The Gender Wage Gap at 42
Evidence from two British Birth Cohort Studies

David Wilkinson, Alex Bryson, Francesca Foliano, Heather Joshi*
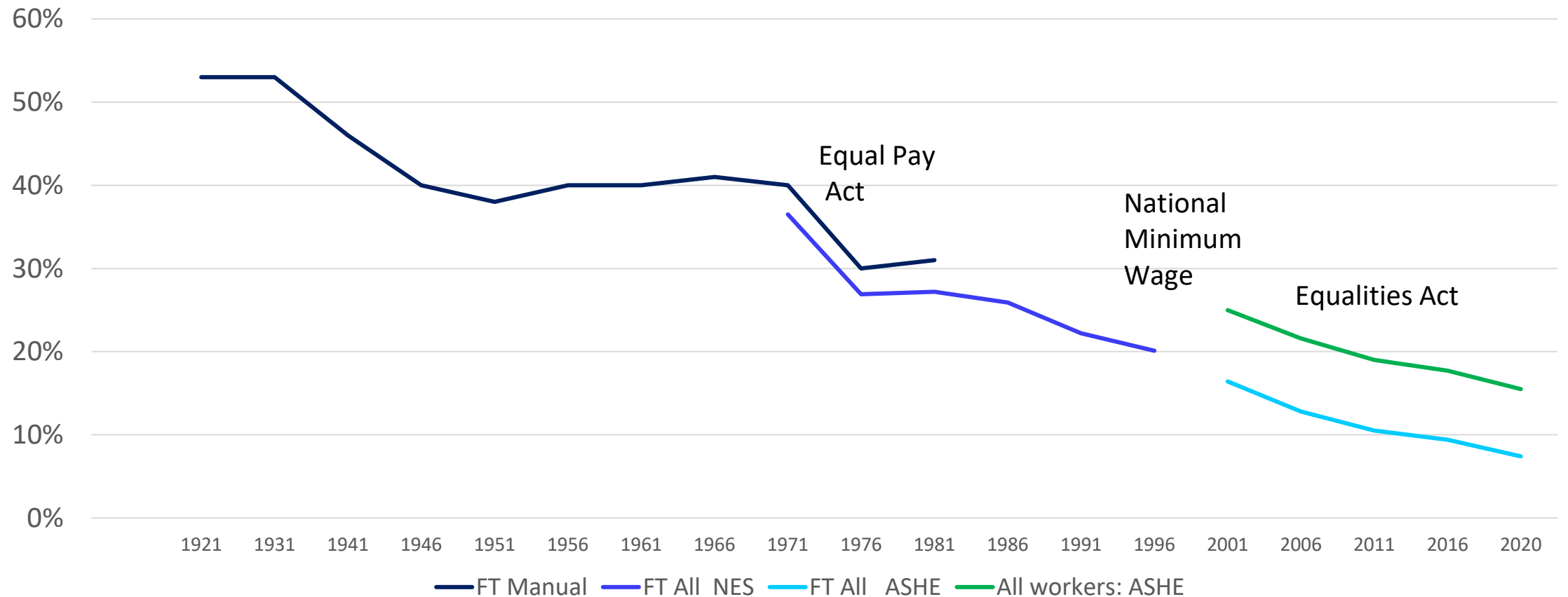**Bożena Wielgoszewska**

SRI Gender Equality Workshop

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* Presenter

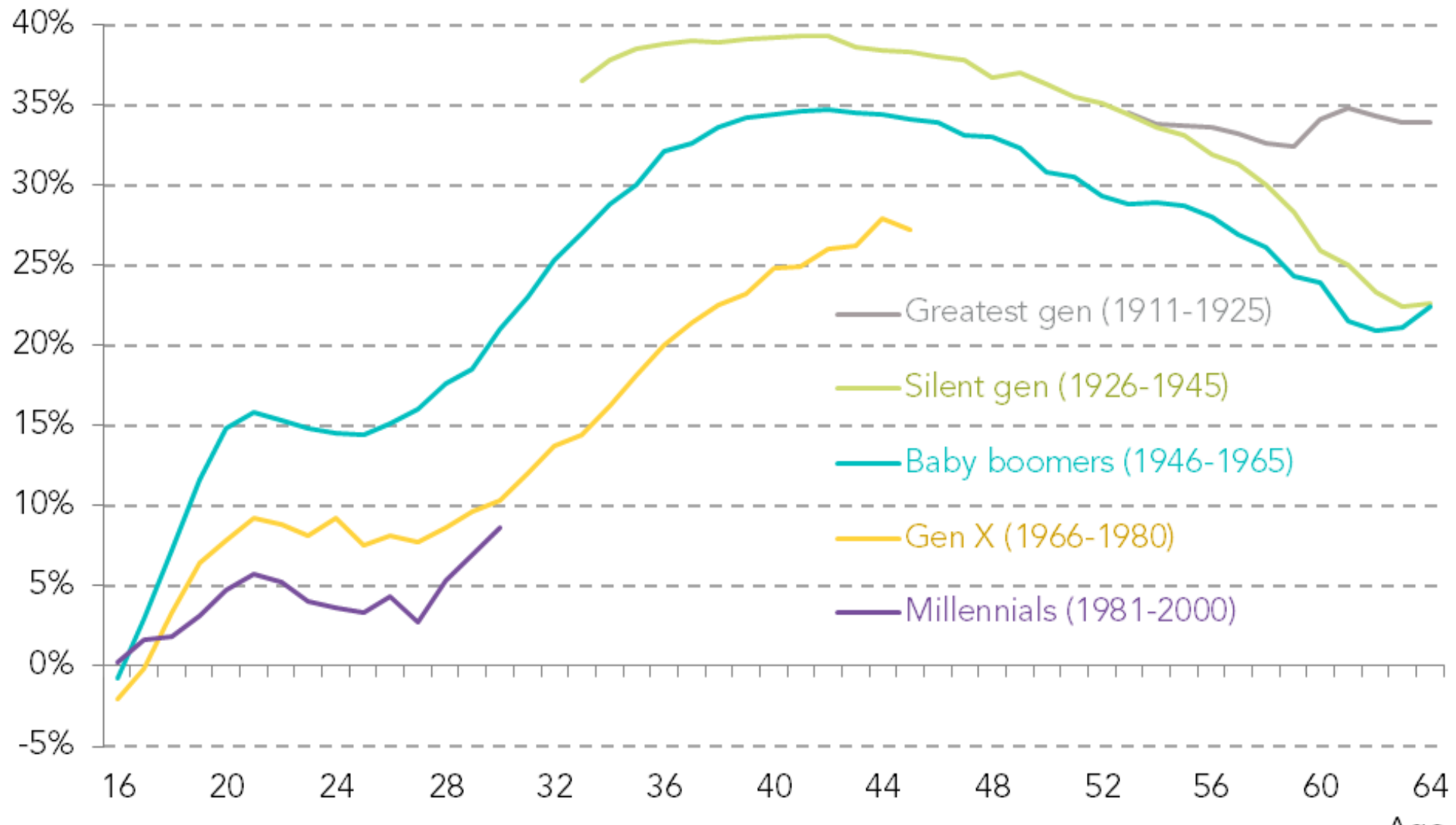# Secular trend in gender pay gap: various series and some policy landmarks

Gender Gap in hourly pay, 1921-2020, per cent of men's average

Equal Pay Act

National Minimum Wage

Equalities Act

Legend: FT Manual — FT All NES — FT All ASHE — All workers: ASHE

Falling trend since 1970s: age pattern within cohorts
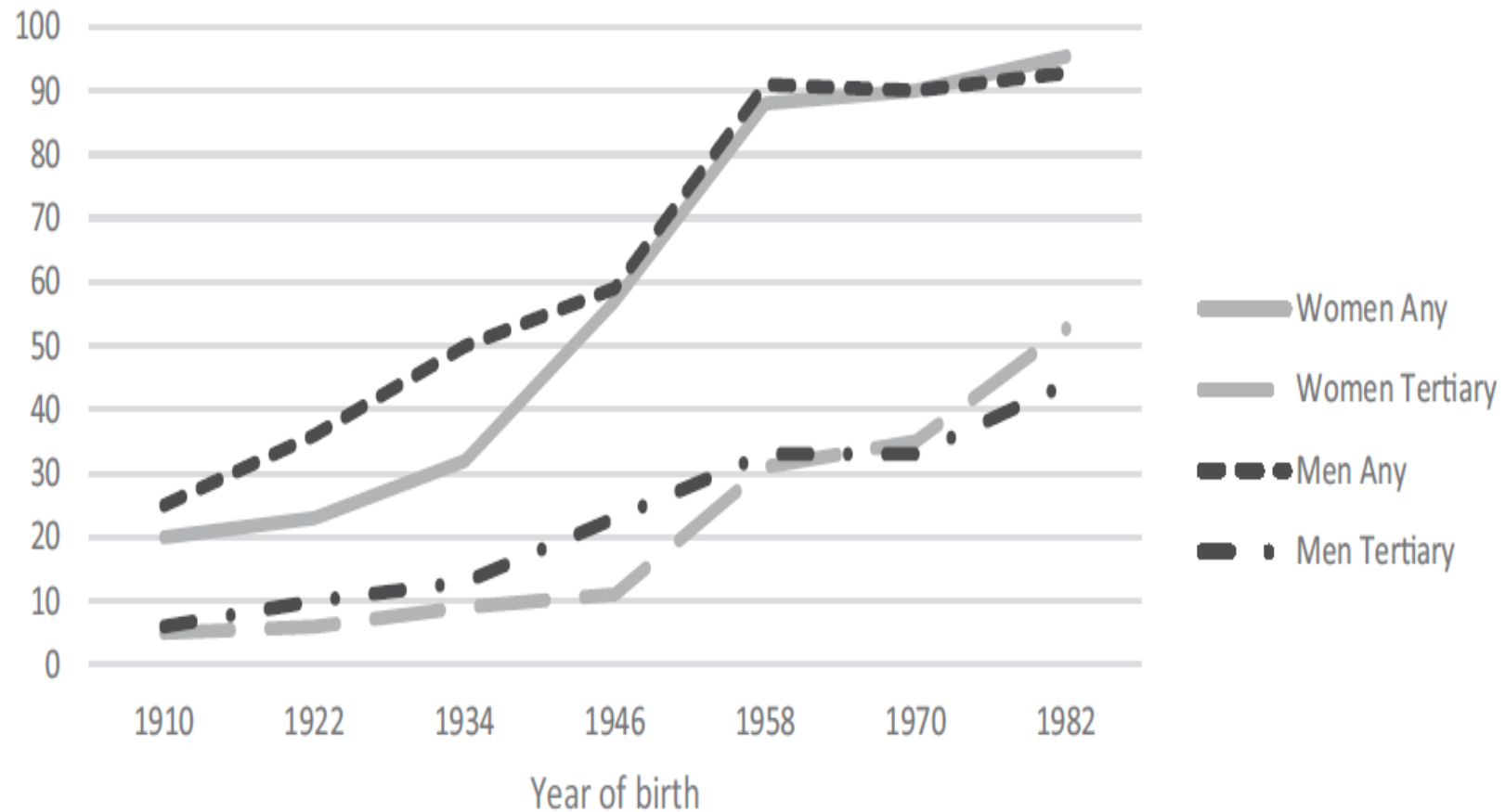
Quasi cohorts, Gardiner 2017

Gender pay gap for median gross hourly earnings, by generation: UK, 1975-2016

Legend:
- Greatest gen (1911-1925)
- Silent gen (1926-1945)
- Baby boomers (1946-1965)
- Gen X (1966-1980)
- Millennials (1981-2000)

Convergence in Educational Attainment

Figure 1: Percentage of men and women in their early 30s with qualifications, by cohort

Notional components of the Gender Pay Gap

- **EXPLAINED**

- Productivity/ **human capital** characteristics
  - Education
  - Skills
  - Age
  - Experience
  - Family responsibilities
- **Job characteristics** ***
  - Full/part-time
  - Occupation
    - vertical or horizontal segregation
  - Employer characteristics
    - Sector, contract, bargaining, size, institutional structure

- UNEXPLAINED 'returns'

- RESIDUAL/ 'adjusted' 'standardized' component

Unequal rewards to a given characteristic for men and women
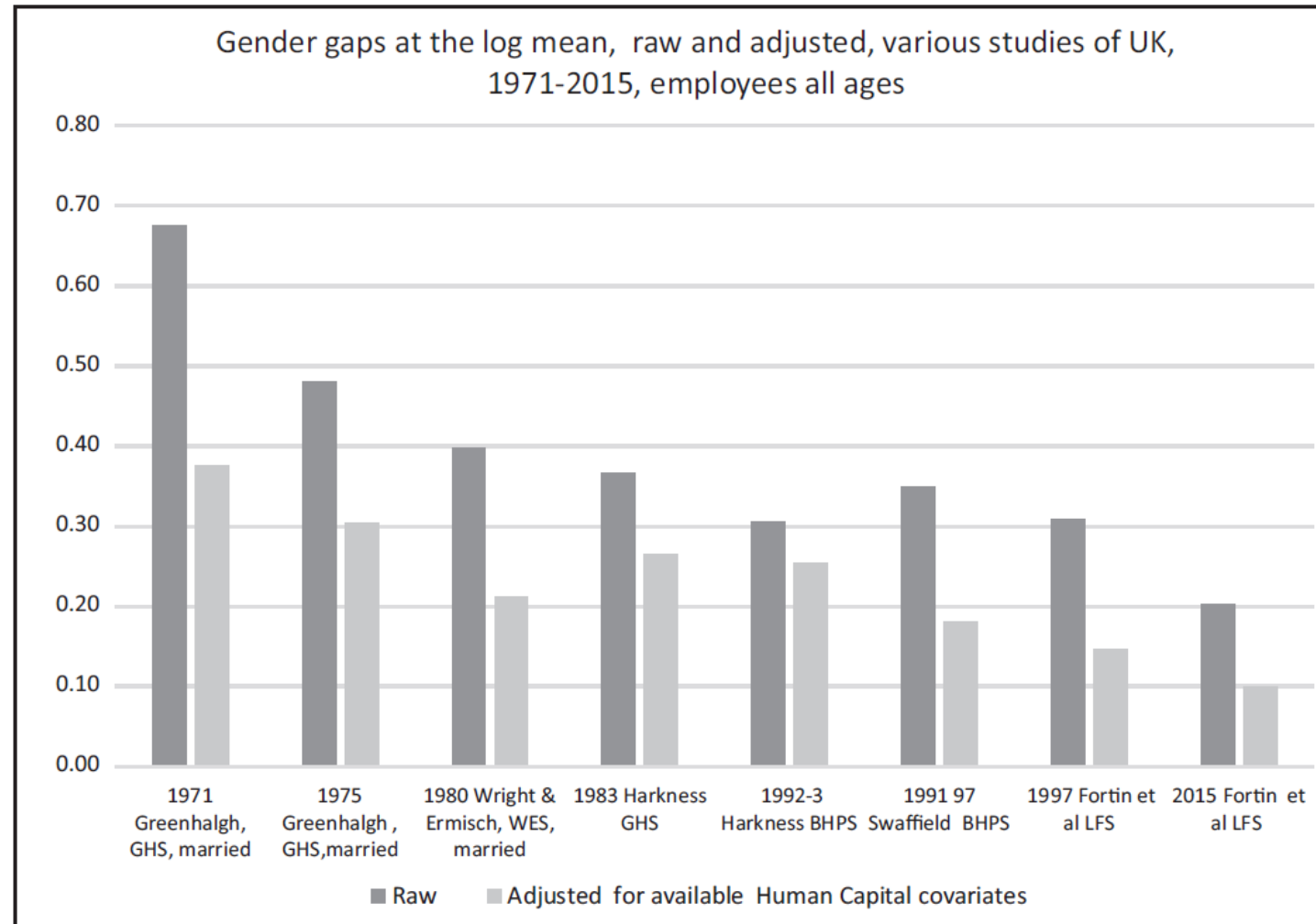
Some arguably discriminatory arising from:
  - Employer/ee preference against hiring, promoting, training or retaining women, institutional culture
  - Women's preference for flexibility or female workmates
  - lower bargaining power and travel range
  - Asymmetric social expectations of men's and women's family roles.

- Omitted explanatory factors (eg data without work histories)

*** Job characteristics can also be seen contributing to unequal treatment within the EXPLAINED component

Gradual Closure of the GWG all ages

Figure 2: Log gender wage gaps in selected UK studies adjusting for human capital

Gender gaps at the log mean, raw and adjusted, various studies of UK, 1971-2015, employees all ages

Analysis

- ## Dependent Variable
  - ### Log of hourly wages at time of interview, all employees:
    - RPI deflated

- ## Blocks of controls
  - ### Education – highest qualification
    - plus
    - Region at interview: London +Southeast v rest of GB
    - Number of previous obs in wage sample
  - ### Work history
    - months in full and part-time jobs over all years since school leaving
    - Months in current job
  - ### Family composition
    - Presence of dependent children by age, presence of a partner, ever been a parent of co-resident child

# Human capital adjustments of GWG, Bryson et al

1. NCDS
   - Life-course pattern of GWG similar to that for raw gap, but gap begins to close in 30s not 40s
   - Gap is less pronounced than raw gap due to human capital differences in 30s and 40s
   - Accounting for attrition gap is larger later in life
   - Selection-adjustment means gap is larger until 40s

2. BCS
   - GWG much flatter between 20s and 40s when covariate adjust due to human capital differences
   - GWG always smaller than in case of NCDS
   - GWG smaller with selection-adjustment

Explained and Unexplained pay gaps in 1958 cohort (NCDS)
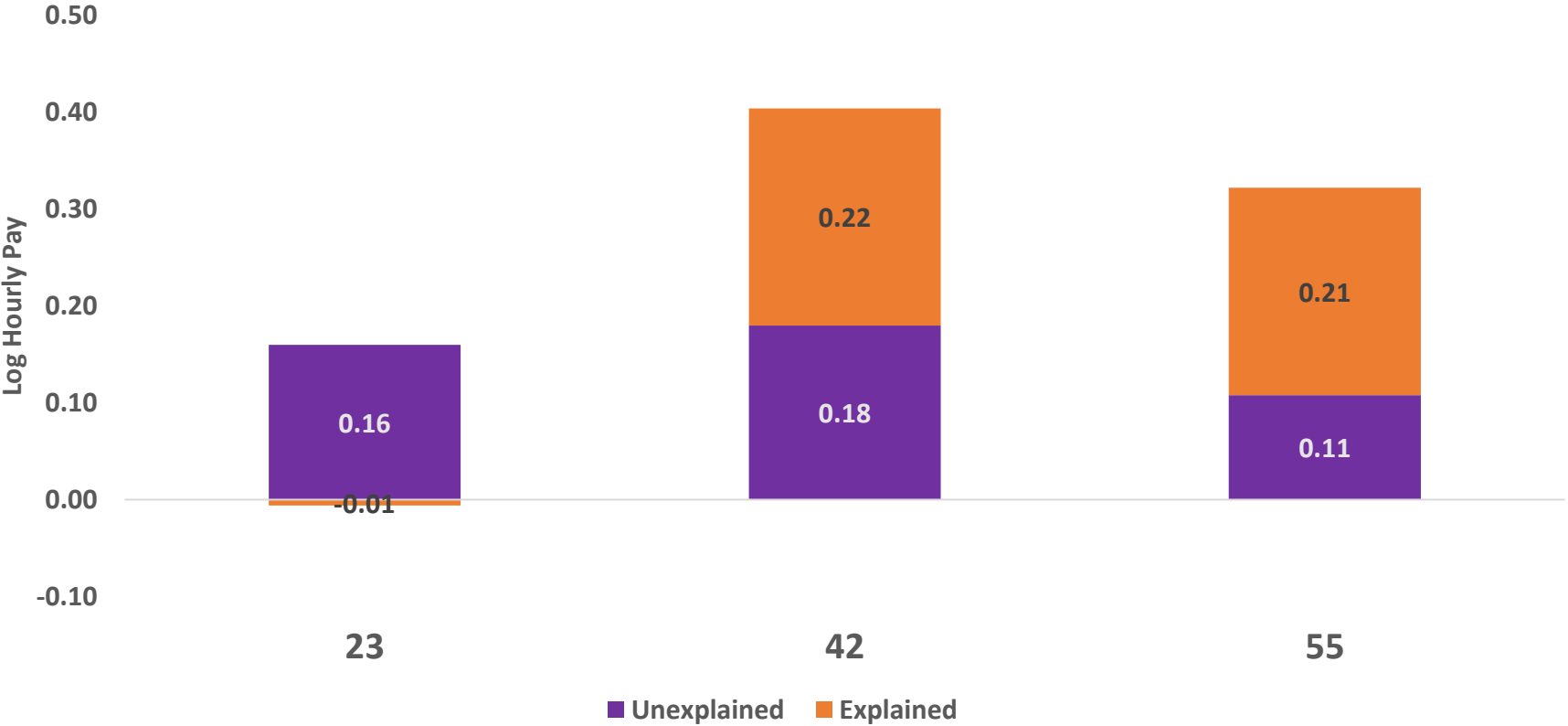
What does the GWG look like in mid-life for these two cohorts?

Method

An accounting exercise not an exploration of causality

- Estimating gender difference in all treatment parameters
- Taking each sweep separately

- Decomposition: Kittagawa-Oaxaca-Blinder

- Explained gap, parameter gap,
- Parameter gap weighted by female attributes,

- Explanatory variable with and without job characteristics,

Raw and unexplained gaps to age 42, NCDS and BCS.

NCDS born 1958
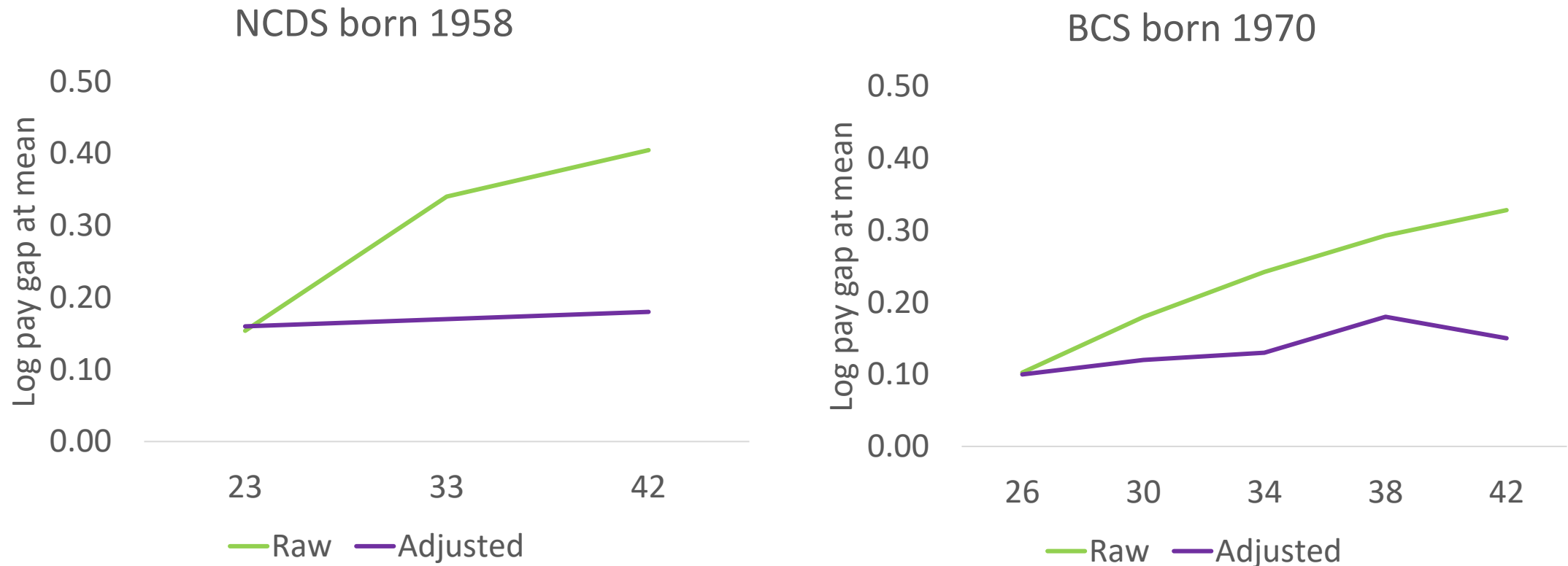
BCS born 1970

NB preliminary analysis. Gaps adjusted for qualifications, work experience and region

Comparison of NCDS with BCS (born in 1970) at 42 by decile

Pay gap explained by gaps between male and female characteristics is smaller at higher wages, but not much changed across cohorts (controlling for education and experience)
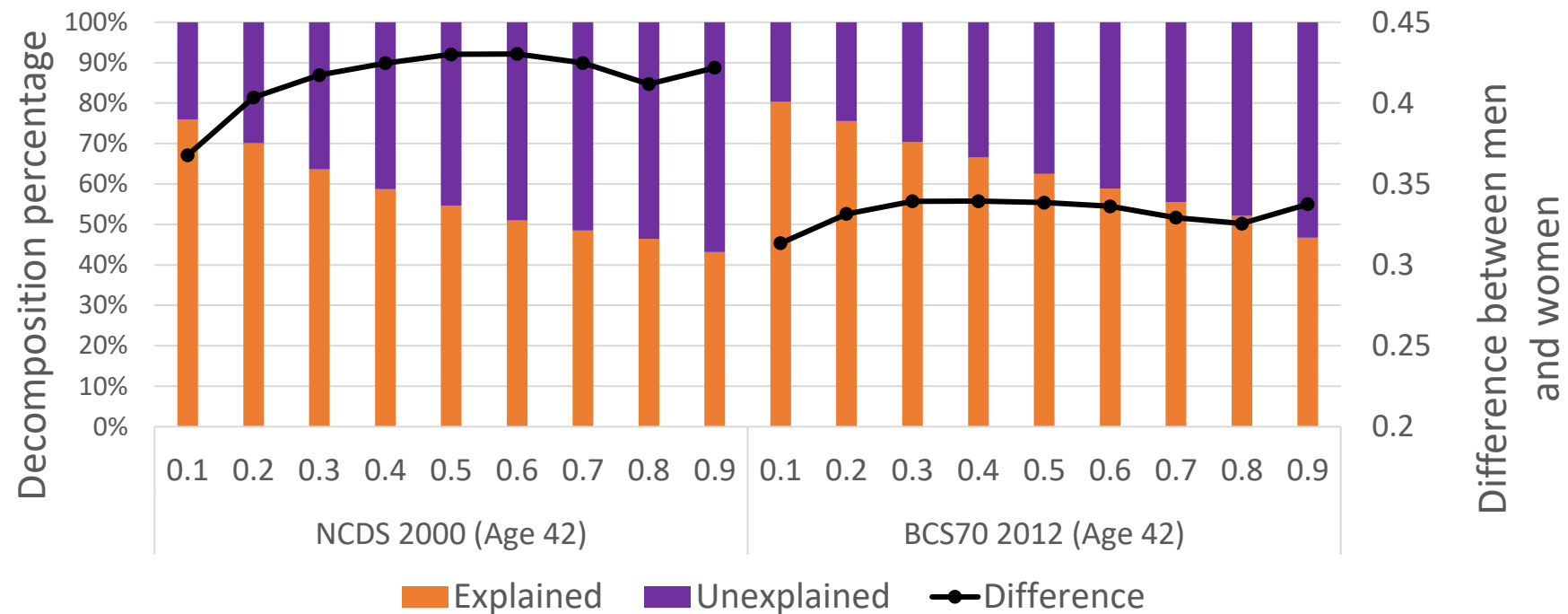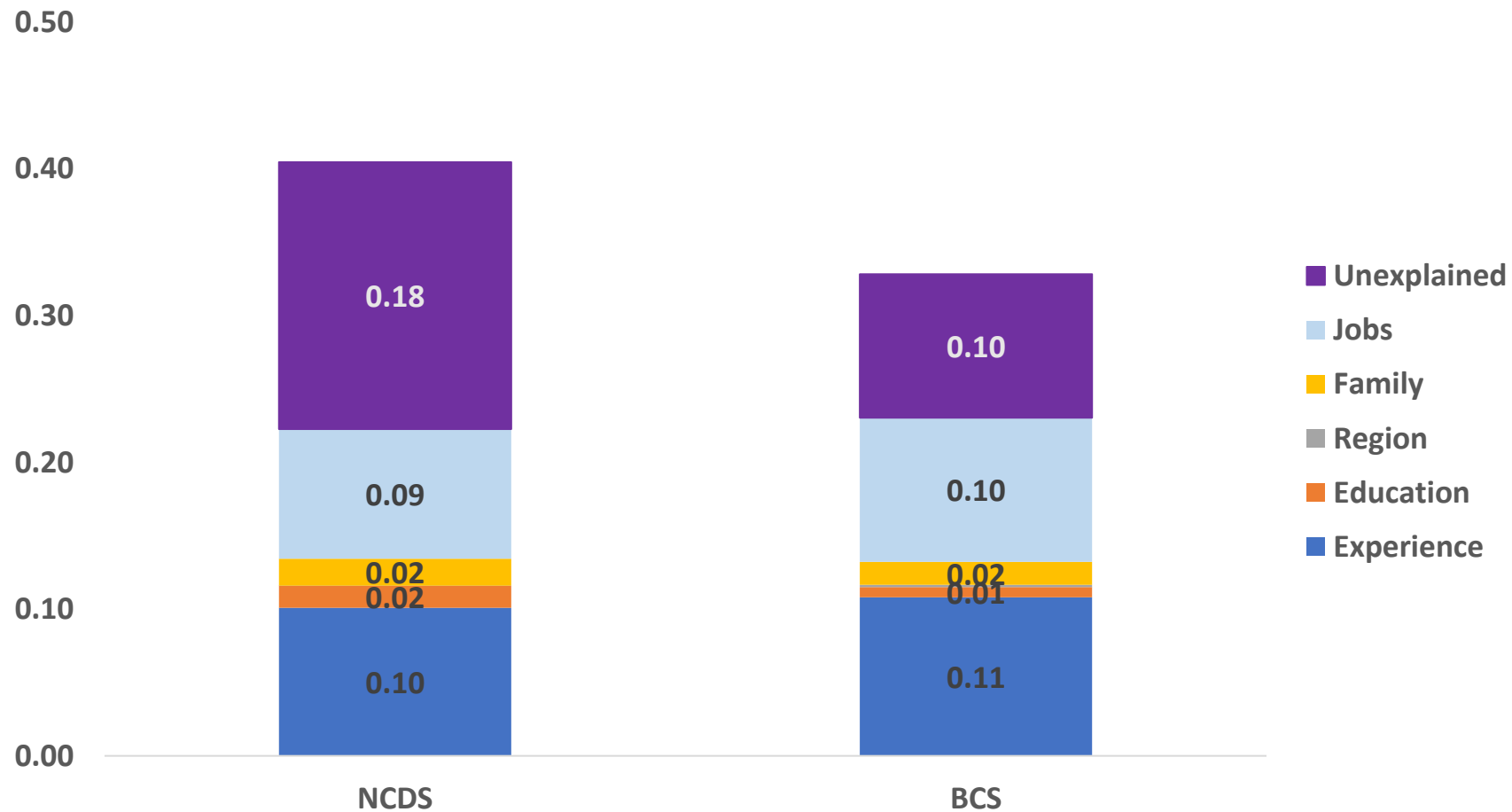
Explained components at the mean, age 42. Which characteristics are doing the Explaining?

We would expect them to fall between cohorts

Full-time experience ■ **Part-time experience** ■ **Job Tenure** ■ **Education** ■ **London/South-East**
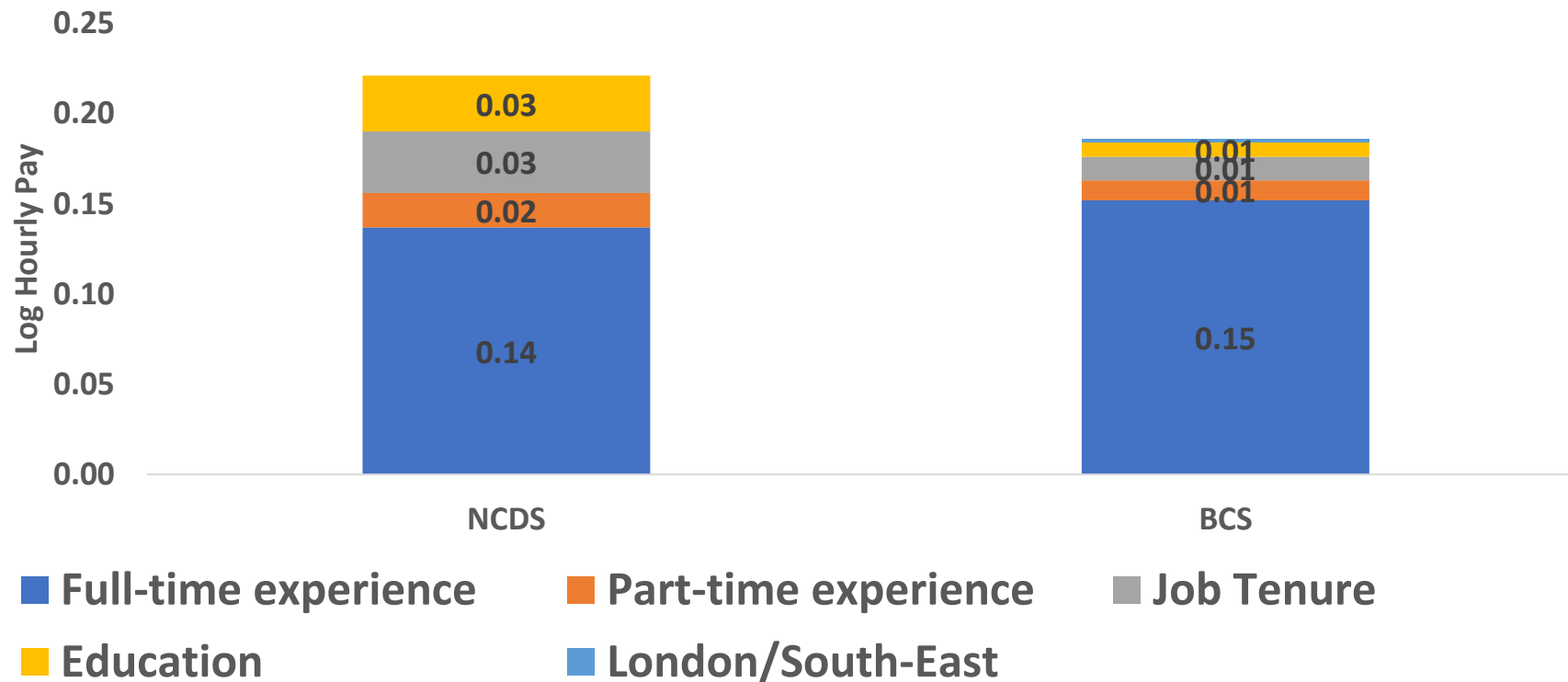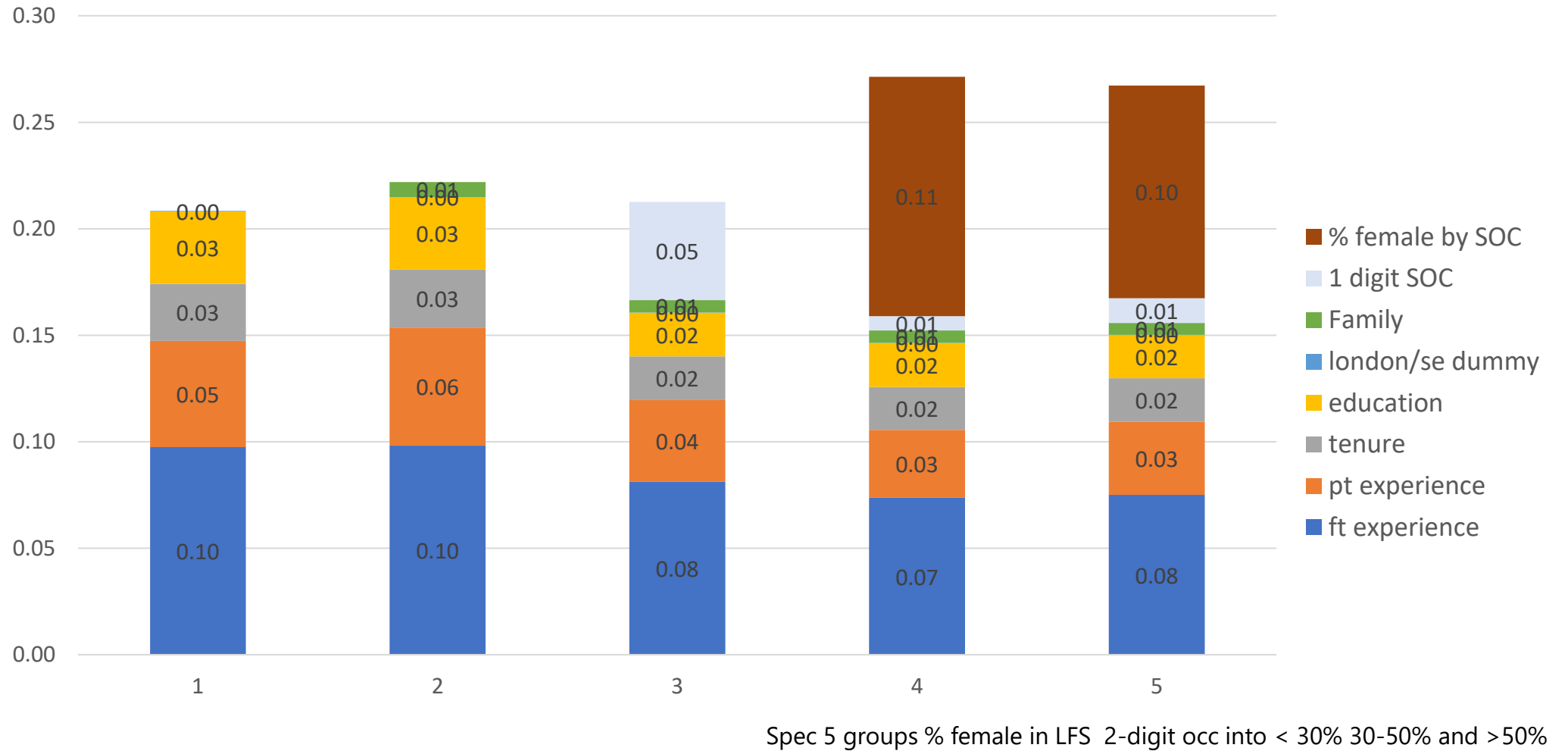
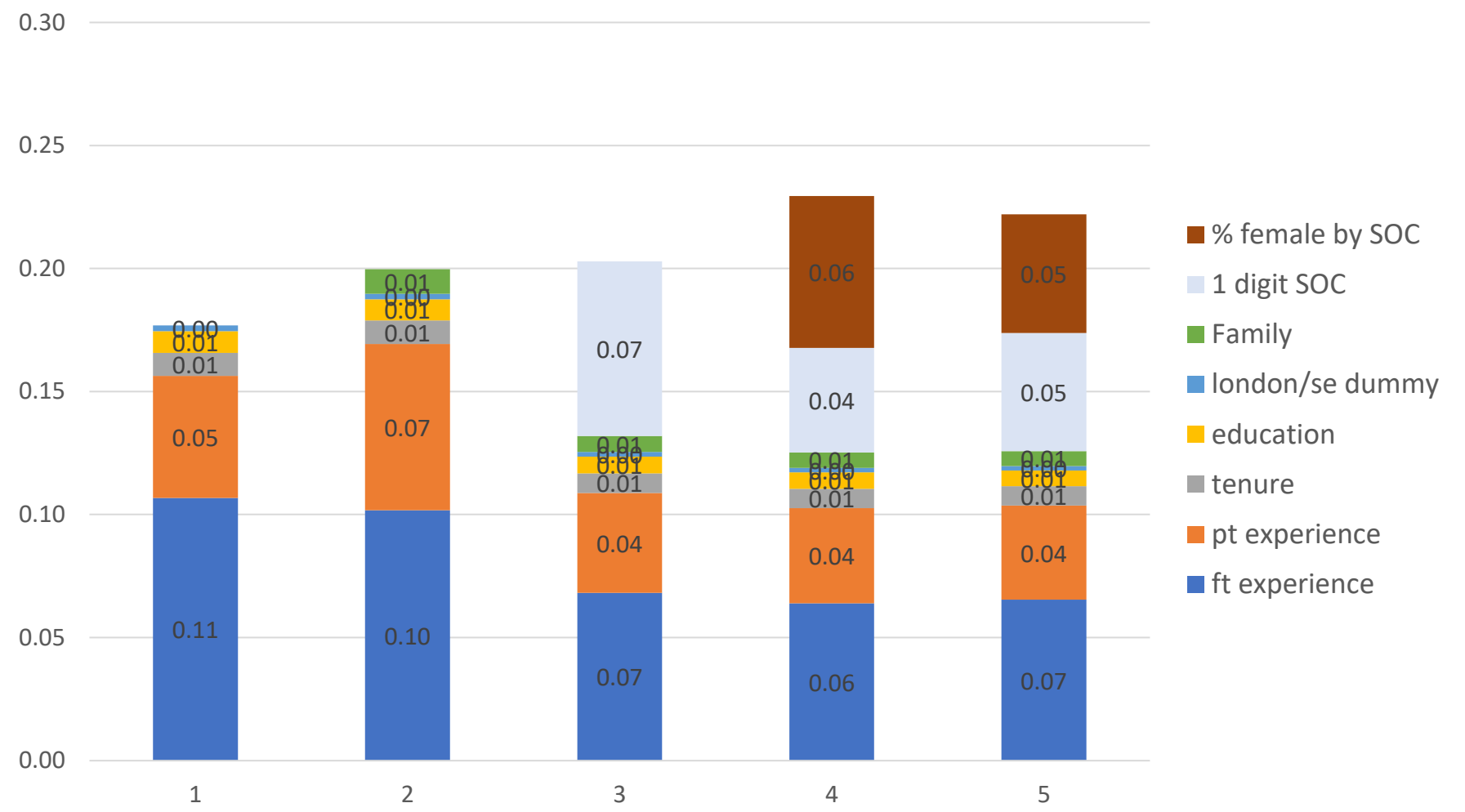# Gender Wage Gap at age 42- unexplained and explained components including job characteristics

Raw gap in log mean hourly wage is 40 log points in NCDS and 33 log points in BCS

NCDS at 42 - Explained components by specification

Spec 5 groups % female in LFS 2-digit occ into < 30% 30-50% and >50%

BCS at 42 - Explained components by specification

Spec 5 groups % female in 2-digit into < 30% 30-50% and >50%

Elements of Explanation

- The main source of the explained pay gap in both cohorts at 42 is human capital, particularly full-time work experience. Very little contribution of education - or family responsibilities.

- The vertical hierarchy of occupations in broad SOCs accounts for a lot of variation in wages, but not so much of the pay gap

- Occupational segregation, horizontal, particularly in part-time work, continues to absorb some of the effects of human capital, and to account for some more of the pay gap, more in the earlier cohort.

Conclusion

- One might have expected the explained component of the GWG to have driven the decline in the mid-life wage gap as education and employment gaps narrow over time

- One might also have expected the unexplained component to fall as the force of legislation and gendered expectations change over time,

- In fact both elements contribute to the modest decline.

- More work needed on the weighting of the decompositions, and changes therein, the differences across the wage distribution, comparison with other literature.

- … and to follow up your suggestions and questions

Project Overview

- Three years (September 2019-September 2022)

- Analyses birth cohort data to explore the gender wage gap across cohorts and over the life-course

- Providing a comprehensive analysis of the GWG across individuals' lives, up to the age of 60 in the case of the 1958 cohort, and across generations

- The UCL team:
  - Alex Bryson (PI)
  - Heather Joshi (co-investigator)
  - David Wilkinson (co-investigator)
  - Francesca Foliano (Research Fellow)
  - Bozena Wielgoszewska (Research Fellow)

- All information on the project, including news and updates, is on the website: https://www.ucl.ac.uk/ioe/departments-and-centres/departments/social-science/gender-wage-gap-evidence-cohort-studies