The impact of minimum wage upratings on wage growth and the wage distribution

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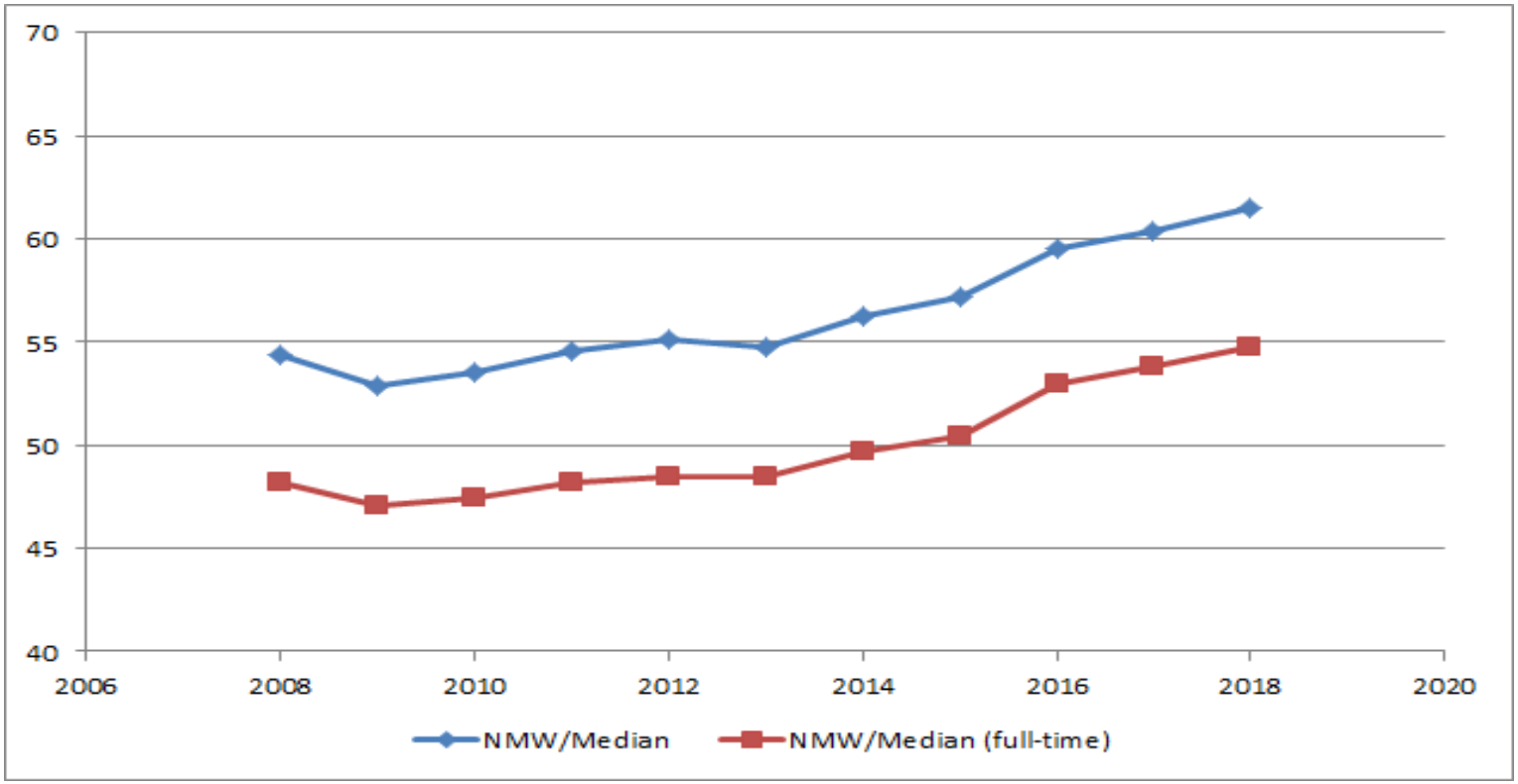
The project

- Mar 2018-Nov 2019-LPC funded project
- Impact of 2009-2018 NMW/NLW uprating on wage inequality
- Examine both hourly and weekly earnings

- Report: `https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/852505/The_impact_of_minimum_wage_upratings_on_wage_growth_and_the_wage_distribution.pdf`

The NMW/NLW between 2008 and 2018



Source: ASHE, ONS

Figure: Changes in the NMW/NLW relative to the median, 2008-2017

The effects of the NMW introduction

- Reduced wage inequality at the bottom
- Widespread compliance but limited or no spill-over effects
- No employment effects
  - Dolton et. al,2012; Stewart,2012; Dickens & Manning,2004; Stewart, 2002; Stewart,2012; Swaffield,2014

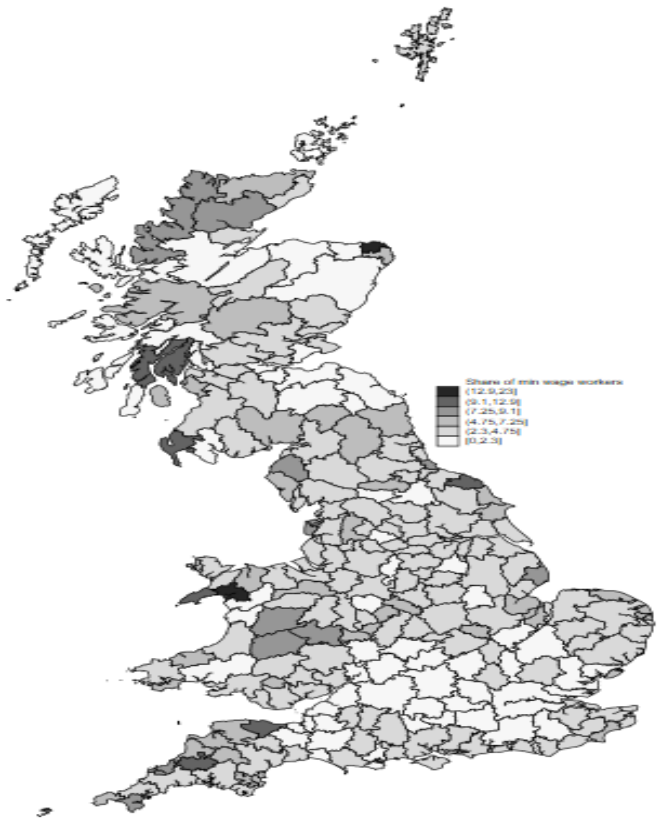
Data

- ASHE 2009-2018 cross-sectional data
- Sample:
  - aged 25-70
  - entitled to the adult pay rate
  - pay period is entirely covered by the new minimum wage level
- 131K-145K individuals per year [1.4 mil. observations]
- hourly and weekly earnings deflated by CPI

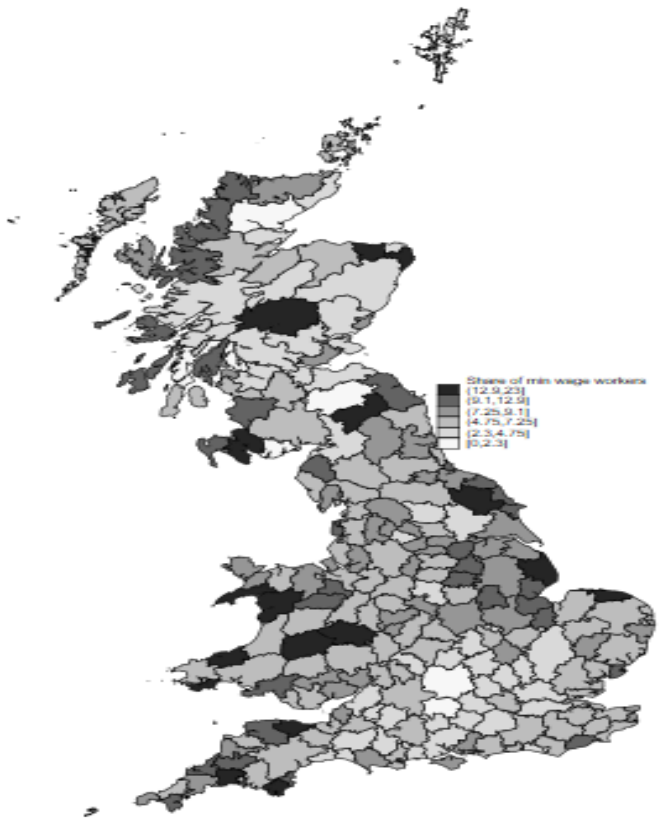
Methodology

- Examine wage growth at various quantiles of the wage distribution
  - 5th,10th, 15th, 20th, 30th and 50th
- Compare wage growth in areas (TTWAs) different shares of MW workers
  - Areas with higher shares of MW workers should be more affected by NMW/NLW increases
  - They should experience stronger falls in wage inequality
- Unconditional Quantile Regressions (UQR)
- Model specification

Variation in MW shares



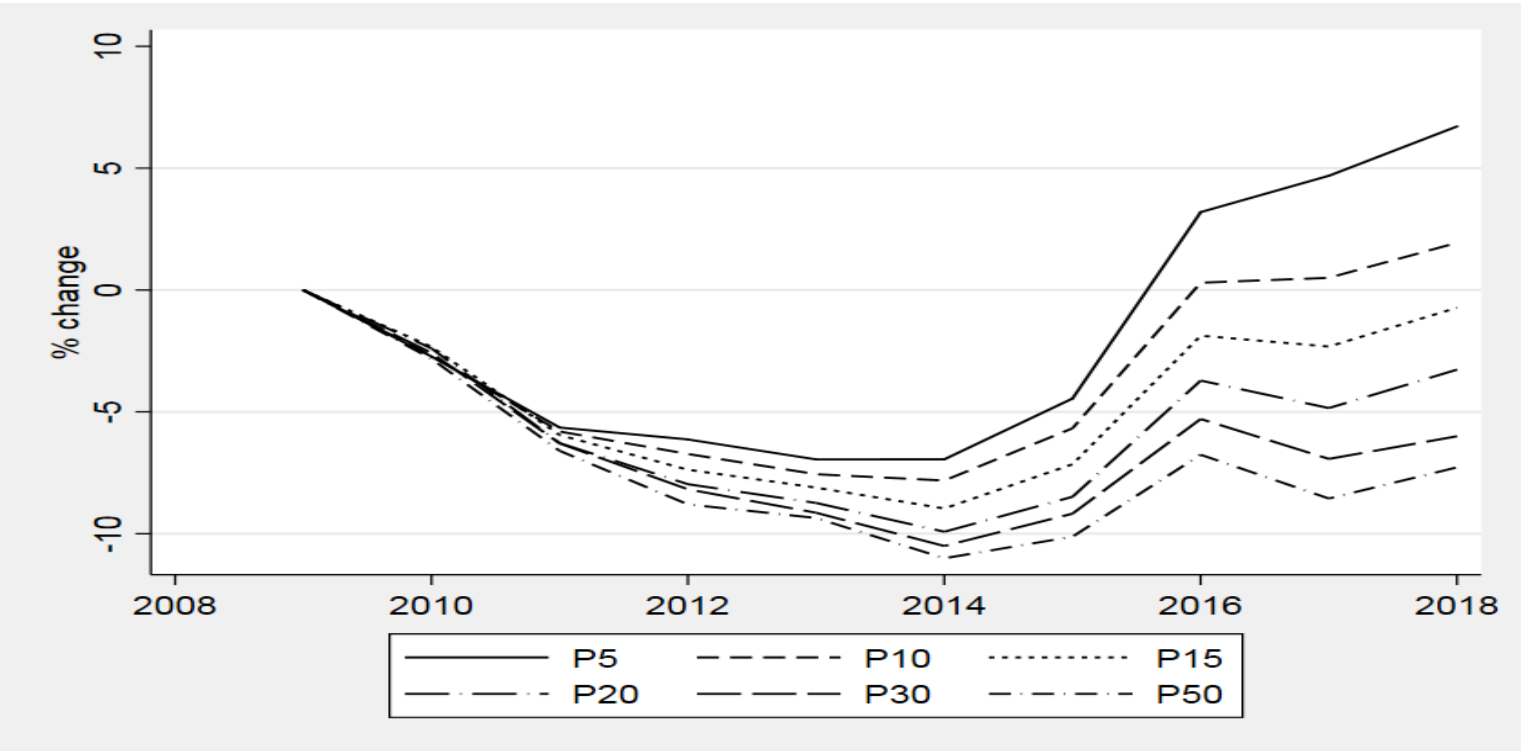
(a) 2009



(b) 2019

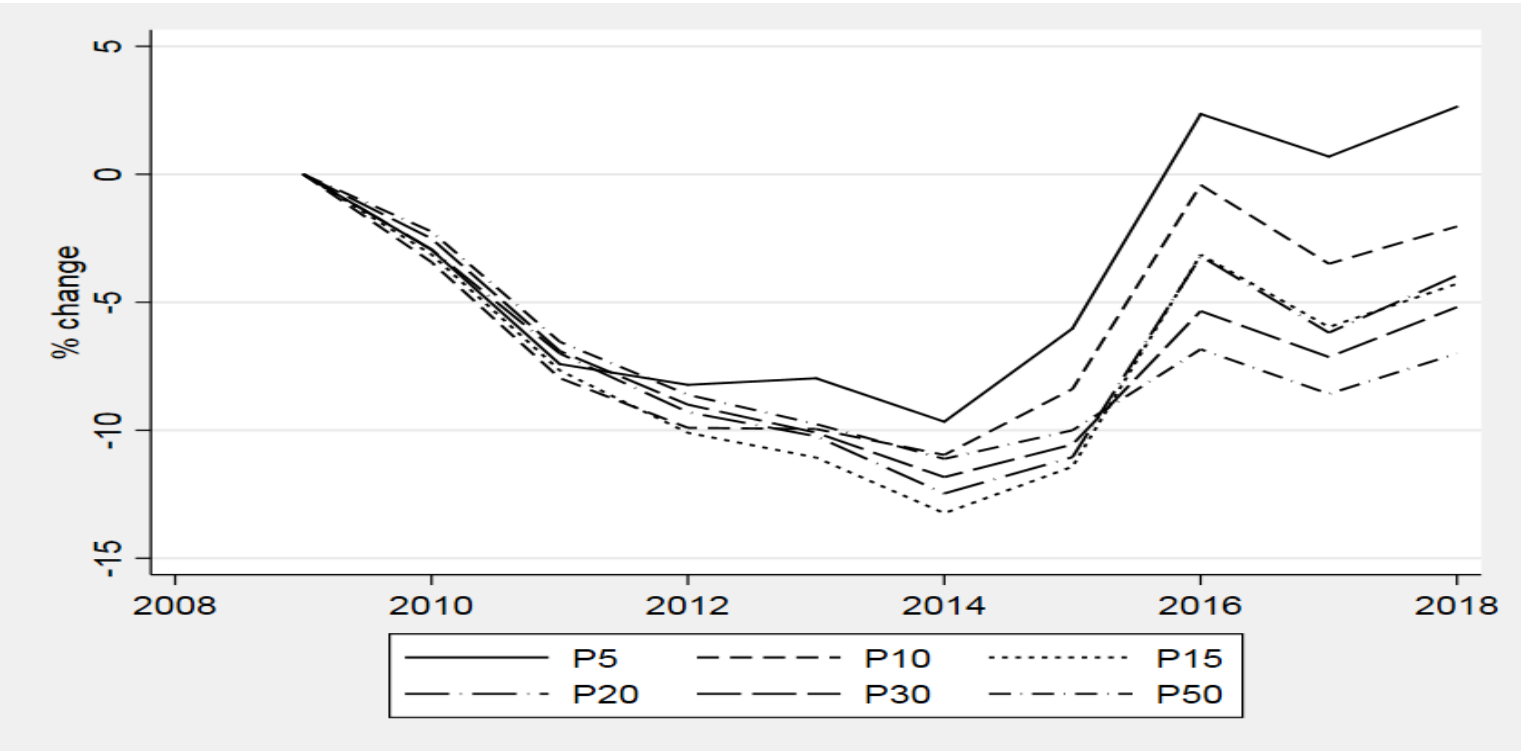
Source: ASHE, 2008-2019

Hourly wage growth



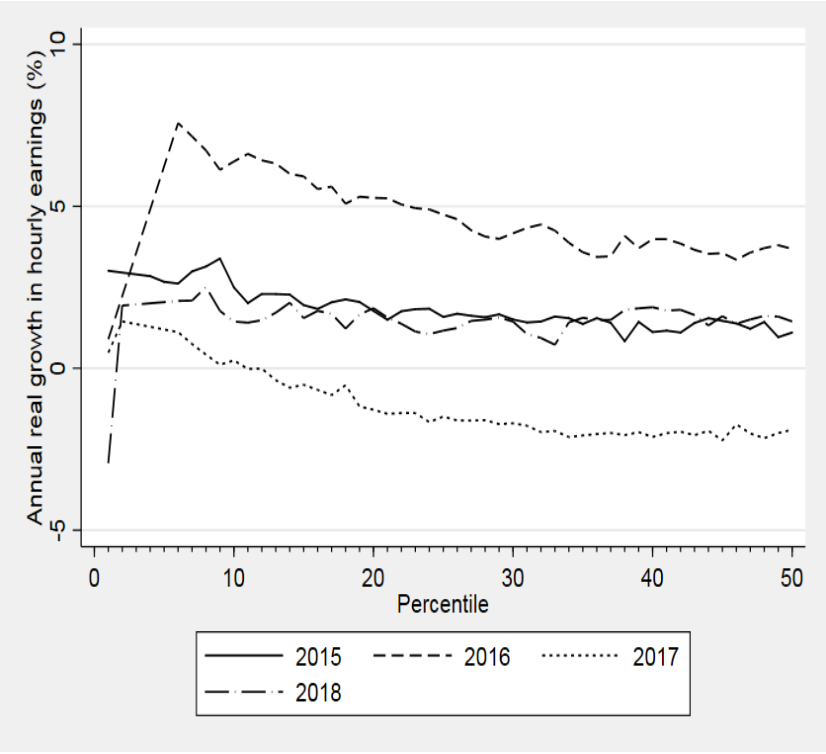
Source: ASHE, 2008-2018

Weekly earnings growth

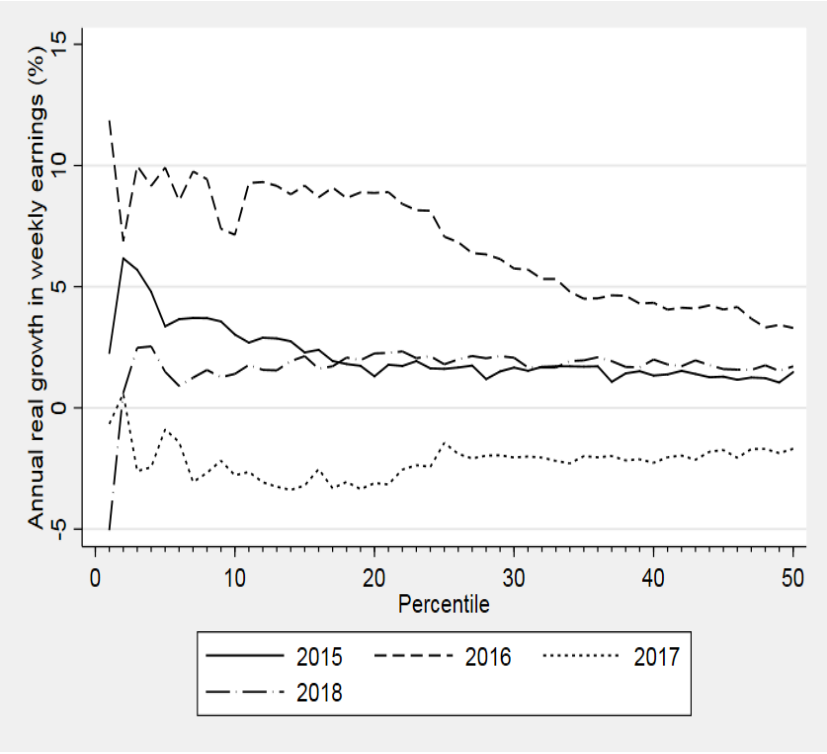


Source: ASHE, 2008-2018

Strong growth in 2016



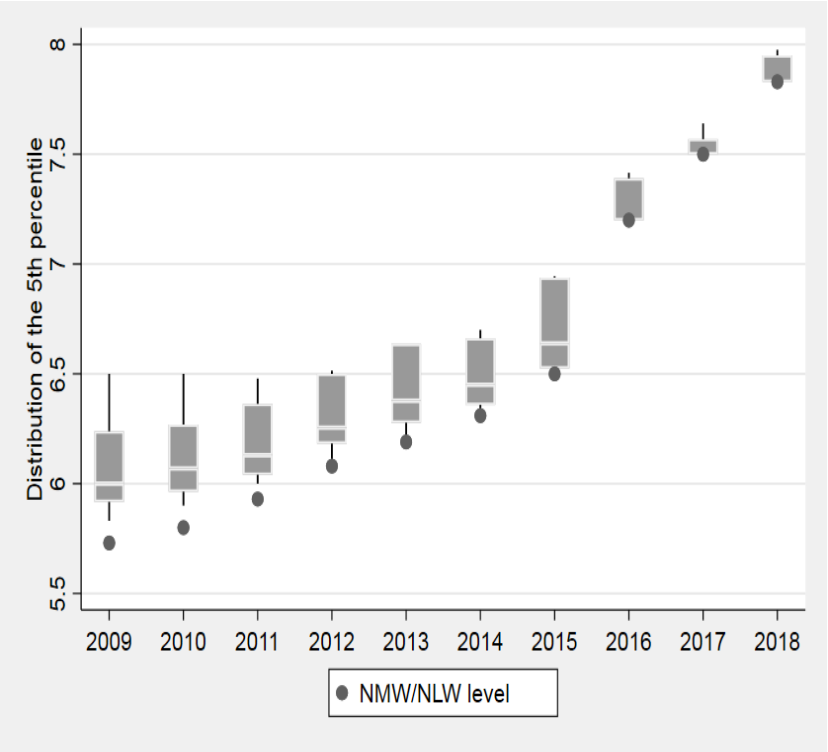
(a) Hourly wage



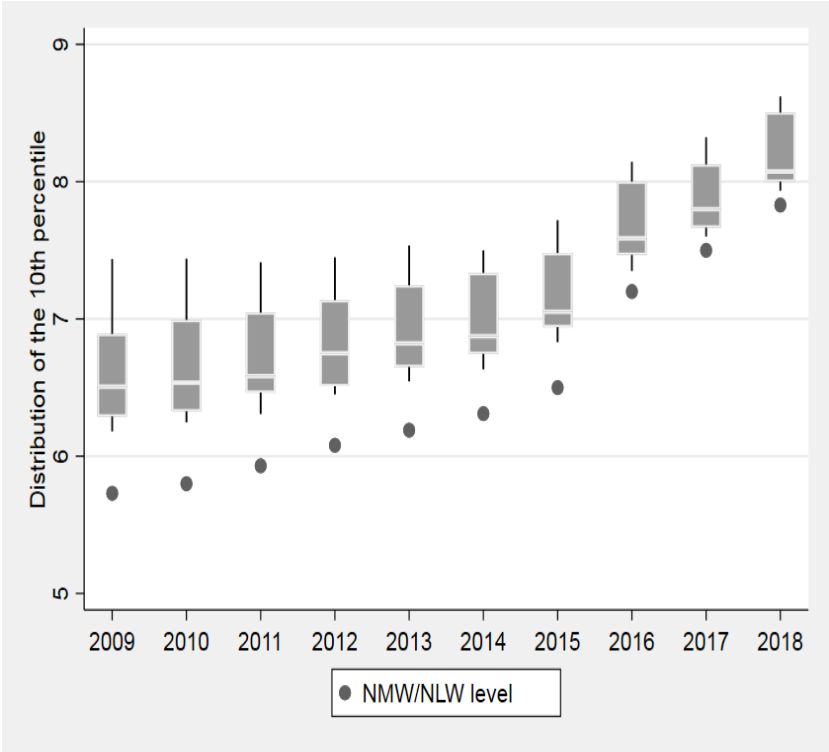
(b) Weekly earnings

Source: ASHE, 2008-2018

Where in the distribution is the NMW/NLW?

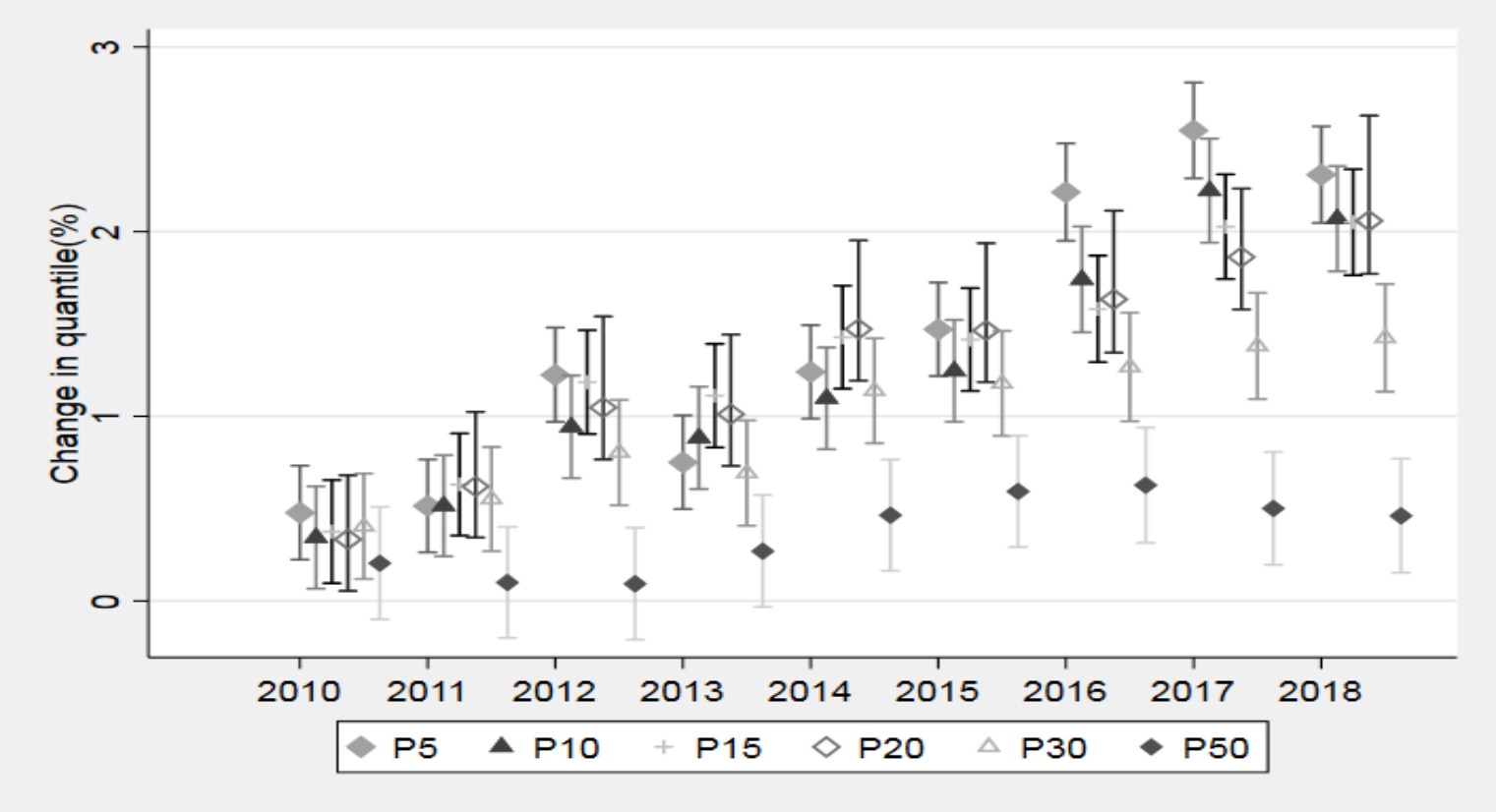


(a) 5-th percentile



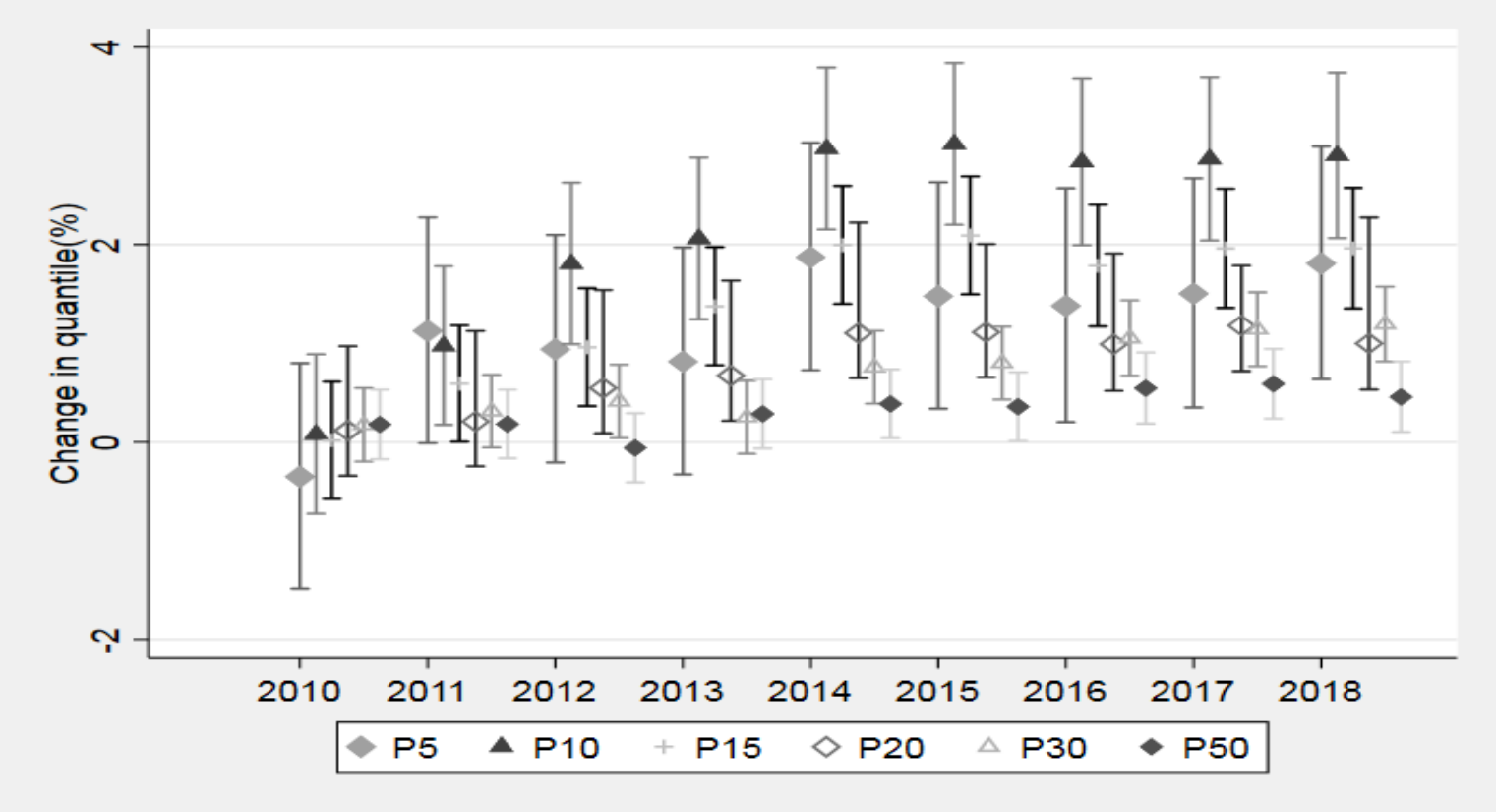
(b) 10-th percentile

NLW boosted hourly wage growth



Source: ASHE, 2008-2018

Weaker effects on weekly earnings



Source: ASHE, 2008-2018

Summary (1/2)

- Both hourly wage and weekly earnings growth stronger at the bottom
- NLW-annual growth especially large in 2016 for all wage levels
- Wage growth differences more progressive for hourly wages than weekly earnings

Summary (2/2)

- Wages at the bottom grew faster in areas with higher shares of MW workers, especially after 2016
  - at the 5th percentile-2-2.5%
  - at the 30th percentile-1-1.5%
- Significant spillover effects up to the 30th percentile
- Somewhat smaller (and more imprecise) effects on weekly earnings

Conclusion

- NMW/NLW upratings reduced wage inequality in the bottom half of the distribution

Thank you!

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Quantile regressions

- $y^p_{iat} = \alpha^p X_{iat} + \beta^p W_{iat} + \sum_{t=2009}^{2018} \theta^p_t + \sum_{a=1}^{233} \phi^p_a + \sum_{t=2009}^{2018} \delta^p_t MWShare_{a,2009} + \epsilon^p_{iat}$
  - y^p_{iat}-p-th percentile of the hourly earnings distribution in area a at time t
  - θ^p_t -year fixed effects
  - ϕ^p_a -area fixed effects
  - $MWShare_{a,2009}$ -share of workers paid NMW/NLW in area a in 2009
  - X_{iat}: sex, age, occupation (2 digits), part-time, temporary
  - W_{iat}:sector, firm size(logged) and industry (14 categories)
  - Back