

# The Taxation of Income from Earnings

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## The Mirrlees Review: Tax by Design

<http://www.ifs.org.uk/mirrleesreview/>

*Panel Session: AEA Meetings*

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## Why re-design earnings taxation?

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- Changes in employment patterns, in earnings inequalities and in population trends
  - New empirical findings on response elasticities
  - New insights from optimal tax design
  - New insights from behavioural economics
  - A need to look at the whole income tax/benefit system
  - Key chapter (in Review): Brewer, Saez and Shephard (2008), <http://www.ifs.org.uk/mirrleesreview/>
- + Commentaries by Moffitt, by Laroque and by Hoynes

## Summary direction of reform plan

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- Change transfer/tax rate structure to match lessons from evidence and from optimal design theory
  - limits to tax rises at the top
    - domicile rules and anti-avoidance
  - lower marginal and participation tax rates at the bottom
    - means-testing should be less aggressive
- An emphasis on age-based taxation
  - target pre-retirement ages
  - distinguish by age of youngest child
- Integration of benefits and, to an extent, taxation
- Interaction with saving taxation and tax smoothing..

## Motivated by a changed economic environment

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- Changes in employment patterns
  - growth of female labour supply
  - changes in youth employment
  - changes in ‘early retirement’ behaviour
- Changes in population
  - growth in single person & single parent households
  - growth in migration
- growth in earnings and wealth inequalities
  - change in nature of income and earnings risks

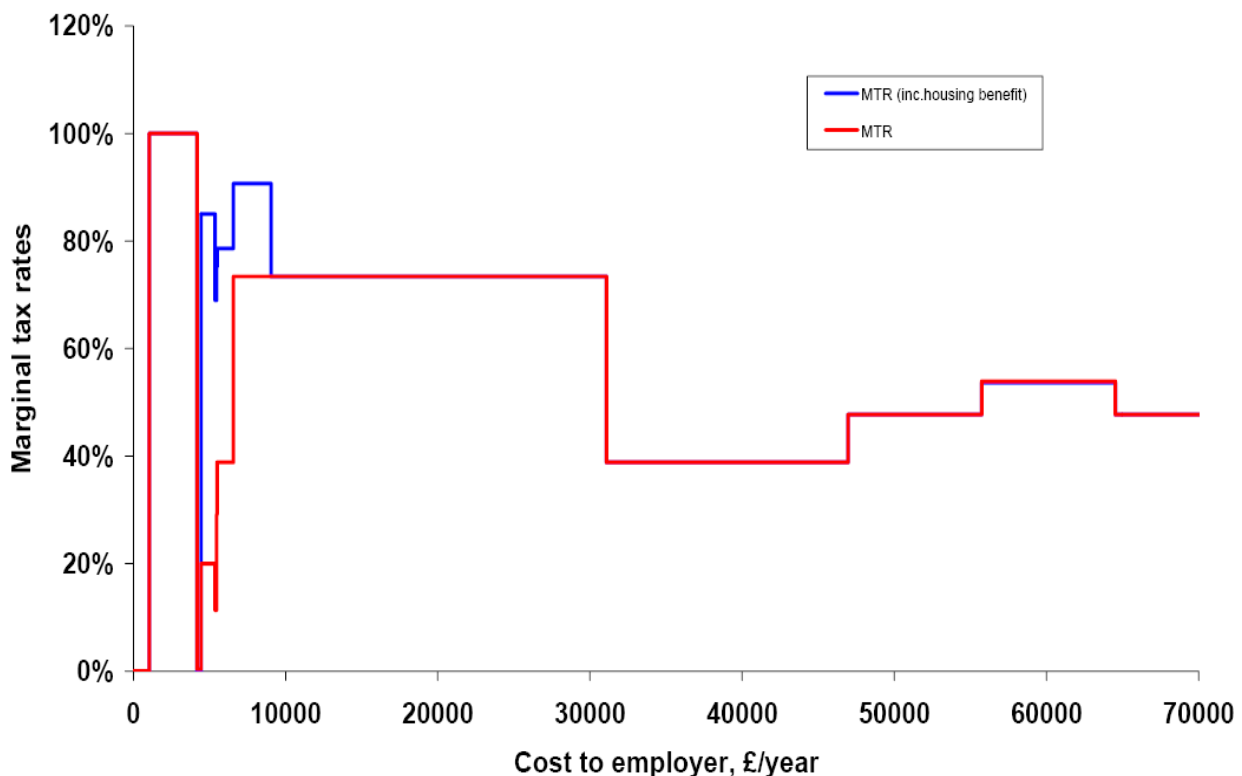
## ... and increased empirical knowledge

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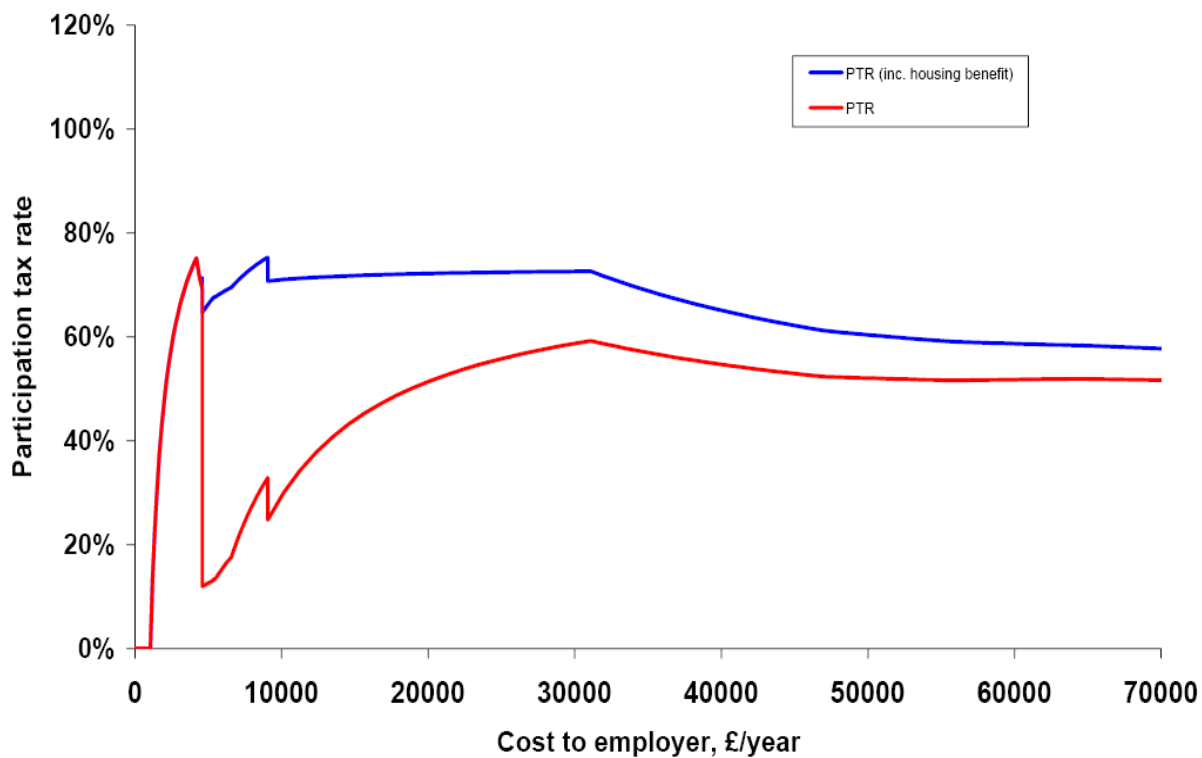
- labour supply responses for individuals and families
  - at the ‘intensive’ and ‘extensive’ margins
  - by age and demographic structure
- importance of margins other than ‘simple’ labour supply
  - taxable income elasticities
  - tax-return information
- human capital responses and savings/social security incentives

## Effective marginal tax rates: Lone Parents UK

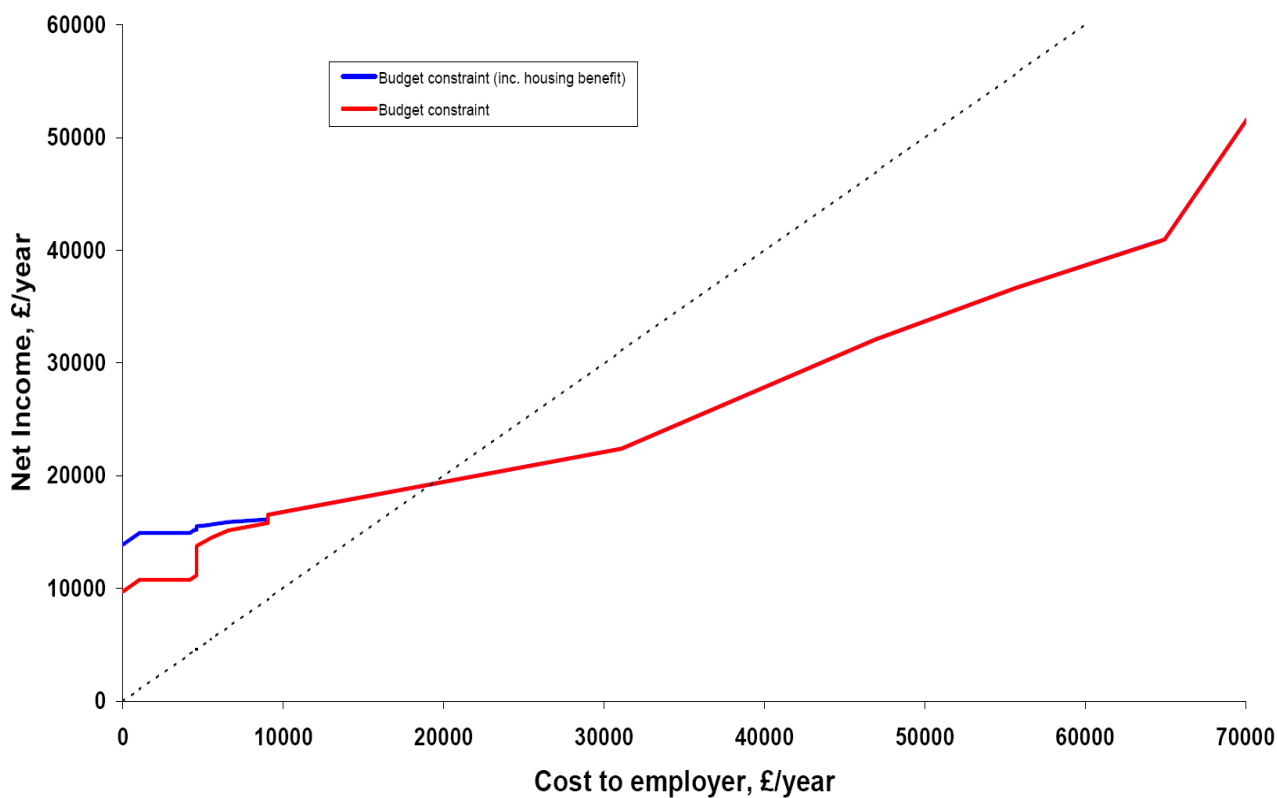
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# Participation tax rates: Lone Parents UK

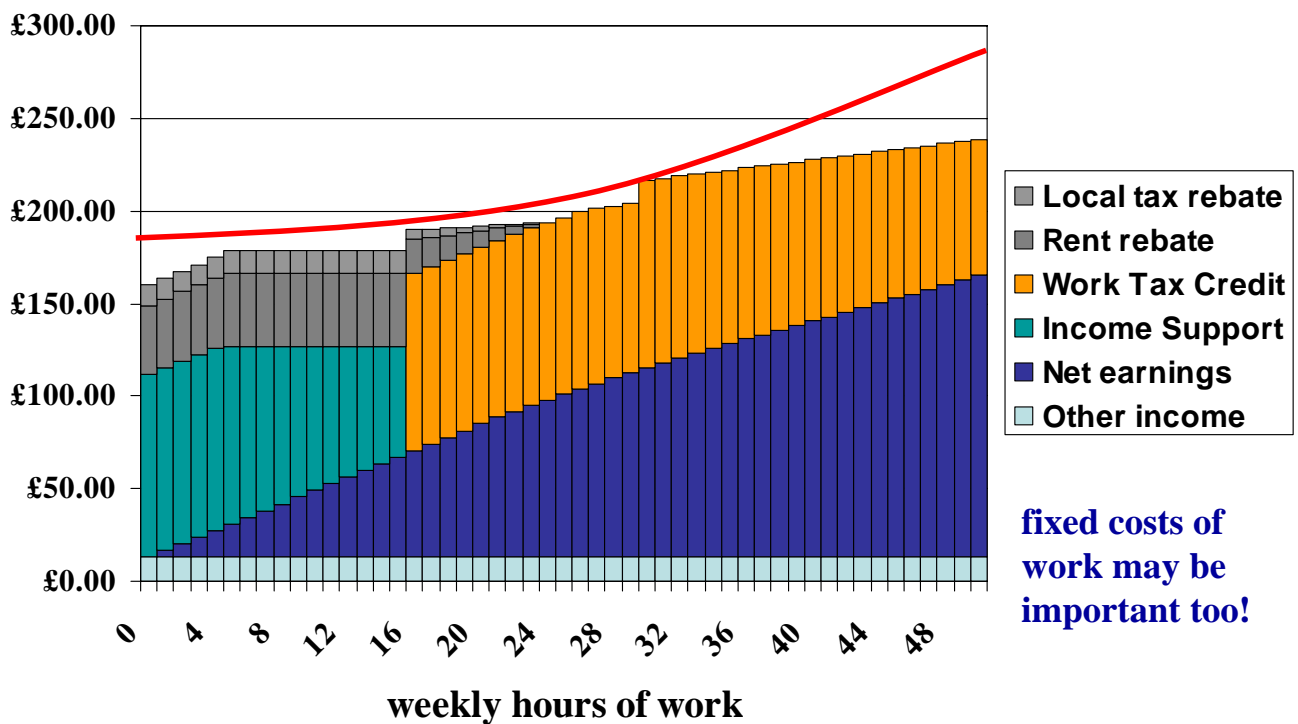


# Budget Constraint: Lone Parents UK



# Interaction of taxes, tax credits and benefits in the UK

## The interaction of taxes and benefits in the UK



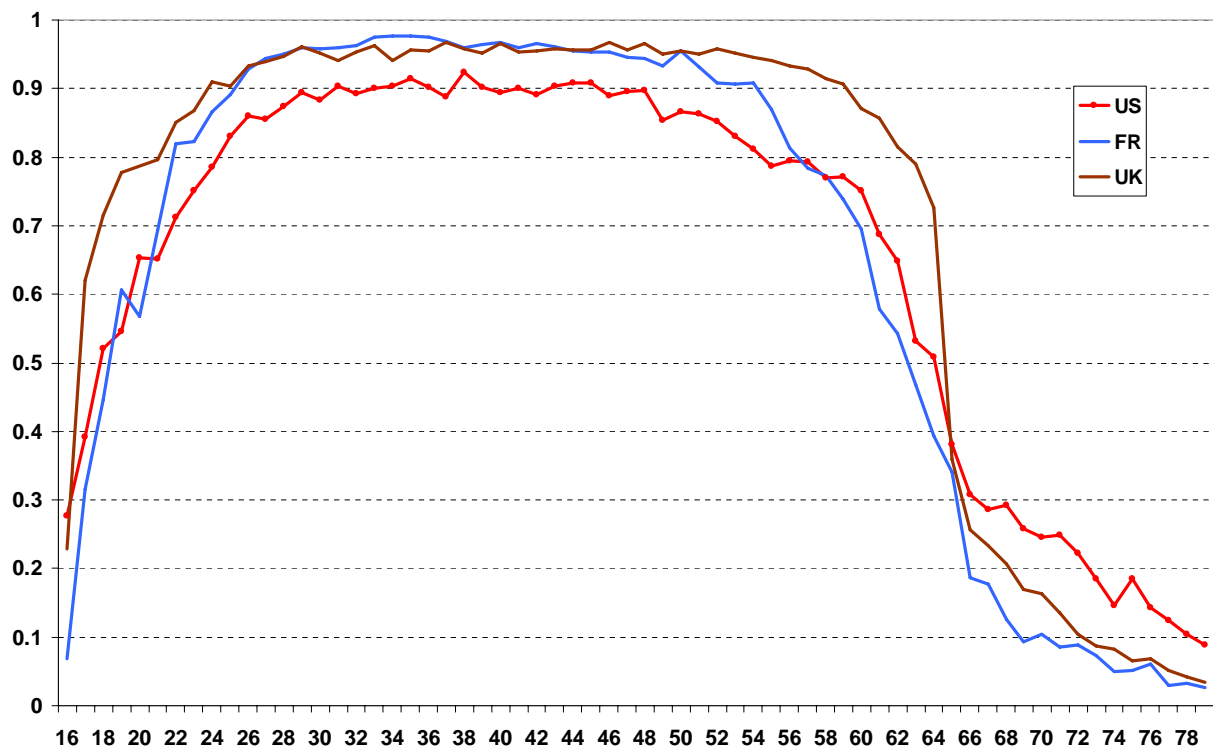
## Tax rates on lower incomes

### Main defects in current welfare/benefit systems

- participation tax rates at the bottom remain very high
- Marginal tax rates well over 80% for low income working families because of phasing-out of means-tested benefits
  - in the UK this is Working Tax Credit + Housing Benefit + ...
  - and interactions with the income tax system
- Are these effective tax rates too high?
- Depends on the key margins of response?

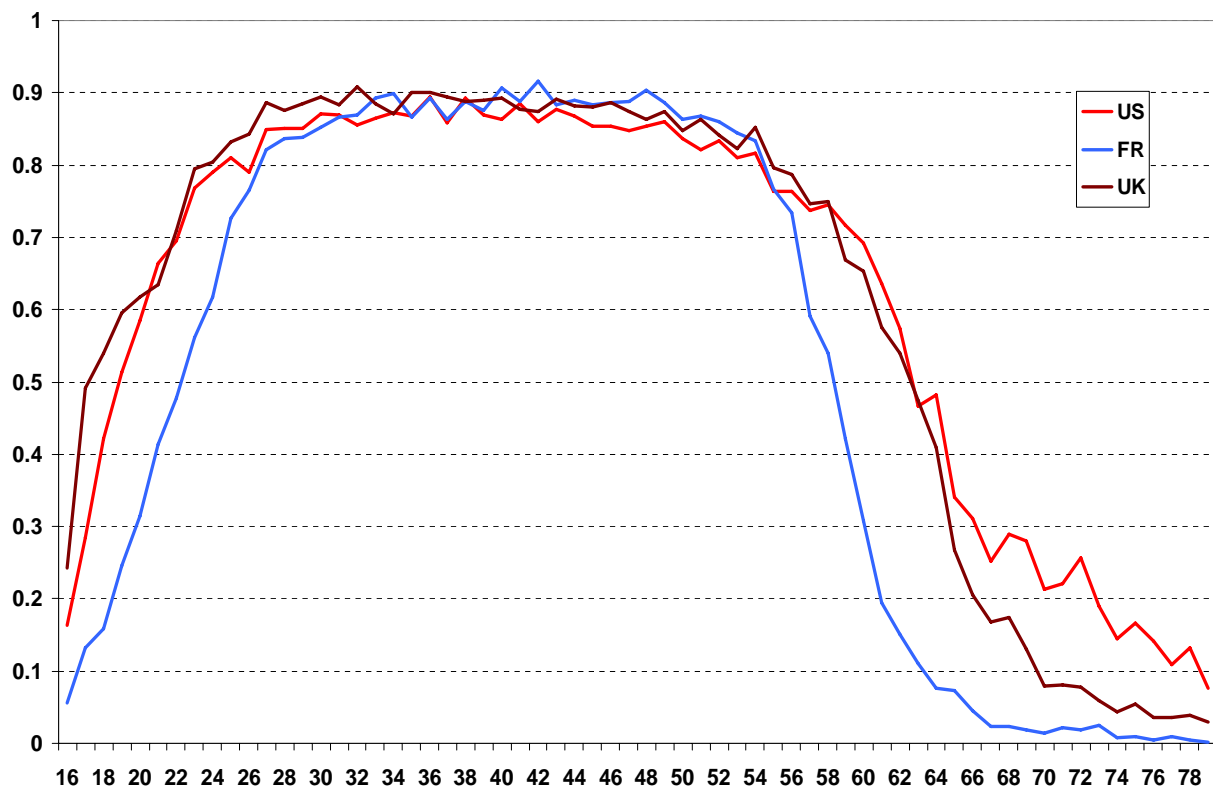
## Male employment by age – US, FR and UK 1975

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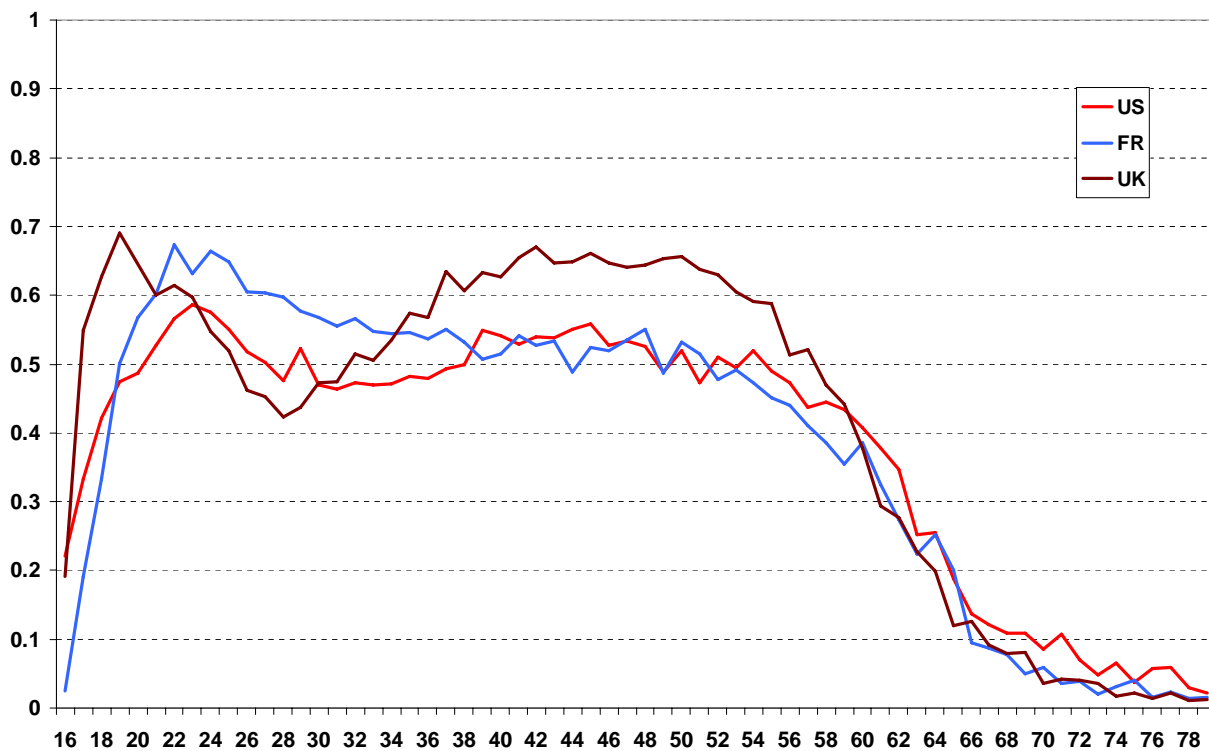
## Male employment by age – US, FR and UK 2005

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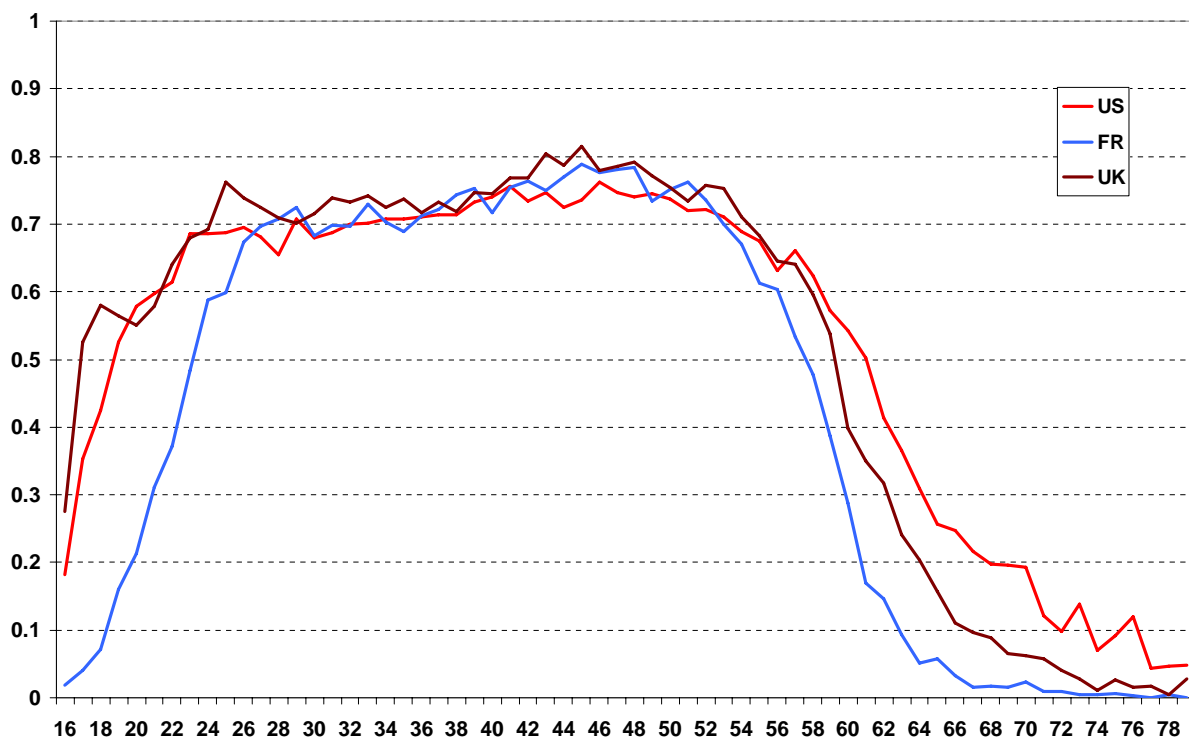
## Female Employment by age – US, FR and UK 1975

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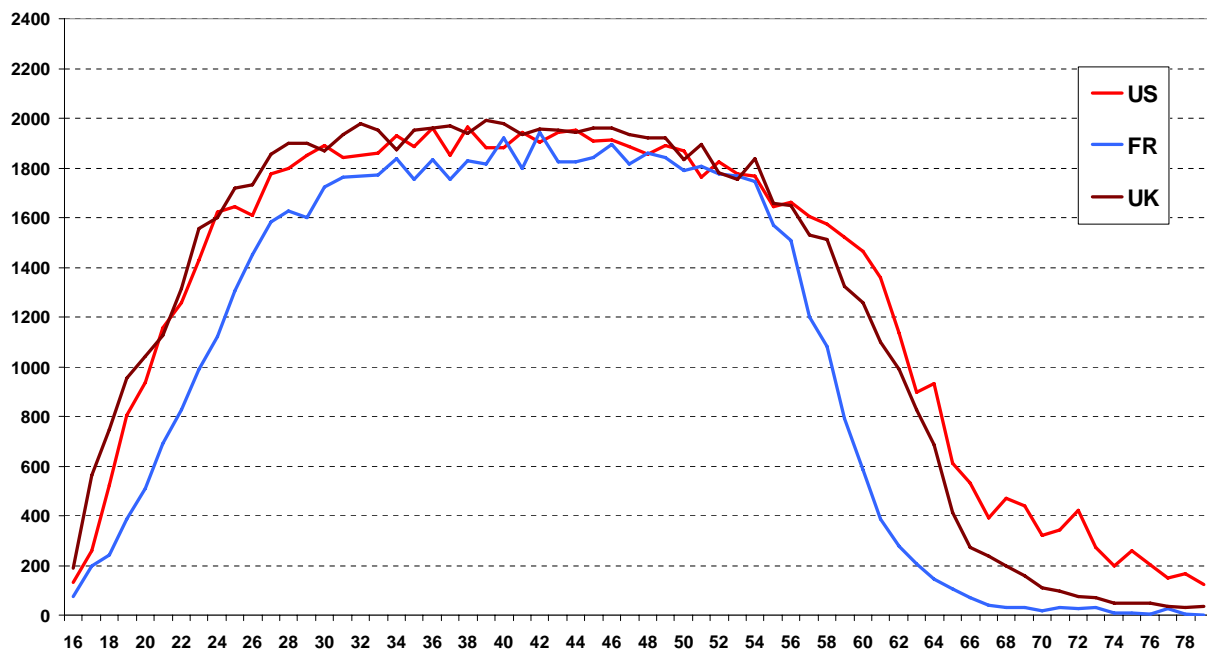
## Female Employment by age – US, FR and UK 2005

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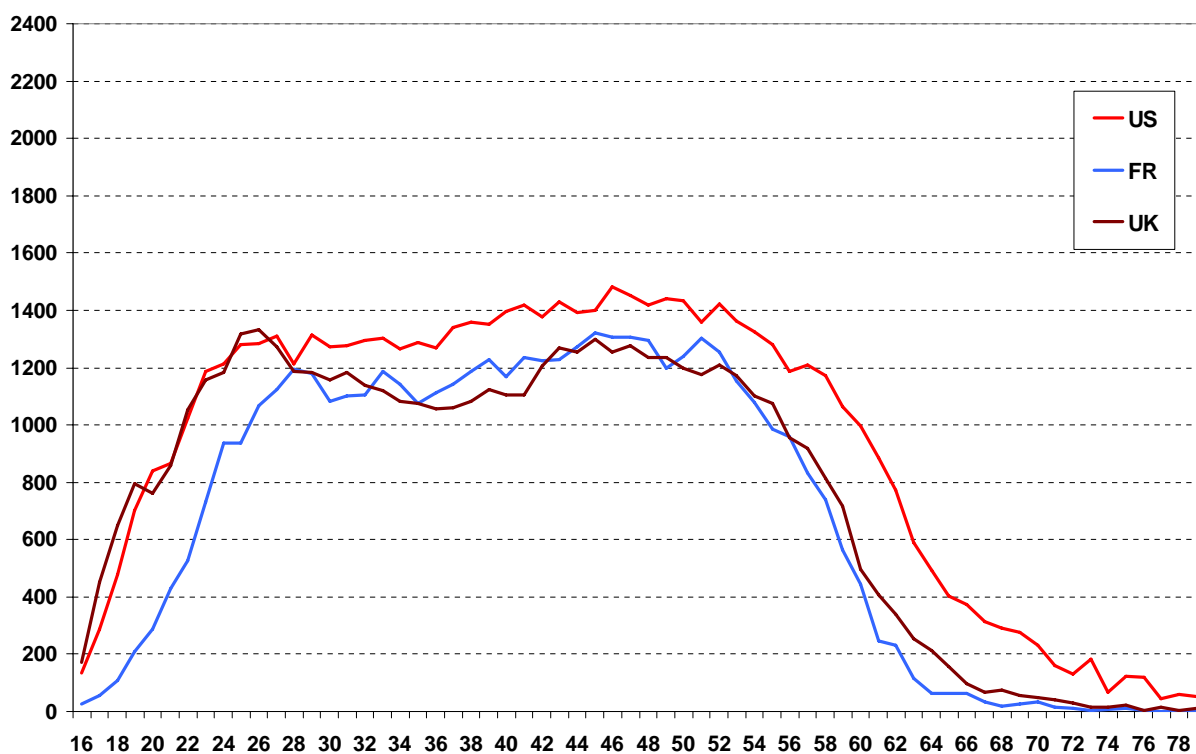
## Male Hours by age – US, FR and UK 2005

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## Female Hours by age – US, FR and UK 2005

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## Can a lowering rates at the bottom be ‘optimal’?

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- New insights from optimal tax theory show negative marginal tax rates can be an optimal design
- With participation effects, high tax rates at the bottom are no longer necessarily desirable and negative participation tax rates can be optimal (Saez, 2002; Diamond, 1980; Laroque, 2004)

$$\frac{T_i - T_{i-1}}{C_i - C_{i-1}} = \frac{1}{\zeta_i h_i} \sum_{j \geq i}^I h_j \left[ 1 - g_j - \eta_j \frac{T_j - T_0}{C_j - C_0} \right].$$

- Labour supply estimation suggest extensive margin is more responsive to incentives than intensive margin

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## Structural Model Elasticities

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### (a) Single Mother Youngest Child Aged 11-18, UK

<i>Earnings</i>	<i>Density</i>	<i>Extensive</i>	<i>Intensive</i>
0	0.3966		
80	0.1240	0.5029	0.5029
140	0.1453	0.7709	0.3944
220	0.1723	0.7137	0.2344
300	0.1618	0.4920	0.0829
<i>Participation elasticity</i>		1.1295	

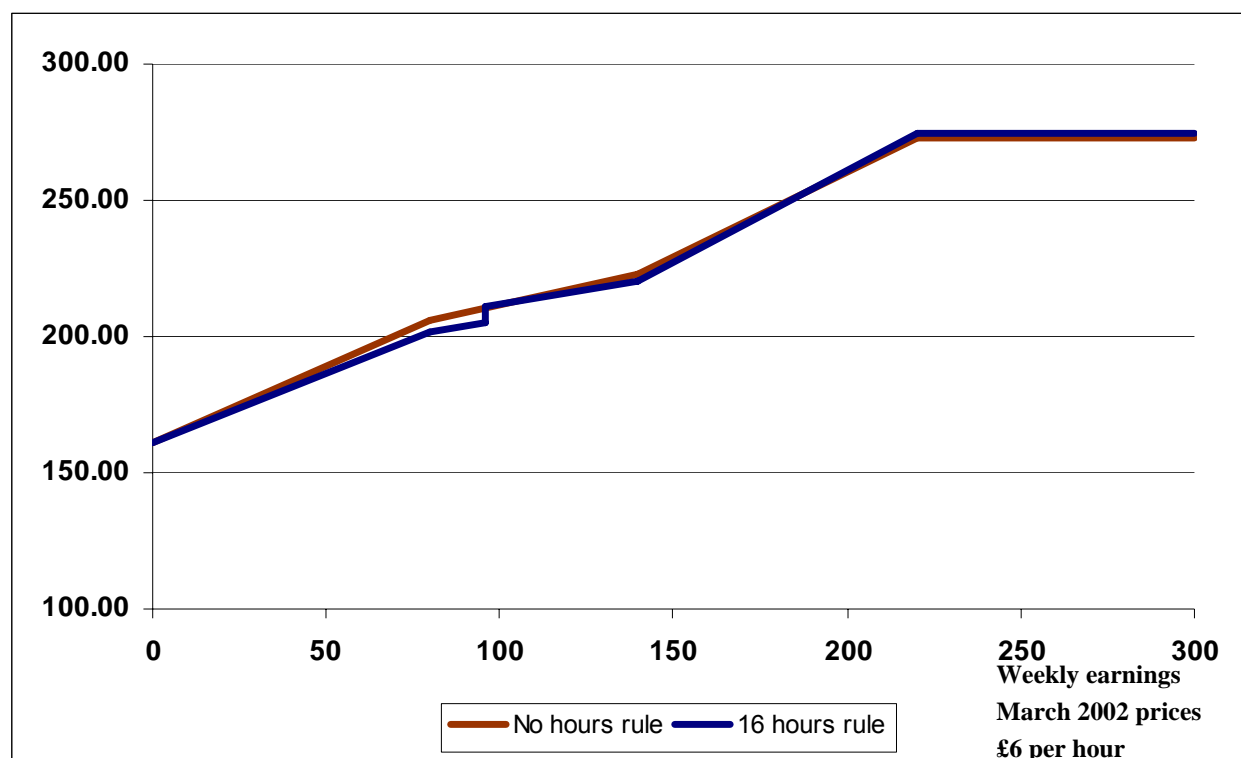
## Structural Model Elasticities

(c) Single Mother, Youngest Child Aged 0-4, UK

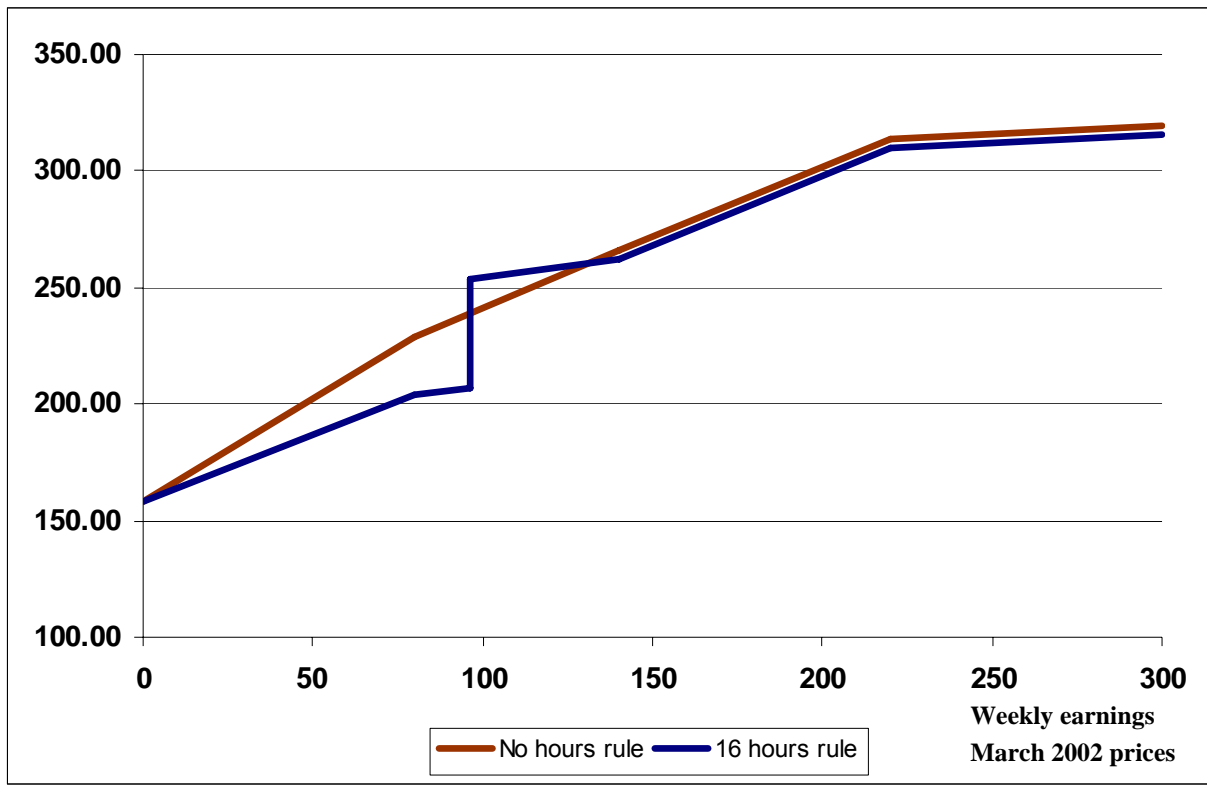
<i>Earnings</i>	<i>Density</i>	<i>Extensive</i>	<i>Intensive</i>
0	0.5942		
80	0.1694	0.2615	0.2615
140	0.0984	0.6534	0.1570
220	0.0767	0.5865	0.1078
300	0.0613	0.4984	0.0834
<i>Participation elasticity</i>		0.6352	

- Implications for the optimal schedule .....

## Implied Optimal Schedule, Youngest Child Aged 0-4

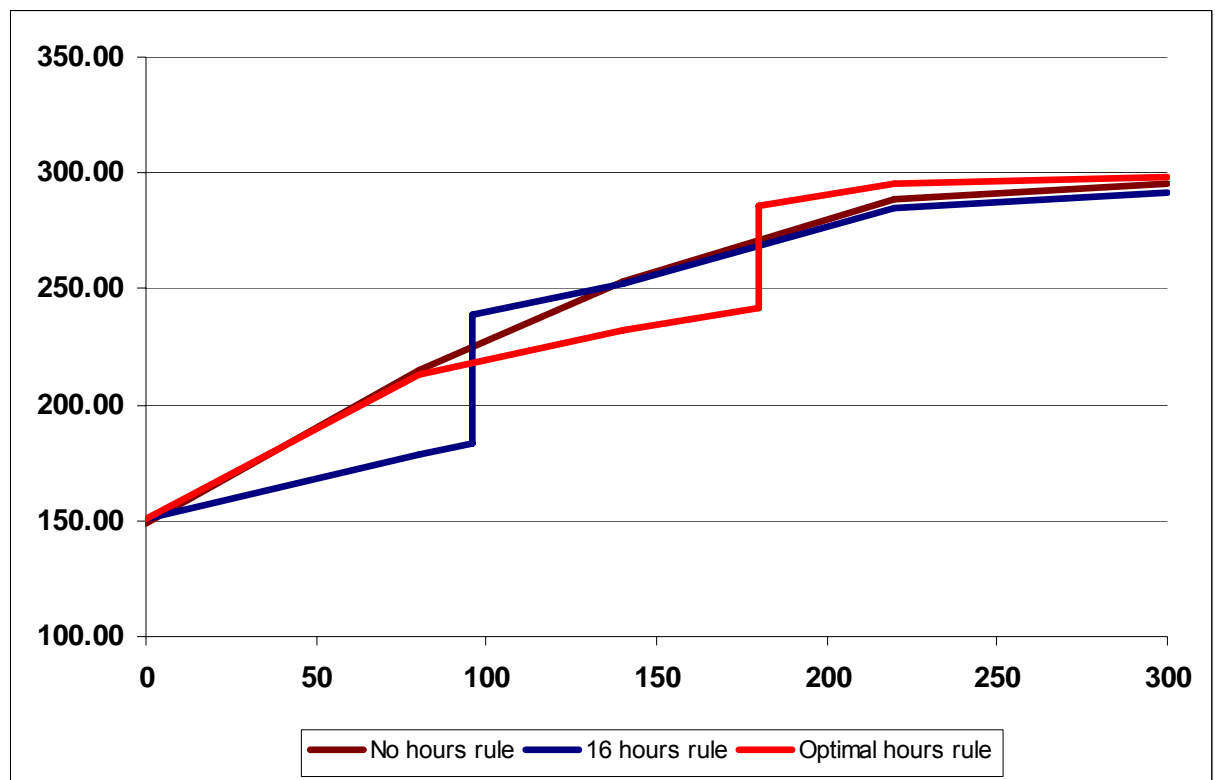


## Implied Optimal Schedule, Youngest Child Aged 5-10



Blundell and Shephard (2008)

## Implied Optimal Schedule, Youngest Child Aged 11-18



Blundell and Shephard (2008)

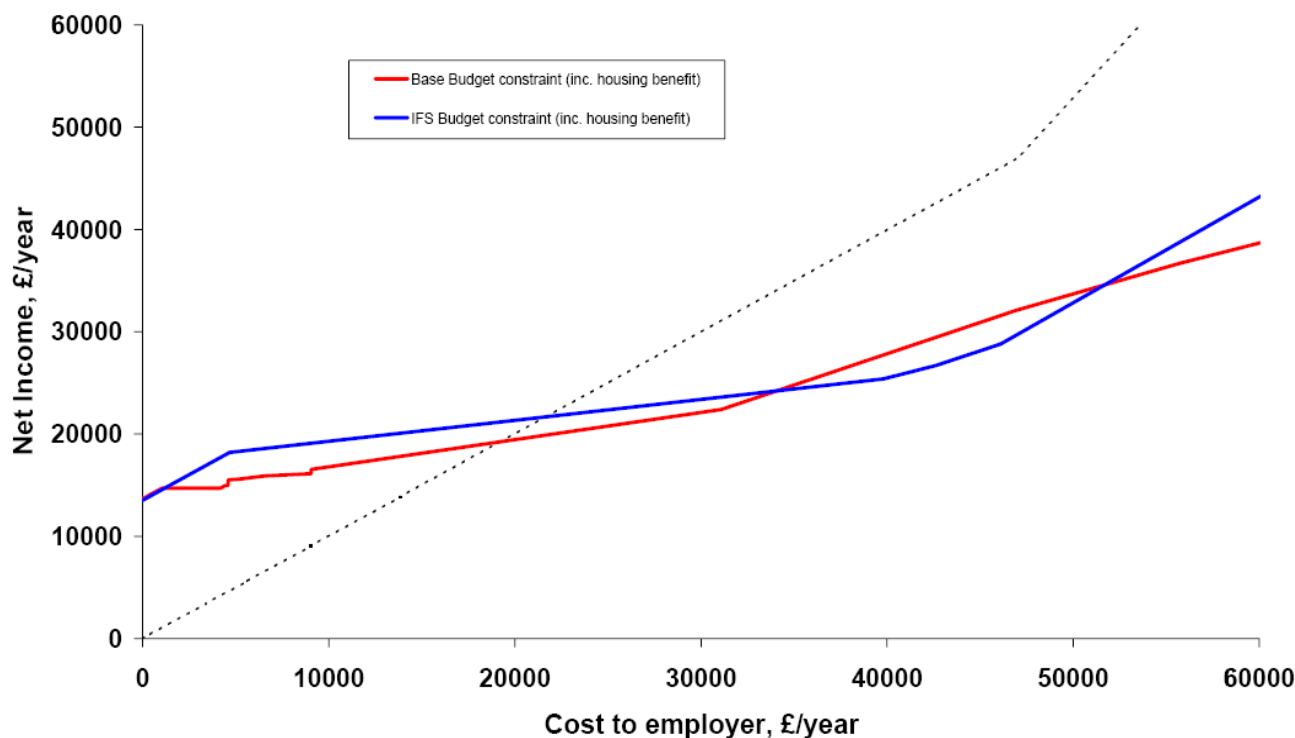
## Some lessons from theory and evidence

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- gross income taken in tax and withdrawal of benefits at low earnings is too high
  - the marginal rate of 75% that many low to moderate earners face is likely to be too high
  - some specific benefits, like housing benefit in the UK, have extremely high withdrawal rates. This exacerbates the problem of undesirably high marginal rates
- suggests a dynamic incentive structured around the age of the youngest child
  - incentives to work conditioned on age of youngest child
  - but efficiency gain from hours rule is limited, an optimality vs complexity trade-off

### IFS Tax Rate Reform: lone parent

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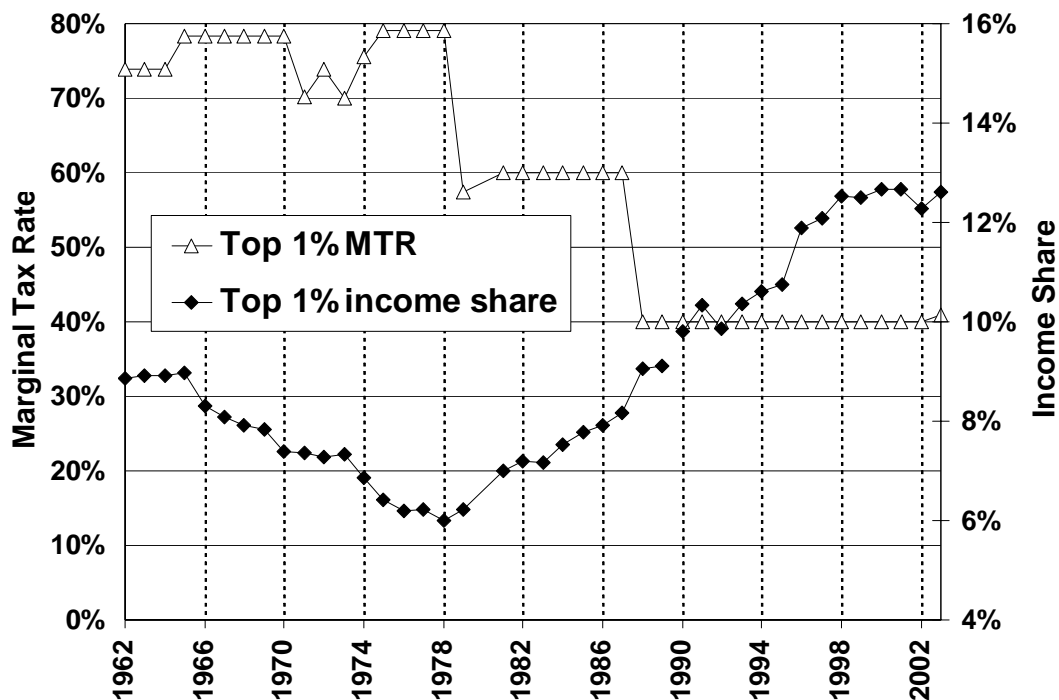


# An optimal top tax rate 't'

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- $e$  – taxable income elasticity
- $t = 1 / (1 + a \cdot e)$
- where  $a$  ( $\approx 2$ ) Pareto parameter.
- Estimate  $e$  from the evolution of top incomes following large top MTR changes

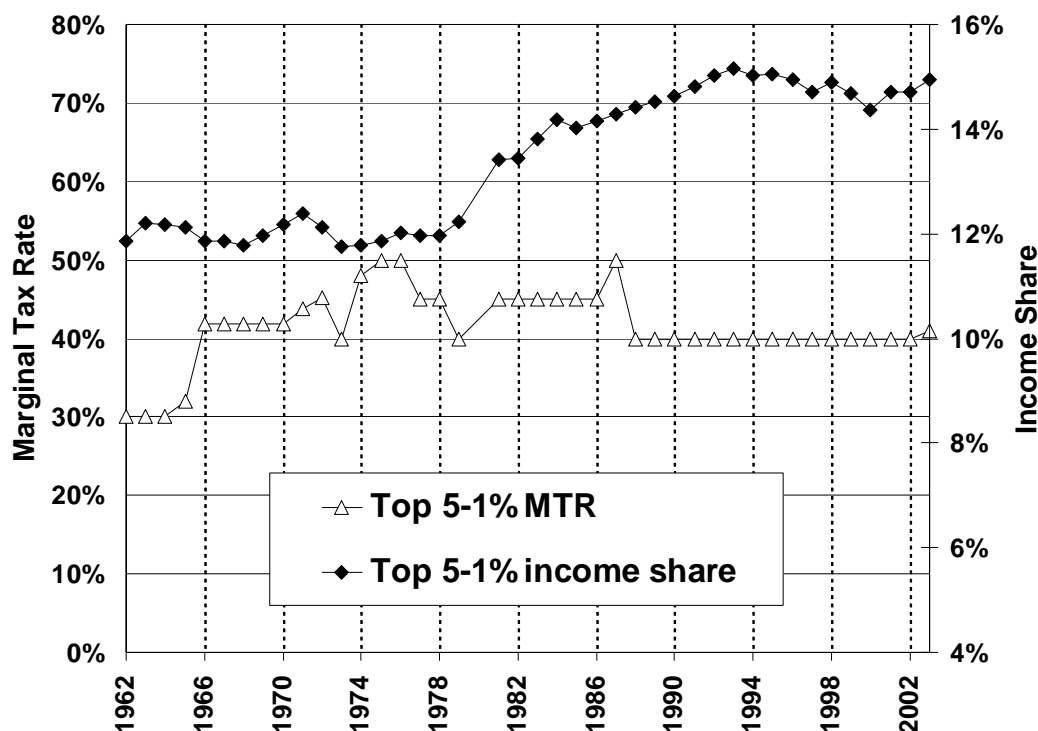
A. Top 1% Income Share and MTR, 1962-2003



# Recovering the taxable income elasticity

- Top 1% income share increases from 6% to 12%
- Net-of-tax rate increases from 20% to 60%
  - elasticity  $e = 2/3$ ,  $t \text{ max} = 43\%$
- But is relative growth in top 1% due only to tax cuts?
  - compare with 1-5% group
- Taxable income elasticity falls to around .45
  - implies an ‘optimal’ top incomes tax rate a little over 50%

B. Top 5-1% Income and MTR, 1962-2003



## Optimal Taxes and Migration

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- Concern that individuals move to low tax countries
  - migration response is similar to an extensive response
- Optimal top tax rate with migration elasticity ( $m$ ) + intensive elasticity ( $e$ ) is:

$$MTR = 1 / (1 + a \cdot e + m)$$

- does it change in recessions?
- nature of evidence on migration elasticity 'm' is weak

## Tax Smoothing and Age-based taxation

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- Age-based taxation will be optimal if
  - labour supply elasticities vary with age
  - if skill differentials increase with age
  - skill/earnings uncertainty varies with age
    - all are likely to be true
- Labour supply elasticities tend to be highest at either end of the life-cycle and for mothers of early school age children
- Tax smoothing through a life-time (expenditure) tax base allows individuals to 'undo' age-based earnings taxation

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for more theory and evidence see

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