

Tax and Transfer Program Reform: The challenge of labour market inequality

Nobel Symposium on Inequality

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<https://ifs.org.uk/inequality/>

Remit: “policies as they relate to labour market outcomes and observed inequality”

Tax and Transfer Program Reform: the challenge of labour market inequality

- It is increasingly clear we can't address all the concerns about (earnings) inequality through tax and welfare reform alone.
- Key questions:
 - how do we best design the tax and transfer system in the new work environment acknowledging the changing role of families and human capital?
 - how do we balance tax policies with other policies: human capital policies, childcare policies, minimum wages, regulation and policies to address anti-competitive practices at work.
- Drawing on recent research & material from the *Deaton Review* <https://ifs.org.uk/inequality/>
 - looking back at the *Mirrlees Review* too!
- My task there is to integrate/connect the issues and policy responses across labour markets, firms, taxes and transfers.
- Focus here on the bottom and the tax and transfer system
 - re-designing what we have, and looking *beyond* tax credits and the minimum wage.
- Comparative across Europe & North America with UK as a running example.

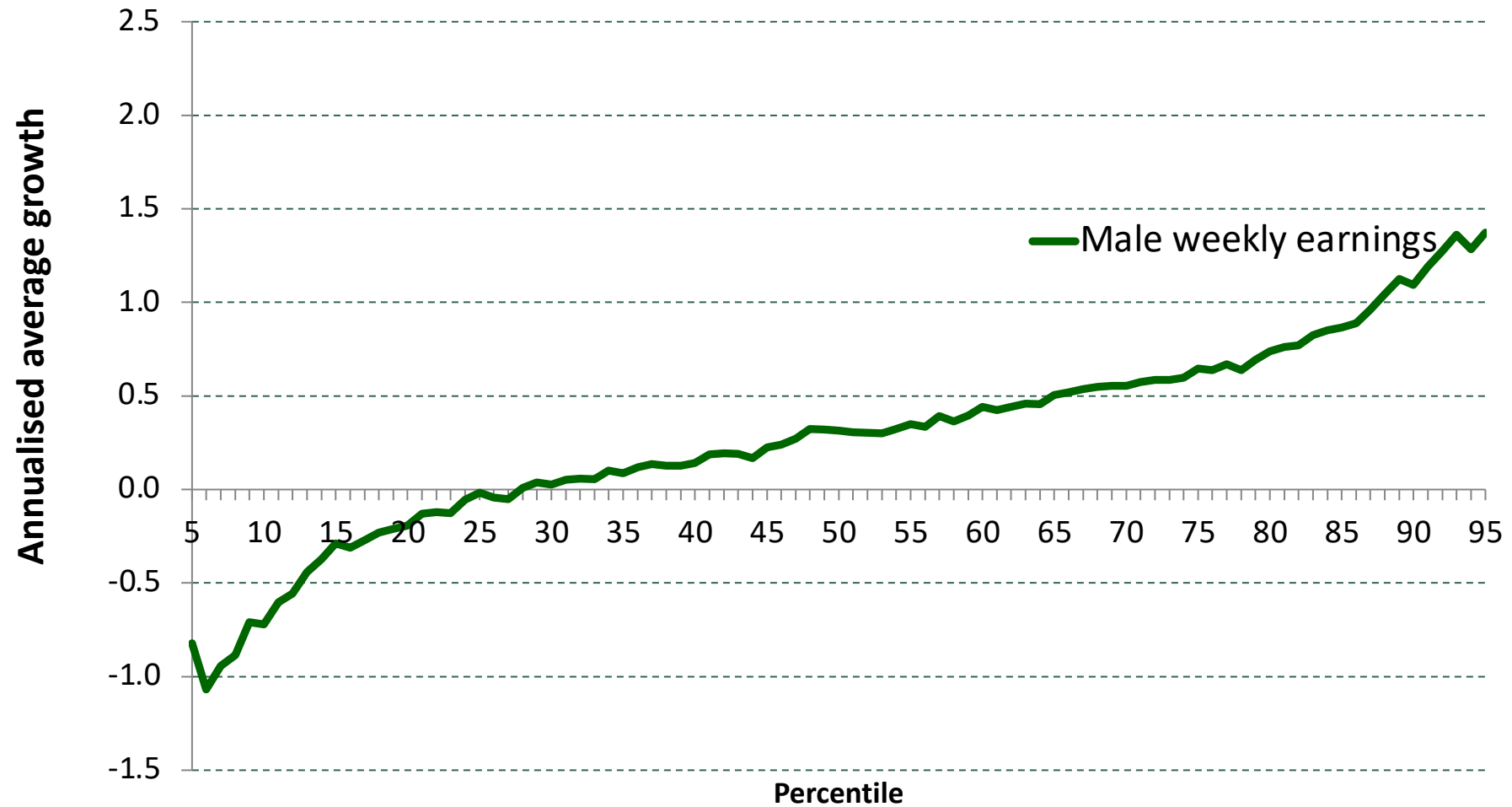
Tax and Transfer Program Reform

- Mirrlees-Diamond-Atkinson-Saez... path-breaking analysis of trade-offs and the design of rates, base, take-up, and tagging,
 - insights remain central to policy design, especially the role of extensive vs intensive margin responses,
 - but the focus has moved toward longer-term impacts and an integration with broader welfare reform and other public policies.
- When we place people in families in local labour markets, with childcare, savings and human capital decisions we get a different take on key tax and transfer design questions,
 - longer-run impacts on human capital and progression and on children;
 - individuals vs families;
 - interactions with business taxes and self-employment;
 - interactions with minimum wages, regulation and competition policy;
 - and the importance of incidence.
- Focus on a broader set of challenges....

(Some) challenges of labour market inequality driving tax and transfer reform

- Increasing earnings inequality
 - with persistent adverse labour market shocks and poor wage progression for lower educated workers and for part-time work.
- Growing solo self-employment, platform work and outsourcing
 - with low rates of on-the-job training and fewer paths to good jobs for non-university educated.
- Increasing in-work poverty
 - with employment alone (increasingly) not enough to escape poverty and low earnings.
- Increasing family earnings inequality
 - female labour supply doing little to off-set the rise, due to lower attachment, part-time work, the gender gap/child penalty and assortativeness.
- How do tax and transfers interact with labour market inequality?
 - first some descriptives..... UK is my running example,
 - also compare US and France, from the Country Studies at the Review.

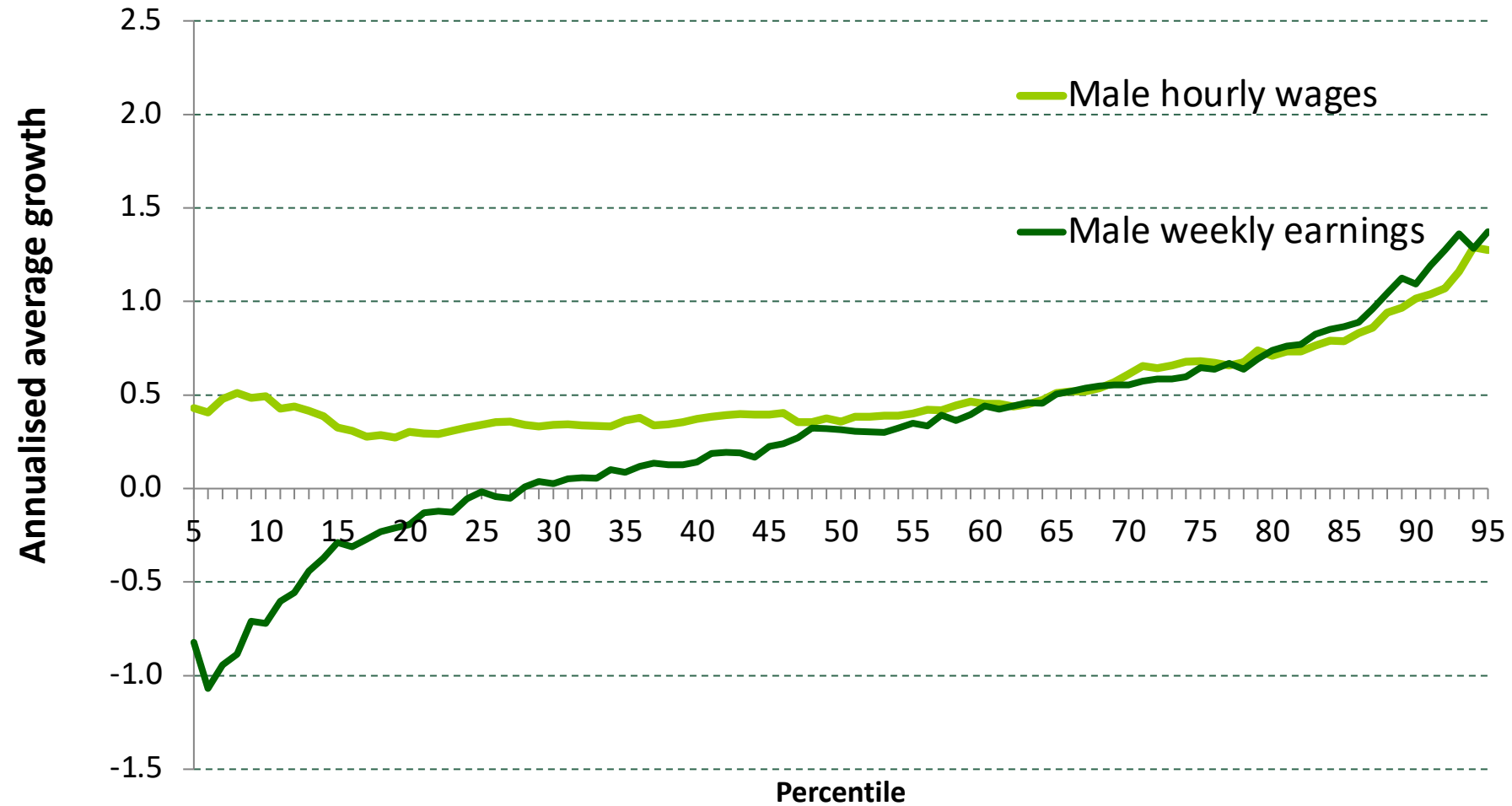
Growth in UK male weekly earnings: 1994/95 – 2016/17



Source: Blundell, Joyce, Norris Keiller and Ziliak (2018), which also contains US graphs.
Data used is UK FRS 1994-95 and 2016-17, not in full time education and aged <64

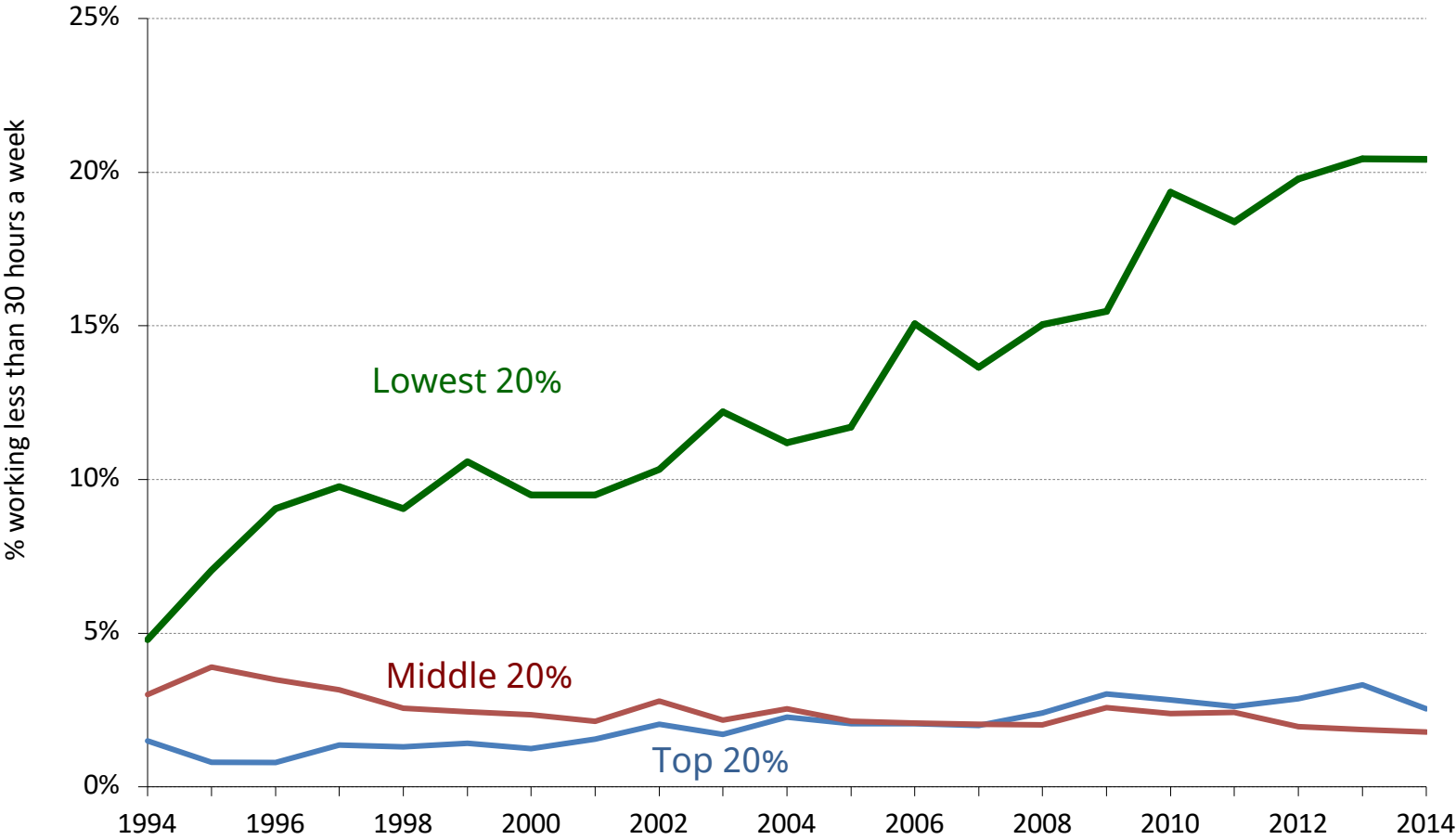
Growth in UK male weekly earnings and hourly wages:

1994/95 – 2016/17



Source: Blundell, Joyce, Norris Keiller and Ziliak (2018), which also contains US graphs.
Data used is UK FRS 1994-95 and 2016-17, not in full time education and aged <64

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

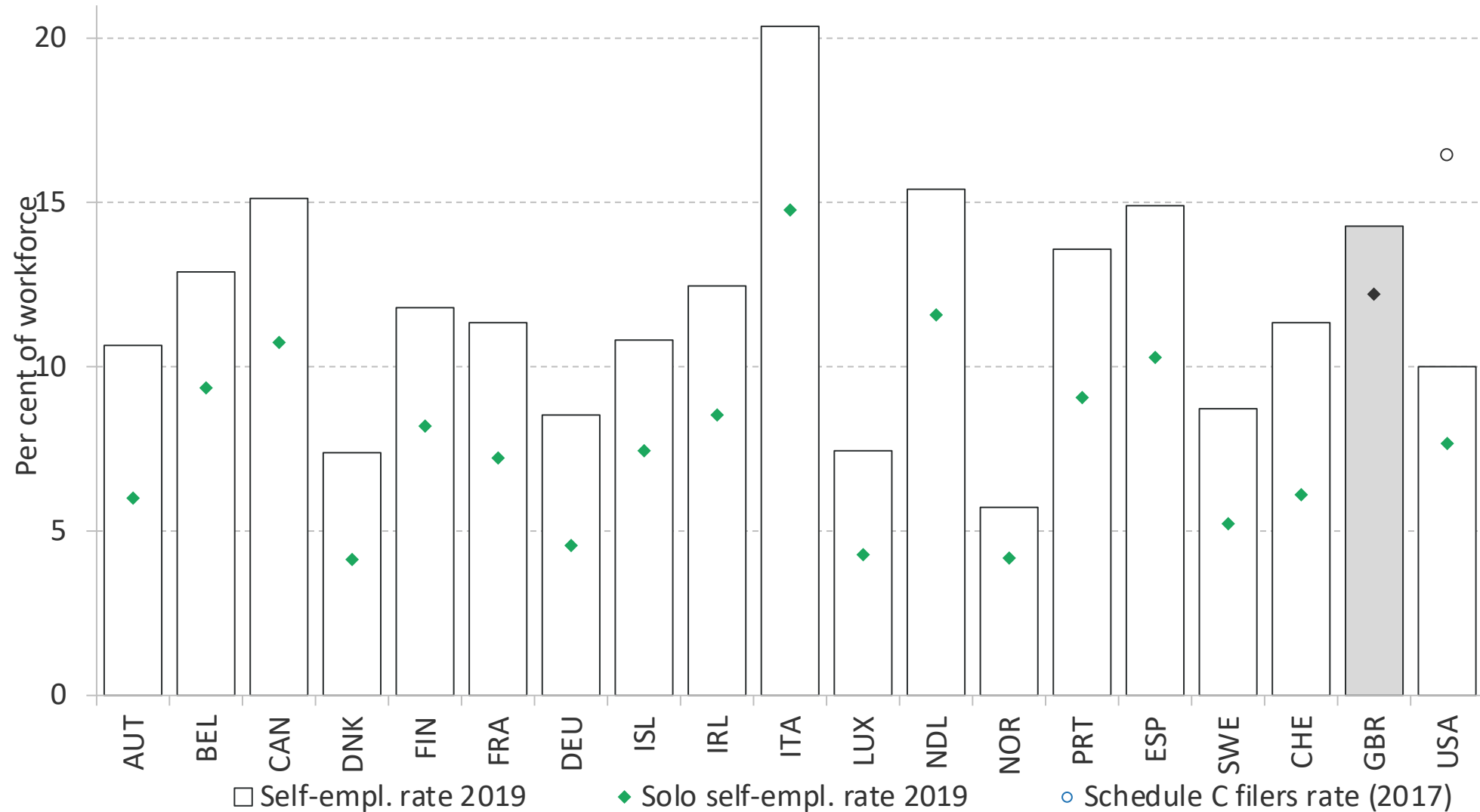


-> Stronger growth of PT work for the self-employed where there has been a growing rate of low earning solo self-employed and part-time hours.

Source: IFS calculations using Labour Force Survey
Notes: LFS: Male employees aged 25-55.

Self-employment across countries

Self-employment as percent of workforce

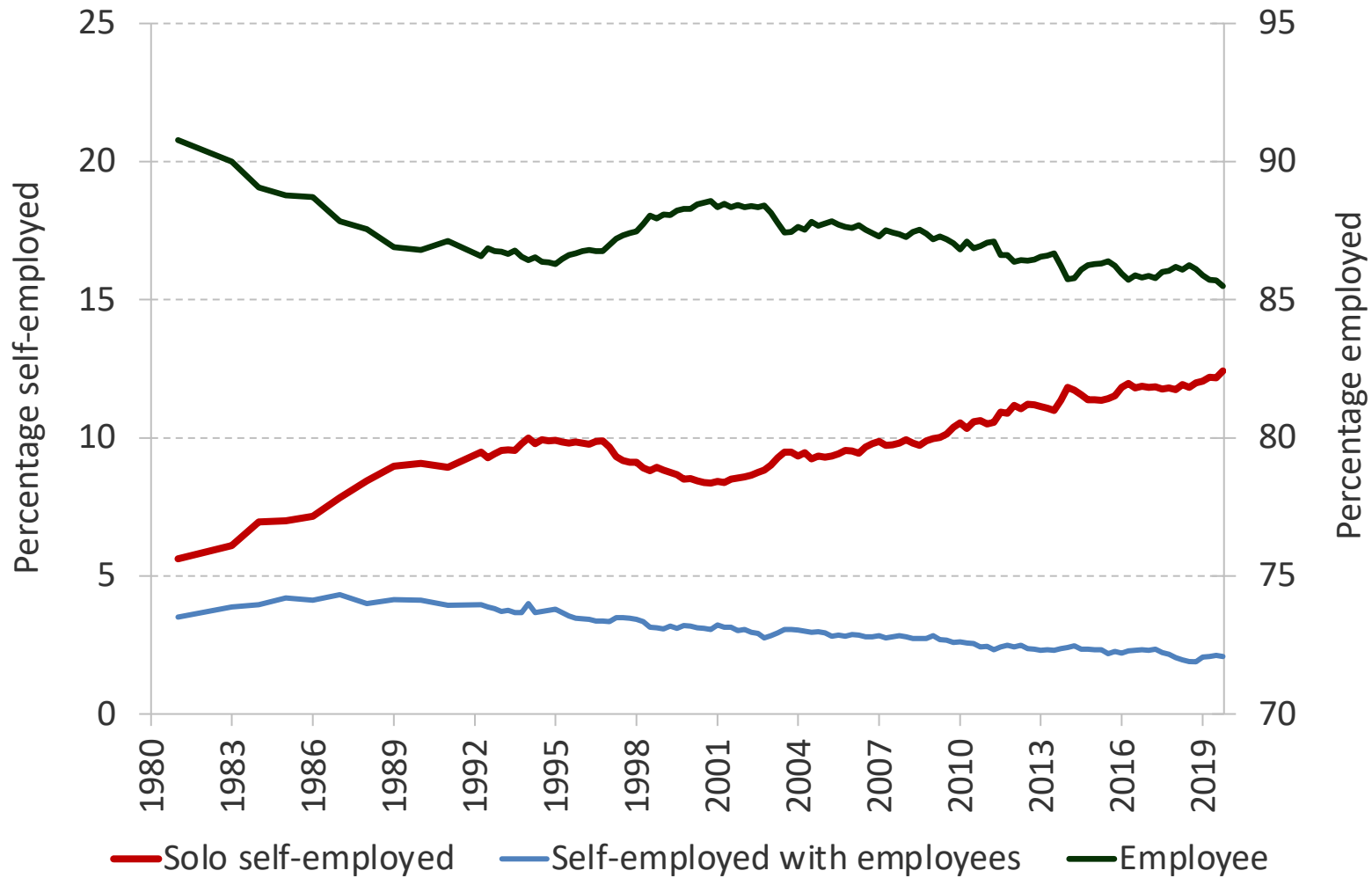


Note: Self-employed not covered by minimum wage, sickness benefits or national insurance in UK.

Source: Giupponi and Machin (Inequality and the Labour Market, Deaton Review, IFS, 2022)

Solo self-employment in the UK

As percent of workforce

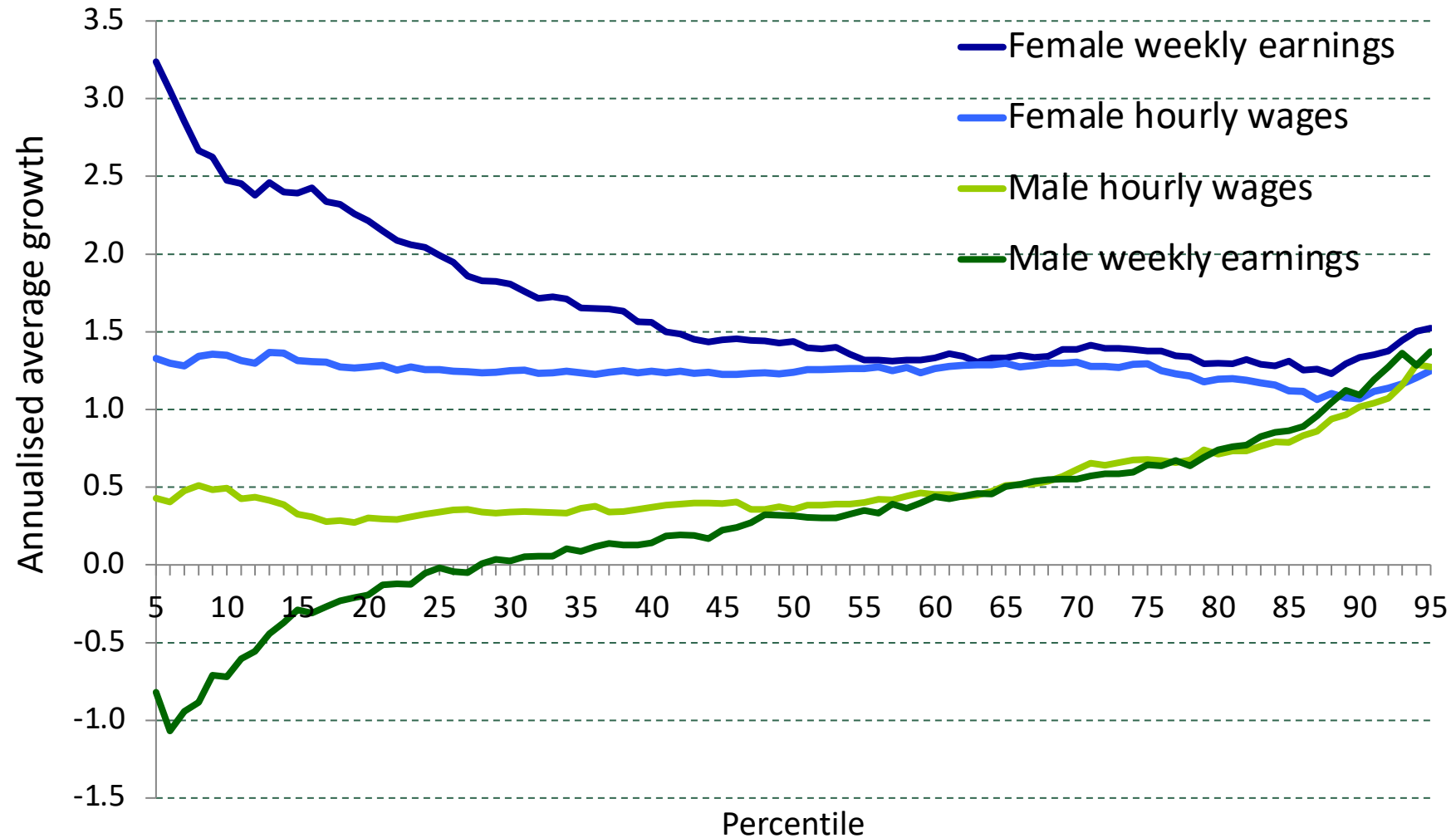


- Solo self-employed not covered by minimum wage, sickness benefits or national insurance

Source: Giupponi and Machin (Inequality and the Labour Market, Deaton Review, IFS, 2022)

Very different growth in female hourly wages and weekly earnings:

UK 1994/95 – 2016/17

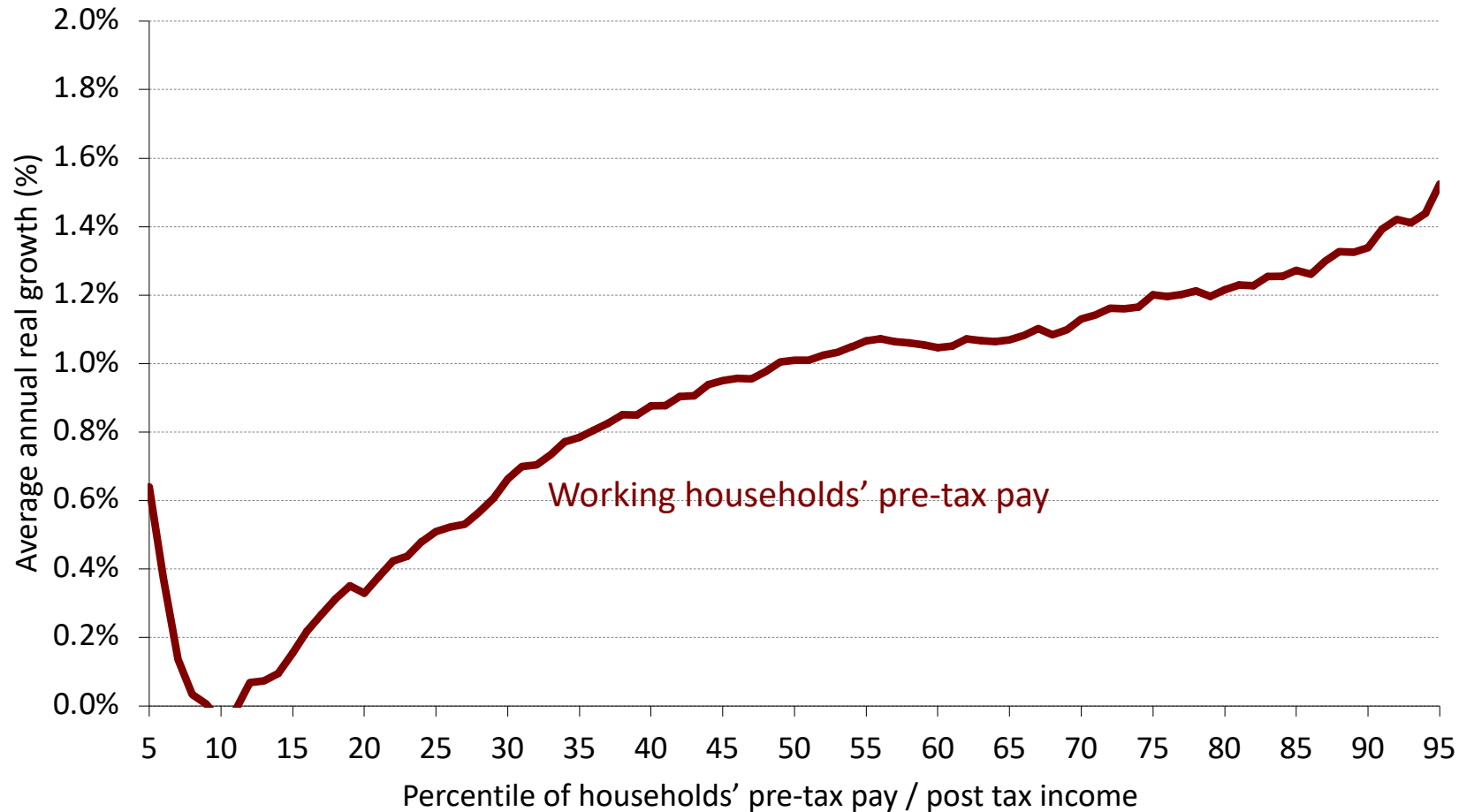


-> But assortative partnering and low female earnings share implies this has not improved between family earnings inequality.... similar for US.. See also Country Studies for the Review.

Source: Blundell, Joyce, Norris Keiller and Ziliak (2018): Data used is FRS 1994-95 and 2016-17.

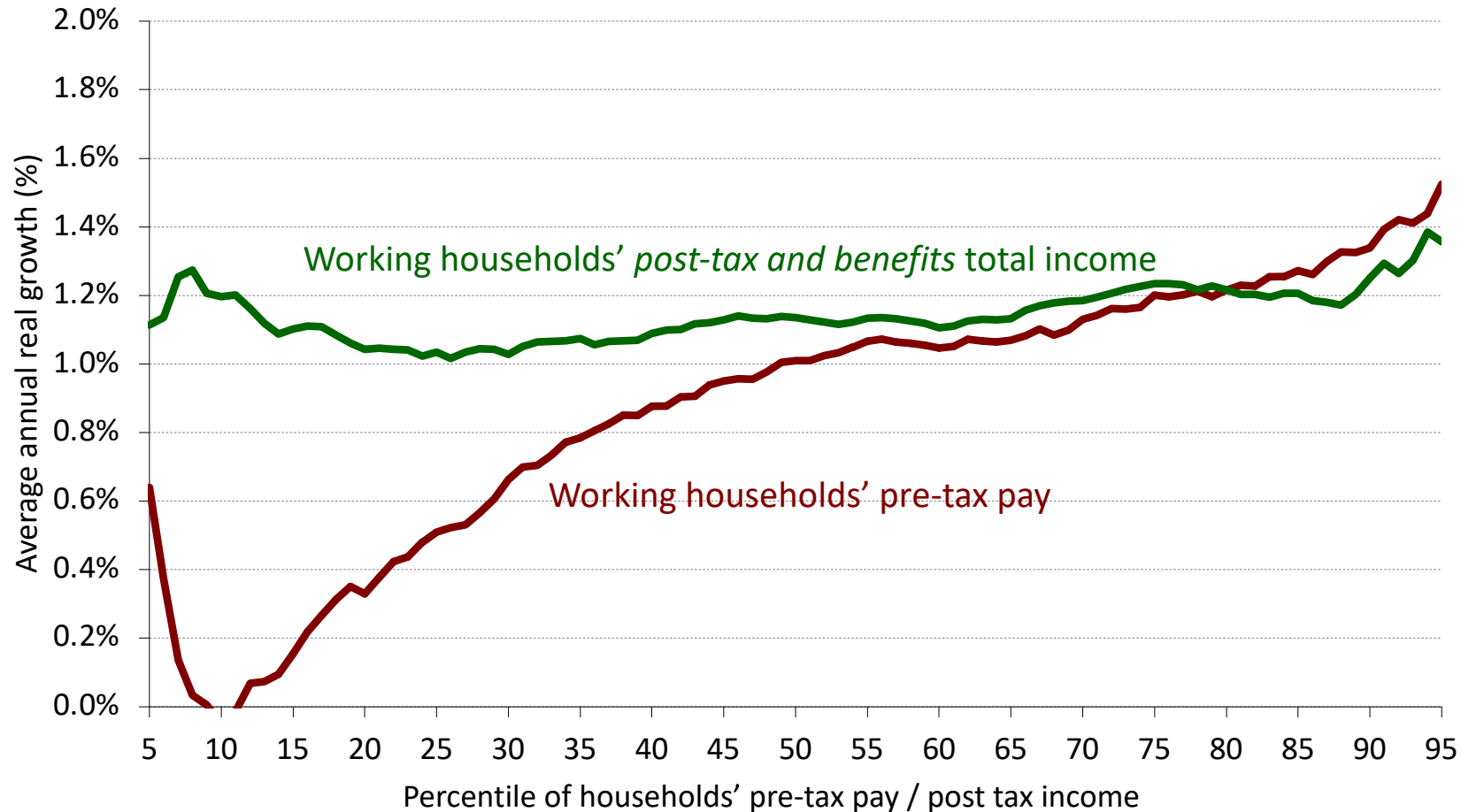
The role of tax and transfer programs in attenuating earnings inequality:

Household income growth for working households UK 1994/5 to 2016/7



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)

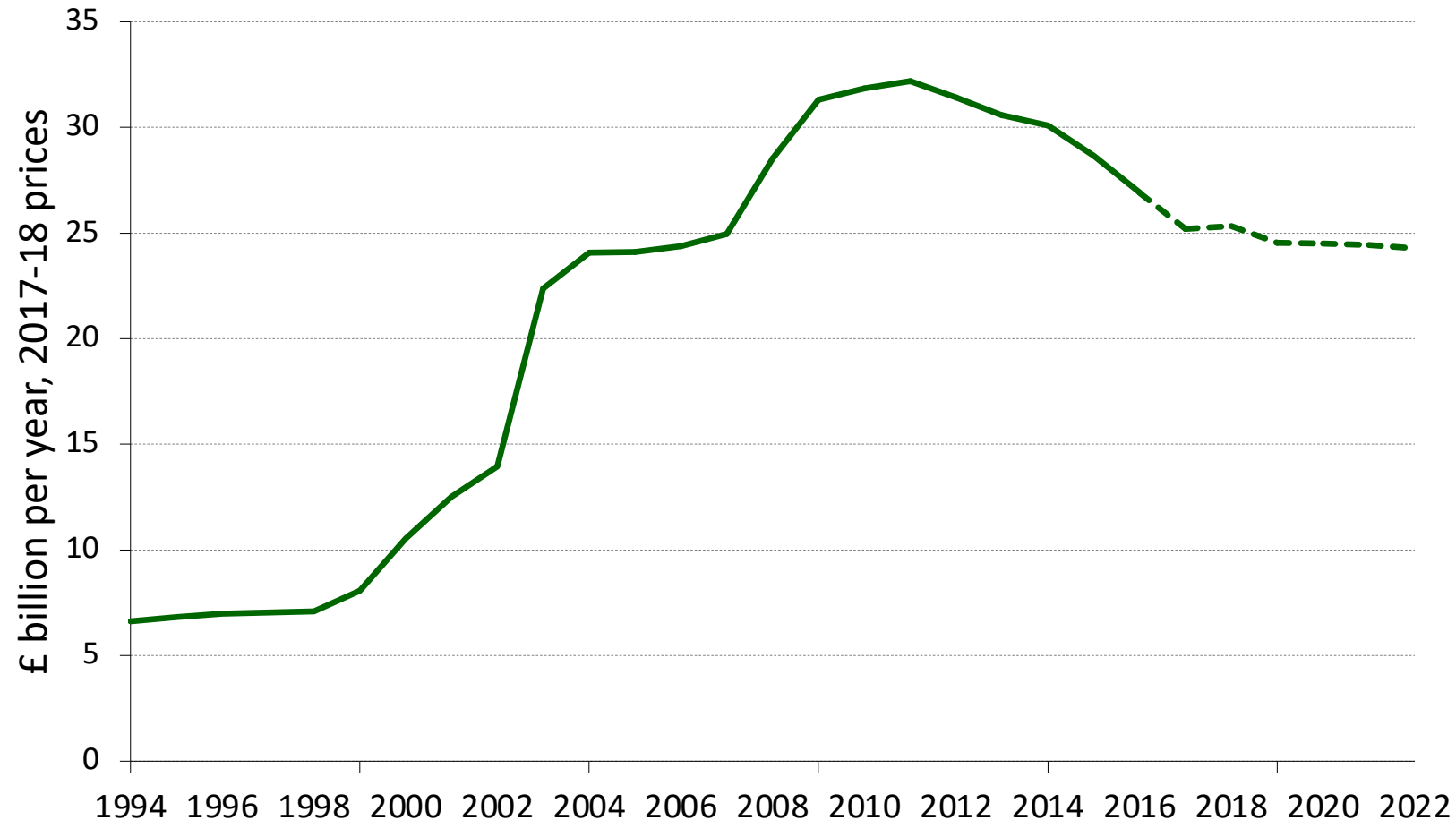
The role of tax and transfer programs in attenuating earnings inequality: Household income growth for working households UK 1994/5 to 2016/7



Almost no change in 90-10 among working age families. Growth in the level of in-work transfers and tax-credit support...

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)

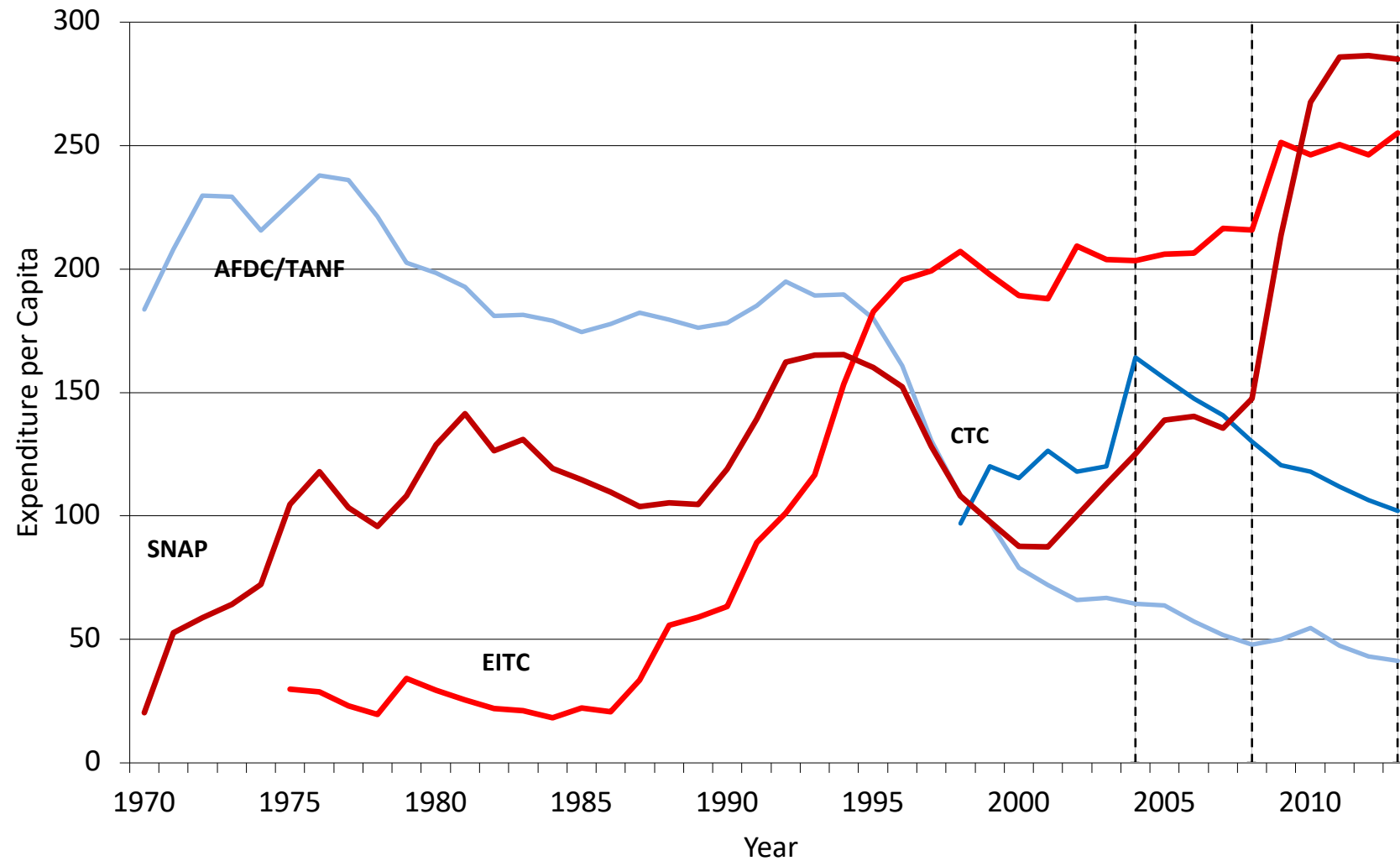
Real spending on work-related tax credits and equivalents in the UK



Driven by the 1999 WFTC reform.

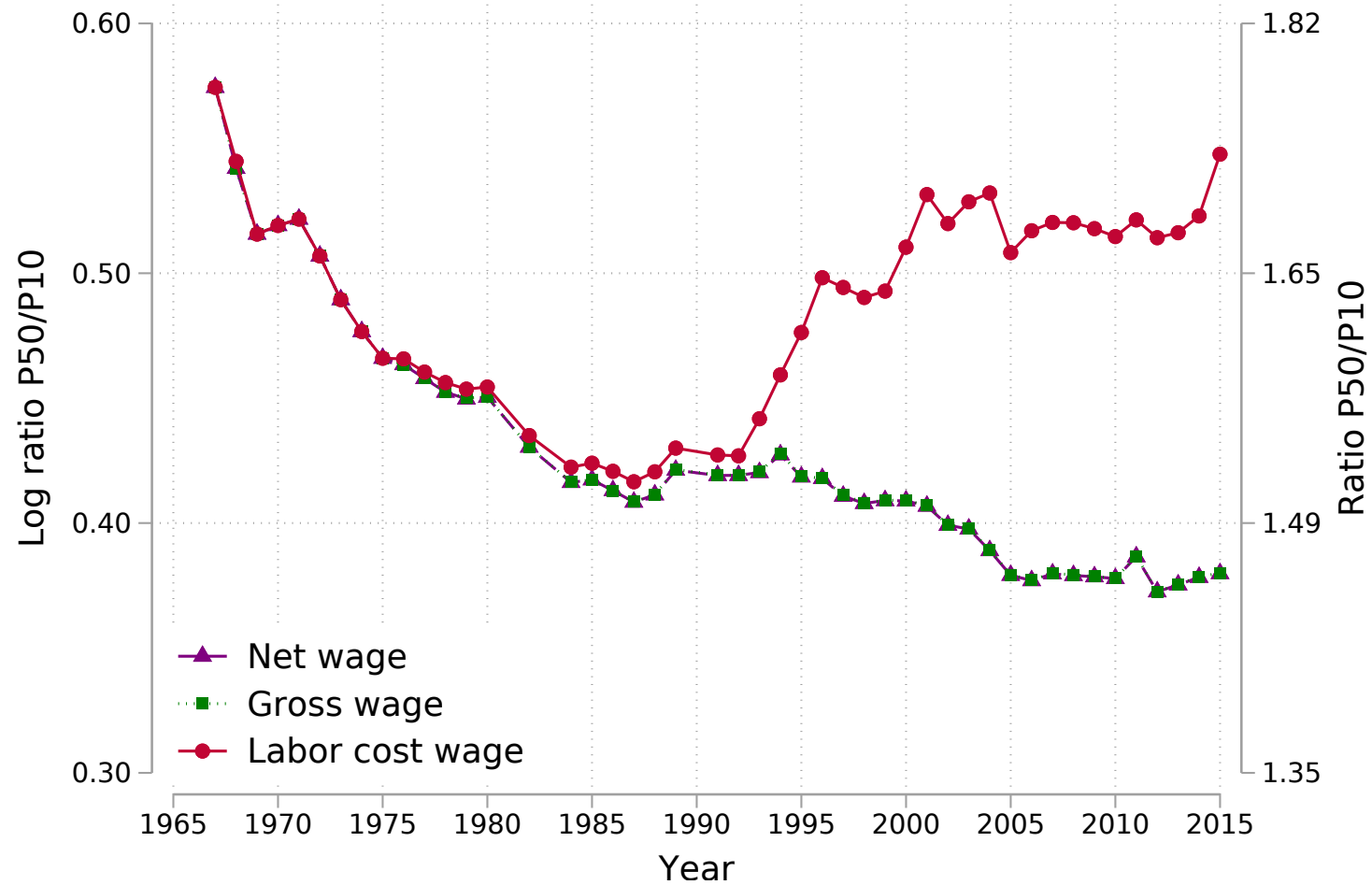
Source: IFS calculations from DWP (UK) benefit expenditure tables.

Expenditure per Capita on some key Non-Medicaid Means Tested Programs, US (real 2009 dollars)



Source: Moffitt (2017).

What role employer contributions? Lower-tail Inequality in France, P50/P10



Source: Guillot, Bozio, and Breda (PSE 2020), “non-contributory” part.

In 1967, low-wage earners were taxed at a 24% rate, while the rate of contribution reached 5% at P99. In 2015, the rate is close to 0 in the bottom and gets higher than 30% in the top. The difference moved from -24 percentage points to + 30.

Poverty rates before and after taxes and transfers

OECD countries in 2018-2017.



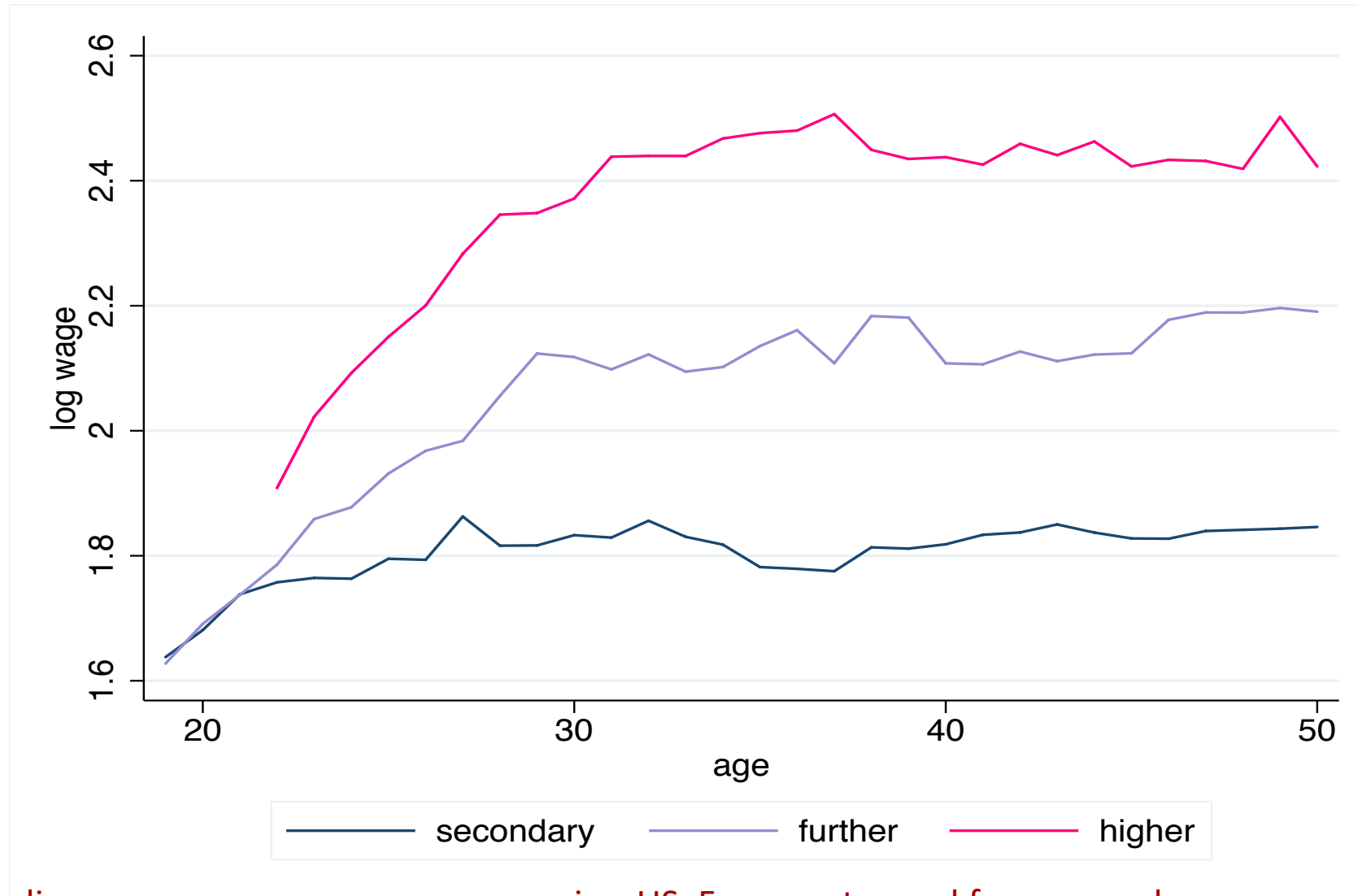
Source: OECD , Cahuc (2022, Deaton Review).

Note: poverty rate = Percentage of persons living with less than 60% of median equivalized income.

Poverty rate before taxes and transfers not independent of tax and transfer policy!

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

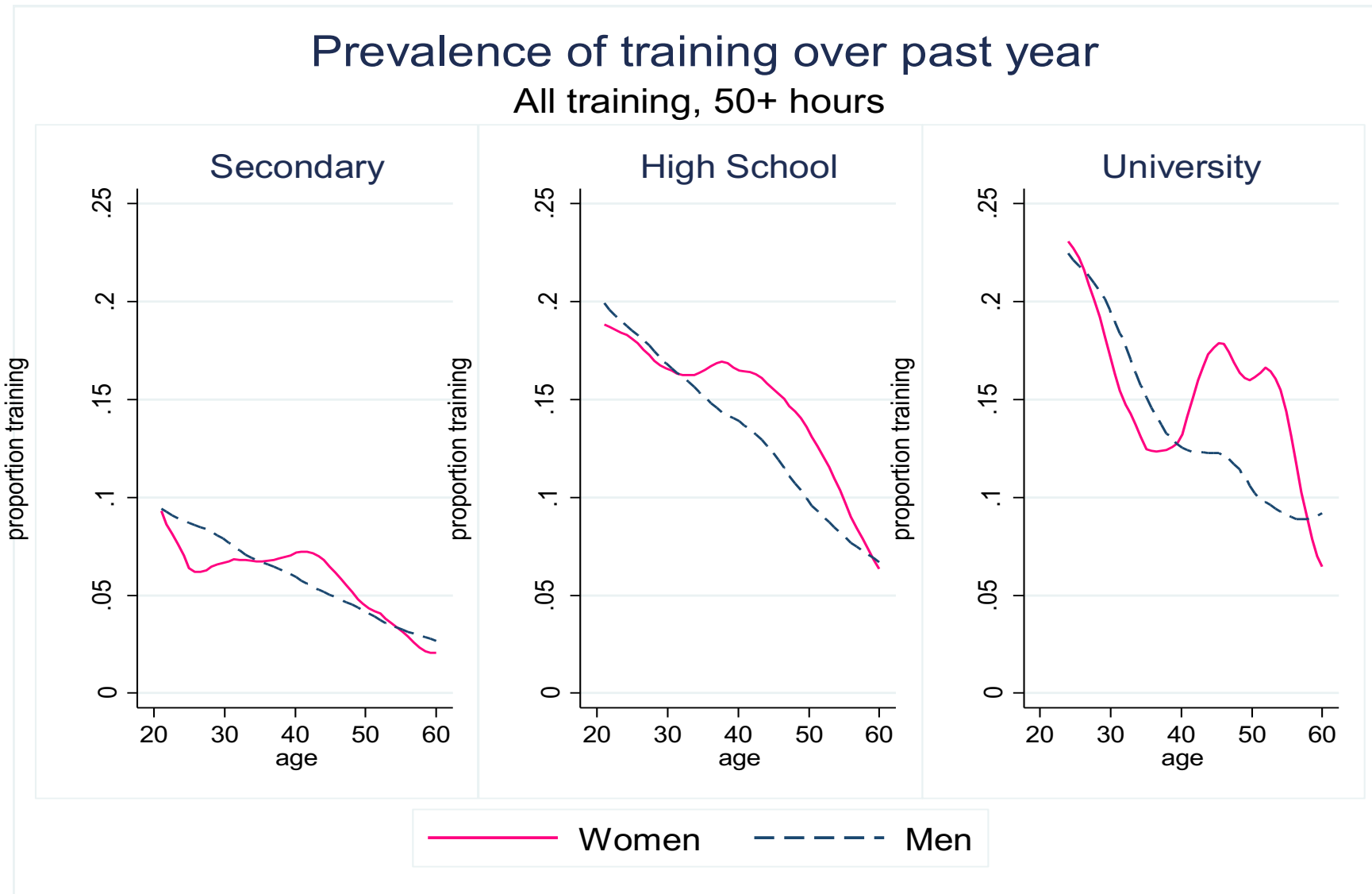
- returns to experience appear strongly *complementary* with education



A finding common across many economies, US, France, etc., and for men and women,

Source: Blundell, Dias, Meghir and Shaw (2016), Notes: Women, UK BHPS

Training also appears complementary with education



Source: Blundell, Costa-Dias, Goll and Meghir (2021), Notes: UK HLS

Looking back at some key welfare-to-work and in-work benefit/EITC reforms:

- Designed to address the ‘iron triangle’ of welfare reform,
 - typically included some *combination* of in-work incentive with time limits, job search conditions and/or minimum hours conditions,
 - optimism based on the premise that increased employment would lead to earnings progression, moving families out of low incomes and into self-sufficiency.
- Series of reforms and policy expansions in 1990s and 2000s, highlight US, UK and Canada
 - UK: WFTC/CTC; in-work benefit, condition on at least 16 hours, plus expansion of means-tested child benefit unconditional on work.
 - Canada: SSP experiment (RCT); in-work benefit, conditional on ≥ 30 hours, 36 month time limit.
 - US: EITC and PRWORA.... the 1986 and 1993 expansions of EITC had a huge impact on reform around the developed world.
- Our (and others) empirical research using reforms to generate exogenous variation showed some promise...

The interaction between taxes, tax credits and benefits in UK

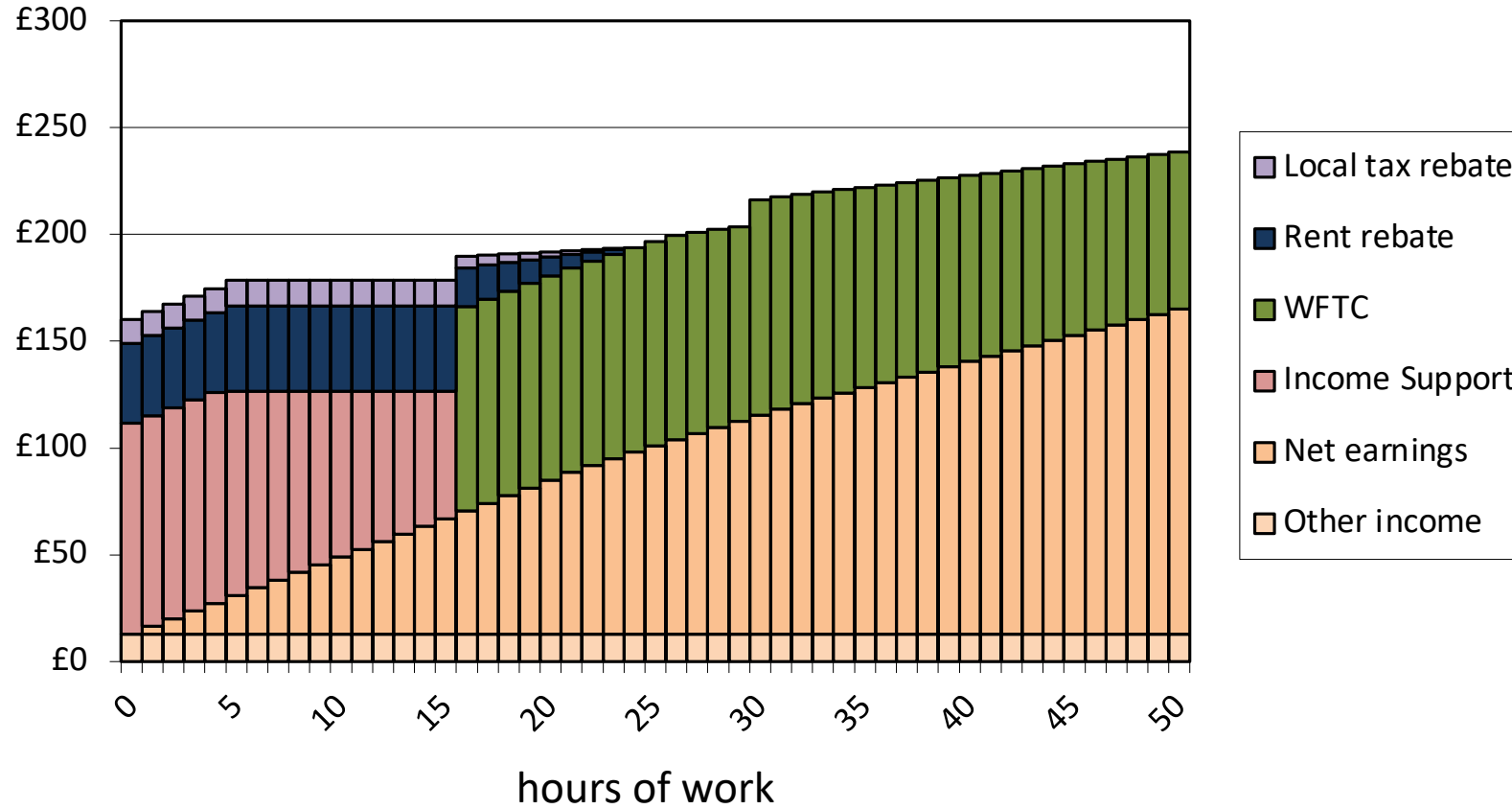
Low wage lone parent with one child, weekly amount, 2000



IFS Calculations. Notes: Single parent, wage £6.50/hr, 1 children, no other income, £80/wk rent. Ignores council tax and rebates

The interaction between taxes, tax credits and benefits in UK

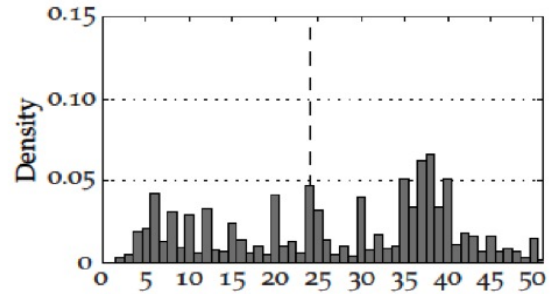
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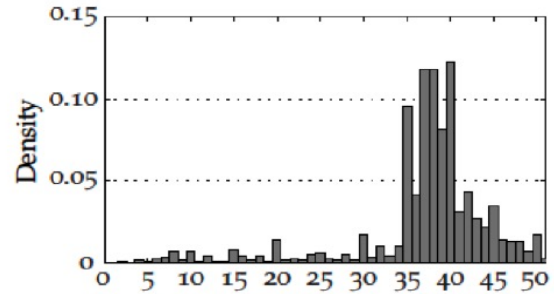
IFS calculations. Notes: Single parent, wage £6.50/hr, 1 children, no other income, £80/wk rent. Ignores council tax and rebates

Bunching of hours and hours conditions

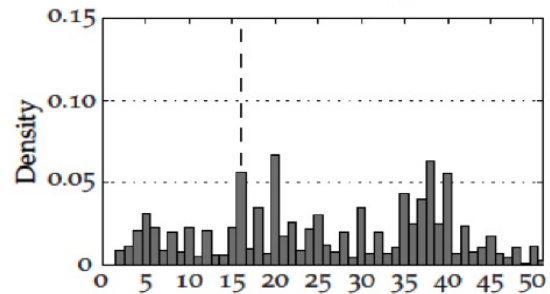
Single Women, lower educated (aged 18-45):



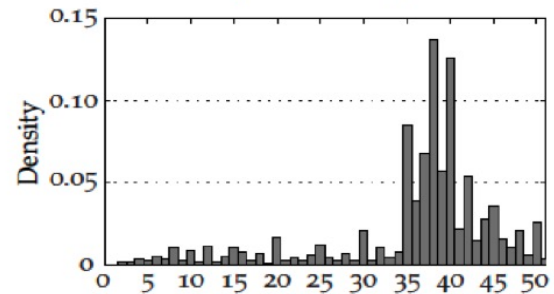
(a) Lone mothers, 1991



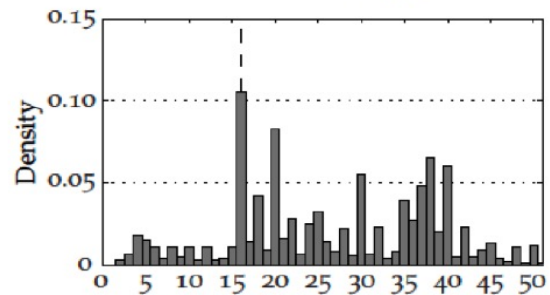
(b) Single women, 1991



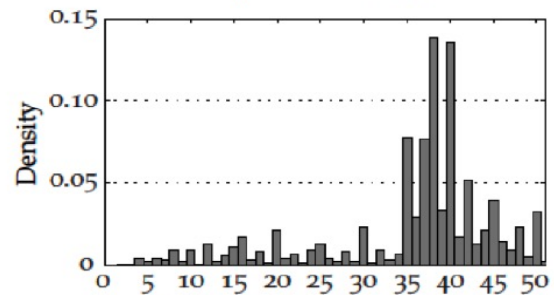
(c) Lone mothers, 1995



(d) Single women, 1995



(e) Lone mothers, 2002



(f) Single women, 2002

Source: Blundell and Shephard (2014)

Some findings...

- Found important labour supply impact for specific groups
 - responses at the extensive margin are large for specific groups and but small for most groups,
 - particularly lower educated single mothers with young school age children – a target group for child poverty and labour market inequality,
 - and impact is mainly on movements into part-time work by single mothers with younger kids.
- Mirrlees Review (Saez et al, Meghir and Philipps, Blundell et al),
 - the range of estimated elasticities (structural & reduced form) pointed to a small targeted tax credit on a negative income tax with credits related to age of youngest child, avoid hours rules,
 - plus integration of all welfare transfers to improve take-up, to minimise big jumps in effective marginal rates, and avoid rates above 100%, -> largely achieved in recent reforms.
- But recent research on dynamic impacts has added new (depressing) results
 - poor, almost no, wage progression with long-term low attachment and largely part-time work,
 - with families spending most of working life on low wages in receipt of in-work transfers,
 - (radically) changing the debate (and optimism) on tax credits and in-work transfers....

A digression on progression, labour supply and tax/transfer design

- Wage progression is a key part of the story about a number of aspects of labour market inequality, of concerns about it and of what to do about it
- What we need to know
 - the role of labour market attachment/part-time work across education groups,
 - the role of human capital investments during working life,
 - the role of firms and skills.
-and the variation we need to identify it
 - variation in incentives for part-time and full-time work, for work experience, and training.
- Exploit long panel data and sequence of changing incentives in the tax and transfer system
 - find strong complementarity with education, with much lower returns to work experience for lower educated and also for part-time work,
 - firm based qualification provides a significant return but low rates of training for lower educated workers.
- Limiting the longer run effectiveness of in-work transfers/tax credits.

Wage progression and work experience: Blundell, Costa-Dias, Meghir and Shaw (Ecta 2016)

log wage for individual i of education s and age t

$$\ln w_{ist} = \ln W_{st} + \gamma_{0s}(x_i) + \gamma_{1s}(x_i) \ln(\kappa_{ist} + 1) + \omega_i + v_{ist} + \xi_{ist}$$

where

education:

$s = [1,2,3]$ [secondary (age 16), high school (age 18)
university (age 21+)]

baseline Mincer effect:

$\ln W_{st}$

family background factors:

x_i cohort, family financial circumstances, books in home,..

experience capital:

$\kappa_{ist} = \kappa_{is,t-1}(1 - \delta_s) + \alpha_{0s}FT_{i,t-1} + \alpha_{2s}PT_{i,t-1}$

individual heterogeneity:

ω_i

persistent shocks:

$v_{ist} = \rho_s v_{is,t-1} + \mu_{ist}$

random shocks:

ξ_{ist}

endogeneity:

selection, part-time and experience, use simulated tax instruments.

embedded within a dynamic discrete response model of employment and part-time work.

Wage equation estimates: women, UK HLS

	Secondary		High School		University	
baseline at age 25	7.19	(.25)	8.64	(.17)	10.55	(.31)
returns to experience $\gamma_{1,s}$	.15	(.02)	.23	(.02)	.31	(.03)
autocorrelation coef ρ_s	.92	(.03)	.91	(.03)	.88	(.02)
depreciation rate δ_s	.08	(.02)	.08	(.01)	.07	(.02)
accumulation of HC in PTE $\alpha_{2,s}$	.13	(.02)	.10	(.02)	.12	(.03)

$$\ln w_{ist} = \ln W_{st} + \gamma_{0s}(x_i) + \gamma_{1s}(x_i) \ln(\kappa_{ist} + 1) + \omega_i + v_{ist} + \xi_{ist}$$

$$\kappa_{ist} = \kappa_{is,t-1}(1 - \delta_s) + FT_{i,t-1} + \alpha_{2s}PT_{i,t-1}$$

- A key substantive result is that tax credits, while inducing many low-education mothers into work, do not affect their wages and employment in the long term, beyond the time they receive the subsidy.

Notes: Method of Simulated Moments estimates. Interactions with background factors x_i included.

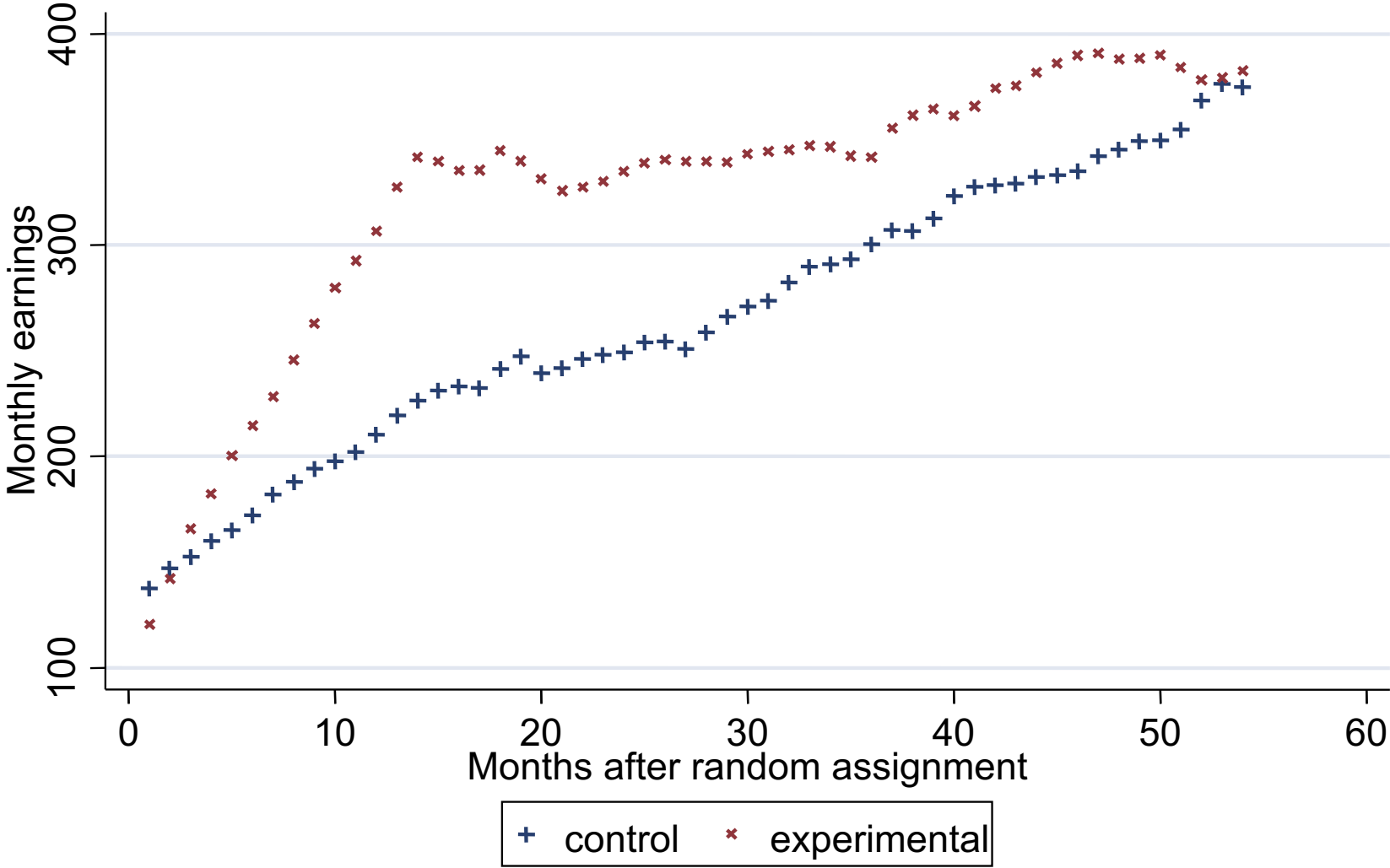
Correlated unobserved heterogeneity in wage and choice model.

Data: 18 waves from the UK HLS data. Unbalanced panel of 7,359 women aged 19-59.

Descriptive statistics and full set of results available.

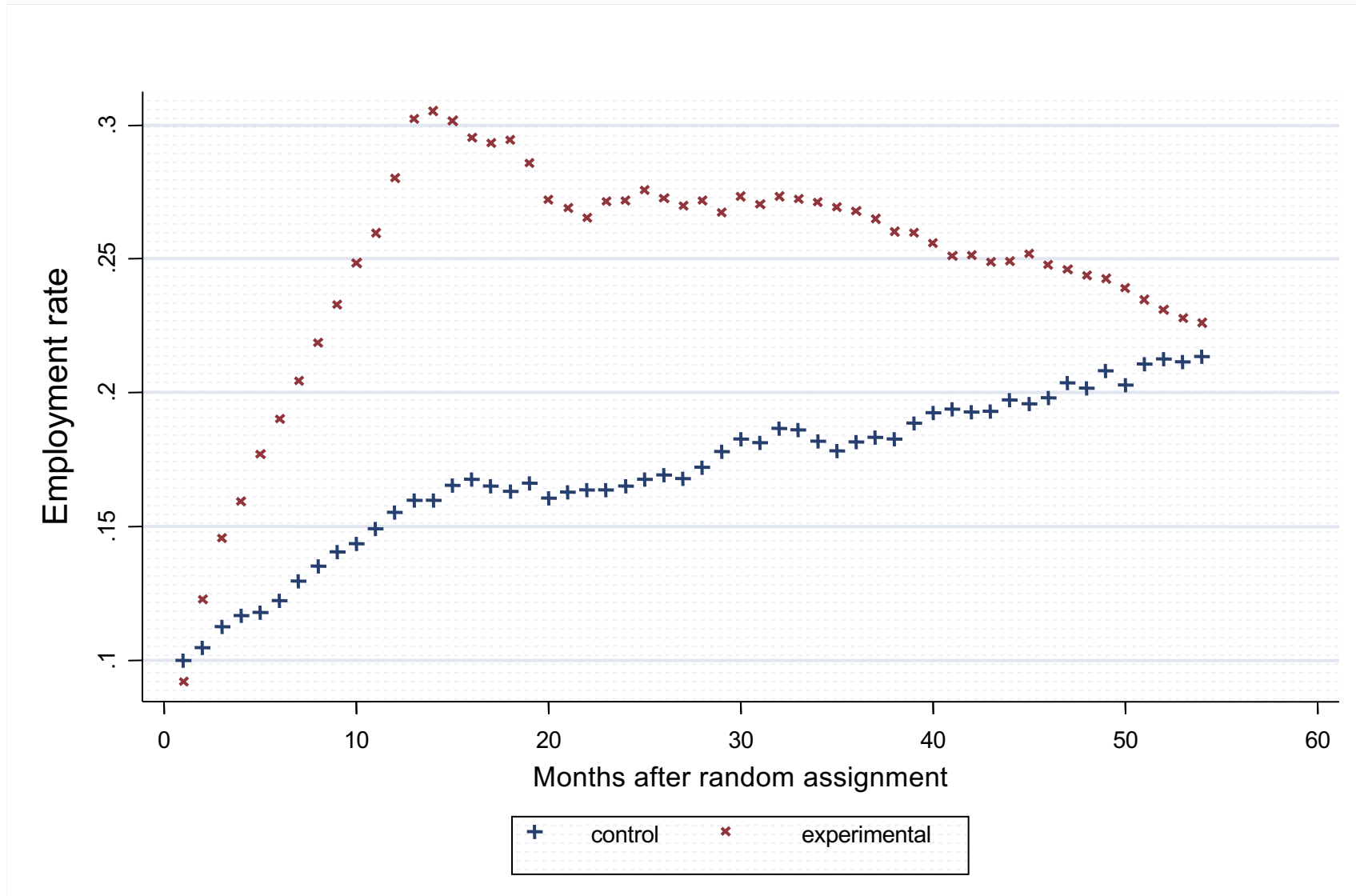
Source: Blundell, Costa-Dias, Meghir and Shaw (Ecta, 2016, updated)

SSP: Monthly earnings by months after RA



Blundell and Moffitt (2012) update of Card and Hyslop (2005), welfare mothers.

SSP: Employment Rate by months after RA



Blundell and Moffitt (2012) update of Card and Hyslop (2005), welfare mothers.

Adding training to the log wage equation

Extend panel data model of log wage for individual i , schooling s , age t and training $D_{i,t-1}$.

Adds $\tau_s D_{i,t-1}$ to the stock of human capital:

$$\kappa_{ist} = \kappa_{is,t-1}(1 - \delta_s) + FT_{i,t-1} + \alpha_{2s}PT_{i,t-1} + \tau_s D_{i,t-1}$$

Parameter	Secondary	High School	University
Return to HC ($\gamma_{s,0}$)	0.134 (.02)	0.230 (.03)	0.290 (.03)
Exp from training (τ_s)	0.119 (.08)	0.139 (.04)	0.096 (.02)
Exp from PT work (α_{2s})	0.092 (.01)	0.093 (.02)	0.105 (.03)
Exp depreciation rate (δ_s)	0.081 (.04)	0.087 (.03)	0.083 (.03)

Data: Women, UK HLS, 1991 - .

Notes: Method of Simulated Moments. Interactions with background factors included.

Additional exclusion: changes in training subsidies by industry weighted by travel to work area industrial shares matched Business Structure Database.

Source: Blundell, Costa-Dias, Goll and Meghir (2021, updated), Notes: UK HLS

Implications for re-designing policy to address the challenge of labour market inequality

Earned income tax credits?

- offset adverse means-testing incentives, encourage employment, well-targeted to low earning families but little progression or 'self-sufficiency', and some evidence of shared incidence.
- recent empirical analysis also finds progression for some lower educated workers in some jobs,
- => avoid part-time incentives and incorporate training/human capital incentives,
- - a focus on incentives for firm-based qualification training for lower educated with emphasis on firm match and 'soft skills' → putting flesh on the 'good jobs' agenda.

Interactions with the minimum wage?

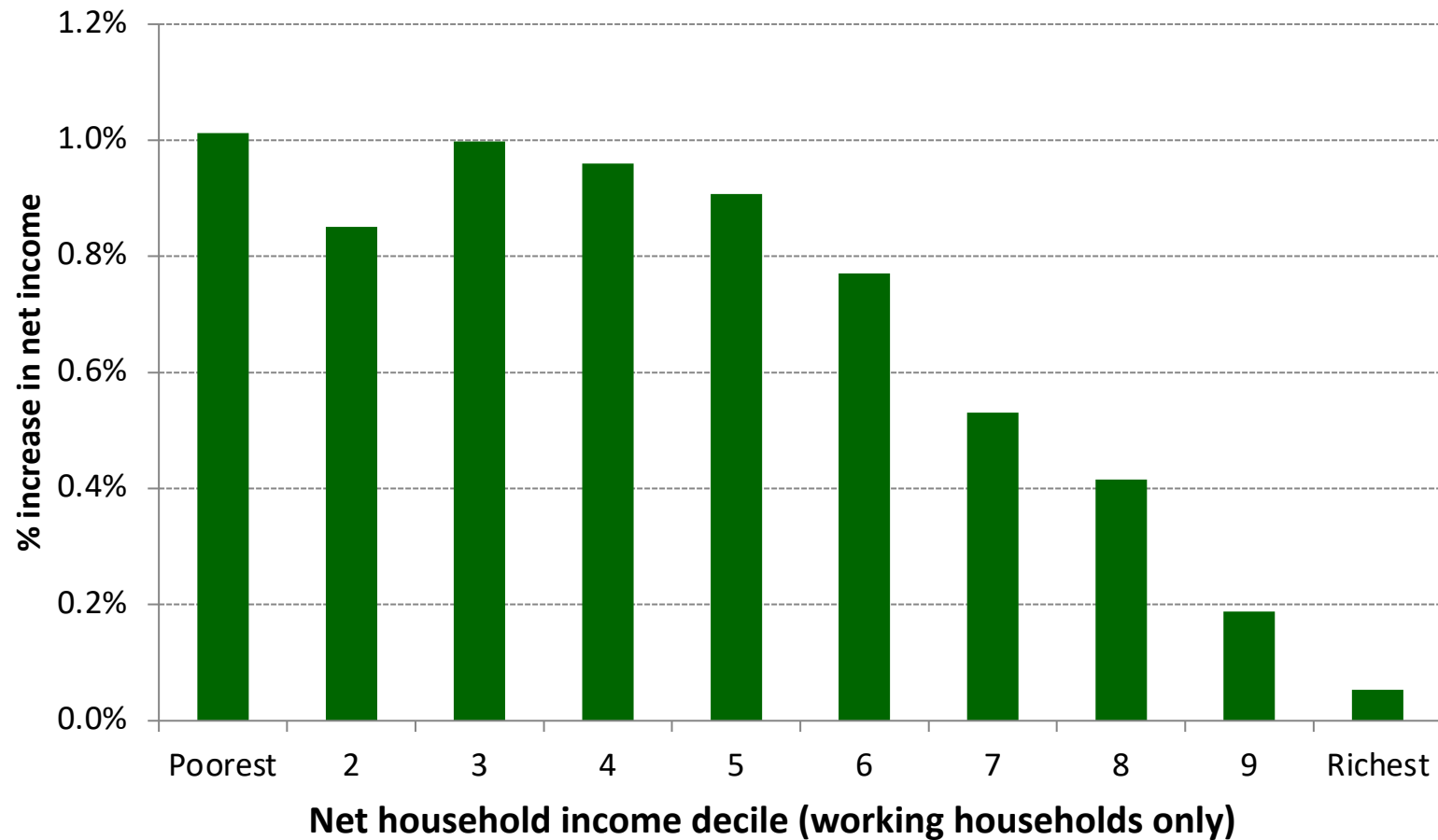
- minimum wage supports hourly wages but less well-targeted to low family incomes, due to family earnings and falling male hours/attachment, little direct incentive for progression,
- => should be a *complement* to tax credits.

Solo-self employed and gig economy regulation?

- => line-up benefit eligibility and effective tax rates for self-employed.

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

Figure shows the increase in the minimum wage between 2018 and 2020 in the UK. Which *working households* get the extra income?



Note: Shows mechanical increase in net income arising from minimum wage rises to 2020, allowing for interaction with tax payments and benefit entitlements.

Source: Cribb, Joyce and Norris Keiller (IFS 2020)

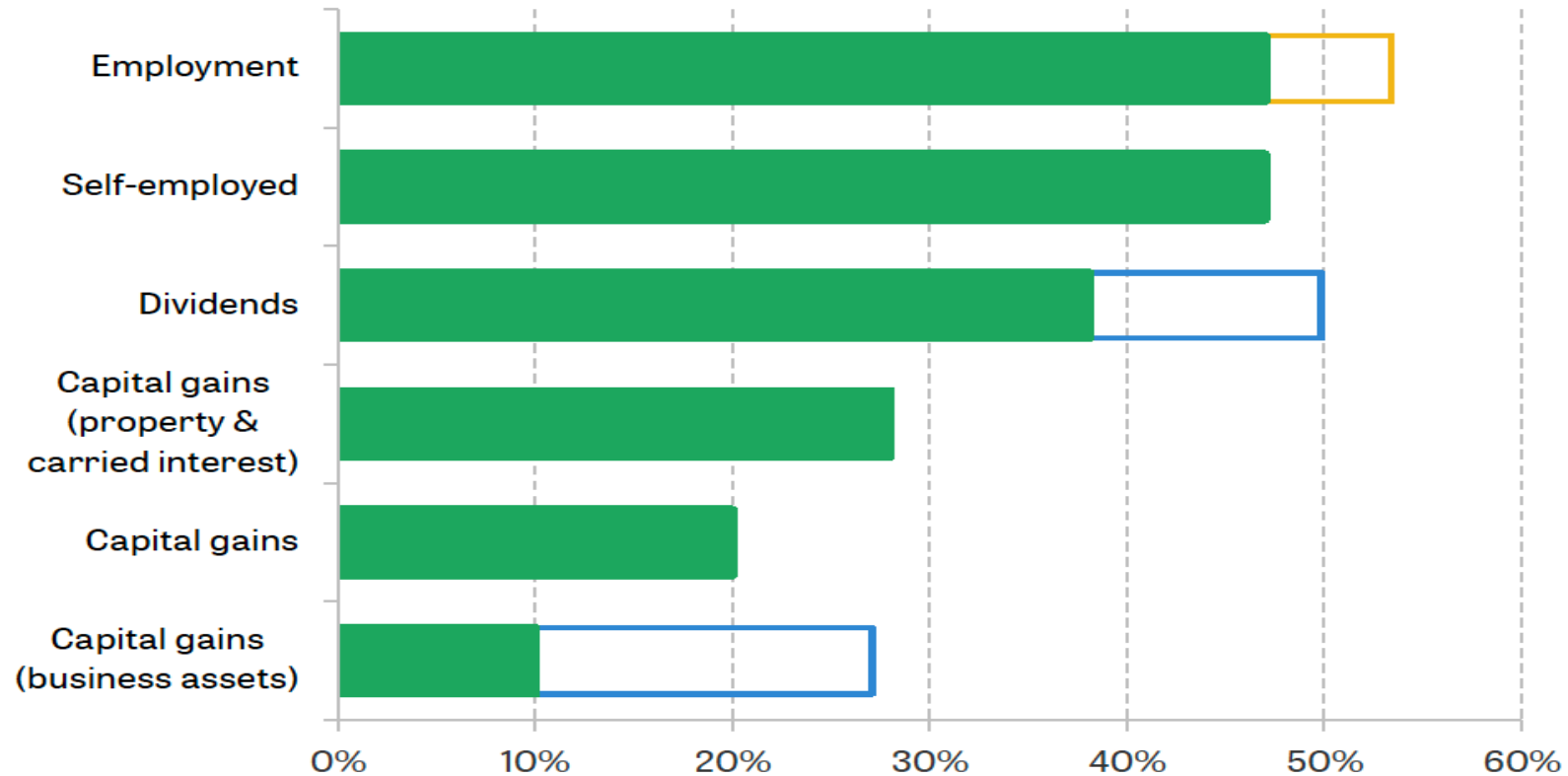
Re-assessing the reform agenda...

- Missing impact of (in-work) transfers on longer term outcomes
 - pay progression and human capital effects – learning-by-doing and employer-based training,
 - child outcomes, -> Hilary (Hoynes) was going to cover this – and is optimistic!
- Assumed full incidence on workers
 - no monopsony effects,
 - no direct role for minimum wage -> find local labour markets matter more at the bottom.
- Measured net family disposable income as as the summary ‘consumption’ measure in welfare
 - no concern for individual wages, earnings progression, or job quality,
 - no direct concern for earnings inequality within the family.
- Largely ignoring self-employment and gig economy
 - little concern for incentives shifting ‘workers’ between employee and solo self-employment,
 - lower effective tax rate and limited access to benefits.

Beyond tax credits and the minimum wage – towards a broader reform agenda

- A new take on the impact of cash transfers and in-work benefits/tax-credits
 - accounting for longer-run impacts on human capital by conditioning on specific investments,
 - accounting for longer-run impacts on child outcomes,
 - incidence and interactions with the minimum wage.
- Concerns and perceptions
 - individual earnings vs family disposable incomes,
 - career progression.
- Social insurance
 - can we move more cash transfers to contributory based benefits?
- Basic income
 - how much conditionality and how to square with full poverty alleviation?
- Integrating the taxation of labour and business income
 - aligning (marginal) rates on self-employment earnings and closely held business incomes,
 - aligning benefits and contributions for solo self-employed.

Top marginal statutory tax rates, UK 2021–22



Source: IFS Deaton Review; Survey of Personal Incomes 2018–19.

■ Excluding employer NICs & corporation tax
■ Inclusive of corporation tax
■ Inclusive of employer NICs

- At the top capital gains becomes a key area for reform...
- Average tax rate on wage-earners in the top 1% is as high as 49%, but rate on company is 27% on income taken in capital gains (zero if gains are deferred until death).

Source: IFS Deaton Review, 2022.

A balance of policies at the top

- Capital gains is a key issue:
 - Alignment of rates: moving toward the alignment marginal rates across labour income and capital income, including capital gains is a key policy recommendation.
 - Base and death: need base reform too and removal of capital gains tax uplift at death.
 - Empirical evidence matters: behavioural elasticity on capital gains tax,..
- Wealth tax:
 - Property tax alignment and capital gains,
 - Wealth transfers tax makes sense – a la Mirrlees,
 - A one-off wealth tax? A annual wealth tax on ‘top millionaires’?
- Cannot address all concerns through tax alone:
 - The top 1% reflect innovation rents and we don't want to unduly tax innovation. But innovation (and agglomeration) rents can be too high.
 - Understanding drivers of top incomes matter for policy – property, innovation, market power, restrictive practices,...?

Background studies, all available online

- ‘Labour market inequality’, Steve Machin and Giulia Giupponi, [IFS Deaton Review of Inequalities](#), March 2022.
- ‘The transfer system’, Hilary Hoynes, Robert Joyce and Tom Waters, [IFS Deaton Review of Inequalities](#), February 2022.
- ‘Spatial disparities across labour markets’, Henry Overman and Xiaowei Xu, [IFS Deaton Review of Inequalities](#), February 2022.
- ‘Women and men at work’, Alison Andrew, Oriana Bandiera, Monica Costa-Dias, and Camille Landais’, [IFS Deaton Review of Inequalities](#), November 2021.
- ‘Top income inequality and tax policy’, Isaac Delestre, Wojciech Kopczuk, Helen Miller, and Kate Smith, [IFS Deaton Review of Inequalities](#), April 2022.
- ‘Firms and Inequality’, Jan De Loecker, Tim Obermeier and John Van Reenen’, [IFS Deaton Review of Inequalities](#), April 2022.
- ‘Income Inequality and the Labour Market in Britain and the US’, Richard Blundell, Robert Joyce, Agnes Norris Keiller, and James P. Ziliak, *Journal of Public Economics*, March 2018.
- ‘Female Labour Supply, Human Capital and Welfare Reform’, Richard Blundell, Monica Costa-Dias, Costas Meghir and Jonathan Shaw, *Econometrica*, 84(5), September 2016.
- ‘Wages, Experience and Training of Women over the Lifecycle’, Richard Blundell, Monica Costa-Dias, David Goll and Costas Meghir, *Journal of Labour Economics*, January, 2021.
- ‘Soft Skills and the Wage Progression of Low-Educated Workers’, Philippe Aghion, Antonin Bergeaud, Richard Blundell, and Rachel Griffith, *CEPR DP14102* updated March 2022.
- ‘Inequality, Redistribution and the Labour Market’, Richard Blundell, *Centenary Issue, Economica* 89, May 2022.
- ‘Inequality and the COVID Crisis’, Richard Blundell, Jonathan Cribb, Monica Costa-Dias, Robert Joyce, Tom Waters, Xiaowei Xu), forthcoming *Annual Review of Economics*, Volume 14, August 2022.

Tax and Transfer Programs

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