



Institute for
Fiscal Studies

Work incentives, redistribution and the tax/benefit rate schedule

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Aims

- Some thoughts on selected issues
 - Not an introduction or a systematic survey

- Focus on concepts and analytical tools
 - Not empirical evidence or practical policy implications

Outline

- Measuring and analysing work incentives
- Policy trade-offs around work incentives
- Perspectives on redistribution
- The incentives/redistribution trade-off: key ideas from the optimal tax literature

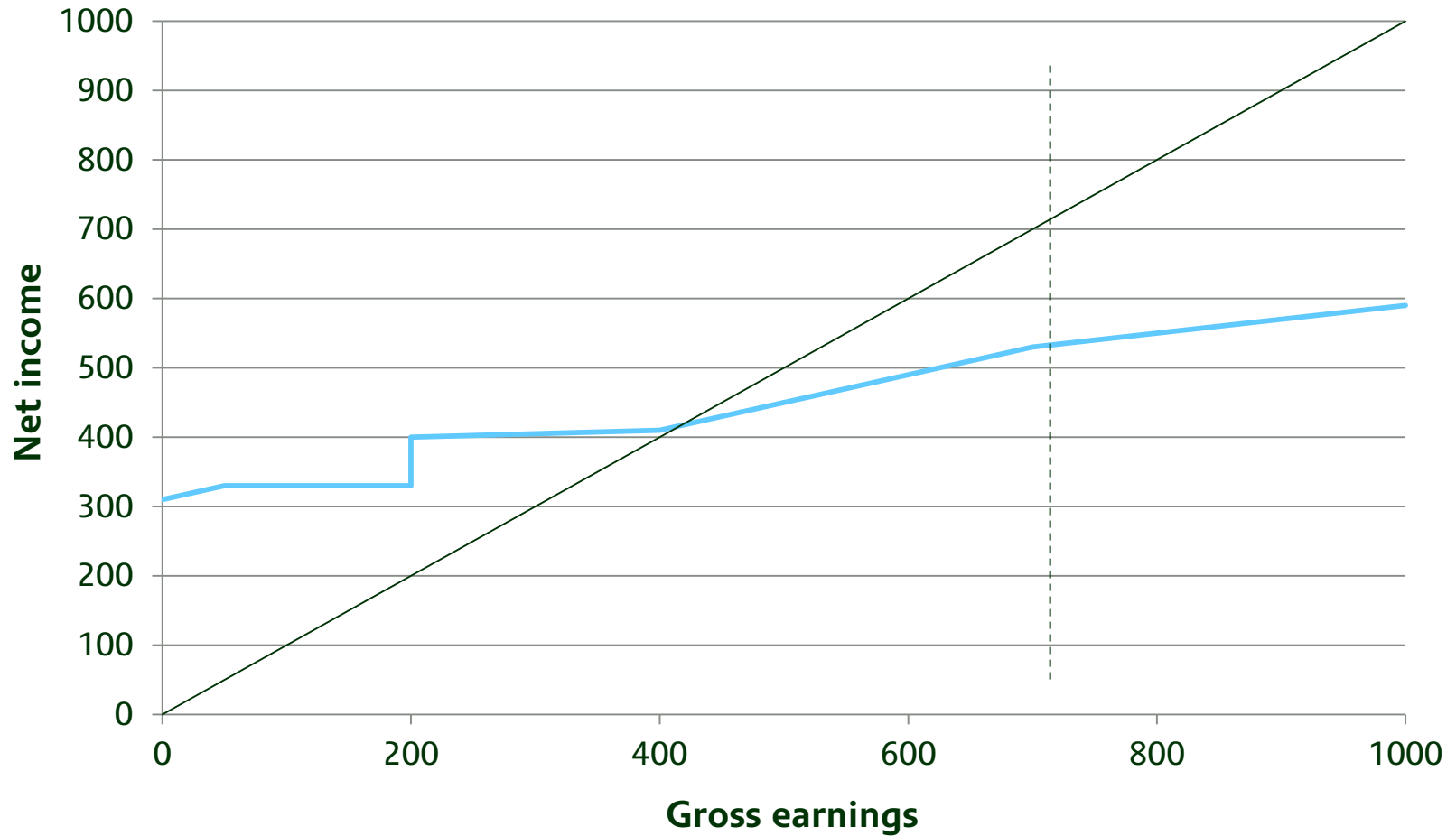
‘Work incentives’?

- ...or *‘financial work incentives’*?
 - Non-financial incentives important but hard to quantify
 - ...or *‘the effects of policy on (financial) work incentives’*?
 - Otherwise, must incorporate costs of childcare, travel, work clothing,...
 - (If include non-financial factors, also enjoyment of work, etc.)
 - Often, appropriate question is not ‘how strong are incentives?’ but ‘how much is government distorting incentives created by the market?’
- Be clear what question you are answering, and what you’re not

Consider a wide range of taxes and benefits

- Employer NICs
- Indirect taxes
- Savings taxes

Example budget constraint



Two kinds of financial work incentives

Incentive for those in work to increase their earnings:

- Effective marginal tax rate (EMTR)
 - proportion of an extra £1 of earnings taken in tax and withdrawn benefits
$$\text{EMTR} = 1 - \text{slope of budget constraint}$$

Incentive to be in work at all:

- Replacement rate (RR)
 - proportion of net income replaced if don't work
$$\text{RR} = \frac{\text{Net out-of-work income}}{\text{Net in-work income}}$$
- Participation tax rate (PTR)
 - proportion of total earnings taken in tax and withdrawn benefits
$$\text{PTR} = 1 - \frac{\text{Net in-work income} - \text{Net out-of-work income}}{\text{Gross earnings}}$$

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- Effective average tax rate (EATR)
 - proportion of total income taken in tax (net of benefits received)

$$\text{EATR} = 1 - \frac{\text{Net in-work income}}{\text{Gross income}}$$

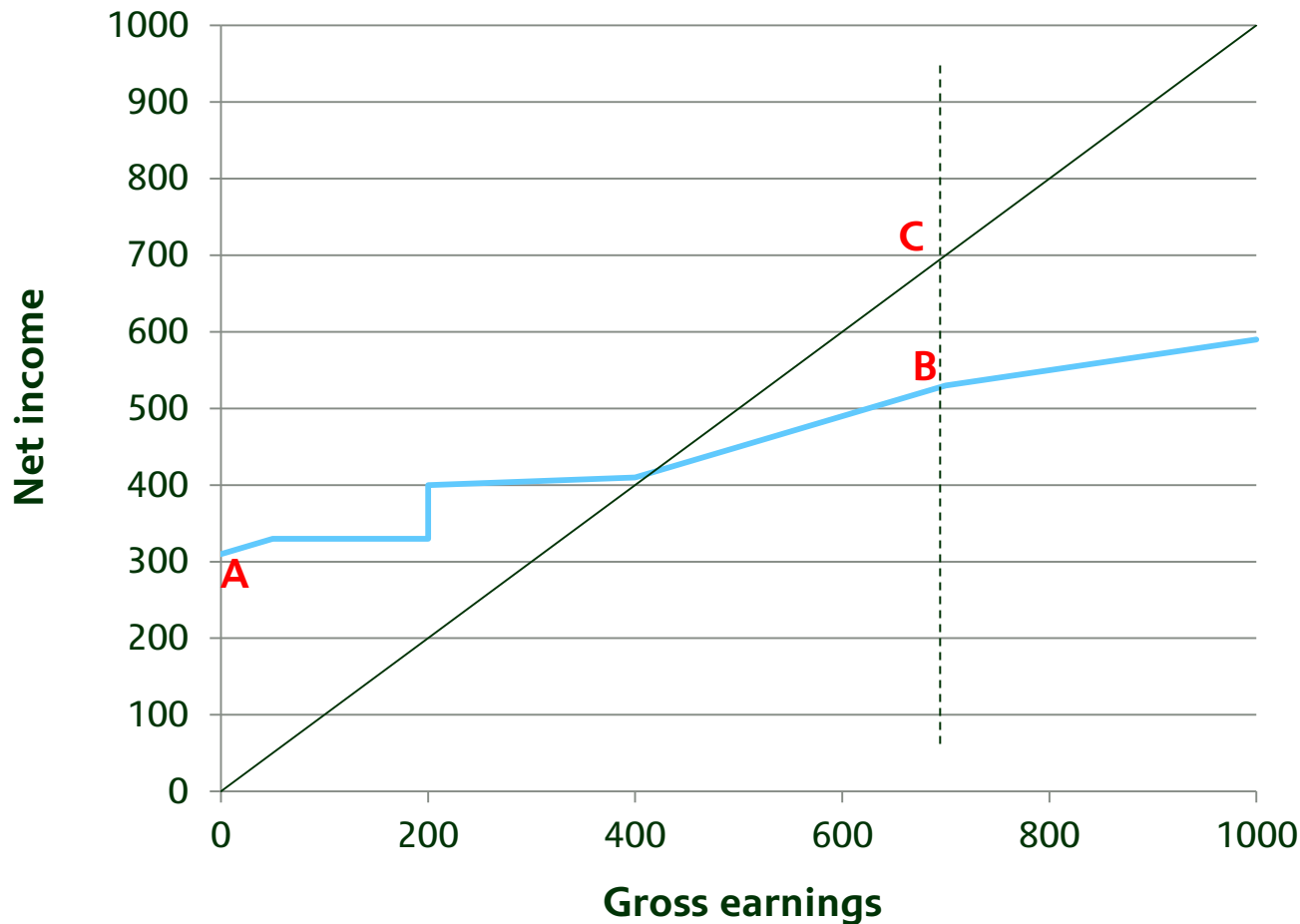
Effective average tax rate

Proportion of total income taken in tax (net of benefits)

$$\text{EATR} = 1 - \frac{\text{Net in-work income}}{\text{Gross income}}$$

- Not a measure of work incentives
 - Doesn't compare working and not working
- Measures net contribution to the Exchequer at given income level
- Defines *progressivity*: progressive if EATR rises with income
 - **not** if EMTR rises with income: use another word for that!

Effective tax rates and the budget constraint



- $RR = \frac{A}{B}$

$$PTR = 1 - \frac{B-A}{C}$$

$$EATR = 1 - \frac{B}{C}$$

Replacement rate vs participation tax rate

RR

$$\frac{\text{Net out-of-work income}}{\text{Net in-work income}}$$

- 100% = no gain from work
- 0% = no income if don't work
- Stronger if earn more
 - Better measure of incentive to be in work?
- Depends on ratio between in-work and out-of-work income
 - So unaffected by uniform VAT

PTR

$$1 - \frac{\text{Net in-work income} - \text{Net out-of-work income}}{\text{Gross earnings}}$$

- 100% = no gain from work
- 0% = keep earnings in full
- Link with earnings reflects progressivity
 - Better measure of effect of taxes and benefits on incentive to be in work?
- Depends on difference between in-work and out-of-work income
 - So unaffected by universal benefit
 - 'No income effects'

Replacement rate vs participation tax rate

RR

$$\frac{\text{Net out-of-work income}}{\text{Net in-work income}}$$

PTR

$$1 - \frac{\text{Net in-work income} - \text{Net out-of-work income}}{\text{Gross earnings}}$$

Can give different impressions. For example:

- Low earner with high-earning partner has high RR but low PTR
 - Small additional earnings make little % difference to family income
 - Above means-testing but little IT & NICs, so keep most of earnings
 - Coalition benefit reforms reduced lone parents' average RR but increased their average PTR
 - Bigger % reduction in out-of-work income
 - Bigger £ reduction in in-work income
- Looking at both gives a richer understanding

Some issues in measuring work incentives

- Couples
 - Looking at how *family* income depends on *individual* work behaviour isn't realistic or value-neutral – but alternatives hard and/or worse?

Some issues in measuring work incentives

- Couples
- Non-workers
 - Need to estimate what they would earn if they worked
 - Do we assume those who are sick/disabled recover, or work anyway?

Some issues in measuring work incentives

- Couples
- Non-workers
- Multiple jobs
 - Compare being in/out of main job, or of all jobs?

Some issues in measuring work incentives

- Couples
- Non-workers
- Multiple jobs
- Non-take-up of benefits (and non-compliance with tax)
 - Would need to model counterfactual benefit take-up
 - Would really want to incorporate a cost of claiming
 - Ignoring better reflects government's intentions?

Some issues in measuring work incentives

- Couples
- Non-workers
- Multiple jobs
- Non-take-up of benefits (and non-compliance with tax)
- Time limits (contrib. JSA & ESA, SMI) and waiting periods (SMI)
 - Short-run or long-run incentives?

Some issues in measuring work incentives

- Couples
- Non-workers
- Multiple jobs
- Non-take-up of benefits (and non-compliance with tax)
- Time limits (contrib. JSA & ESA, SMI) and waiting periods (SMI)
- Accrual of contributory entitlements strengthens work incentives

Some issues in measuring work incentives

- Couples
- Non-workers
- Multiple jobs
- Non-take-up of benefits (and non-compliance with tax)
- Time limits (contrib. JSA & ESA, SMI) and waiting periods (SMI)
- Accrual of contributory entitlements strengthens work incentives
- Pension contributions
 - Data rarely include employer pension contributions
 - What happens to pension contributions when earnings change?
 - Counting relief on contributions while ignoring tax on future pension income understates true tax on work

Work incentive trade-offs

- Work incentives *vs.* redistribution
 - e.g. progressivity of tax rates
- Incentives to be in work *vs.* for those in work to earn more
 - e.g. WTC rates (or UC work allowances)
- Incentives for 1st *vs.* 2nd earners
 - e.g. WTC rates (or UC work allowances) with joint assessment of couples
- Very weak incentives for a few *vs.* quite weak incentives for many
 - e.g. benefit withdrawal rates
- Theoretical optimality *vs.* practical considerations

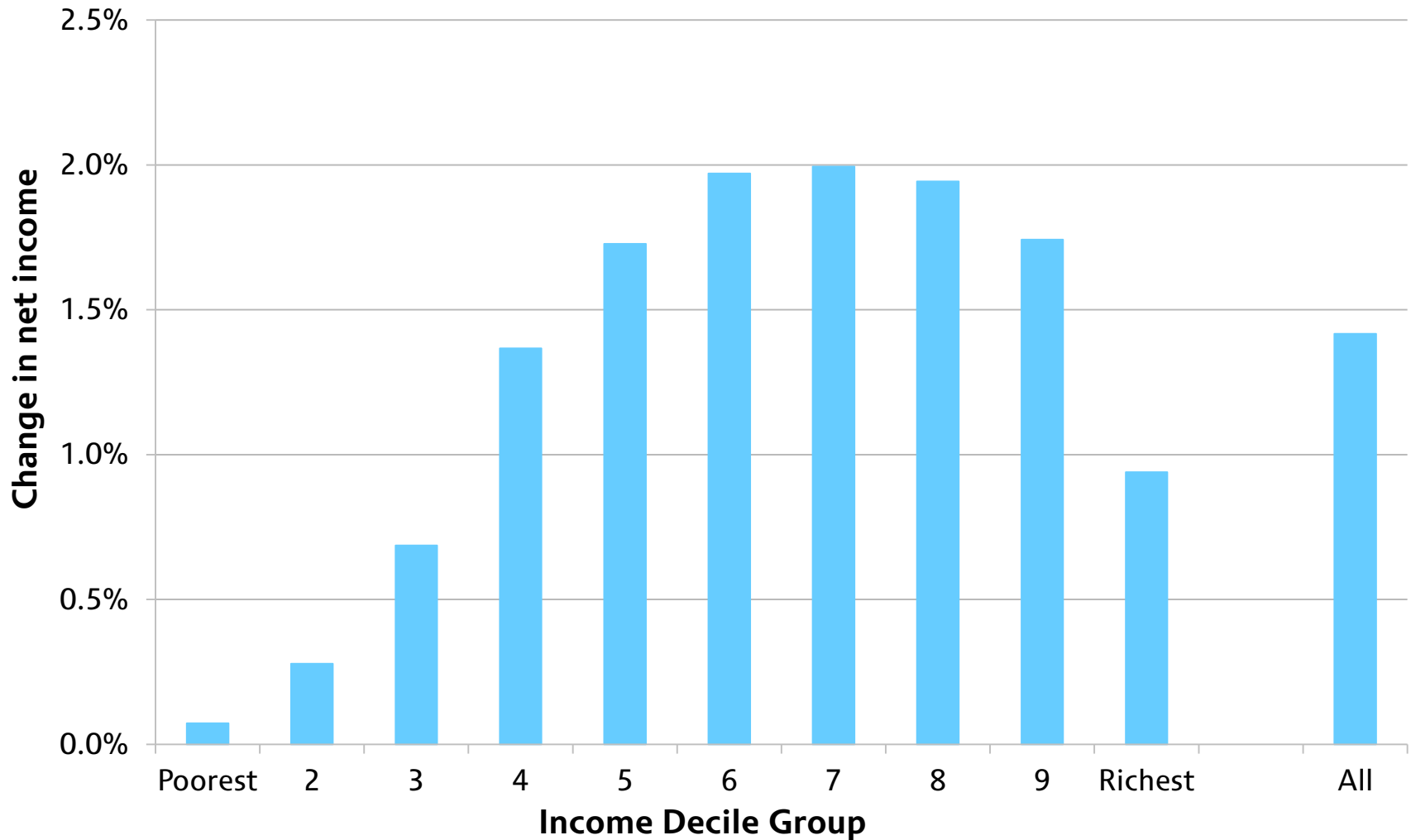
Income and redistribution

Many parallel considerations apply:

- Income vs. well-being
- Income vs. effect of policy on income
- All taxes and benefits matter
- Measuring income is tricky, especially capital income
 - Include pension income but don't deduct pension contributions?
 - Include interest received but don't deduct interest paid?
 - Include gifts and bequests received but don't deduct those given?
 - Imputed housing income for owner-occupiers

Increasing the personal allowance

Distributional impact of an increase from £10,000 to £12,500



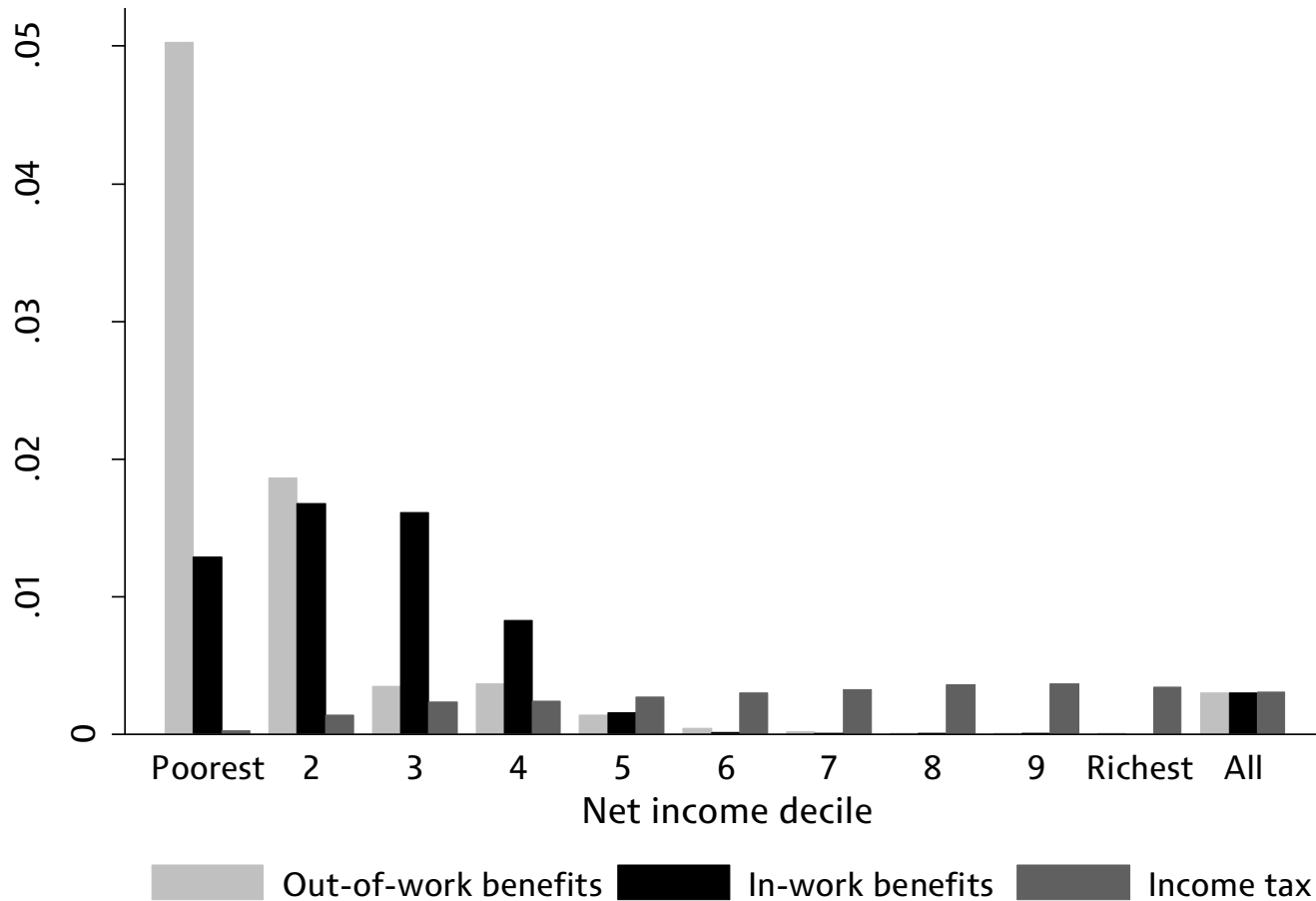
Assumes higher-rate threshold held constant.

Source: Figure 7.4 of *The IFS Green Budget: February 2014*

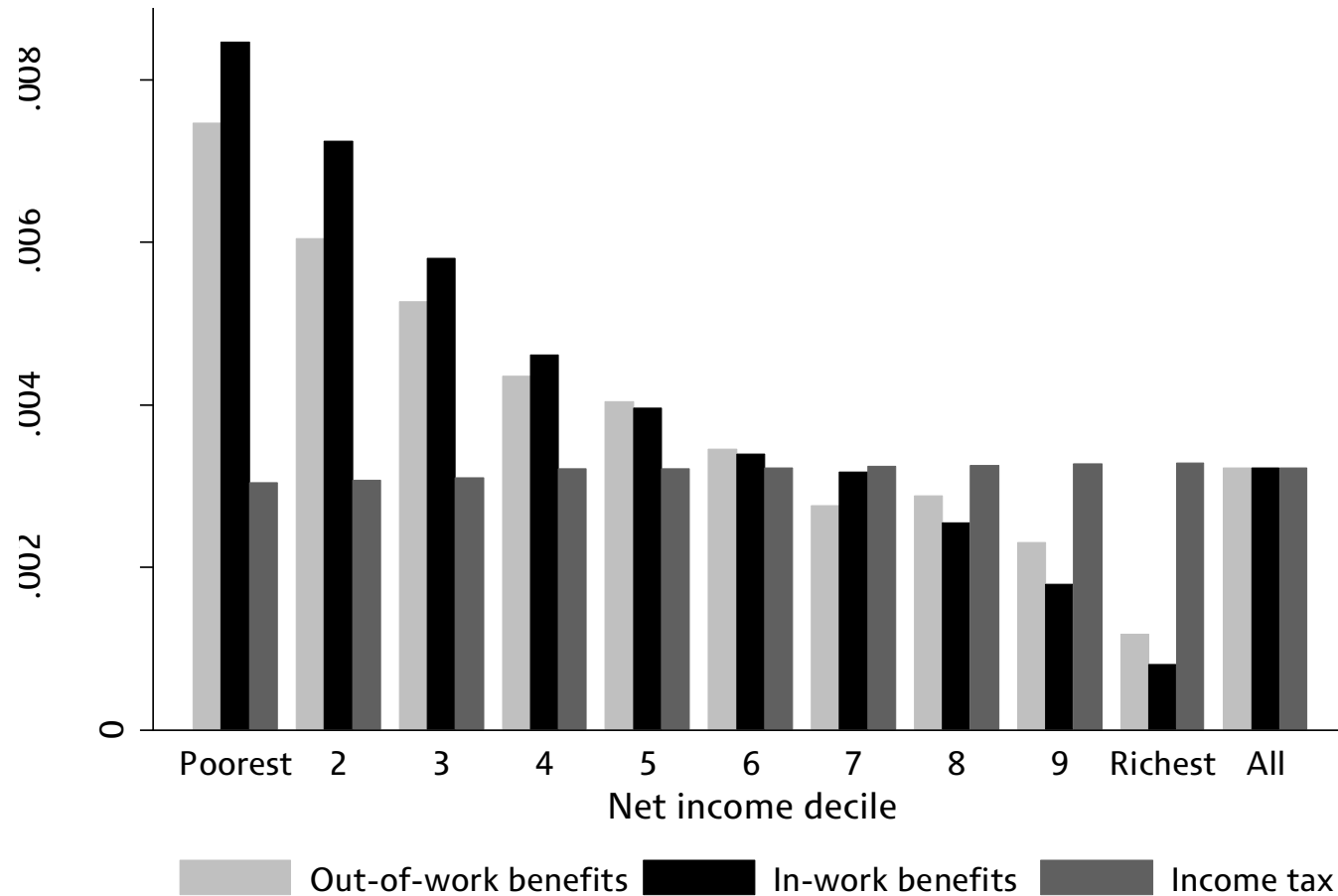
Redistribution: beyond the decile chart

- Incidence: who is ultimately made worse off?
- Heterogeneity is important
 - Variation by family type, region, etc.
 - Variation within groups typically large relative to that between groups
- Consider a lifetime perspective

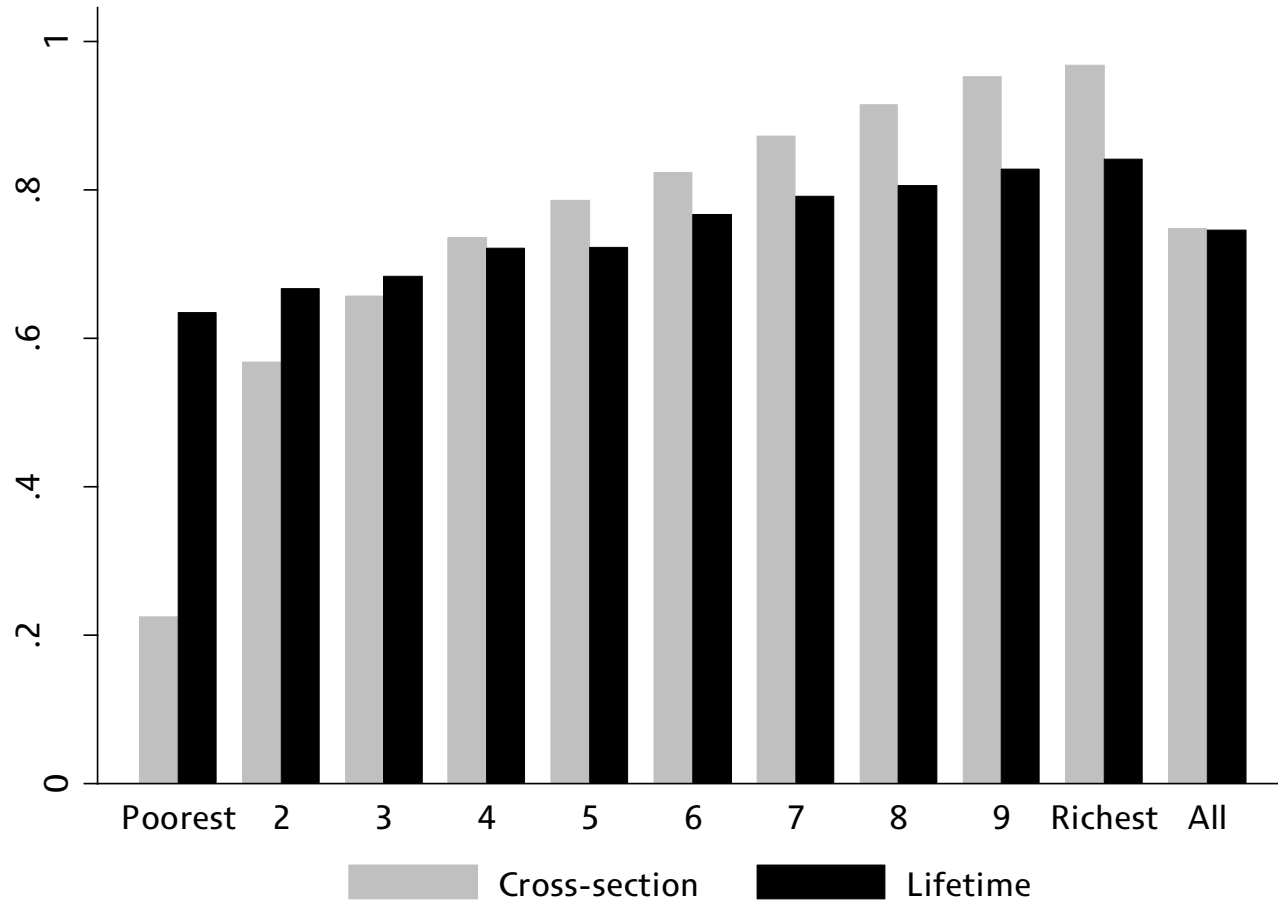
In cross-section, increasing out-of-work benefits is most progressive



Over a lifetime, increasing in-work and out-of-work benefits equally progressive



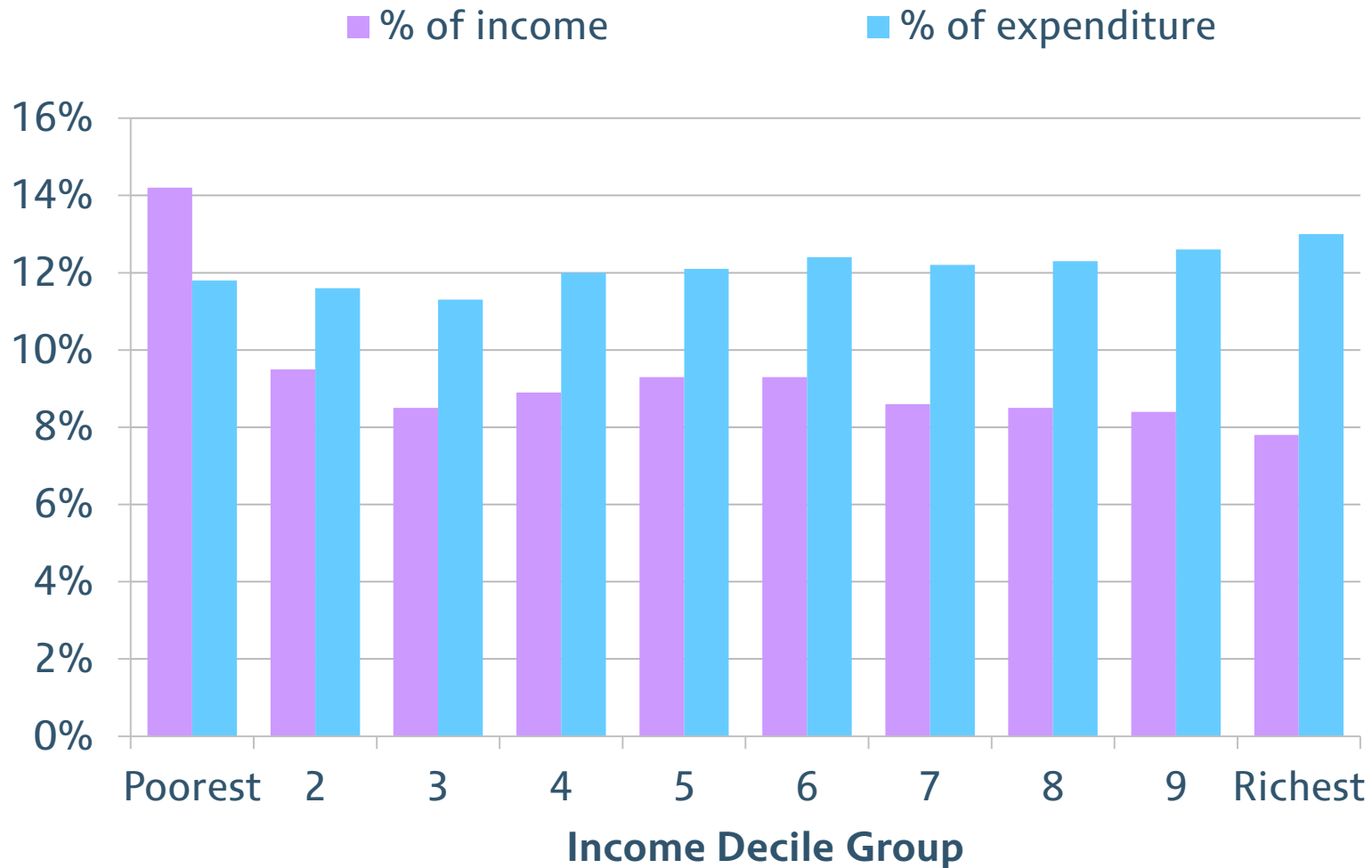
Explanation: the poorest individuals spend most of working-age life in work



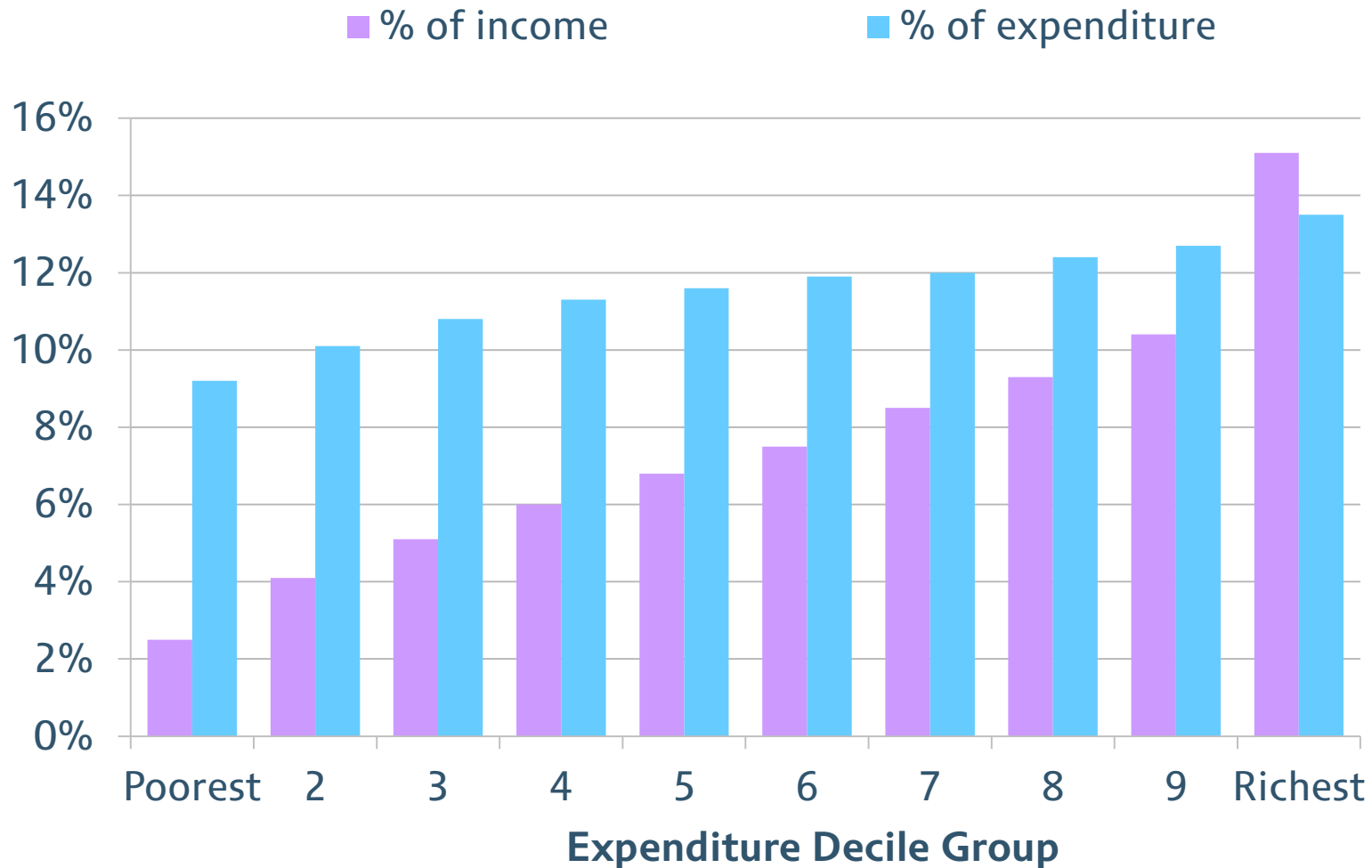
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- Consider a lifetime perspective
 - Much low income is temporary
 - Much redistribution is across the life-cycle
- Particularly important for expenditure taxes

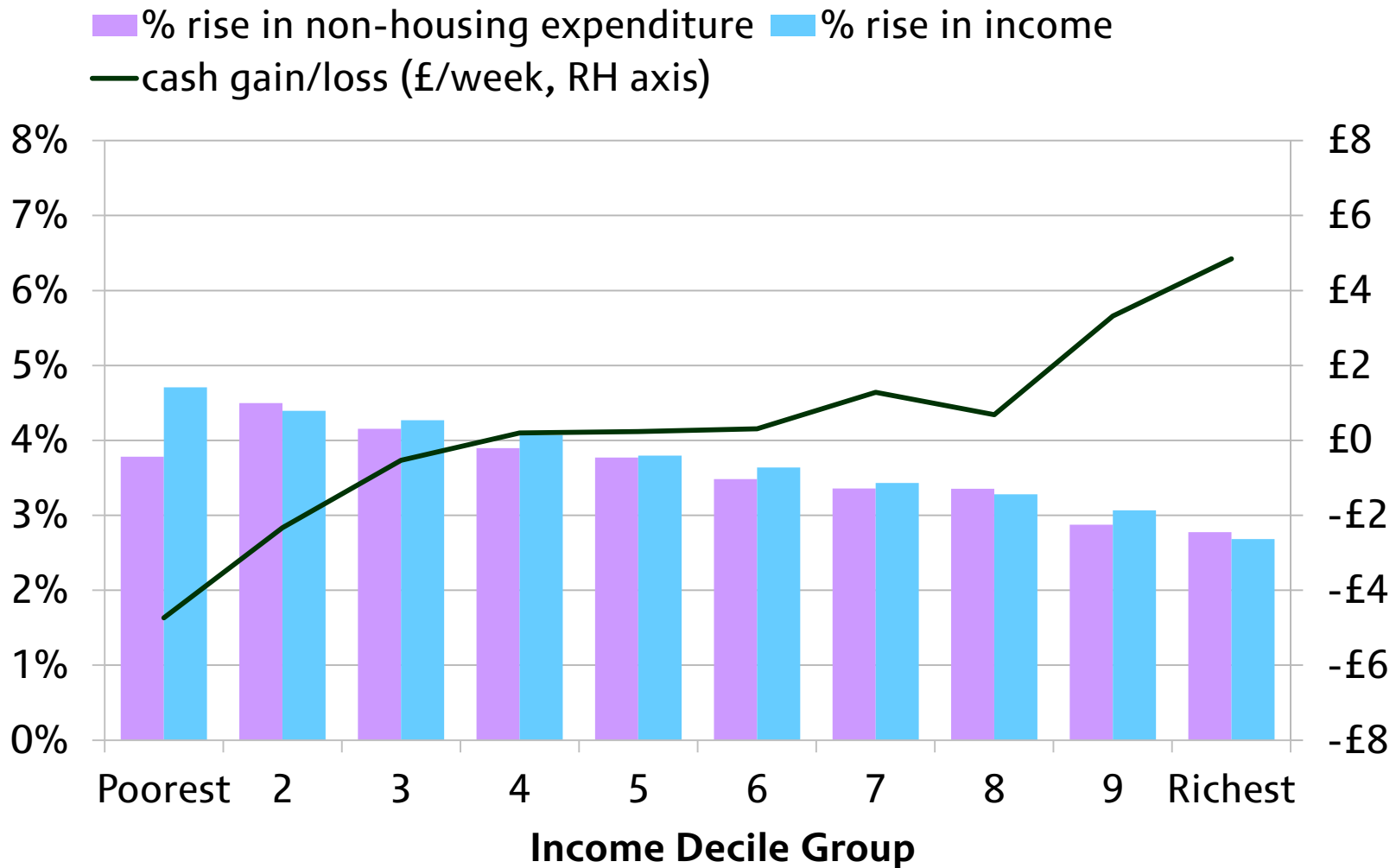
VAT payments by income decile, 2010-11



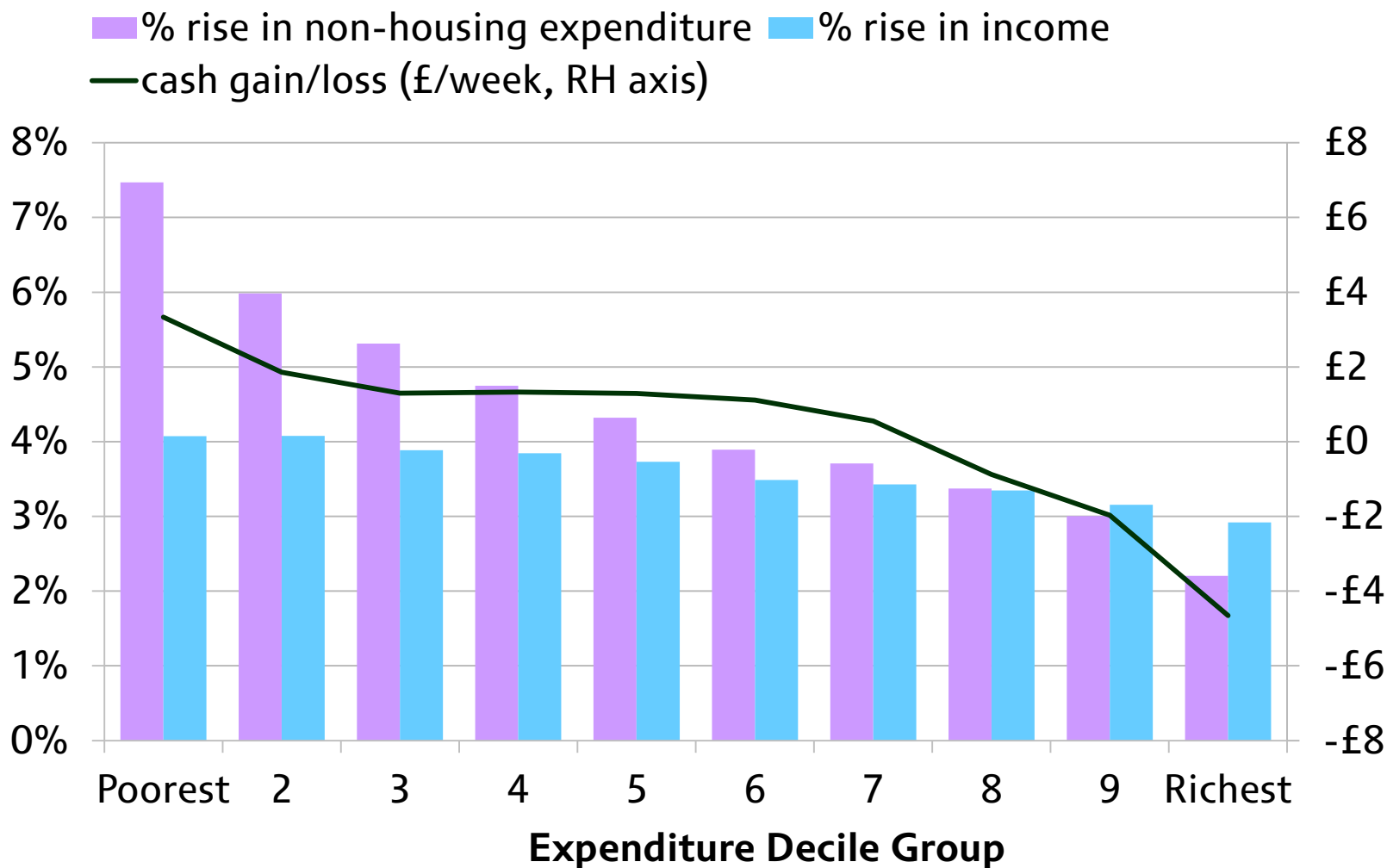
VAT payments by expenditure decile, 2010-11



Compensated VAT reform: effects by income



Compensated VAT reform: effects by expenditure



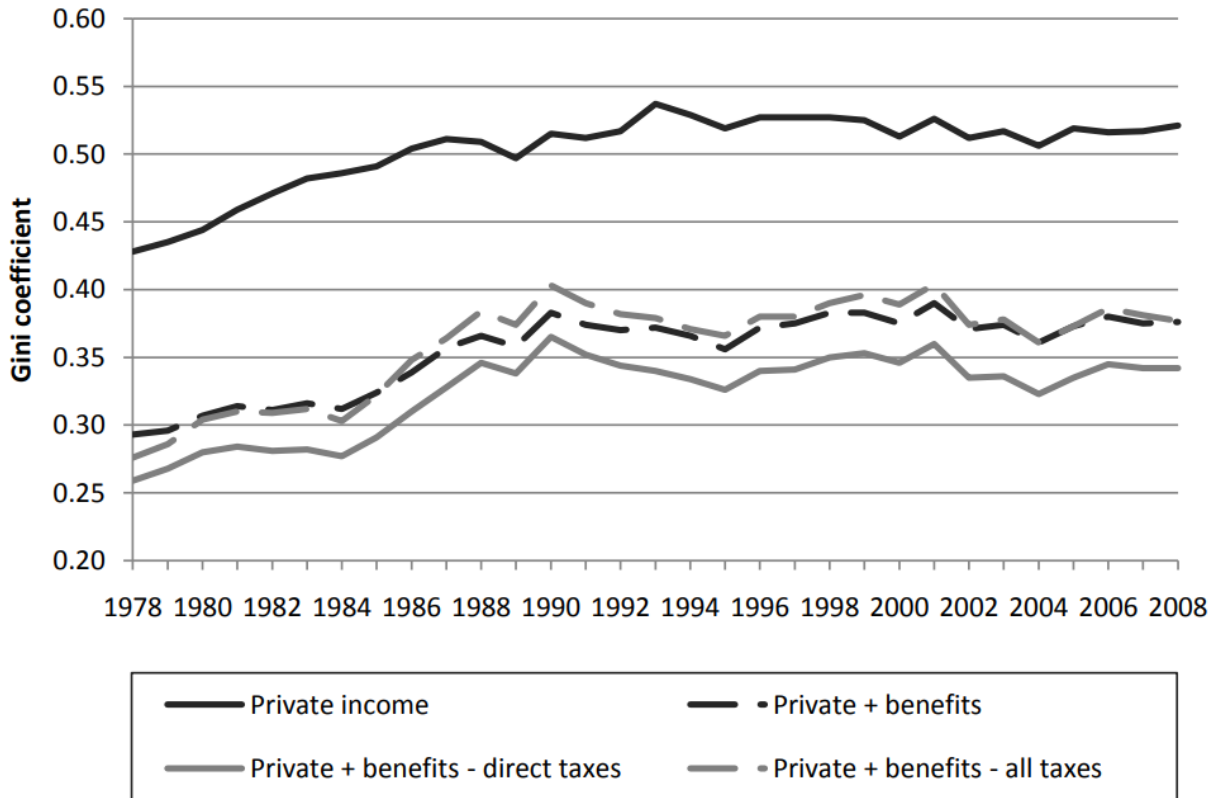
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- Consider a lifetime perspective
 - Much low income is temporary
 - Much redistribution is across the life-cycle
- Particularly important for expenditure taxes
 - If only snapshot data, measure as % of expenditure, not income
- But lifetime distributional analysis isn't the only issue either
 - Short-term hardship matters too
 - Existing population only has part of their lifetime left!
 - Intergenerational issues increasingly prominent

Capitalisation

- Expected future taxes on an asset can reduce its market value
- The real loser is the owner on the day the tax (rise) is announced
 - Future buyer pays taxes, but also buys the asset for less
- Taxes to capture past rises in value (or recoup past giveaways) may not penalise the same people who gained
 - Asset may have changed hands for higher price in the meantime
- Capital tax reforms often better analysed in terms of distribution of windfall gains and losses rather than distribution of annual liabilities
 - Specifically, taxes on existing marketable assets

Most inequality reduction done through benefits



➔ Sharp benefit withdrawal means strongly targeted at poverty reduction, and also responsible for weakest work incentives

➔ Note dubious impression that indirect taxes regressive, based on income snapshot

Note: Excludes corporation tax, inheritance tax, stamp duty on securities and some smaller taxes. Years are fiscal years from 1993 onwards (so 2008 means 2008–09) and calendar years before that.

Sources: Barnard (2010) and Jones et al. (2008).

Redistribution and work incentives

- There is an inevitable trade-off
 - Redistributing from rich to poor reduces incentive for poor to get richer
 - In the short run, trade-off with revenue too
- Ultimately requires political value judgements
- But there are subtleties in the trade-off
- Optimal tax theory has useful lessons on efficient redistribution

Some lessons from optimal tax theory (1/2)

- Avoid EMTRs $>100\%$, including cliff-edges
- High EMTRs in earnings bands that few people *in*, but many *above*
- Low PTRs for low earners if responses mainly employment, not earnings
- Stronger incentives when people most responsive
 - Around retirement; mothers with school-age children
 - NB lower EMTRs and PTRs, not necessarily ATRs

Some lessons from optimal tax theory (2/2)

- Use other indicators of earning capacity, need or responsiveness ('tags')
 - Achieve more redistribution at lower cost to taxpayers
 - e.g. disability is a good indicator of low earning capacity and high need
- But watch out for:
 - Fairness:
 - What characteristics are legitimate to use?
 - What about the unusual people left behind?
 - Complexity
 - Incentives to acquire tags
- Tax consumption of particular goods, or at particular times (i.e. saving), only if:
 - Work responds less to tax on that consumption than on other consumption
 - It indicates ability/need *given* total income/consumption
- If not, rate schedule better controls how liabilities depend on resources

Treatment of couples

- Progressive system cannot be neutral both towards whether in a couple and towards distribution of resources within the couple
 - Joint assessment for means tests creates ‘couple penalty’
 - Individual assessment for income tax encourages equal income splitting
- There is a case for joint assessment at bottom, individual at top
 - Though a large element of value judgement involved too
- Recent reforms no clear principle for role of individual vs joint income
 - High Income Child Benefit Charge
 - Marriage Allowance
 - Tax-Free Childcare
 - All complicate the system, and all withdrawn in strange ways

Empirical evidence is crucial

- Shape of the income distribution
- Responsiveness:
 - Of different groups
 - At different income levels
 - Of employment vs earnings
 - Of non-income characteristics
- Association between characteristics and ability to pay / need

Conclusions

- Be careful what question you are answering
- Different measures tell you different things
- Consider the whole of the tax and benefit system
- Consider distributional effects overnight (capitalisation), over a lifetime and intergenerationally as well as snapshots
 - Given snapshot data, think about income and expenditure
- Heterogeneity is important
- Optimal policy involves subtle trade-offs
 - Combine theory and evidence
- Need careful case-by-case thought as well as standardised tools

Further reading

Adam, Brewer & Shephard (2006), *The poverty trade-off: work incentives and income redistribution in Britain* (www.ifs.org.uk/publications/3739) and *Financial work incentives in Britain: comparisons over time and between family types* (www.ifs.org.uk/publications/3747)

Adam & Browne (2010), *Redistribution, work incentives and thirty years of UK tax and benefit reform* (www.ifs.org.uk/publications/5367)

Brewer, Saez & Shephard (2010), *Means testing and tax rates on earnings*, Chapter 2 of Mirrlees et al. (eds), *Dimensions of tax design: The Mirrlees Review* (www.ifs.org.uk/publications/7184)

Heady (1993), *Optimal taxation as a guide to tax policy: a survey* (onlinelibrary.wiley.com/doi/10.1111/fisc.1993.14.issue-1/issuetoc)

Kay & King (1990), *The British tax system*, Chapter 1 (www.ifs.org.uk/docs/kay_king.pdf)

Levell, Roantree & Shaw (2015), *Redistribution from a lifetime perspective* (www.ifs.org.uk/publications/7986)

Mirrlees et al. (2011), *Tax by Design: The Mirrlees Review*, esp. Chapters 3, 4 and 9 (www.ifs.org.uk/publications/5353)