Inequality, Redistribution and the Labour Market

The Future of Work Conference

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Motivating theme: Can't address all the concerns about low wages and earnings inequality through the tax and welfare system alone.

Key challenge: How do we balance tax/benefit policy with other policies: min wages, human capital policies, competition policy, etc?

First: a little background to the *IFS Deaton Inequality Review*…

https://www.ifs.org.uk/inequality/

The IFS Deaton Review: Inequalities in the 21st Century

Inequality

The IFS Deaton Review

An ambitious 5-year study of inequality

Bringing together the best available evidence from across the social sciences to answer the big questions:

- Which inequalities matter most?
- How are different kinds of inequality related?
- What are the underlying forces that come together to create them?
- What is the right mix of policies to tackle adverse inequalities?
- For developed economies with the UK as the running example, but comparative in nature….

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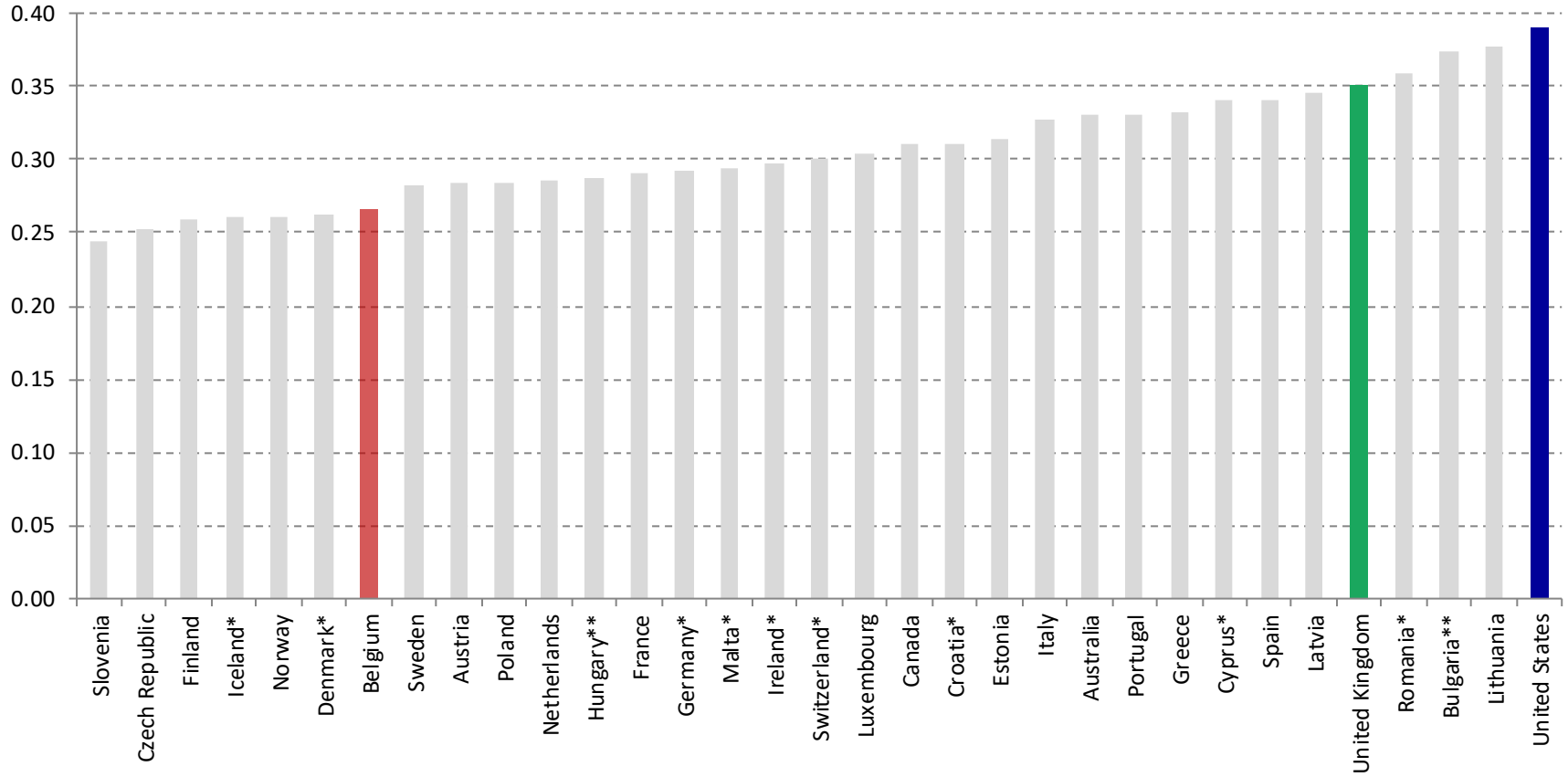
Measured by the Gini, the UK is unequal by European standards

Gini coefficient of equivalised net household incomes in selected countries, 2016



Figures from 2015 are marked with an asterisk (*). Figures from 2014 are marked with two asterisks (**).
Note: Data on EU states that joined in or before 2004 are from the OECD. Data on other countries are from the World Bank.
Source: Joyce and Xu, IFS, 2019

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Inequality is not just about income

- Income inequality is important, but so are inequalities in
  - wages, wealth, consumption, health, family life, political voice, …..
- Need to look at inequalities between groups as well as individuals
  - gender, ethnicity, generations, places, ……
- The focus is on understanding the *drivers* of these inequalities and the *best policy mix* to mitigate their adverse impacts.

The IFS Deaton Review: An International Panel

Inequality

The IFS Deaton Review

Chair

Angus Deaton
Princeton University

Panel

Orazio Attanasio
IFS & Yale

James Banks
IFS & Manchester University

Lisa Berkman
Harvard University

Tim Besley
London School of Economics

Richard Blundell
IFS & UCL

Pinelopi Goldberg
Yale University & World Bank

Paul Johnson
IFS & UCL

Robert Joyce
IFS

Kathleen Kiernan
University of York

Lucinda Platt
London School of Economics

Imran Rasul
IUCL & IFS

Debra Satz
Stanford University

Jean Tirole
Toulouse School of Economics

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Format of the Review

Much like the *Mirrlees Review*, this Review will be published in two volumes:

I. A volume of commissioned studies and commentaries
   - detailed studies on different aspects of inequality, with commentaries that offer complementary perspectives or alternative views.

II. A book written by the panel, aimed at the general public
   - sets out what has happened to inequality, why, and what can be done.

- With a sequence of academic and public policy events…

Focus in this talk is on:

Inequality, Redistribution and the Labour Market

- The structure of work and of families has changed over the last three decades and continues to change apace,
  - growing earnings inequality for men and women, and adverse labour market 'shocks' for the low educated, especially men.
- When we place people in families in local labour markets, with childcare, marriage, savings and human capital decisions we get a different take on some key tax and welfare design questions.
  - when we put families in a dynamic context, redistribution and insurance become intrinsically linked.

Focus here is on:

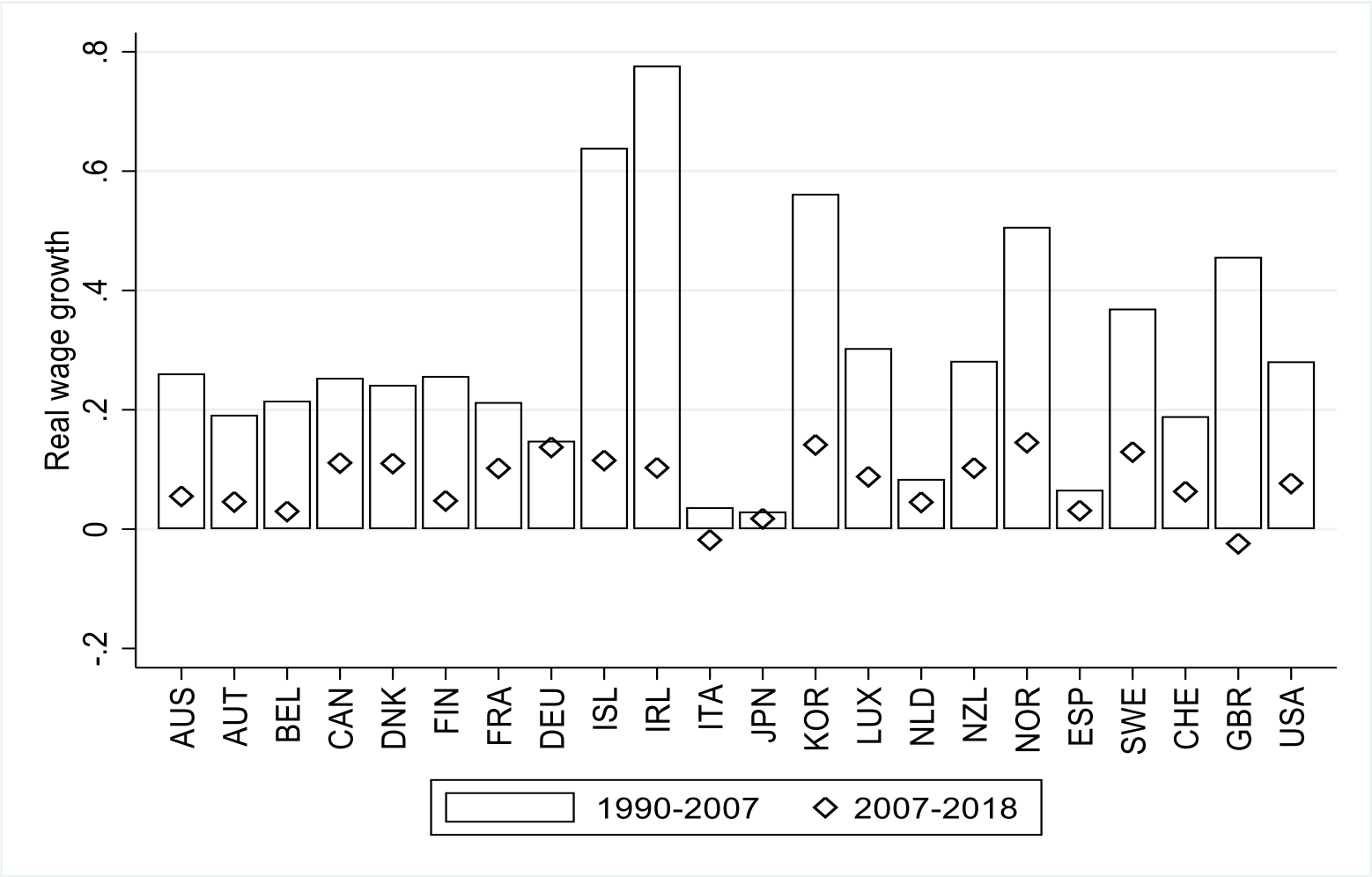
Inequality, Redistribution and the Labour Market

- A key challenge: what is the best balance of policies? e.g.

1. How should we balance tax & welfare-benefit reform with min wages and human capital policies to address low incomes?
2. How should we balance the taxation of top incomes and corporations with competition policy that targets rents of firms and innovators?

- Let's turn to some facts
  - –> focus here is on the UK although point to some common features in Europe and North America.

Real wage growth across countries



Note: Data for Germany start in 1991.
Source: OECD.

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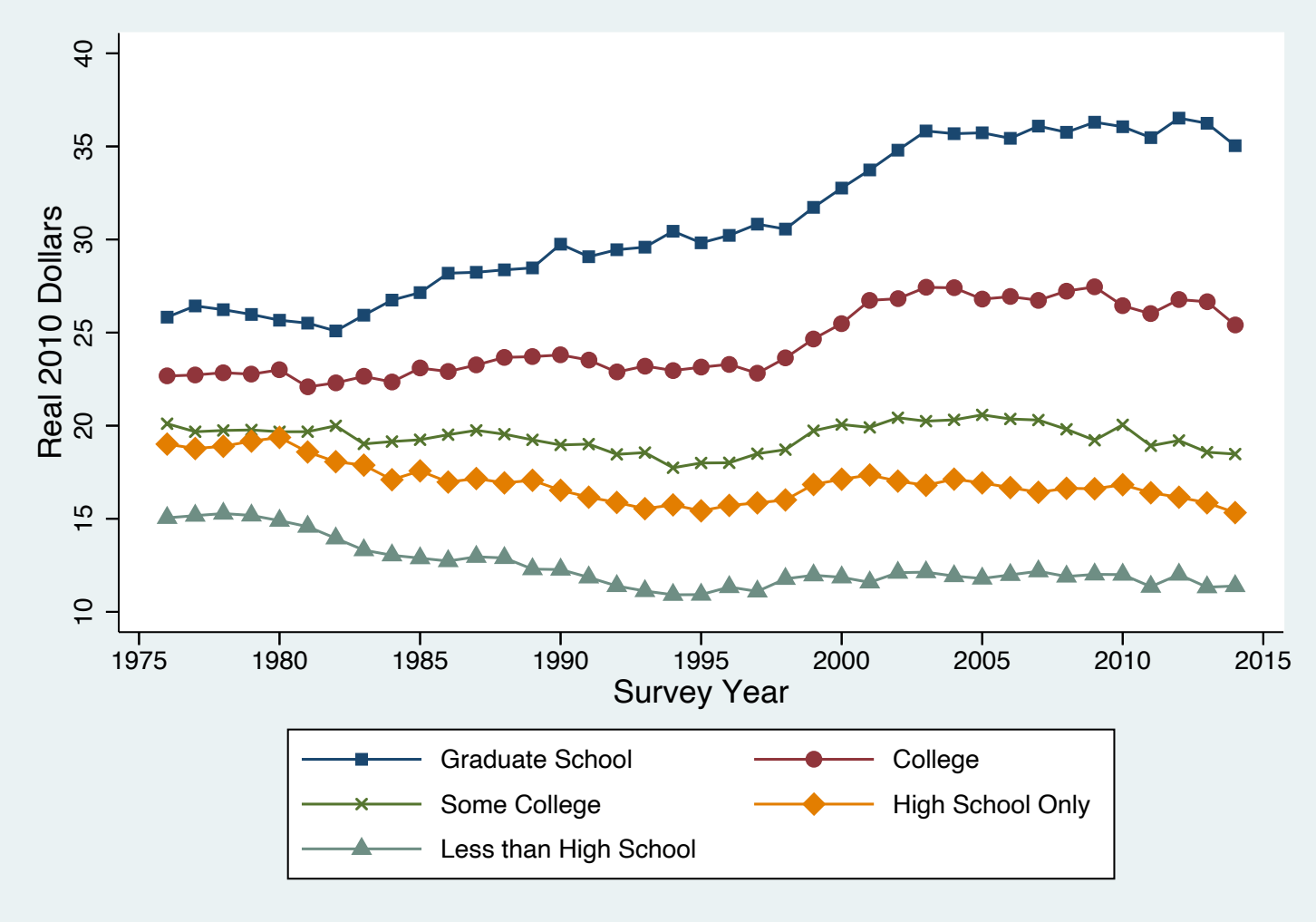
Earnings inequality:

Growth in median male wages in the US by education group: US 1974/5 to 2015/6



Notes: CPS, Includes self employment income and self employed households.
Source: Blundell, Joyce, Norris Keiller and Ziliak (2018)

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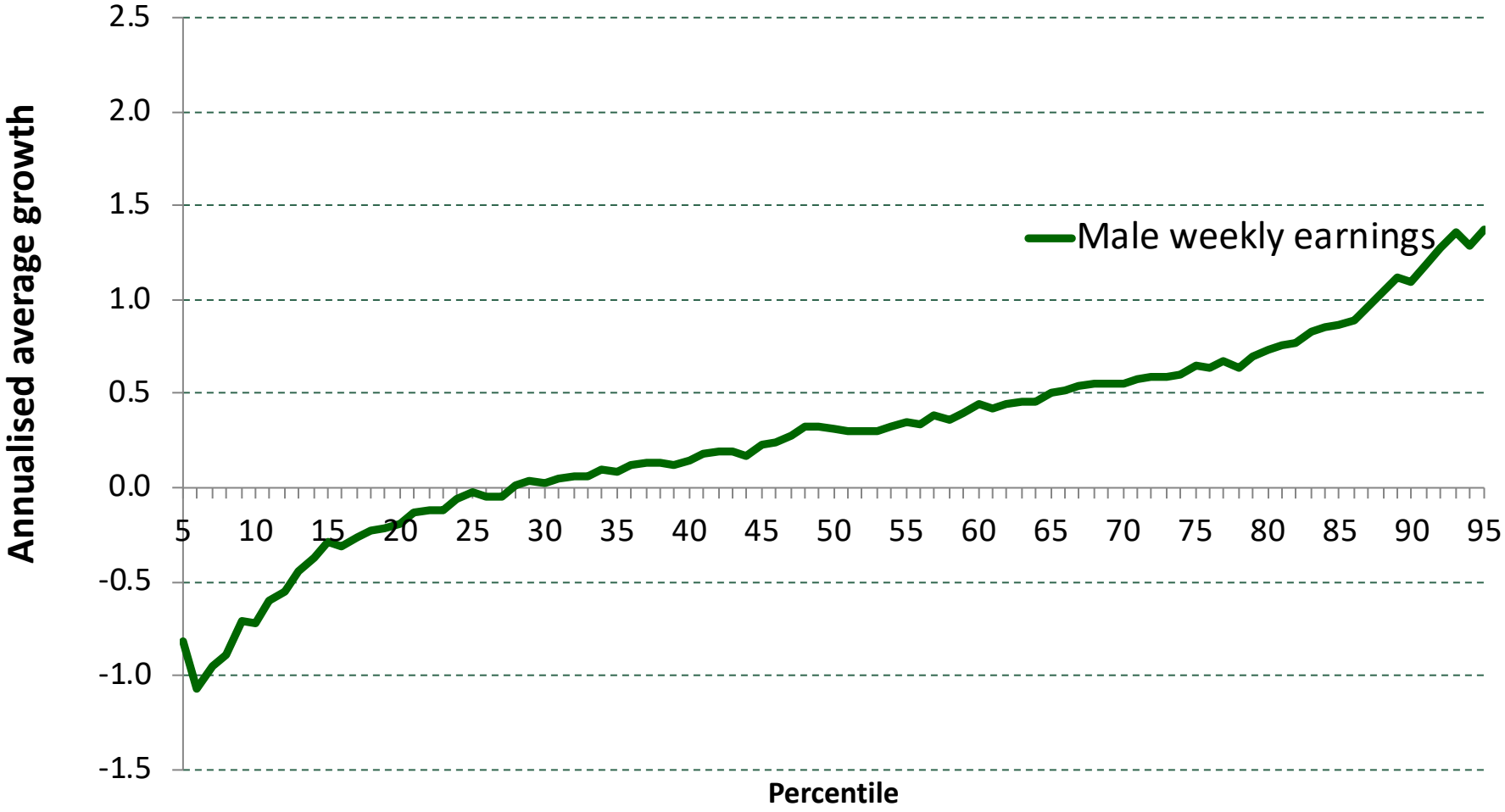
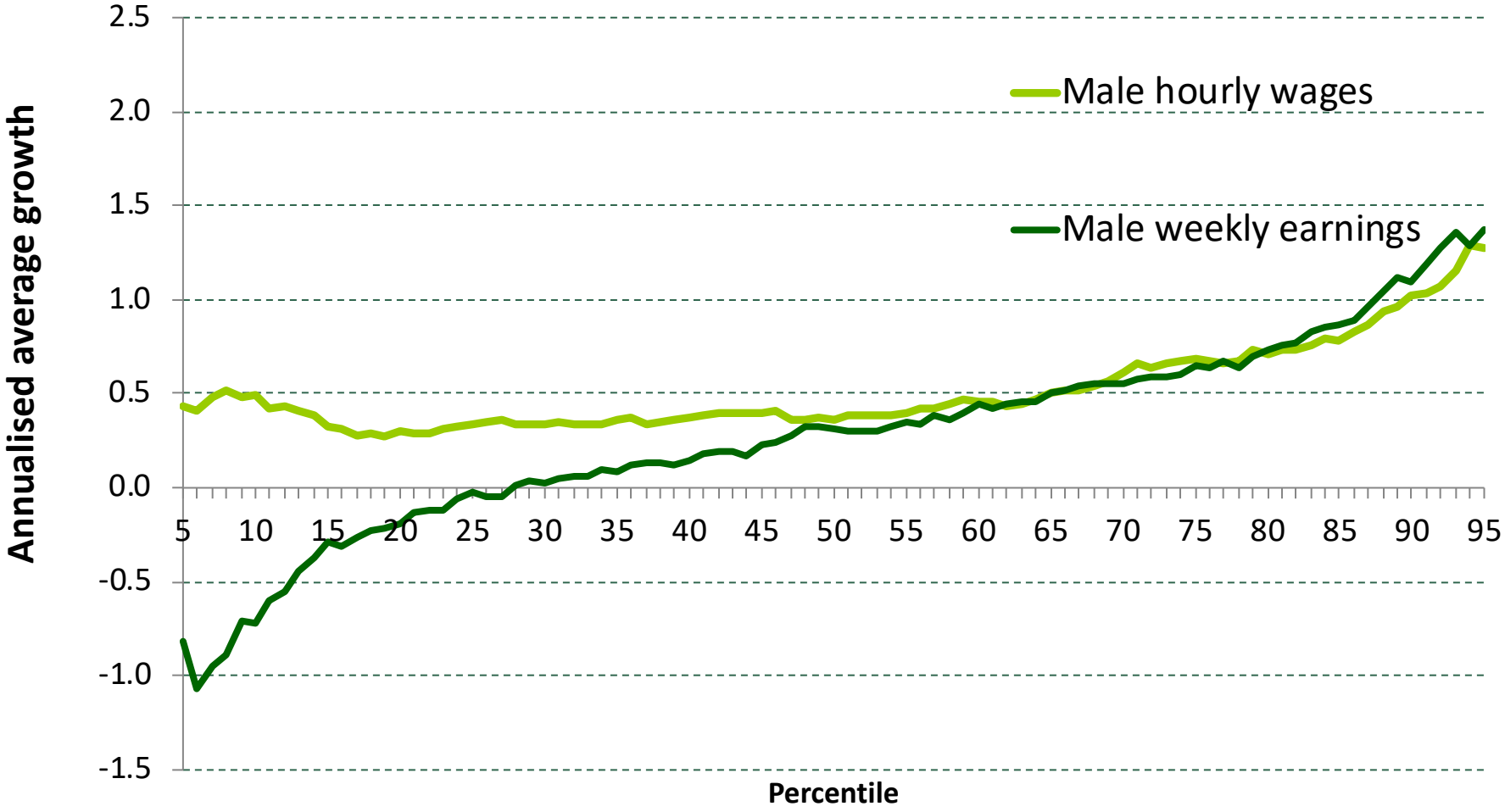
Growth in UK male weekly earnings:
1994/95 – 2015/16



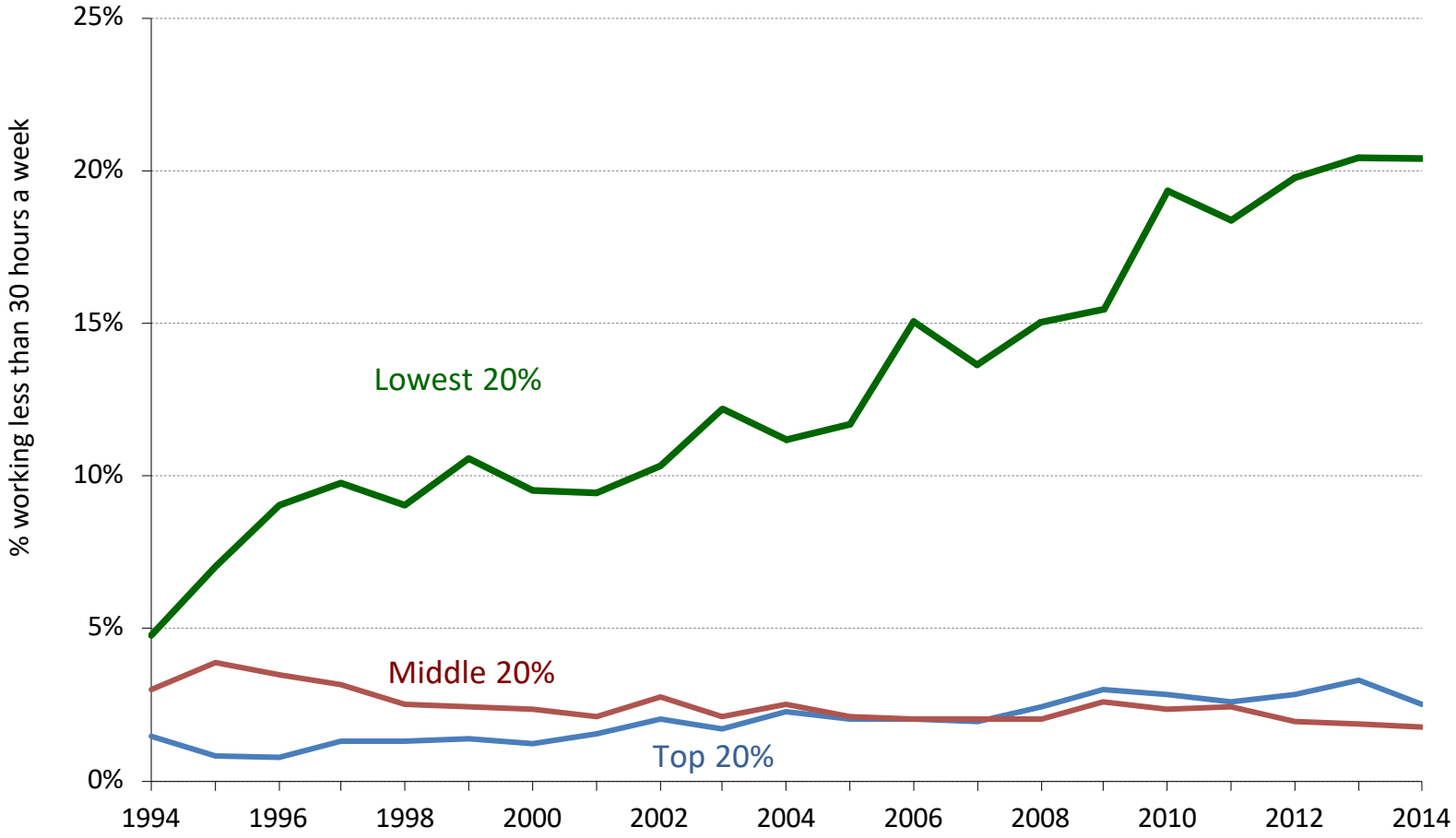
Source: Blundell, Joyce, Norris Keiller and Ziliak (2018): www.ifs.org.uk/publications/10031. Data used is UK FRS 1994-95 and 2015-16.

Growth in UK male weekly earnings and hourly wages: 1994/95 – 2015/16



Source: Blundell, Joyce, Norris Keiller and Ziliak (2018): www.ifs.org.uk/publications/10031. Data used is UK FRS 1994-95 and 2015-16.

Proportion of men working less than 30 hours in the UK by hourly wage quintile – aged 25-55

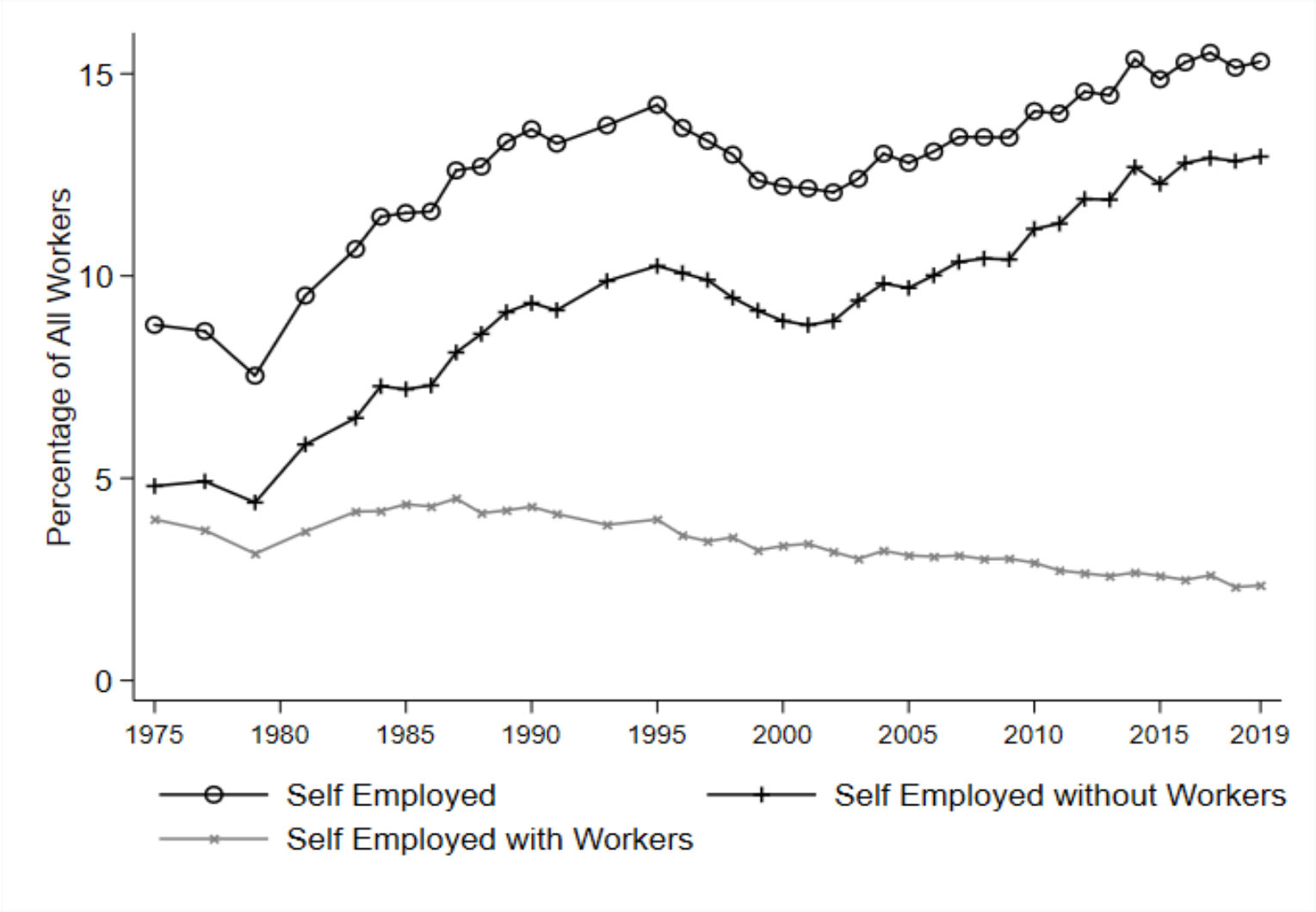


Source: IFS calculations using Labour Force Survey

Notes: LFS: Male employees aged 25-55. Giupponi and Machin (2019) show even stronger for self-employed since 2008 where there has been a growing rate of Involuntary part-timers.

Self-employment and ‘alternative work arrangements’

Self-employment as percent of workforce



Source: Giupponi and Machin (Deaton Review, IFS, 2019)

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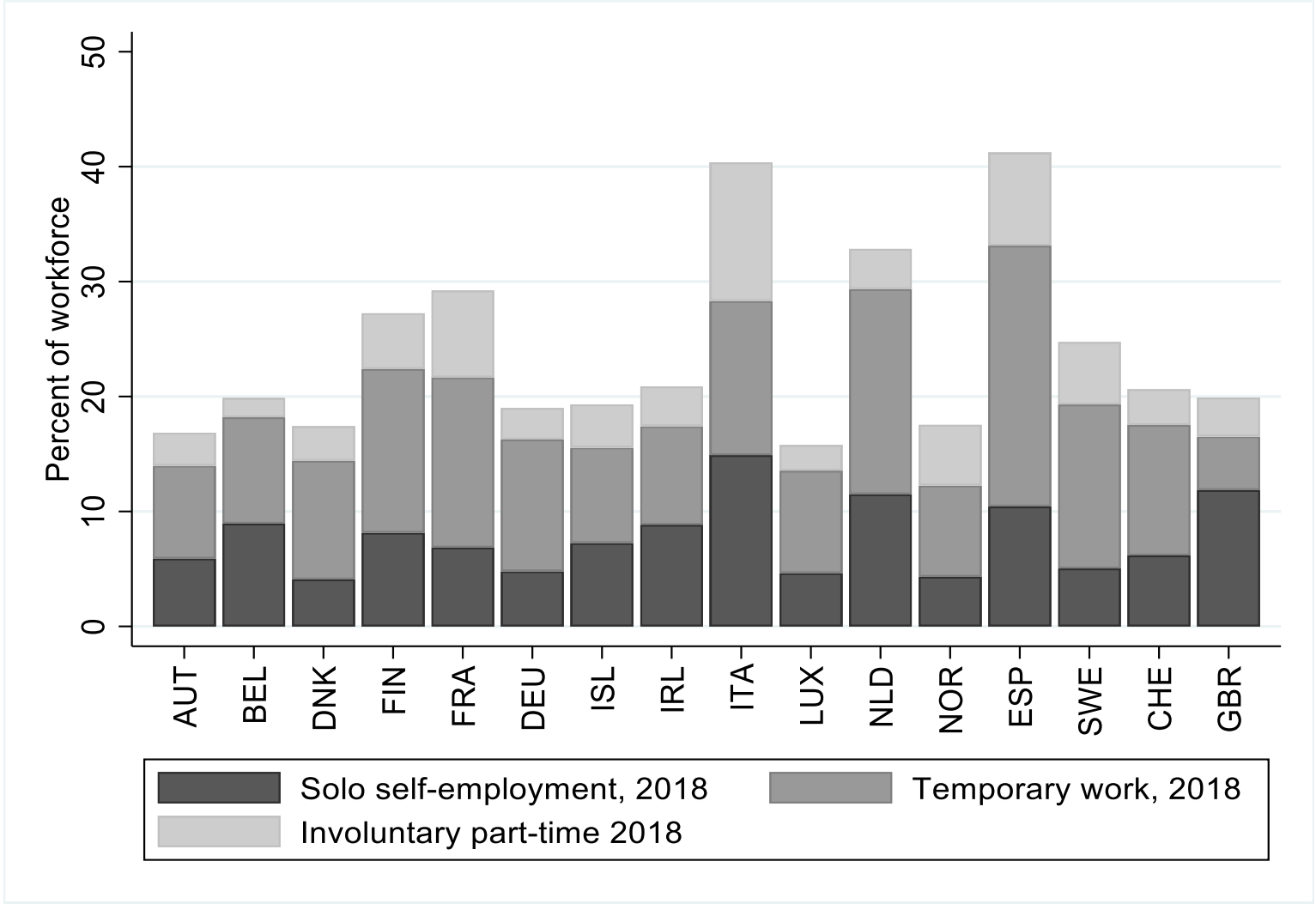
Alternative work arrangements across countries

Alternative work as percent of workforce



Source: Giupponi and Machin (Deaton Review, IFS, 2019)

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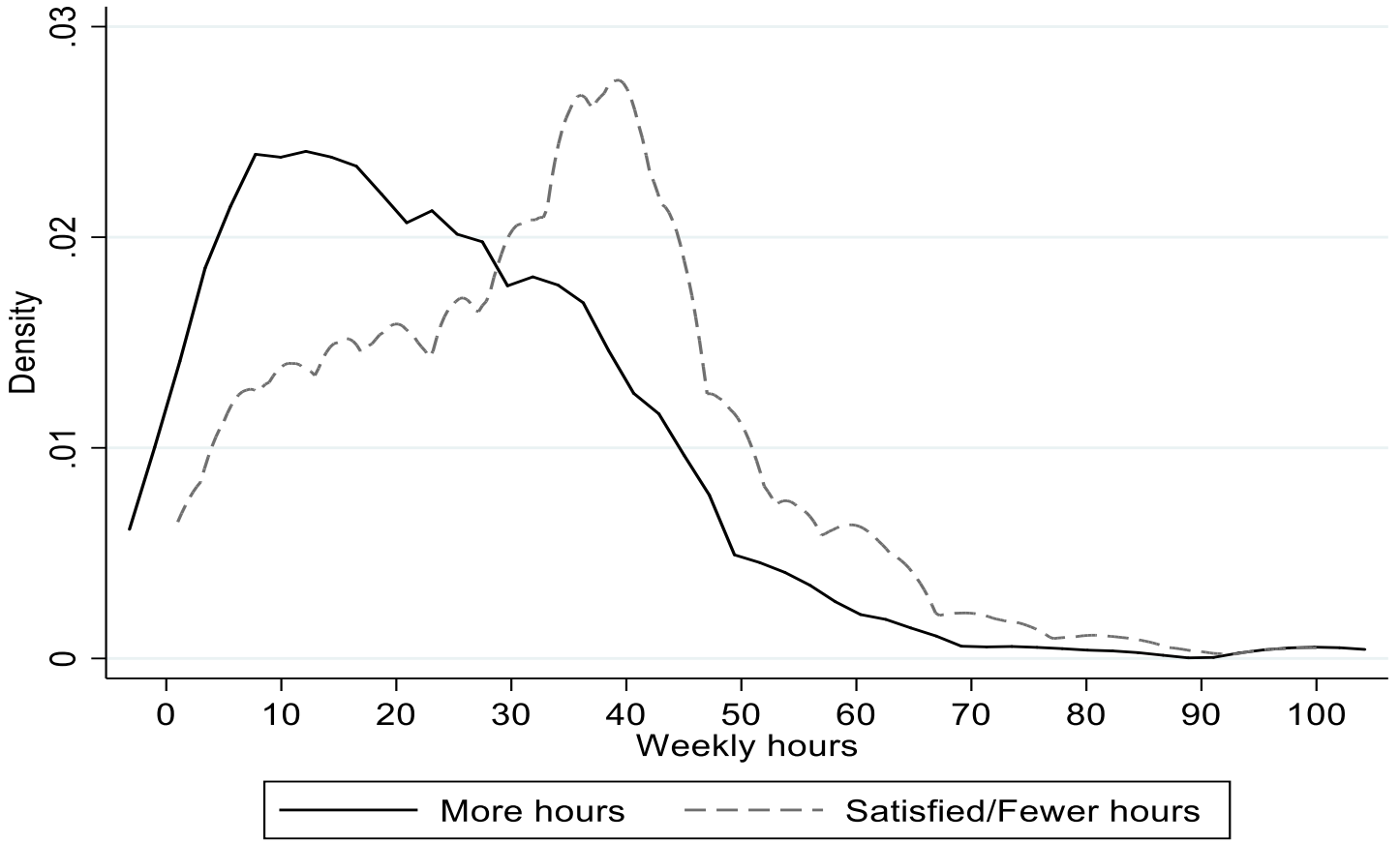
Weekly hours of work

Density of weekly hours worked for workers on alternative work arrangements (solo self-employed and zero hours contract workers)

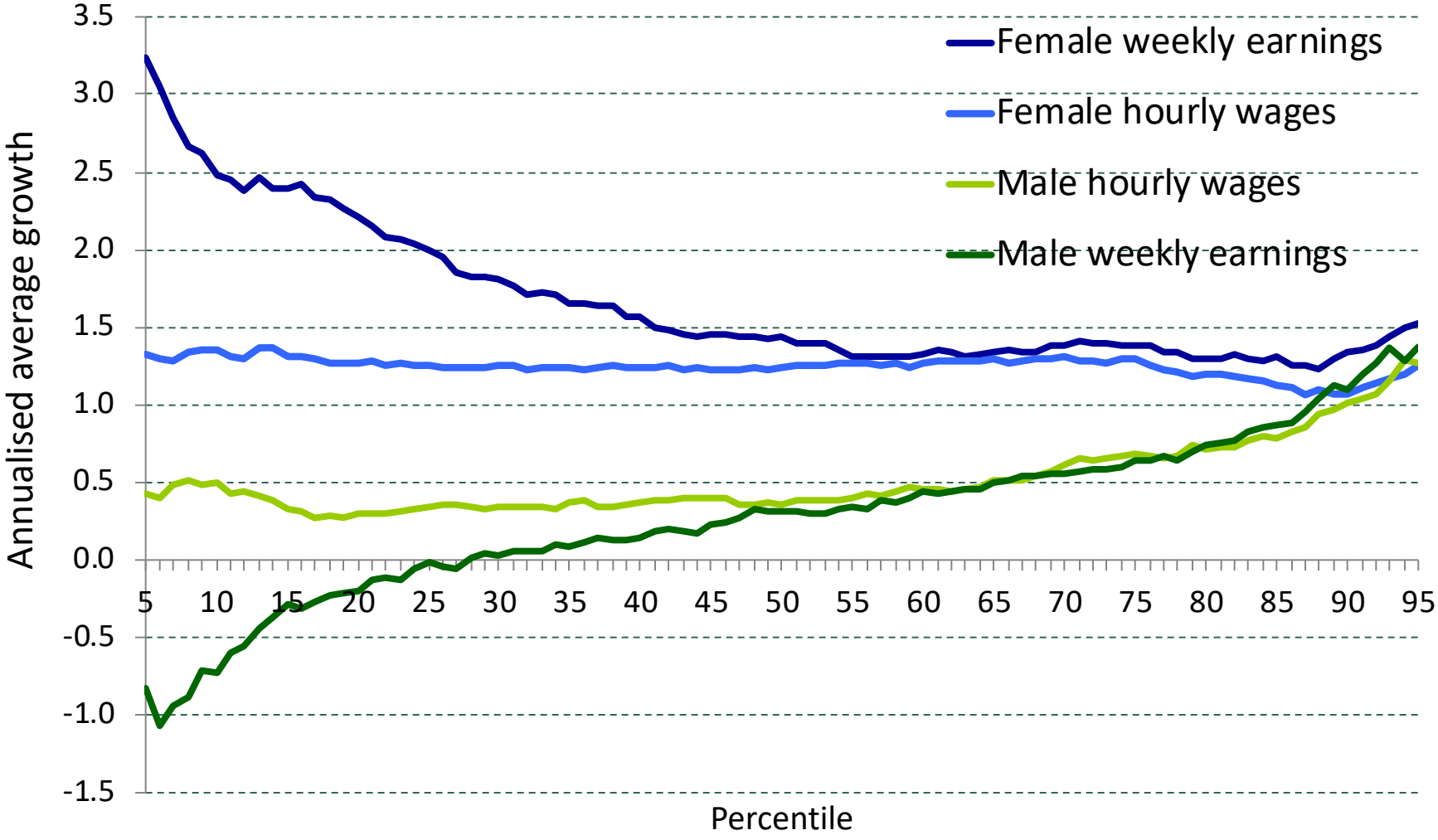


Notes: kernel density; who desire to work more hours (solid line) and who are satisfied with their hours or would like to work fewer hours (dashed line).

Source: LSE-CEP Survey of Alternative Work Arrangements.

Very different growth in female hourly wages and weekly earnings:

UK 1994/95 – 2015/16

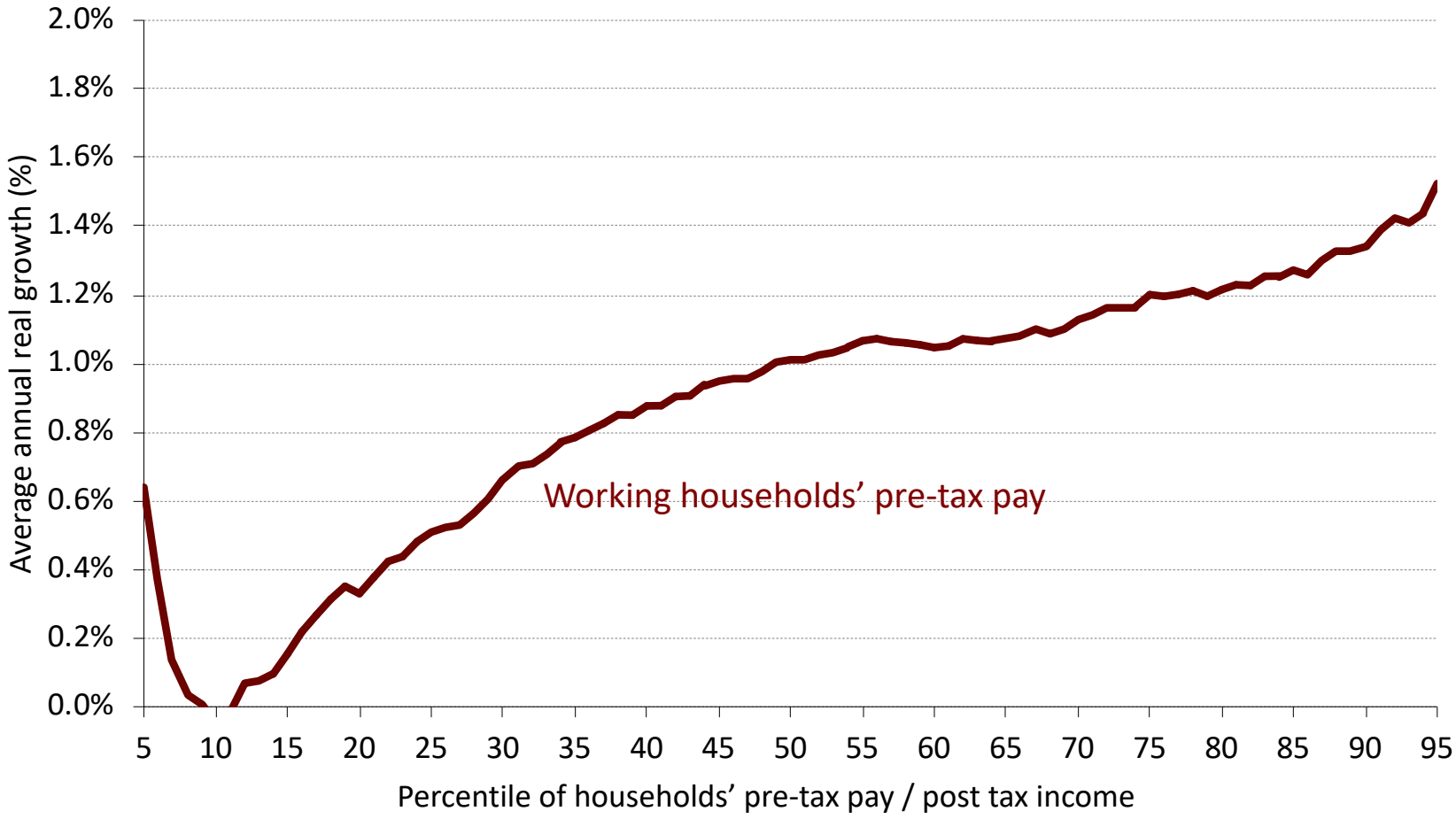


But assortative partnering and the low female earnings share implies this has not improved between family inequality…. Similar results in the US.

Source: Blundell, Joyce, Norris Keiller and Ziliak (2018): Data used is FRS 1994-95 and 2015-16.

Earnings and Incomes:

Growth in pre-tax earnings for working households in UK 1994/5 to 2015/6



Notes: Includes self employment income and self-employed households. Family Resources Survey. All income measures are equivalised.
Source: Blundell, Joyce, Norris Keiller and Ziliak (2018)

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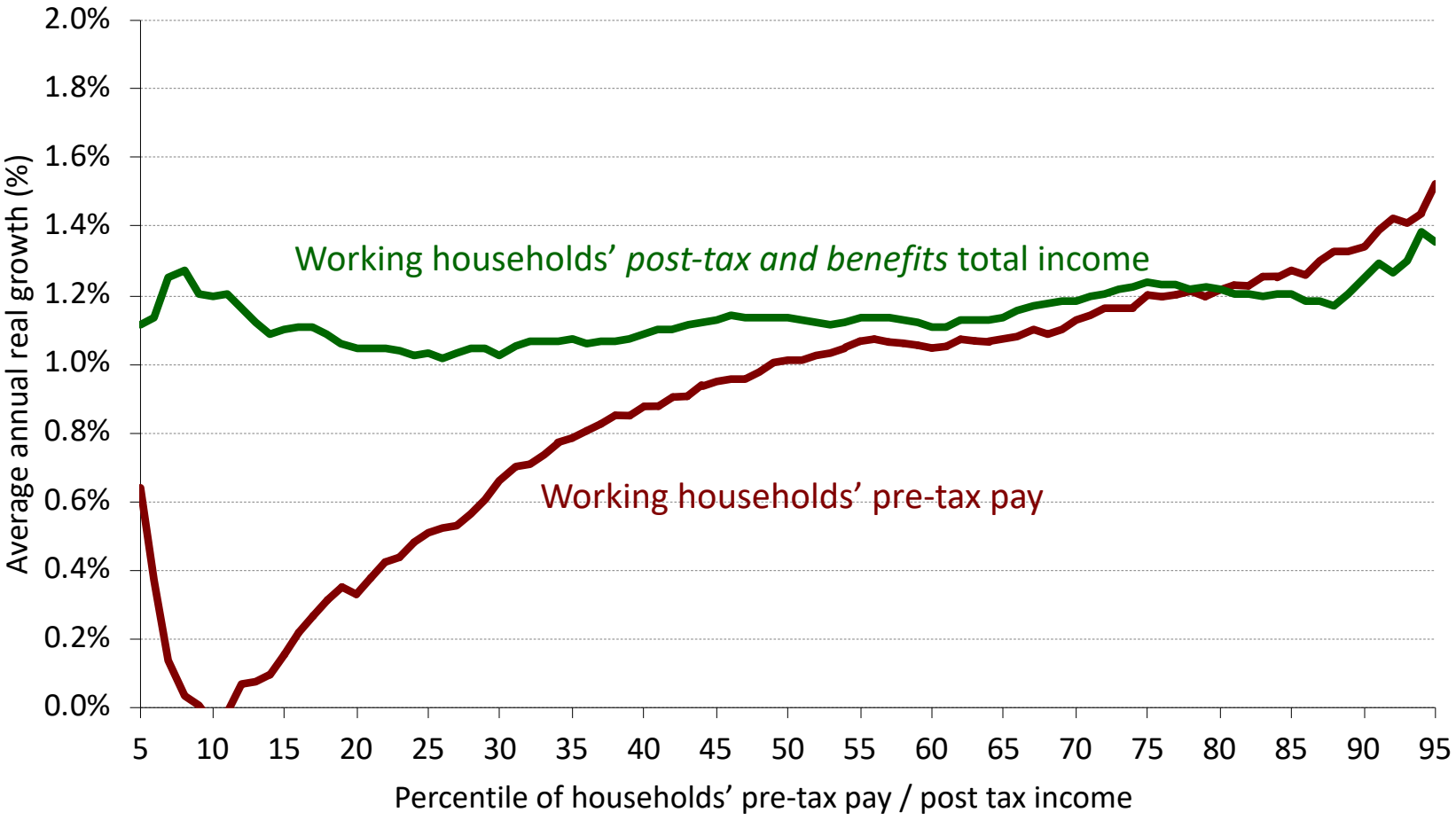
Family Earnings and Family Incomes:

Household income growth for working households in UK 1994/5 to 2015/6



Notes: Includes self employment income and self employed households. Family Resources Survey. All income measures are equivalised.
Source: Blundell, Joyce, Norris Keiller and Ziliak (2018)

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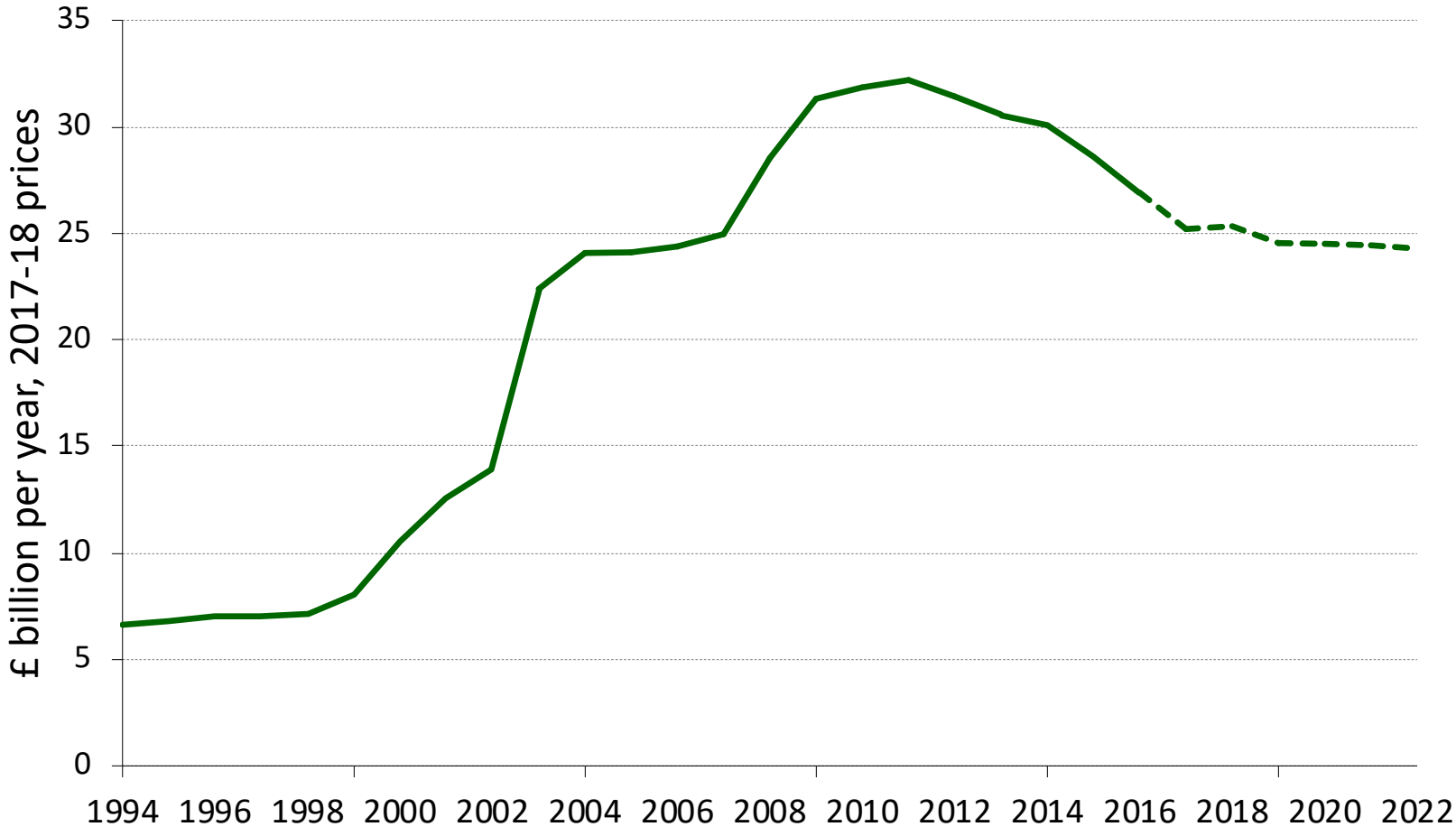
Real spending on tax credits and equivalents in the UK



Source: IFS calculations from DWP (UK) benefit expenditure tables.

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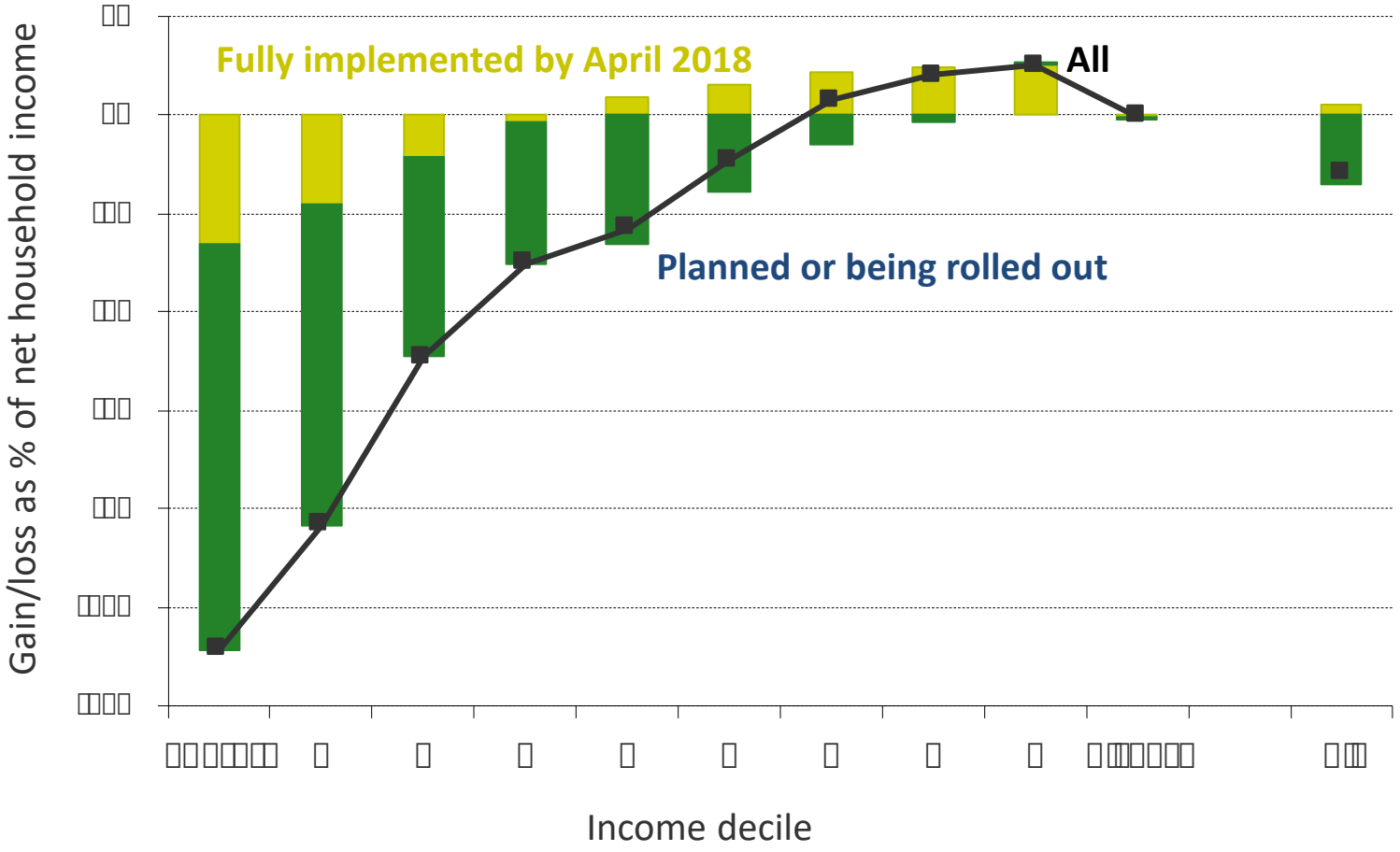
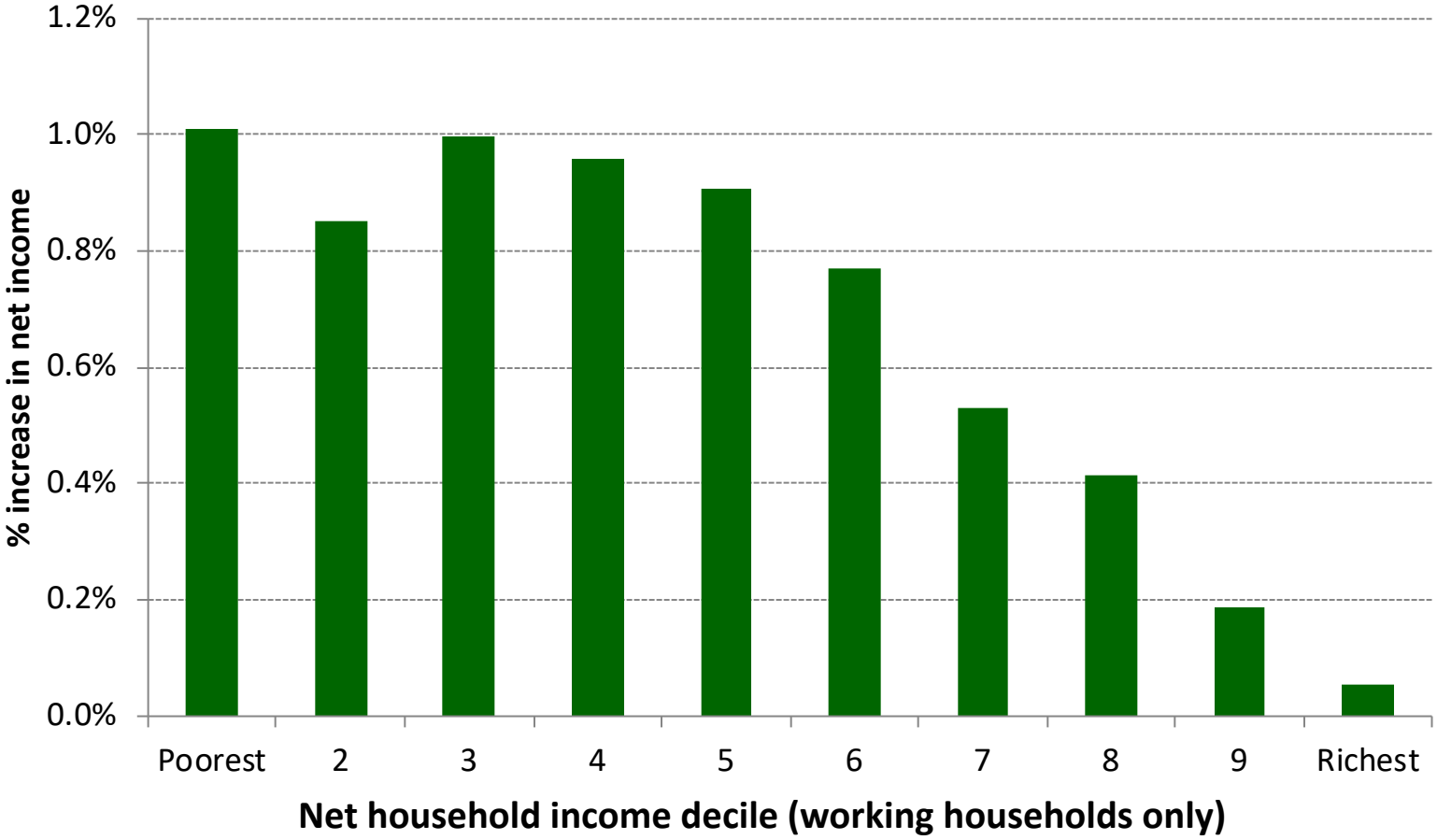
Long run distributional impact of personal tax/benefit reforms in the UK since 2015 going forward…



Note: Assumes full take-up of means-tested benefits and tax-credits. Policies partially rolled are Universal Credit, the 2-child limits, the replacement of DLA with PIP and the abolition of the WRAG premium in ESA.
Source: IFS calculations using the IFS micro-simulation model run on the 2015–16 FRS and 2014 LCFS.

Higher minimum wage targets the lowest-wage people, *not* the lowest-earning households

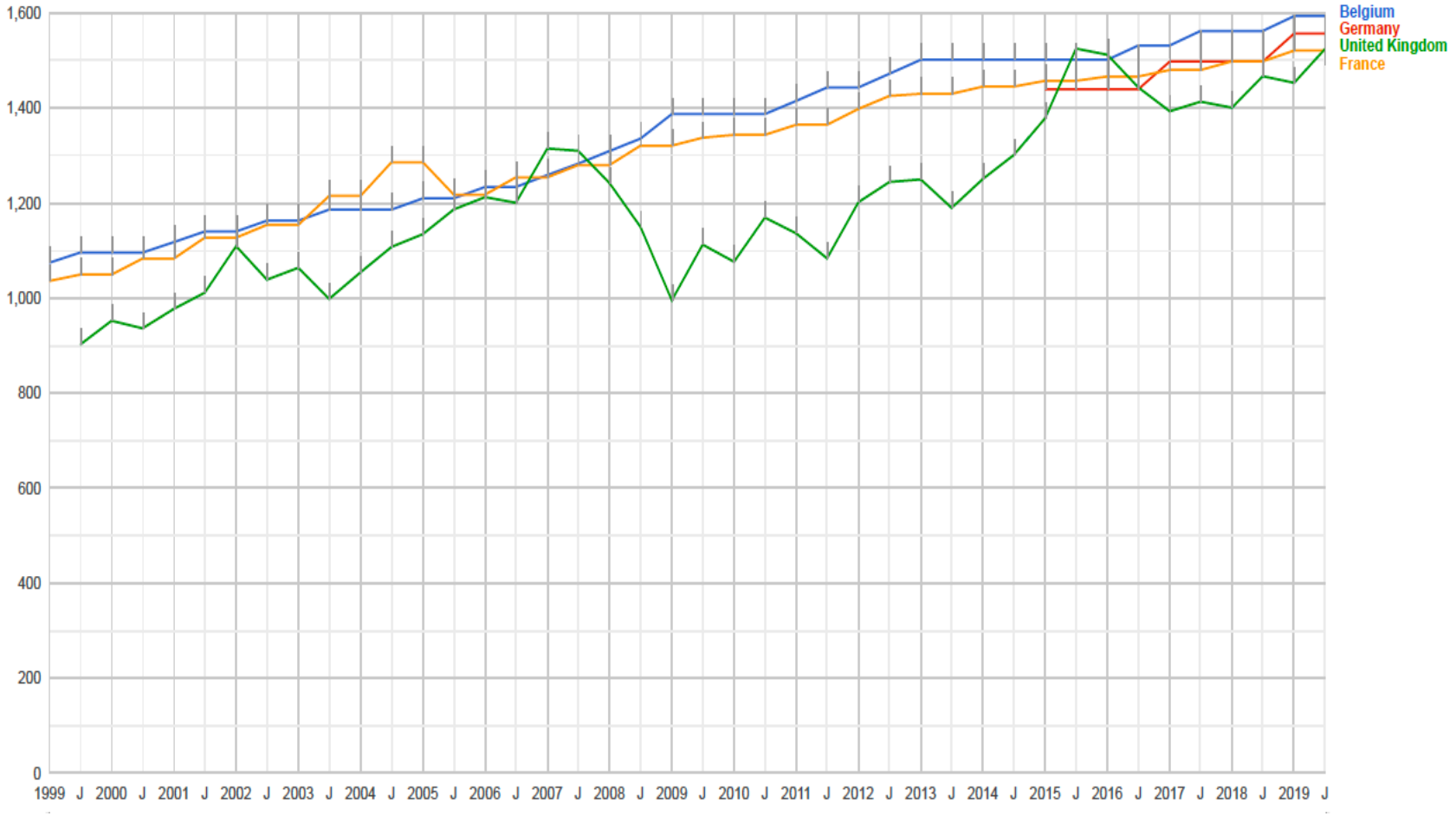
Figure shows the increase in the minimum wage between now and 2020 in the UK. Which *working households* get the extra money?



Note: Shows mechanical increase in net income arising from minimum wage rises planned between now and 2020, allowing for interaction with tax payments and benefit entitlements.
Source: Calculations using data underlying Figure 9 of Cribb, Joyce and Norris Keiller (2017): www.ifs.org.uk/publications/9205

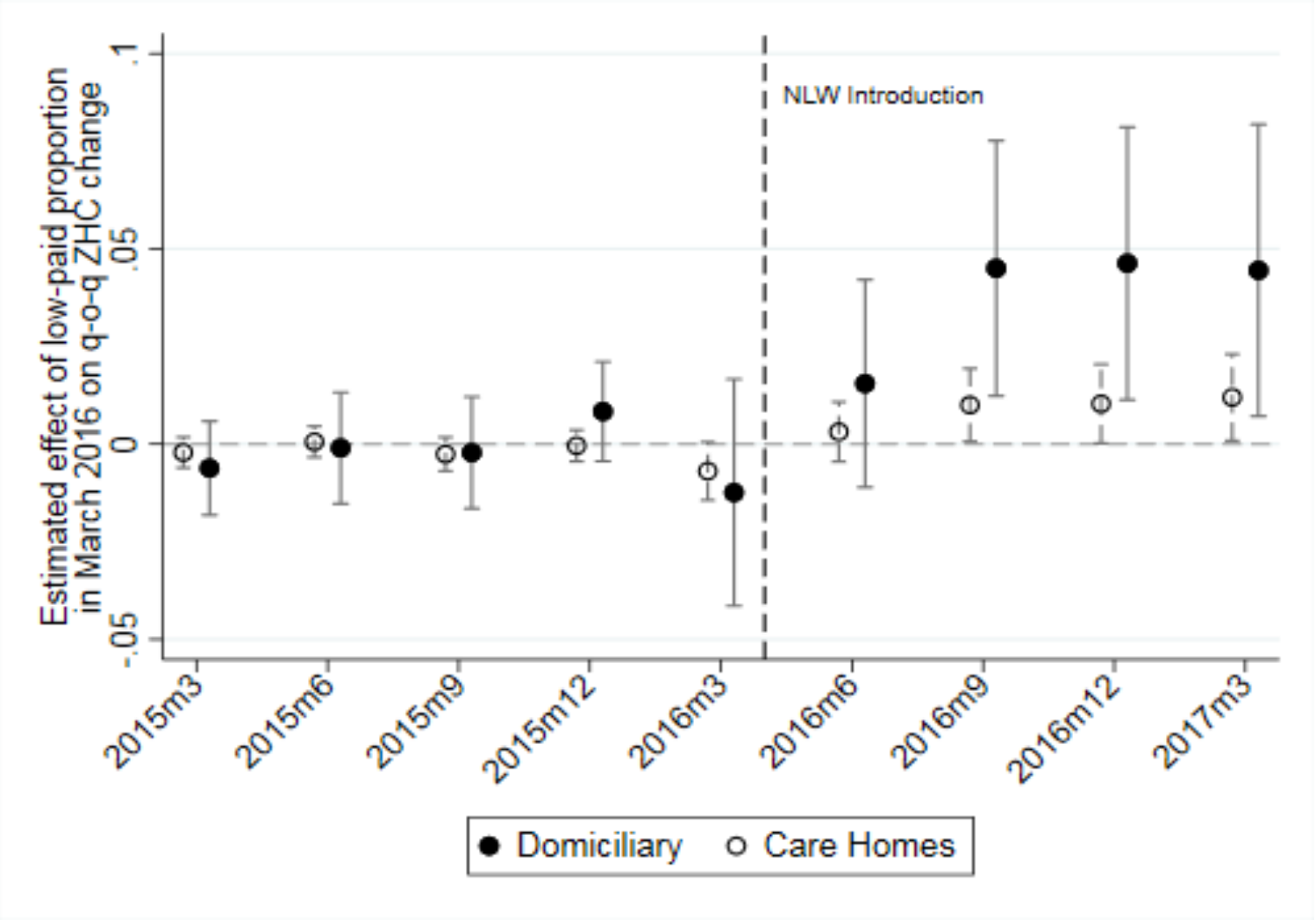
Min wage across countries

Monthly equivalent min wage



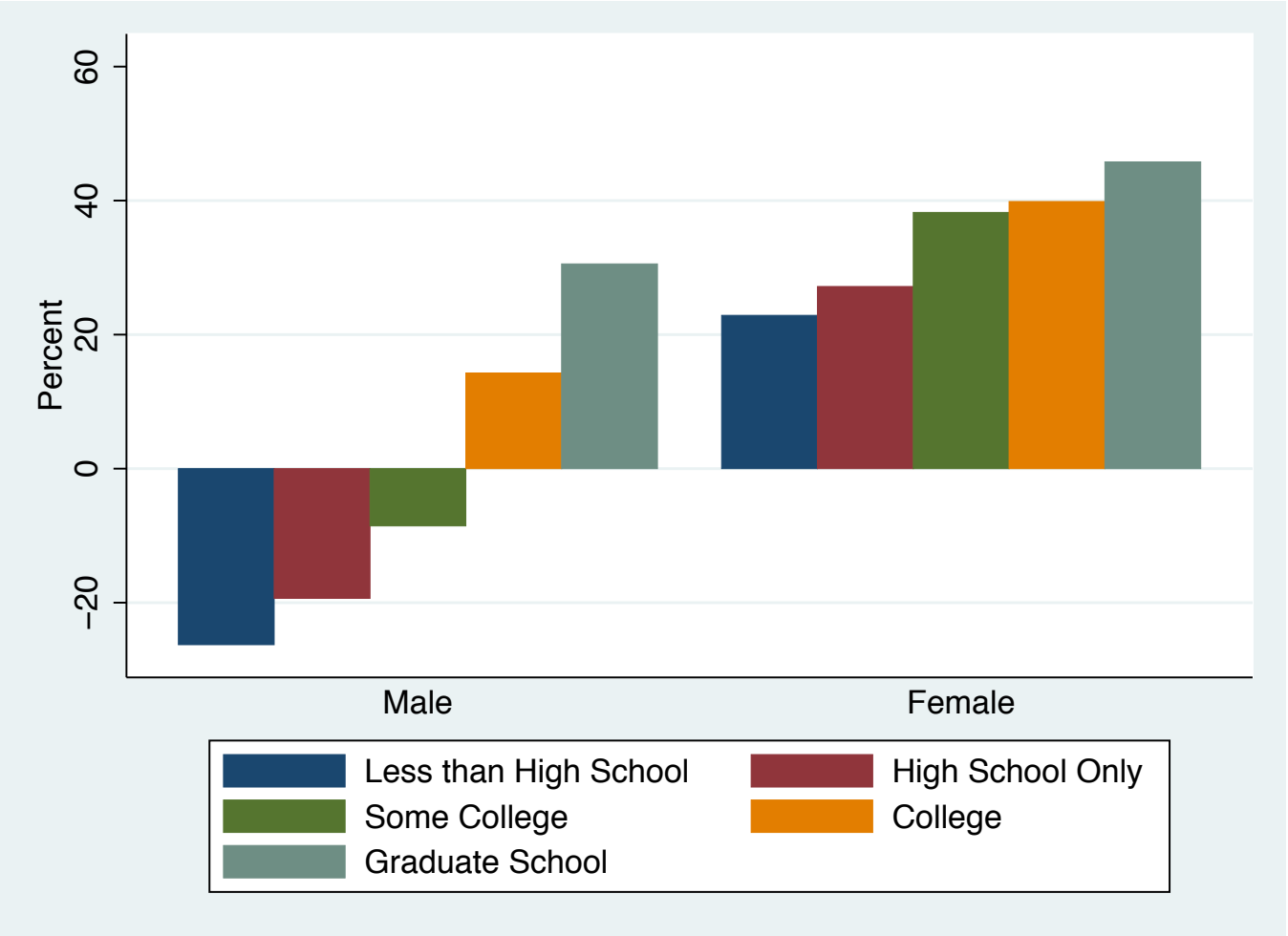
Source: Eurostat

NLW and the Proportion of Employees on ZHC in the UK



Source: Giupponi and Machin (Deaton Review, IFS, 2019)

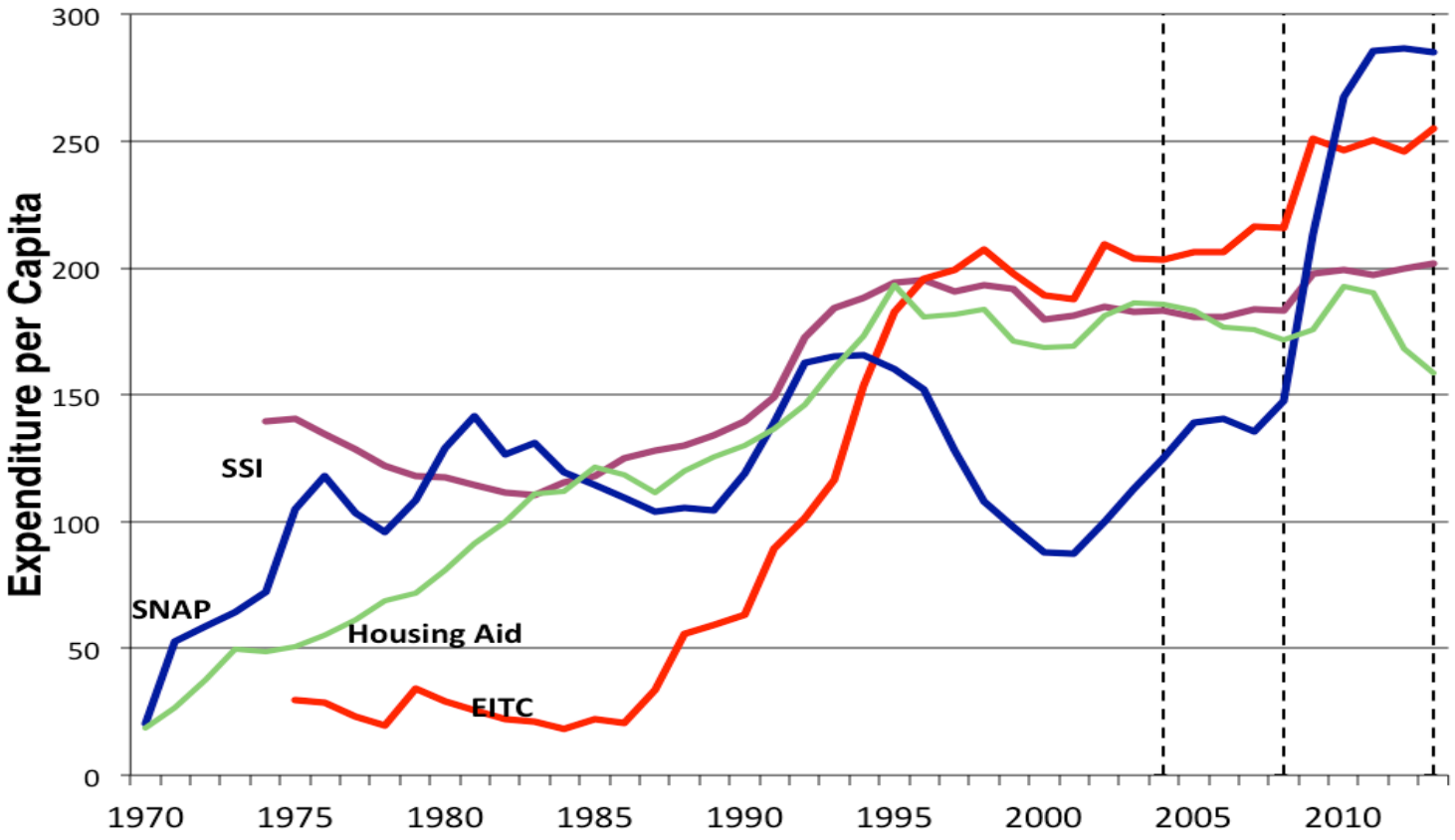
Growth in pre-tax earnings in US: 1974/5 to 2015/6



Notes: CPS, Includes self employment income and self employed households.
Source: Blundell, Joyce, Norris Keiller and Ziliak (2018)

The US experience

Growth in expenditure per capita on welfare transfers and EITC



Source: Moffitt (2018)

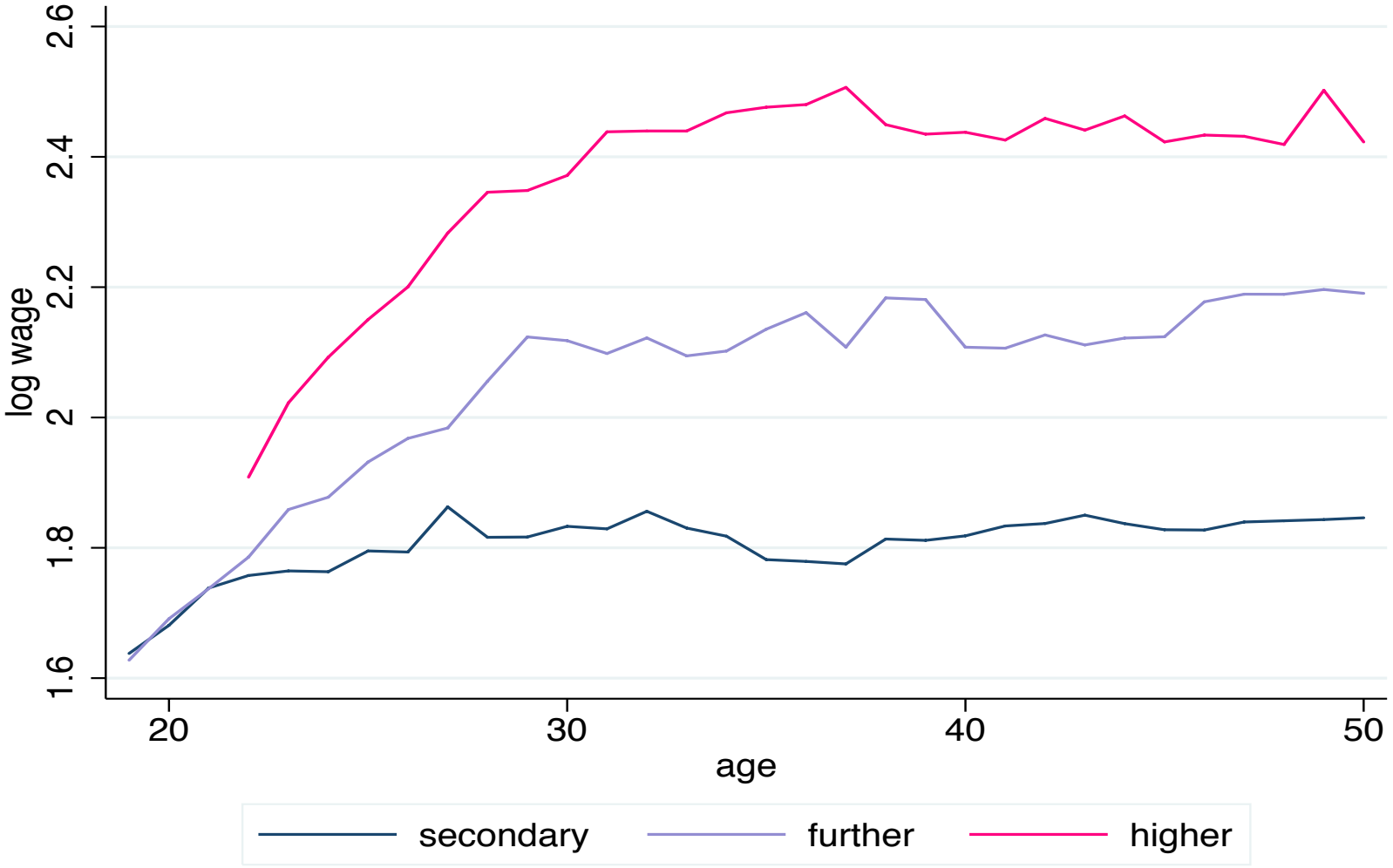
A little more detail on three key issues:

1. Wage progression
2. Training
3. The role of good/innovative firms

1. Wage progression:

It's depressing at the bottom: wage profiles by education and age

- returns to experience appear strongly *complementary* with education

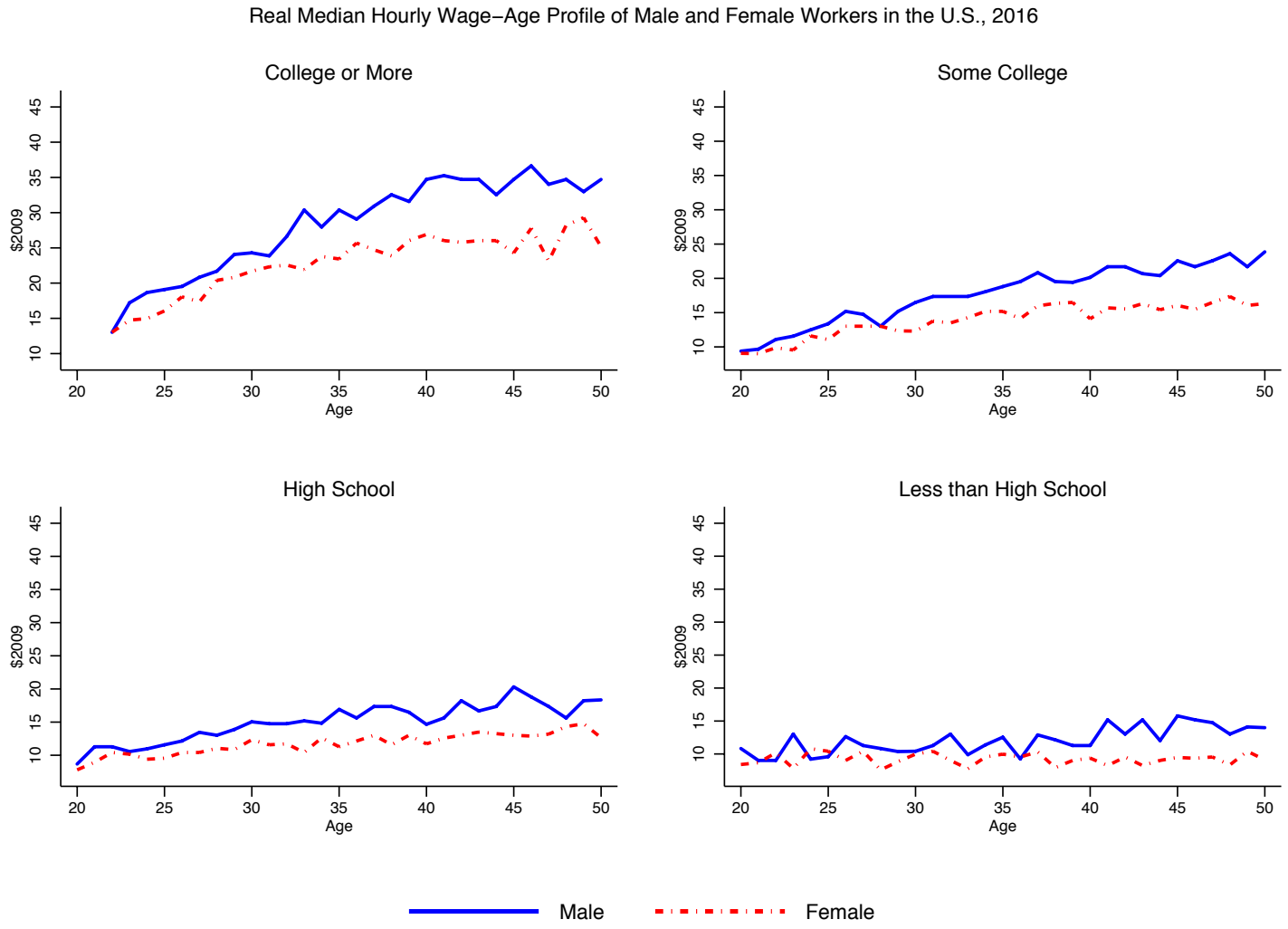


Source: Blundell, Dias, Meghir and Shaw (2016),

Notes: Women, UK BHPS. See similar for UK men and for recent cohorts in the US.

Similar wage progression age profiles in the US

Life-cycle growth in real median wages



Notes: CPS, Includes self employment income and self-employed households.
Source: Blundell, Joyce, Norris Keiller and Ziliak (2018)

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Understanding wage progression and work experience

- Household panel linked to family histories and IFS tax/benefit simulator
- Panel data model for individual *i* of schooling *s* and age *t*

$$lnw_{\text{ist}} = lnW_{st} + \gamma_0(x_i) + \gamma_1(x_i)\ln(\kappa_{ist}+1) + \omega_i + v_{ist} + \xi_{ist}$$

where

education: s = [1,2,3] [basic, high school, university]

family background: x_i

baseline Mincer effect: lnW_{st}

individual effect: ω_i

experience capital: $\kappa_{ist} = \kappa_{ist\_1}(1-\delta_s) + \alpha_0 FT_{i,t\_1} + \alpha_2 PT_{i,t\_1}$

Persistent shocks: $v_{ist} = \rho_s v_{ist\_1} + \mu_{ist}$

random shocks: ξ_{ist}

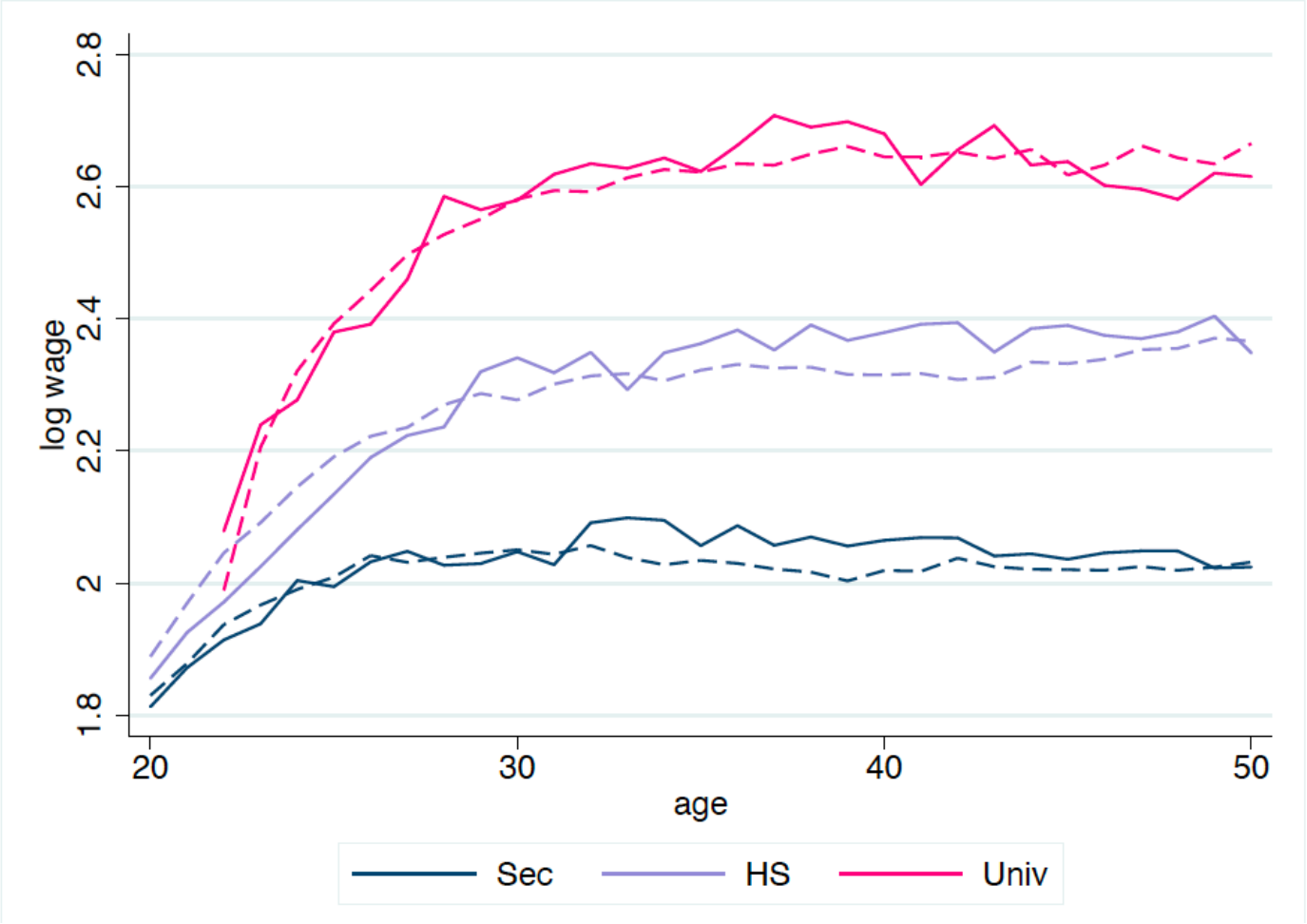
endogeneity: selection and experience; use simulated tax instruments

Female wage equation estimates with PT experience

	Secondary		Further		Higher	
baseline at age 25	7.19	(.050)	8.64	(.067)	10.55	(.31)
returns to experience	.15	(.01)	.23	(.01)	.31	(.02)
autocorrelation coef	.92	(.01)	.92	(.01)	.88	(.02)
se innovation	.12	(.01)	.15	(.01)	.14	(.01)
initial prod	.14	(.01)	.13	(.01)	.31	(.03)
initial productivity: se	.14	(.02)	.20	(.02)	.23	(.03)
depreciation rate	.08	(.01)	.06	(.01)	.07	(.01)
accumulation of HC in PTE	.15	(.02)	.10	(.02)	.12	(.02)

Notes: Interactions with background factors are included
Source: Blundell, Dias, Meghir and Shaw (Ecta, 2016),

Wage distribution fit



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Wage distribution fit

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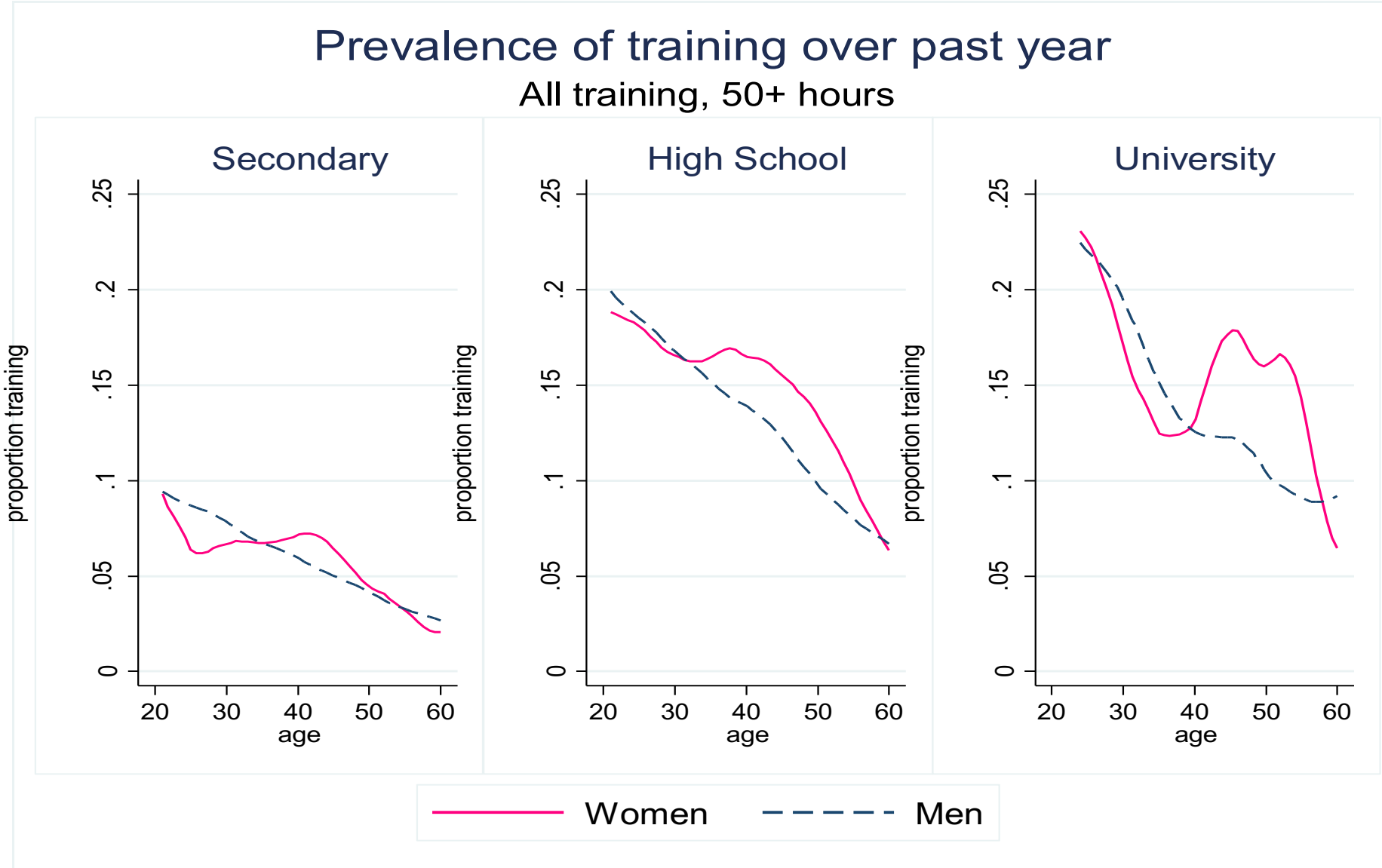
Wage progression results: summary

- The returns to work experience show strong complementarity with education,
  - much lower returns for low educated,
  - much lower returns to part-time work.
- These effects seem to be getting stronger over time.
- We find experience and the part-time penalty explain around 70% of the gender wage gap.
- Note too the growth of younger men in part-time work.
- What about the role of on-the-job training?

2. Training is also appears complementarity with education



Source: Blundell, Costa-Dias, Goll and Meghir (2019), Notes: UK BHPS

Training questions

READ OUT

I would like to ask some details about all of the training schemes or courses you have been on since September 1st 1999, (other than those you have already told me about), starting with the most recent course or period of training even if that is not finished yet.

Event no.	D69. **SHOWCARD D13** Where was the main place that this course or training took place?	D70. Was this course or training. . . **READ OUT AND CODE FOR EACH**	D71. Since September 1st 1999 how much time have you spent on this course or training in total?	D72. **SHOWCARD D14** Which statement or statements on this card describe how any fees were paid, either for the course or for examinations? **CODE ALL THAT APPLY**
1	**WRITE IN MAIN PLACE AND ENTER CODE FROM SHOWCARD CODE ONE ONLY** **WRITE IN PLACE** _____ _____ **ENTER CODE FROM SHOWCARD** ☐☐ JTRPLCE1	**Yes No** To **help** you get started in your current job? 1 2 JTRWHYA1 To **increase** your skills in your current job for example by learning new technology? 1 2 JTRWHYB1 To **improve** your skills in your current job? 1 2 JTRWHYC1 To **prepare** you for a job or jobs you might do in the future? 1 2 JTRWHYD1 To **develop** your skills generally? 1 2 JTRWHYE1	**ENTER NUMBER** ☐☐☐ JTRQ1 **CODE UNIT** Hours 1 Days 2 Weeks 3 Months 4 Other (SPECIFY) _____ 5 JTRU1	No fees 01 JTRFEEA1 Self/family 02 JTRFEEB1 Employer/ future emp 03 JTRFEEC1 New Deal scheme 05 JTRFEEE1 Training for work, Youth/Emp training/ TEC 06 JTRFEEF1 Other arrangement (SPECIFY) _____ 07 JTRFEEG1

Source: Blundell, Costa-Dias, Goll and Meghir (2019), Notes: UK BHPS

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Adding training investments to the wage equation
by education group

Parameter	Secondary	High School	University
Return to HC ($\gamma_{s,0}$)	0.134 (.02)	0.230 (.03)	0.290 (.03)
Exp from training (τ)	0.119 (.08)	0.139 (.04)	0.096 (.02)
Exp from PT work	0.092 (.01)	0.093 (.02)	0.105 (.03)
Exp depreciation rate (δ)	0.081 (.04)	0.087 (.03)	0.083 (.03)

Training impact: Relative to year full-time experience

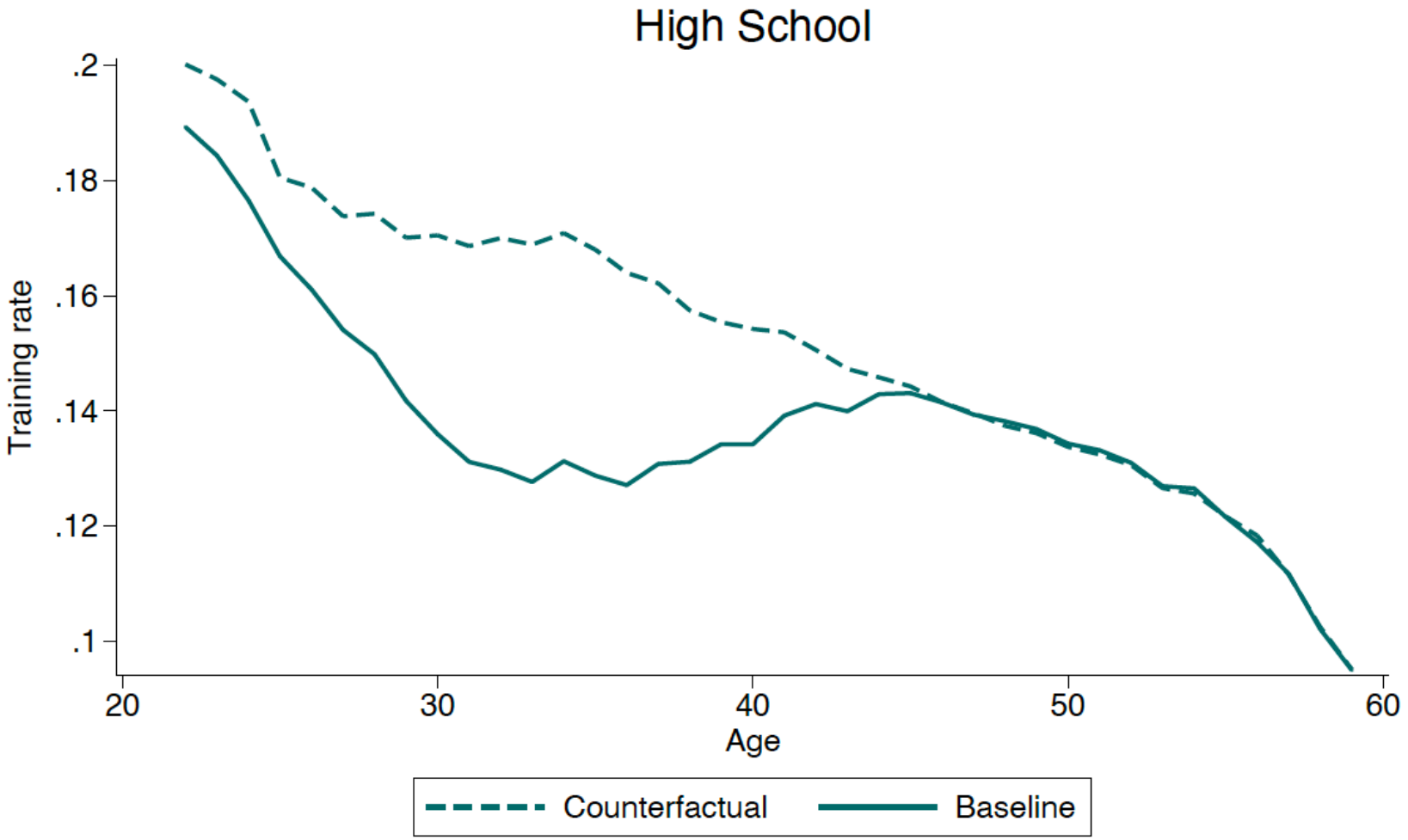
Source: Blundell, Costa-Dias, Goll and Meghir (2019), Notes: UK BHPS

Wage progression and training: empirical results

- Add training to enter the wage equation as an additional human capital investment
  - potentially offsetting the depreciation of experience capital
  - allow for endogeneity of training
  - allow for job induction training
- The training impact on wages is significant, conditional on education, experience, family background, heterogeneity,
- Firm-based qualification training is key
  - with return equivalent to that in formal education
- Particularly strong effects for middle education group

Subsidy policy simulation

£500 subsidy per year available when child is age 0-7.



Source: Blundell, Costa-Dias, Goll and Meghir (2019), Notes: UK BHPS

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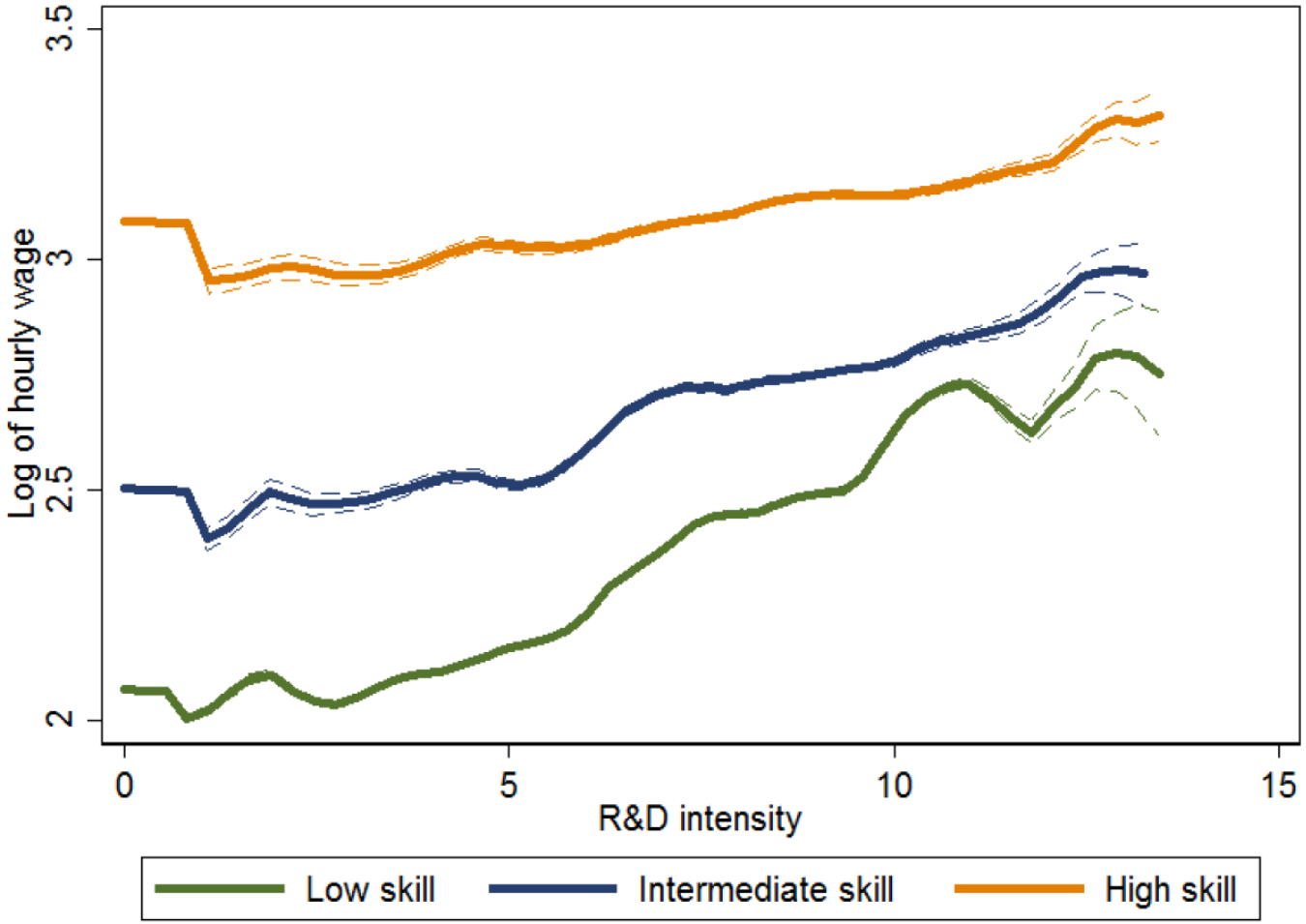
3. Wage progression and firms

- Do firms matter?
- Why do some low education workers do well ‘good’ firms?
- What are good firms?

Low skilled workers and 'good' firms: not all bad at the bottom

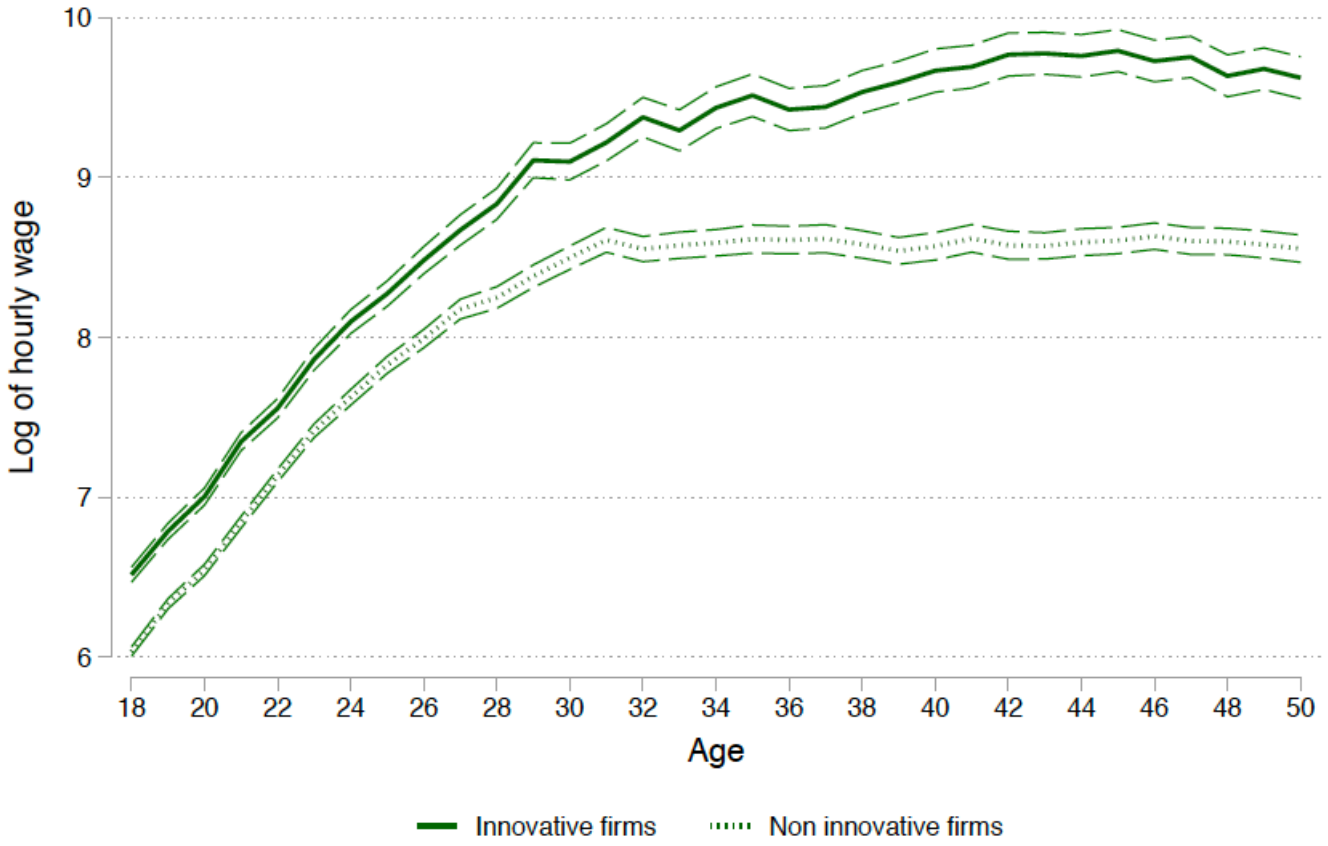
log hourly wage rate and R&D intensity: by skill group



Not all selection, some abilities of low educated are complementary with technology, they get training and the jobs are not outsourced....

Notes: Skill allocated by occupations in ASHE.
Source: Aghion, Bergeaud, Blundell and Griffith (2018)

Wage progression for workers in low-skilled occupations



Notes: matched employer-employee data for UK 2004-2016; average hourly wage for workers in low-skilled occupation in innovative and non-innovative firms
Source: Aghion, Bergeaud, Blundell and Griffith (2018)

Firms and wage progression: empirical findings

Implications of using new employee-employer matched data that includes information on R&D, innovation, and task content

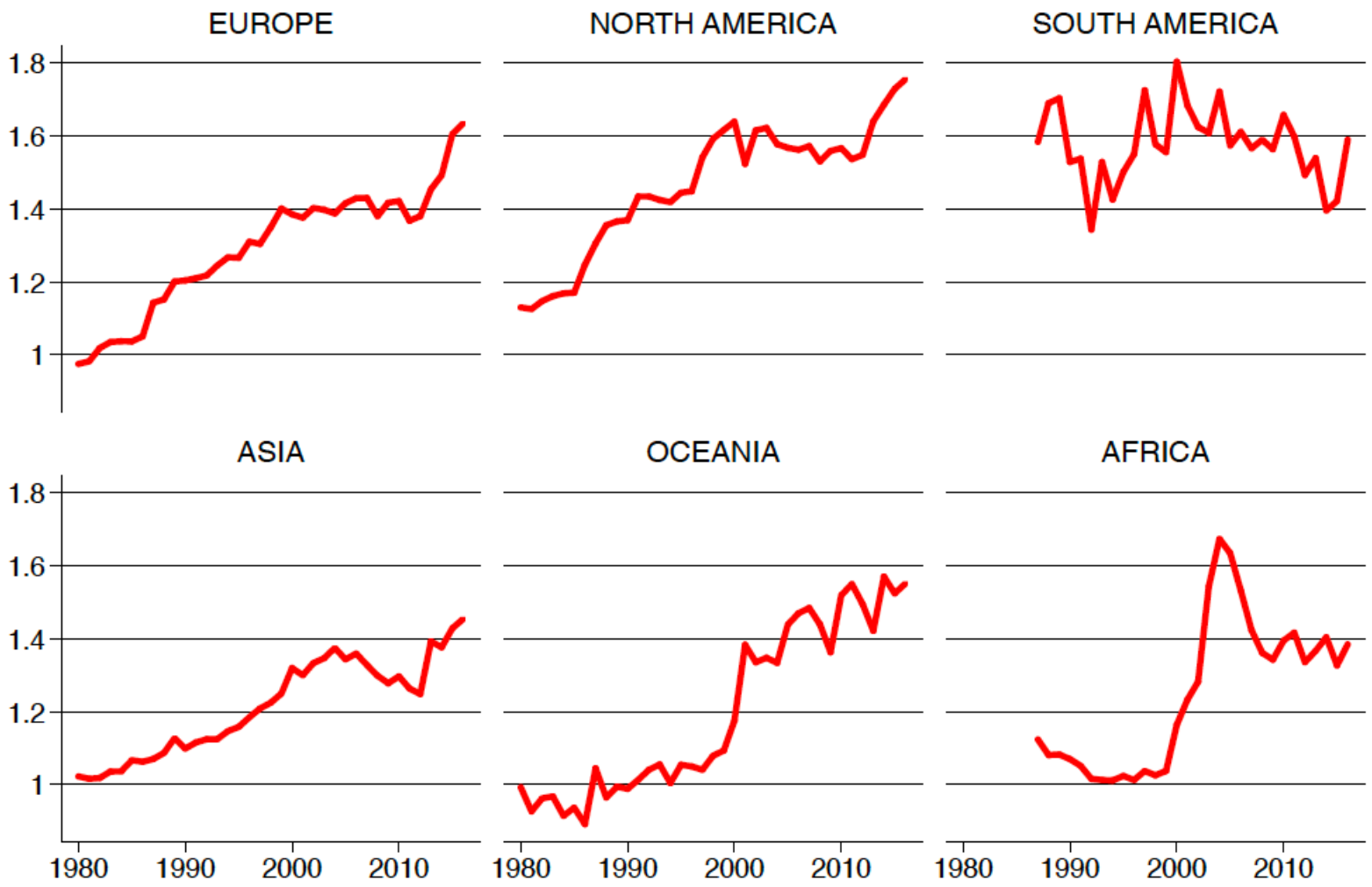
- workers in innovative firms earn higher wages on average than workers in non-innovative firms,
- some tasks by workers in low skilled occupations attract higher wages in innovative firms and see wage progression with tenure.

The idea: workers who perform these tasks are *complementary* to high skilled workers and capture a higher share of the surplus than equivalent workers in low-R&D firms,

- find this reflects the value of soft skills for low educated workers,
- find workers with these skills are less likely to be out-sourced and more likely to receive training.

Growth in market power?

Average markups across different regions



Source: De Leocker and Eeckhout (2018}

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Some take-aways:

- Little wage progression for low educated & those in part-time work
  - employment is not enough to escape poverty or for self-sufficiency;
  - diverging profiles with education? US and UK evidence.
- Increased female labour supply
  - not overcome family earnings inequality;
  - assortativeness and low earnings share
- Tax credits well targeted to low earning families
  - offset means-testing at the extensive margin for parents;
  - but earnings progression and incidence?
- Minimum wage has lifted *hourly* wages at the bottom
  - but not well-targeted to low earning families, due to secondary workers and falling male hours -> *complementary* to tax credits;
  - increasingly affecting workers vulnerable to automation?

Jobs affected by higher minimum are not the same as those previously affected

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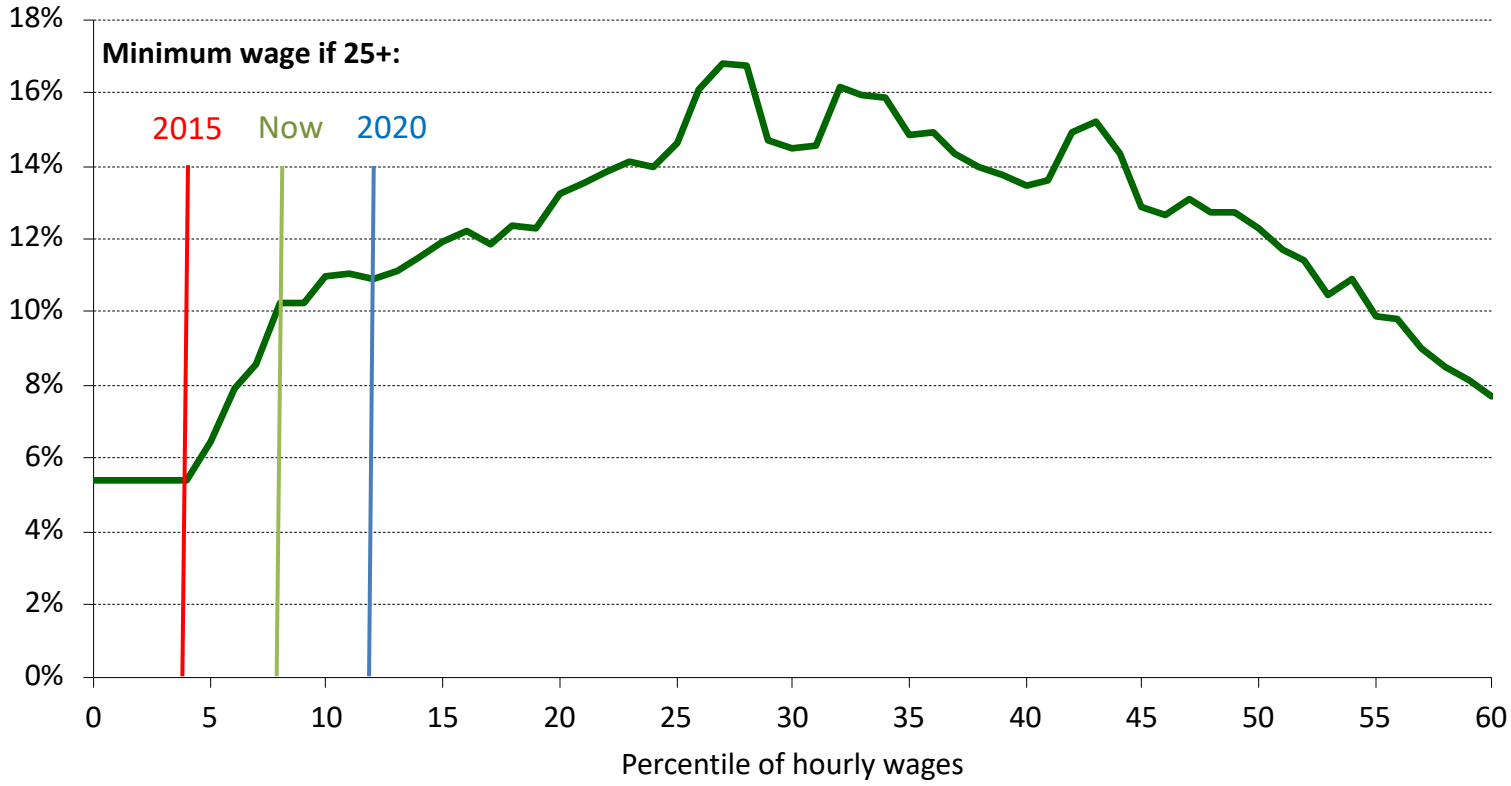
Proportion of employees aged 25+ in the most "automatable" jobs (top 10% of routine task intensity")



Source: Cribb, Joyce and Norris Keiller (2018): www.ifs.org.uk/publications/10287. Data used is ASHE, 2015.

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Designing a policy mix

- What limits wage progression?
  - less training and networking, constraints on build-up of skill in low-hours jobs, labour market for part-time workers less competitive,
  - avoid part-time incentives & incorporate training incentives in part-time work
- What skills among those with lower education are valued by 'good /growing' firms?
  - skills that complement innovation are less likely to be out-sourced,
  - 'soft skills' seem key => re-think qualification firm-based training and the role of technology.
- Do we need stronger competition policy and contract regulation alongside redistributive tax credit and min wage policies?
  - increasing mark-ups, solo self-employment and the gig economy may signal declining bargaining power of lower educated workers..
  - improve access to training, non-wage benefits and job search information.

Summary

- A depressing finding – *little wage progression for low skill, why?*
- Employment is *increasingly* not enough to move out of poverty or for longer run self-sufficiency – diverging profiles by education?
- Female employment and family earnings inequality – assortativeness?
- Policy options:
  1. Earned income tax credits? - encourage employment of low wage workers, are well-targeted to low earning families, but may preserve low wage progression, and could have large incidence effects.
  2. Minimum wage? - not so well-targeted, due to family earnings and falling male hours/attachment. Should be a *complement* to tax credits.
  3. Basic income? - difficult to square once families are brought in.
  4. Human capital/training incentives/tax credits for low educated? – focus on soft skills for low educated and training for women returning after children…. Back to early years investments.
- *Challenge: finding the appropriate balance between tax policy & min wage, human capital, and competition policies that impact earnings inequality*.

Inequality
The IFS Deaton Review

Inequality, Redistribution and the Labour Market

ULB Solvay Conference

Brussels, November 26th 2019

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Motivating theme: Can't address all the concerns about low wages and earnings inequality through the tax and welfare system alone.

Key challenge: How do we balance tax/benefit policy with other policies: min wages, competition policy, human capital policies, etc?

https://www.ifs.org.uk/inequality/

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