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

- Raised less revenue in cash terms of part of the incidence on profits and wages (lower income taxes)
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.
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
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
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
Example: distributional impact of VAT payments in the UK

% of income | % of expenditure | Cash amount (€/week, right axis)
---|---|---
Poorest | 18% | €180
2 | 16% | €160
3 | 14% | €140
4 | 12% | €120
5 | 10% | €100
6 | 8% | €80
7 | 6% | €60
8 | 4% | €40
9 | 2% | €20
Richest | 0% | €0
Example: distributinal impact of VAT payments in the UK

- 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”
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
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)

- 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
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?