

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

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
- Received submissions from tax experts.
- Evidence to Treasury Select Committee, EU, etc

The Mirrlees Review

Reforming the Tax System for the 21st Century

Editorial Team

Chairman: Sir James Mirrlees

Tim Besley (LSE & IFS)

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Malcolm Gammie QC (One Essex Court)

James Poterba (MIT & NBER)

with:

Stuart Adam (IFS)

Steve Bond (Oxford & IFS)

Robert Chote (IFS)

Paul Johnson (IFS)

Gareth Myles (Exeter & IFS)

Two volumes:

- '*Dimensions of Tax Design*: published April 2010
 - a set of 13 chapters on particular areas by IFS researchers + international experts, along with expert commentaries (MRI)
- '*Tax by Design*: published November 2010
 - an integrated picture of tax design and reform, written by the editors (MRII)
- *OUP* but also all on open access at
 - <http://www.ifs.org.uk/mirrleesReview>

Why another Tax Review?

Changes in the world (since the *Meade Report*)

Changes in our understanding

Built on our increased empirical knowledge...

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

Principles

- **System:**
 - Consider the tax system as a whole
 - 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?

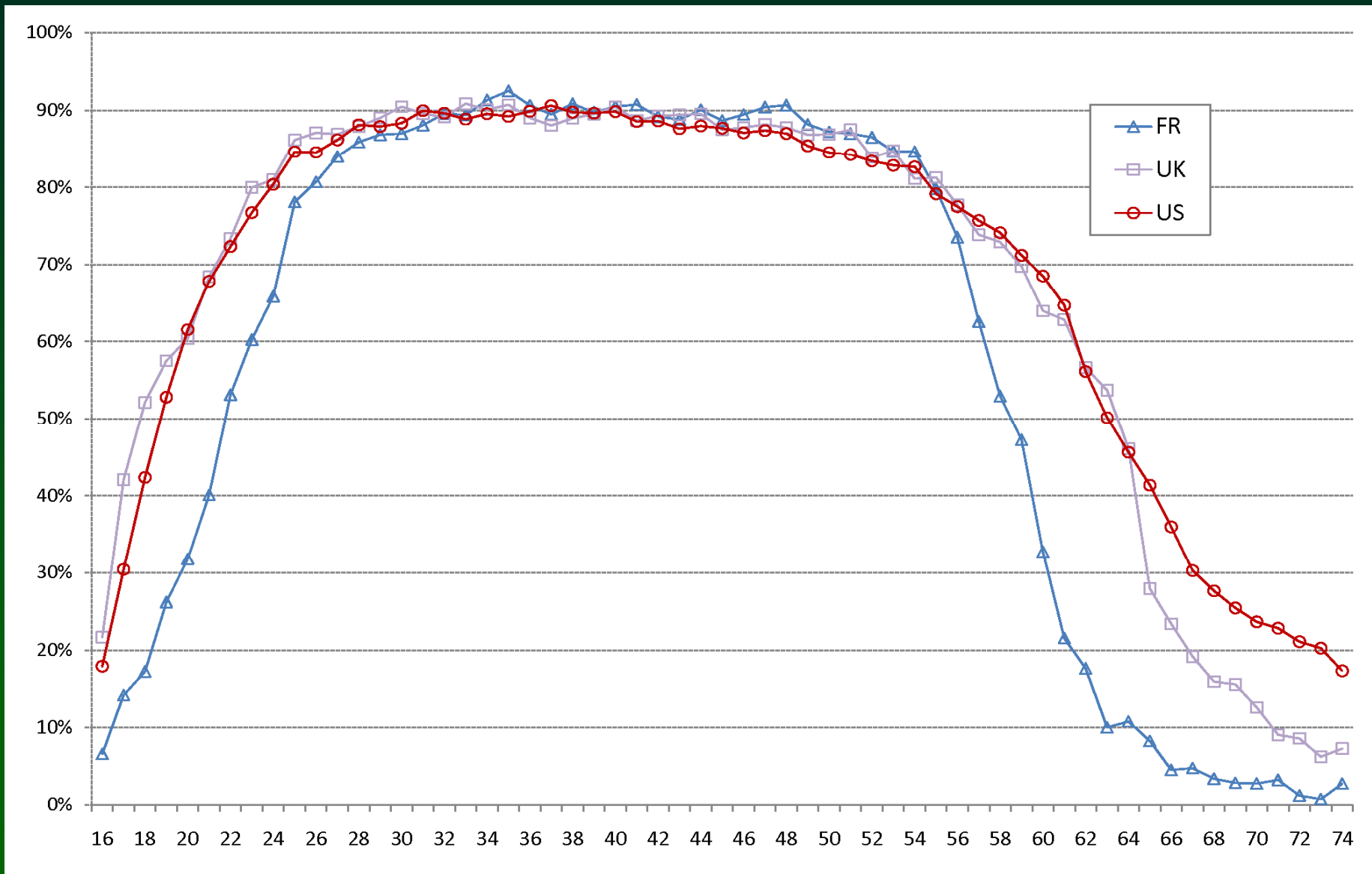
- **Five steps.....**
 1. Key margins of adjustment to tax reform
 2. Measurement of effective tax rates
 3. The importance of information, complexity and salience
 4. Evidence on the size of responses
 5. Implications for tax design

Key Margins of Adjustment

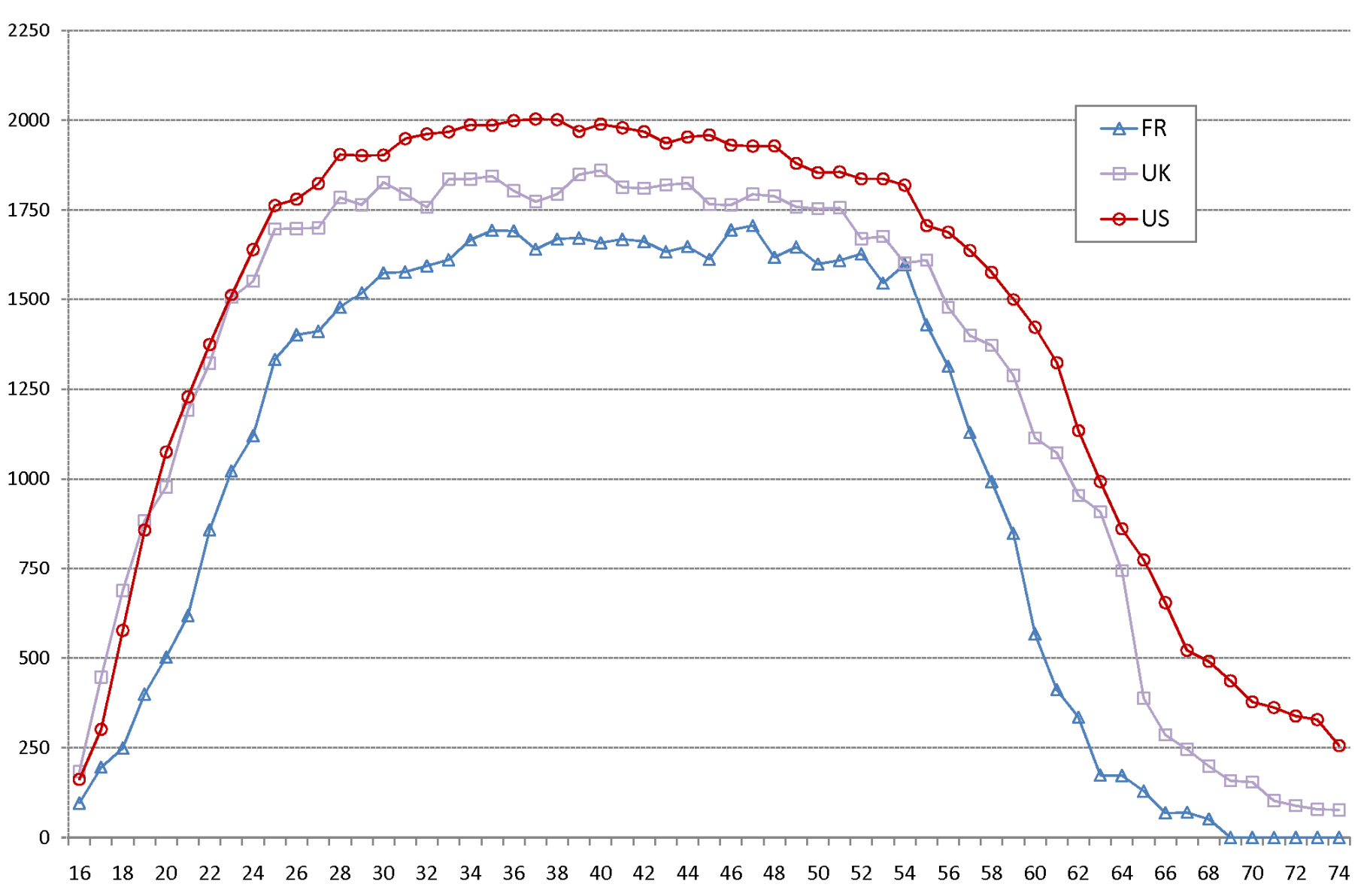
Here I will focus on taxation of earnings, with some discussion of indirect taxation and the taxation of savings:

- Leading examples of the mix of theory and evidence
- Earnings taxation, in particular, takes most of the strain in distributional adjustments of other parts of the reform package
- Key distinction between Extensive (whether to work) and intensive (how much to work) margins of labour supply
 - Male employment and hours....

Male Employment by age – US, FR and UK 2007



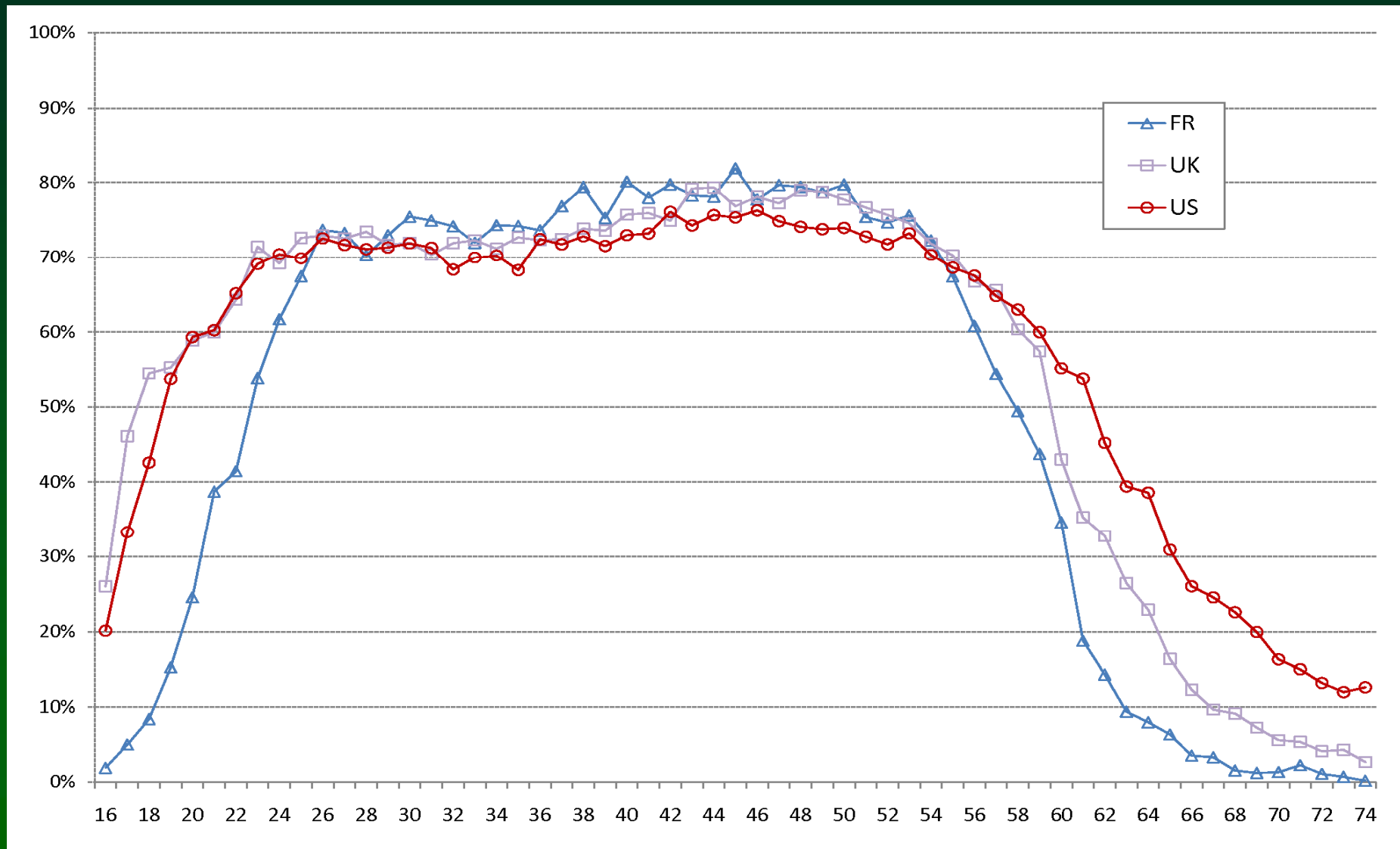
Total Hours for men by age – FR, UK and US 2007



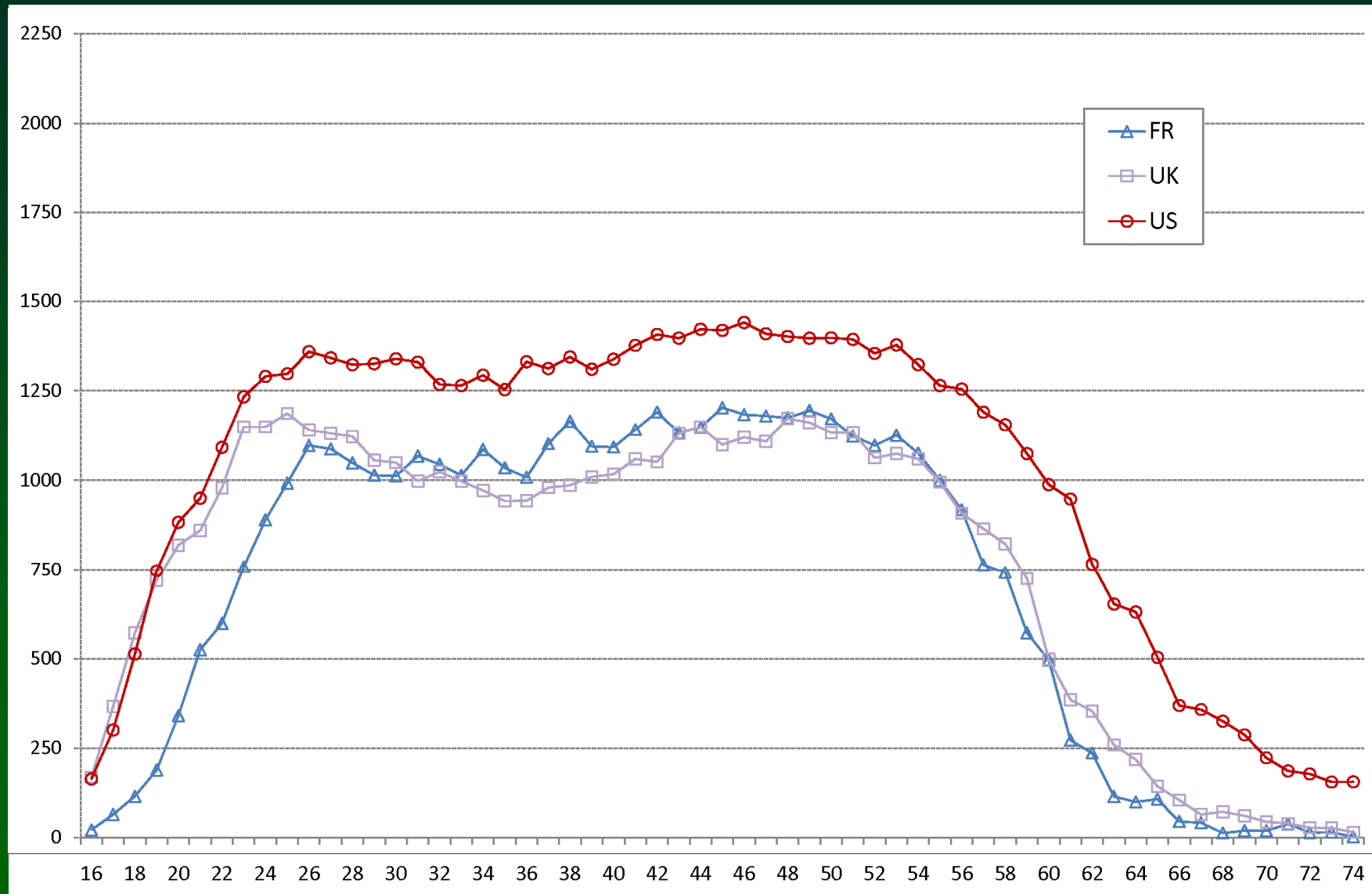
Key Margins of Adjustment

- Its not all the extensive margin
 - intensive and extensive margins both matter
 - and they matter in different ways by age and demographic groups
- Female employment and hours?

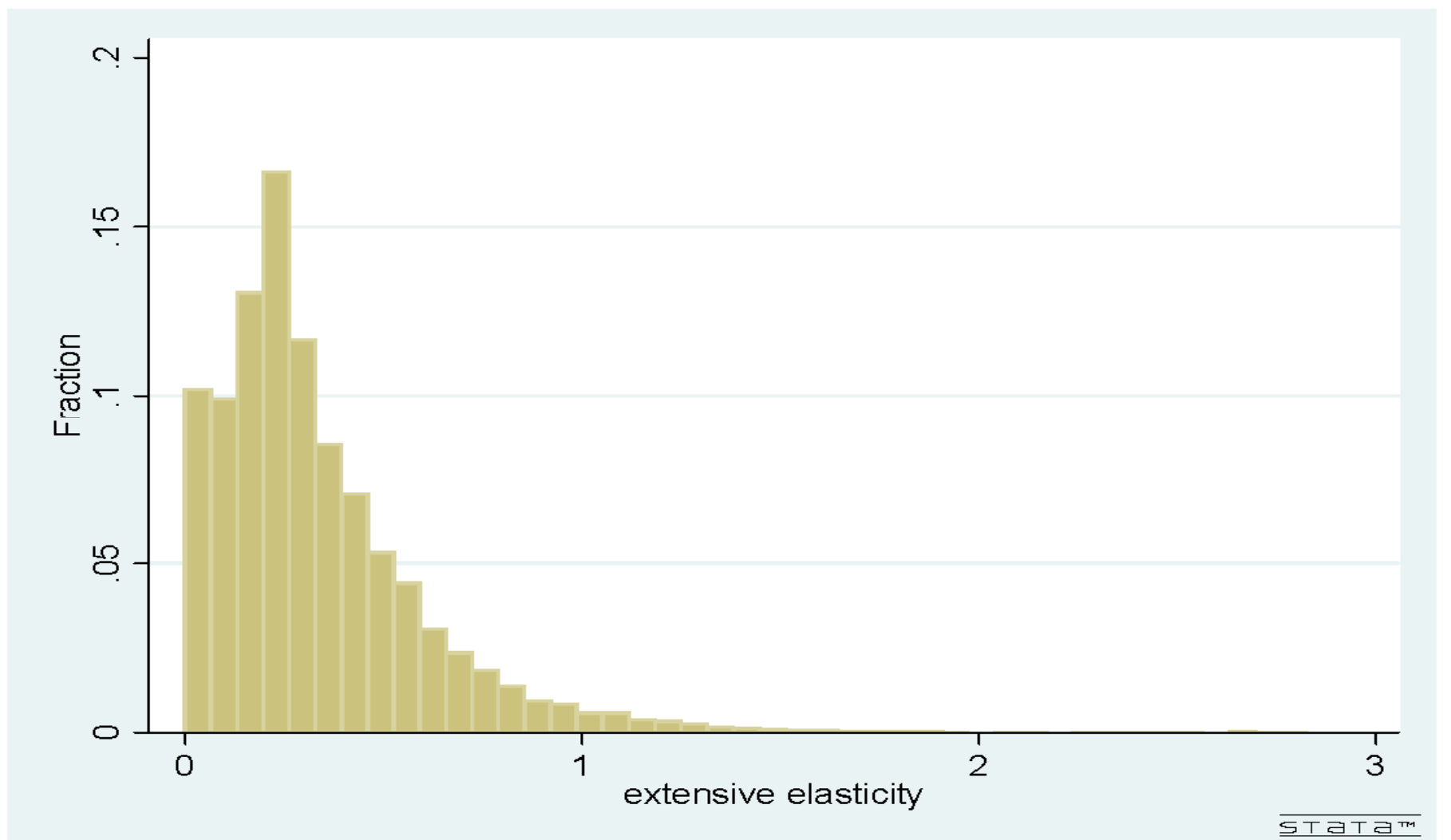
Female Employment by age – US, FR and UK 2007



Female Total Hours by age – US, FR and UK 2007

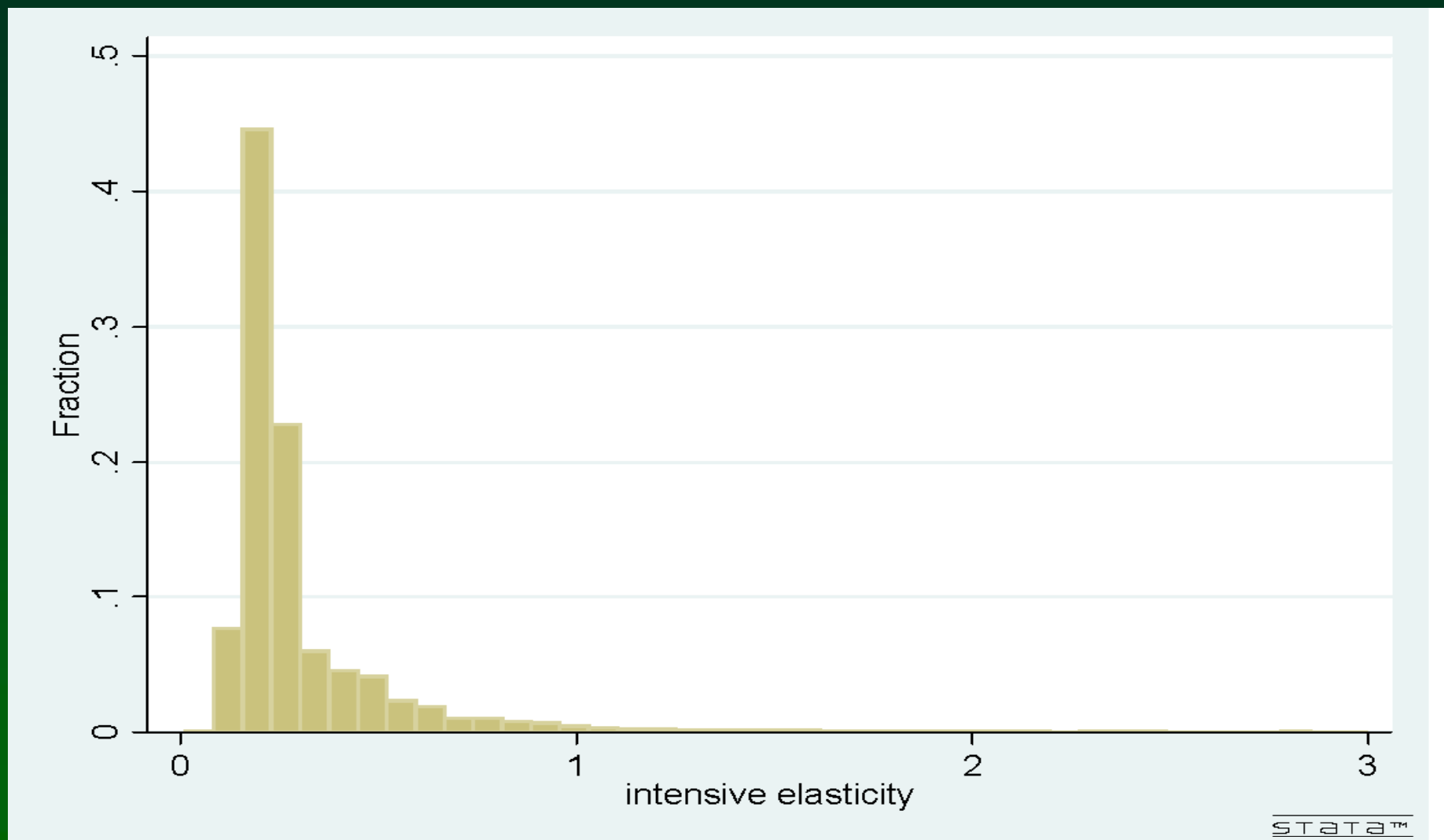


The Distribution of Extensive Elasticities



Blundell, Bozio and Laroque (2011)

The Distribution of Intensive Elasticities



Why is this evidence important for tax design?

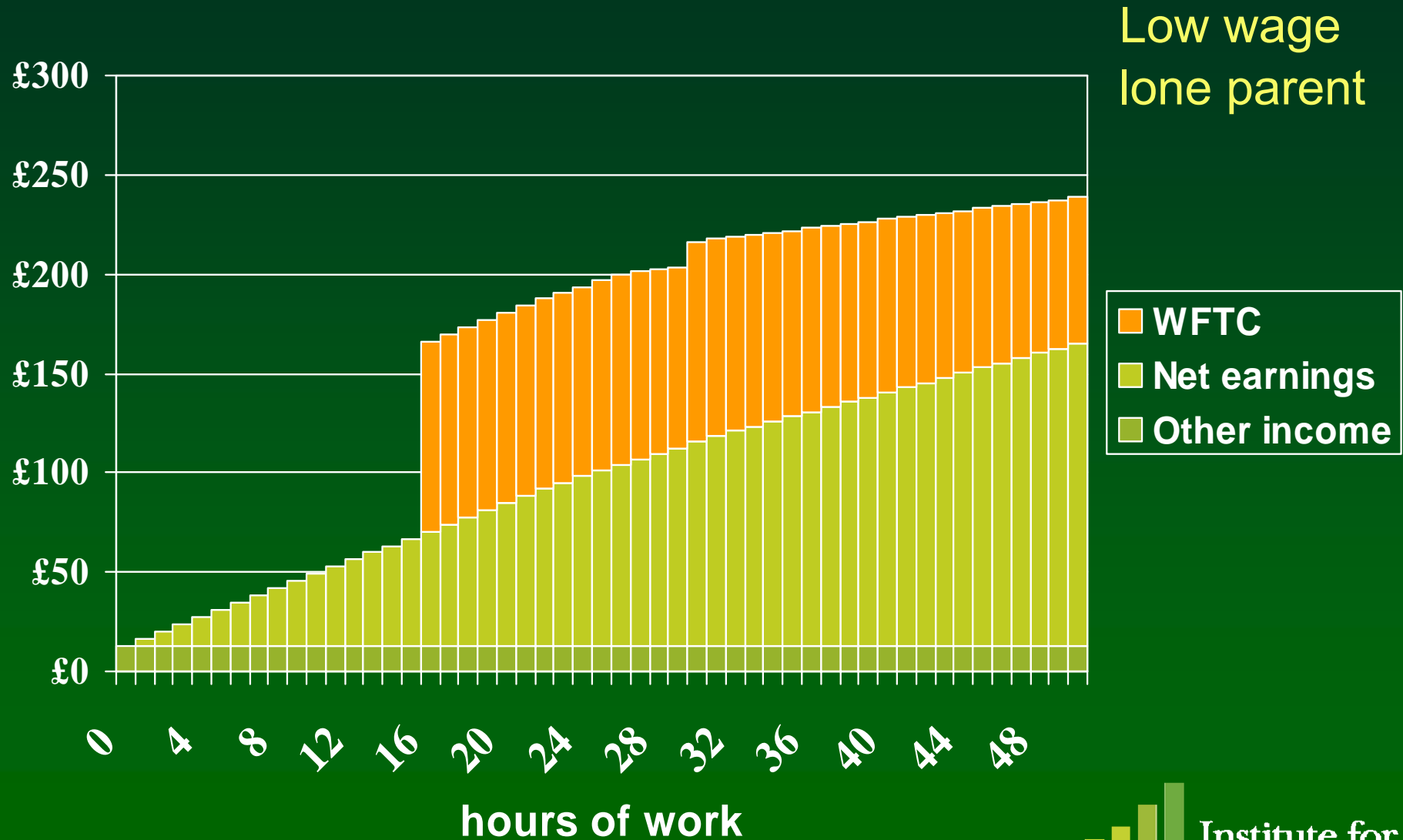
- The extensive-intensive difference is key in understanding responses to reform
- A 'large' extensive elasticity can 'turn around' the impact of declining social weights
 - implying a higher transfer to low wage workers than those out of work
 - a role for earned income tax credits
- Significant differences in responses by age and demographic type
 - parents with school age children,
 - people aged 55-70.

Take a look at tax rates on lower incomes.....

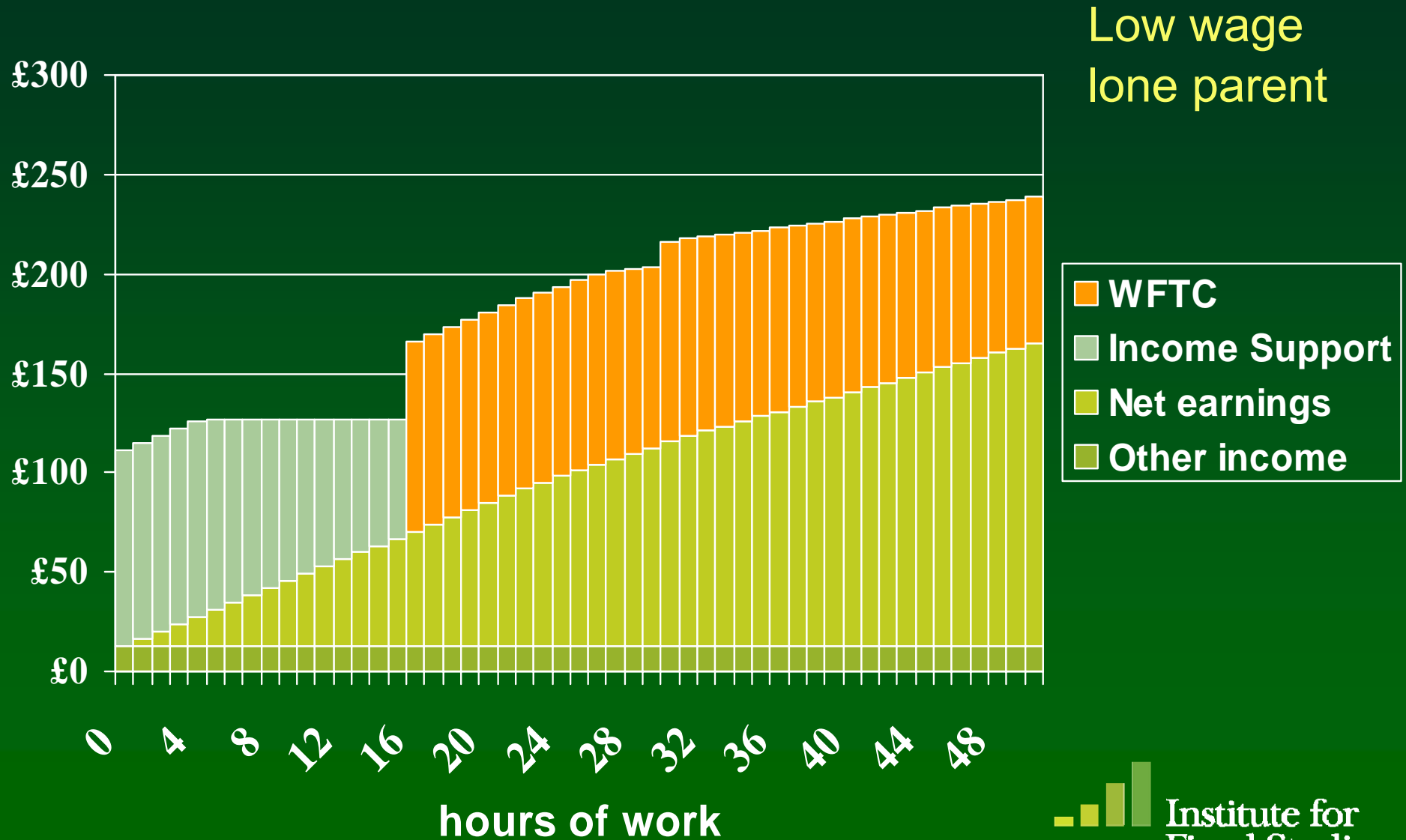
Main defects in current welfare/benefit systems

- *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...

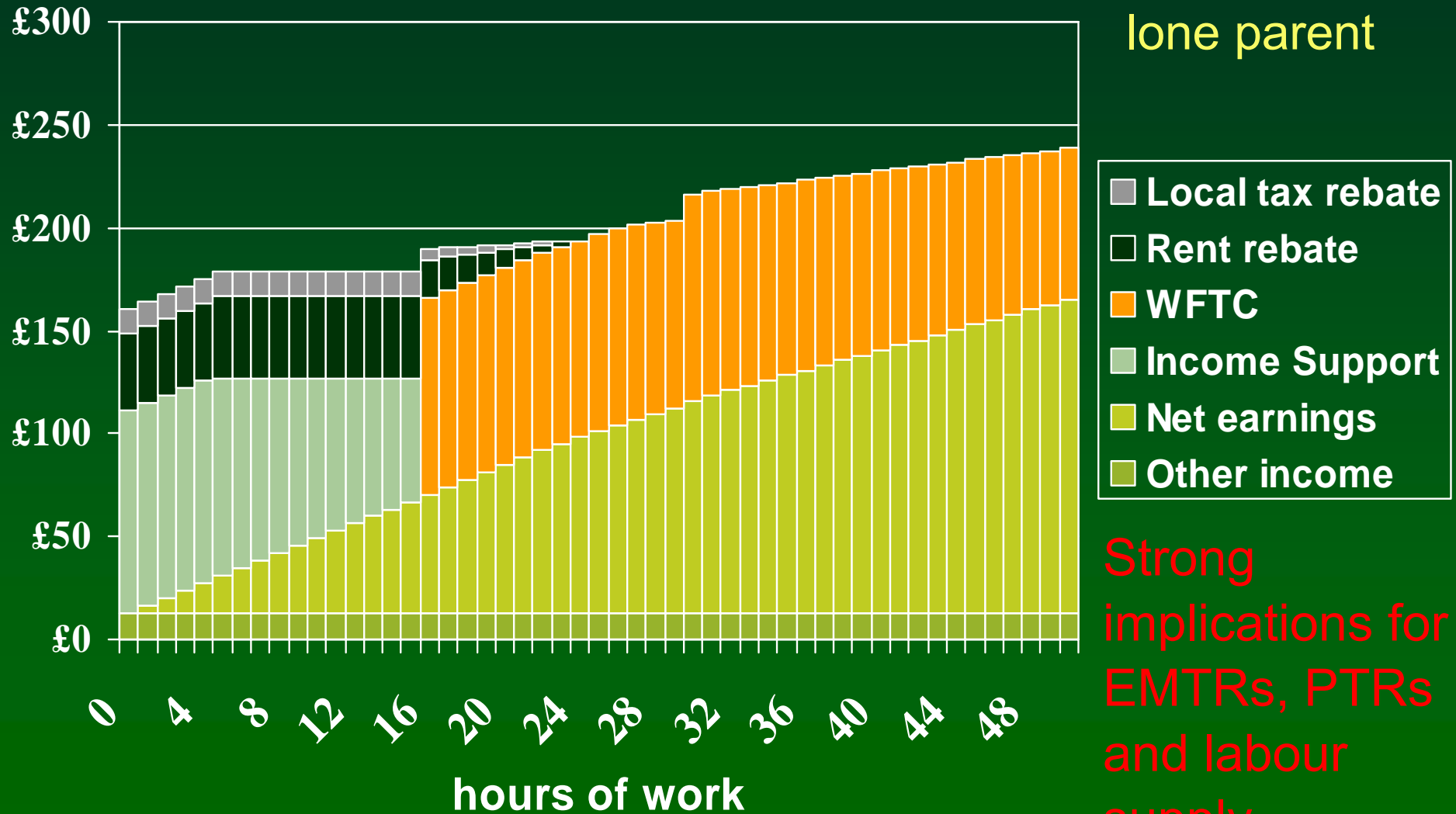
The interaction between taxes, tax credits and benefits



The interaction between taxes, tax credits and benefits



The interaction between taxes, tax credits and benefits

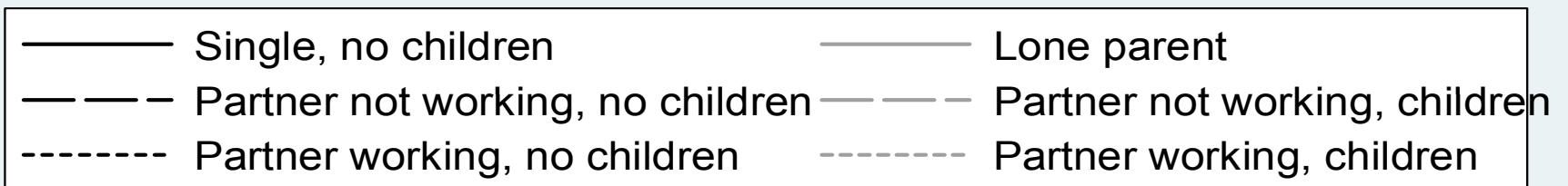
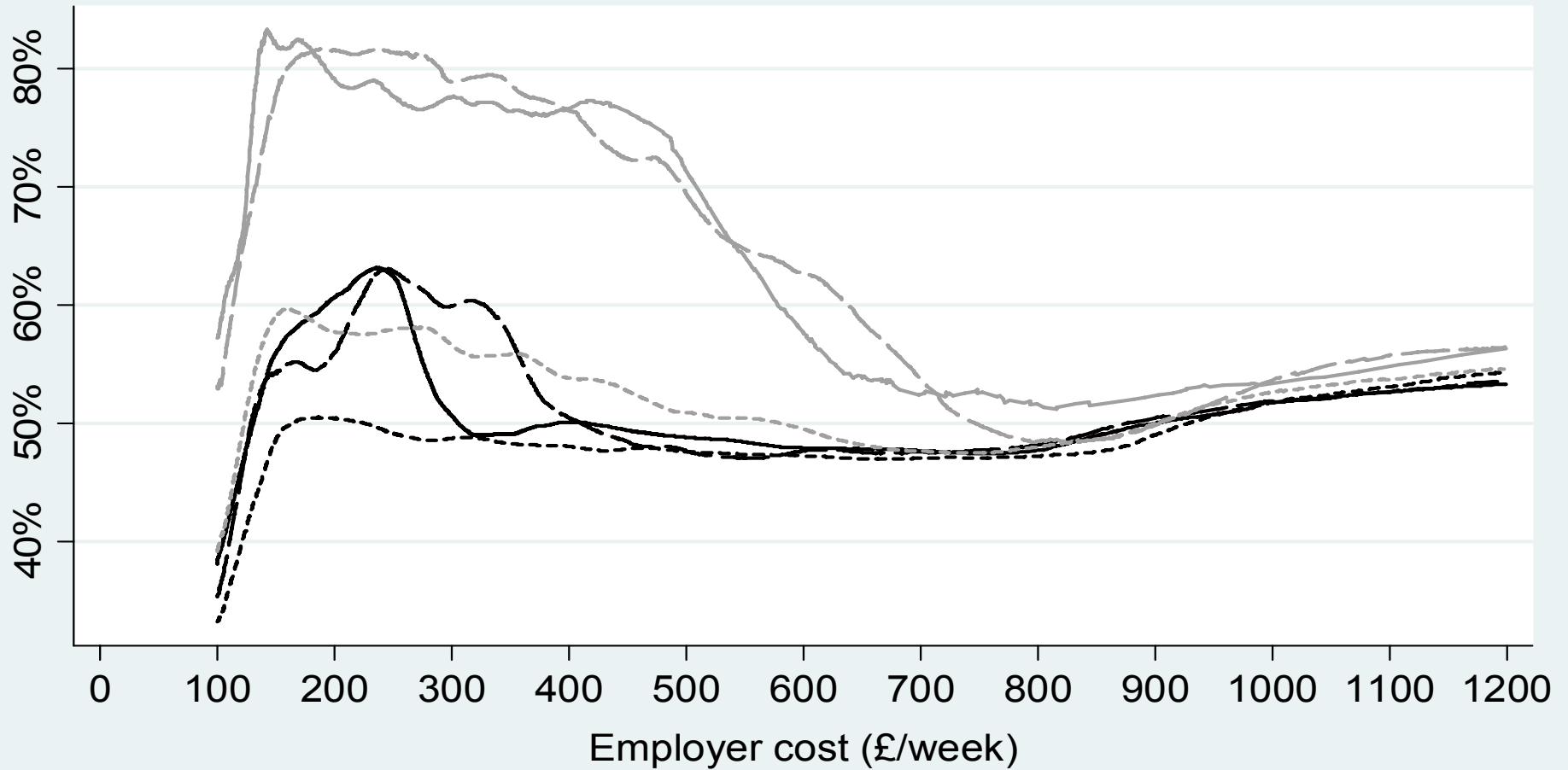


Low wage
lone parent

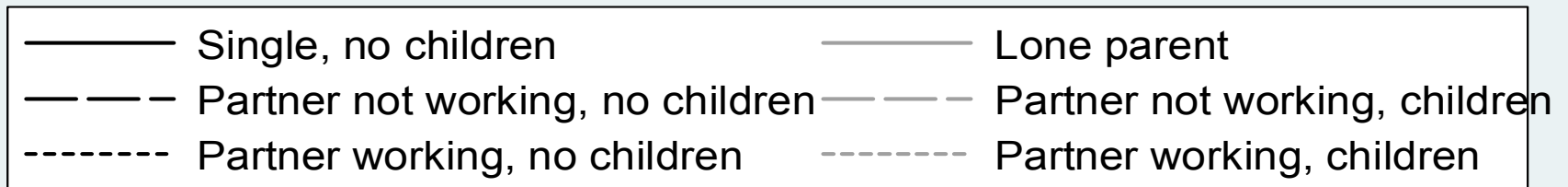
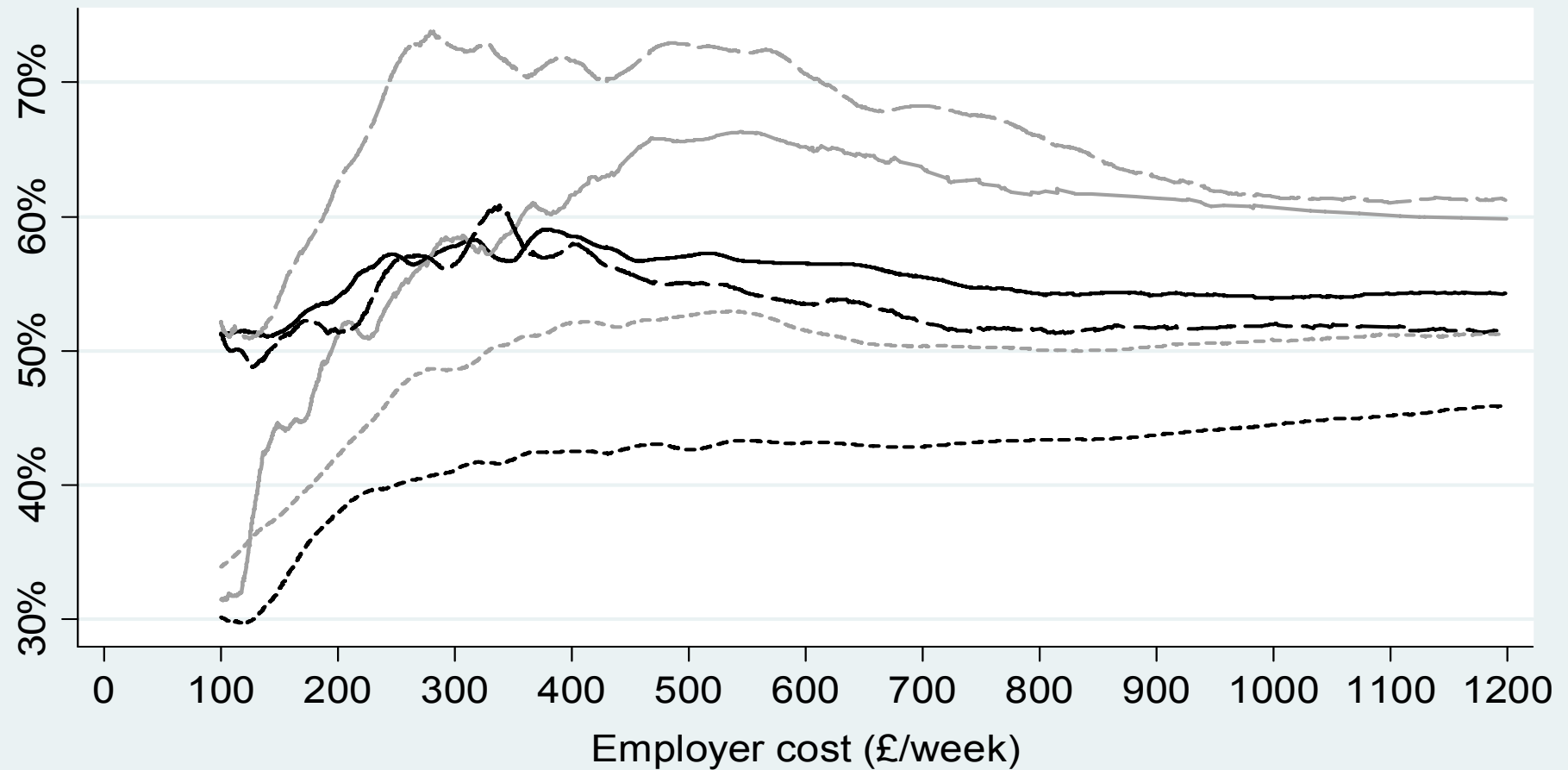
- Local tax rebate
- Rent rebate
- WFTC
- Income Support
- Net earnings
- Other income

Strong
implications for
EMTRs, PTRs
and labour
supply

Average EMTRs for different family types



Average PTRs for different family types

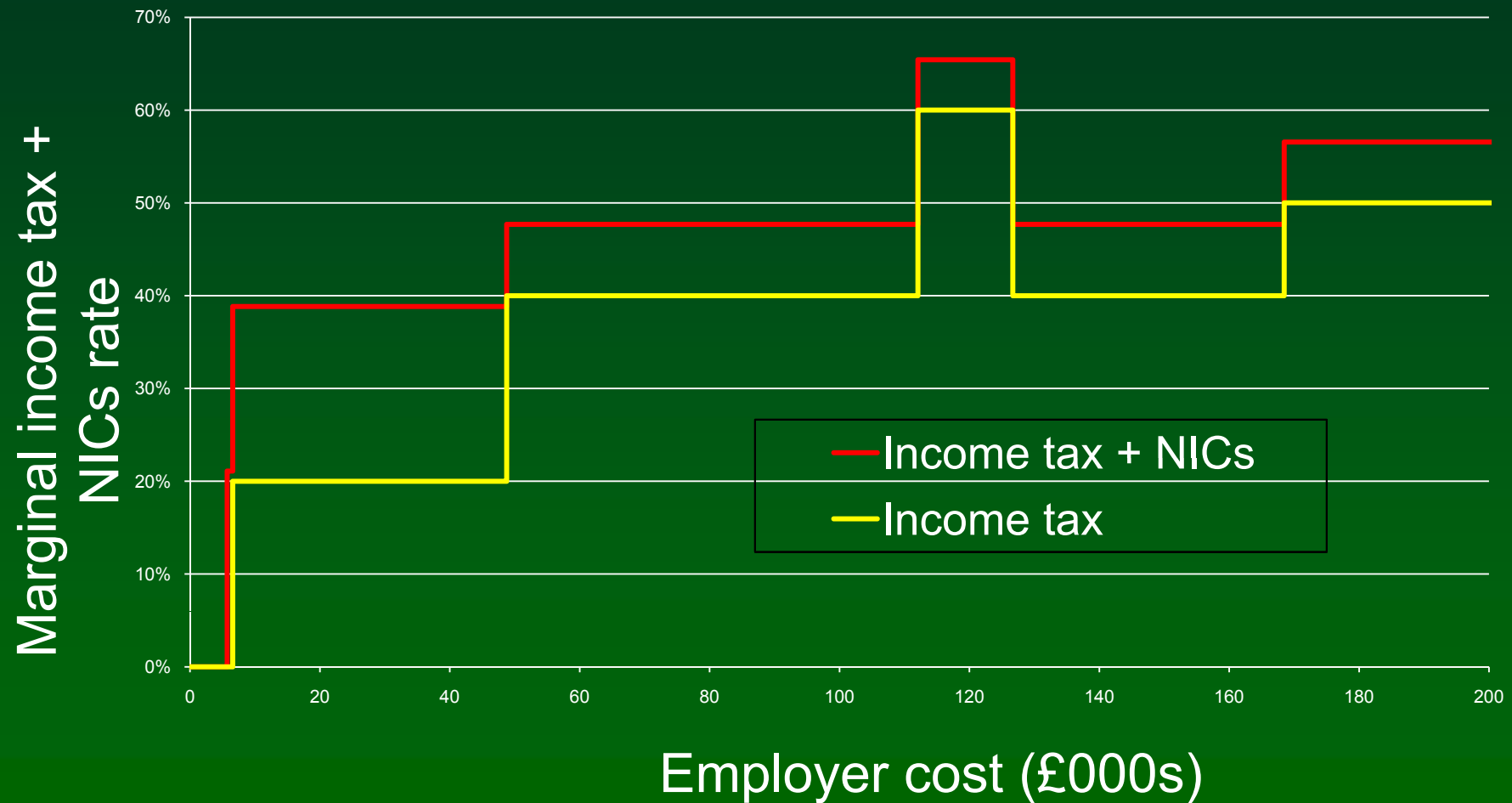


Implications for Reform of Earnings Taxation

- Introduce a single integrated benefit
- Work incentives should be better targeted where they are most effective
 - use what we know about behavioural responses =>
 - means-testing should be less aggressive
 - at least for some key groups =>
 - > parents with school age children,
 - > people aged 55-70.
- What about top incomes?

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

- Suppose we want to maximise the revenue collected – what should the tax rate on the top income bracket be?

- An ‘optimal’ top tax rate

e – taxable income elasticity

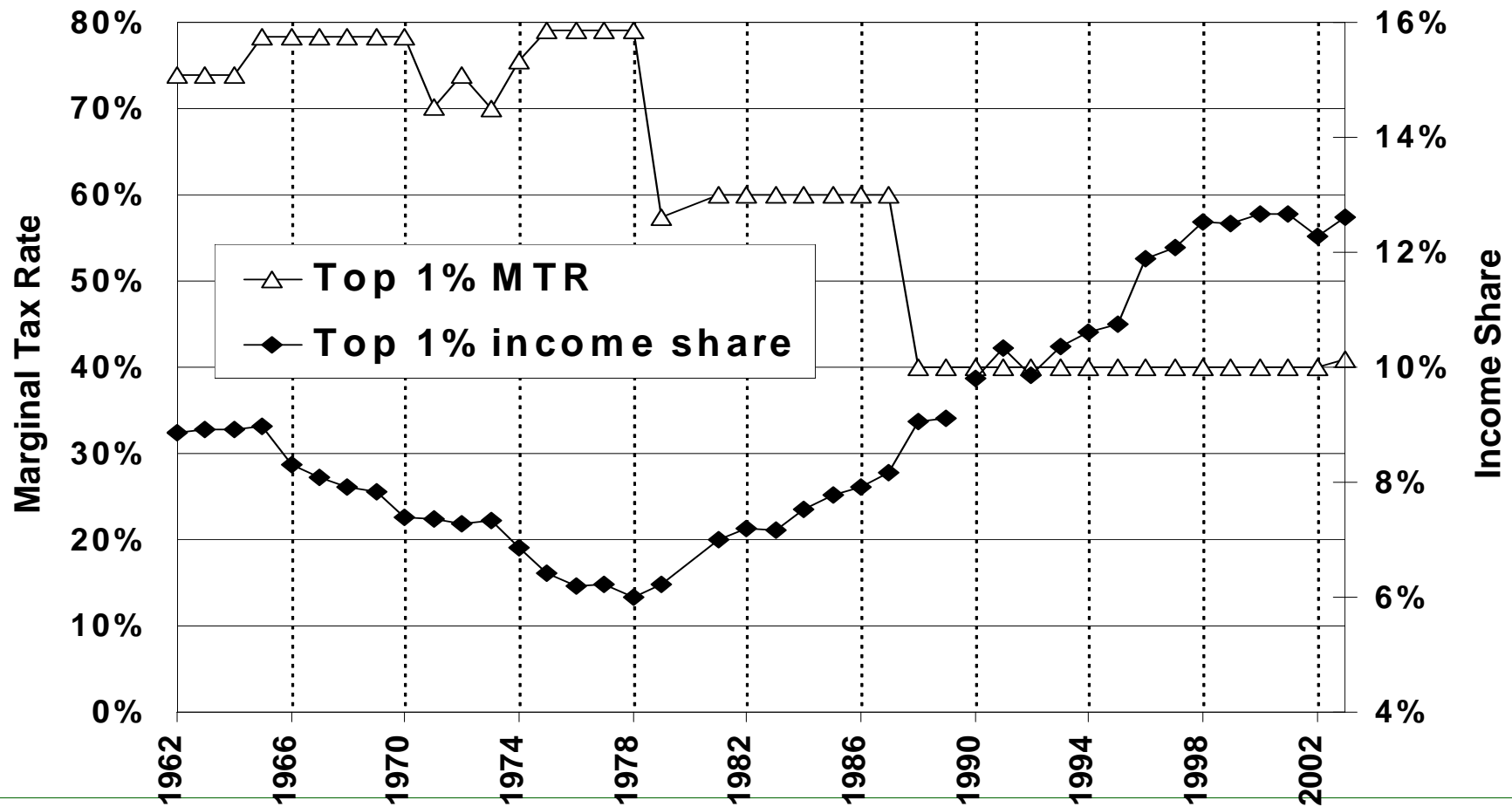
$$t = 1 / (1 + a \cdot e)$$

where a is the Pareto parameter.

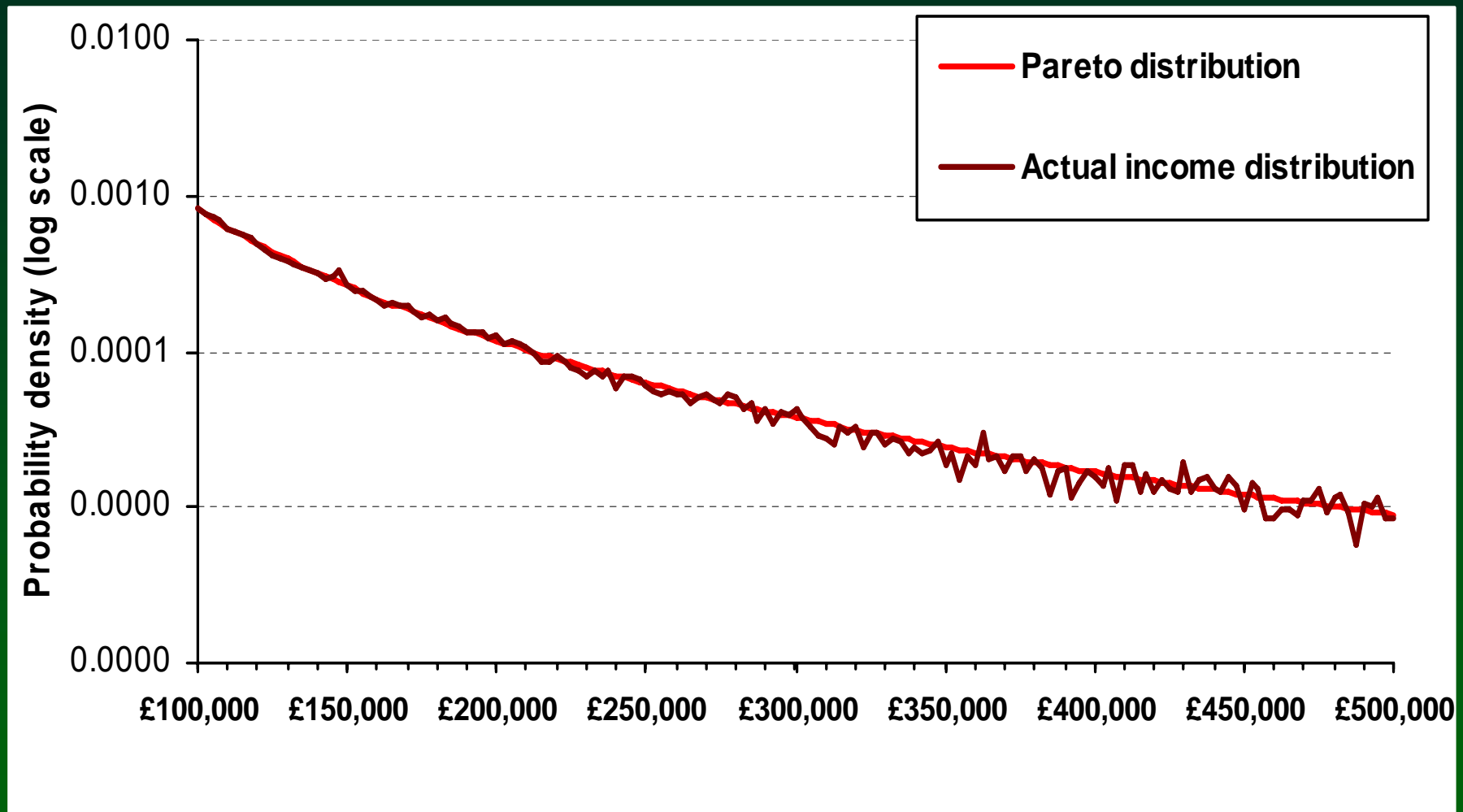
- Estimate $a \approx 1.67$ from the empirical distribution
- Estimate $e \approx 0.46$ from the evolution of top incomes in tax return data

Top incomes and taxable income elasticities

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



The Pareto distribution and the income distribution



- Pareto parameter quite accurately estimated at 1.67
- => revenue maximising tax rate for top 1% is 56%

Implications for Reform

- Limits to tax rises at the top, **but**
 - base reforms - anti-avoidance, domicile rules, avoid revenue shifting =>
- 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

Finally to Indirect Taxation.

UK has just moved to a 20% Standard Rate

| Zero-rated: | Cost (£m) |
|--|------------------|
| 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 |

Evidence on consumer behaviour => exceptions to uniformity

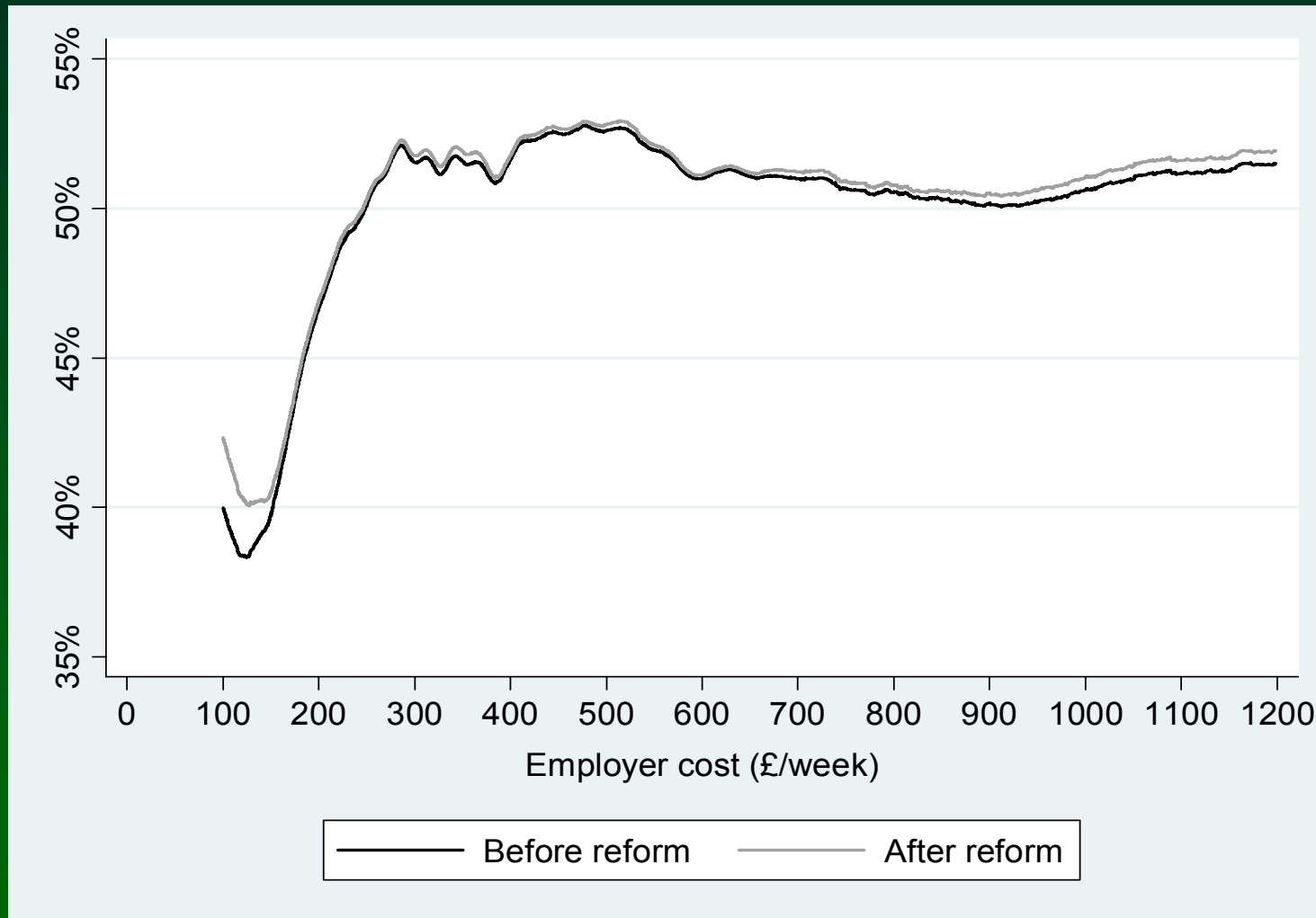
- childcare strongly complementary to paid work
- a few others (plus externalities)
- These do not line up well with existing structure of taxes
 - ⇒ broadening the base
- Compensating losers, even on average, is difficult
 - but can be done
 - use direct taxes and benefits
 - worry about *work incentives* too
- Simulate a broadening of the base

'Uniform' VAT reform: effects by income



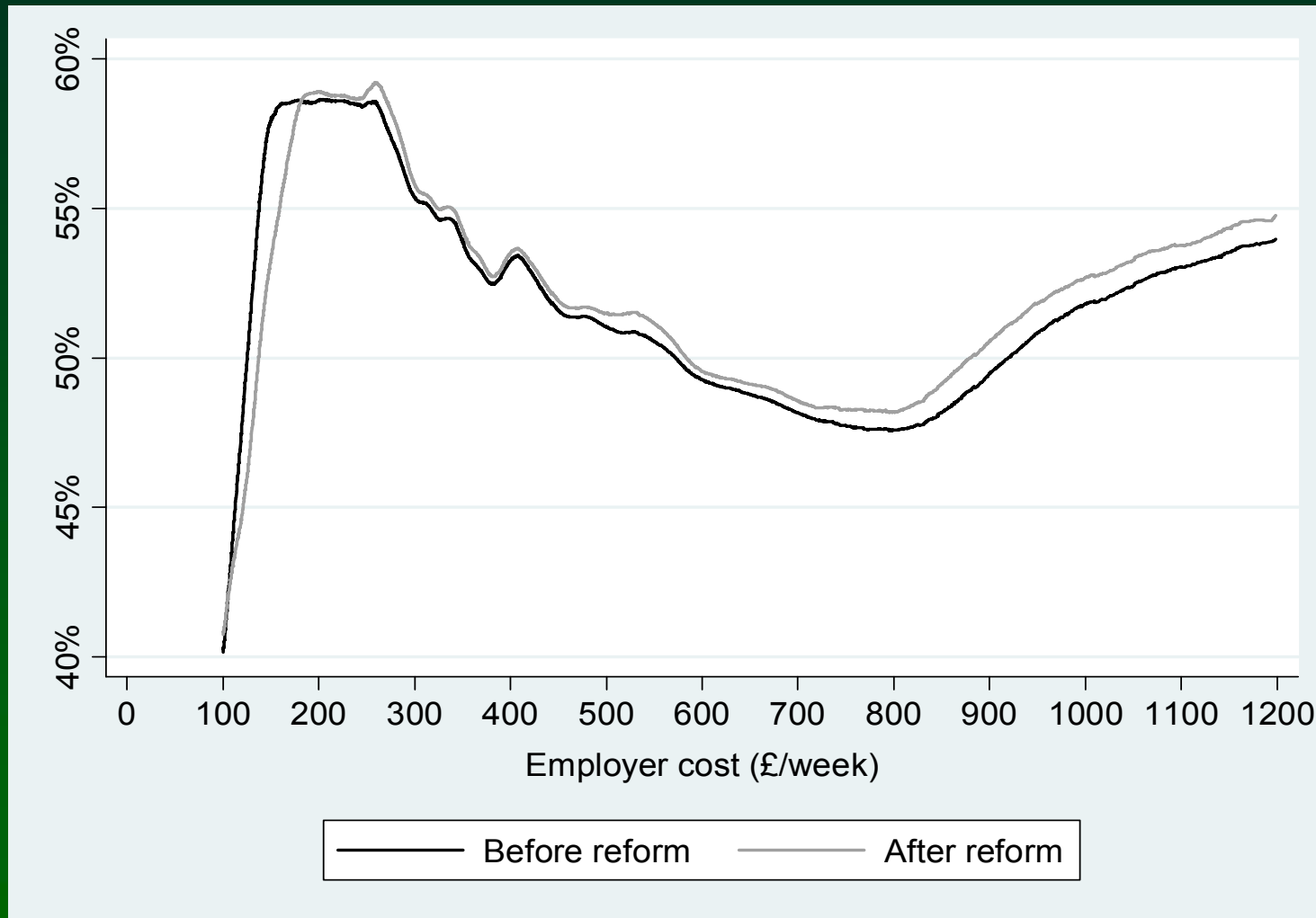
VAT reform: incentive to work at all

Participation tax rates



VAT reform: incentive to increase earnings

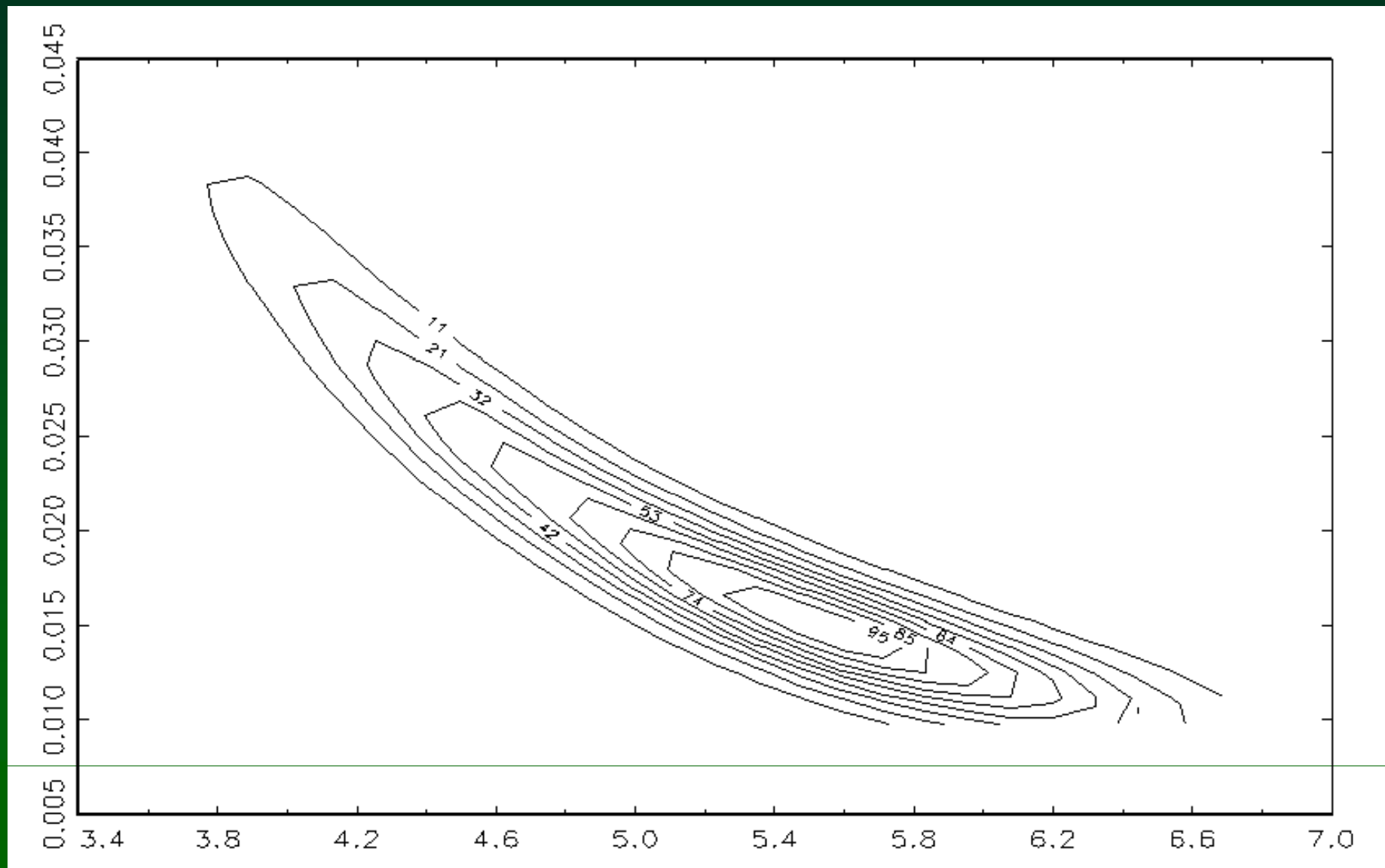
Effective marginal tax rates



Broadening the base of indirect taxation

- Empirical results suggest current indirect tax rates do not line up with any reasonable justification
- They are a poor way of delivering redistribution, given the other tax instruments available
 - implement a reform package that achieves compensation
 - while also avoiding significant damage to work incentives.
- Quite sizable welfare gains from removing distortions
 - around 1.5% of consumption
 - QUAIDS model for representative sample =>

Welfare gains - Distribution of EV/x by $\ln(x)$



A similar analysis for savings taxation....

- Rate of return allowance/expenditure tax treatment
- Exempt normal rate of return
 - avoids distortions in the timing of consumption
 - captures excess returns
 - Integrates with corporate taxation
 - gives neutrality between debt and equity
- but additional age-based incentives around pensions
- capital gains treated as any other income, avoids lock-in effects

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 rate of return allowance where possible
 - neutrality across assets and time where possible
- Pensions - allow some additional incentive to lock-in savings
 - twist implicit retirement incentives to later ages

Built on our increased empirical knowledge

- **Labour supply responses for individuals and families**
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and the 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

Find it all open access online at
<http://www.ifs.org.uk/mirrleesReview>

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