Assessing the incidence of taxation

A few key issues and thoughts

I will highlight a few issues around...

- Economic incidence of taxes

- Using consumption or income as measures of welfare

- Tax evasion

- Behavioural modelling and CGE

But all 11 of the questions are important and need discussion.

Institute for
Fiscal Studies

Standard economic incidence assumptions for 'personal taxation'

- Income taxes – on the individual liable to pay

- Social security contributions – on the workers on whose earnings they are based

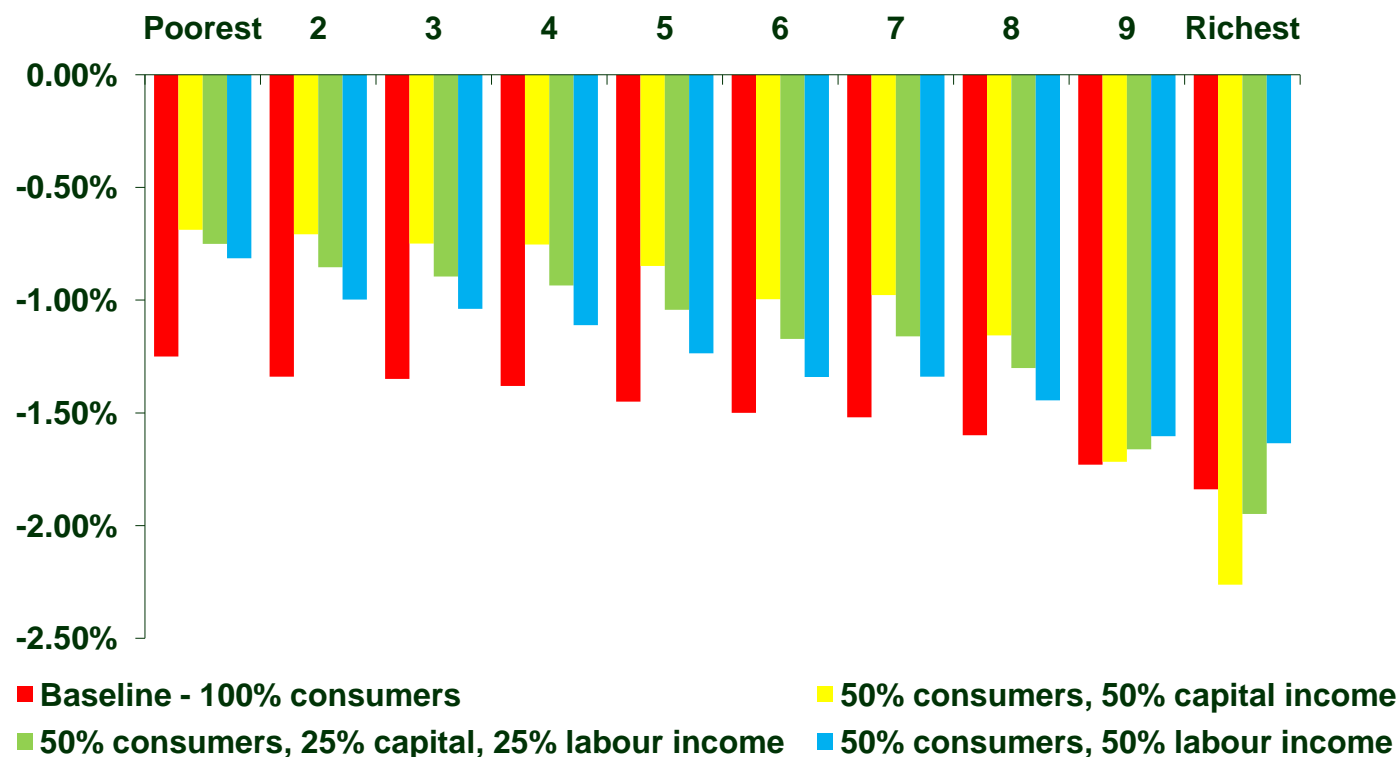- VAT, duties etc – on the final consumer of the goods

These look like fairly sensible assumptions for a 'baseline' analysis

- Has benefit that observe necessary info to allocate to individual households

Institute for
Fiscal Studies

Sensitivity testing incidence assumptions

- Even for these standard taxes, can be worthwhile sensitivity testing as different estimates of incidence exist

- Distributional impact can look quite different under different assumptions

- Avoids giving a false sense of certainty from what are ultimately assumption driven analyses

Institute for
Fiscal Studies

Example: changing assumptions about incidence of VAT (proposed reforms in Mexico)

Legend:
- **Baseline - 100% consumers** (red)
- **50% consumers, 50% capital income** (yellow)
- **50% consumers, 25% capital, 25% labour income** (green)
- **50% consumers, 50% labour income** (blue)

- Raised less revenue in cash terms of part of the incidence on profits and wages (lower income taxes)

Institute for Fiscal Studies

Sensitivity testing incidence assumptions

- Even for these standard taxes, can be worthwhile sensitivity testing as different estimates of incidence exist

- Distributional impact can look quite different under different assumptions

- Avoids giving a false sense of certainty from what are ultimately assumption driven analyses

- When you cannot allocate taxes to individual households (e.g. corporate income taxes, taxes on intermediate goods, taxes on capital if capital not recorded in survey) sensitivity testing even more important.

- Sensitivity tests should be based on literature and/or new empirical evidence.

Institute for
Fiscal Studies

Determining assumptions and estimating incidence

- Fullerton and Metcalf (2002) provides a decent, if slightly older, review (http://www.nber.org/papers/w8829.pdf?new_window=1)

- Applied methods include:
  - Microeconomic studies where one group/product etc faces a tax change and another does not
  - Cross-country studies (e.g. OECD estimates of incidence of social security contributions)
  - General equilibrium models

- Can be difference between short and long-run incidence
  - e.g. Employers versus employees social contributions
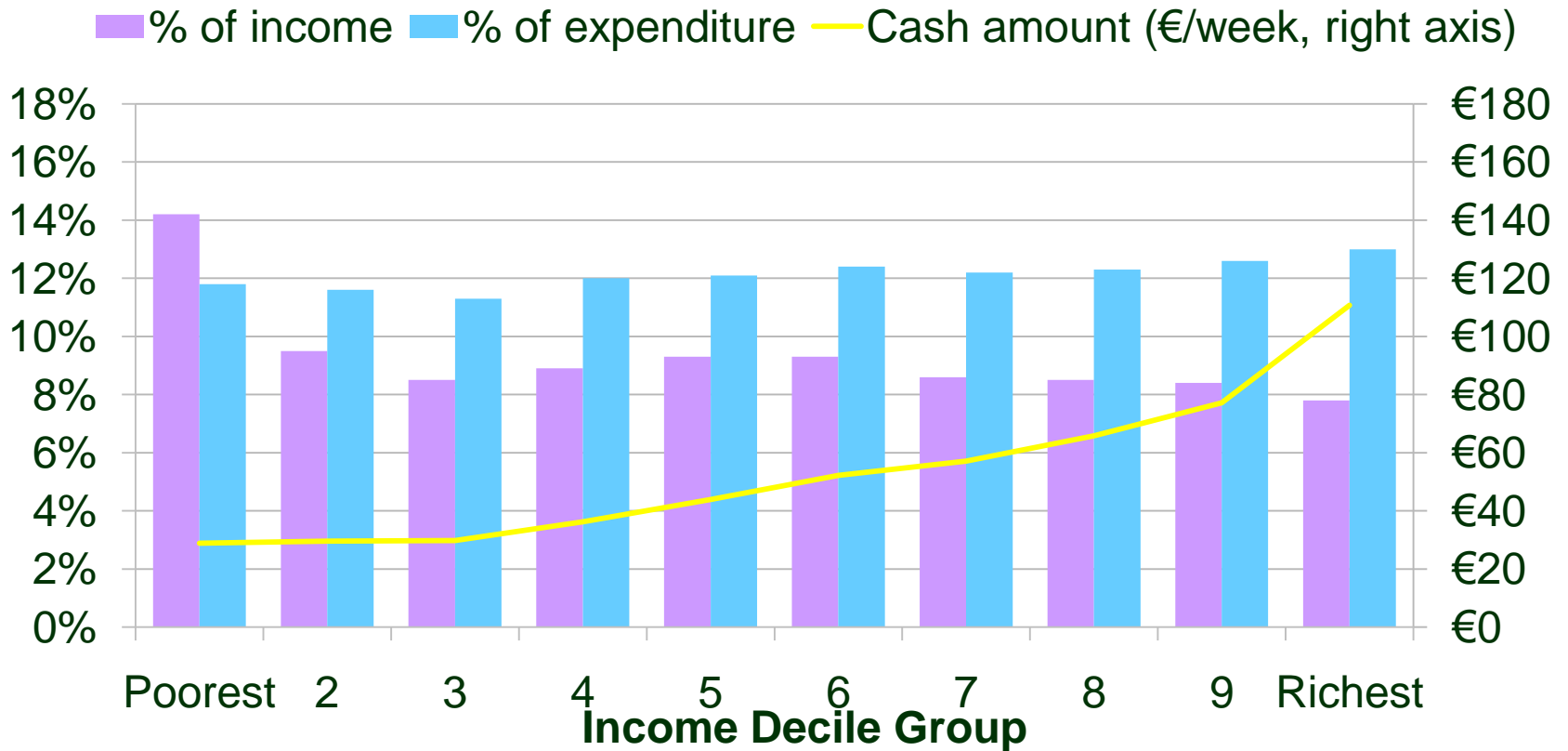 - Probably for these analyses want to consider long-run incidence

Institute for Fiscal Studies

Consumption or income as a measure of living standards?

- First up, survey's don't measure consumption – they measure expenditure

  – Even if people smooth consumption, expenditure will be volatile

  – Focusing on only non-durable expenditure can be problematic

  – Ideally want data that has non durable spending and ownership of durables

- Second, there is not simply one "consumption versus income" question

  – How do you rank households from poor to rich

  – How do you determine the proportionate impact of taxes
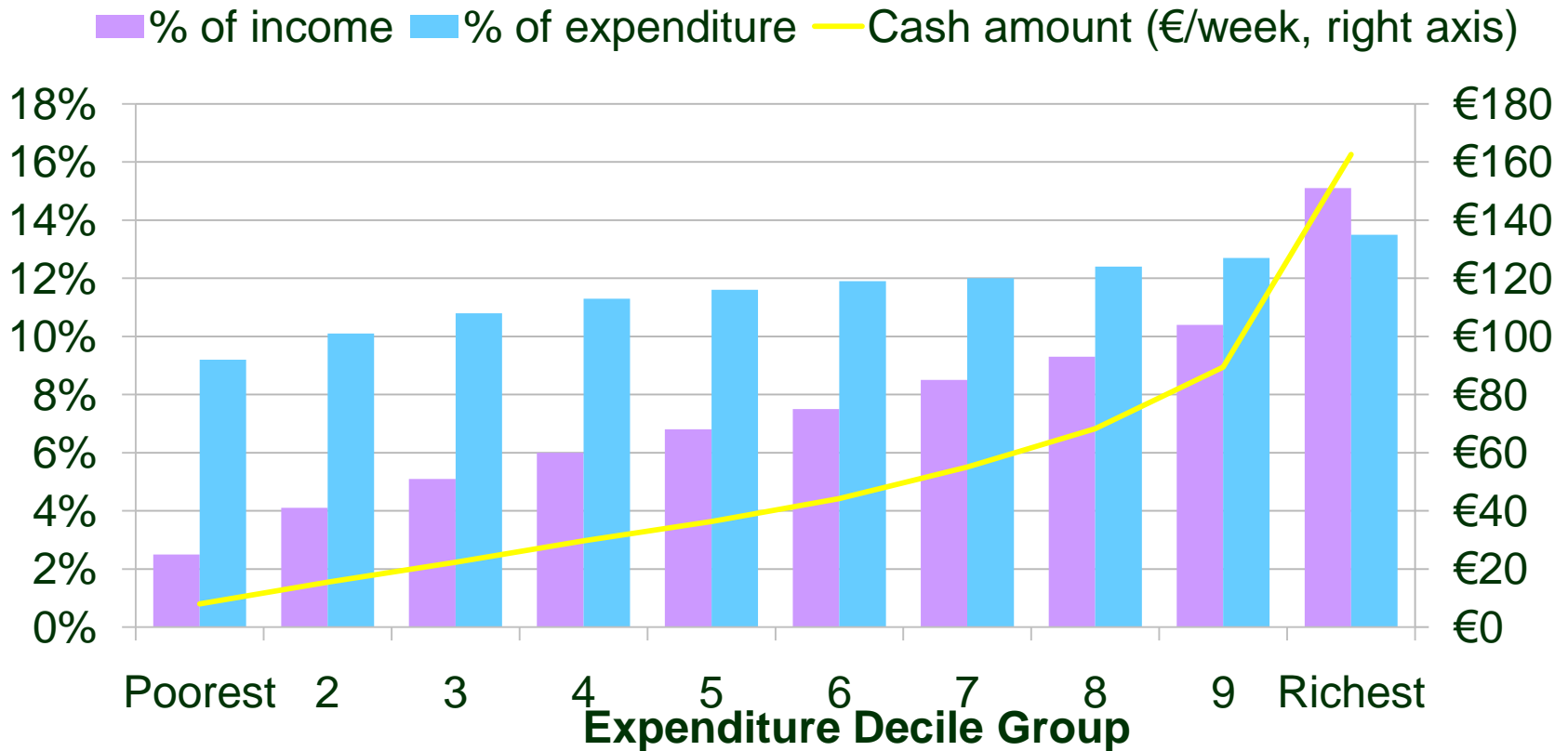
Institute for
Fiscal Studies

Consumption or income as a measure of living standards?

- Ranking households
  - Evidence from UK suggests despite problems, expenditure probably is a better way of ranking than income
  - Income may be more intuitive so might want to consider doing both

- Looking at proportionate tax payments
  - Expenditure taxes should be expressed as a % of expenditure
  - Income taxes (and other things related to income) as a % of income
  - Doing this shows the 'long run' distributional impact of these taxes

- How do you analyse expenditure and income taxes together?
  - Ideally panel data and express everything as % of "long term income" or "long term spending"
  - Such data rarely exists – do it both as % of income and spending and emphasise the one that corresponds to biggest revenue source

Institute for
Fiscal Studies

Example: distributional impact of VAT payments in the UK

Legend: ■ % of income ■ % of expenditure — Cash amount (€/week, right axis)

X-axis (Income Decile Group): Poorest, 2, 3, 4, 5, 6, 7, 8, 9, Richest

Left axis: 0% to 18%
Right axis: €0 to €180

Institute for Fiscal Studies

Example: distributional impact of VAT payments in the UK

Legend: % of income · % of expenditure · Cash amount (€/week, right axis)

Chart: Expenditure Decile Group (Poorest, 2, 3, 4, 5, 6, 7, 8, 9, Richest)

- Also worthwhile looking at distributional impact in cash as well as percentage terms

Tax evasion

- Think a case can be made either to look at things both with and without evasion

  – Hypothetical distributional impact if everyone complied

  – Actual impact given that there is non compliance

- Data does not contain information on whether people comply or not

  – Assuming full compliance is therefore easiest

  – Depending on data available, may be proxies for compliance (e.g. coverage by social security health insurance, type of vendor goods purchased from etc)

  – Try to match external estimates of compliance?

  – Randomly make some people "non compliers"

Institute for
Fiscal Studies

Allowing for behavioural response? (I)

- Whether you allow for behavioural response ultimately depends on what you want this analysis to be
  - Assessment of how much taxes different people pay (or should pay) and how is spent on them?
  - Full economic assessment of the distributional impact of taxes and spending

- Latter, really does require behavioural analysis
  - No behavioural response is a 'first order approximation' of the impact of setting taxes and spending to zero
  - But taxes and government spending are "big" and likely to have substantial effects on households' and firms' behaviour
  - Struggled to find comparisons of analyses similar to those proposed with and without behavioural response to compare

Institute for
Fiscal Studies

Allowing for behavioural response? (II)

- A CGE modelling approach allows to take into account all feedback effects etc

  – Growing number of linked microsimulation-CGE models

  – (see Clauss and Schubert, for a German example ftp://ftp.zew.de/pub/zew-docs/dp/dp09062.pdf)

  – Different approaches exist and give different results though (http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1222562)

- An alternative approach is to look at certain elements of behaviour only to show how e.g. labour supply or consumer demand effects affect results?

  – Simpler models to estimate although data quality still an issue

  – Easier to interpret findings from these smaller models

Institute for
Fiscal Studies

Allowing for behavioural response? (III)

- Use the analysis as a stepping stone and impetus to developing behavioural models in the chosen countries

- But, probably accept that these projects will address the simpler question of:

    - how much taxes different people pay (or should pay) and how is spent on them?

Institute for
Fiscal Studies