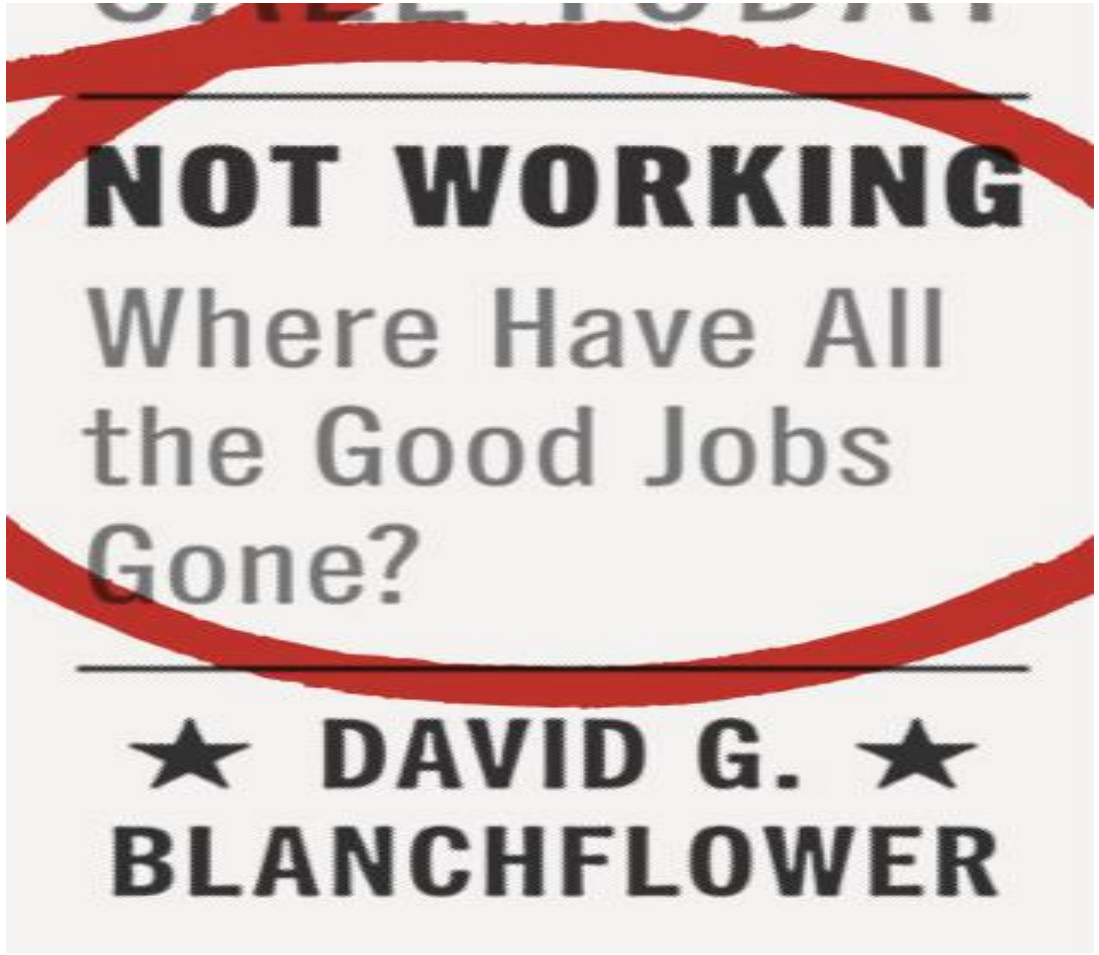
Full employment is a long way off



Professor Danny Blanchflower

Stirling, Dartmouth and Bloomberg

www.dartmouth.edu/~blnchflr & twitter @D_Blanchflower

My new book, an old book and a few relevant papers

- Princeton University Press, Not Working; Where Have All The Good Jobs Gone?, May 2019.
- With Andrew Oswald, ‘The rise of despair in modern America’, working paper
- With David Bell, 'Underemployment in Europe and the United States’, Industrial and Labor Relations Review, 2019.
- With David Bell, ‘Well-being of the overemployed and the underemployed and the rise in depression in the UK’ Journal of Economic Behavior and Organization, volume 161, May, pp. 180-196, 2019.
- With David Bell, 'The lack of wage growth and the falling NAIRU', National Institute Economic Review, No. 245, August, pp. R1-R16, 2018
- With David Bell, 'Underemployment and the Lack of Wage Pressure in the UK', National Institute Economic Review, No. 243, February, pp. R53-R61, 2018
- With Andrew T. Levin 'Labor Market Slack and Monetary Policy', working paper 2014.
- With Andrew J. Oswald 'Does High Home-Ownership Impair the Labor Market?' Peterson Institute Working Paper 13-3, May 2013.
- With Andrew Oswald, The Wage Curve, MIT Press, 1994

The long dragging conditions of semi-slump

"For it is a possibility that the duration of the slump may be much more prolonged than most people are expecting and much will be changed both in our ideas and in our methods before we emerge.

Not, of course the duration of the acute phase of the slump, but that of the long, dragging conditions of semi-slump, or at least sub-normal prosperity, which may be expected to succeed the acute phase".

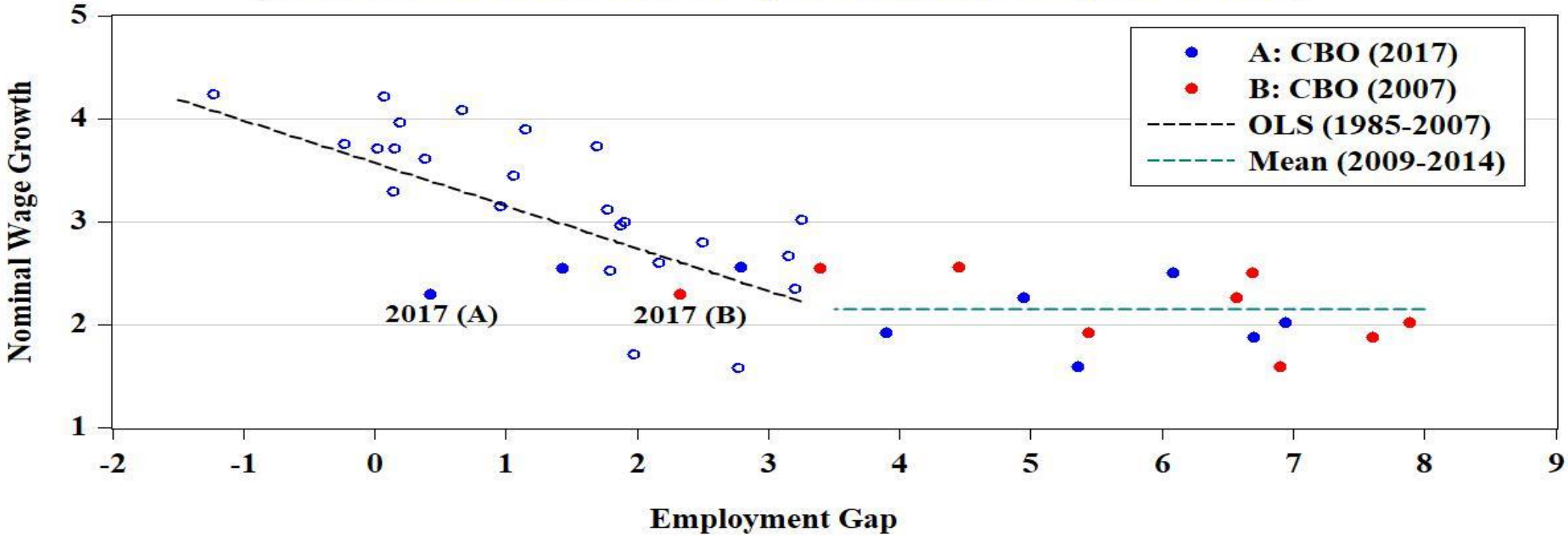
Keynes, J.M. (1931), 'An economic analysis of unemployment', in Unemployment as a World Problem, edited by Q. Wright and J.M. Keynes, University of Chicago Press.

Full-employment in a Free Society – William Beveridge, 1960 – "**full employment has been accomplished**"

- *"In 1944 as a guide to the amount of such temporary idleness as we might expect under full employment, I suggested a figure of 3%, of the total labour force idle at any time.*
- *Maynard Keynes, when he saw this figure, wrote to me that that there was no harm in aiming at 3%, but that he would be surprised if we got so low in practice.*
- *In fact during the 12 years 1948-1959 the average unemployment rate for Britain taking all industries together, has been not 3% but half of that, 1.55% in exact terms.*
- *Full employment is here. This is probably the single largest cause of British prosperity today."*

The Wage Curve

(Alternative Assessments of the Potential Labor Force)



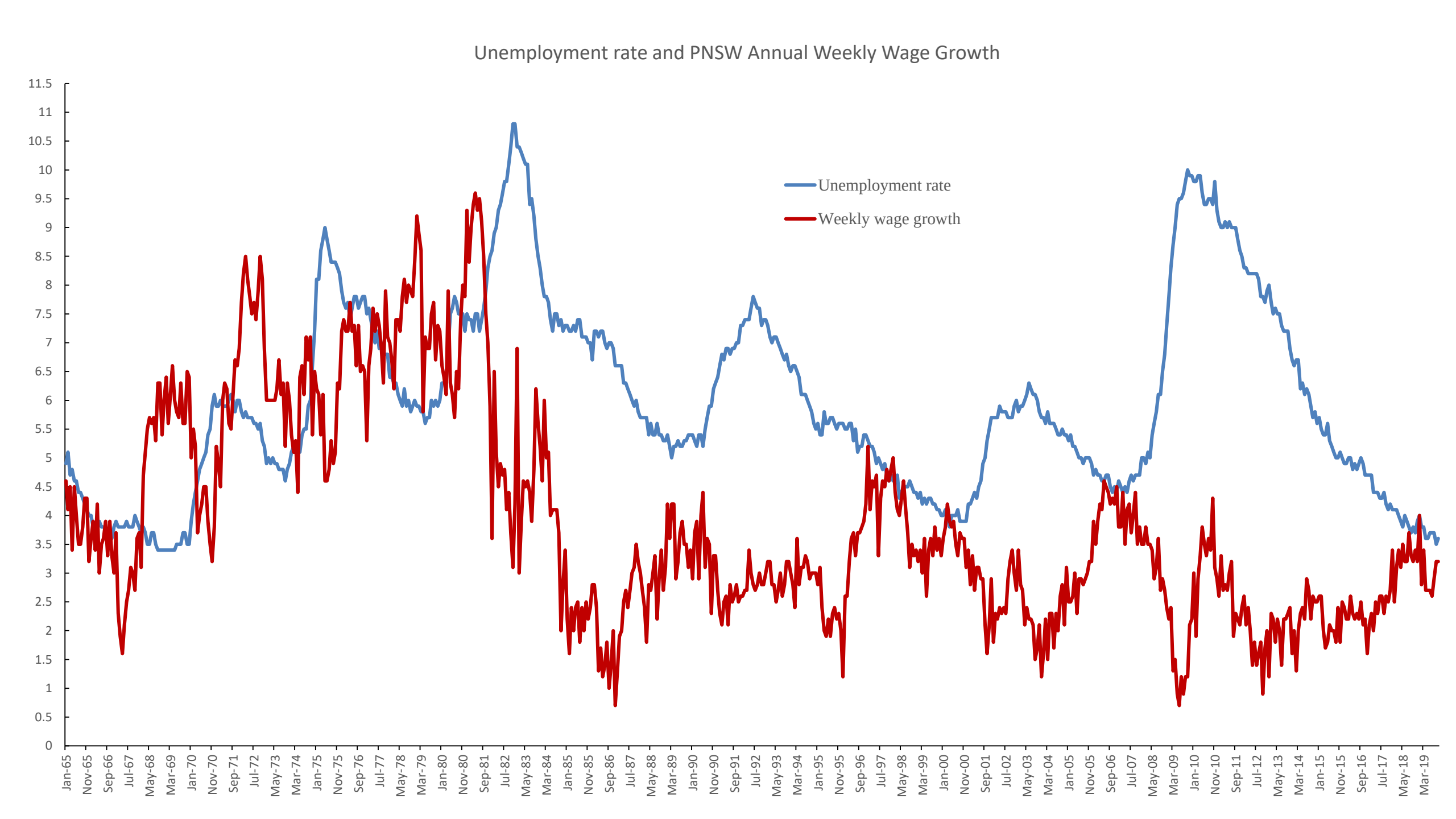
Note: This chart shows the relationship between the annual average employment gap (expressed as a percent of CBO's assessment of the potential labor force) and the 12-month percent change in average hourly earnings of production and nonsupervisory workers for each calendar year since 1985. The blue dots reflect the CBO (2017) assessment of the potential labor force, whereas the red dots reflect the assessment of CBO (2007), just prior to the last recession.

Fed Chair Jay Powell yesterday, December 11th 2019

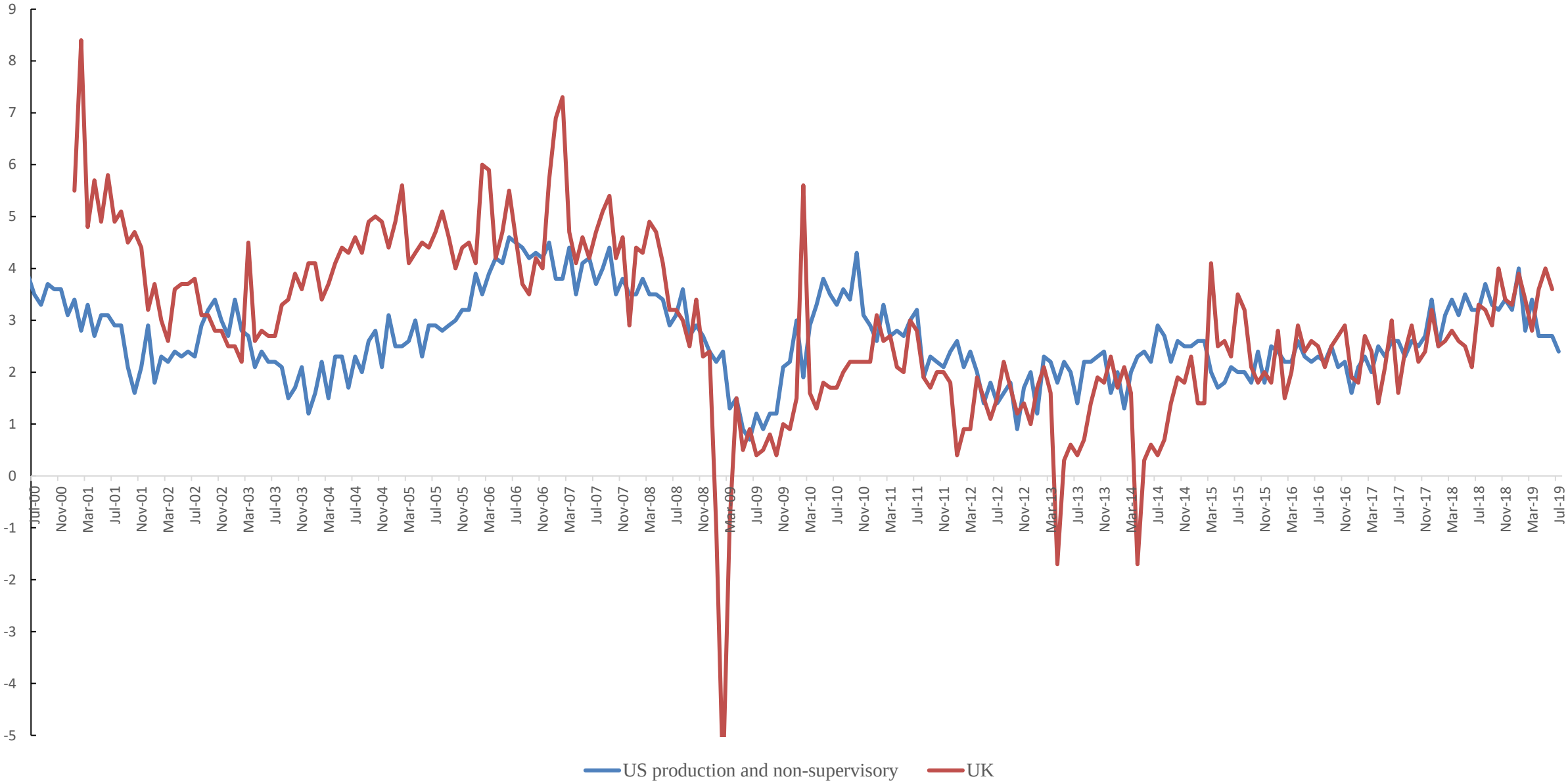
"Wages, really. There is so many other measures that suggest that the labor market is, I like to say labor market is strong, I don't want to say that it's tight.

Someone asked me a question about a hot labor market. That was in the Humphrey Hawkins hearings. The labor market is strong. I don't know that it's tight because you are not seeing wage increases, ultimately, *if it's tight those should be reflected in higher wage increases*.

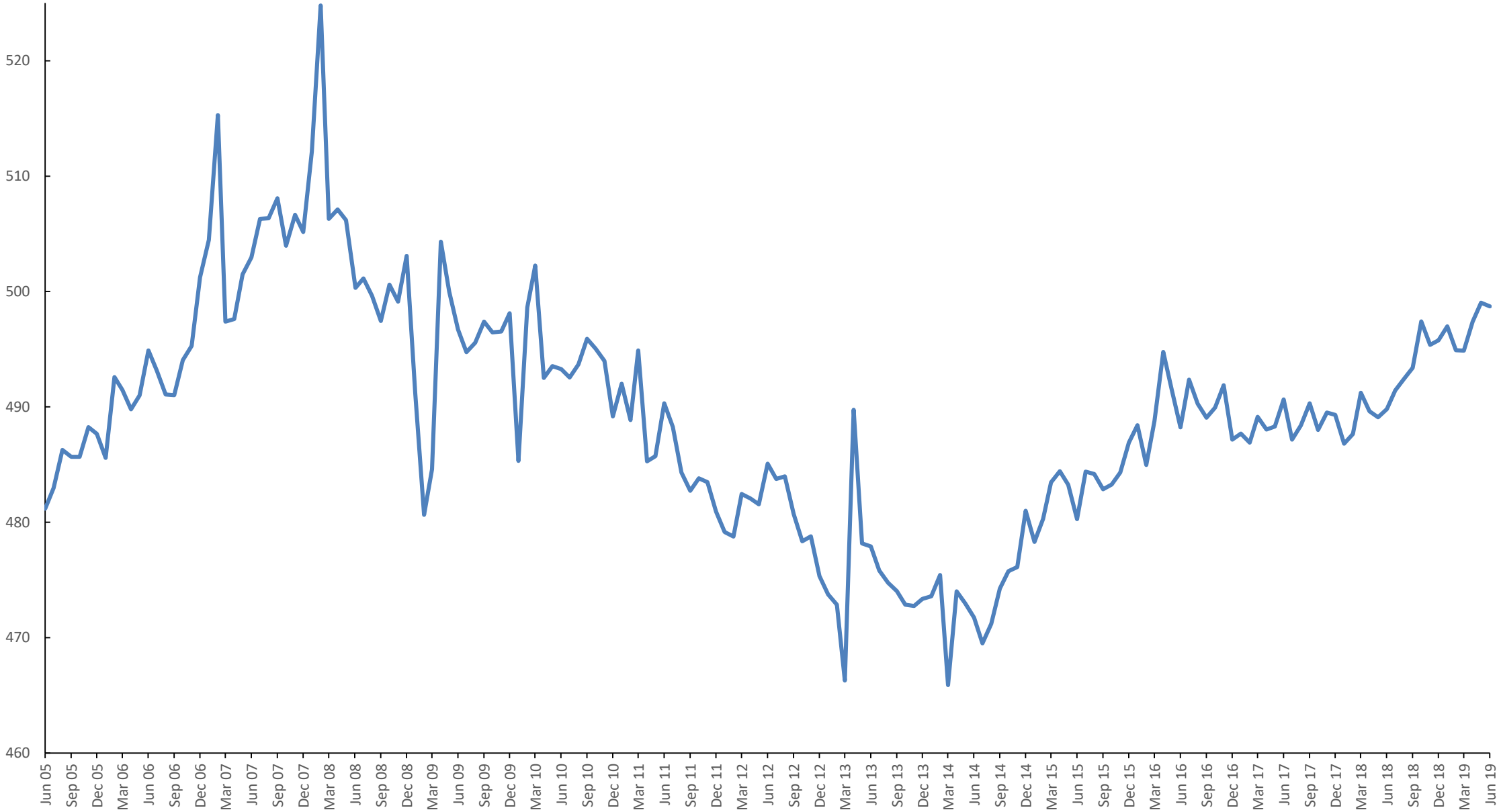
It does come down to that. We look at countless measures of labor market, labor utilization and there are so many. It's too many to count. But the one that is suggesting that, it's a healthy number, the 3.1 percent average hourly earnings number is a decent number, 3.7 percent for production supervisory workers is more healthy. *Ultimately though, we would like to see, to call it hot, you would want to see heat, you would want to see higher wages."*

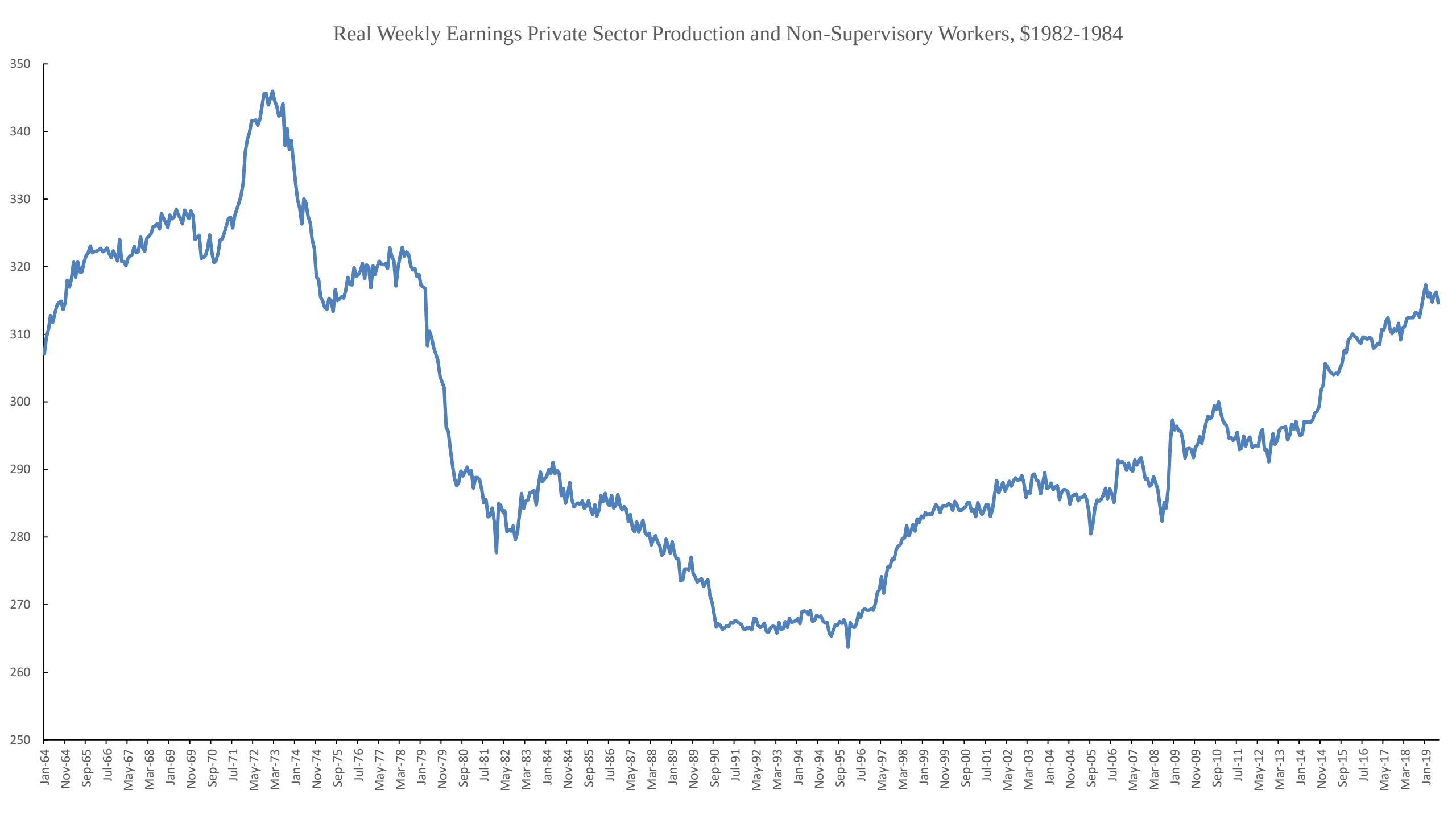

Unemployment rate and PNSW Annual Weekly Wage Growth
Unemployment rate
Weekly wage growth
11.5
11
10.5
10
9.5
9
8.5
8
7.5
7
6.5
6
5.5
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
Jan-65
Nov-65
Sep-66
Jul-67
May-68
Mar-69
Jan-70
Nov-70
Sep-71
Jul-72
May-73
Mar-74
Jan-75
Nov-75
Sep-76
Jul-77
May-78
Mar-79
Jan-80
Nov-80
Sep-81
Jul-82
May-83
Mar-84
Jan-85
Nov-85
Sep-86
Jul-87
May-88
Mar-89
Jan-90
Nov-90
Sep-91
Jul-92
May-93
Mar-94
Jan-95
Nov-95
Sep-96
Jul-97
May-98
Mar-99
Jan-00
Nov-00
Sep-01
Jul-02
May-03
Mar-04
Jan-05
Nov-05
Sep-06
Jul-07
May-08
Mar-09
Jan-10
Nov-10
Sep-11
Jul-12
May-13
Mar-14
Jan-15
Nov-15
Sep-16
Jul-17
May-18
Mar-19

US and UK weekly nominal wage growth



UK Real Weekly Earnings Total Pay at 2015 Constant Prices




Real Weekly Earnings Private Sector Production and Non-Supervisory Workers, $1982-1984
350
340
330
320
310
300
290
280
270
260
250
Jan-64
Nov-64
Sep-65
Jul-66
May-67
Mar-68
Jan-69
Nov-69
Sep-70
Jul-71
May-72
Mar-73
Jan-74
Nov-74
Sep-75
Jul-76
May-77
Mar-78
Jan-79
Nov-79
Sep-80
Jul-81
May-82
Mar-83
Jan-84
Nov-84
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Jan-09
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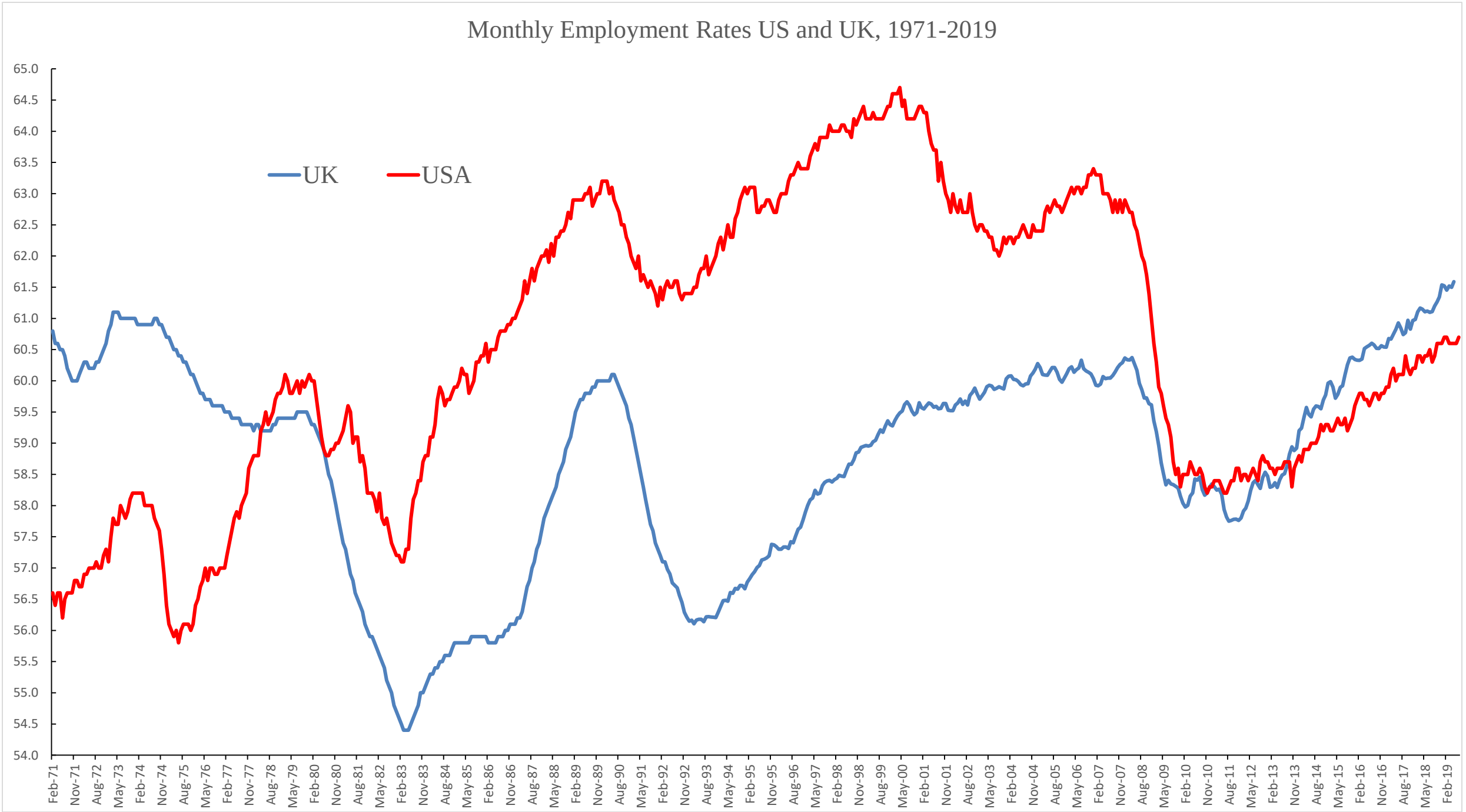
Sep-15
Jul-16
May-17
Mar-18
Jan-19


Monthly Employment Rates US and UK, 1971-2019
UK
USA
65.0
64.5
64.0
63.5
63.0
62.5
62.0
61.5
61.0
60.5
60.0
59.5
59.0
58.5
58.0
57.5
57.0
56.5
56.0
55.5
55.0
54.5
54.0
Feb-71
Nov-71
Aug-72
May-73
Feb-74
Nov-74
Aug-75
May-76
Feb-77
Nov-77
Aug-78
May-79
Feb-80
Nov-80
Aug-81
May-82
Feb-83
Nov-83
Aug-84
May-85
Feb-86
Nov-86
Aug-87
May-88
Feb-89
Nov-89
Aug-90
May-91
Feb-92
Nov-92
Aug-93
May-94
Feb-95
Nov-95
Aug-96
May-97
Feb-98
Nov-98
Aug-99
May-00
Feb-01
Nov-01
Aug-02
May-03
Feb-04
Nov-04
Aug-05
May-06
Feb-07
Nov-07
Aug-08
May-09
Feb-10
Nov-10
Aug-11
May-12
Feb-13
Nov-13
Aug-14
May-15
Feb-16
Nov-16
Aug-17
May-18
Feb-19

Unemployment Rates %

	2008	2018
Australia	4.2	5.3
Canada	6.1	5.8
France	7.1	9.1
Germany	7.5	3.4
Greece	7.8	19.3
Ireland	6.8	5.7
Italy	6.7	10.6
Japan	4.0	2.4
United Kingdom	5.6	4.0
United States	5.8	3.9

Labor Market Rates

	Employment rates		15-64 LFPR	
	2008	2018	2008	2018
Australia	73.2	73.8	76.5	78.0
Canada	73.5	73.8	78.4	78.4
France	64.9	65.4	69.9	72.3
Germany	70.1	75.9	75.9	78.7
Greece	61.4	54.9	66.7	68.2
Ireland	59.8	68.7	75.0	73.0
Italy	58.7	58.5	62.9	65.6
Japan	70.9	76.9	73.8	78.9
United Kingdom	71.5	74.7	76.8	78.3
United States	70.9	70.7	75.3	73.6

Underemployment rates U7 = PT wants FT/employment

	2008	2013	2018
Belgium	0.8	3.3	3.5
Cyprus	2.1	6.4	5.4
Finland	2.7	3.0	3.8
France (metropolitan)	4.5	5.5	5.1
Germany	6.0	4.3	2.9
Greece	2.0	4.5	5.3
Italy	1.6	2.5	2.6
Netherlands	1.1	6.7	4.3
Norway	3.0	2.9	2.7
Portugal	1.8	5.2	3.5
Spain	3.6	6.8	5.6
Sweden	4.5	5.0	3.3
Switzerland	5.8	6.3	7.2
United Kingdom	4.2	6.2	4.4

Annual Average Wage Changes 2000-2016 (annual % changes)

	Nominal		Real	
	2000-2007	2008-2016	2000-2007	2008-2016
Australia	4.2	2.9	1.3	0.6
Canada	3.5	2.6	1.7	1.2
France	3.0	1.7	1.1	1.0
Germany	1.6	2.3	0.2	1.1
Greece	5.7	-1.7	2.6	-2.2
Ireland	5.9	1.2	2.4	1.2
Italy	3.1	1.2	0.4	-0.1
Japan	-0.8	-0.2	-0.1	0.0
United Kingdom	4.1	1.7	2.7	-0.3
United States	3.8	2.2	1.5	0.7

Table 3.2. Twenty Three Successive MPC Wage Forecasts, 2014–20 (%)

	2014	2015	2016	2017	2018	2019	2020	2021
2014 Q1	2¾	3¾	3¾					
2014 Q2	2½	3½	3¾					
2014 Q3	1¼	3¼	4					
2014 Q4	1¼	3¼	3¾	3¾				
2015 Q1		3½	4	4				
2015 Q2		2½	4	4				
2015 Q3		3	3¾	4½				
2015 Q4		2½	3¾	4	4¼			
2016 Q1			3	3¾	4¼			
2016 Q2			3	3¾	4			
2016 Q3			2¾	3	3½			
2016 Q4			2½	2¾	3¾	3¾		
2017 Q1				3	3¾	3¼		
2017 Q2				2	3½	3¾		
2017 Q3				2	3	3¼		
2017 Q4				2¼	3	3¼	3¼	
2018 Q1				2½	3	3¼	3½	
2018 Q2					2¾	3¼	3½	
2018 Q3					2½	3¼	3½	
2018 Q4					3½	3	3¼	
2019 Q1					3½	3	3¼	3¾
2019 Q2						3	3½	3¾
2019 Q3						3	3¼	4
Outcome	1.6	2.4	2.4	2.3	2.8	3.6 (Jan-Aug ‘19)		

The economics of walking about - Federal Reserve Beige Book, October, 2019

Wages rose moderately in most Districts

Boston

Labor markets remained tight,,. Signs of slowing have become more widespread in recent weeks

New York

While businesses generally report that wage growth has remained moderate

Philadelphia

Wage growth continued at a moderate pace

Cleveland

Wages grew modestly on the whole in the Fourth District.

Richmond

Wages in-creased moderately

Atlanta

Annual wage increases, on average, remained in the 3-4 percent range

Chicago

Wages increased slightly overall.

St. Louis

Wages have grown moderately since the previous re- port

Minneapolis

Wage pressures were *moderate* overall

Kansas

Wages grew modestly

Dallas

Wage pressures continued but retreated slightly to more average levels.

San Francisco

Wages continued to rise moderately across sectors

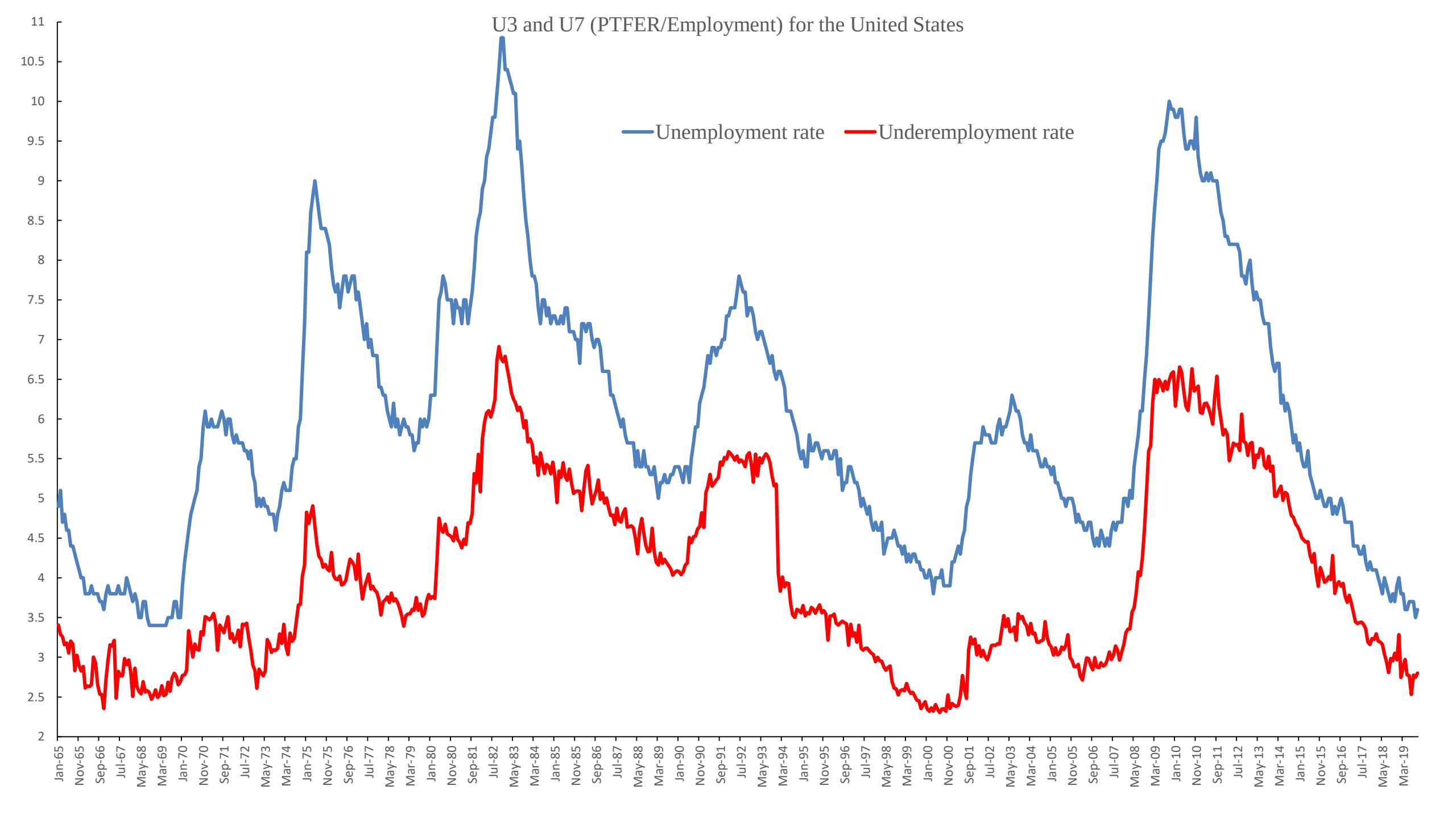
Why has wage growth been weak?

- GR exposed underlying economic weaknesses and displayed to the populace the possibility of catastrophic declines in house prices and pension pots.
- Globalization has weakened worker's bargaining power.
- Migrant flows have put downward pressure on wages and greased the wheels of the labor market as their presence increased mobility. In UK since July 2004 2.7 million from the A8* have registered for NINOs. Since January 2014, 900,000 from the A2** have registered for NINOs. They have lowered the NAIRU
- Central banks have overestimated the NAIRU, which has fallen. Raising rates by the Fed in 2017 and 2018 was a mistake.
- Labor market slack remains elevated especially from underemployment.
- Economies are slowing around the world – Germany, Italy, France and China

*A8 =Estonia; Latvia; Lithuania, Slovenia, Slovakia; Czech Republic; Hungary; Czech Republic and Poland. **A2= Bulgaria and Romania

Underemployment is the new measure of labor market slack

- Large numbers of part-time workers around the world, both those who choose to be part-time and those who are there involuntarily and would prefer a full-time job report they want more hours.
- When recession hit in most countries the number of hours of those who said they wanted more hours, rose sharply and there was a fall in the number of hours that full-timers wanted their hours reduced by.
- Even though the unemployment rate has returned to its pre-recession levels in many advanced countries, underemployment in most has not.
- Underemployment replaces unemployment as the main influence on wages in the years since the Great Recession. This largely explains the lack of wage pressure and why central banks have been wrong.
- U7 (PTFER/employment) fits monthly CPI and PNSW weekly wage growth data post 2008 better than U3


U3 and U7 (PTFER/Employment) for the United States
Unemployment rate
Underemployment rate
11
10.5
10
9.5
9
8.5
8
7.5
7
6.5
6
5.5
5
4.5
4
3.5
3
2.5
2
Jan-65
Nov-65
Sep-66
Jul-67
May-68
Mar-69
Jan-70
Nov-70
Sep-71
Jul-72
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Sep-76
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May-08
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Nov-10
Sep-11
Jul-12
May-13
Mar-14
Jan-15
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May-18
Mar-19

Bell/Blanchflower Index

- . We construct an *overhrs* (*undhrs*) variable for those who say they want less (more) hours at the going wage rate from the LFS

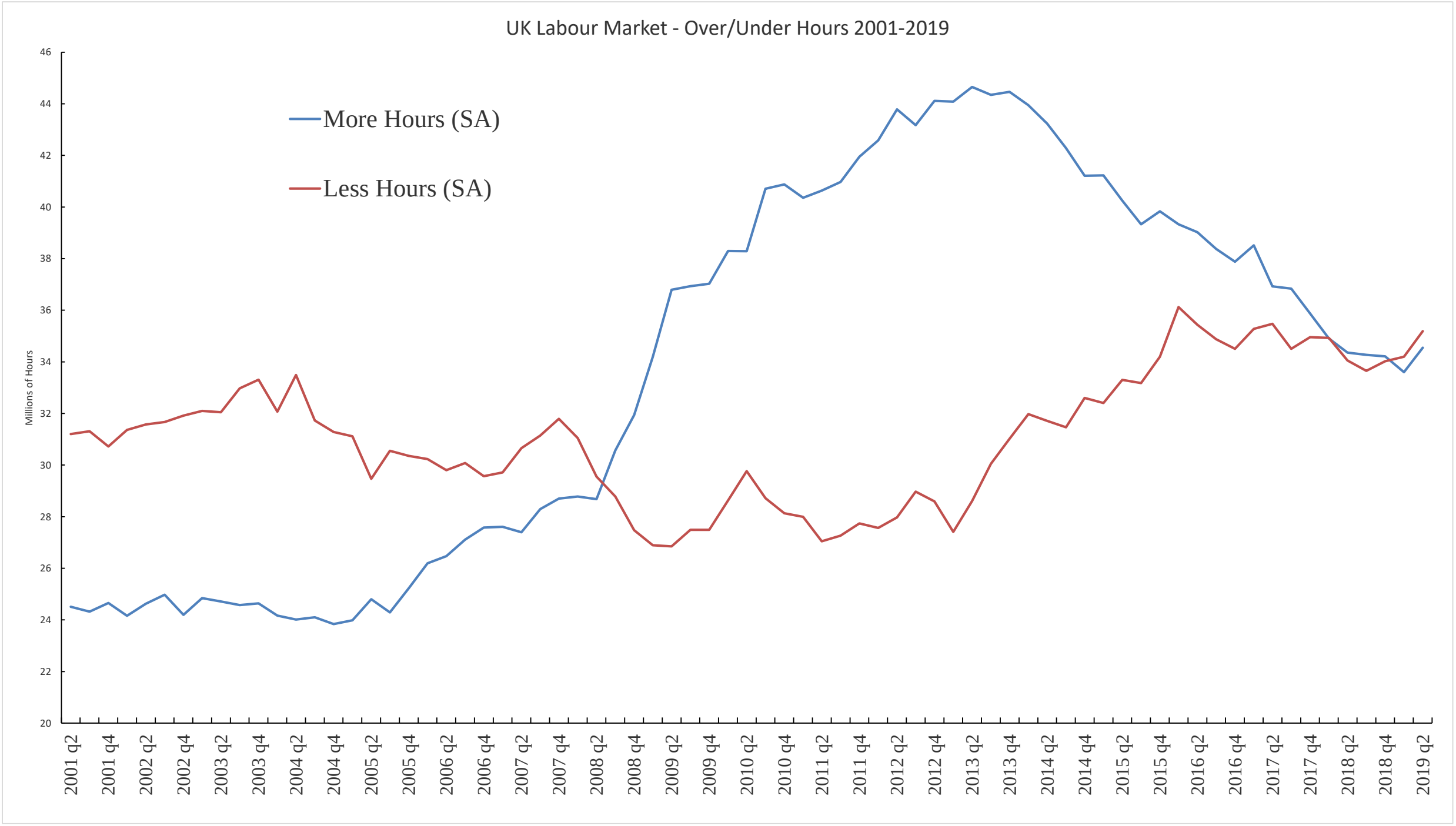
- Those who wish to increase (decrease) their hours have *undhrs (overhrs)* set to zero. If individuals express no preference to change their hours, both variables are set to zero, which seems non-controversial.

- Questions over hours preferences are asked of all workers, not just of those who are PTWFT.

- This potentially matters because the data suggests that less than a third of aggregate desired increases in hours come from those who are PTWFT.

- In the US, only PTFER is available from the Current Population Survey, so it is not possible to measure desired increases or decreases in hours, and therefore impossible to assess the contribution of PETR to aggregate changes in desired hours.

- We have used these nationally representative data to construct an underemployment rate each quarter from 2000-2016 for 26 European countries and quarterly for the UK.


UK Labour Market - Over/Under Hours 2001-2019
More Hours (SA)
Less Hours (SA)
Millions of Hours
46
44
42
40
38
36
34
32
30
28
26
24
22
20
2001 q2
2001 q4
2002 q2
2002 q4
2003 q2
2003 q4
2004 q2
2004 q4
2005 q2
2005 q4
2006 q2
2006 q4
2007 q2
2007 q4
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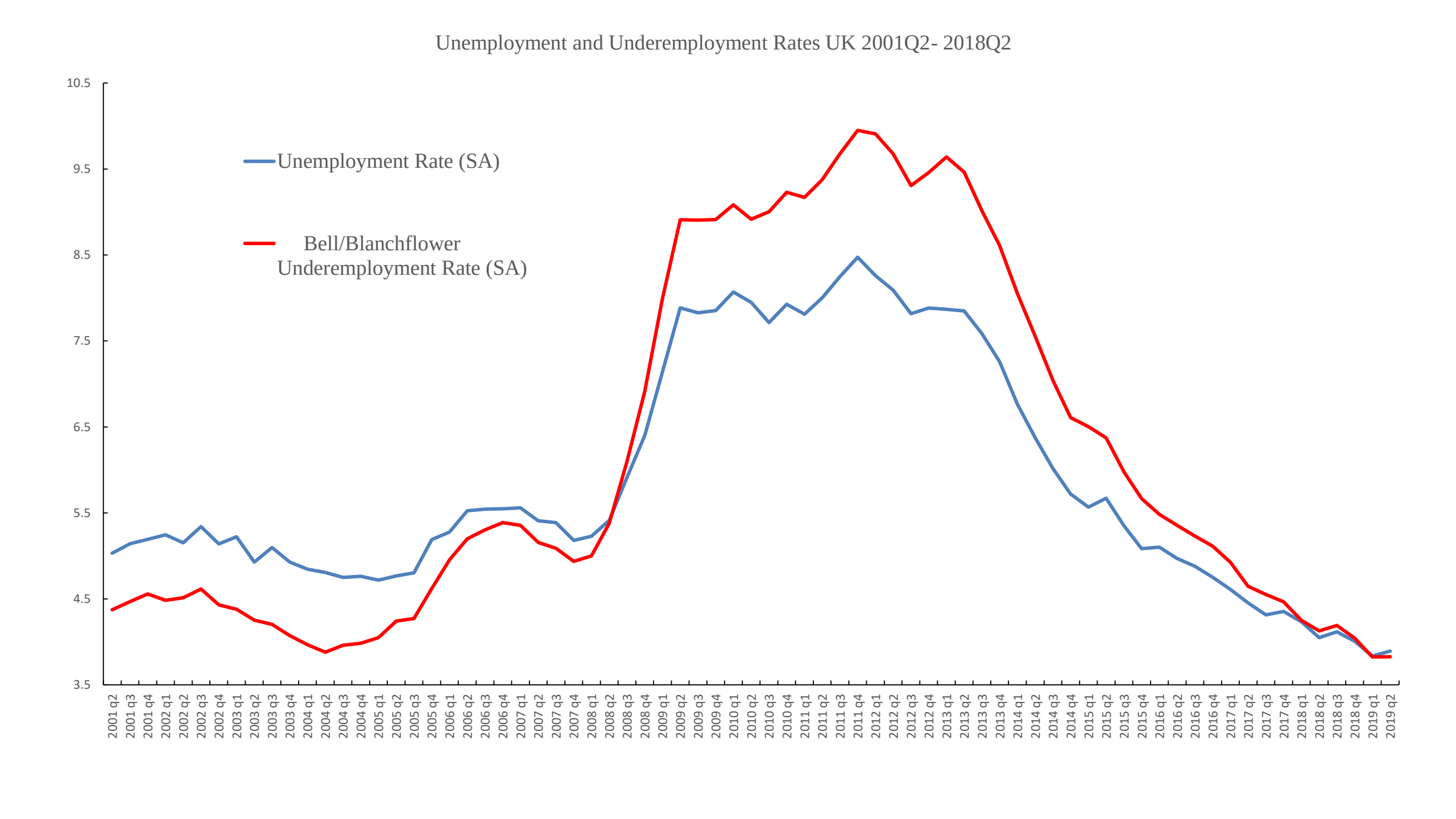
2018 q4
2019 q2


Unemployment and Underemployment Rates UK 2001Q2- 2018Q2
Unemployment Rate (SA)
Bell/Blanchflower Underemployment Rate (SA)
10.5
9.5
8.5
7.5
6.5
5.5
4.5
3.5
2001 q2
2001 q3
2001 q4
2002 q1
2002 q2
2002 q3
2002 q4
2003 q1
2003 q2
2003 q3
2003 q4
2004 q1
2004 q2
2004 q3
2004 q4
2005 q1
2005 q2
2005 q3
2005 q4
2006 q1
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2016 q1
2016 q2
2016 q3
2016 q4
2017 q1
2017 q2
2017 q3
2017 q4
2018 q1
2018 q2
2018 q3
2018 q4
2019 q1
2019 q2

Table 1: Share of excess hours by European country (%)

	2008			2016		
	Voluntary	Involuntary	Full-timee	Voluntary.	Involuntary	Full-time
Austria	110	55	-65	64	34	1
Belgium	25	33	43	37	21	43
Denmark	77	45	-21	158	92	-151
Finland	14	33	53	15	39	47
France	11	21	68	12	27	61
Germany	27	70	2	49	38	13
Greece	36	115	-51	13	70	17
Ireland	18	13	69	20	32	48
Italy	22	152	-74	5	99	-4
Netherlands	237	58	-195	280	167	-347
Norway	-36	47	89	-3	25	78
Poland	40	38	22	19	27	54
Portugal	8	23	69	11	20	70
Spain	24	74	2	10	91	-1
Switzerland	-8	-8	117	-1	-10	110
UK	38	22	41	37	32	31

Source: EULFS

Governor of Bank of Australia, Philip Lowe, Adelaide speech 20th June 2019

- "We have constructed a measure of underutilisation that takes account of the part-time workers who want to work more hours.
- This measure adds the extra hours sought by these workers to the hours sought by those who are unemployed
- These extra hours are equivalent to around 3.3 per cent of the labour force, which, taking account of conventional unemployment, means that the underutilisation rate is 8.1 per cent.
- This hours-based measure is preferable to heads-based measures of underutilisation that treats an unemployed person in the same way as a part-time worker seeking a few more hours.
- Unlike the unemployment rate, which has trended down over the past 20 years, the underemployment rate has been relatively stable.
- *These different patterns in unemployment and underemployment suggest that fewer inroads have been made into spare capacity in the labour market than suggested by looking at the unemployment rate alone.*

https://www.rba.gov.au/speeches/2019/pdf/sp-gov-2019-06-20.pdf

Table 5. Time series log wage and wage growth equations in an unbalanced country panel, 1976-2016

	1998-2016	**1998-2007**	**2008-2016**
Lagged wage	.9198 (70.9)	.9447 (24.7)	.7873 (20.2)
Log unemployment rate	-.0224 (2.3)	-.0554 (2.7)	-.0242 (1.4)
Underemployment rate	-.0025 (3.3)	-.0041 (0.8)	-.0036 (3.1)
N	275	133	142

Source: Bell and Blanchflower (2019)
Note: underemployment rate is the Bell/Blanchflower index from Table 3. T-statistics in parentheses.
Source: Hong et al (2018) and own calculations

Table 7a. State level hourly wage equations with various measures of labor market slack, 1980-2017 with robust standard Errors - Bell & Blanchflower (2019)

a) Unemployment rate and involuntary part-time rate

	1980-2017	*1980-2007*	*2008-2017*	*1980-2017*	*1980-2007*	*2008-2017*
Log W_{t-1}	.6612 (21.76)	.7185 (22.75)	.0439 (1.30)	.6460 (19.84)	.7057 (22.38)	.0474 (1.35)
Log $U3_t$	-.0171 (4.51)	-.0211 (5.23)	.0068 (0.59)	.0033 (0.67)	-.0072 (1.36)	
Log PTFER				-.0253 (5.34)	-.0179 (3.84)	-.0263 (3.23)
N	1938	1428	510	1938	1428	510
R^2 within	.9964	.9962	.9216	.9965	.9963	.8727
R^2 between	.9569	.9600	.4198	.9677	.9639	.2592
R^2 overall	.9924	.9916	.5365	.9932	.9920	.4326

Notes: equations include a full set of year and state effects plus 20 personal controls - 15 education variables; age, gender and 3 race variables. U3 is the unemployment rate. U6 is the BLS broader measure of labor underutilization. PTFER is part-time for economic reasons as a percent of employment calculated from the MORG files (weighted using variable=weight).

Table 7. Changes over time in the probability of being depressed, January 1997-April 2018

	All	Workers	Workers with under hours>0			Unemployed	OLF
			All	Men	Women		
1997	0.6	0.2	0.3	0.2	0.4	0.8	1.2
1998	0.8	0.3	0.4	0.3	0.5	1.2	1.5
1999	0.8	0.3	0.5	0.5	0.6	1.7	1.6
2000	0.9	0.3	0.6	0.4	0.7	1.5	1.8
2001	1.0	0.4	0.7	0.5	0.8	1.6	1.9
2002	1.3	0.6	0.8	0.6	1.0	1.9	2.3
2003	1.4	0.7	1.0	0.9	1.2	2.3	2.5
2004	1.5	0.7	1.0	0.8	1.1	2.6	2.7
2005	1.5	0.7	1.0	0.8	1.2	2.8	2.6
2006	1.4	0.7	1.1	0.7	1.5	2.5	2.5
2007	1.5	0.7	1.1	0.8	1.4	2.7	2.6
2008	1.5	0.8	1.1	0.8	1.4	2.8	2.5
2009	1.5	0.8	1.3	0.9	1.6	2.4	2.5
2010	1.6	1.0	1.5	1.0	1.9	2.9	2.5
2011	1.7	1.0	1.4	0.9	1.8	3.4	2.6
2012	1.9	1.2	1.9	1.4	2.3	3.8	2.7
2013	2.0	1.4	2.2	1.4	2.9	4.2	2.7
2014	2.4	1.8	2.7	2.0	3.3	5.2	3.2
2015	2.7	2.1	3.2	2.5	3.9	6.6	3.4
2016	2.9	2.3	3.8	2.6	4.9	7.3	3.6
2017	3.3	2.8	4.5	3.1	5.7	7.5	3.7
2018	3.6	3.1	4.8	3.4	6.1	8.0	3.9

Table 3. Well-being by labor force status and # under and over hours, January 2013-December 2017. N=510,293

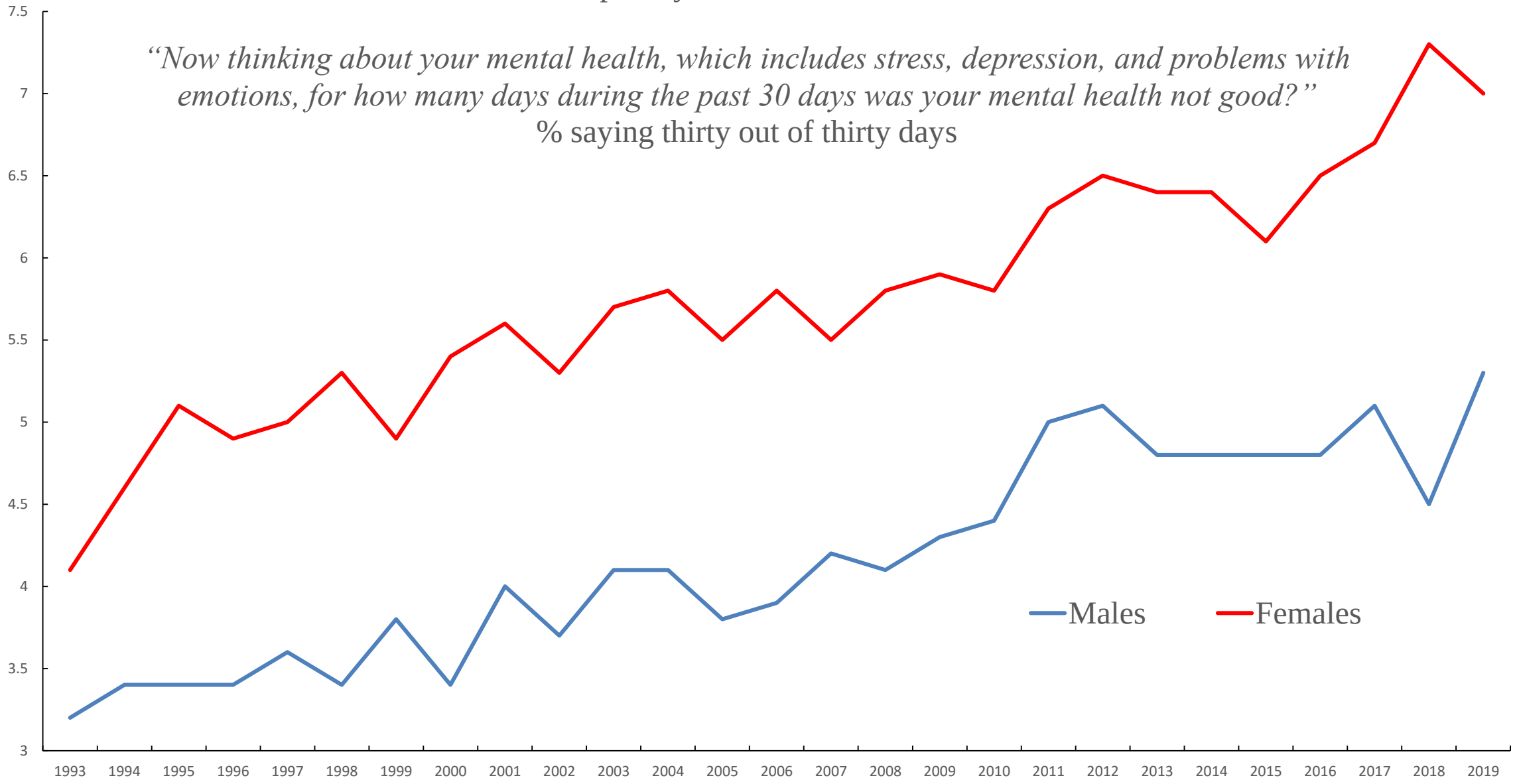
	Happy	Satisfied	Worthwhile	Anxious
Workers	7.53	7.53	7.96	2.84
PTWFT	7.24	7.22	7.59	3.17
Part-time DNWFT	7.71	7.89	8.18	2.79
Full-time	7.50	7.73	7.91	2.82
Unemployed	6.95	6.72	7.16	3.44
OLF	7.49	7.57	7.78	2.96
Workers only				
Under hours=0	7.55	7.78	7.99	2.80
Under hours 1-4	7.50	7.60	7.92	3.14
Under hours 5-9	7.42	7.54	7.82	3.13
Under hours 10-19	7.34	7.37	7.75	3.17
Under hours ≥20	7.22	7.10	7.55	3.31
Over hours=0	7.55	7.74	7.97	2.80
Over hours 1-4	7.42	7.79	7.86	3.08
Over hours 5-9	7.43	7.76	7.87	3.13
Over hours 10-19	7.36	7.71	7.90	3.18
Over hours ≥20	7.25	7.60	7.88	3.28

David Bell and David Blanchflower, The Well-being of the Overemployed and the Underemployed and the Rise in Depression in the UK, JEBO, May 2019

Despair by Gender, 1993-2019

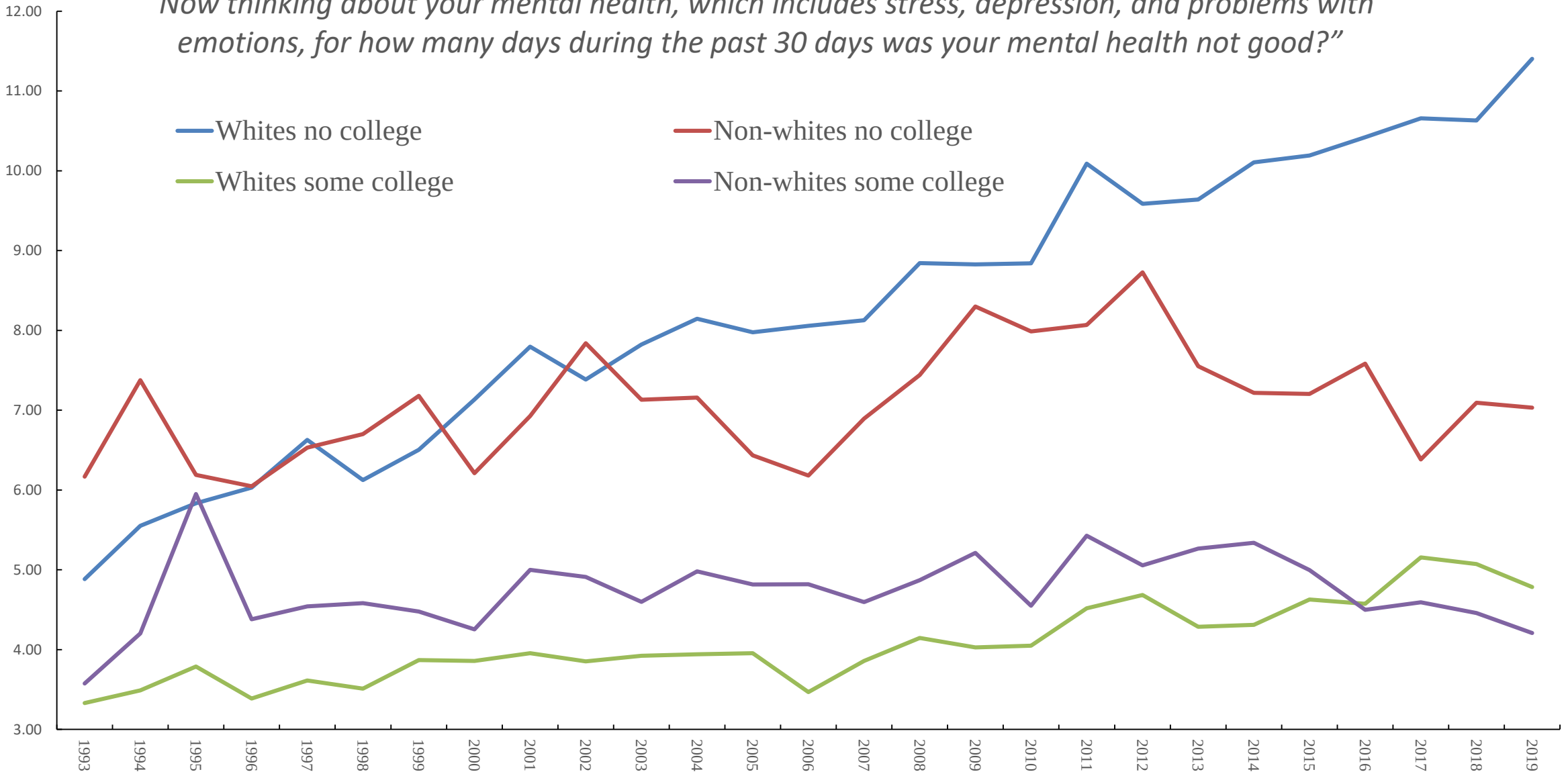
"Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?"

% saying thirty out of thirty days



Despair, ages 35-54 by college or non-college, 1993-2019

"Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?"



Conclusions

- Even though the unemployment rate is at historic lows in many countries this still does not suggest that these country's labor markets are anywhere close to full-employment.
- In his 1944 book Full Employment in a Free Society William Beveridge wrote that "full employment means having more vacancies for workers than there are workers seeking vacancies. It does not mean having no unemployment at all."
- Full employment likely does not mean excessively high underemployment rates where workers are willing to work more hours at the going wage.
- Policymakers should not be focused on the unemployment rate in the years post-recession but rather on the underemployment rate.
- NAIRU seems likely to have fallen - Carney asked me how low I think it is - I said 2.5%!
- **Underemployment replaces unemployment as the main measure of labor market slack in the post-recession years.**