

The Gender Pay Gap in the British cohort studies, past, present and future.

Heather Joshi, Dave Wilkinson, Francesca Foliano

UCL Institute of Social Research

Institute of Clinical Trials & Methodology Seminar, June 7th, 2021

Motivation

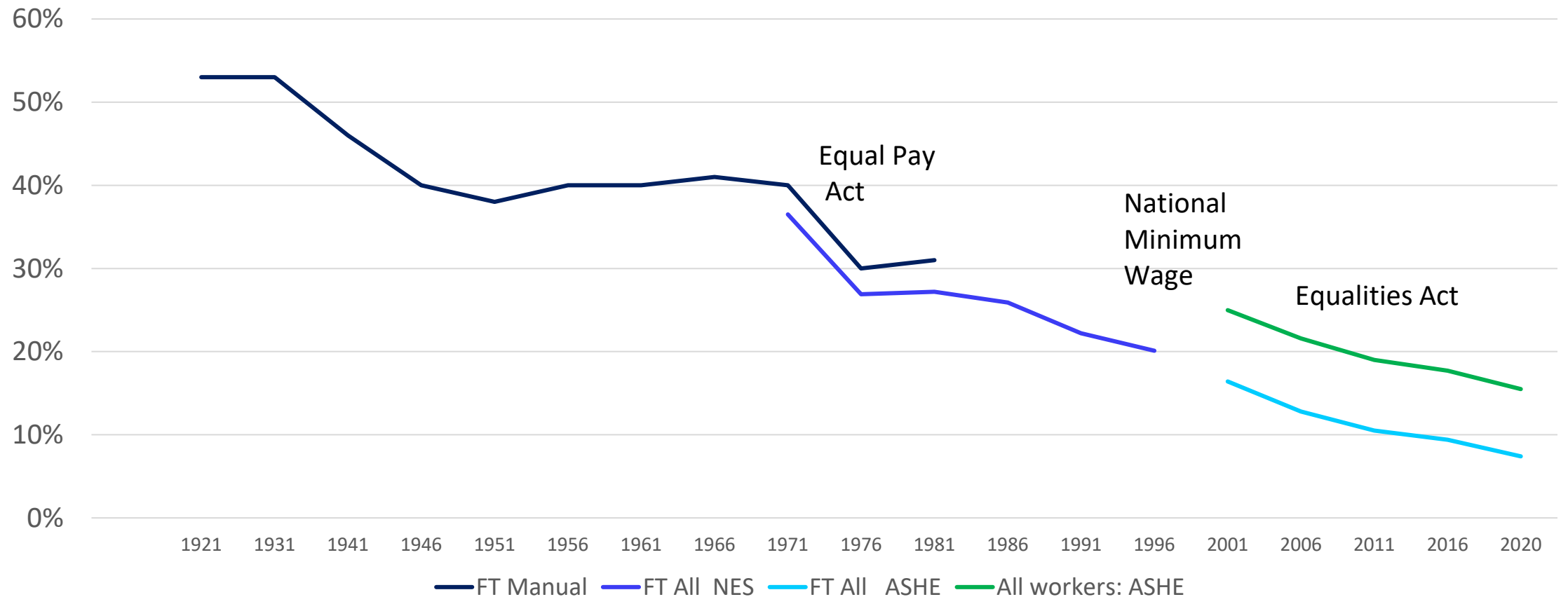
- Unequal pay for equal work by men and women is inequitable, inefficient, and since 1970, unlawful in UK
- It introduces bias against the use of female talent and reinforces unequal gender relations
- This talk reviews some evidence on whether a pay penalty for women is becoming a thing of the past.

Outline

- History of pay gap observed between women and men in national British data
- Components of pay gap
 - Explained by differences in characteristics and differences in remuneration
- Analysis of pay gap in birth cohort studies
 - extracts from several papers
 - Over life-cycle
 - Over the earnings distribution at given ages
- Comparison with recently published findings on pay gaps for doctors
- Future of gender pay gap

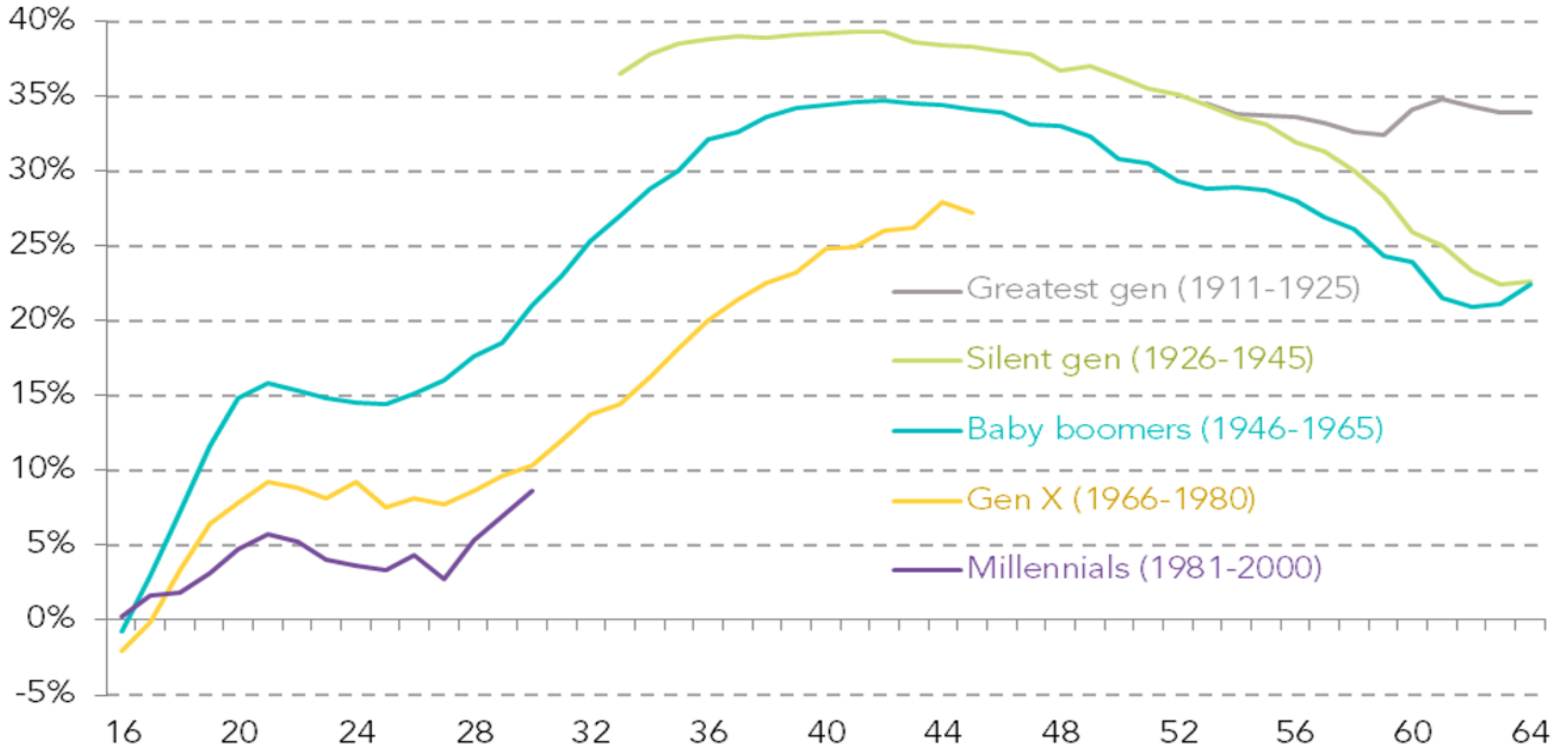
Secular trend in gender pay gap: various series and some policy landmarks

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



Falling trend with time: age pattern within cohorts

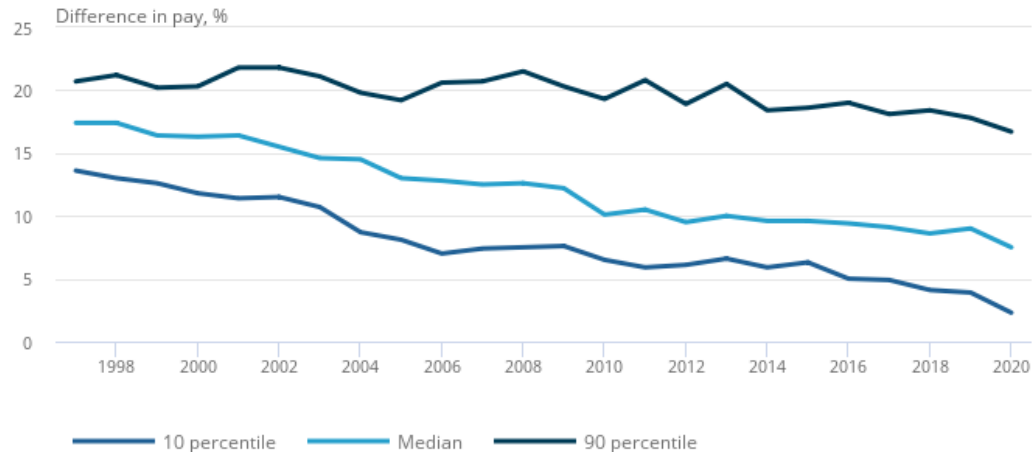
Gender pay gap for median gross hourly earnings, by generation: UK, 1975-2016



Trend within the pay distribution since 1998: difference has fallen least among top earners

Figure 6: The difference in pay between the sexes is largest among higher earners

Difference in gross hourly earnings (excluding overtime) for men and women at the top and bottom decile and median, UK, 1997 to 2020, full-time employees



Source: Office for National Statistics – Annual Survey of Hours and Earnings (ASHE)

- Narrowing gap for low earners especially since National Minimum Wage of 1999
- Widening gender gaps at the top of the earnings distribution and some well-paid occupations.
- In this context we turn to recent studies of the pay gap in medicine at the end of this presentation to complement evidence within the national cohort studies

Notional components of the Gender Pay Gap

- **EXPLAINED**

- 'like for like'

- **Personal (human capital) characteristics** contributing to productivity

- **Job characteristics**

- 'Equal work' under Equal Pay Act

- May contribute to unequal treatment if allocation to job type is discriminatory – subject of other equal opps law

- **UNEXPLAINED**

- RESIDUAL/ 'adjusted' 'standardized' component

Unequal rewards to a given characteristic for men and women

.

- Could arise from omitted explanatory factors (eg data without work histories)

Contributions to components

- **EXPLAINED**

- **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**

Unequal rewards to a given characteristic for men and women

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.

Some arguably discriminatory

Analysis

- Dependent Variable
 - Log of hourly wages at time of interview, all employees:
 - RPI deflated
- Blocks of controls
 - Education – highest qualification
 - plus controls for region etc
 - 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

Methods

- Analysis performed on log wages rather than ratios
- gap in log and percentage points very similar up to around 15% of male wages but it can be added up)

An accounting exercise not an exploration of causality

Decomposition - Oaxaca-Blinder (Kitigawa)

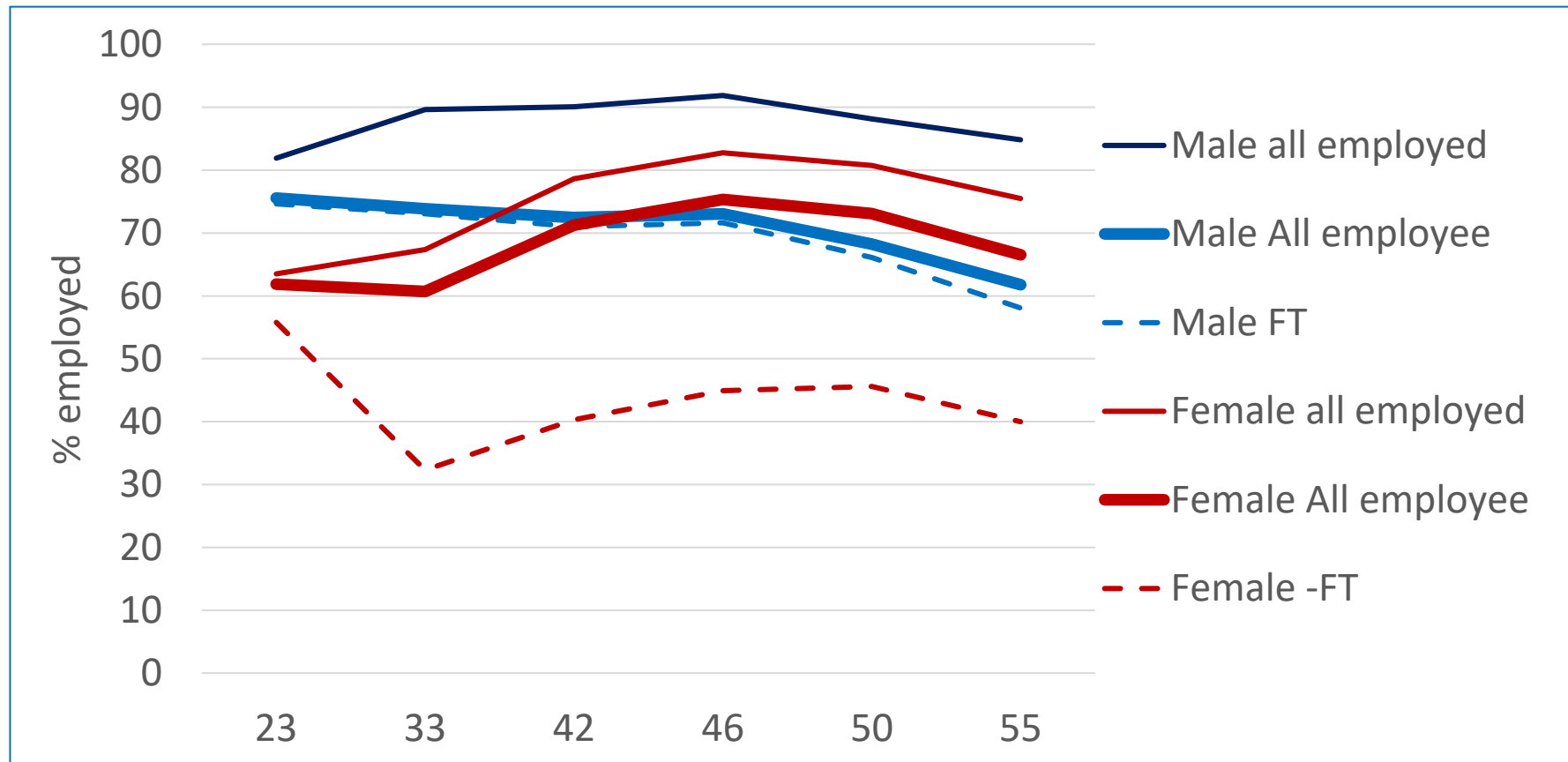
- **Explained gap**, - difference in characteristics;
- **Parameter gap**, differences in treatment
- Various formulae for weighting used here, some allow for an interaction of remuneration and attributes
- Explanatory variables with and without job characteristics

Data from the British Cohort Studies

- 1946 National Survey of Health and Development
 - Continues into their 70s
 - We use age 26 sweep , 1972
- National Child Development Survey (NCDS)
 - 1958 Birth cohort, 9 sweeps to age 55
 - Originally ca 1800 births in GB
 - we use 6 sweeps 23-55, mostly omitting postal at age 46
- British Cohort Survey (BCS)
 - 1970 birth cohort, 9 sweeps to age 42
 - Originally ca 1800 births in GB
 - We use 5 sweeps 26 to 42 including postal at 26
- Next Steps (NS)
 - formerly Longitudinal Study of Young People in England, born 1989/90
 - We use data from interview in 2015, age 25

Gender differences in pay are underlain by gender difference in employment participation.

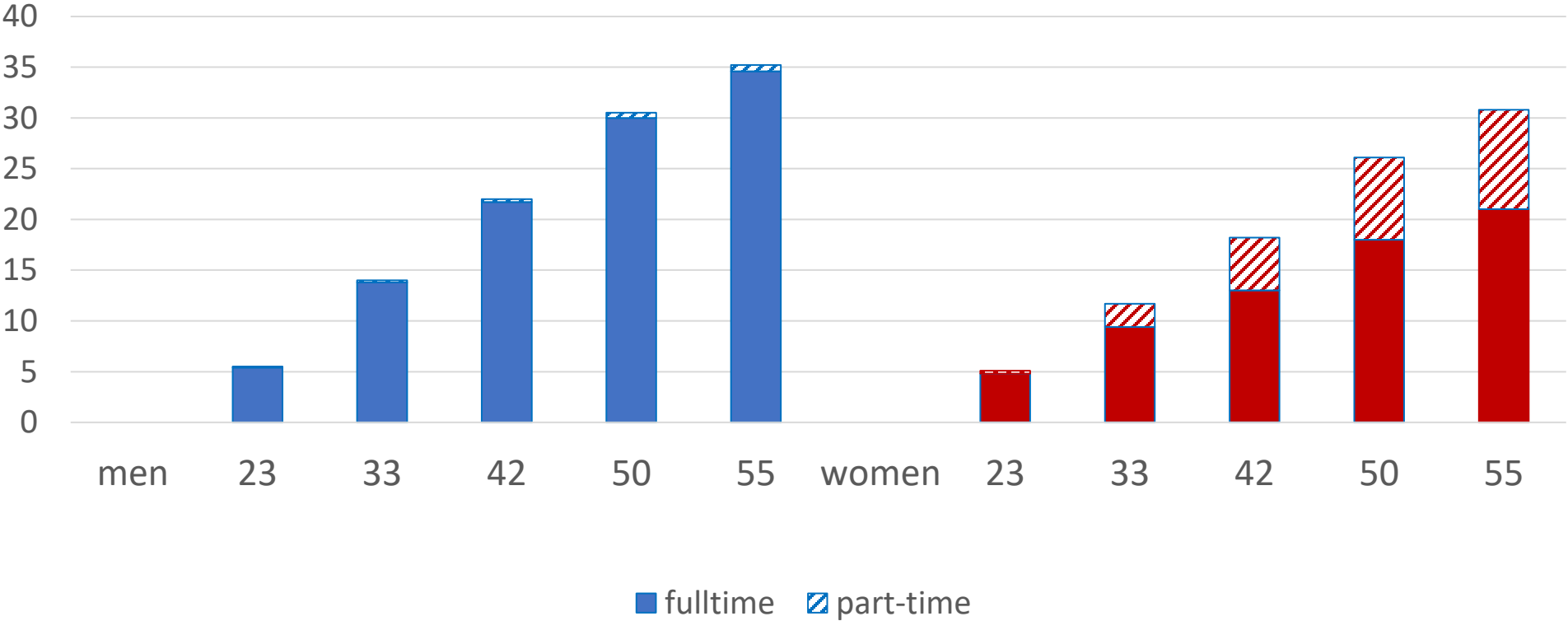
In NCDS the main employment gap(full-time), starts in childrearing ages



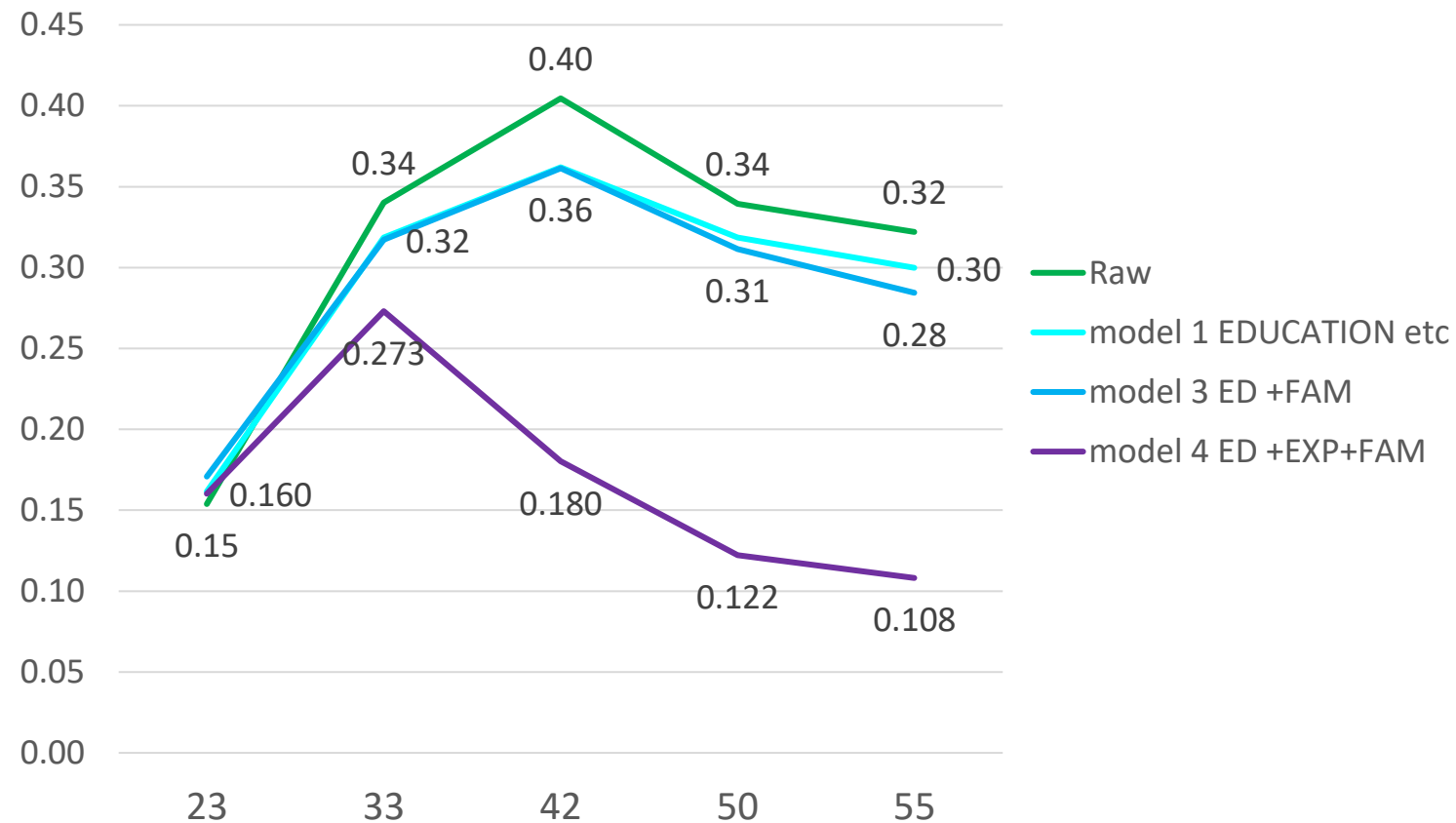
All employed = employees + self employed

The work experience of workers NCDS

Years of work experience: wage samples

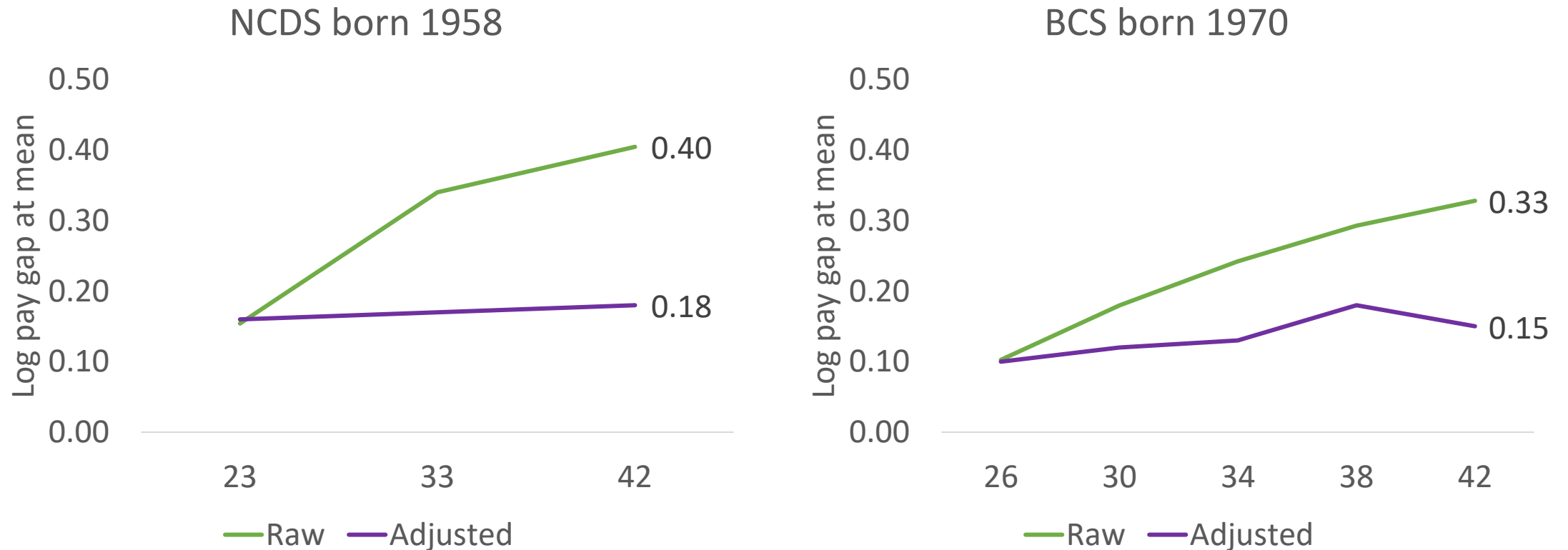


Gender pay gap: NCDS 23 - 55, logs: raw and adjusted



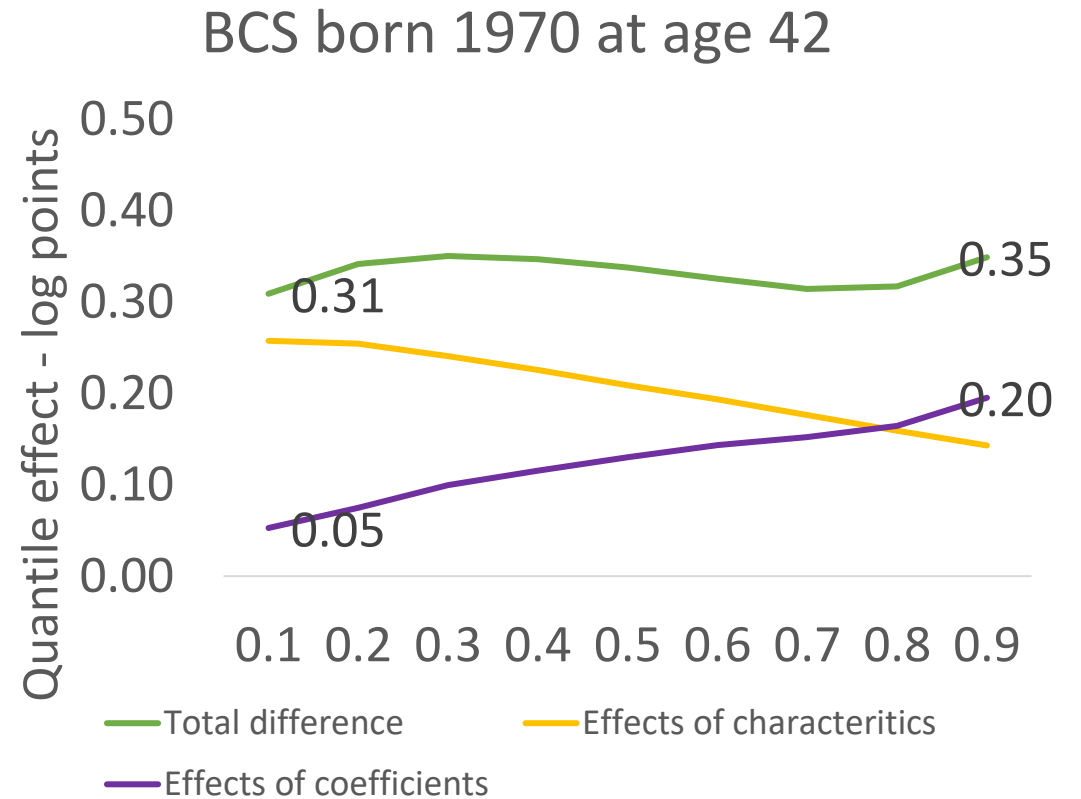
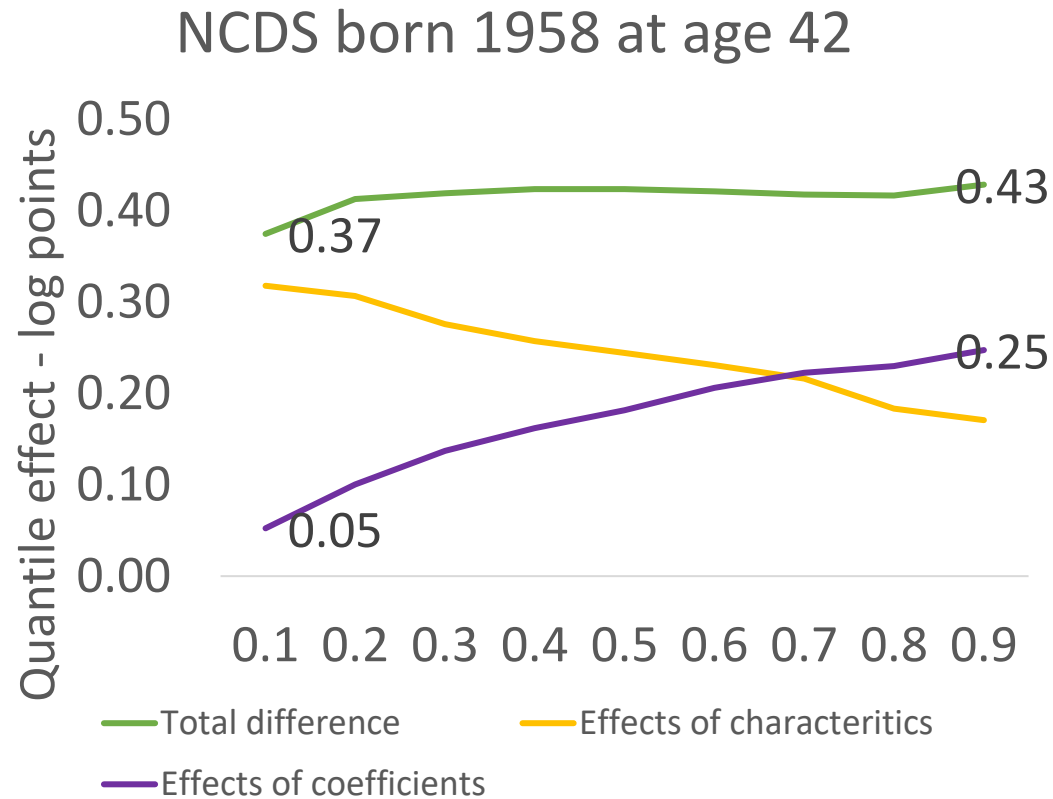
Pay gaps from youth to midlife: two cohorts

Explained gap fell more than unexplained



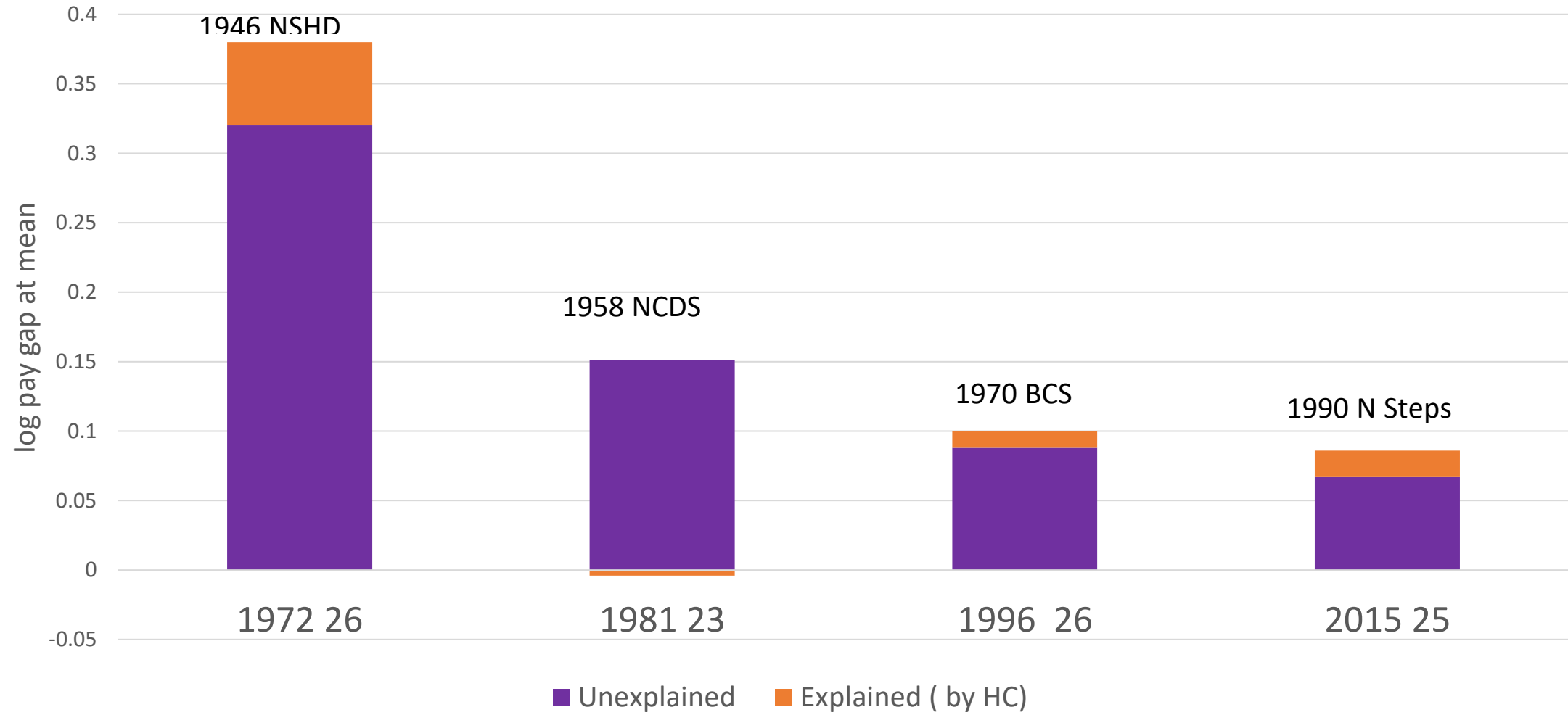
NB NCDS reworked, Gaps adjusted for qualifications, work experience and region

Decomposition across the distribution at mid-life: encounters with a glass ceiling?



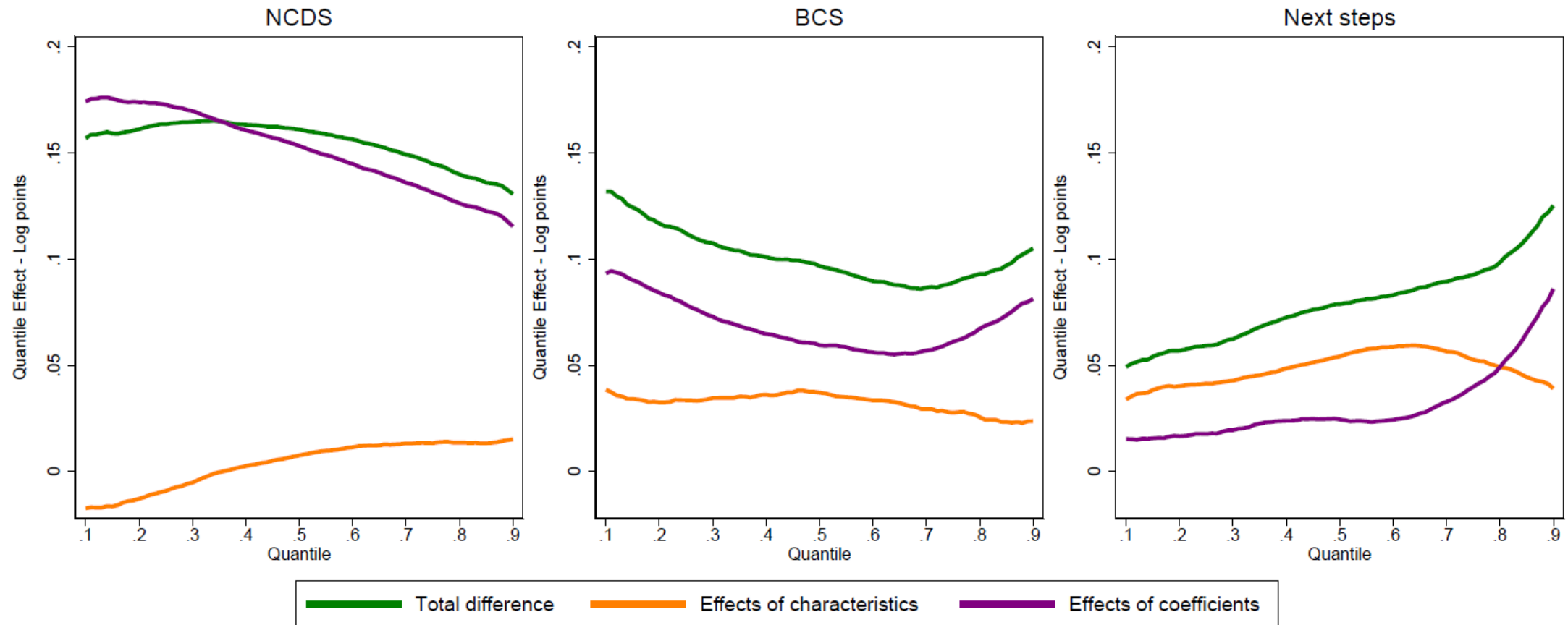
NB Gaps adjusted for qualifications, work experience and region

Young adults across cohort studies 1972-2015, Gender pay gap adjusted for human capital*



* Quails, experience (all) ; cognitive scores @11 (NSHD); subject studied, family, (NCDS-NS); attitudes @16(NCDS+NS)
No adjustment for selection into wage sample.

Young adults (23.26.25) GPG across the distribution Human capital adjustment*

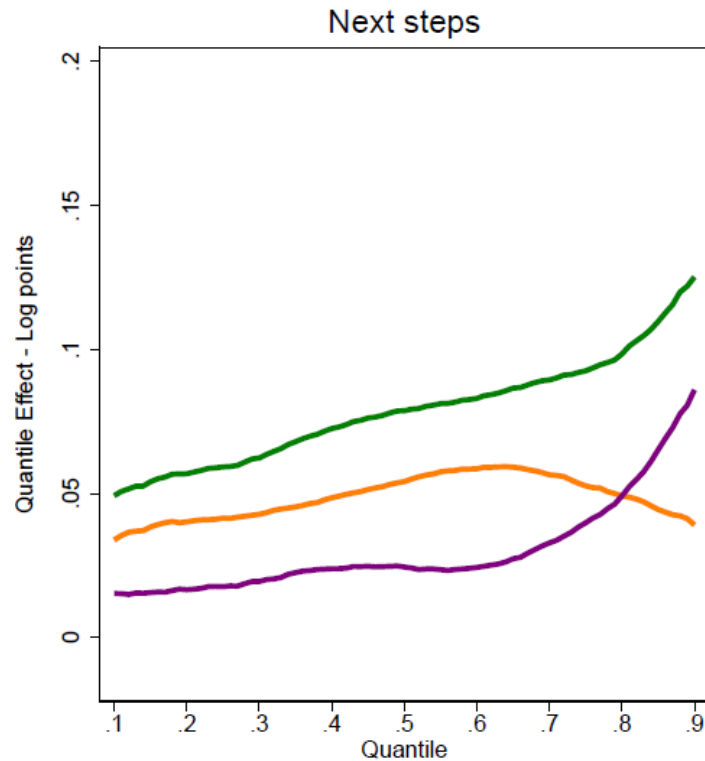


* Quals, subject studied, experience, family, attitudes at 16(NCDS+NS)

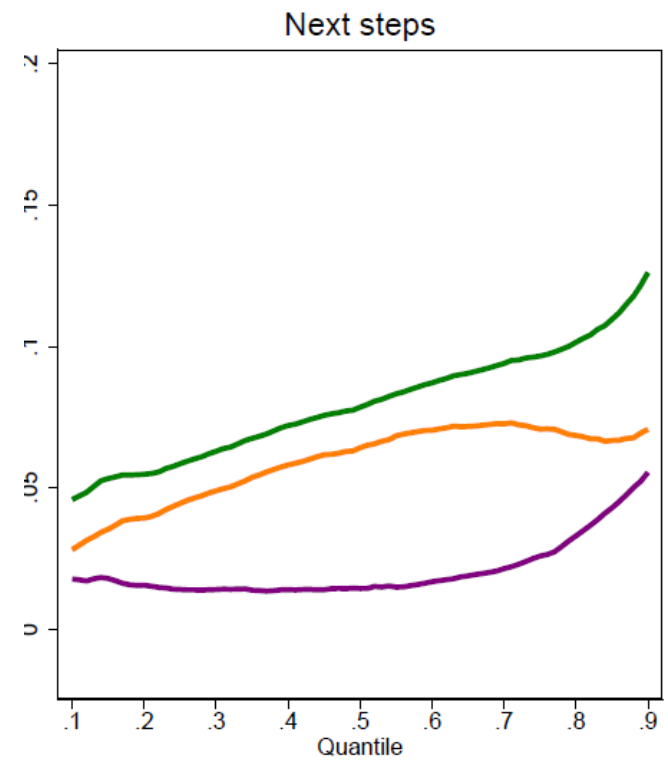
Next Steps Age 25 in 2015

Widening gaps within highest paid jobs

Adjusted for Human Capital



Adjusted also for Job Characteristics*



*Occupation at 1 digit; % female and % graduate in 4 digit occupation, hours

Recent studies of the gender pay gap within an elite occupation - medicine

- Dept of Health and Social Care (2020)
- Mend the Gap: The Independent Review into Gender Pay Gaps in Medicine in England**
- Chair - Professor Dame Jane Dacre,
- Lead Researcher - Professor Carol Woodhams (U of Surrey Business School, et al)

NHS payroll Quoting here total pay, not just basic, from one set of earners.

Melanie Jones and Ezgi Kaya (2021)

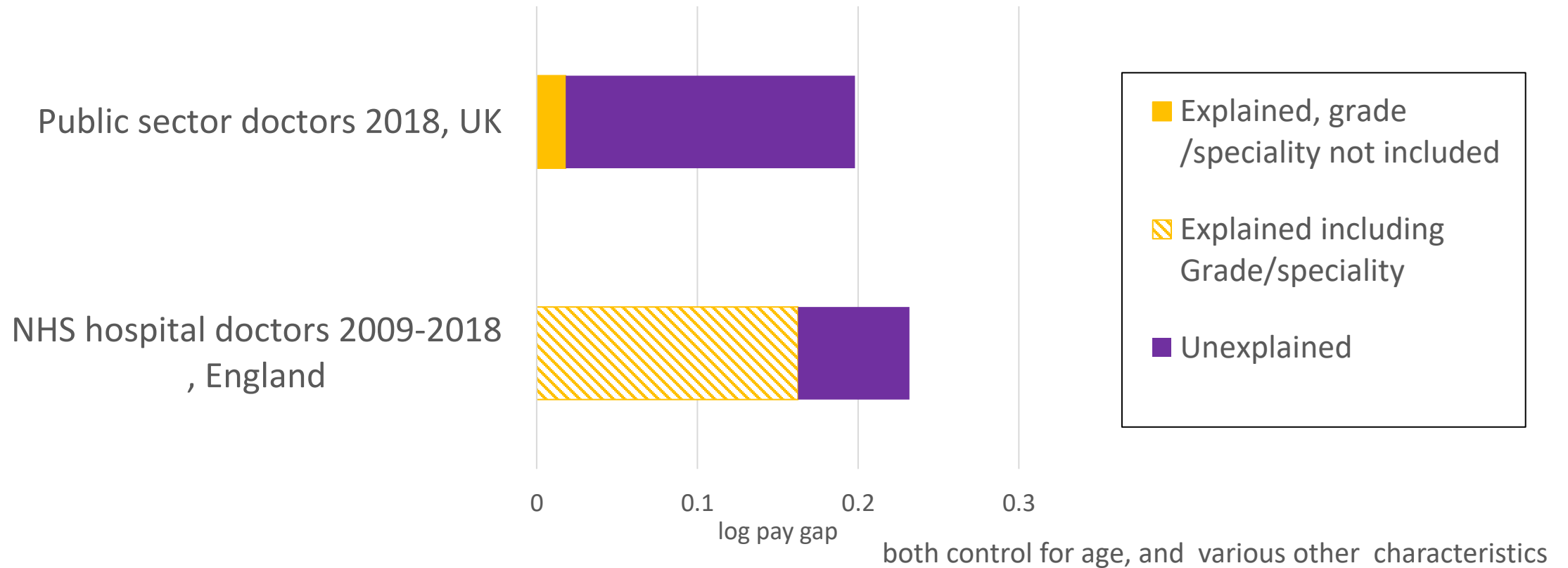
The Gender Pay Gap in UK Medicine

- Cardiff University and **Institute of Labor Economics** (IZA discussion paper 14177),
ASHE (tax) records, medical practitioners in public sector and other groups

Recent analyses of gender pay gap in medicine

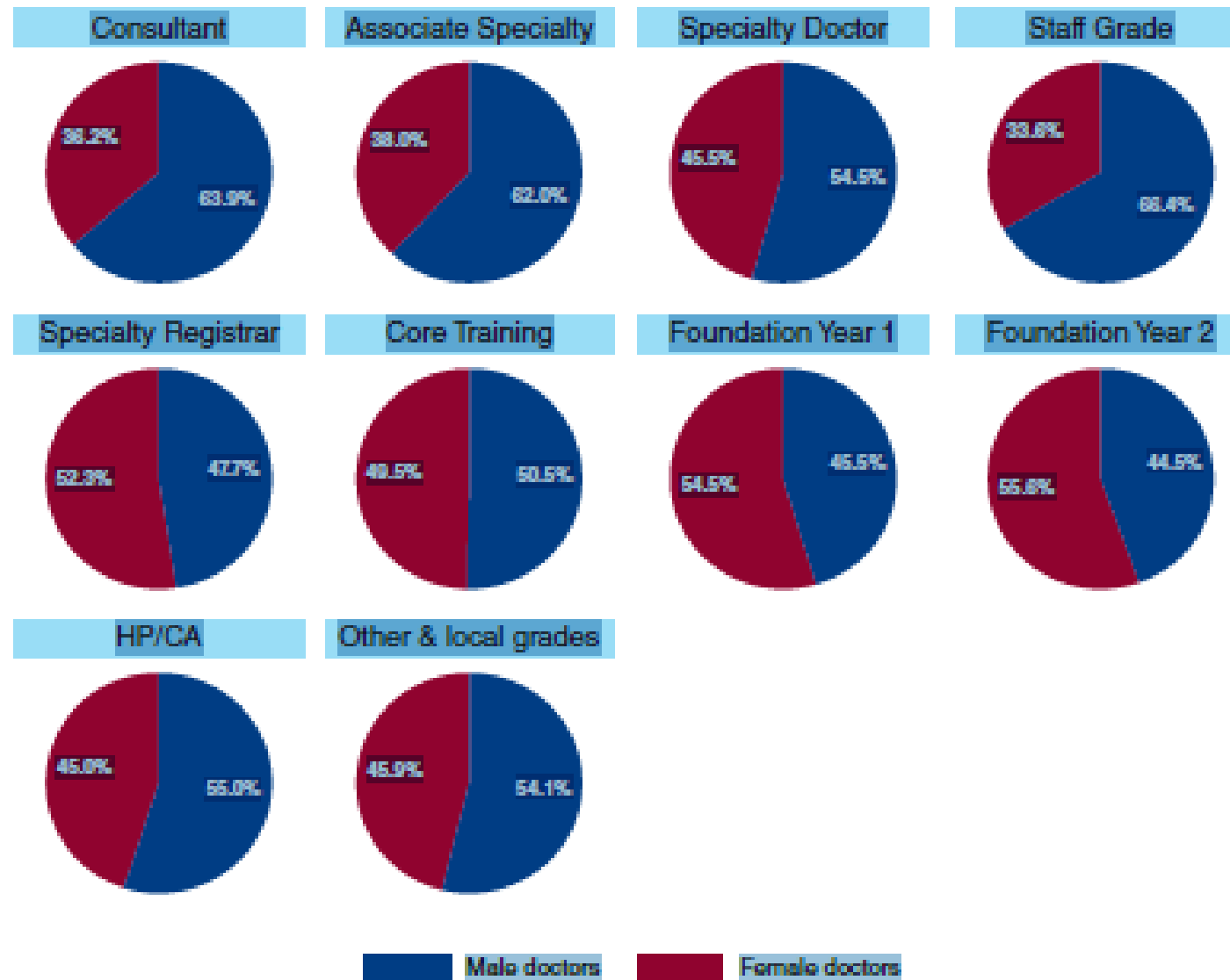
Jones & Kaha 2021, hourly pay, public sector doctors (hospital and some salaried GPs)

Mend the Gap, FTE of total pay NHS mainly hospital doctors



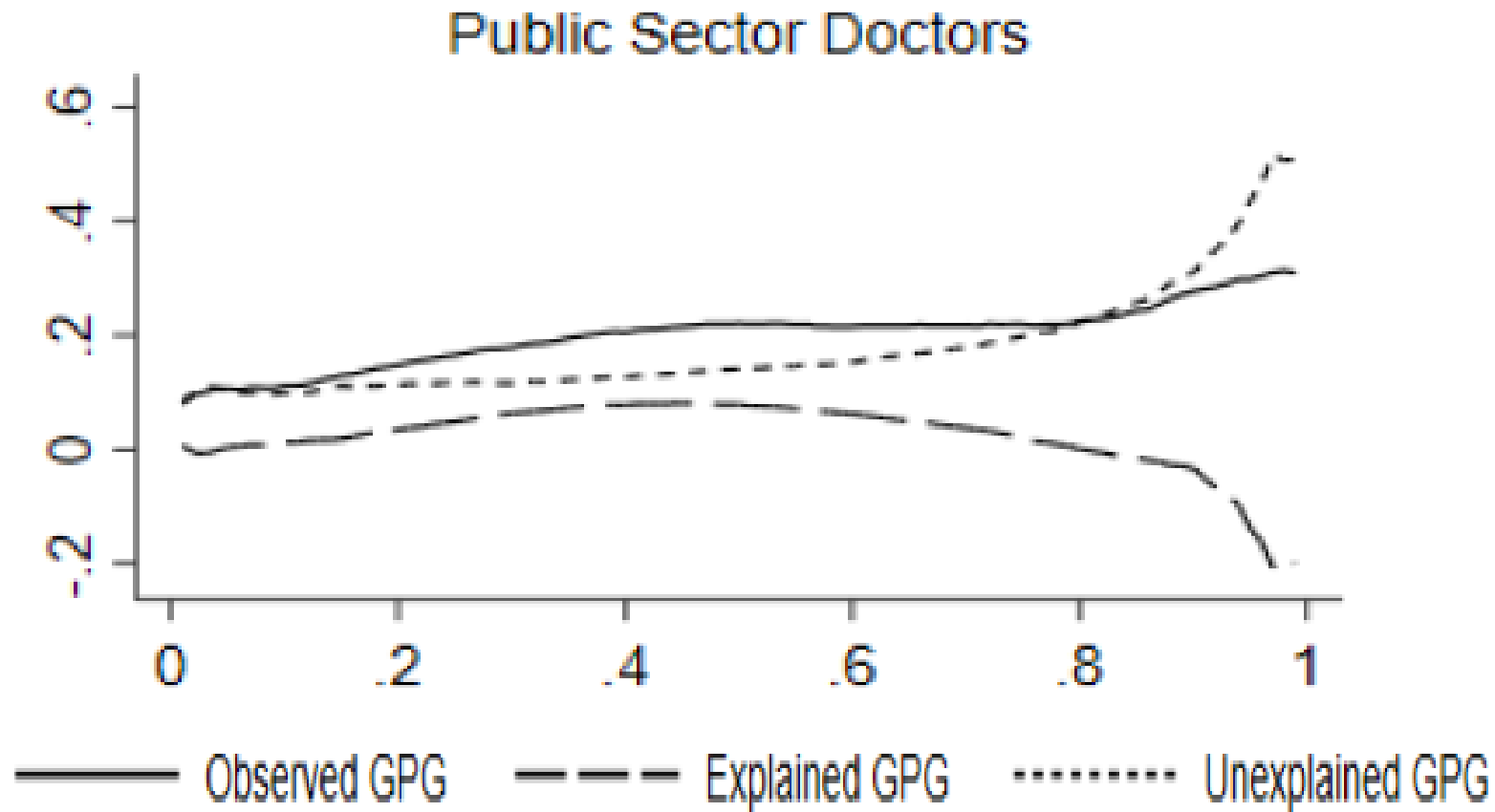
Vertical segregation by NHS Grades

Figure 1. Gender composition across grades, September 2018 (%).



'Glass ceiling' within medicine

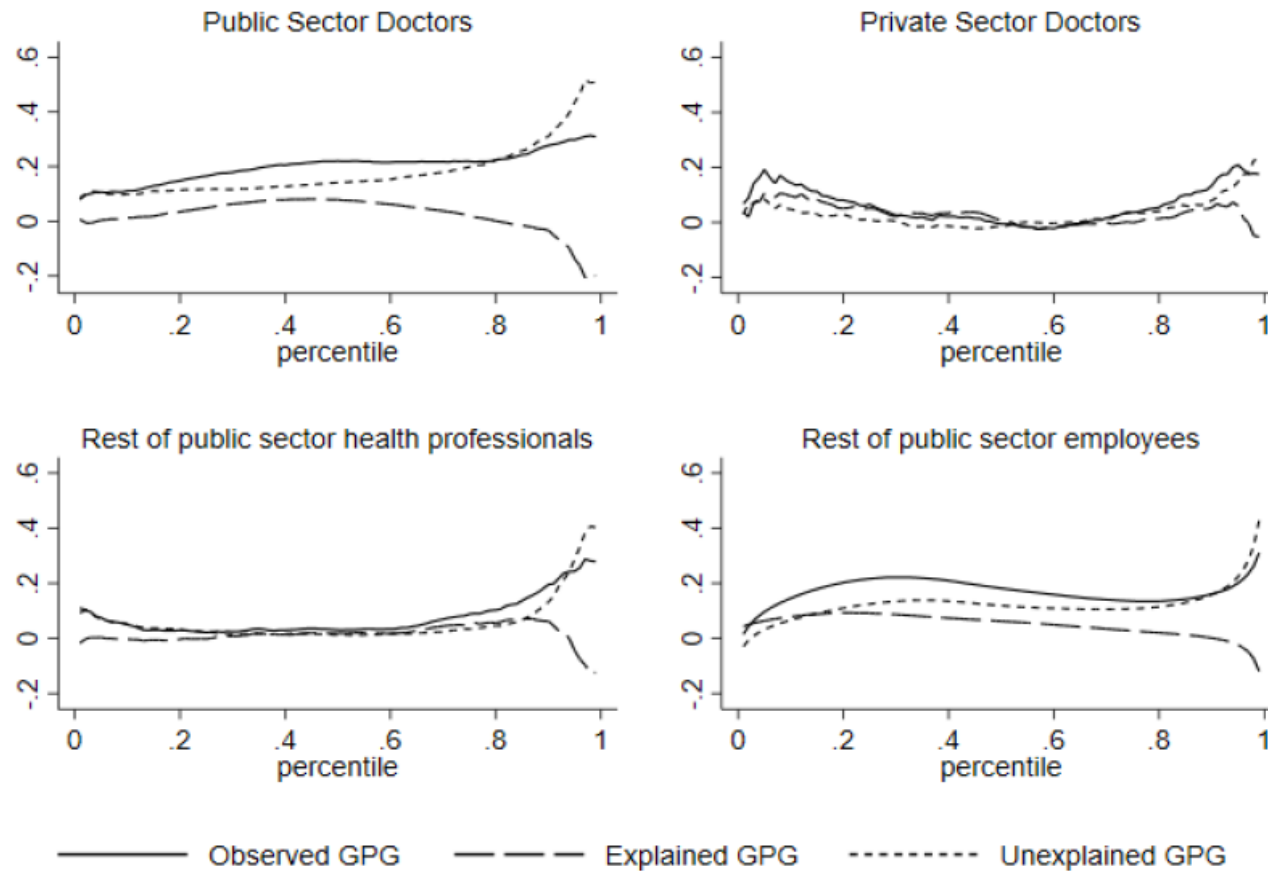
Jones and Kaha 2021, using ASHE 2018



ASHE. 2018

Decomposition of log hourly pay gap at percentiles, depends on sector

Jones and Kaha 2021



The future?

- Over time, **GPG** has reduced, helped by a number of policies affecting **unequal treatment** of male and female workers and narrowing differences in their **human capital**.
- Differences remain, particularly among parents, higher earners and some elite occupations, including parts of medicine
- Policies to tackle differences in culture in the workplace and some pay-setting institutions are still needed to speed the pipeline of cohort succession.
- Meanwhile the impact of the pandemic on the distribution of employment and future career records is likely to provide a new source of female disadvantage, differential employment records and differential rates of pay for male and female parents.
- Working from home may exacerbate or redress the unequal pay of mothers and fathers – but that is still under investigation in our project.

Thank you for your attention and comments

Please visit our website

<https://www.ucl.ac.uk/ioe/departments-and-centres/centres/quantitative-social-science/gender-wage-gap-evidence-cohort-studies>