

Empirical Evidence and Tax Reform: Lessons from the Mirrlees Review

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Empirical Evidence and Tax Policy Design

- First, a little background to the Mirrlees Review
- Then an idea of the broad set of principles we followed for what makes a 'good tax system'
- Followed by a discussion on the role of evidence in coming up with our proposals for tax reform
- Finally, specific proposals focussing on earnings, savings and indirect tax reform as leading examples
 - a more technical discussion in the next two lectures

The Mirrlees Review

- Built on a large body of economic theory and evidence.
- Inspired by the Meade Report on Taxation
- Review of tax design from first principles
 - for modern open economies in general
 - for the UK in particular
- Commissioned papers on all the main topics, with commentaries, collected in *Dimensions of Tax Design*.
- Received submissions and held discussions with some tax experts.

The Mirrlees Review

- **Two volumes:**
 - 'Dimensions of Tax Design': published in April 2010
 - a set of 13 chapters on particular areas by IFS researchers + international experts, along with expert commentaries (**MRI**)
 - 'Tax by Design': published on Nov 10th – last week!
 - an integrated picture of tax design and reform, written by the editors (**MRII**)
- <http://www.ifs.org.uk/mirrleesReview>

Why another Tax Review?

Changes in the world (since the Meade Report)

Changes in our understanding

Increased empirical knowledge

To consider the tax system as a whole....

Increased empirical knowledge

- Labour supply responses for individuals and families
 - at the intensive and extensive margins
 - by age and demographic structure
- Taxable income elasticities
 - top of the income distribution using tax return information
- Consumer responses to indirect taxation
 - interaction with labour supply and variation of price elasticities
- Intertemporal behaviour
 - consumption, savings and pensions
- Ability to (micro-)simulate marginal and average rates
 - simulate potential reforms

Think of Taxes in General

- Taxes and benefits form a system
 - To raise revenue to finance government spending.
 - To redistribute from the better off to the needy.
 - (They can also correct some market failures.)
- People are affected by the whole system, some made worse off, some better.
- Ideally, desired revenue and desired

Principles

- System:
 - Consider all tax rates together
 - Marginal tax rate is sum of all additional taxes paid when income increases by €1.
 - Particular taxes need not be green or progressive for the whole system to be green and progressive.
- Neutrality:
 - Don't discriminate (unnecessarily) between similar activities.
- Progressivity:
 - More tax from the better off.

We start from a structure of taxes and benefits that...

- Does not work as a system
 - Lack of joining up between welfare benefits, personal taxes and corporate taxes
- Is not neutral where it should be
 - Inconsistent savings taxes and a corporate tax system that favours debt over equity
- Is not well designed where it should deviate from neutrality
 - A mass of different tax rates on carbon and failure to price congestion properly
- Does not achieve progressivity efficiently
 - VAT zero and reduced rating a poor way to redistribute, and taxes and benefits damage work incentives more than necessary

The broad proposals

- Treat the system as a whole
 - A single integrated welfare benefit
 - Aligning tax rates across employment and profits
- Move towards neutrality
 - Widening the VAT base
 - Not taxing the normal return to capital
- Whilst proposing sensible deviations from neutrality
 - Imposing a consistent tax on GHG emissions and on congestion
 - Imposing zero rate of VAT on childcare
 - Special treatment for pensions
- Achieve progressivity through the direct tax and benefit system
 - Recognising constraints imposed by responses to incentives

How did we reach our proposals?

- Five steps.....
 1. Key margins of adjustment to tax reform
 2. Measurement of effective tax rates
 3. The importance of information, complexity and salience
 4. Evidence on the size of responses
 5. Implications for tax design

Key Margins of Adjustment

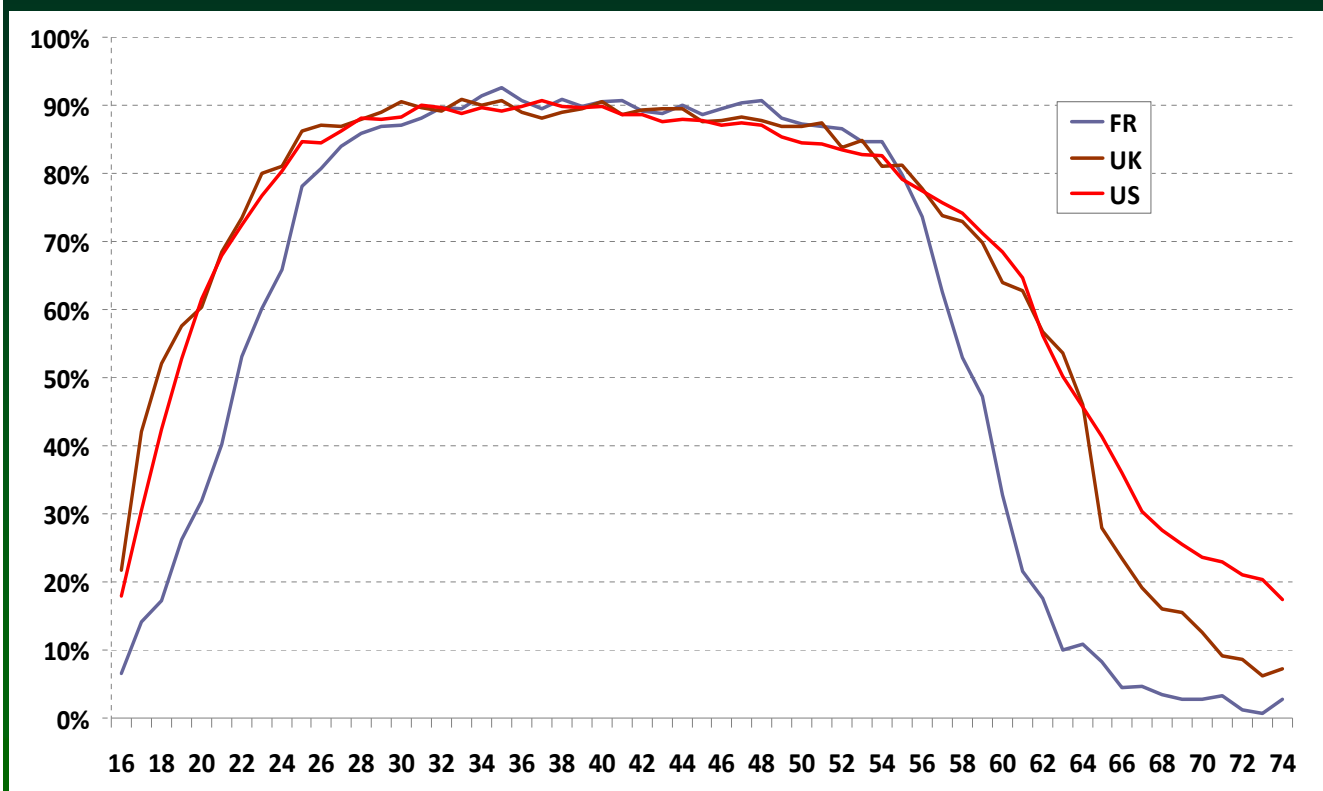
Here I will focus on taxation of earnings, indirect taxation and taxation of savings:

- Leading examples of the mix of theory and evidence
- Key implications for tax design
- Earnings taxation, in particular, takes most of the strain in distributional adjustments of other parts of the reform package

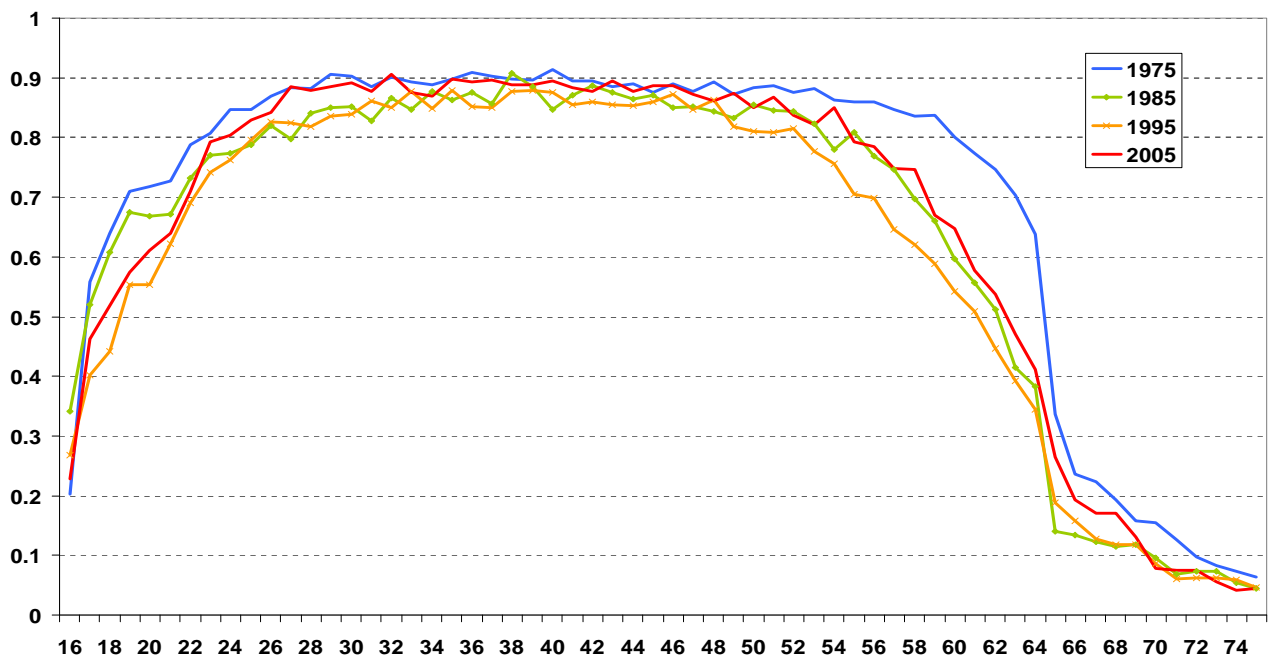
I. Earnings Taxation

- Key distinction between Extensive (whether to work) and intensive (how much to work) margins of labour supply
- Its not all the extensive margin
 - intensive and extensive margins both matter
 - they matter for tax policy evaluation and design
 - and they matter in different ways by age and demographic groups
- What do they look like?
 - Getting it right for men

Male Employment by age – US, FR and UK 2007



Male Employment by age UK: 1975 - 2005



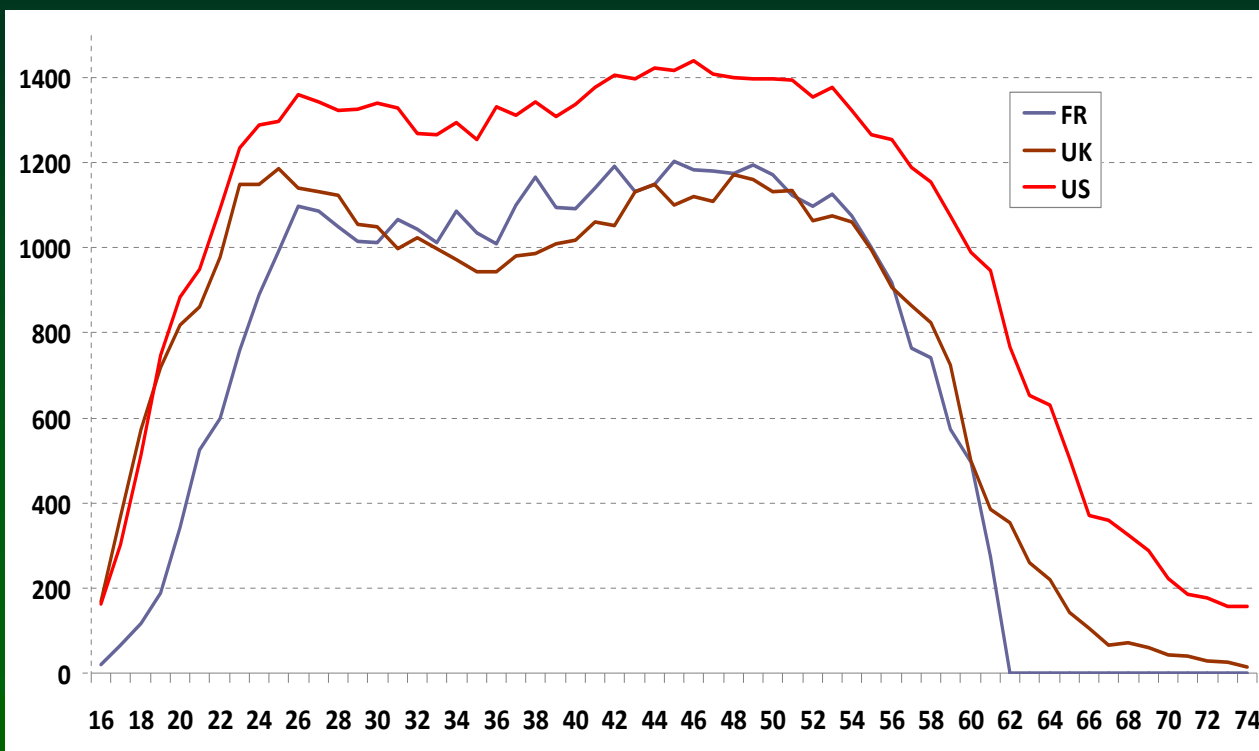
Data: UK LFS.

Bozio, Blundell and Laroque

Key Margins of Adjustment

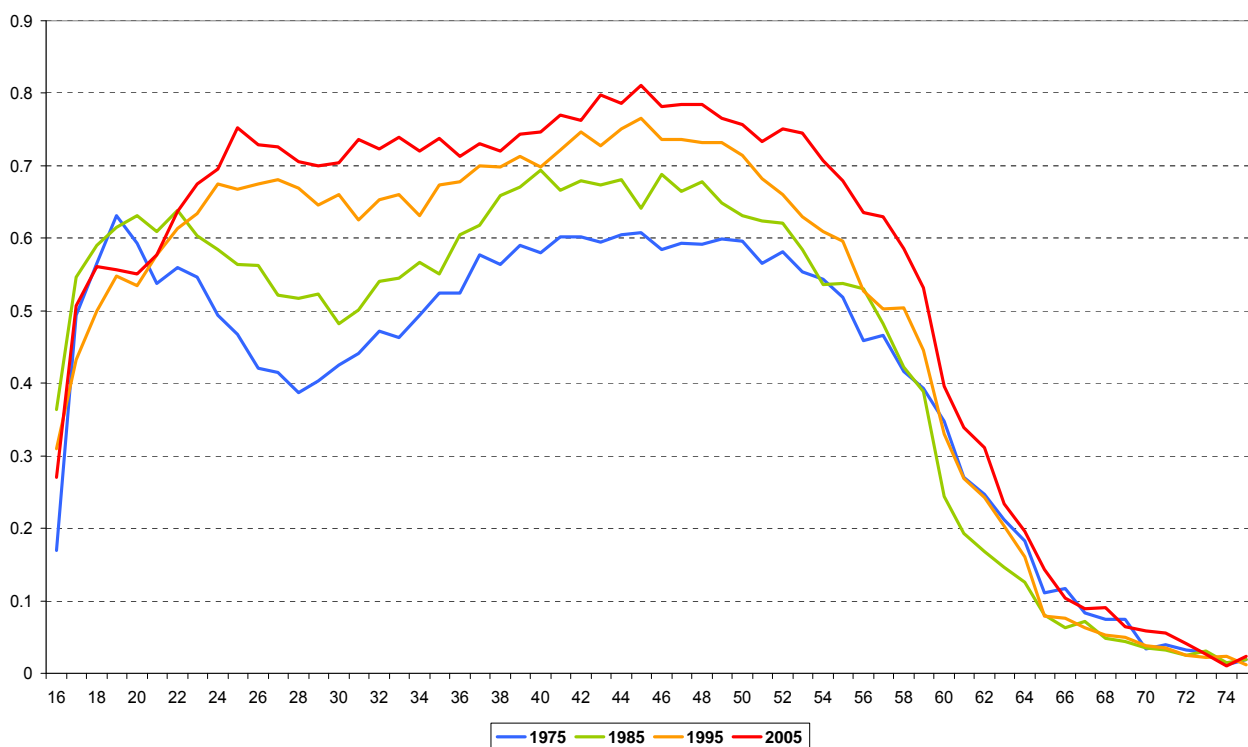
- Extensive and extensive margins
- What do they look like?
 - Female employment and hours

Female Hours by age – US, FR and UK 2005



Bozio, Blundell and Laroque

Female Employment by age in the UK – 1975 - 2005



Source: LFS.

Bozio, Blundell and Laroque

What do we know about how people respond to taxes and benefits?

- Taxes reduce labour supply
 - substitution effects are generally larger than income effects
- And, especially for low earners,
 - responses are larger at the extensive margin—employment
 - than at the intensive margin—hours of work.
- These responses are largest for
 - women where the youngest child is school-age
 - those aged over 55
- Other responses affecting taxable income matter
 - certainly for the rich

Why is this important for tax design?

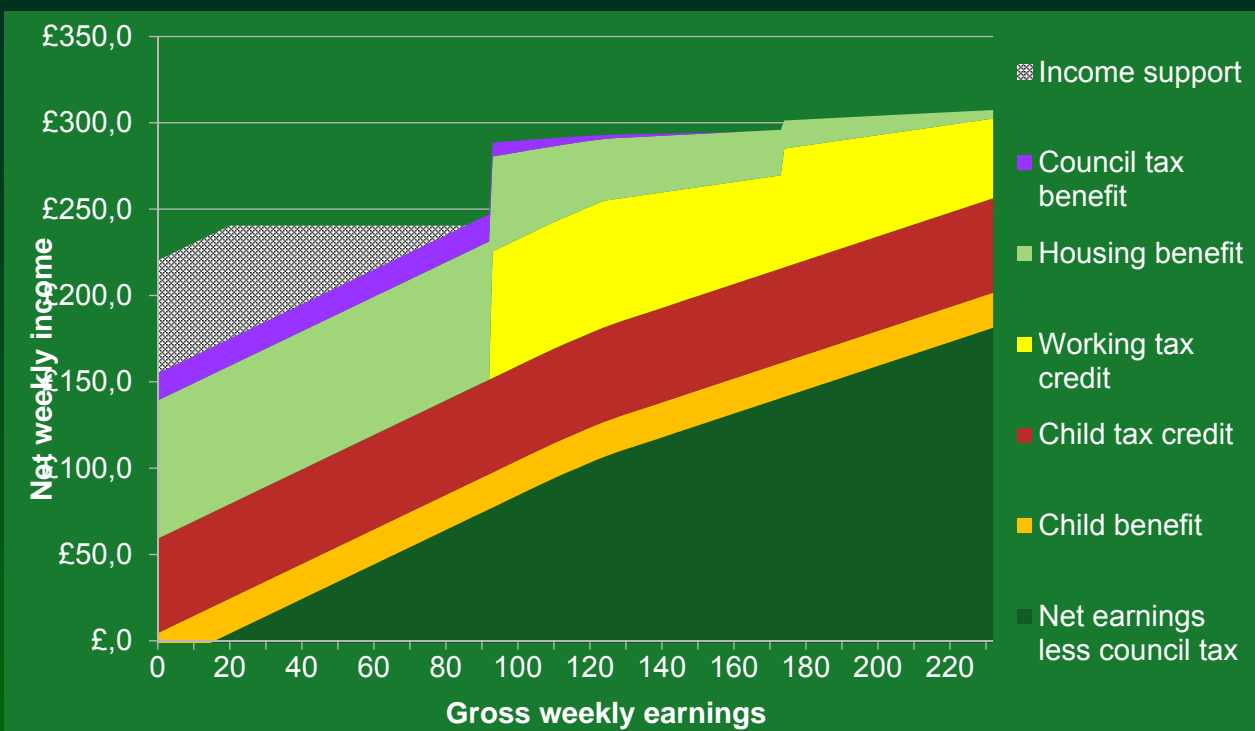
1. Suggests where should we look for responses to tax reform.
2. Some key lessons from recent tax design
 - Importance of extensive labour supply margin (Heckman, Rogerson, Wise, ..)
 - A 'large' extensive elasticity can 'turn around' the impact of declining social weights
 - implying a higher transfer to low wage workers than those out of work
 - a role for earned income tax credits
3. Importance of margins other than labour supply
 - e.g. taxable income elasticities (at the top)

Tax rates on lower incomes

Main defects in current welfare/benefit systems

- Participation tax rates at the bottom remain very high in UK and elsewhere
- Marginal tax rates in the UK are well over 80% for low income working families because of phasing-out of means-tested benefits and tax credits
 - Working Families Tax Credit + Housing Benefit + etc
 - and interactions with the income tax system
 - For example, we can examine a typical budget constraint for a single mother...

The interaction between taxes, tax credits and benefits



Notes: Lone parent, with one child aged between one and four, earning the minimum wage (£5.80 per hour), with no other private income and no childcare costs, paying £80 per week in rent to live in a council tax Band B property in a local authority setting council tax rates at the national average

...and these EMTRs and PTRs are just averages.

- The current structure of multiple benefits with an array of overlapping means-tests leaves some people facing effective marginal tax rates of over 90%.
- **Implications for reform:**
- For the tax and benefit system to be effective requires simplification and integration of the benefit and tax credit system

What about redesigning the tax rate schedule?

- Use what we know about behavioural responses so people face strengthened work incentives:
 - parents with school age children,
 - people aged 55-70.
- So that people face stronger incentives at the times they are most responsive to them

Implications for Reform of Earnings Taxation

- We are still bound by the trade-off between incentives and redistribution
- But current systems are unnecessarily complicated and induce too many people not to work or to work too little
 - The rate structure of income tax should be simplified.
 - A single integrated benefit should be introduced rationalising the way in which total support varies with income and other characteristics.
 - Work incentives should be targeted where they are most effective
- Placing us in a good position to address the distributional implications of other aspects of our reform package

II. Indirect Taxes

- Should be value-added taxes. Differentiate?
- Interaction with labour is the key issue : more time use implies higher tax.
- Few clear cases for differential taxes : low or zero rates for child-care, education, probably medical care.
- For different reasons, higher taxes on alcohol and tobacco.
- No transaction taxes.
- Environmental taxes: greenhouse gas emissions, and congestion on the roads.

Indirect Taxation – UK case

	Cost (£m)
Zero-rated:	
Food	11,300
Construction of new dwellings	8,200
Domestic passenger transport	2,500
International passenger transport	150
Books, newspapers and magazines	1,700
Children's clothing	1,350
Drugs and medicines on prescription	1,350
Vehicles /supplies to people with disabilities	350
Reduced-rated:	
Domestic fuel and power	2,950
Residential conversions and renovations	150
VAT-exempt:	
Rent on domestic dwellings	3,500
Rent on commercial properties	200
Finance and insurance	4,500

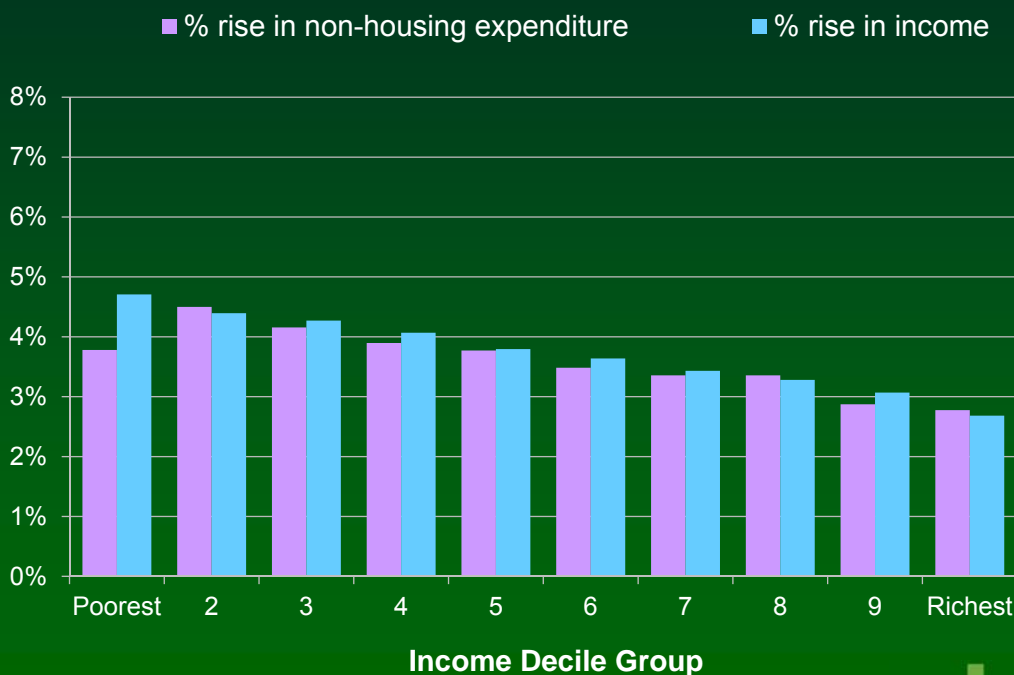
Indirect Taxation

- Evidence on consumer behaviour => exceptions to uniformity
 - Childcare strongly complementary to paid work
 - 'Vices': alcohol, tobacco, betting, possibly unhealthy food have externality / merit good properties → keep 'sin taxes'
 - Environmental externalities
 - Human capital expenditures
- These do not line up well with existing structure of taxes
 - ⇒ Broadening the base – many zero and reduced rates in UK VAT
- Compensating losers, even on average, is difficult
 - Worry about work incentives too
 - Use direct tax and benefit instruments as in earnings tax reforms

Broadening the VAT base

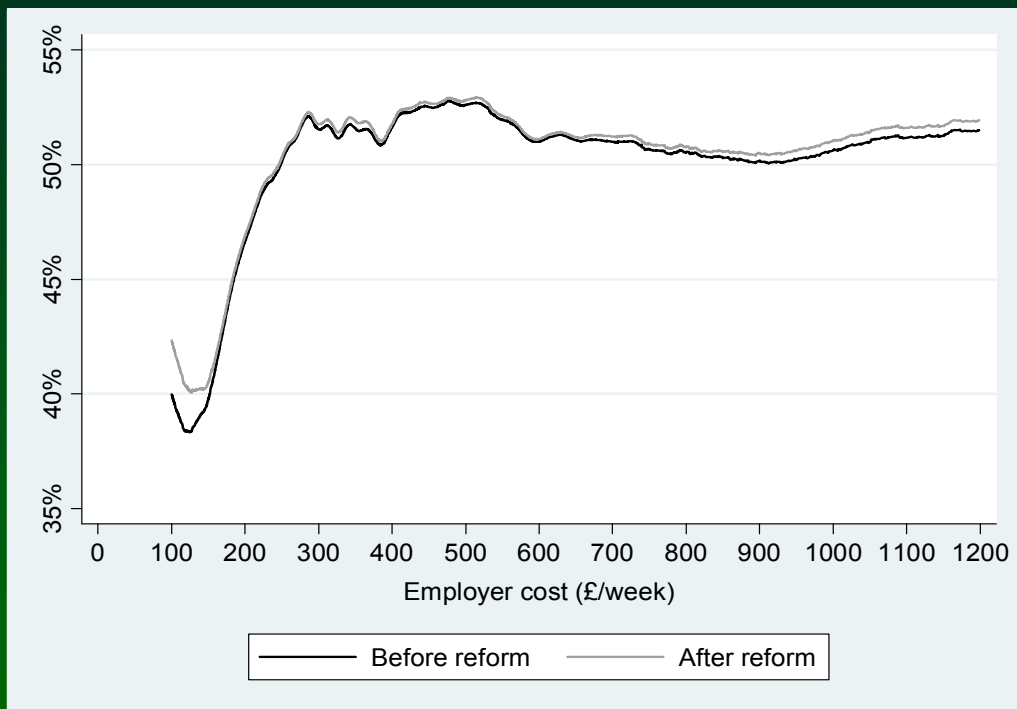
- We simulate removing almost all zero and reduced rates
- Raises £24bn (with a 17.5% VAT rate)
- Reduces distortion of spending patterns
 - If uniformity were optimal, could (in principle) compensate every household and have about £3bn left over
- But on its own, would be regressive and weaken work incentives
- Can a practical package avoid this?

'Uniform' VAT reform: effects by income



VAT reform: incentive to work at all

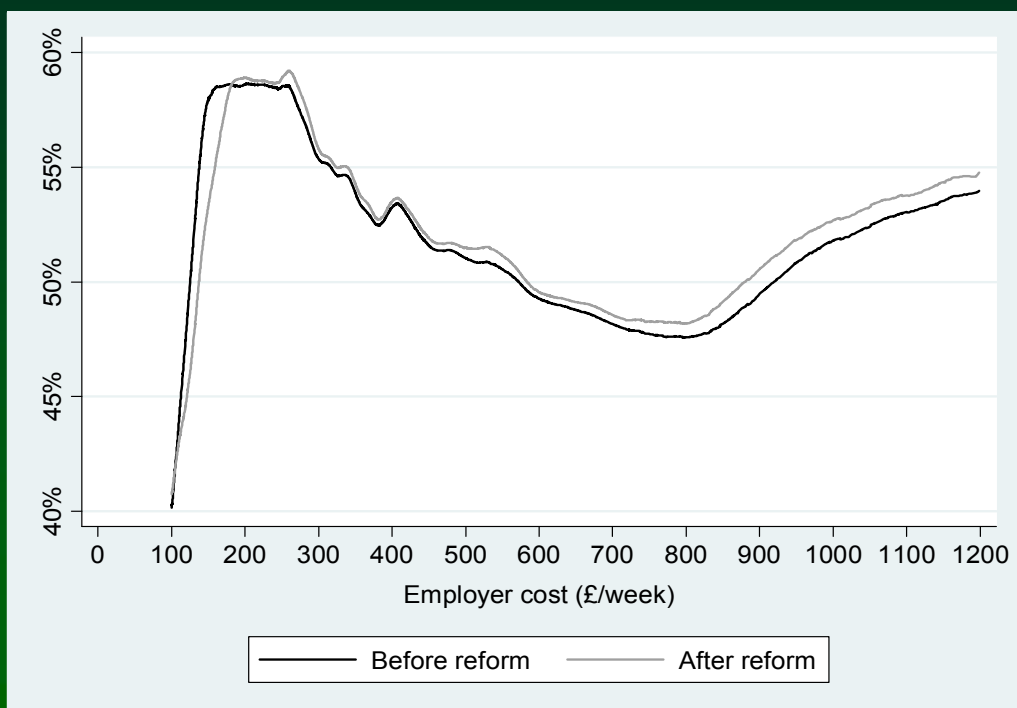
Participation tax rates



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VAT reform: incentive to increase earnings

Effective marginal tax rates



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VAT and financial services

- Consumption of financial services should be taxed
- Exemption causes serious problems
 - Financial services too cheap for households, too expensive for firms
 - Costs around £7bn (though insurance premium tax recoups £2bn)
- Can't be taxed through standard VAT mechanism
- But there are equivalent alternatives
 - Cash-flow tax, Tax Calculation Accounts, Financial Activities Tax,...

III. Taxation of Saving

- Organising principal around which we begun was the 'expenditure tax' as in Meade/Bradford but with adaptations
 - coherent approach to taxation of earnings and savings over the life-cycle – lifetime base
 - provides a framework for the integration of capital income taxation with corporate taxation
- Capital gains and dividends treated in the same way and overcomes 'lock-in' incentive from CGT
- Can incorporate progressivity and also capture excess returns

Taxation of Saving

- Taxing saving is an inefficient way to redistribute
 - at least over the life-cycle
 - some exceptions as we will see
- Alternative forms that exempt the normal return:
 - pure expenditure tax (EET) like pensions/social security
 - exempt all income from savings (TEE) like ISAs, 401ks
 - exempt normal return on savings (TtE)
 - RRA – rate of return allowance
 - can be viewed as an expenditure tax with a deferred rather than immediate tax relief for saving
 - captures excess returns (not the case with TEE)

Fraction of wealth held in different tax treatments in UK

Decile of gross financial wealth	Range of gross financial wealth (£'000s)	Proportion of wealth held in:		
		Private pensions	ISAs	Other assets
Poorest	<1.7	0.126	0.091	0.783
2	1.7–16.6	0.548	0.138	0.315
3	16.6–39.1	0.652	0.110	0.238
4	39.1–75.9	0.682	0.108	0.210
5	75.9–122.3	0.697	0.079	0.223
6	122.3–177.2	0.747	0.068	0.185
7	177.2–245.4	0.781	0.062	0.157
8	245.4–350.3	0.818	0.046	0.136
9	350.3–511.2	0.790	0.057	0.153
Richest	>511.2	0.684	0.044	0.273
All		0.736	0.055	0.209

Source: ELSA, 2004 – at least one member aged 52-64

Savings behaviour – what's the evidence?

- How much life-cycle consumption smoothing goes on?
- How well do individuals account for future changes?
- What about the pattern of consumption and savings at/after retirement
 - e.g. the retirement saving puzzle
- What is the form of temporal preferences?
 - ability, cognition, framing..
- Are intergeneration transfers like saving for future consumption?

Implications for the Reform of Savings Taxation:

- Capture excess returns and rents
 - move to RRA (or EET) where possible – neutrality across assets
 - TEE limited largely to interest bearing accounts
- Behavioural issues
 - Pensions - allow some additional incentive to lock-in savings
 - twist implicit retirement incentives to later ages
 - current tax free lump sum in UK is too generous and accessed too early
 - Provide income (and consumption) floor through benefit system

Wealth Transfers (Gifts and Bequests)

- Principles applied to life-cycle savings may not extend to transfers between generations
- Strong case in principle for some taxation of receipts, on a cumulative basis, in the hands of recipients
 - a lifetime accessions tax
- Potential to achieve redistribution at limited efficiency cost
 - promoting equality of opportunity

Savings Taxation and Corporate Taxation

- Exempt normal rate to give neutrality between debt and equity
- A progressive rate structure for the shareholder income tax, (rather than a flat rate)
 - with progressive tax rates on labour income, progressive rates are also required on shareholder income
 - avoid differential tax treatments of incorporated and unincorporated firms
- Less need to rely on anti-avoidance measures

The shape of the reform package:

- Reforms to the income tax / benefit rate schedule
 - Introduce a single integrated benefit
 - Apply lessons from empirical evidence on response elasticities
- Broaden VAT base
 - VAT on financial services, food and clothing
- Capture excess returns and rents
 - move to RRA(TtE) or EET where possible – neutrality across assets
 - TEE limited largely to interest bearing accounts
- Pensions - allow some additional incentive to lock-in savings
 - twist implicit retirement incentives to later ages

Built on increased empirical knowledge

- **Labour supply responses for individuals and families**
 - at the intensive and extensive margins
 - by age and demographic structure
- **Taxable income elasticities**
 - top of the income distribution using tax return information
- **Consumer responses to indirect taxation**
 - interaction with labour supply and variation of price elasticities
- **Intertemporal responses**
 - consumption, savings and pensions
- ..and our **ability to (micro-)simulate** marginal and average rates
 - simulate proposals for reform



Five building blocks for the role of evidence in tax design....

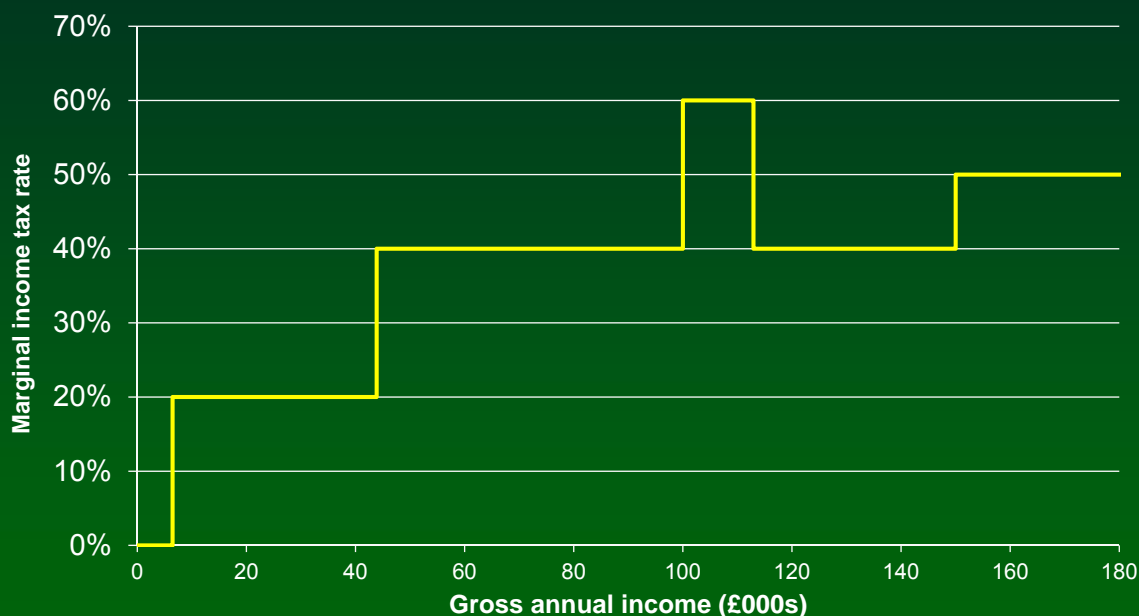
- Key margins of adjustment to tax reform
- Measurement of effective tax rates
- The importance of information, complexity and salience
- Evidence on the size of responses
- Implications for tax design

Some final comments

- The design of tax matters hugely for national prosperity
 - not surprising when tax takes nearly 40% of GDP
- Often suggested that excessive consumption/ borrowing have contributed to recent economic problems
 - tax systems in the UK and many other countries favour debt and discourage saving and investment
- There has been little sense of direction on tax policy
 - which is not good politics either
- The Mirrlees Review sets out a possible direction
 - and challenges governments to define a strategy

At the top too... the income tax system lacks coherence

Income tax schedule for those aged under 65, 2010–11



Top tax rates and taxable income elasticities

- An 'optimal' top tax rate

e – taxable income elasticity

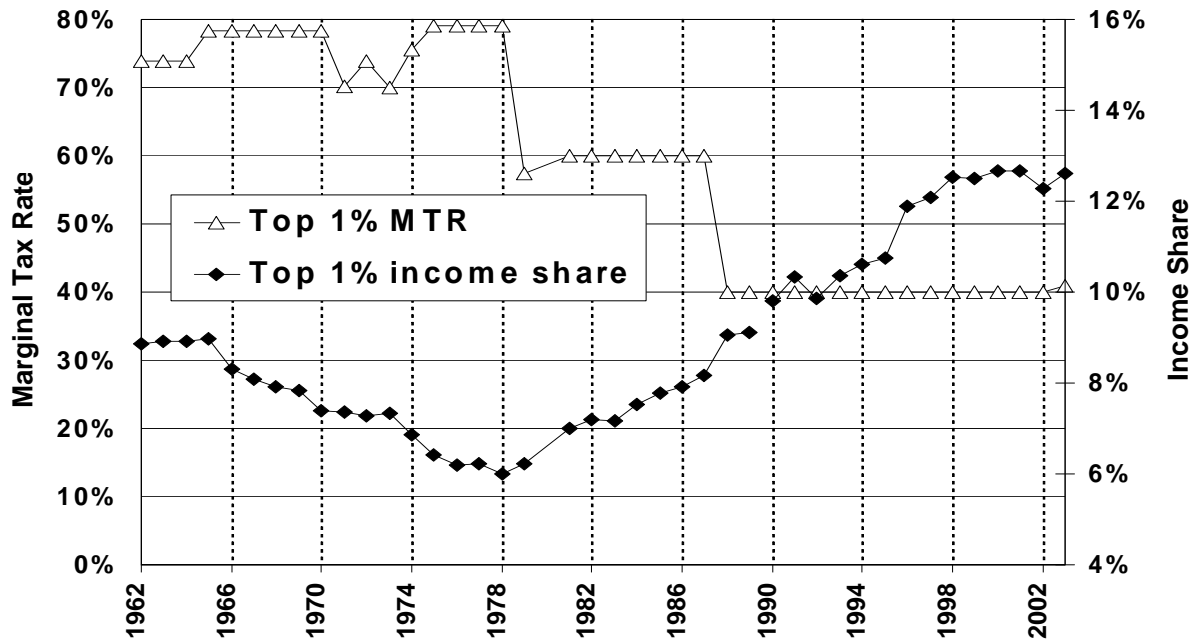
$$t = 1 / (1 + a \cdot e)$$

where a is the Pareto parameter.

- Estimate e from the evolution of top incomes in tax return data
- Estimate a (≈ 1.8) from the empirical distribution

Top incomes and taxable income elasticities

A. Top 1% Income Share and MTR, 1962-2003



Taxable Income Elasticities at the Top

Simple Difference (top 1%)

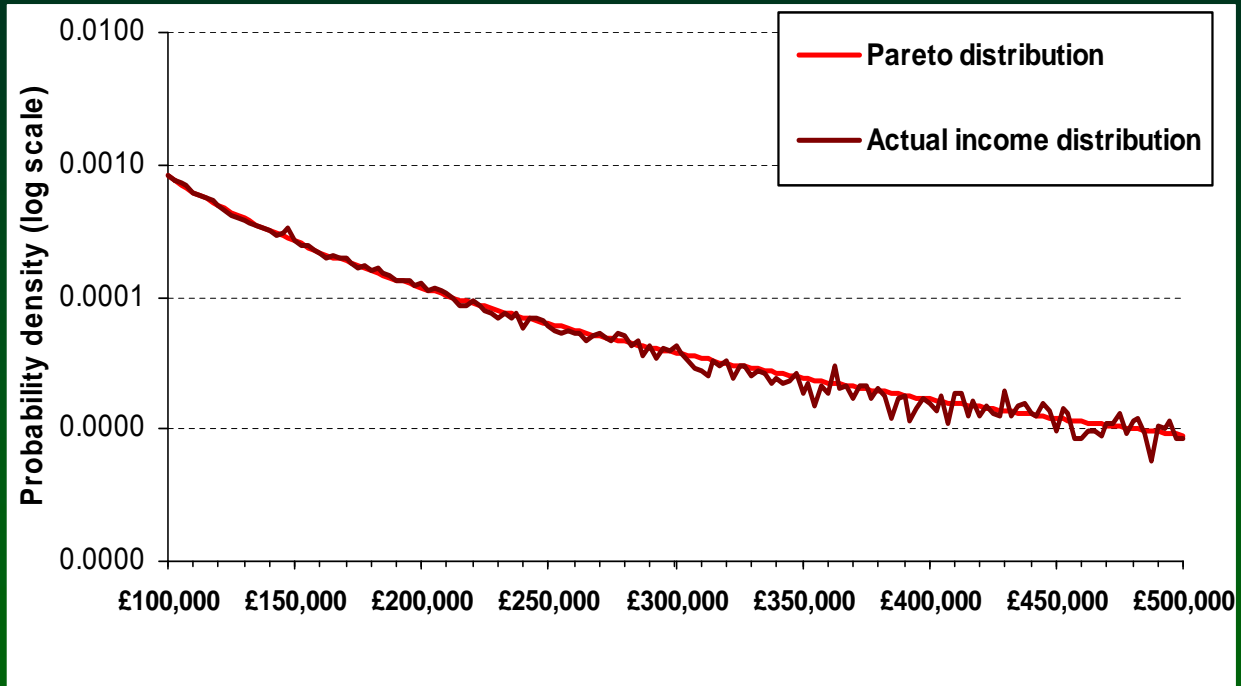
DD using top 5-1%
as control

1978 vs 1981	0.32	0.08
1986 vs 1989	0.38	0.41
1978 vs 1962	0.63	0.86
2003 vs 1978	0.89	0.64
Full time series	0.69 (0.12)	0.46 (0.13)

With updated data the estimate remains in the .35 - .55 range with a central estimate of .46, but remain quite fragile

Note also the key relationship between the size of elasticity and the tax base (Slemrod and Kopczuk, 2002)

Pareto distribution as an approximation to the income distribution



- Pareto parameter quite accurately estimated at 1.8
- => revenue maximising tax rate for top 1% of 55%.

Earnings Taxation and Corporate Taxation

- Suitable alignment of personal and corporate tax rates can then:
 - equalise tax treatment of income derived from employment, self-employment and running a small company
 - reduce incentives to convert labour income into dividend income/capital gains
- Less need to rely on anti-avoidance measures