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  - proportion of an extra £1 of earnings taken in tax and withdrawn benefits
  \[
  EMTR = 1 - \text{slope of budget constraint}
  \]

**Incentive to be in work at all:**
- Replacement rate (RR)
  - proportion of net income replaced if don’t work
  \[
  RR = \frac{\text{Net out-of-work income}}{\text{Net in-work income}}
  \]
- Participation tax rate (PTR)
  - proportion of total earnings taken in tax and withdrawn benefits
  \[
  PTR = 1 - \frac{\text{Net in-work income} - \text{Net out-of-work income}}{\text{Gross earnings}}
  \]
- Effective average tax rate (EATR)
  - proportion of total income taken in tax (net of benefits received)
  \[
  EATR = 1 - \frac{\text{Net in-work income}}{\text{Gross income}}
  \]
Effective average tax rate

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

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

- 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 1\textsuperscript{st} vs. 2\textsuperscript{nd} 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

Source: Levell, Roantree & Shaw (2015)
Over a lifetime, increasing in-work and out-of-work benefits equally progressive

Source: Levell, Roantree & Shaw (2015)
Explanation: the poorest individuals spend most of working-age life in work

Source: Levell, Roantree & Shaw (2015)
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
  - Much low income is temporary
  - Much redistribution is across the life-cycle
- Particularly important for expenditure taxes
### VAT payments by income decile, 2010-11

<table>
<thead>
<tr>
<th>Income Decile Group</th>
<th>% of income</th>
<th>% of expenditure</th>
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<tbody>
<tr>
<td>Poorest</td>
<td>14%</td>
<td>12%</td>
</tr>
<tr>
<td>2</td>
<td>12%</td>
<td>10%</td>
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<td>3</td>
<td>10%</td>
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<td>8</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>9</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Richest</td>
<td>2%</td>
<td>2%</td>
</tr>
</tbody>
</table>

Source: IFS et al. (2011) *A retrospective analysis of elements of the VAT system*
VAT payments by expenditure decile, 2010-11

% of income  % of expenditure

Poorest  2  3  4  5  6  7  8  9  Richest

Expenditure Decile Group

Source: IFS et al. (2011) A retrospective analysis of elements of the VAT system
Compensated VAT reform: effects by income

% rise in non-housing expenditure  % rise in income

- cash gain/loss (£/week, RH axis)

Source: Figure 9.1 of Tax by Design: The Mirrlees Review
Compensated VAT reform: effects by expenditure

% rise in non-housing expenditure  % rise in income
cash gain/loss (£/week, RH axis)

Source: Figure 9.2 of Tax by Design: The Mirrlees Review
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
  – 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)


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