

# **The distribution of UK earnings: Soft-peaks, sharp-edges and shifting dynamics**

Dr Philip Wales  
Head of Economic Analysis, ONS

# Outline

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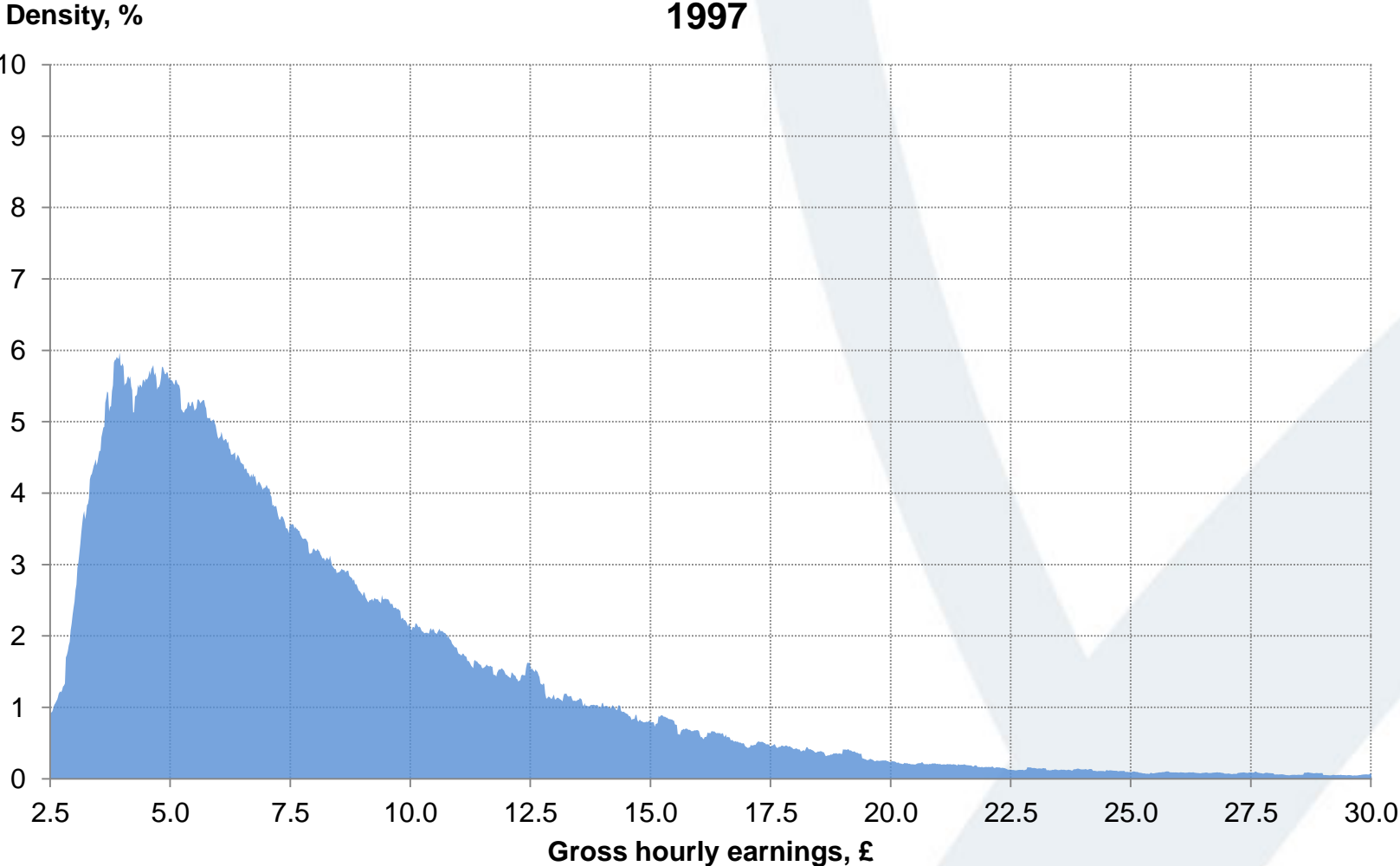
- Distribution of earnings levels
- Distribution of earnings growth

# Distribution of earnings: levels

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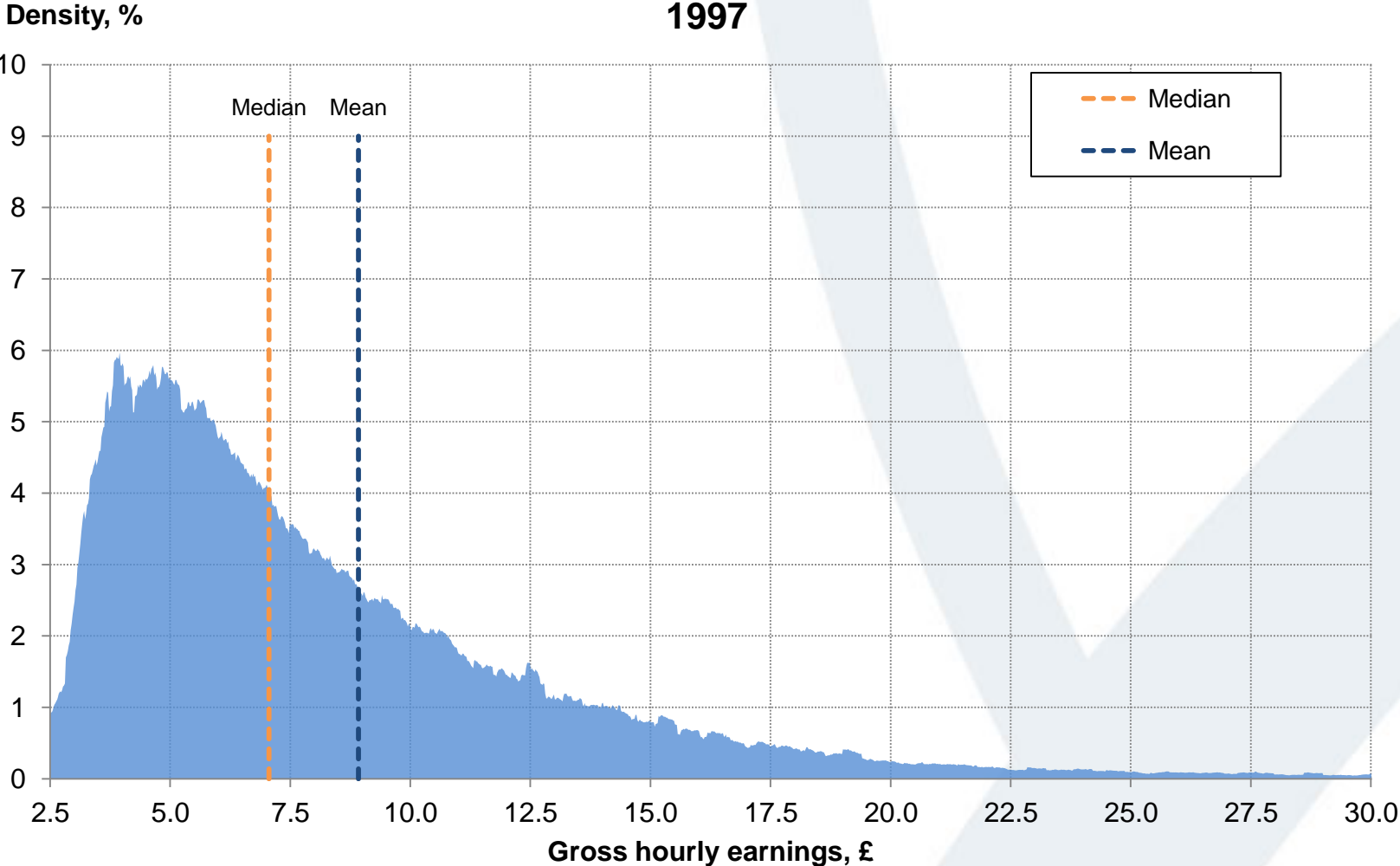
- Substantial variation in the rates of hourly pay for employees in the UK...

# ASHE – earnings distribution



Source: Annual Survey of Hours and Earnings  
Note: Density shows proportion of jobs within +/-20p of shown pay rate

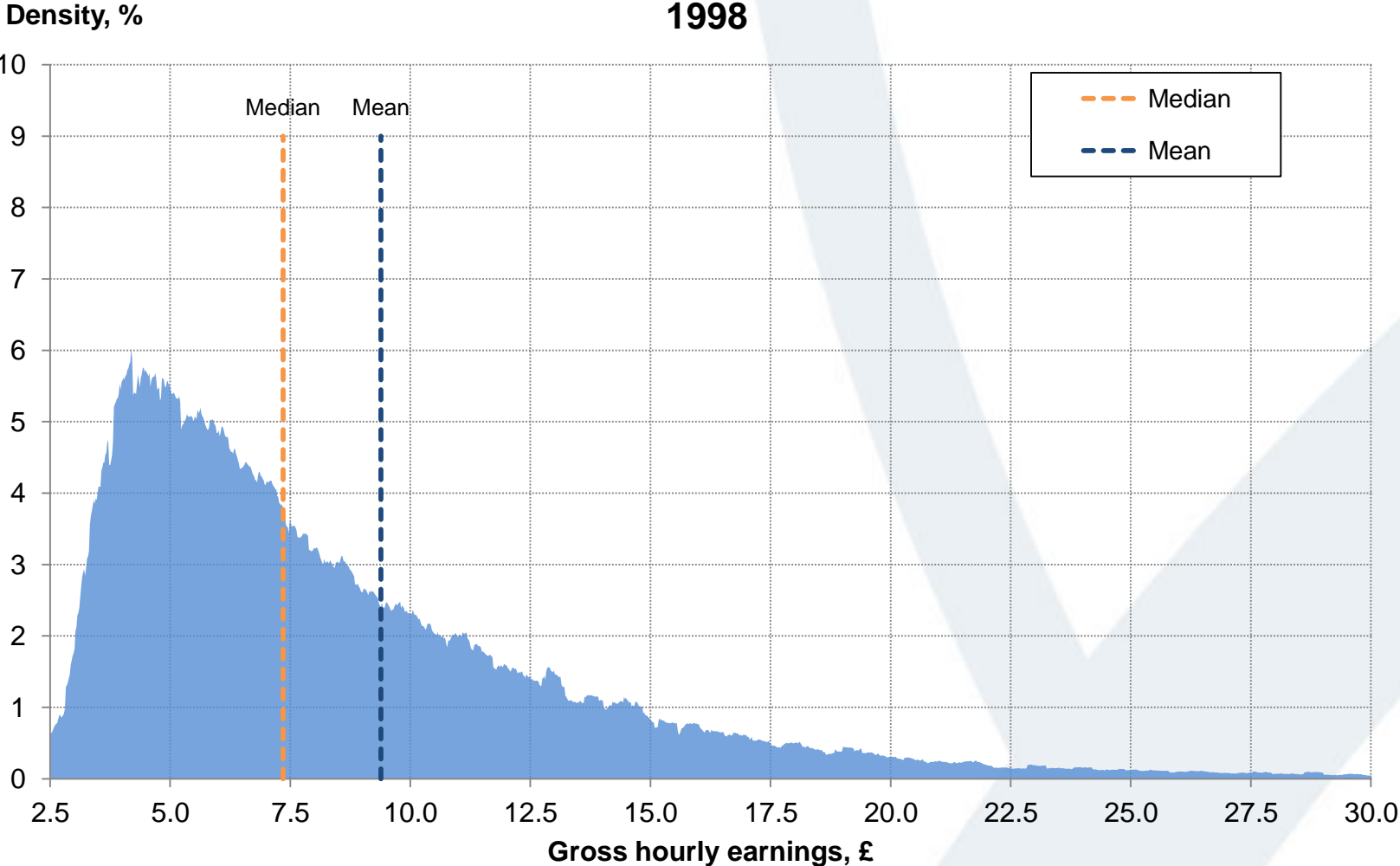
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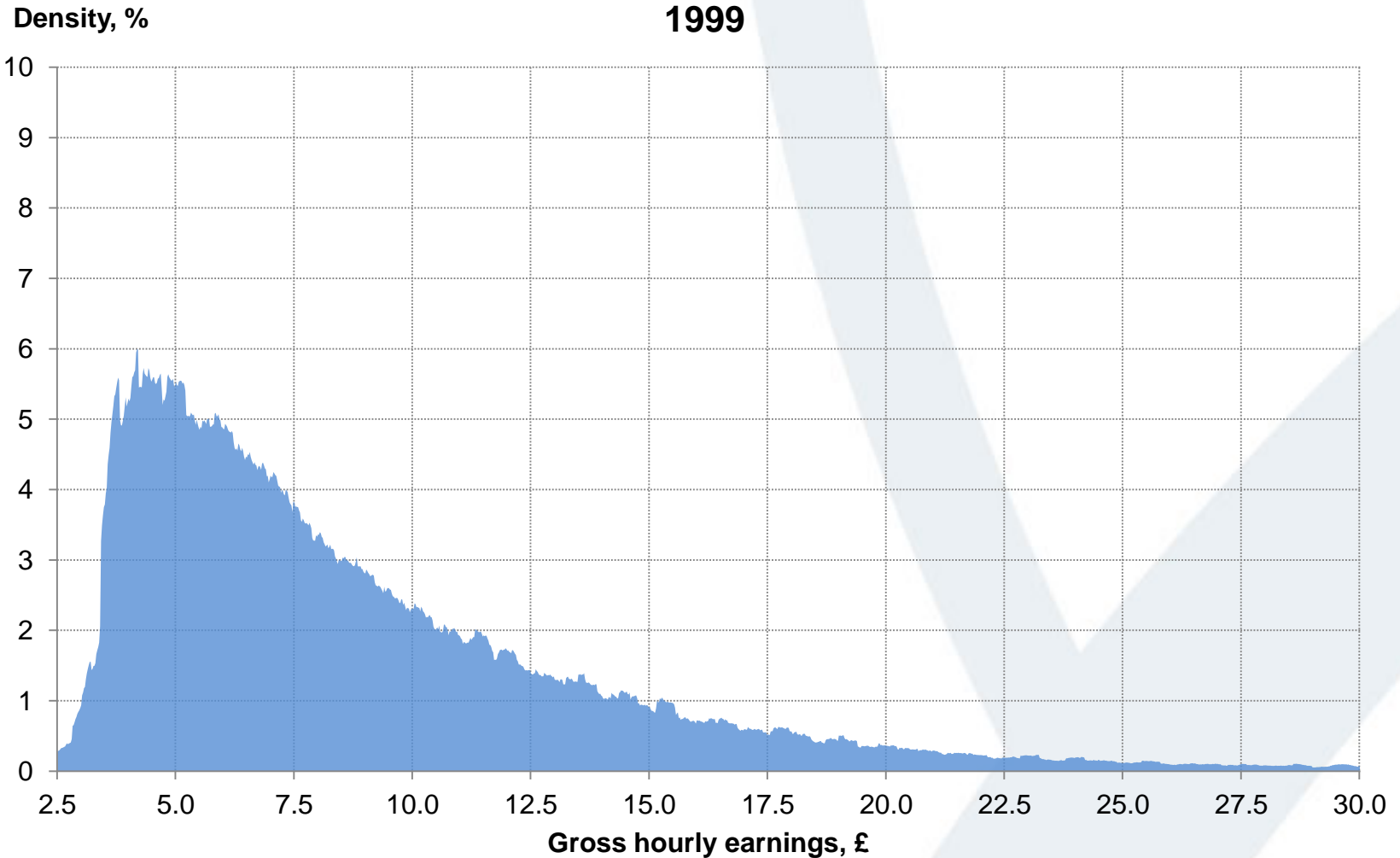
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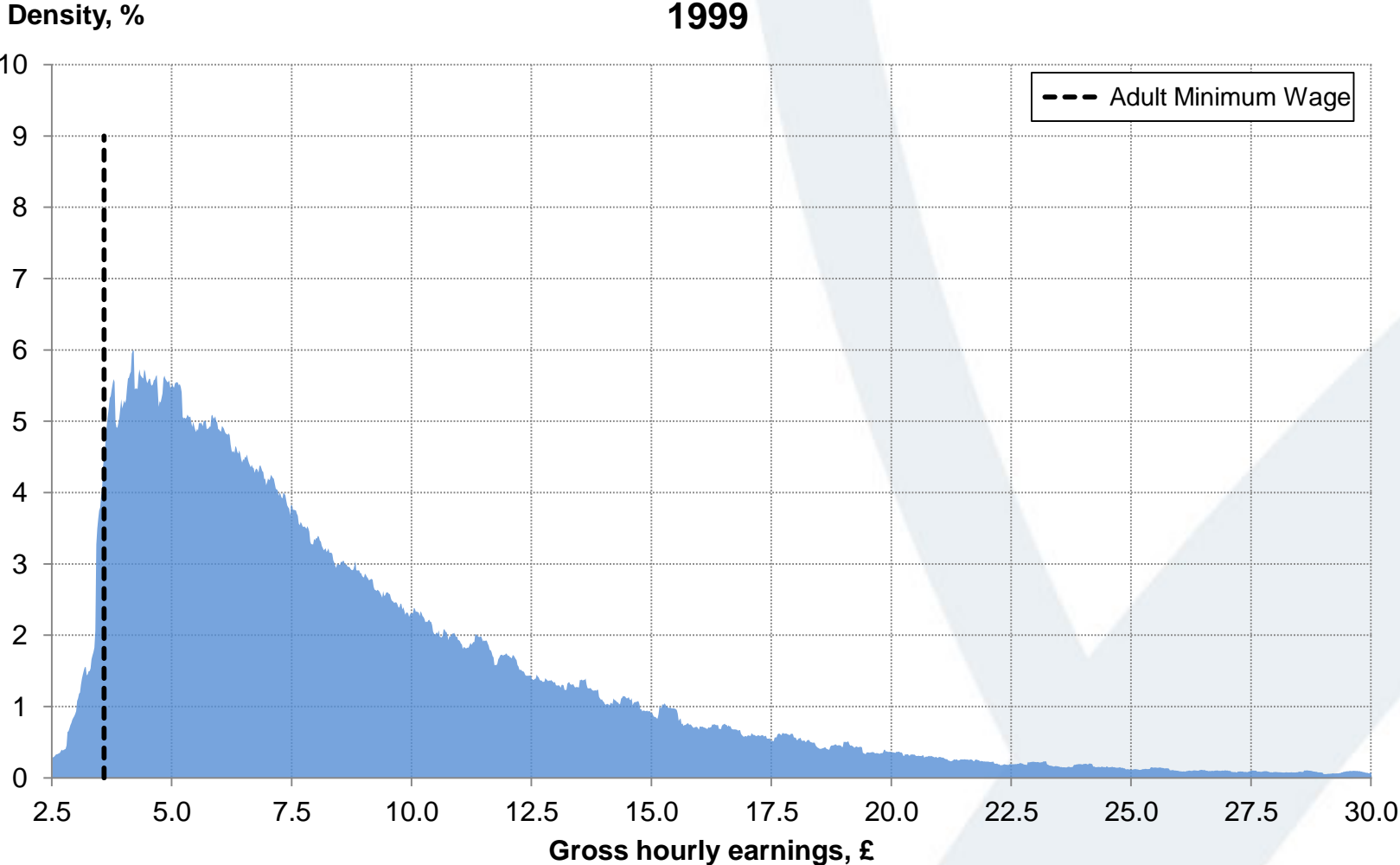
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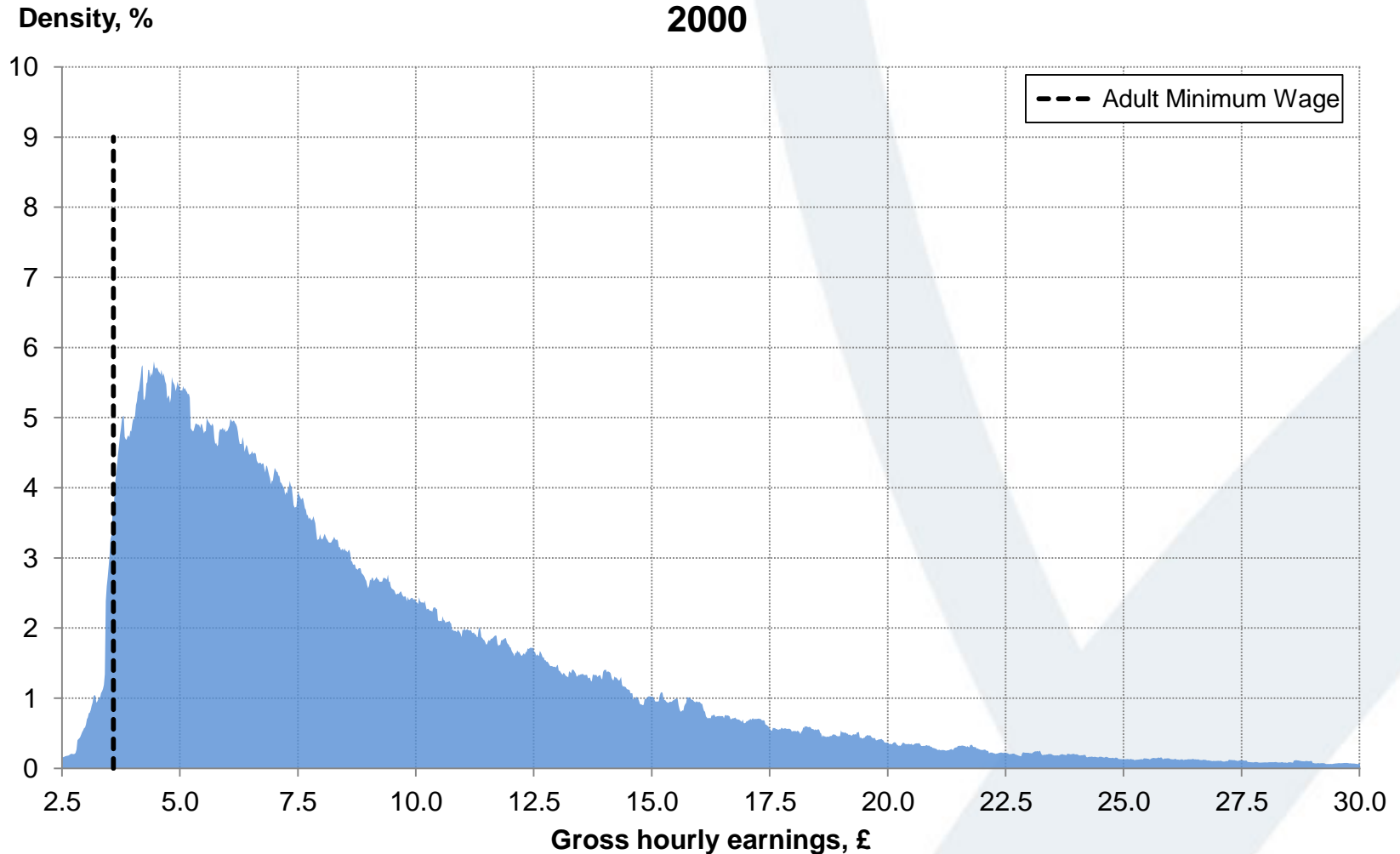
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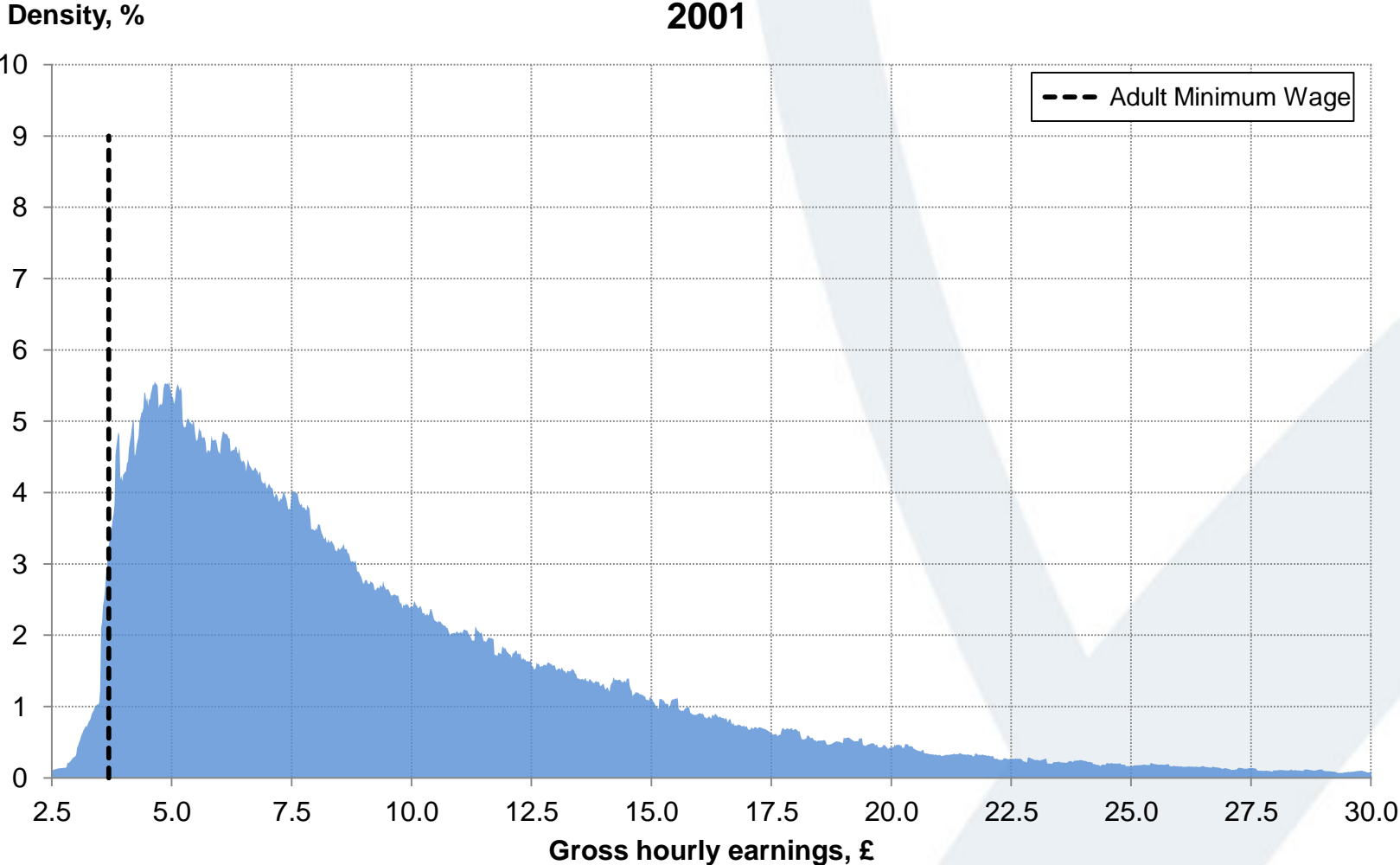
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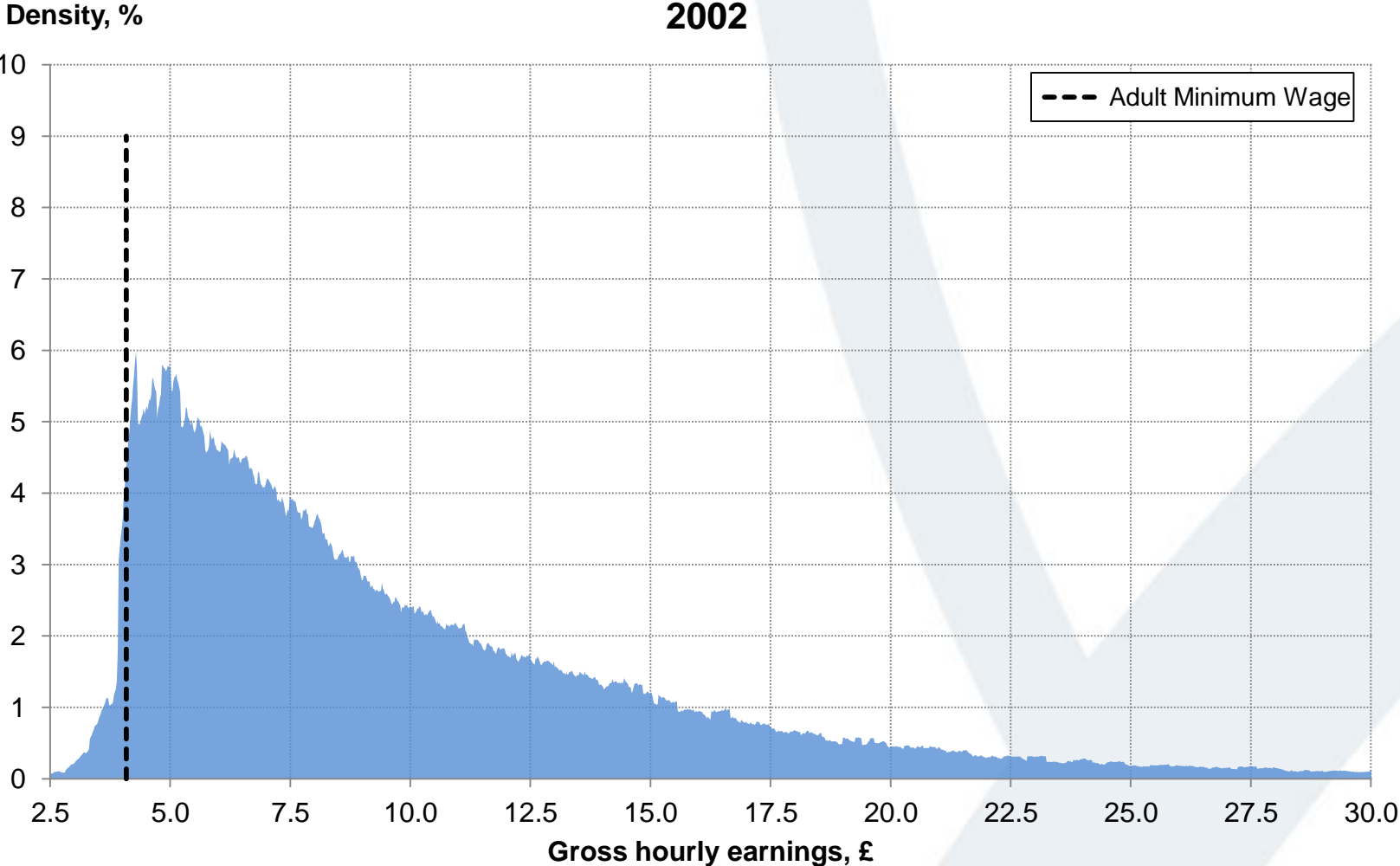
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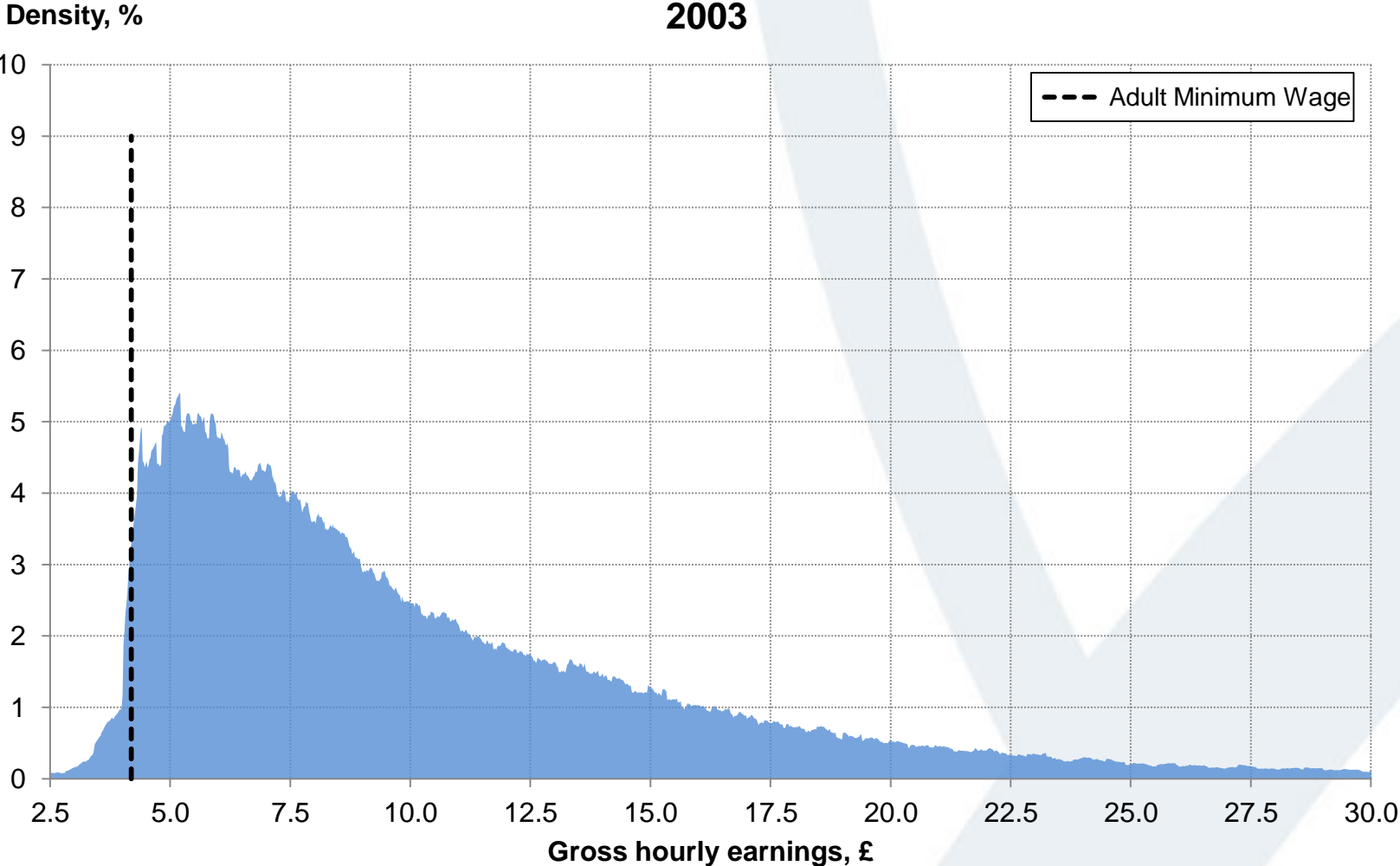
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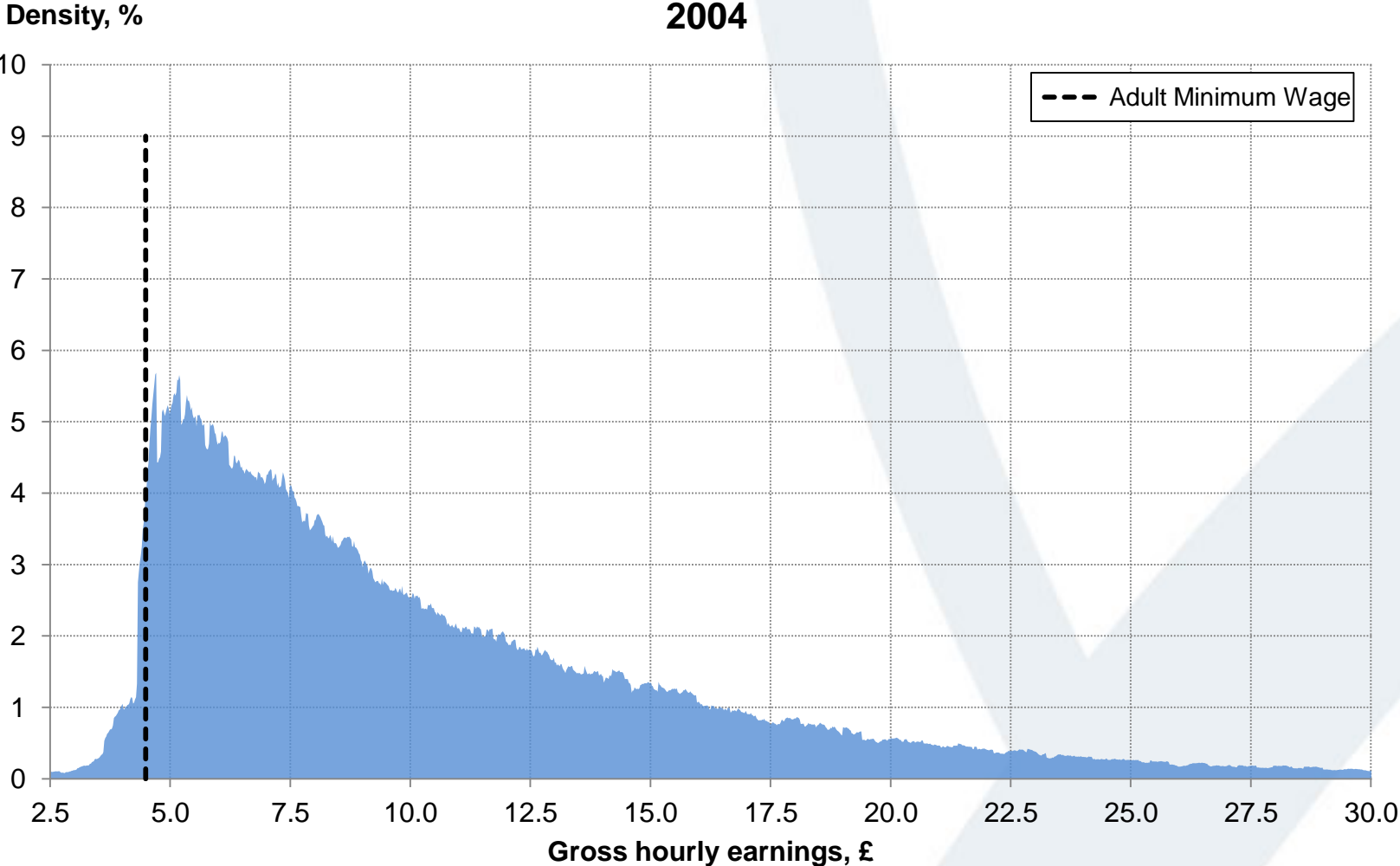
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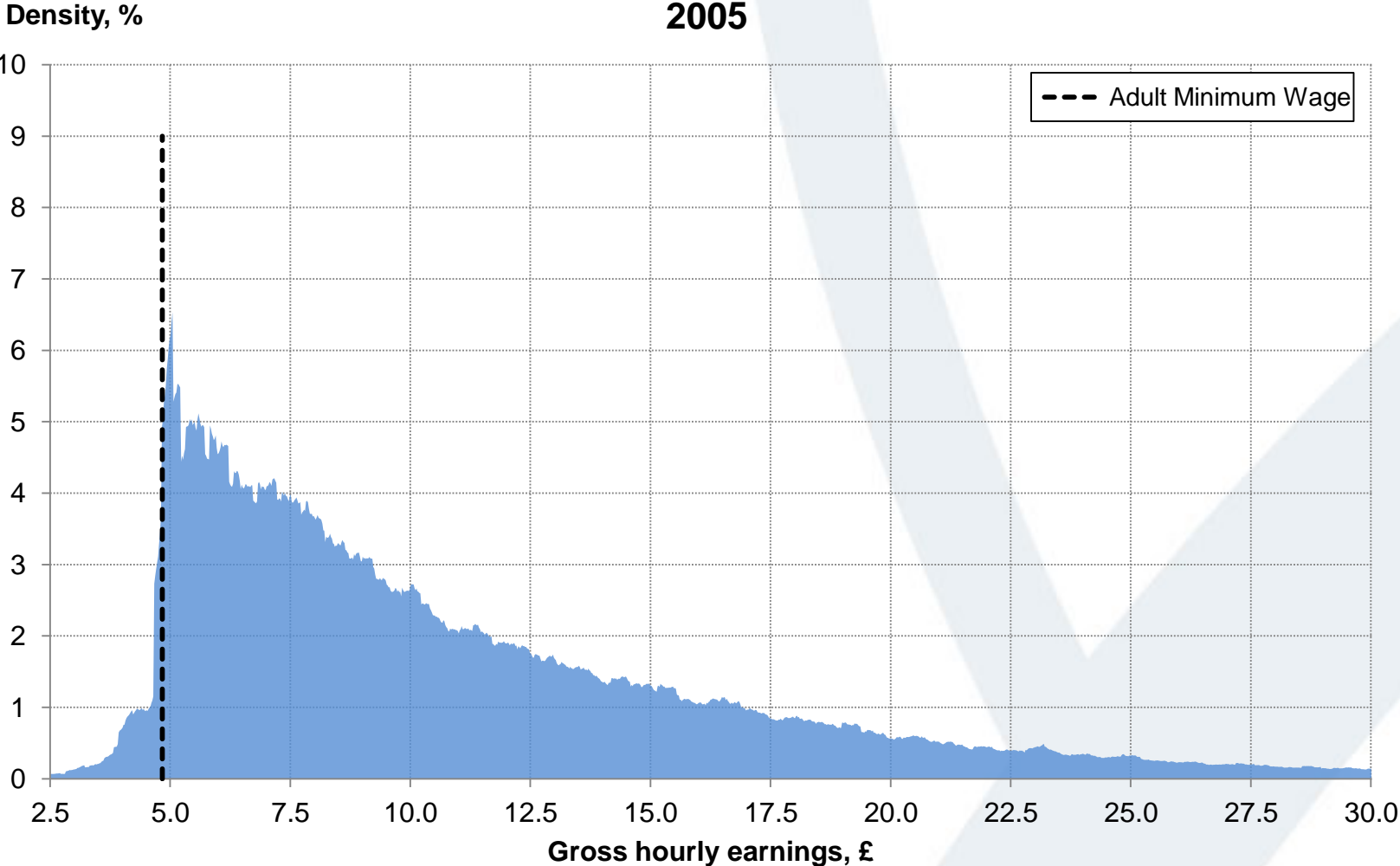
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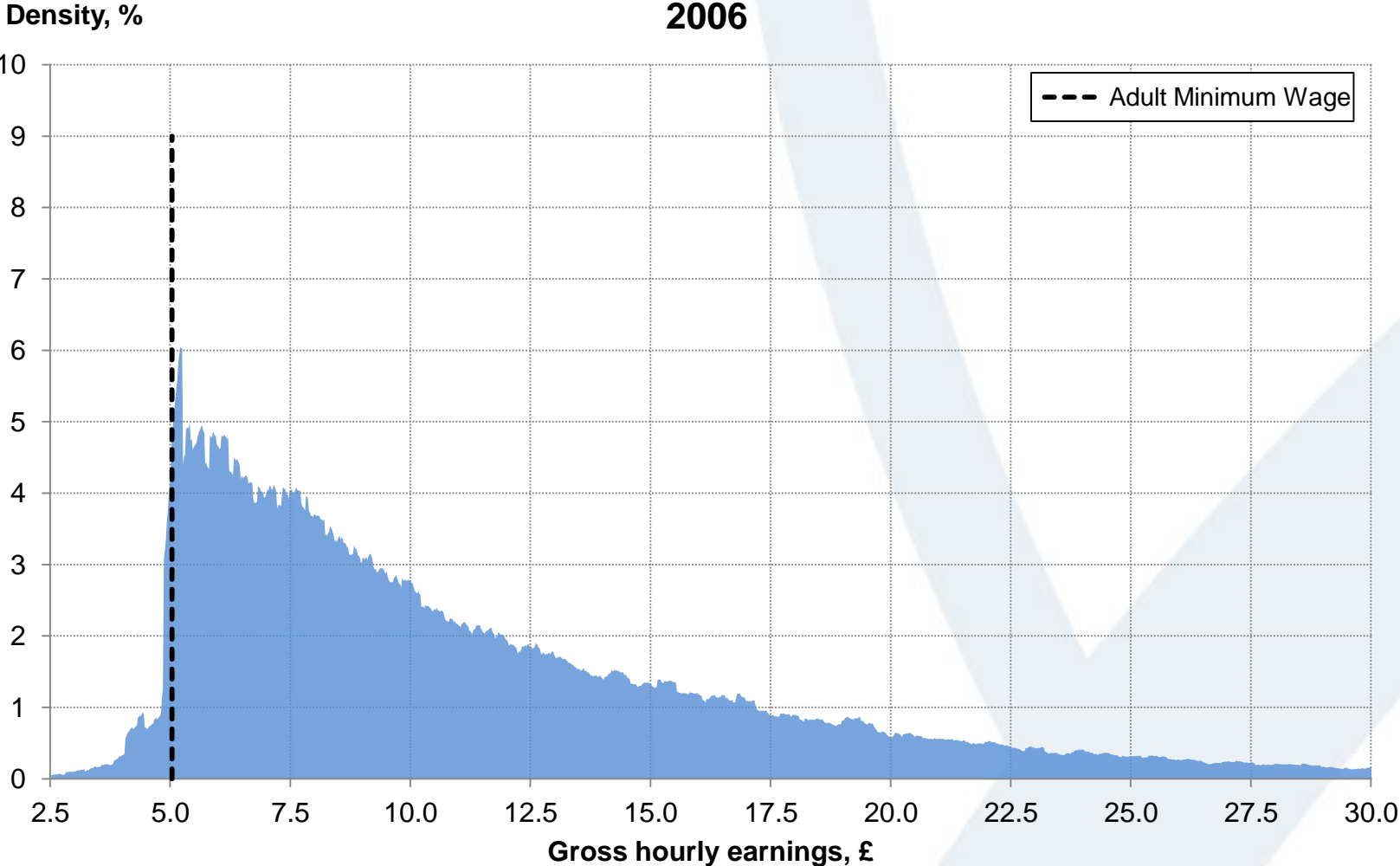
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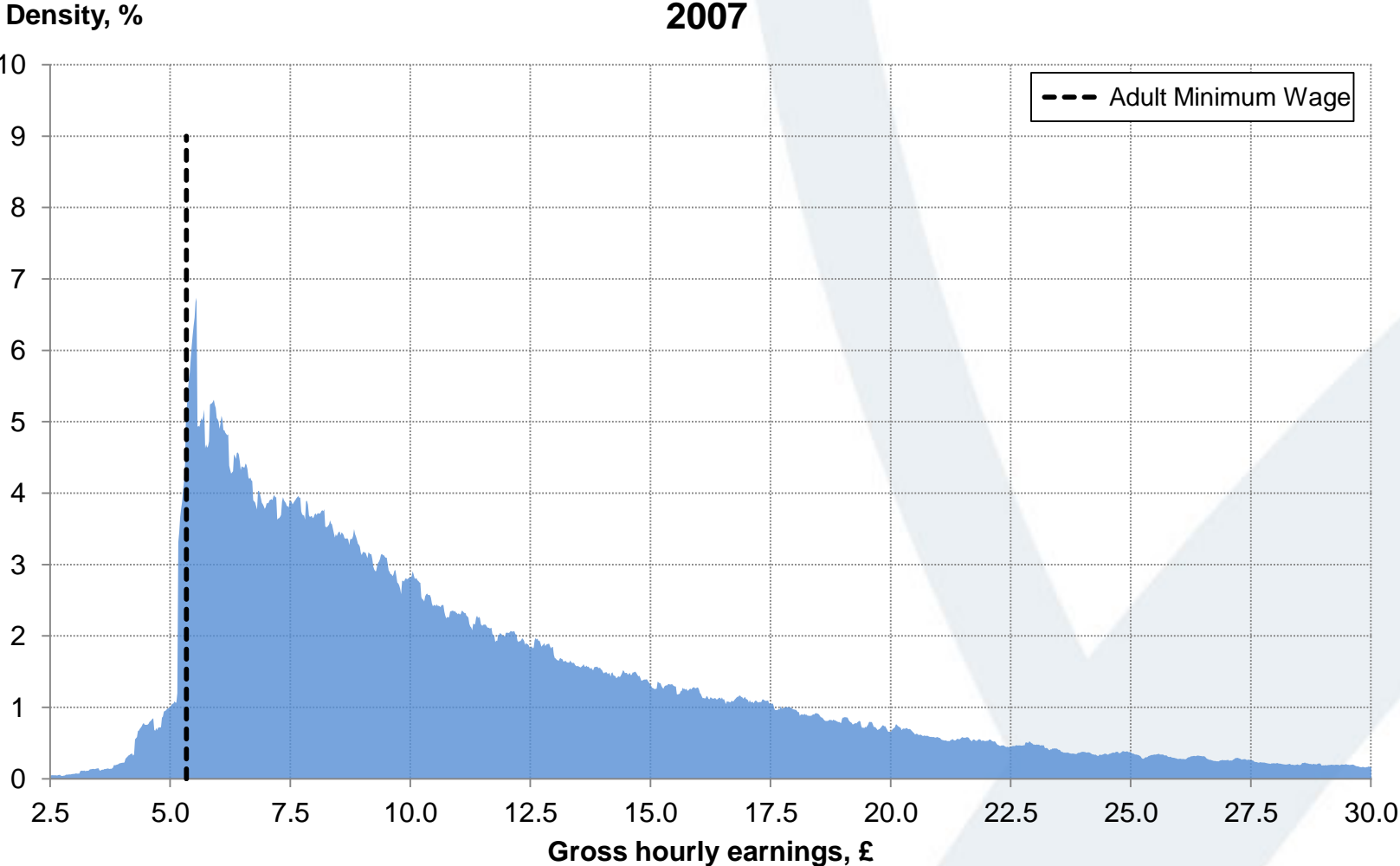
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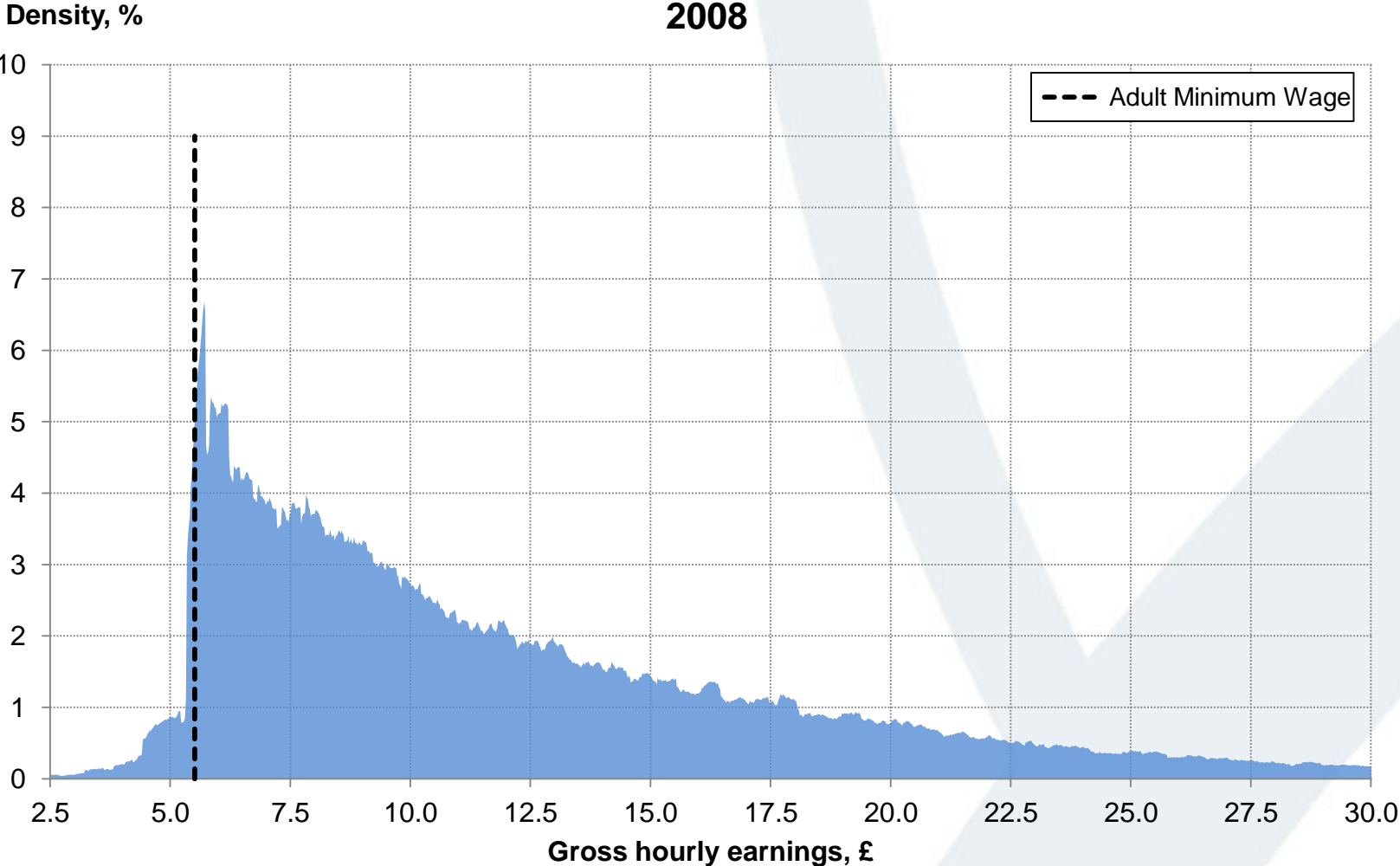


Source: Annual Survey of Hours and Earnings

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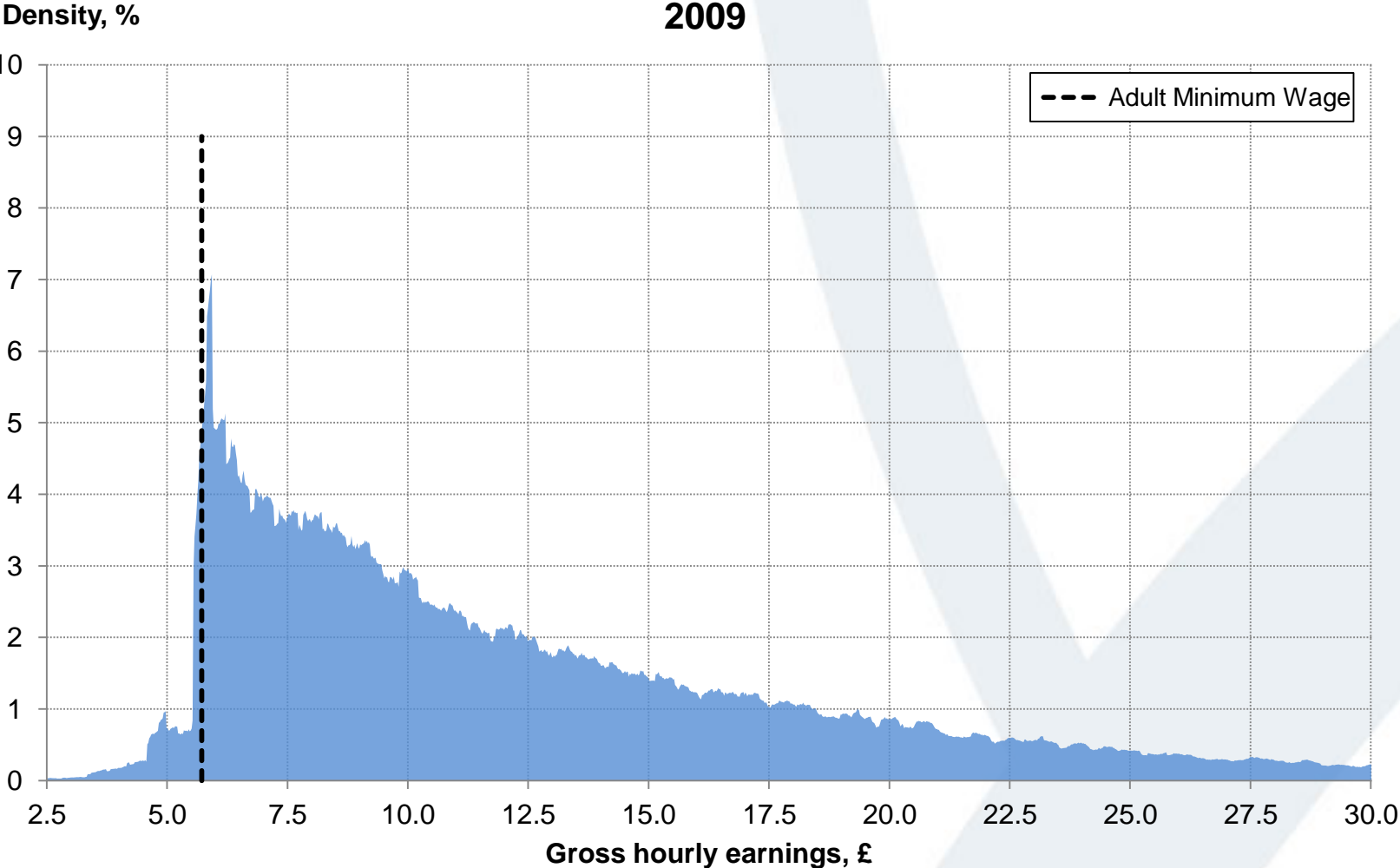


# ASHE - earnings distribution



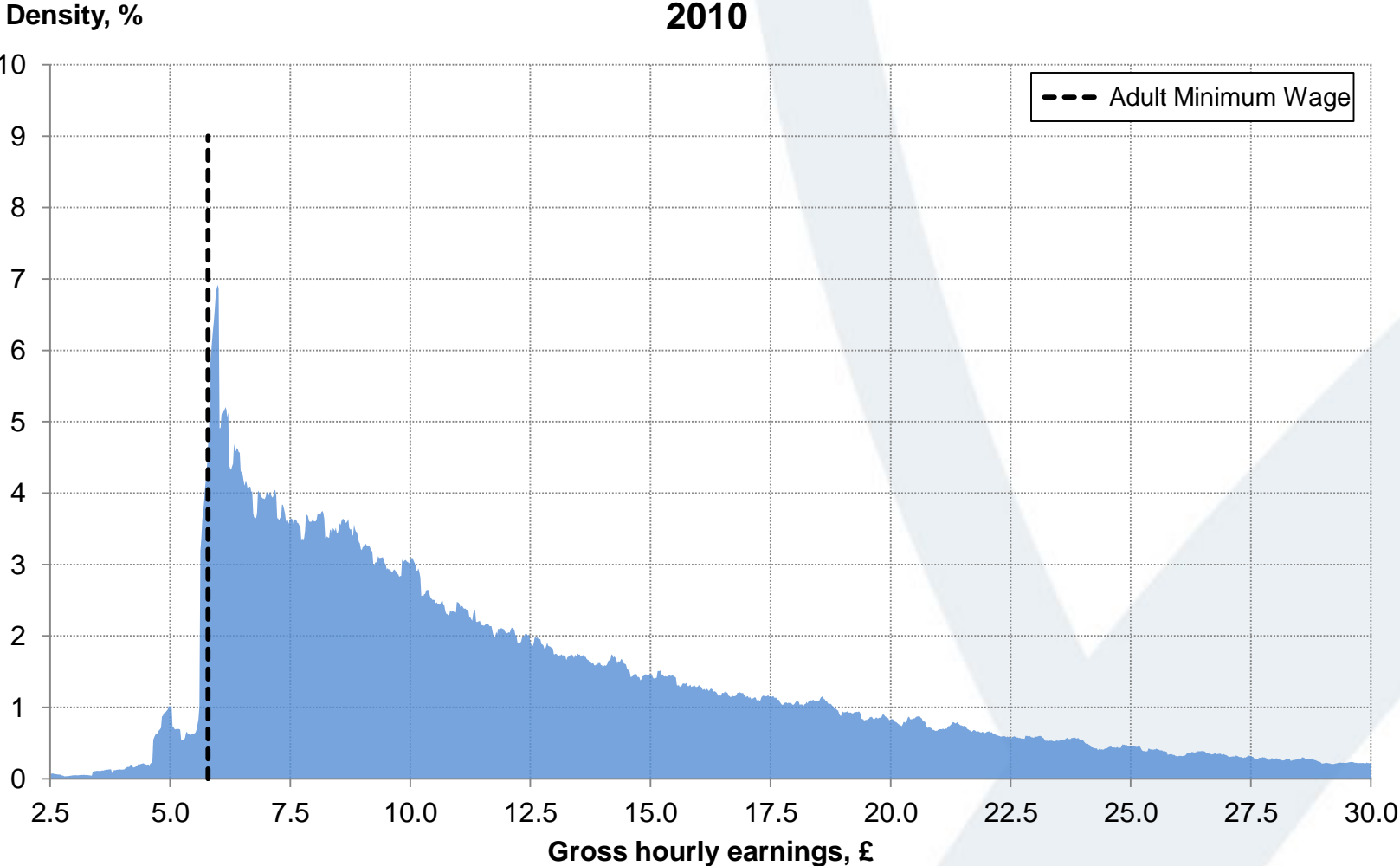
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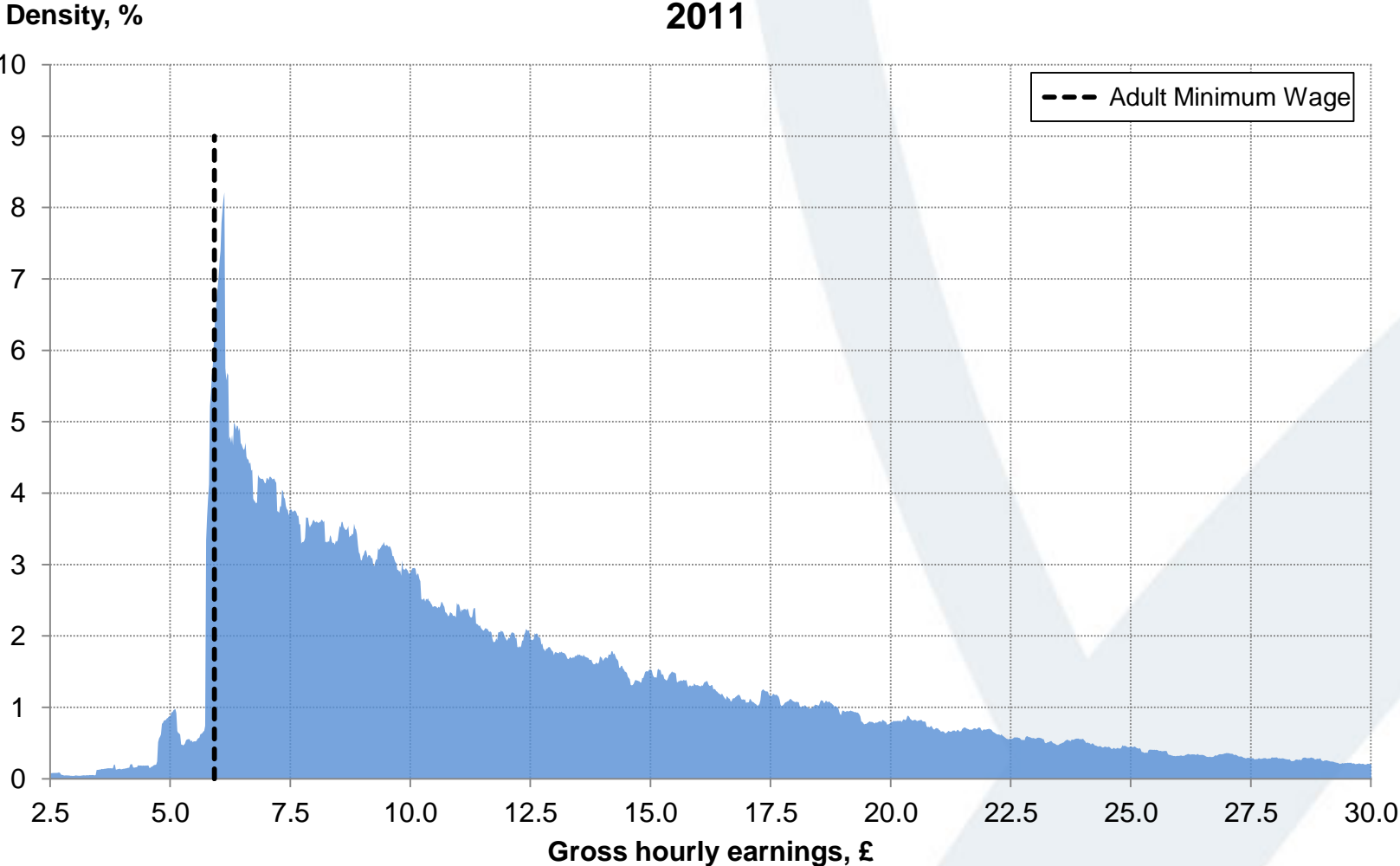
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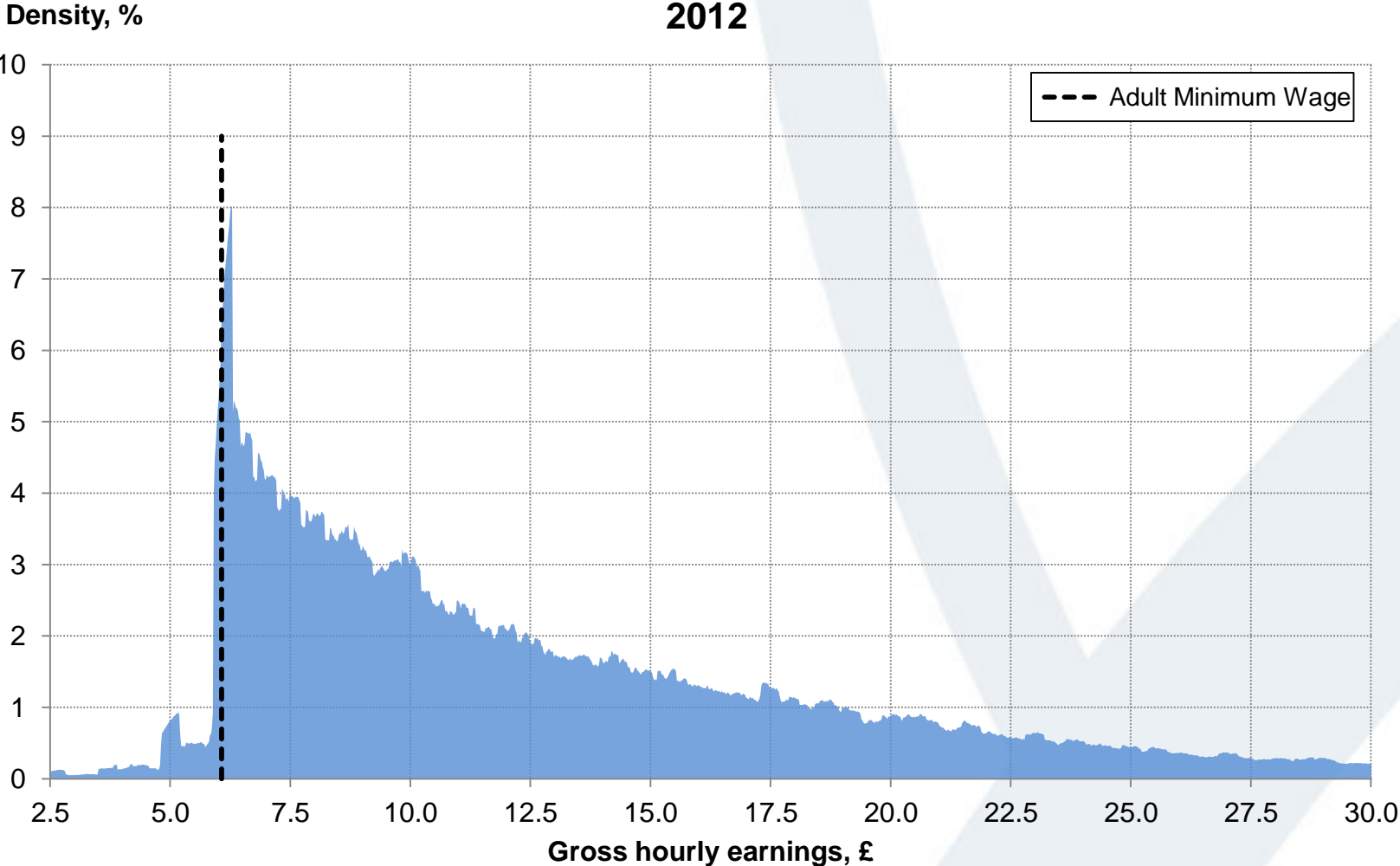
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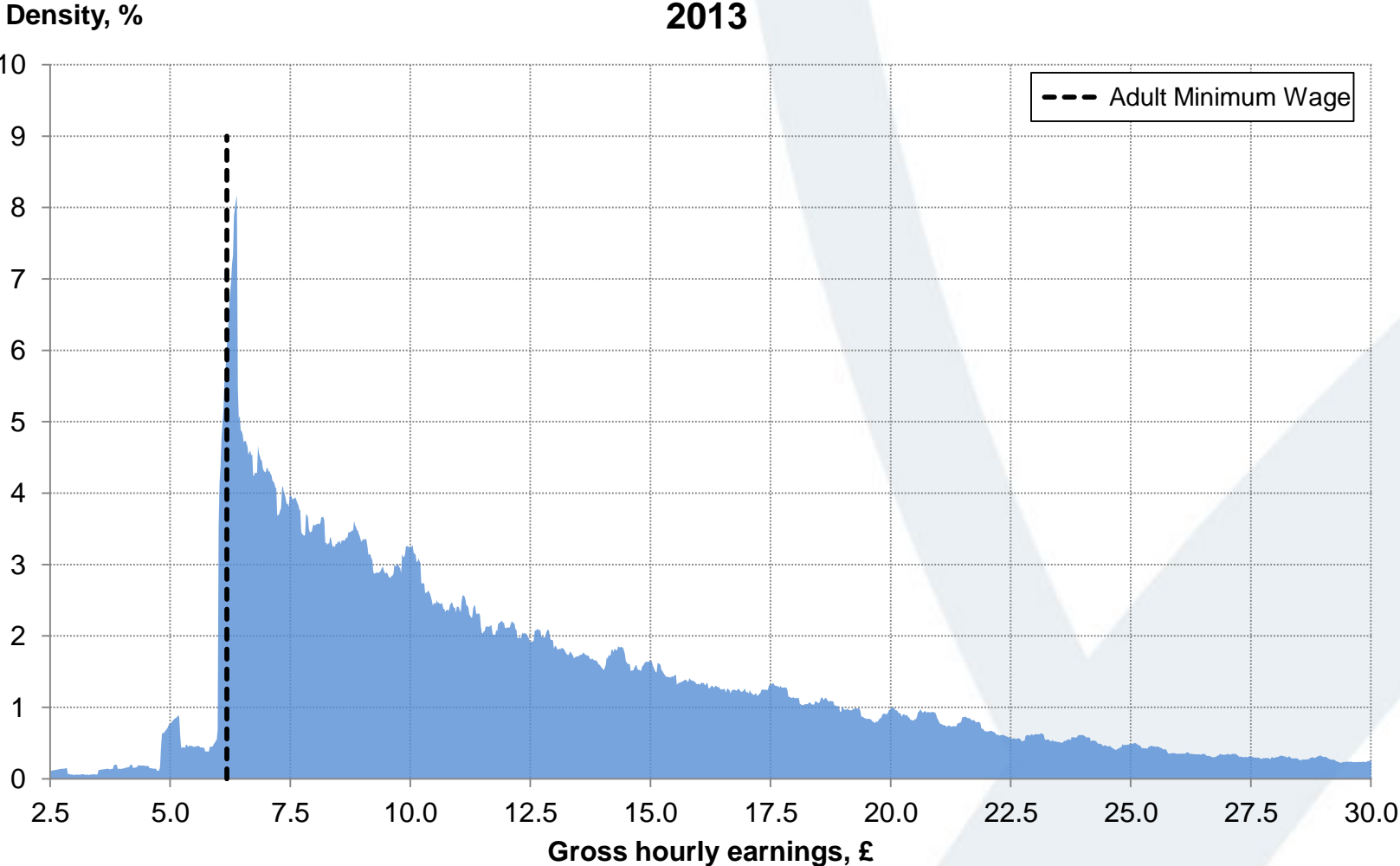
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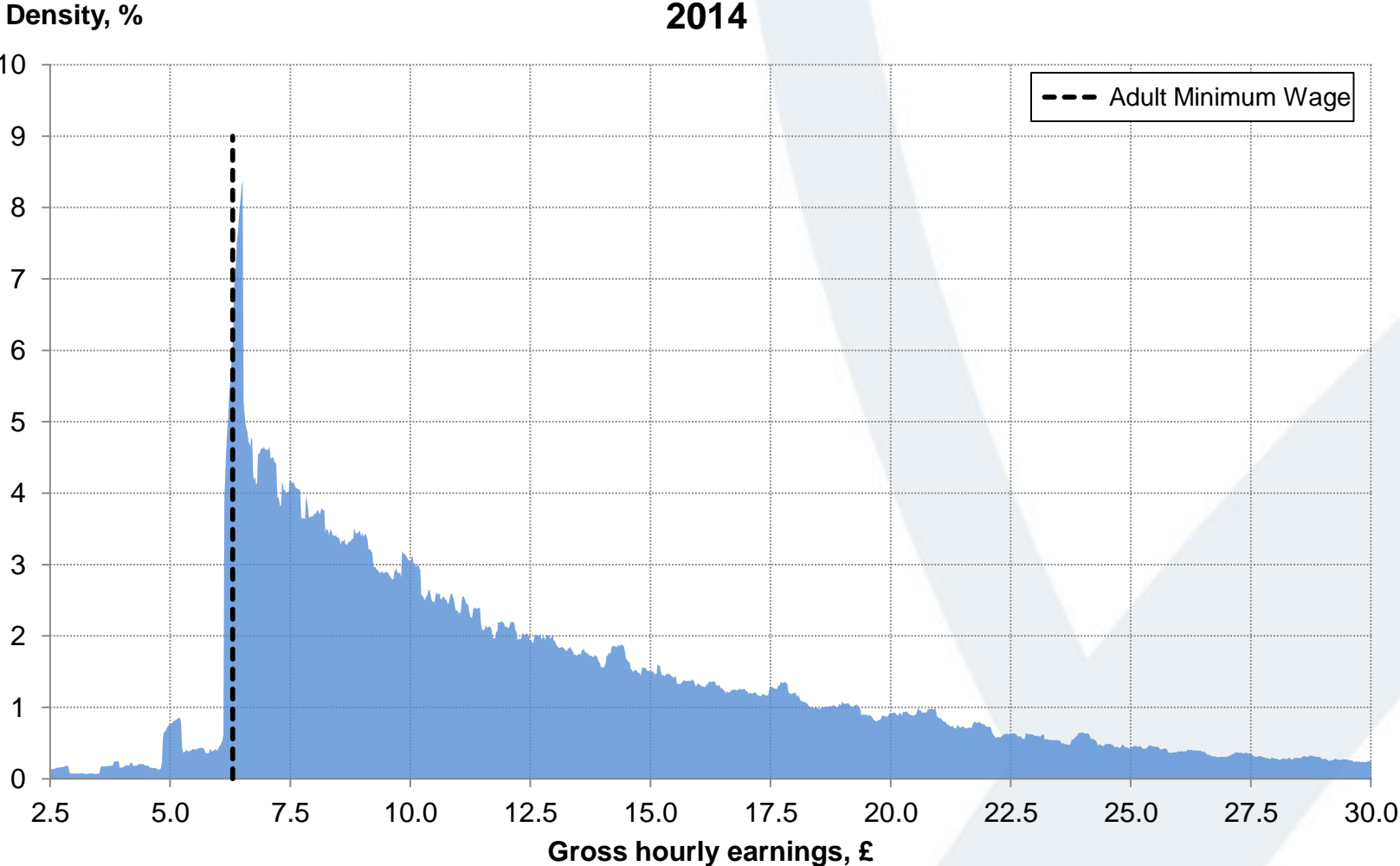
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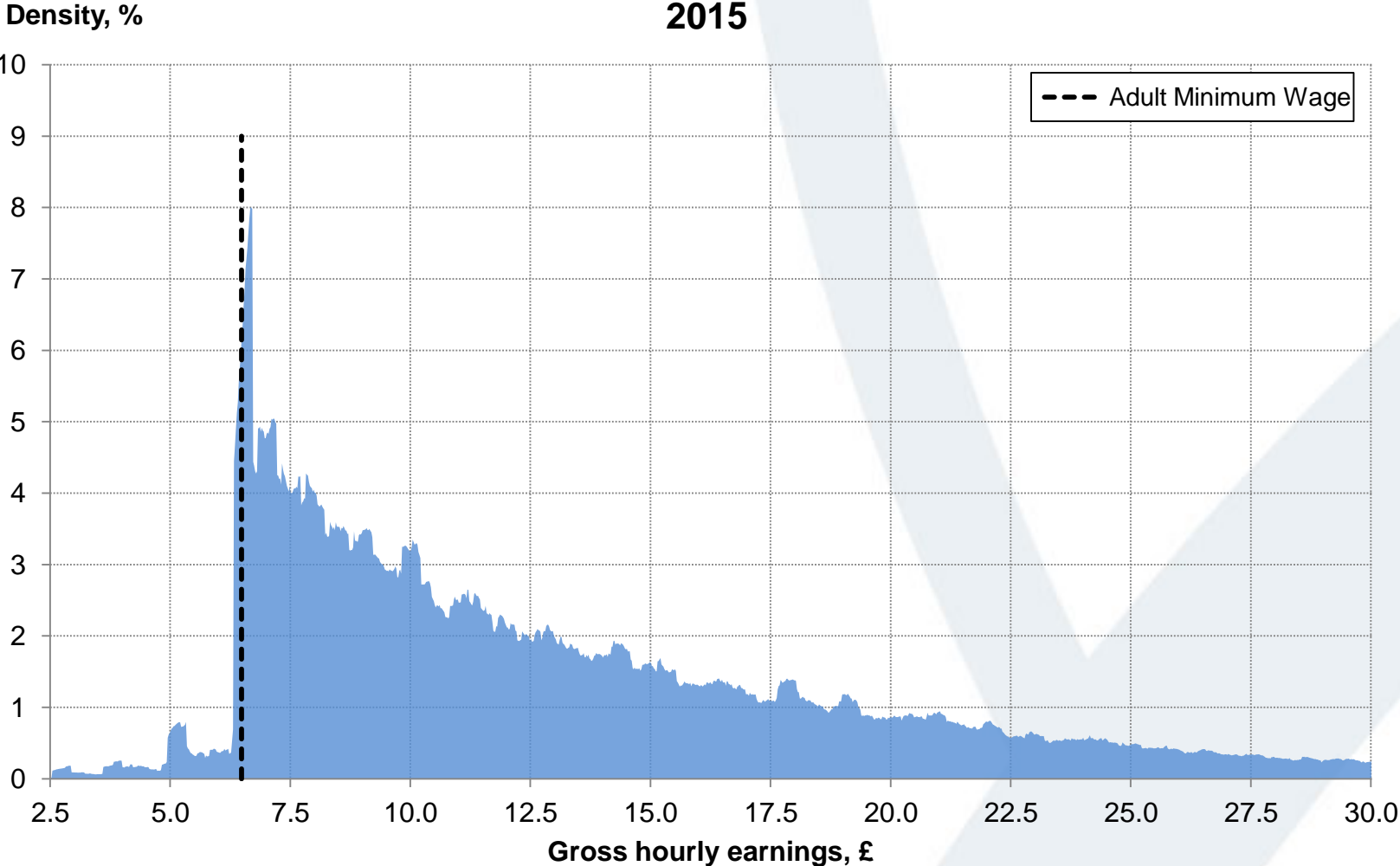
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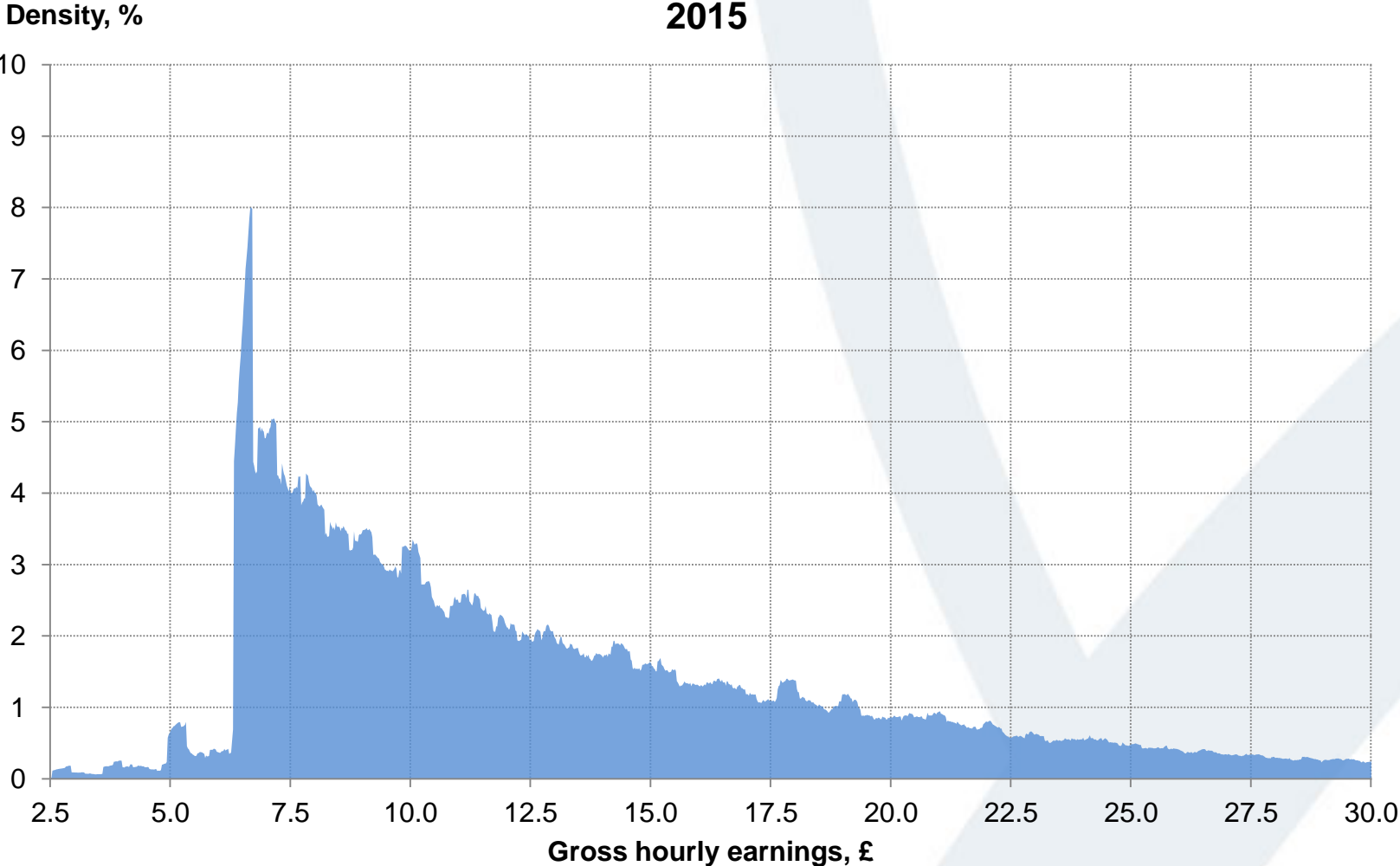
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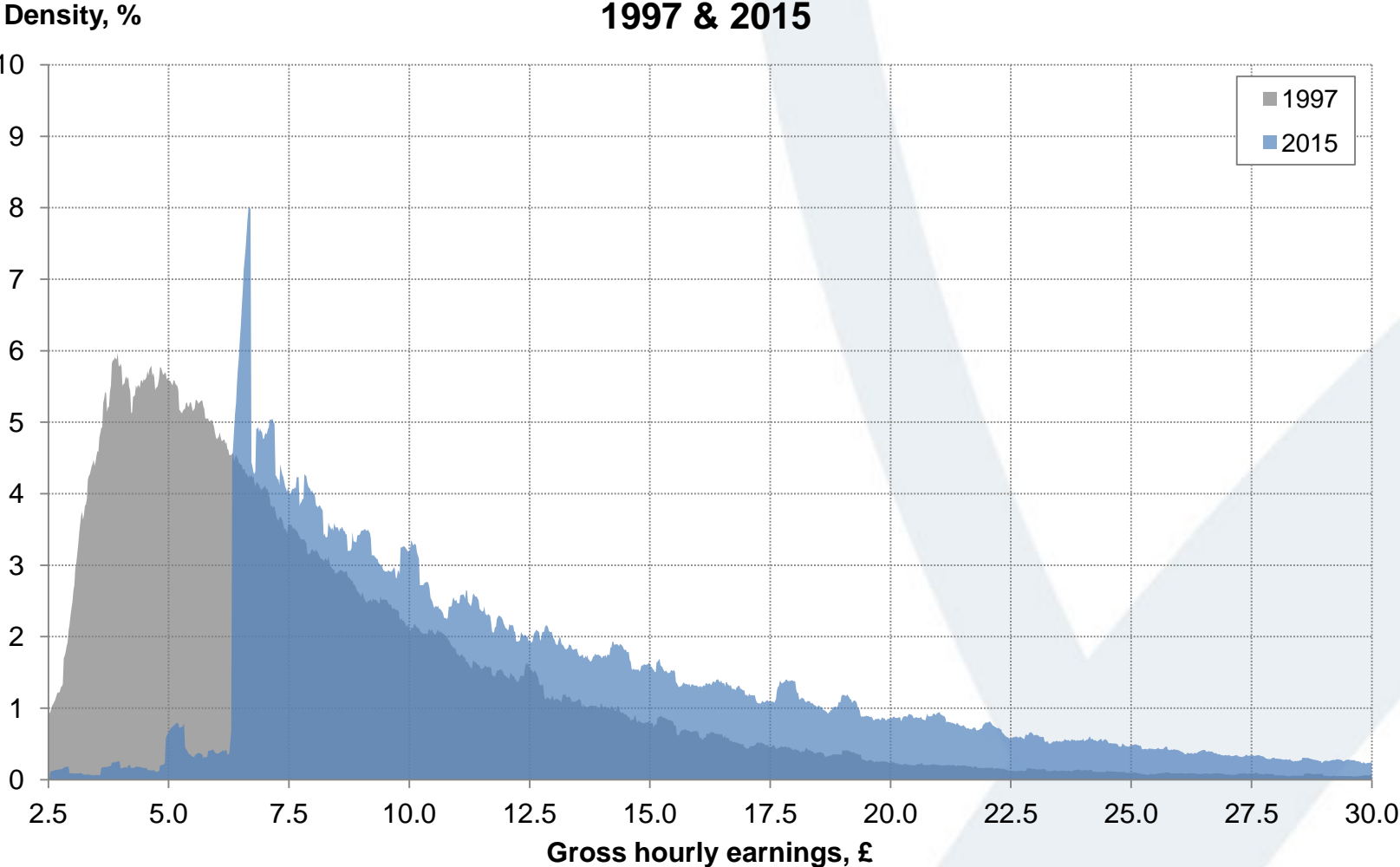


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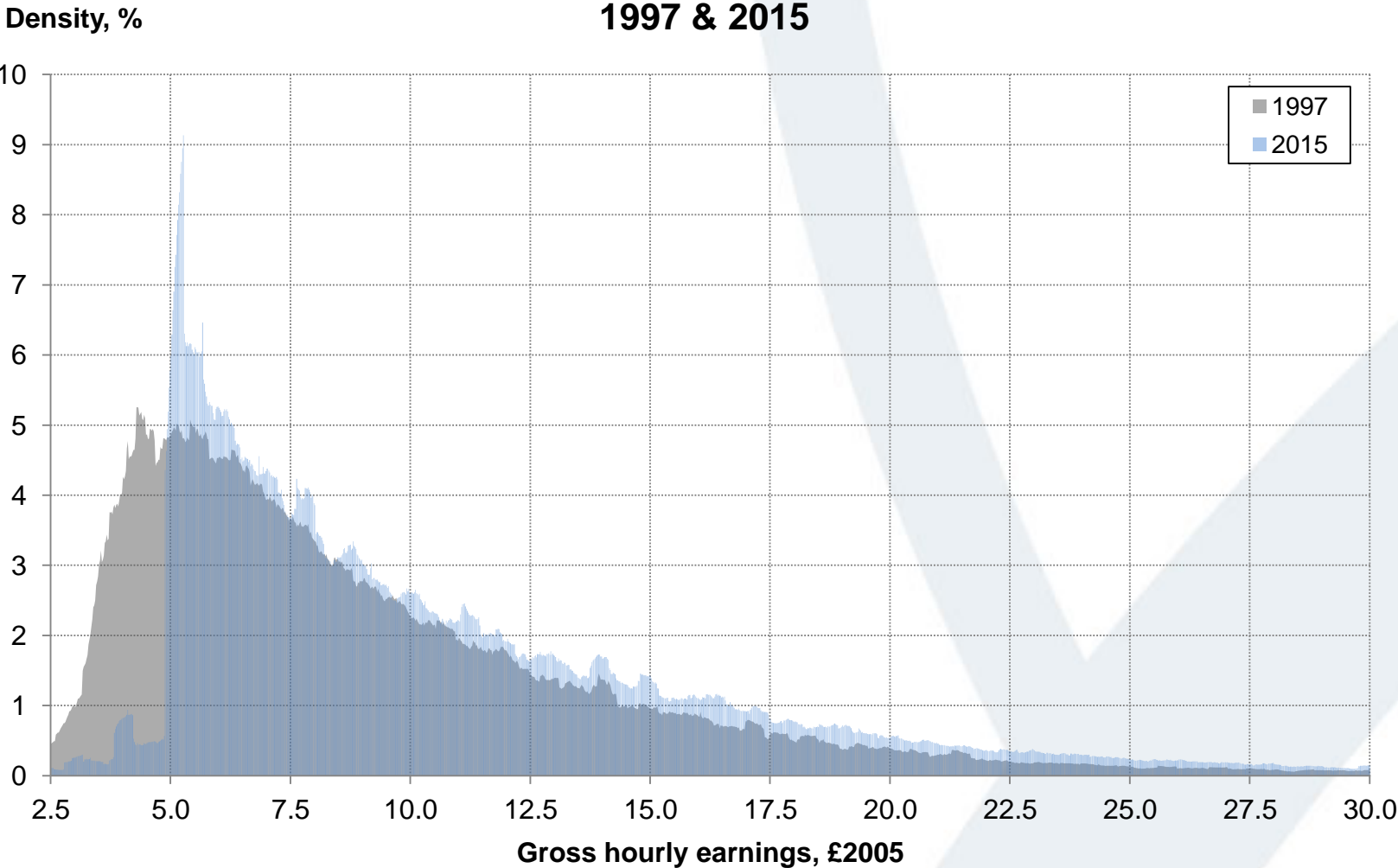
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# ASHE - earnings distribution



Source: Annual Survey of Hours and Earnings  
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# ASHE - earnings distribution (real)



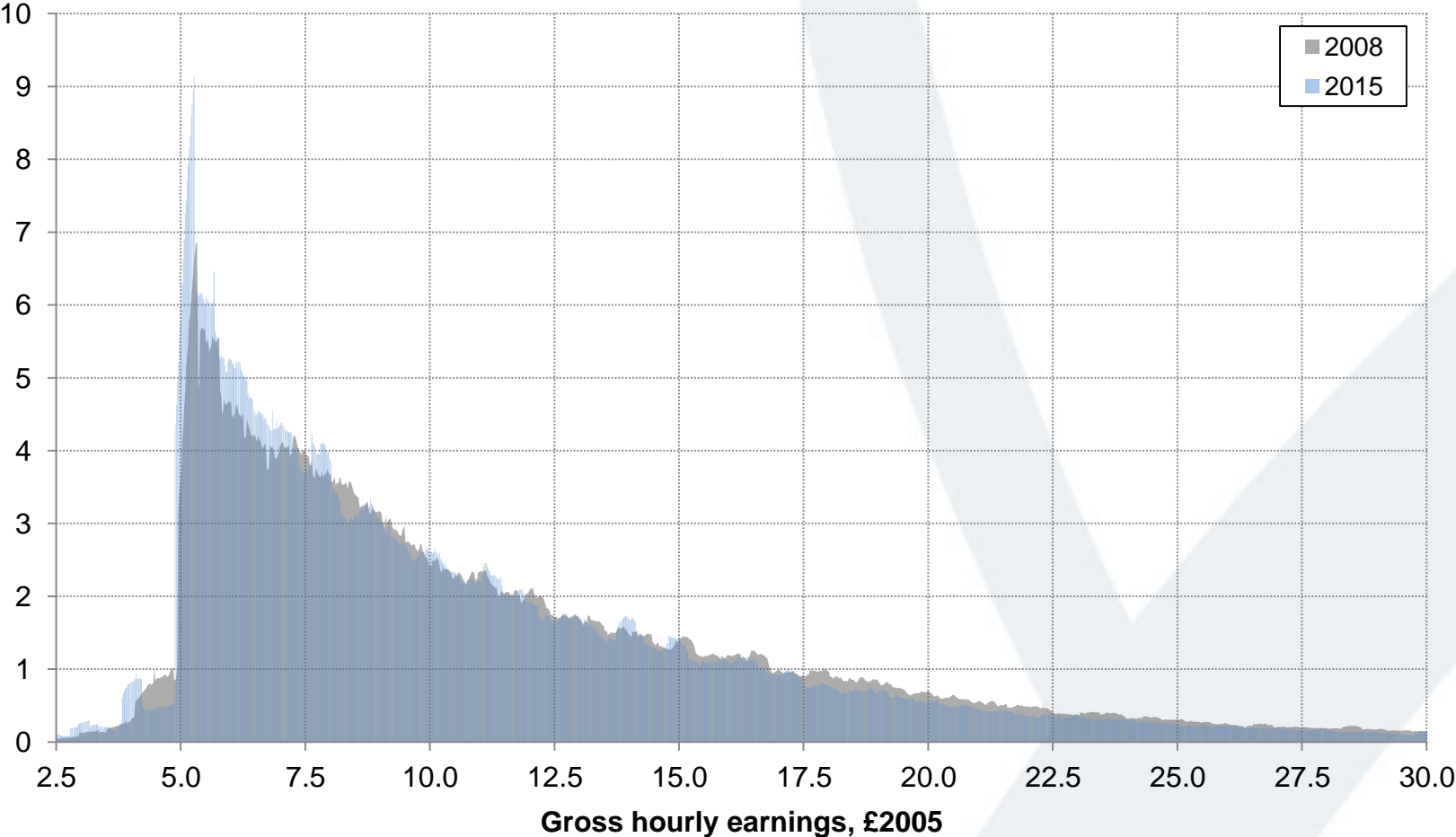
Source: Annual Survey of Hours and Earnings

Note: Density shows proportion of jobs within +/-20p of shown pay rate

# ASHE - earnings distribution (real)

Density, %

2008 & 2015



Source: Annual Survey of Hours and Earnings

Note: Density shows proportion of jobs within +/-20p of shown pay rate

# Distribution of earnings: levels

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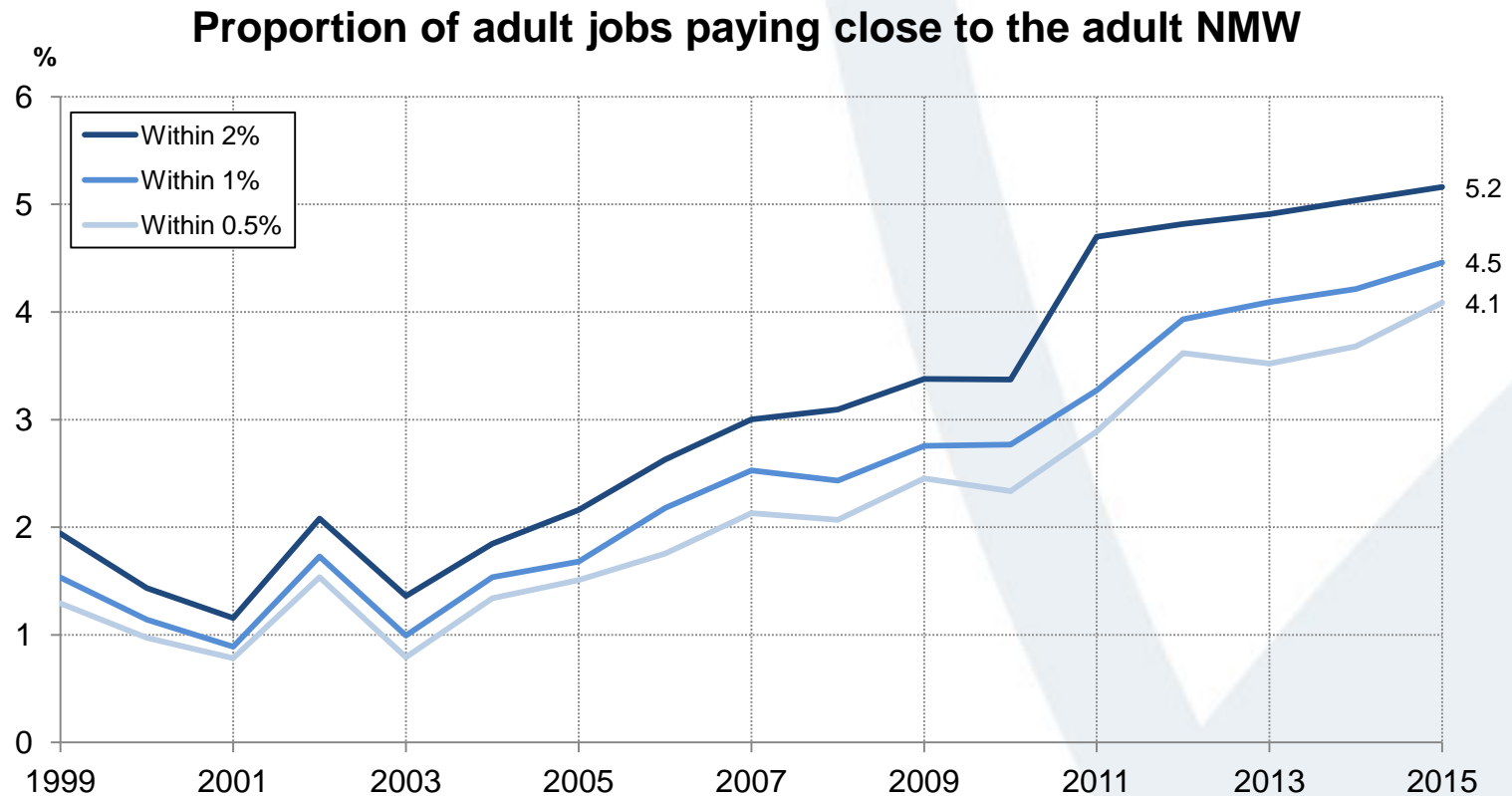
- Substantial variation in the rates of hourly pay for employees in the UK...

# Distribution of earnings: levels

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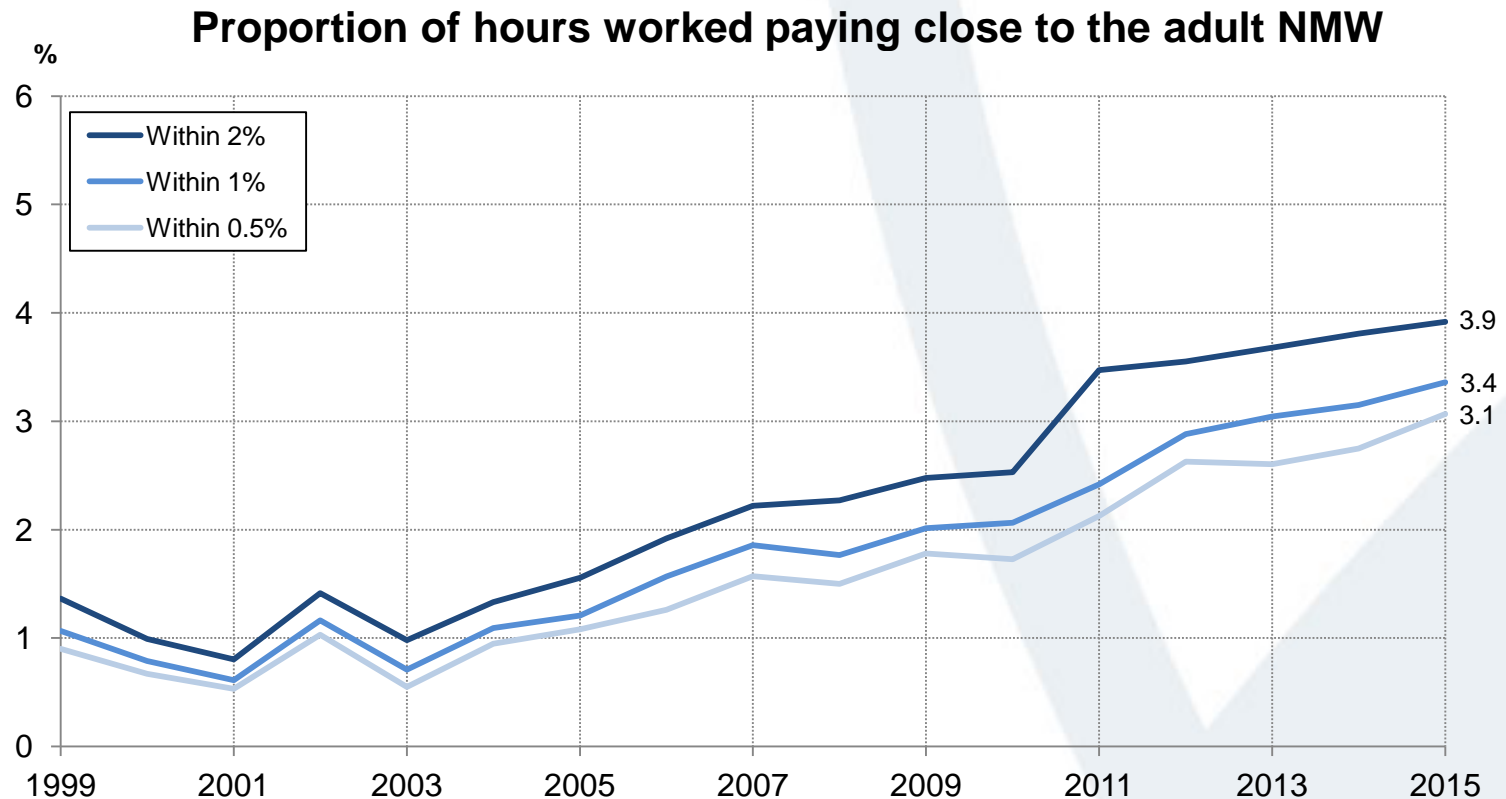
# Proportion of jobs paying close to NMW



Source: Annual Survey of Hours and Earnings, ONS calculations

Note: Adults are defined in accordance with the NMW adult rate, i.e. Between 1999 and 2008, adults are 22 and over. From 2009 onwards, adults are 21 and over. No account made for apprenticeships.

# Proportion of hours paying close to NMW



Source: Annual Survey of Hours and Earnings, ONS calculations

Note: Adults are defined in accordance with the NMW adult rate, i.e. Between 1999 and 2008, adults are 22 and over. From 2009 onwards, adults are 21 and over. No account made for apprenticeships.



# Distribution of earnings: levels

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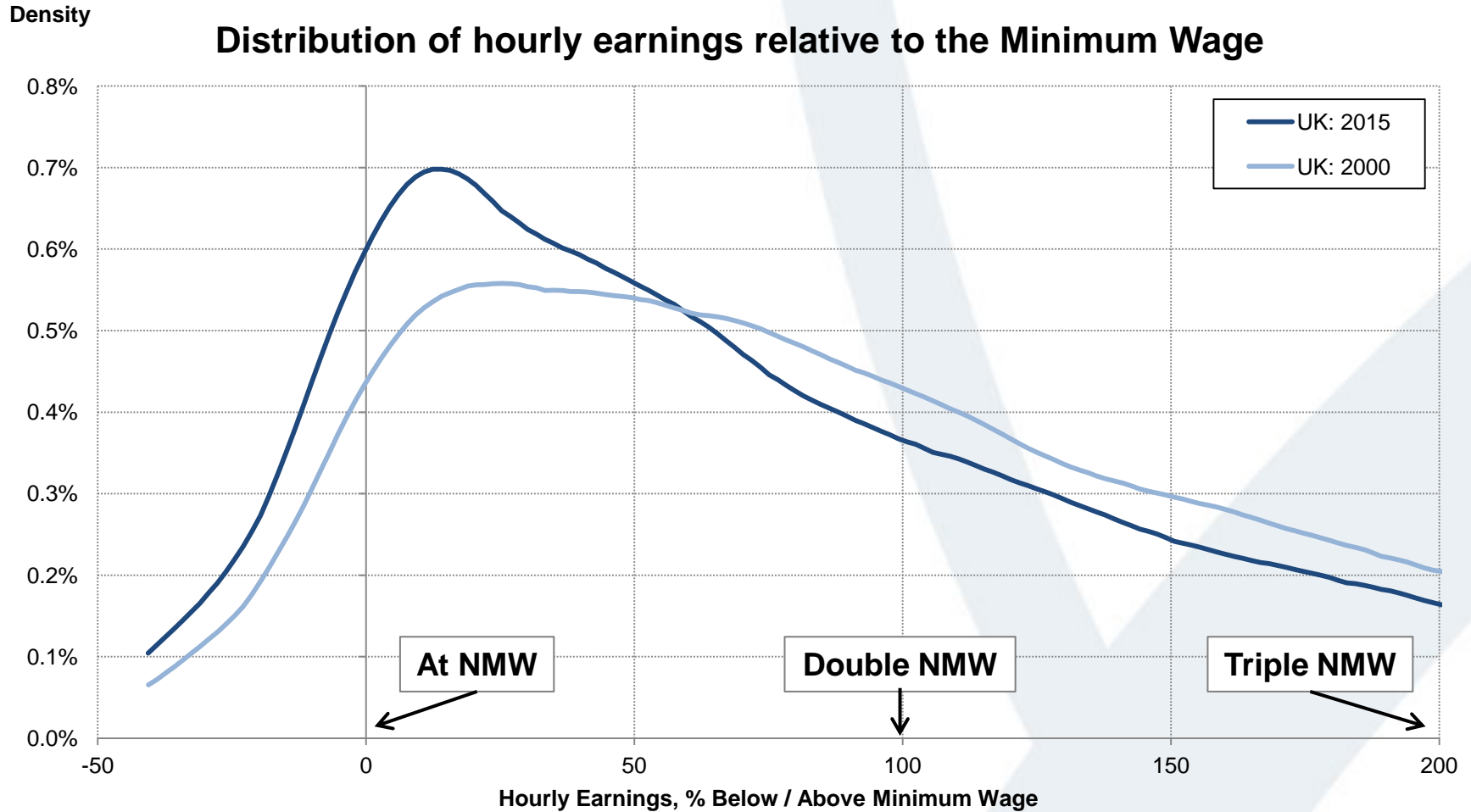
- Substantial variation in the rates of hourly pay for employees in the UK...
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# Distribution of earnings: levels

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- Substantial variation in the rates of hourly pay for employees in the UK...
- ...but there is an emerging 'mass' in the distribution at the minimum wage...
- ... as well as a growing concentration of individuals just above the minimum wage...

# Compression above NMW?



Source: Labour Force Survey, ONS calculations.

# ASHE - levels

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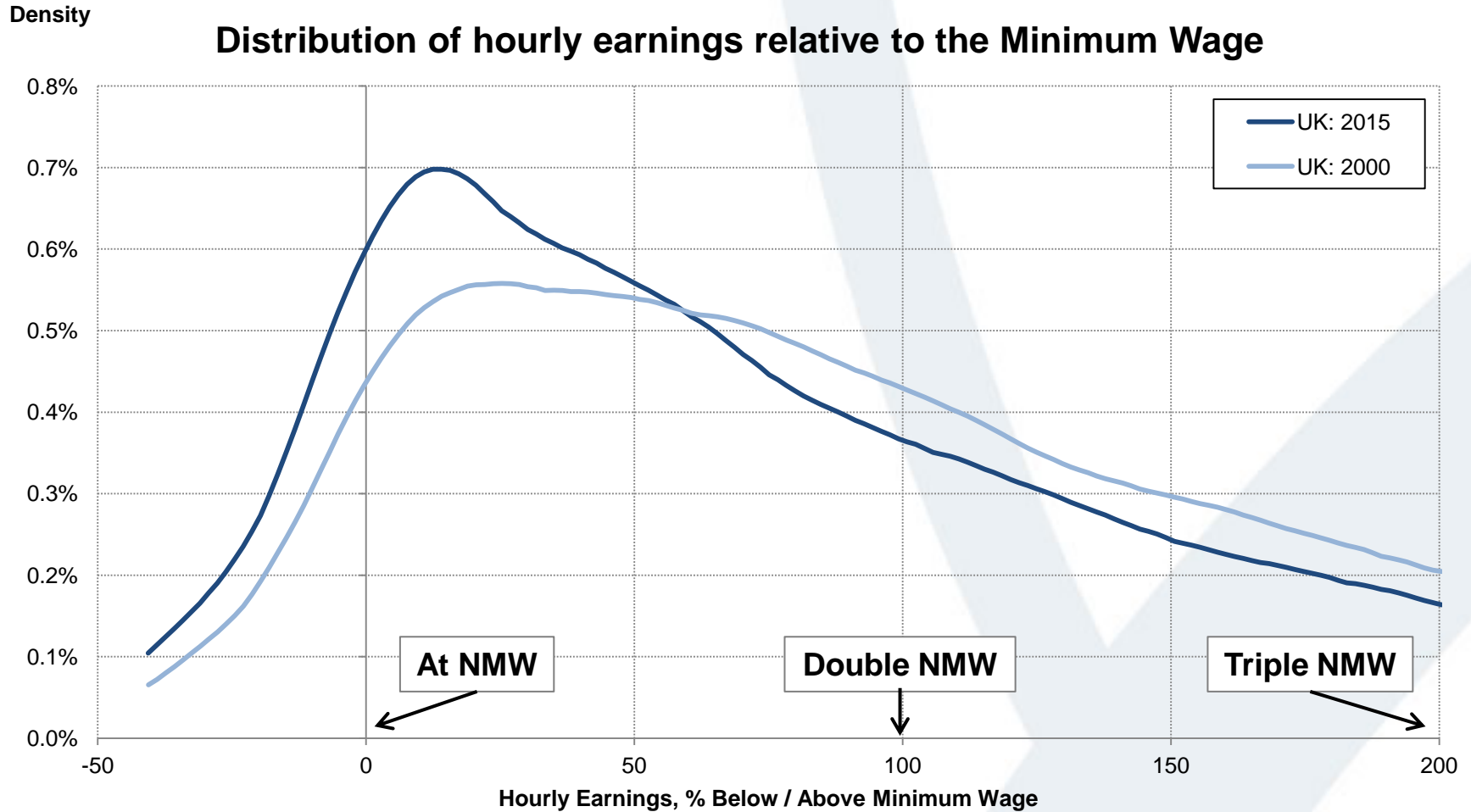
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# ASHE - levels

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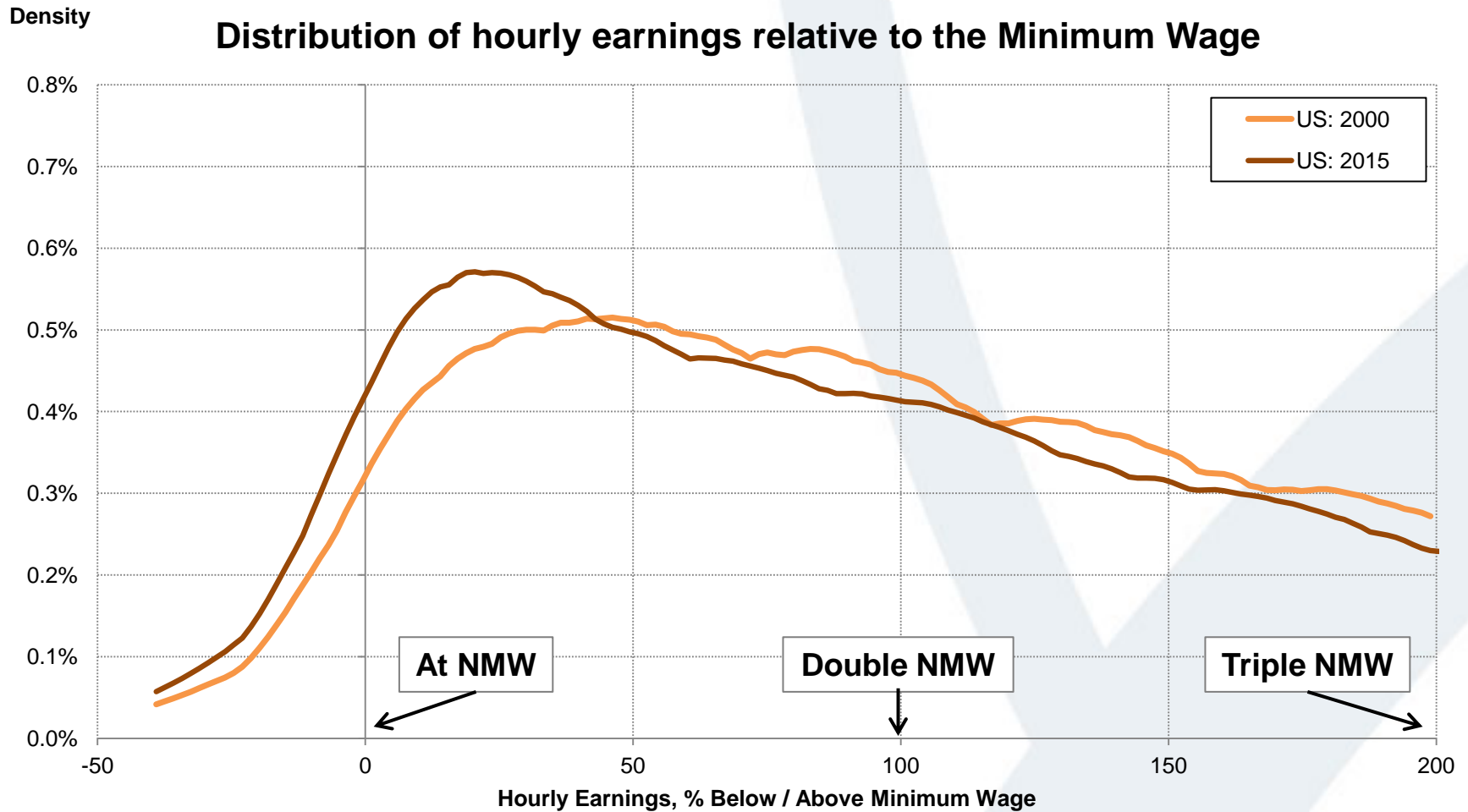
- Substantial variation in the rates of hourly pay for employees in the UK...
- ...but there is an emerging 'mass' in the distribution at the minimum wage...
- ... as well as a growing concentration of individuals just above the minimum wage...
- ... and there is some evidence that this experience is not unique to the UK.

# Compression above NMW?



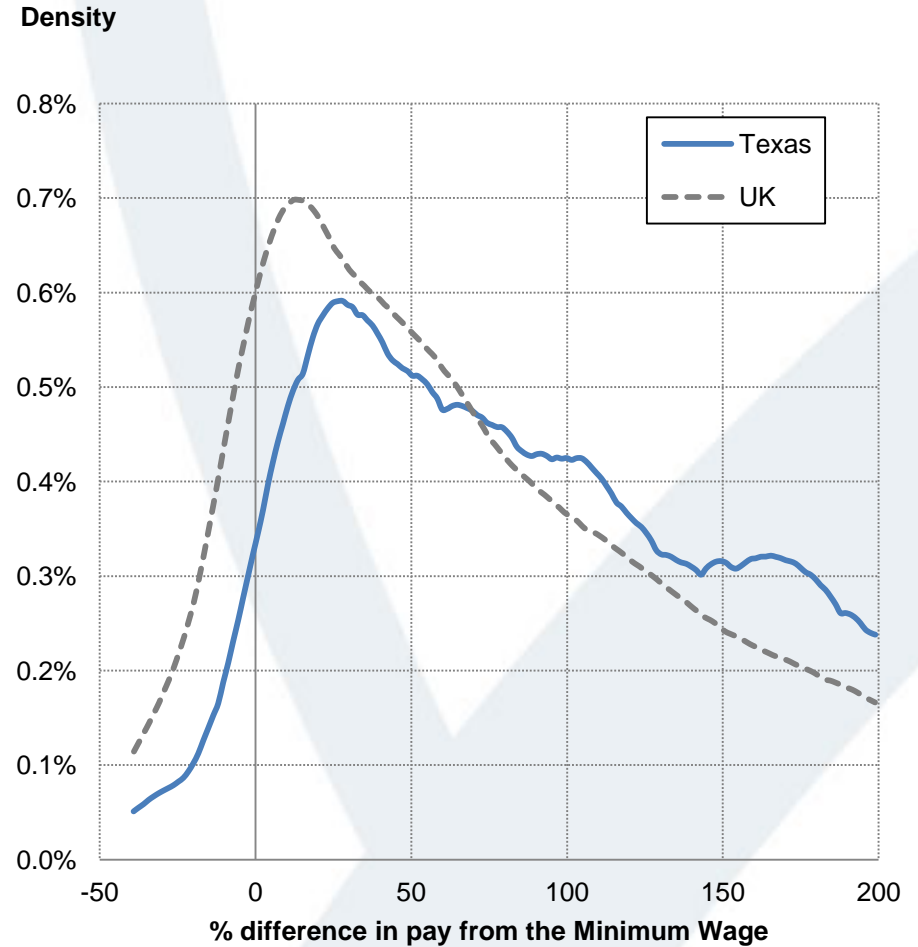
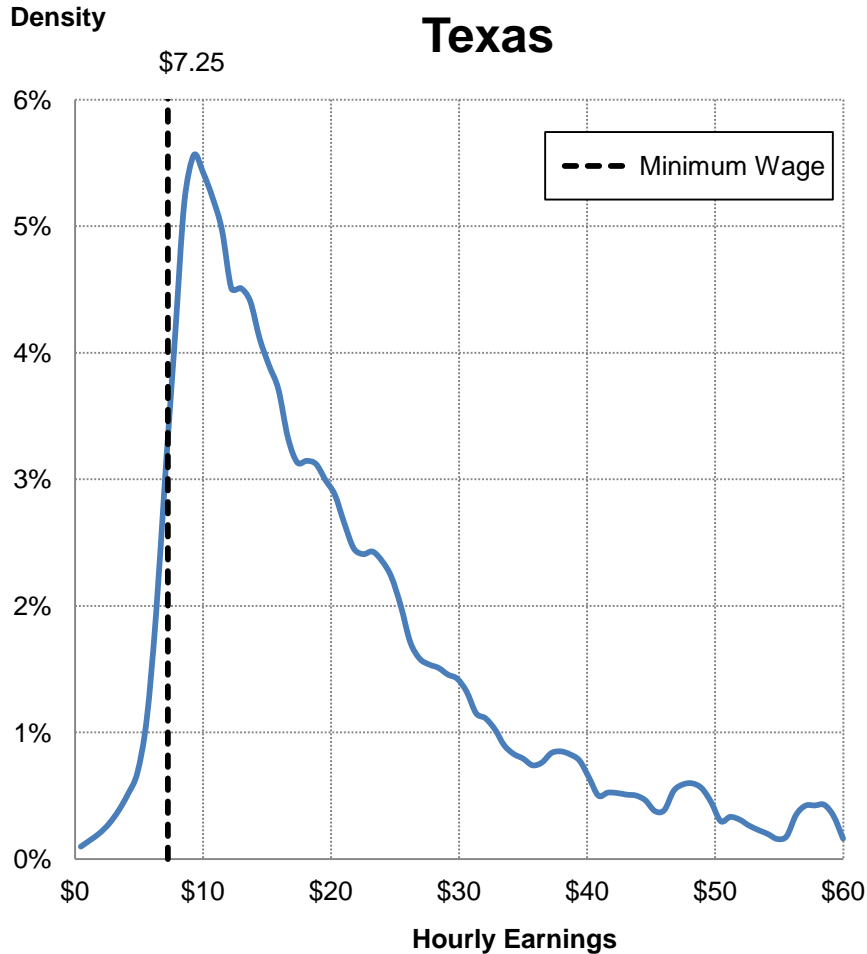
Source: Labour Force Survey, ONS calculations.

# Compression? Comparison with the US



Source: US Current Population Survey, ONS calculations.  
Note: State and Federal minimum wages for 1<sup>st</sup> January used.

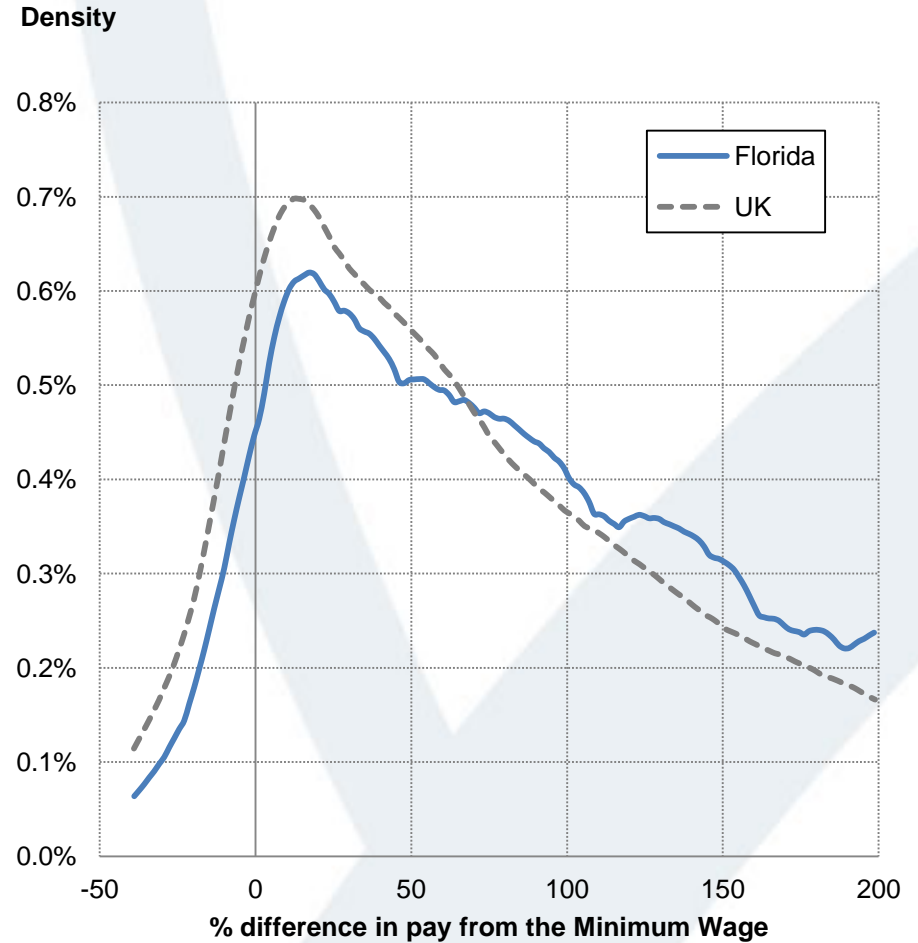
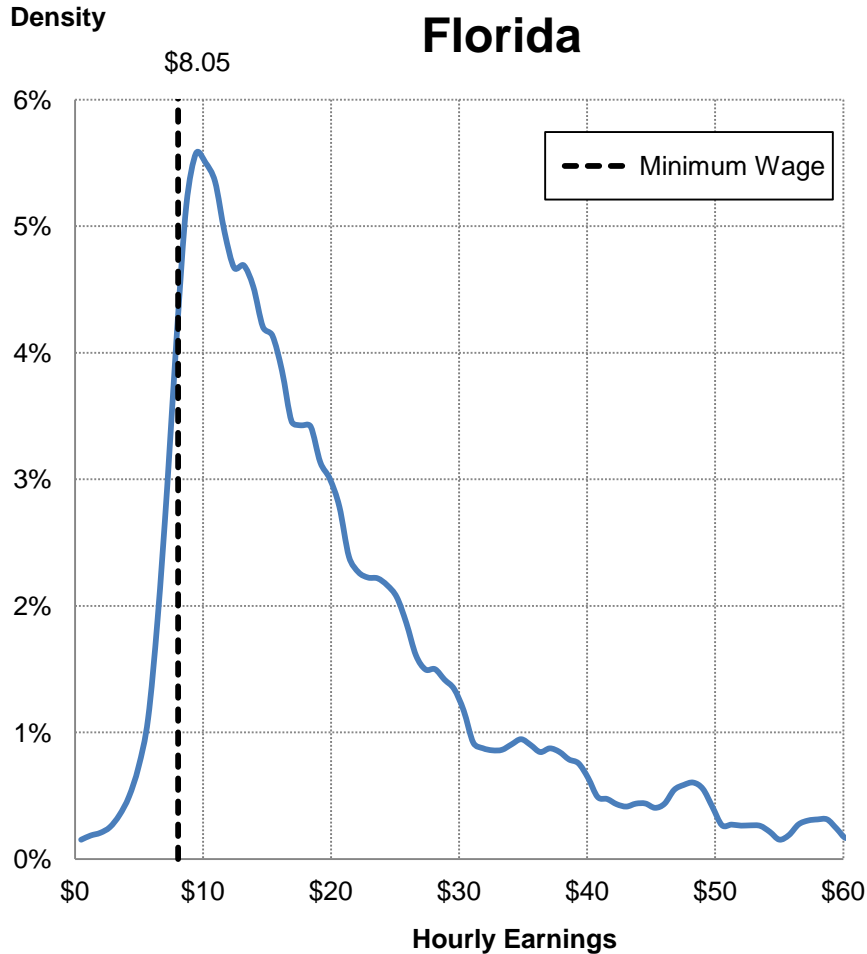
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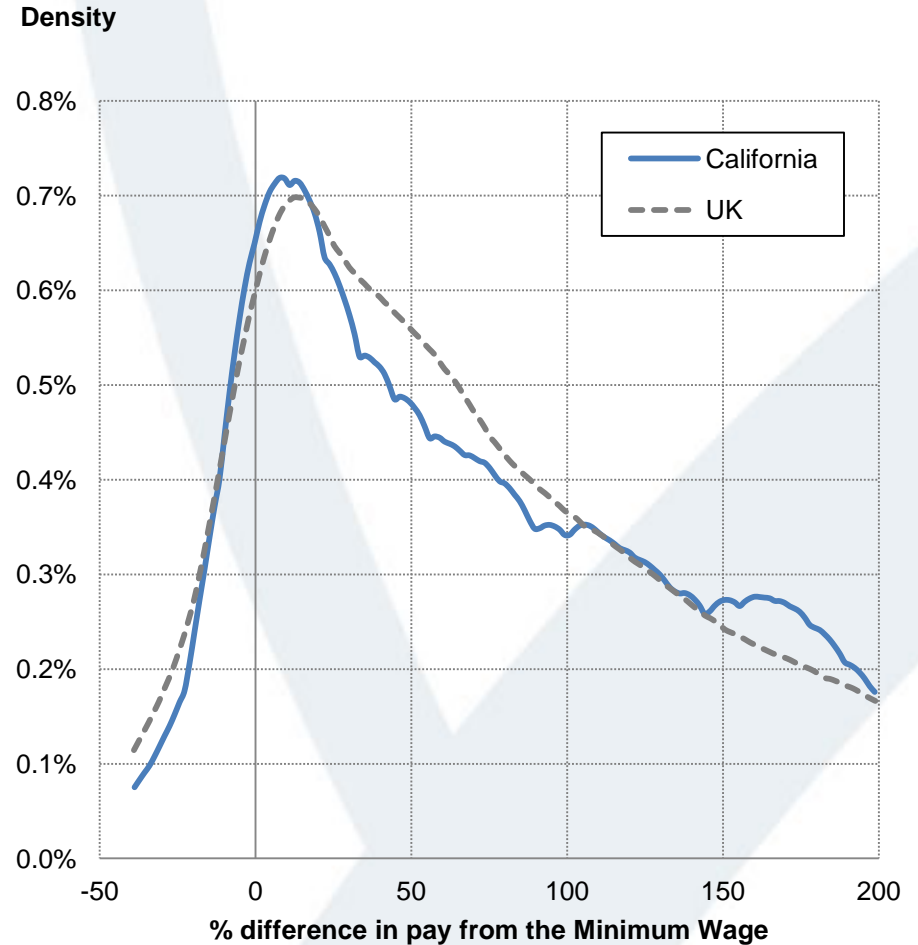
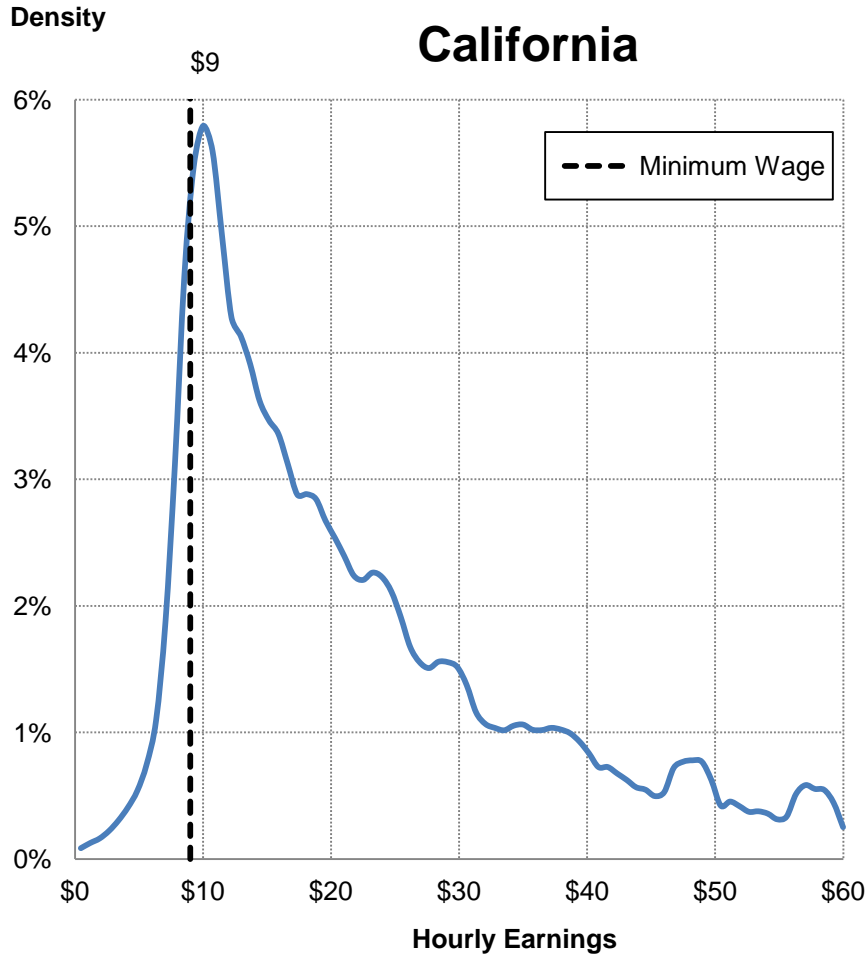


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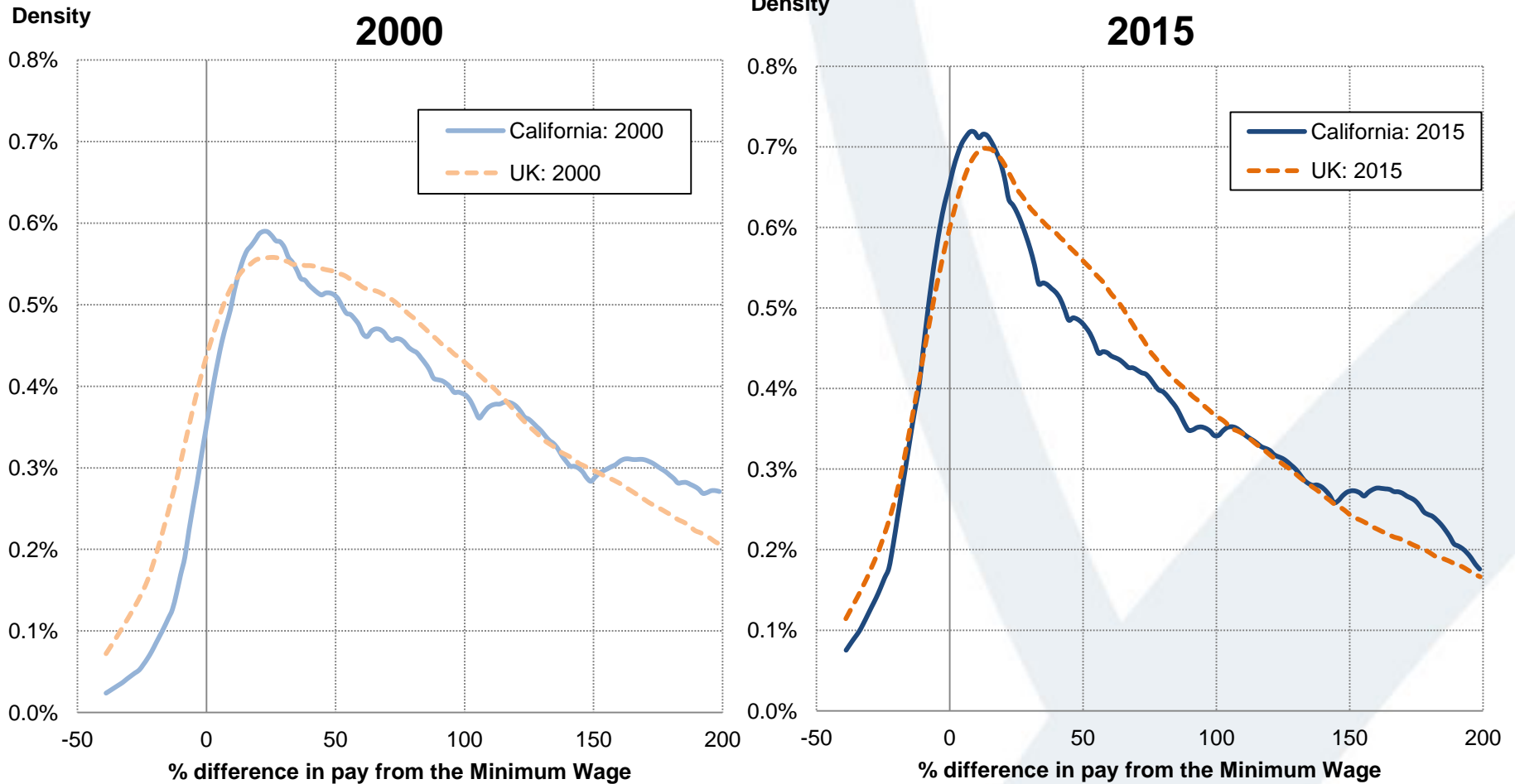
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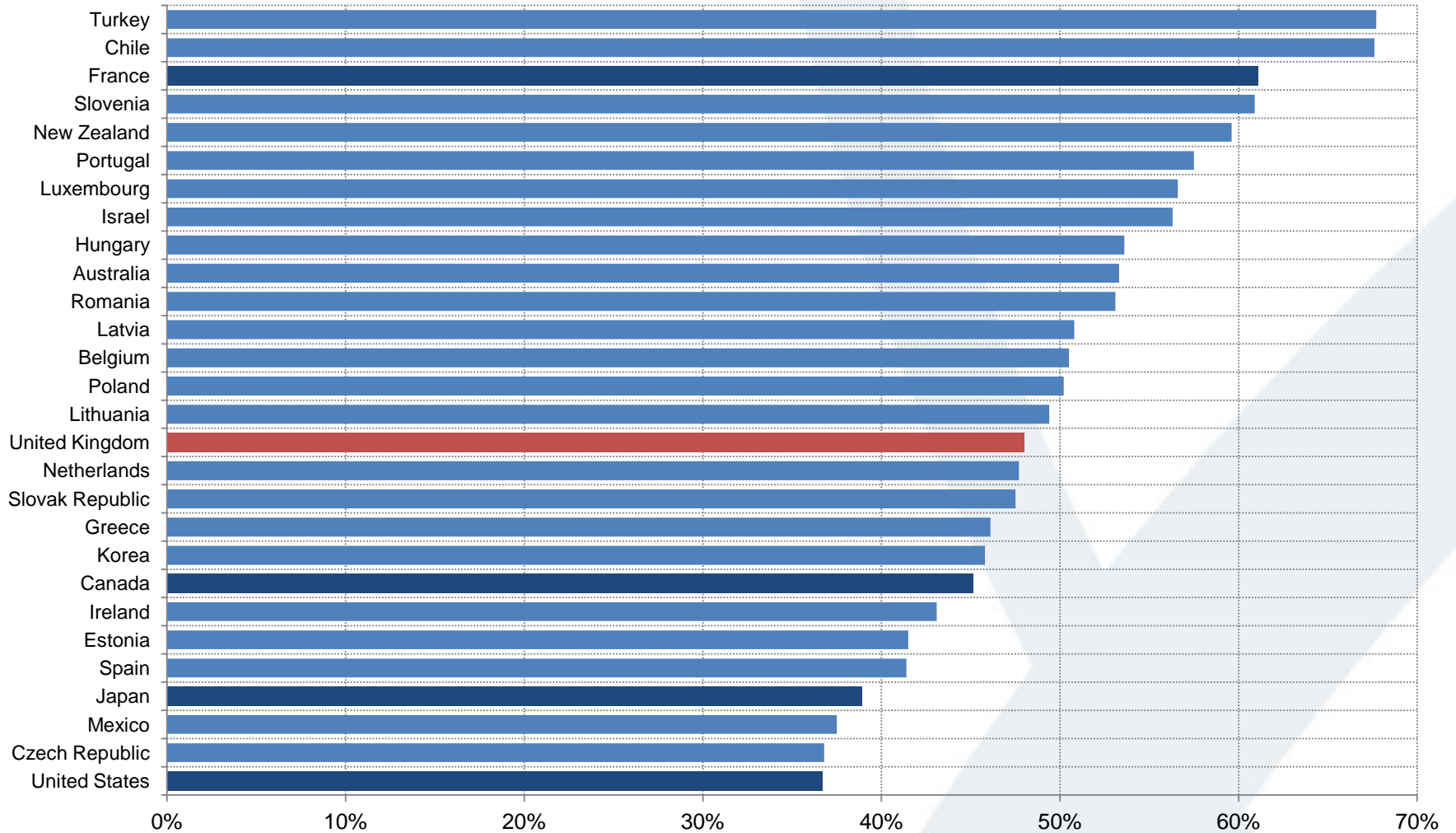
# Compression? Comparison with the US



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# Proportion of jobs paying close to NMW

Minimum Wage Relative to Median Wage of Full-time Workers: 2014



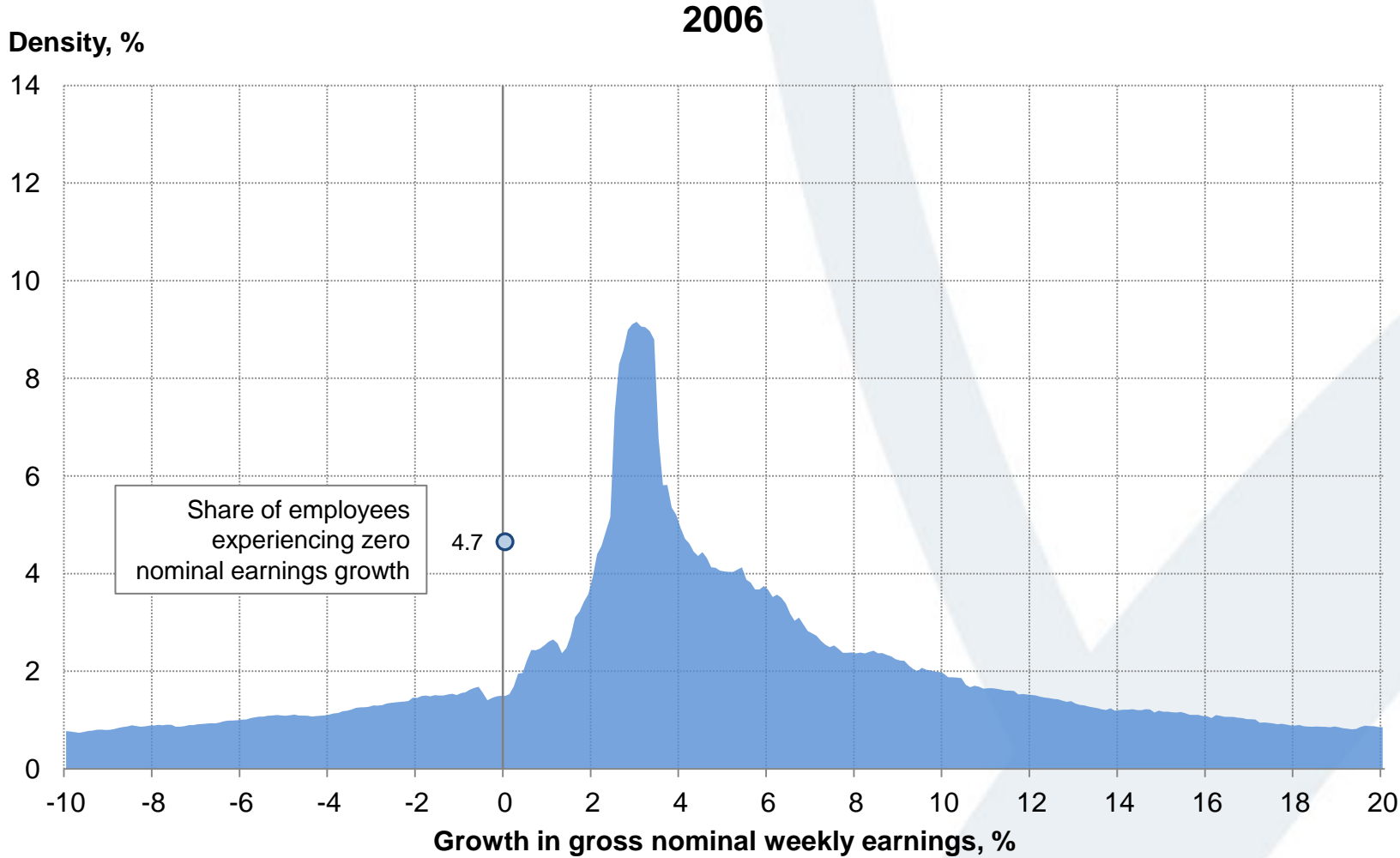
Source: OECD

# ASHE - growth

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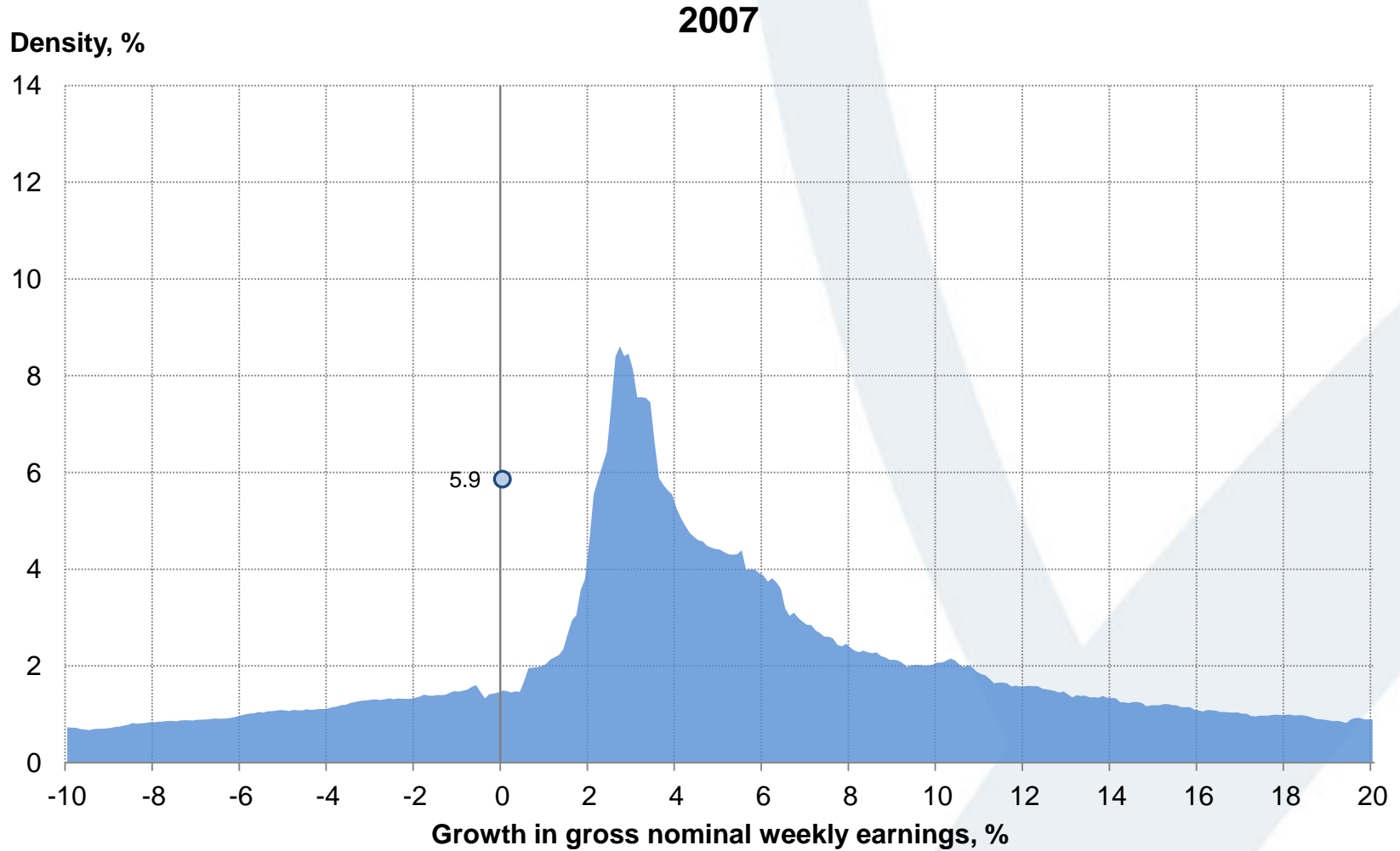
- While the levels are interesting from a distributional perspective, earnings growth is key from a 'spare capacity' perspective.
- Can examine the 'typical experience of earnings growth' using data on those who are employed in consecutive periods. This differs from the 'growth of the median'
- Distribution of earnings growth also varies considerably through time

# ASHE – distribution of earnings growth



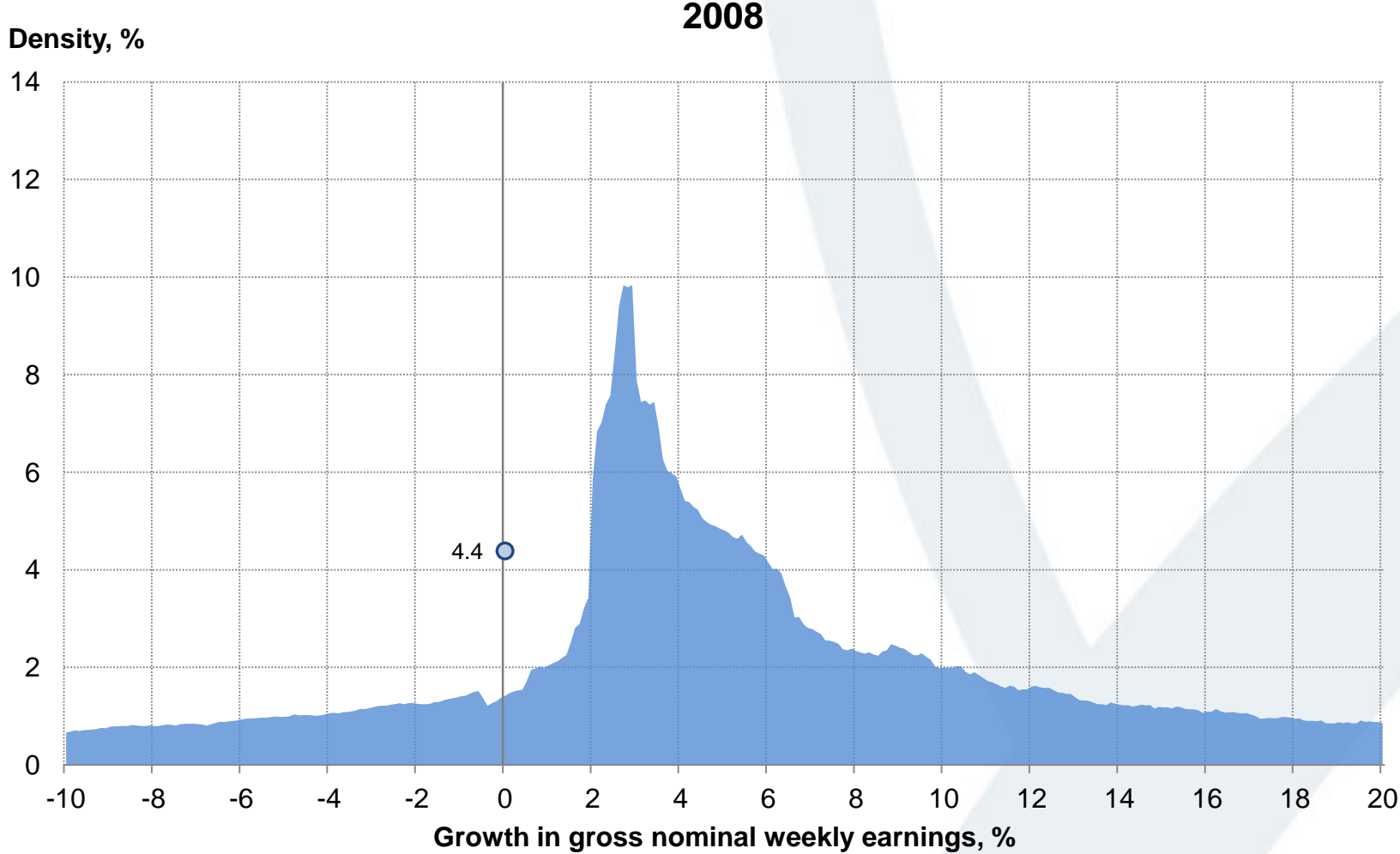
Source: Annual Survey of Hours and Earnings, ONS calculations

# ASHE - distribution of earnings growth



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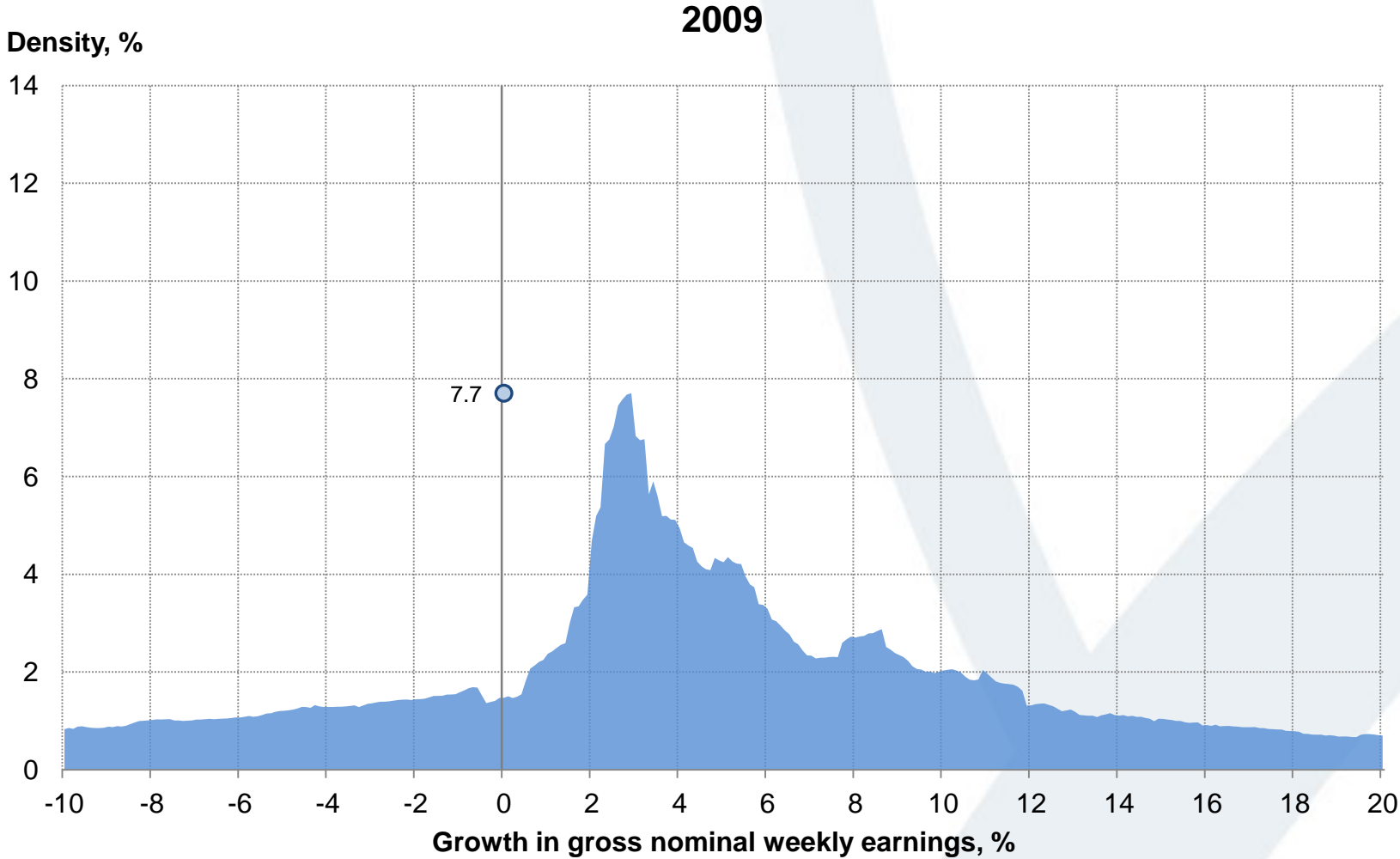
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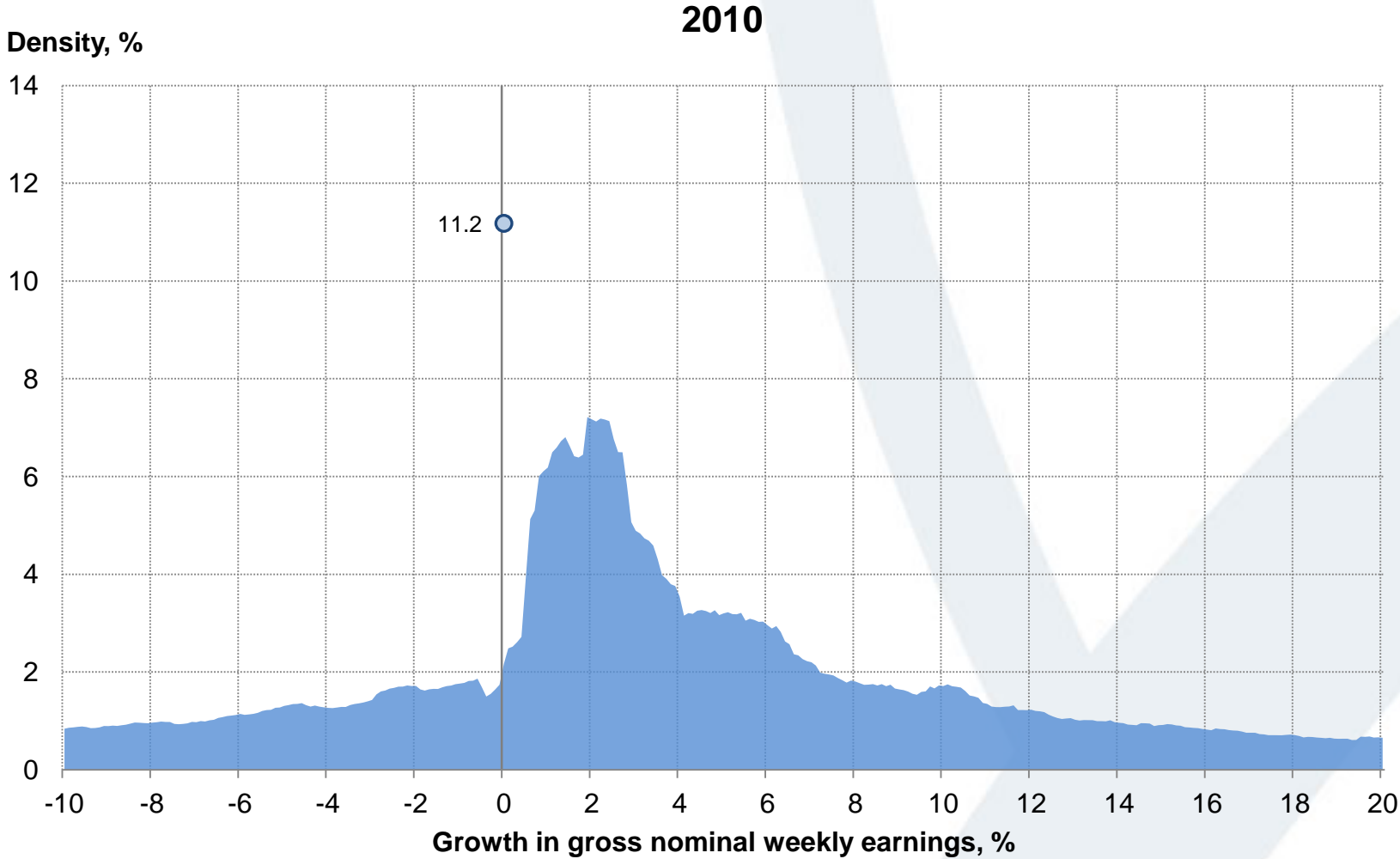


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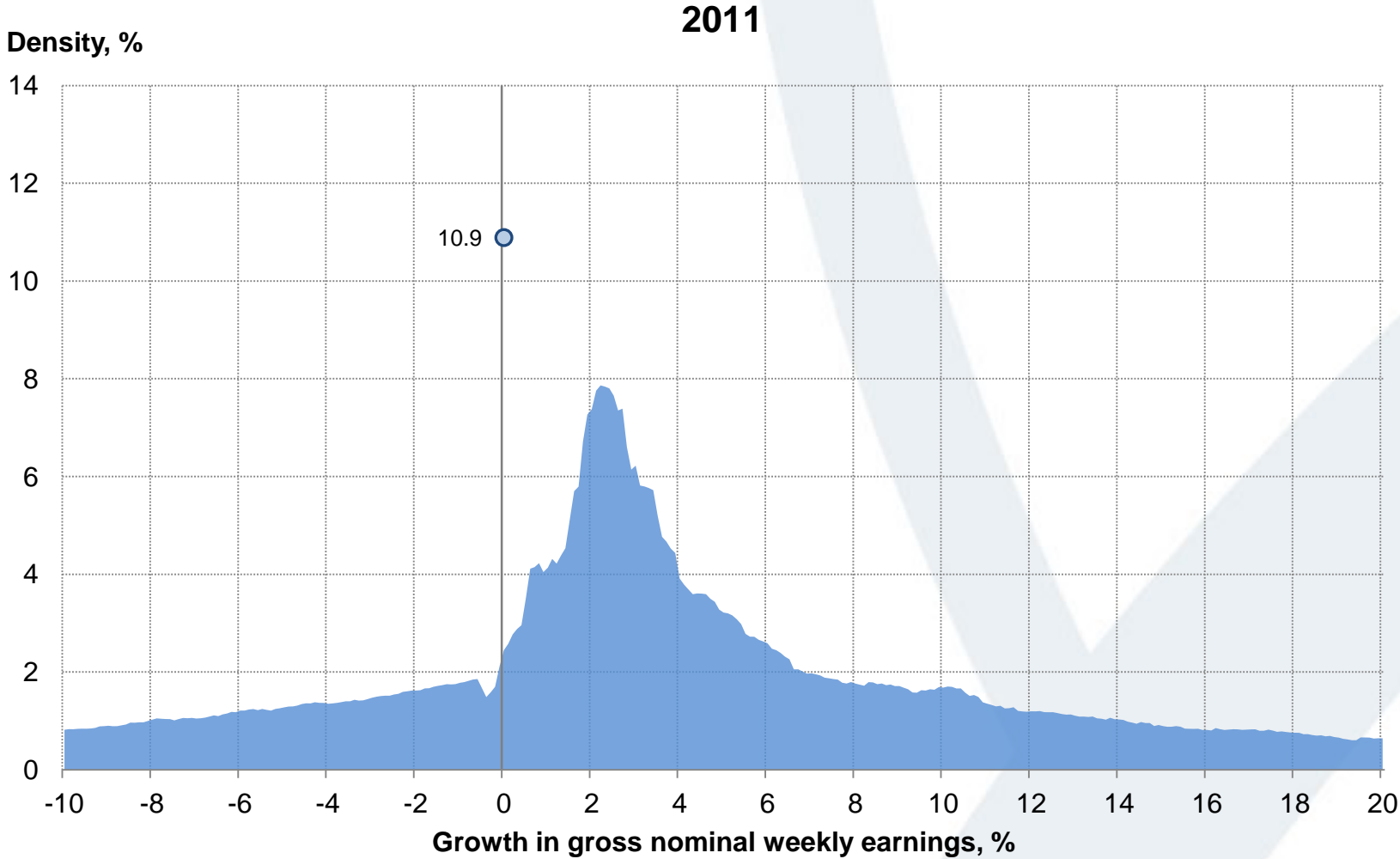
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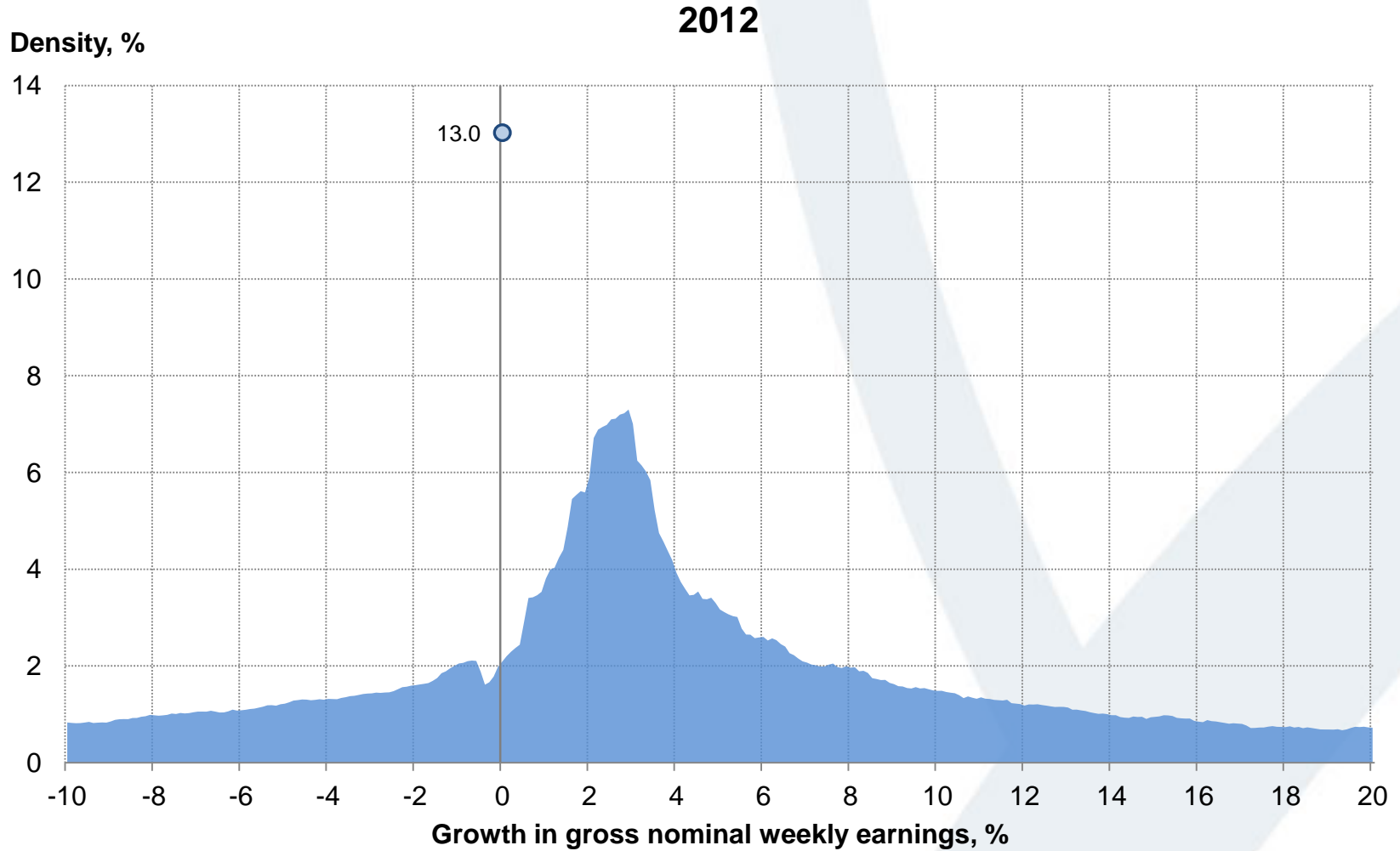
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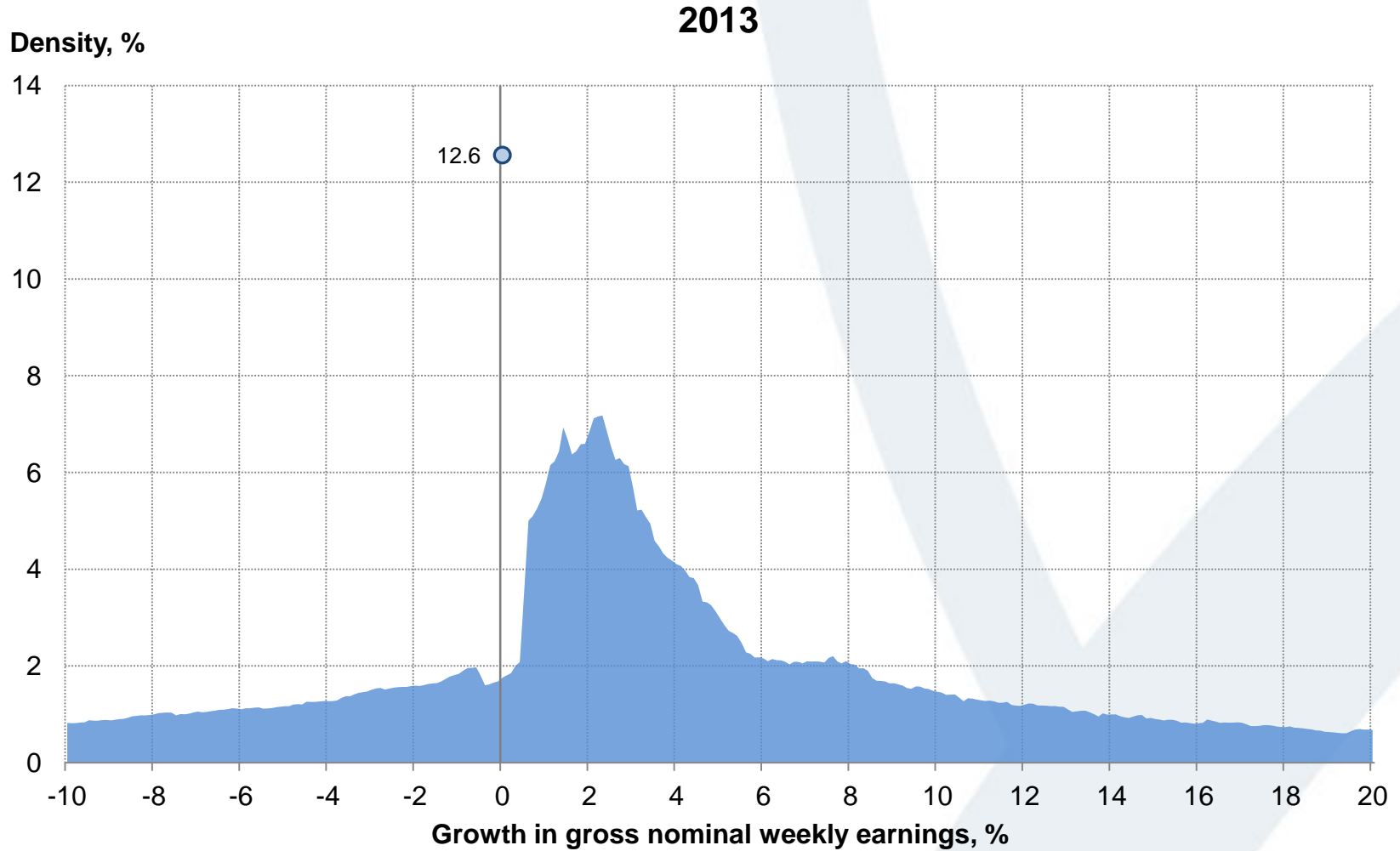
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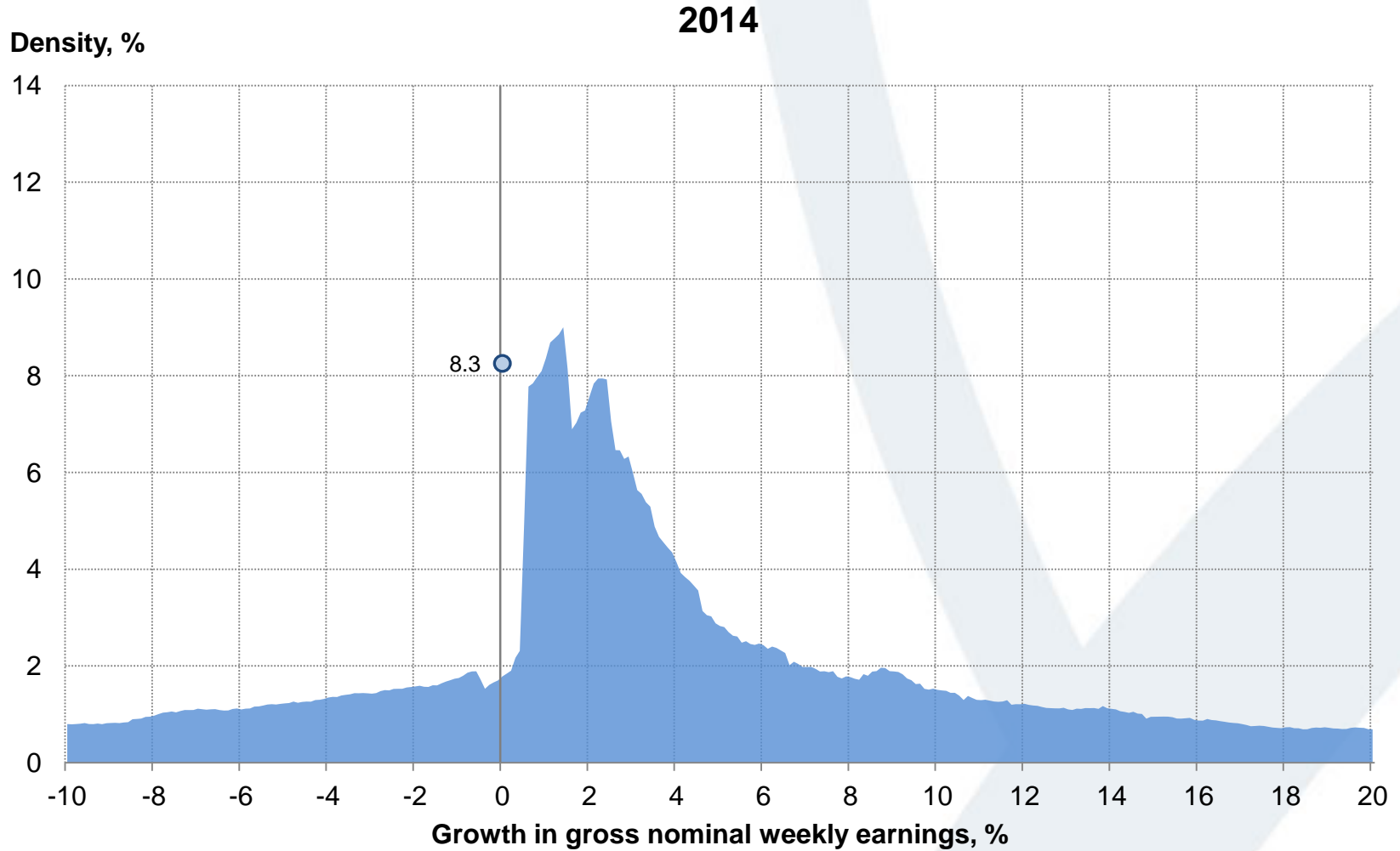
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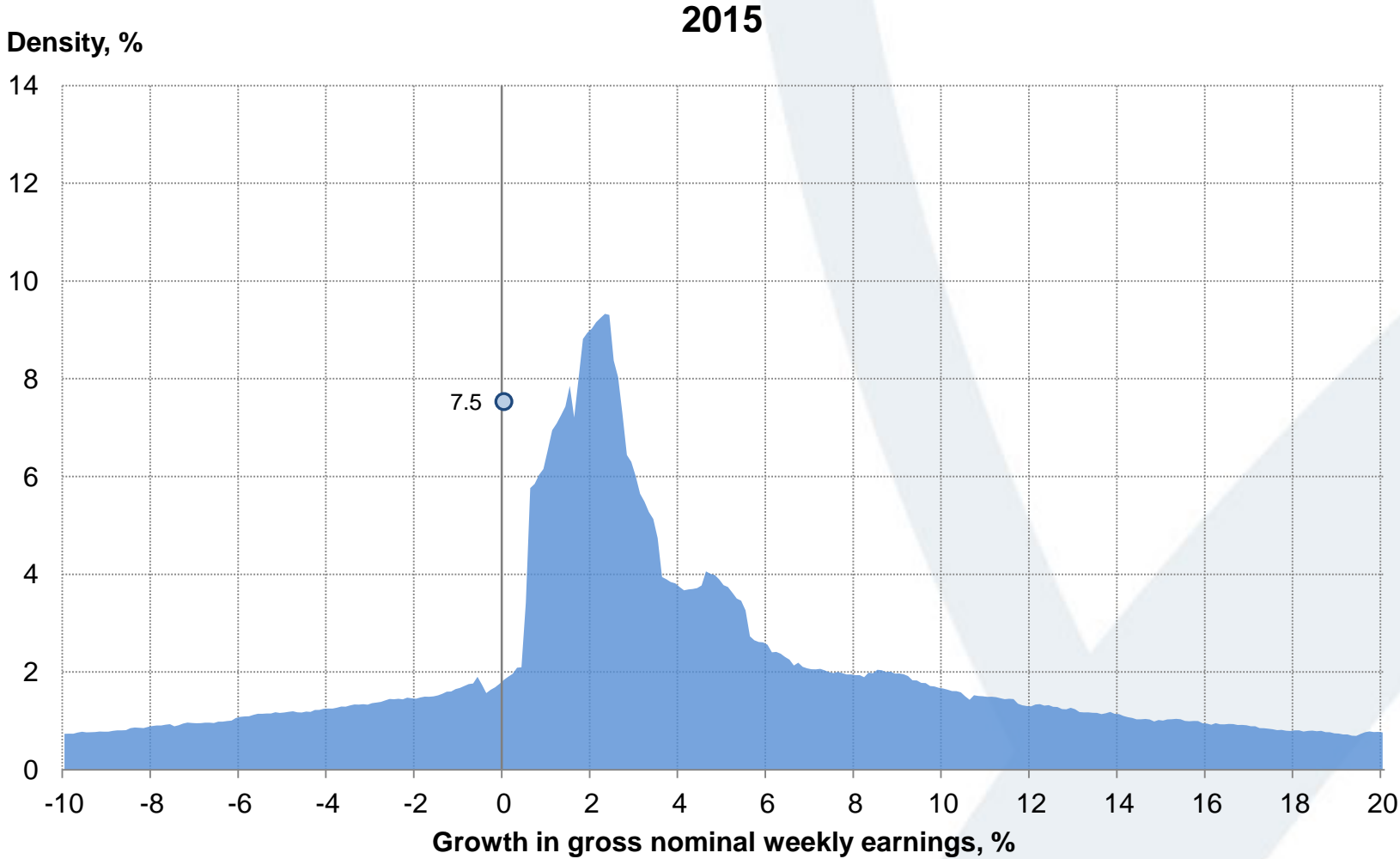
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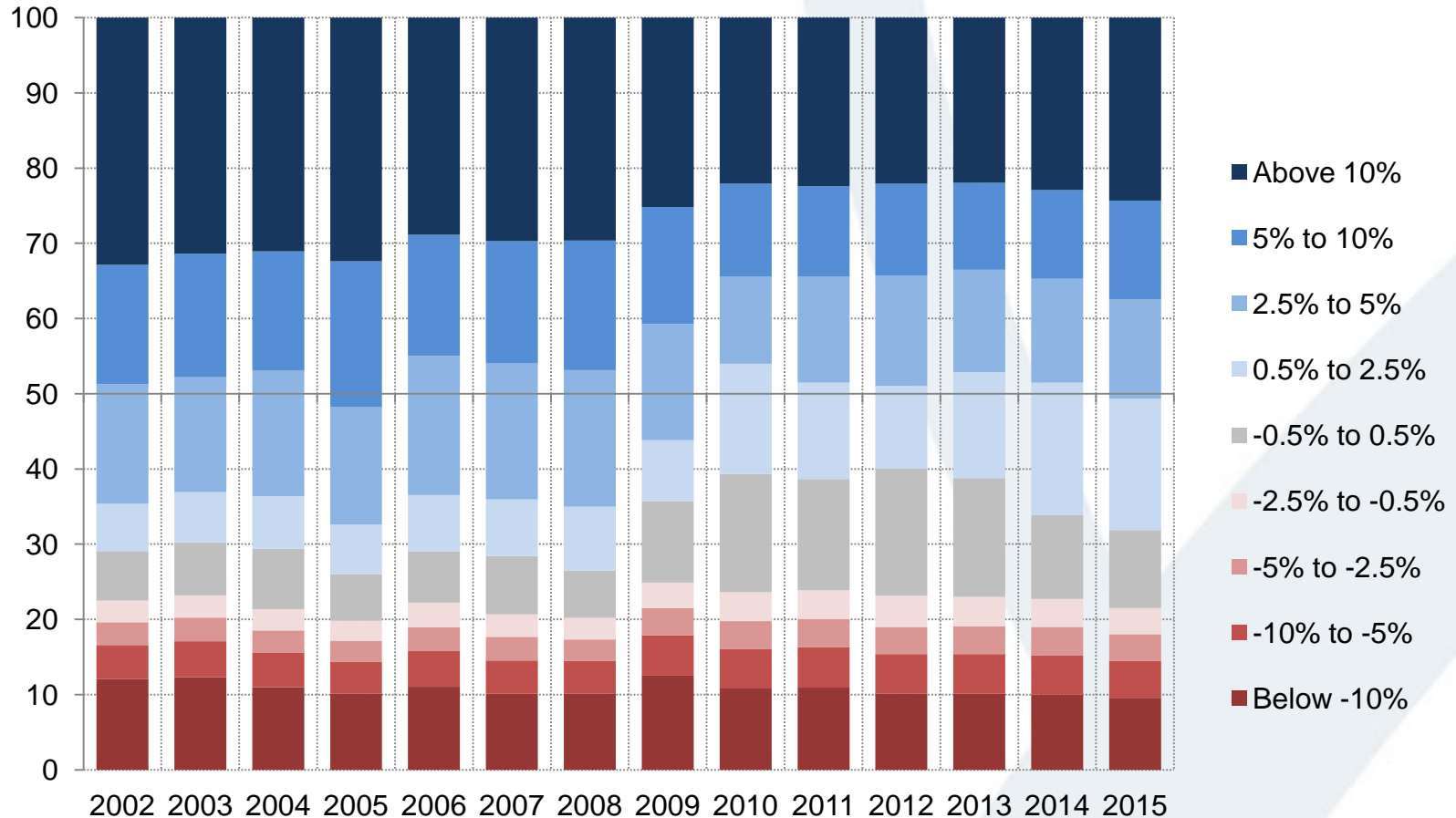


Source: Annual Survey of Hours and Earnings, ONS calculations

# Distribution of nominal earnings growth

## Percentages of FT Employees by their annual rate of nominal weekly earnings growth

% of employees employed full-time in both years

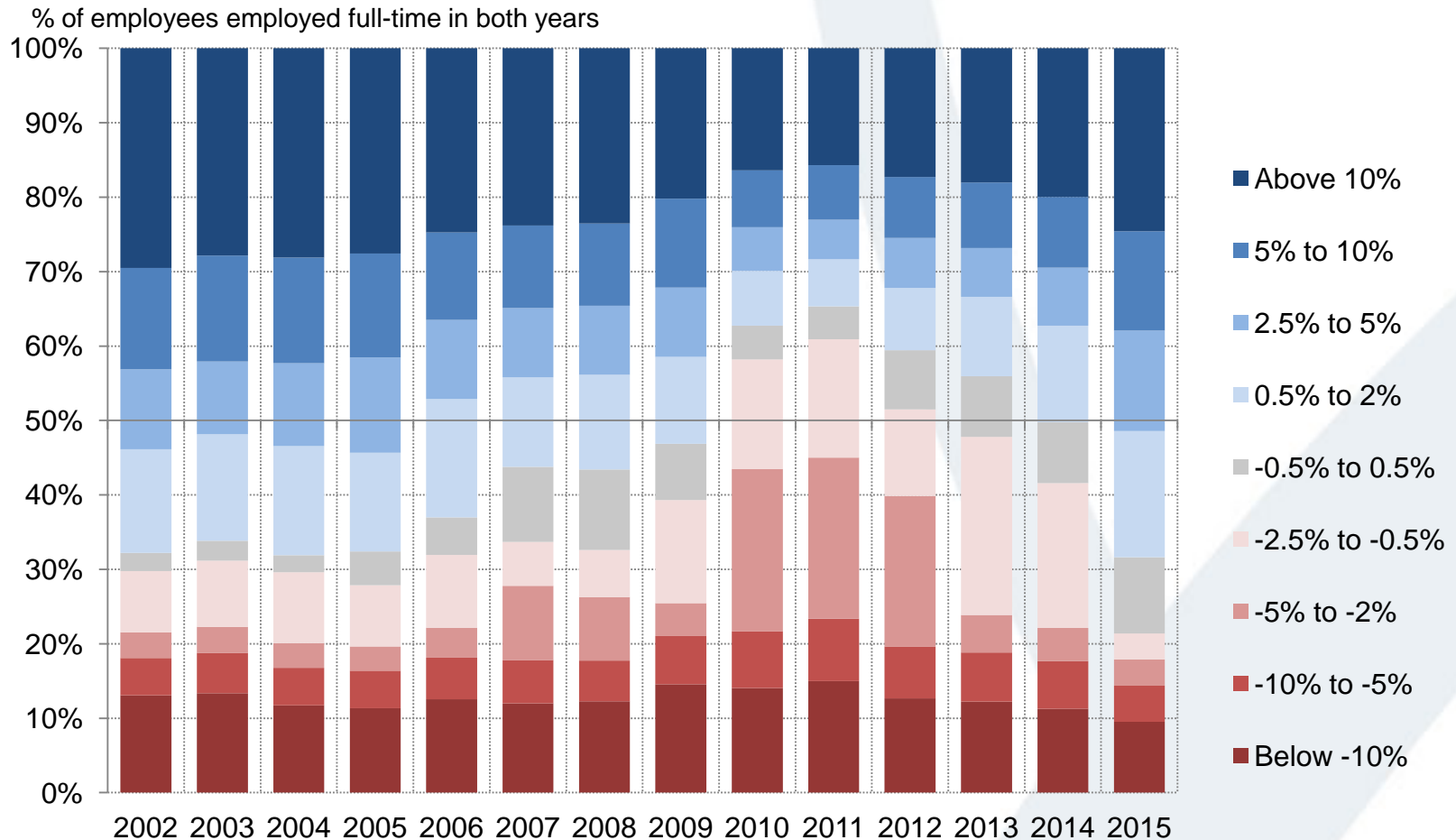


Source: Annual Survey of Hours and Earnings, ONS calculations



# Real earnings growth more prevalent in 2015...

## Percentages of FT Employees by their annual rate of real weekly earnings growth

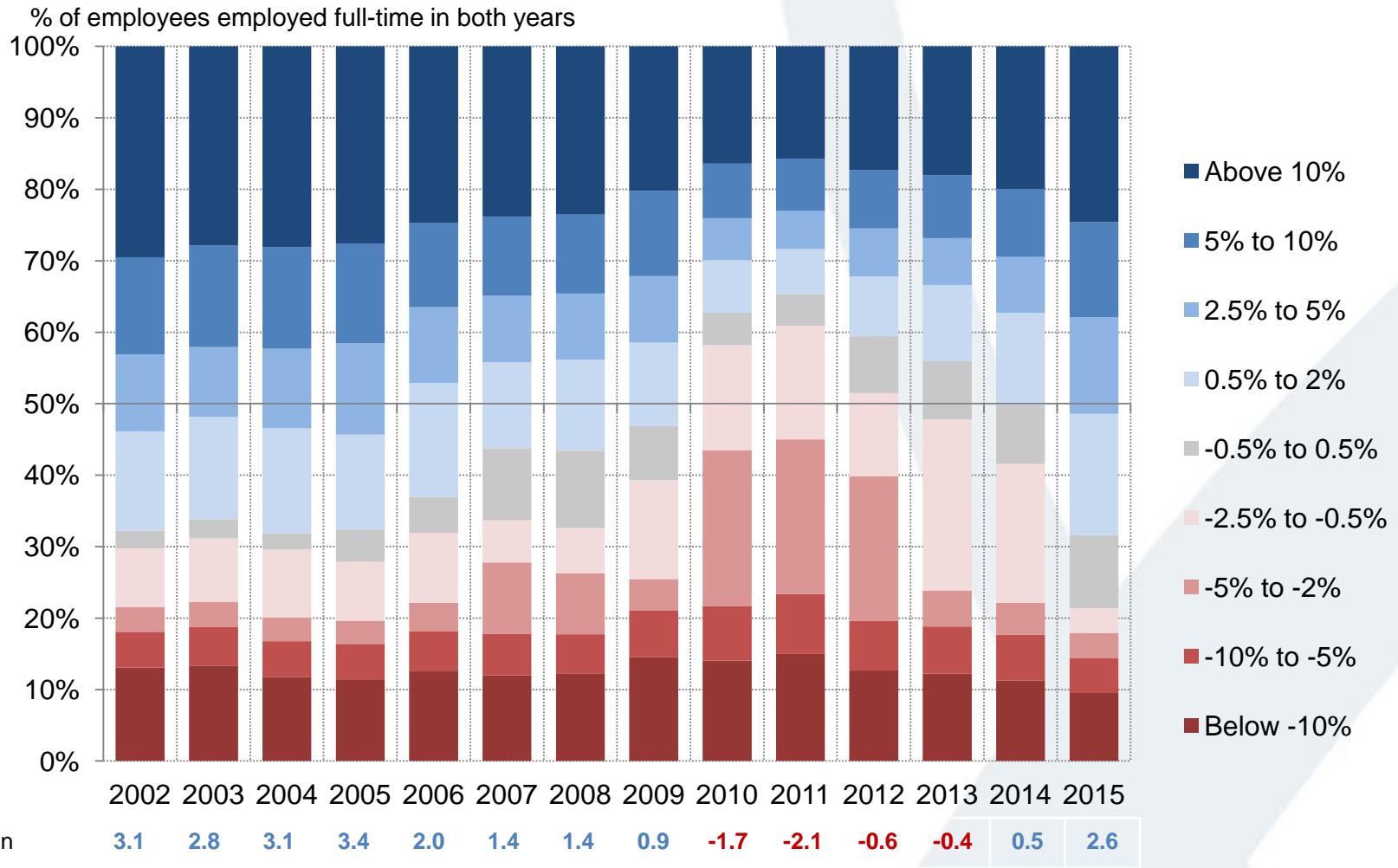


Source: Annual Survey of Hours and Earnings, ONS calculations

Notes: Real earnings calculated using the Consumer Prices Index (CPI)

# Real earnings growth more prevalent in 2015...

Percentages of FT Employees by their annual rate of real weekly earnings growth



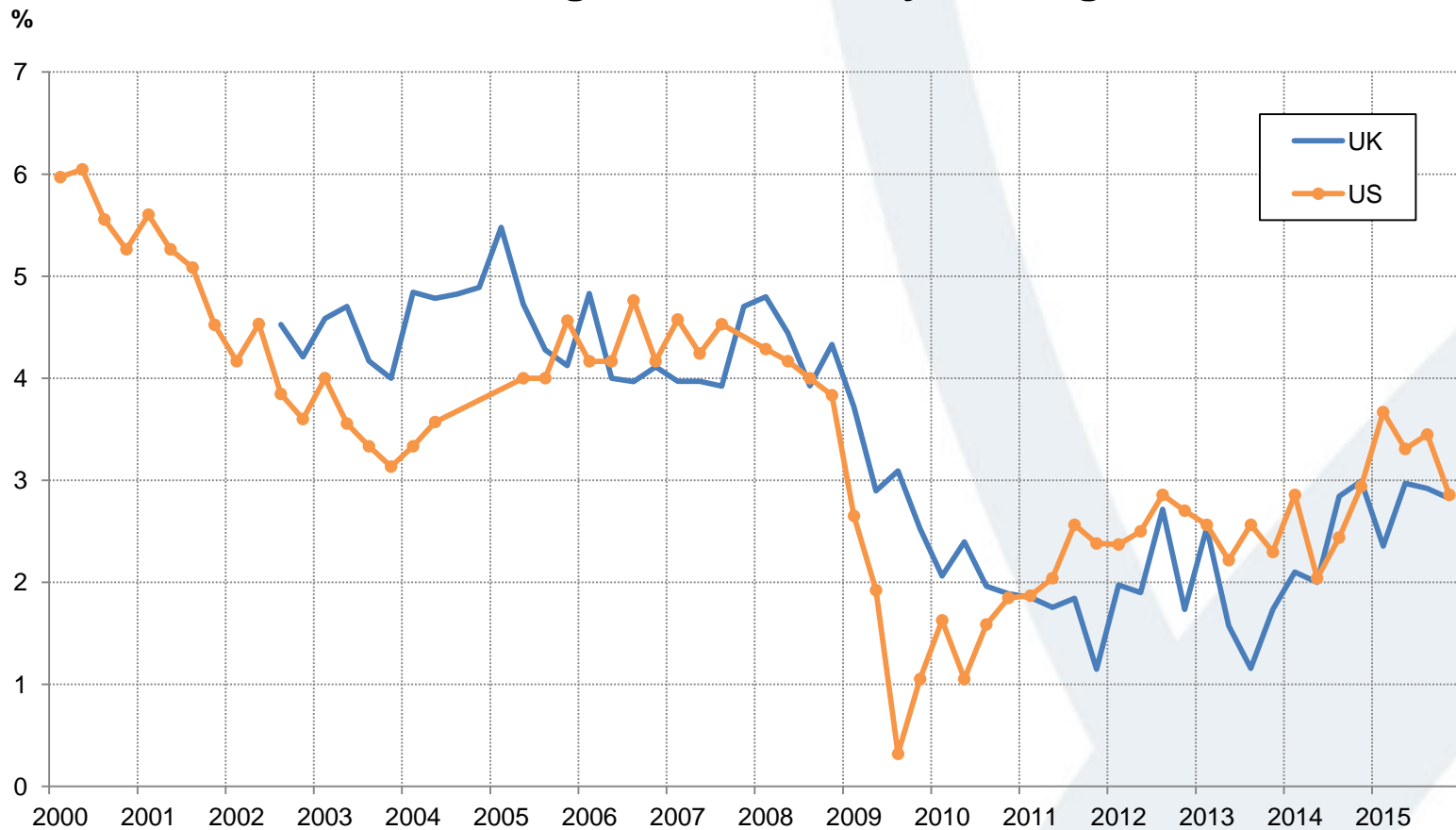
## ... consistent with other sources



Source: UK Labour Force Survey, Annual Survey of Hours and Earnings, ONS calculations

# Compared with the US

## Median growth in weekly earnings



Source: UK Labour Force Survey, US Current Population Survey, ONS calculations

# Conclusions

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- Analysis suggests that the typical experience of pay growth increased in 2015: the median rate of nominal earnings growth increased from 2.0% to 2.5% between 2014 and 2015.
- A majority of full time employees experienced substantial real earnings growth in 2015 for the first time since 2009.
- But much of the growth in real earnings has been driven by the moderation of inflation: in nominal terms, the position is little changed from 2011

# Questions?

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# Annex

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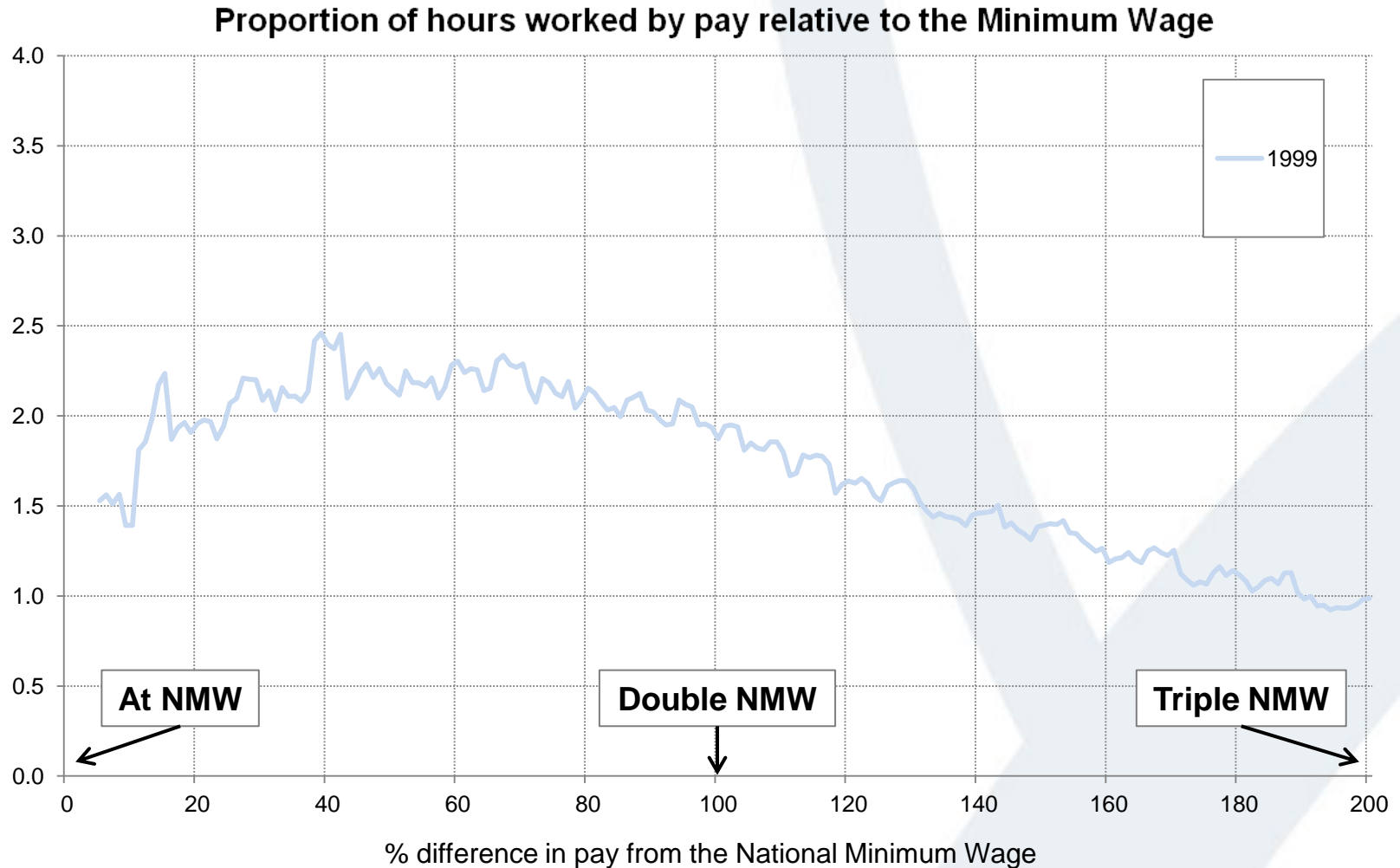
# Median growth & Growth in median

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- Growth in median pay =
  - *‘how pay at the centre of the earnings distribution has changed between periods’*
  - *‘how pay for the individual at the middle of the earnings distribution in one year compares with pay for the individual at the middle of the earnings distribution a year later’*
  - *Not necessarily typical of changes in wages experienced by the majority of the continuously employed*
- Median growth rate of pay =
  - *‘the typical experience of earnings growth’*
  - *‘the rate of pay growth at the centre of the distribution of earnings growth’*



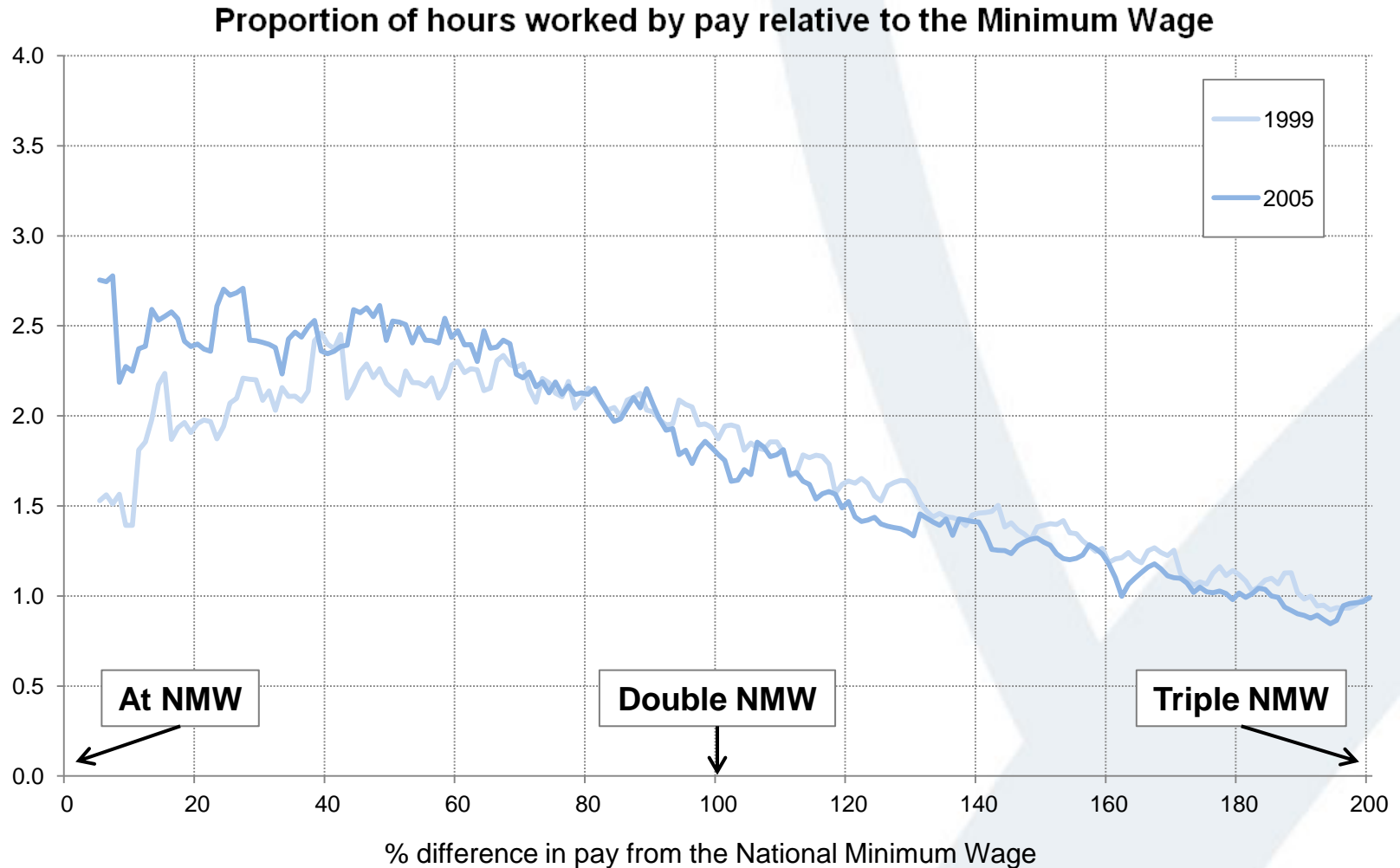
# Compression above NMW?



Source: Annual Survey of Hours and Earnings, ONS calculations.

Note: Series shown are rolling sums over the five preceding percentage points.

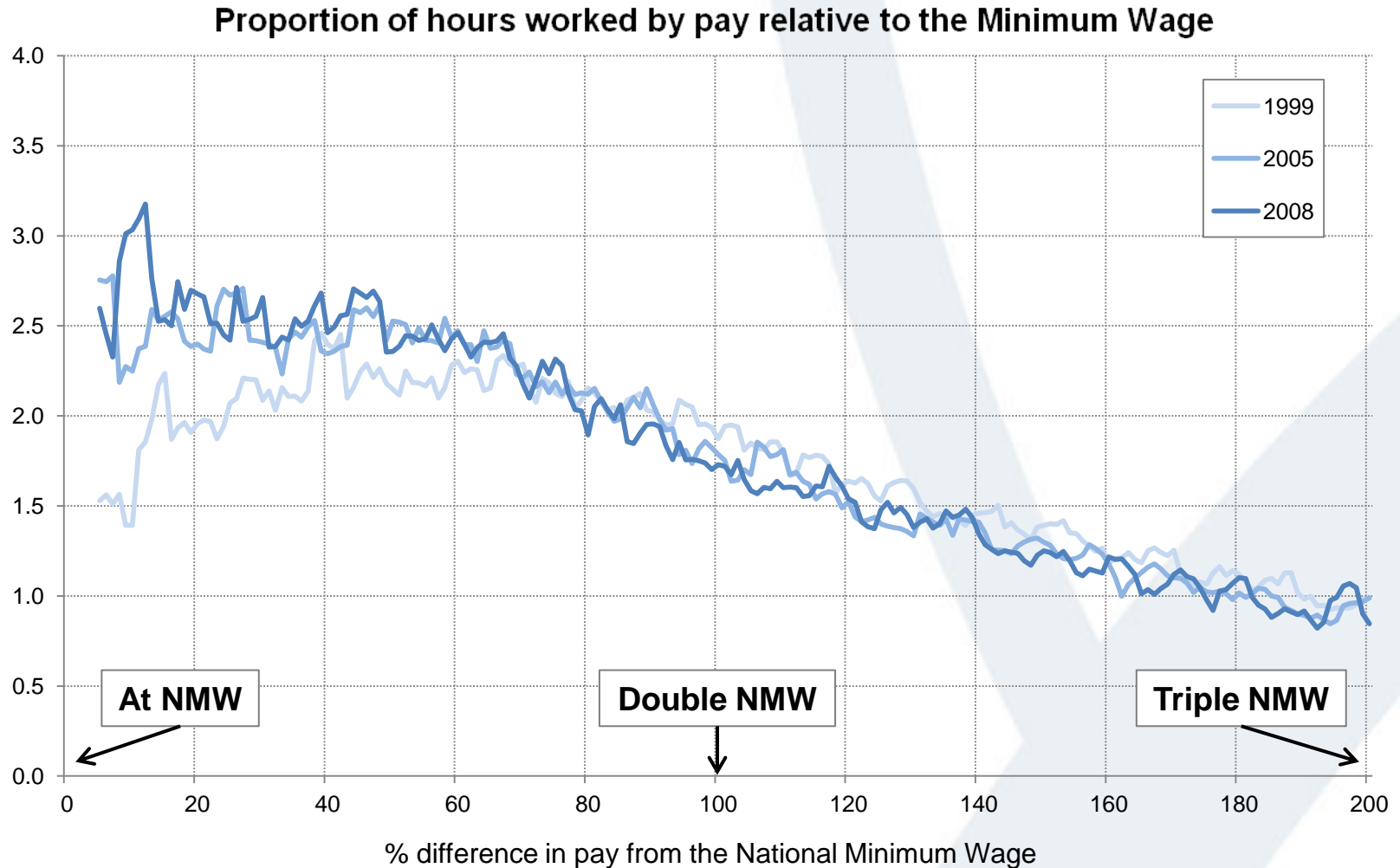
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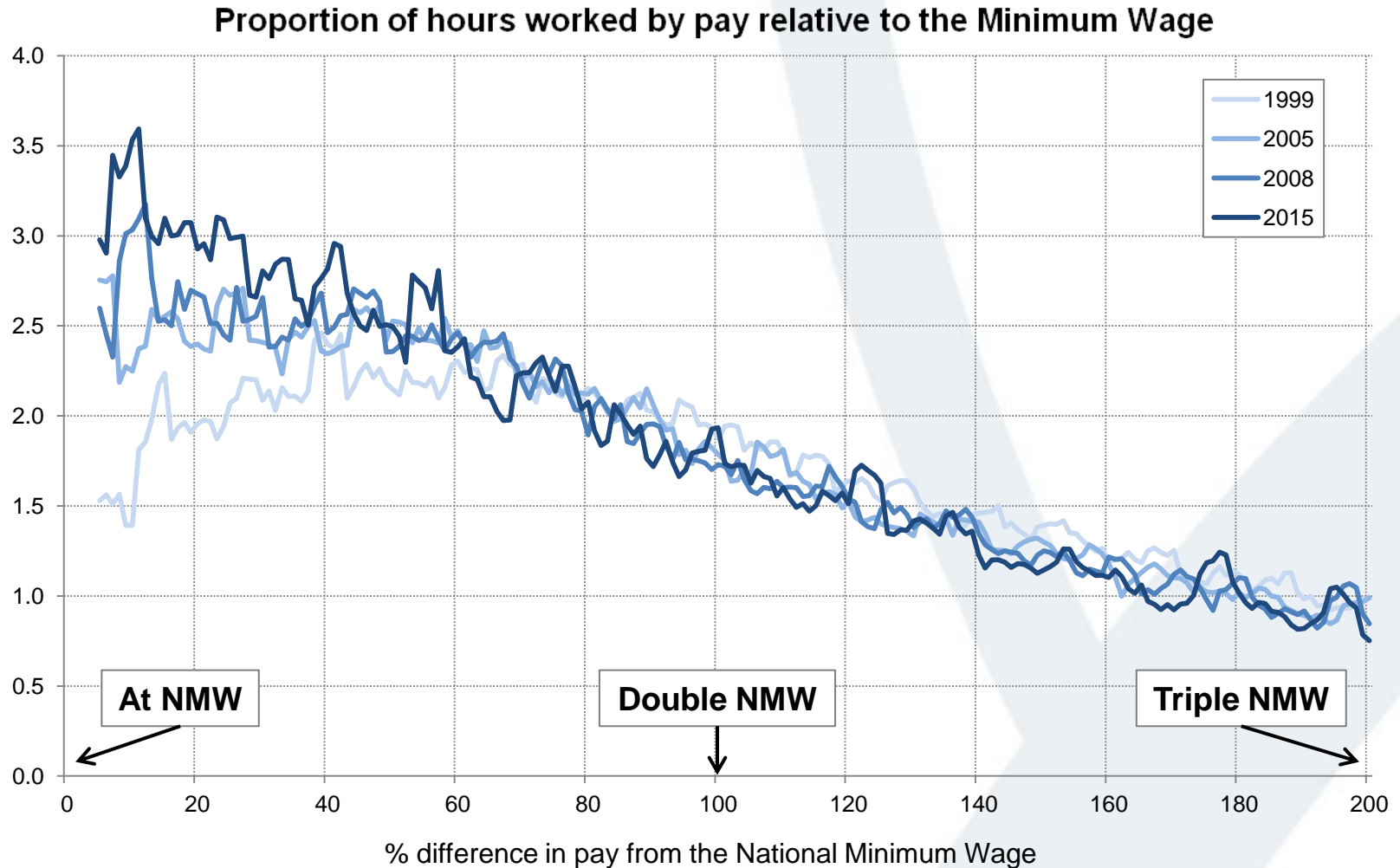
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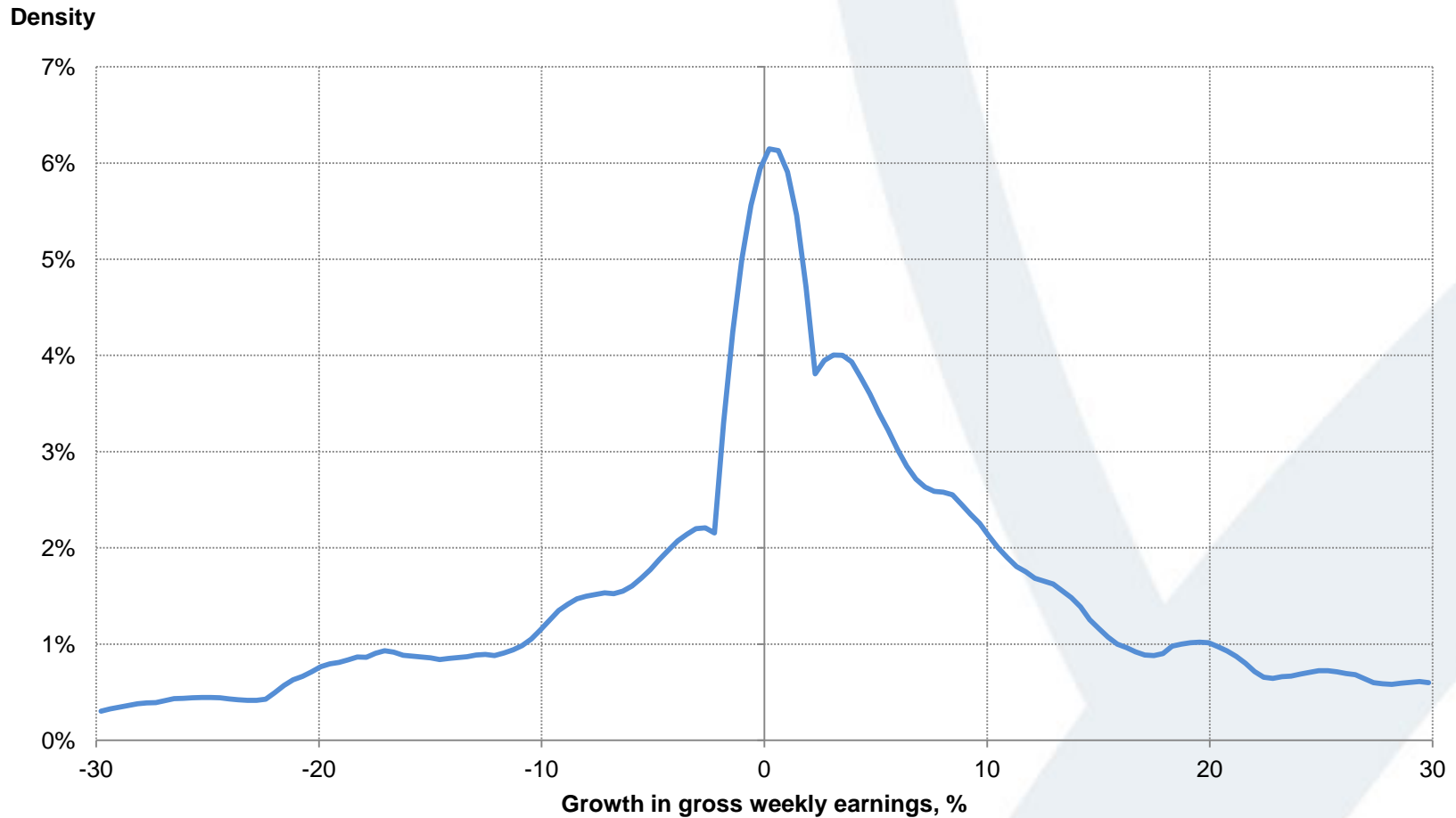


Source: Annual Survey of Hours and Earnings, ONS calculations.

Note: Series shown are rolling sums over the five preceding percentage points.

# Compared with the US

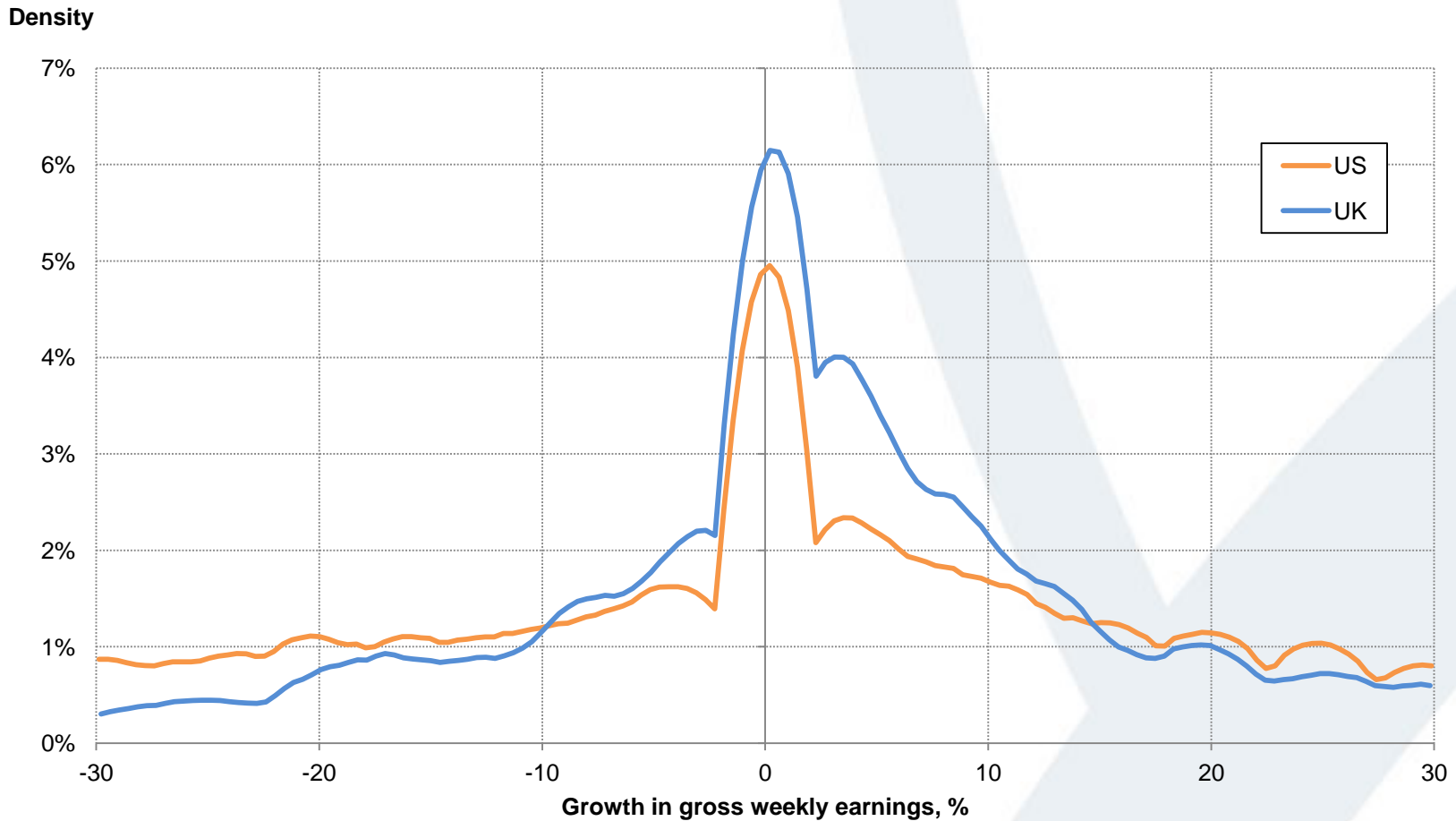
## Distribution of weekly earnings growth



Source: UK Labour Force Survey, ONS calculations

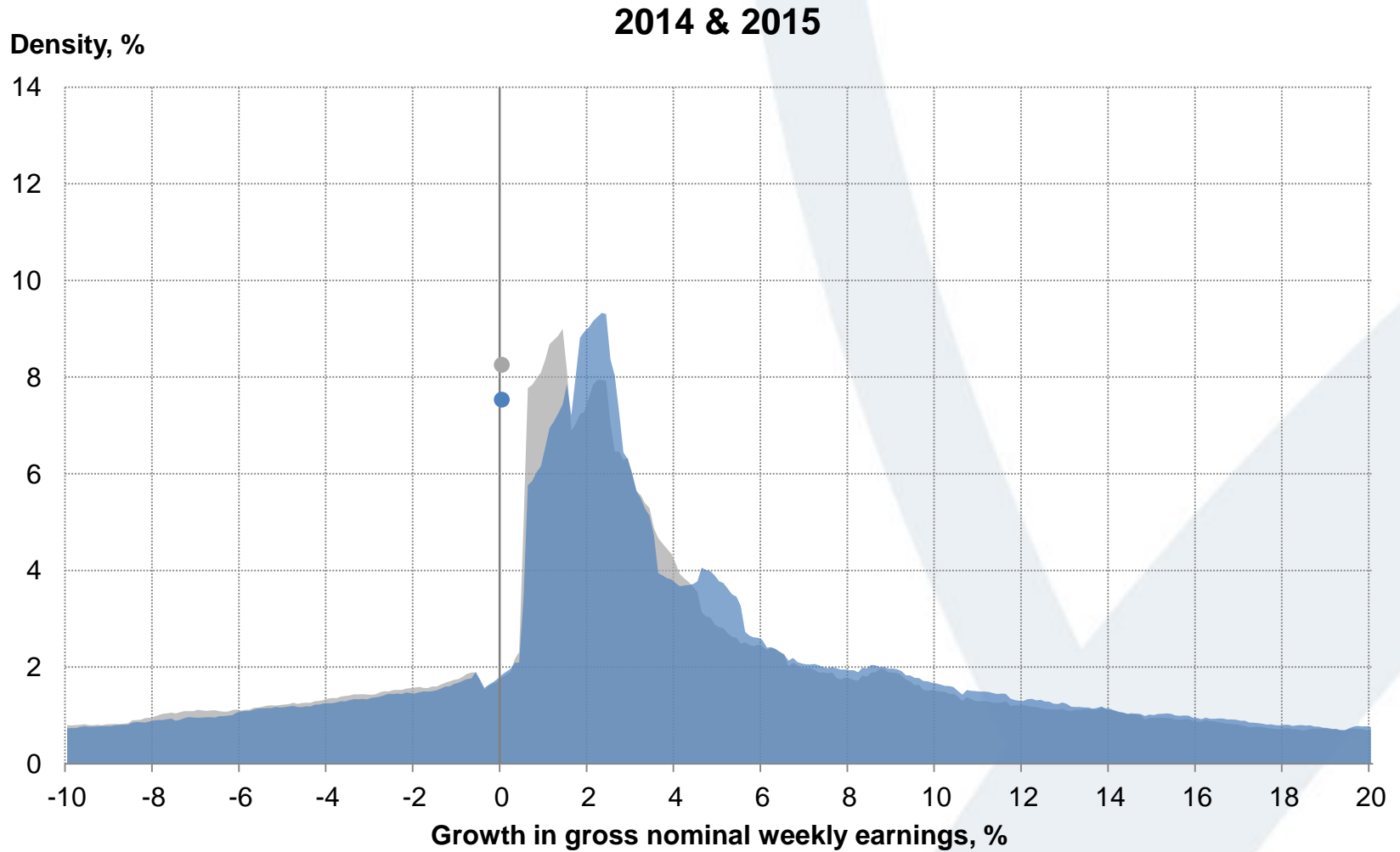
# Compared with the US

## Distribution of weekly earnings growth



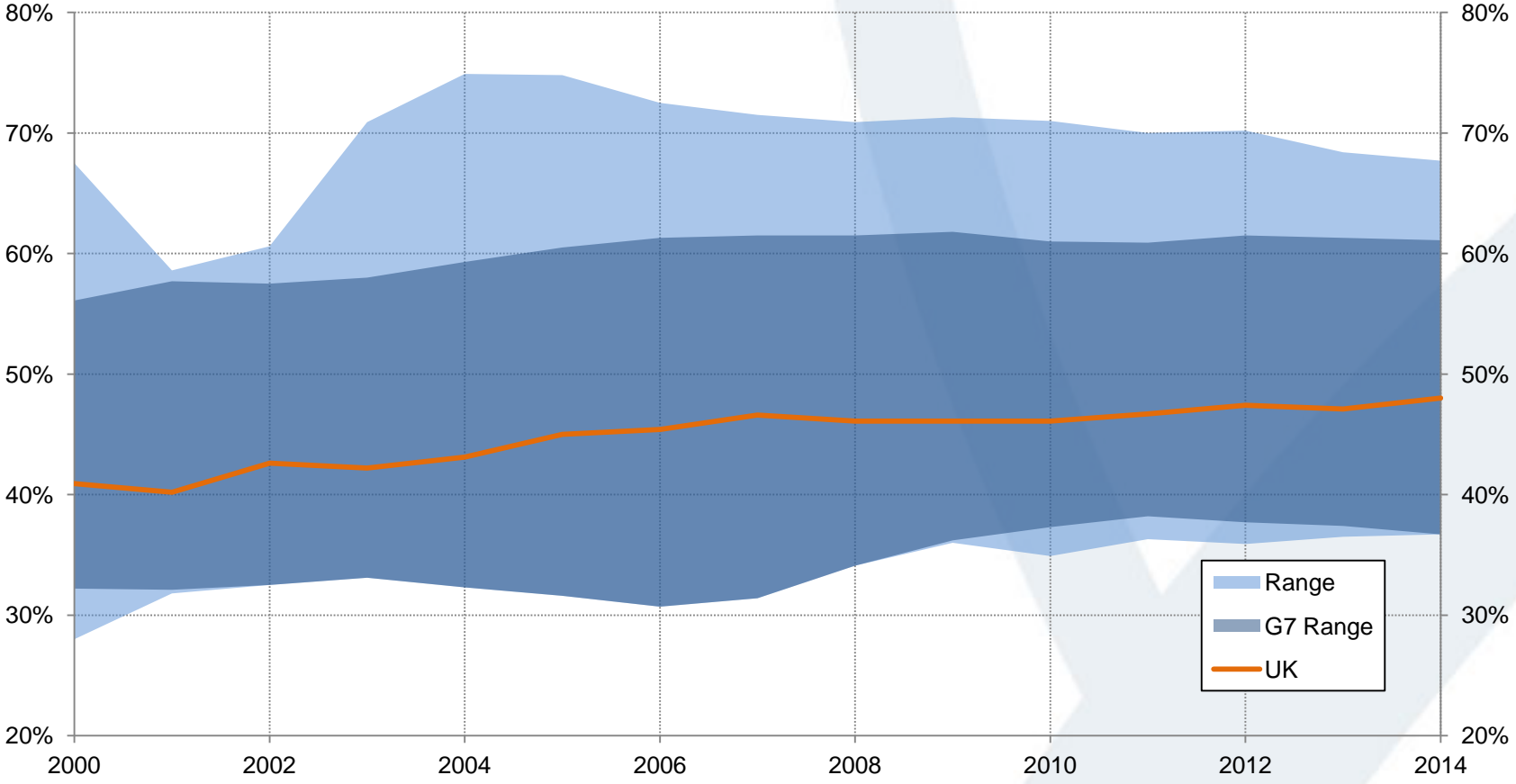
Source: UK Labour Force Survey, US Current Population Survey, ONS calculations

# Changes in the distribution of growth...



Source: Annual Survey of Hours and Earnings, ONS calculations

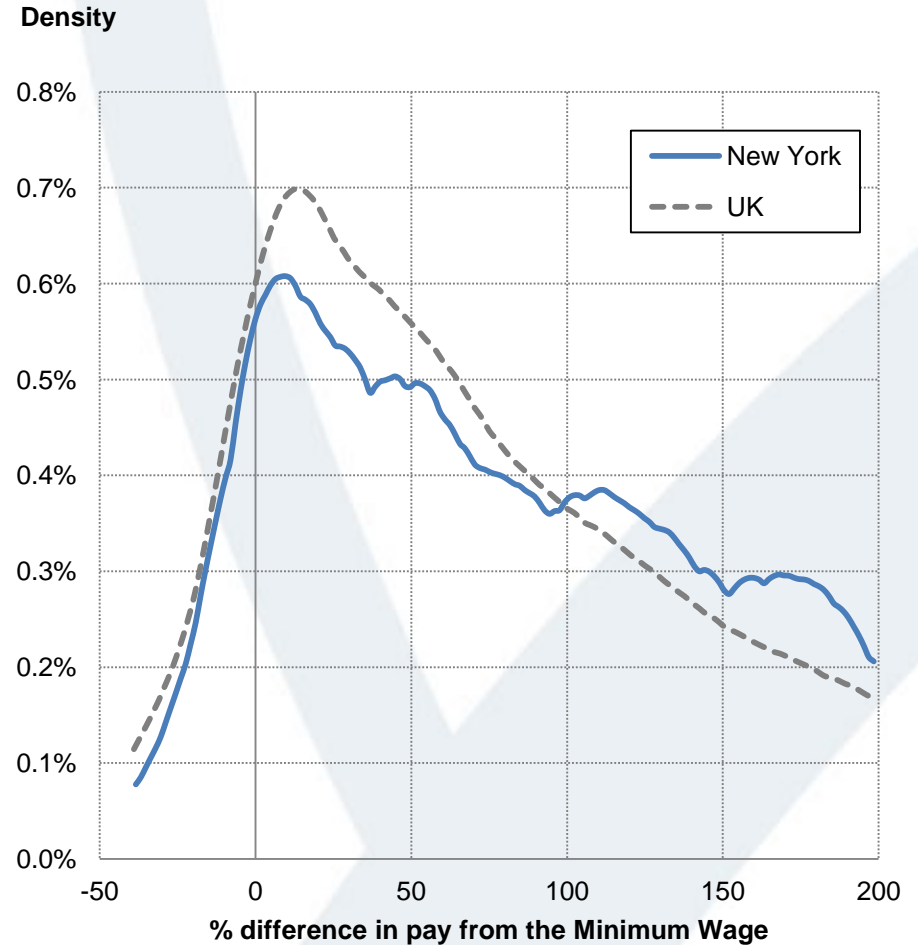
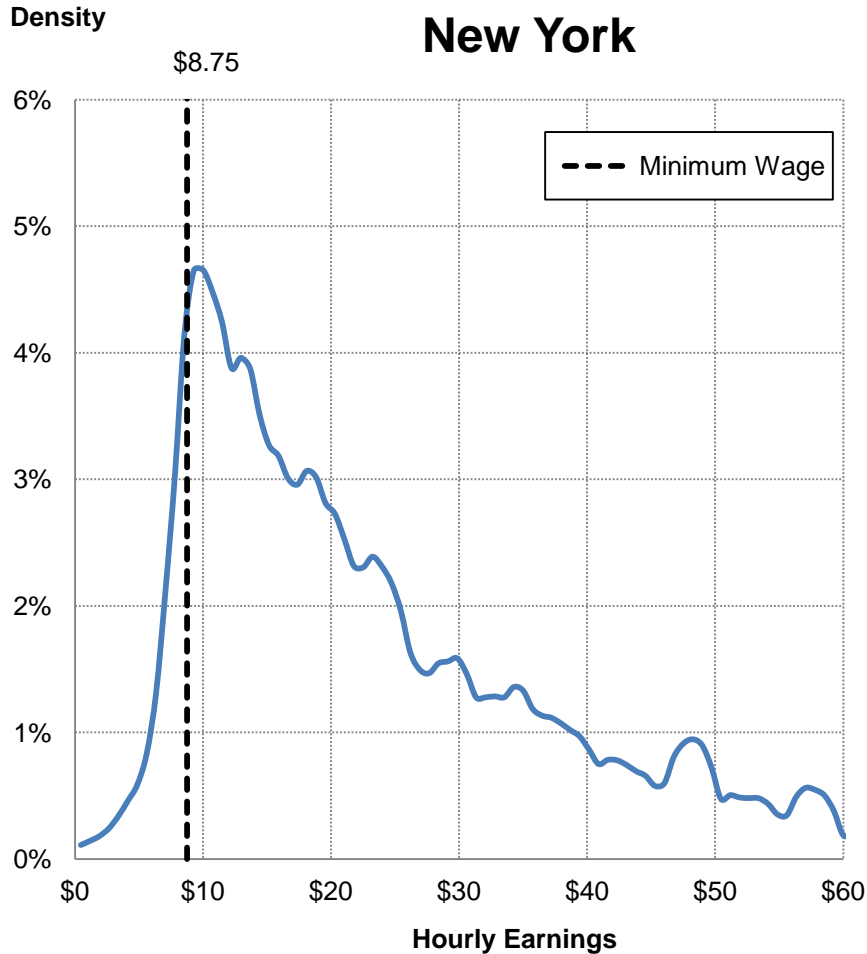
# Ratio minimum wage to median gross weekly earnings



Source: OECD



# Compression? Comparison with the US



Source: US Current Population Survey, ONS calculations.  
Note: State and Federal minimum wages for 1<sup>st</sup> January used.