



Institute for
Fiscal Studies

Road Transport Taxation

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Road transport taxation

- Some of the principles
- The current system, and its development
- Revenues
- Policy options
- Conclusions

Economic rationales for motoring taxation

- Externality principle
 - Motorists create an external cost that is not reflected in the private cost of driving
 - Impose a tax equal to these external costs to achieve a socially optimal level of motoring.
 - Main focus.
- Revenue raising
 - Relatively (short-term) inelastic demand for fuel
 - Simple; low costs

Externalities

- In practice, motoring creates a number of externalities:
 - Local air pollution
 - Global pollutants / Greenhouse gases
 - Congestion
 - Accidents
 - Noise
 - Road damage
- Congestion is by far the largest.
 - But extremely variable and not closely related to fuel duty

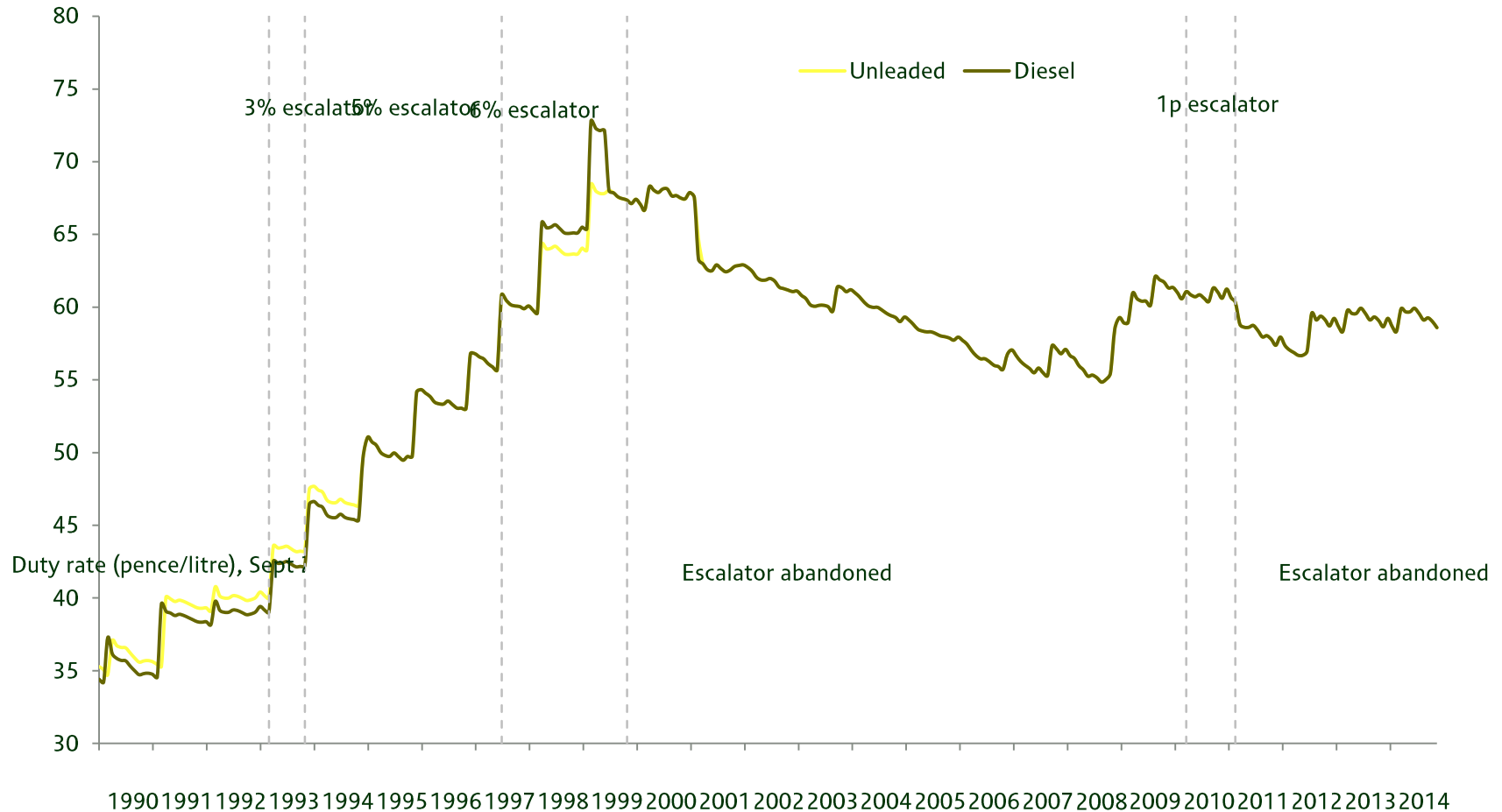
Optimal tax rates

- In principle tax should reflect the marginal external cost at the optimal level of road use
- NB – this is not the same as generating total revenue equal to total external costs
 - If marginal costs increase with road use – which they surely do – then total revenues will exceed total external costs
- As we shall see, the great variation in congestion costs, makes it very hard to determine an optimal fuel tax rate

Current motoring taxes

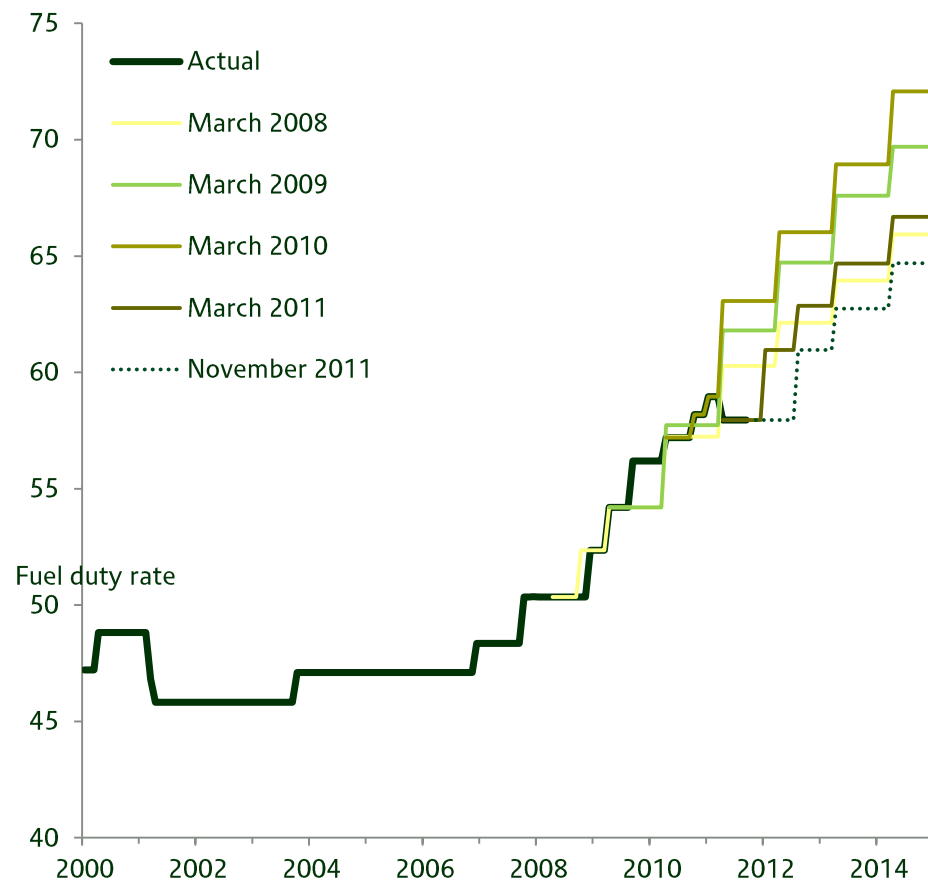
- Account for nearly 7% of tax receipts (£38 billion)
- The overwhelming majority comes from fuel duty.
 - Current rate of 57.95p/litre
 - VAT levied on top of this
 - 2011-12 receipts forecast at £32.4 billion
- Most vehicles are also liable for Vehicle Excise Duty
 - Since 2001, rates depend upon vehicle CO₂ emissions
 - Raises about £6 bn per annum
- Company cars and employer provided fuel are also taxed
 - Linked to vehicle CO₂ emissions
 - Annual payment

Fuel duty has risen and fallen over time



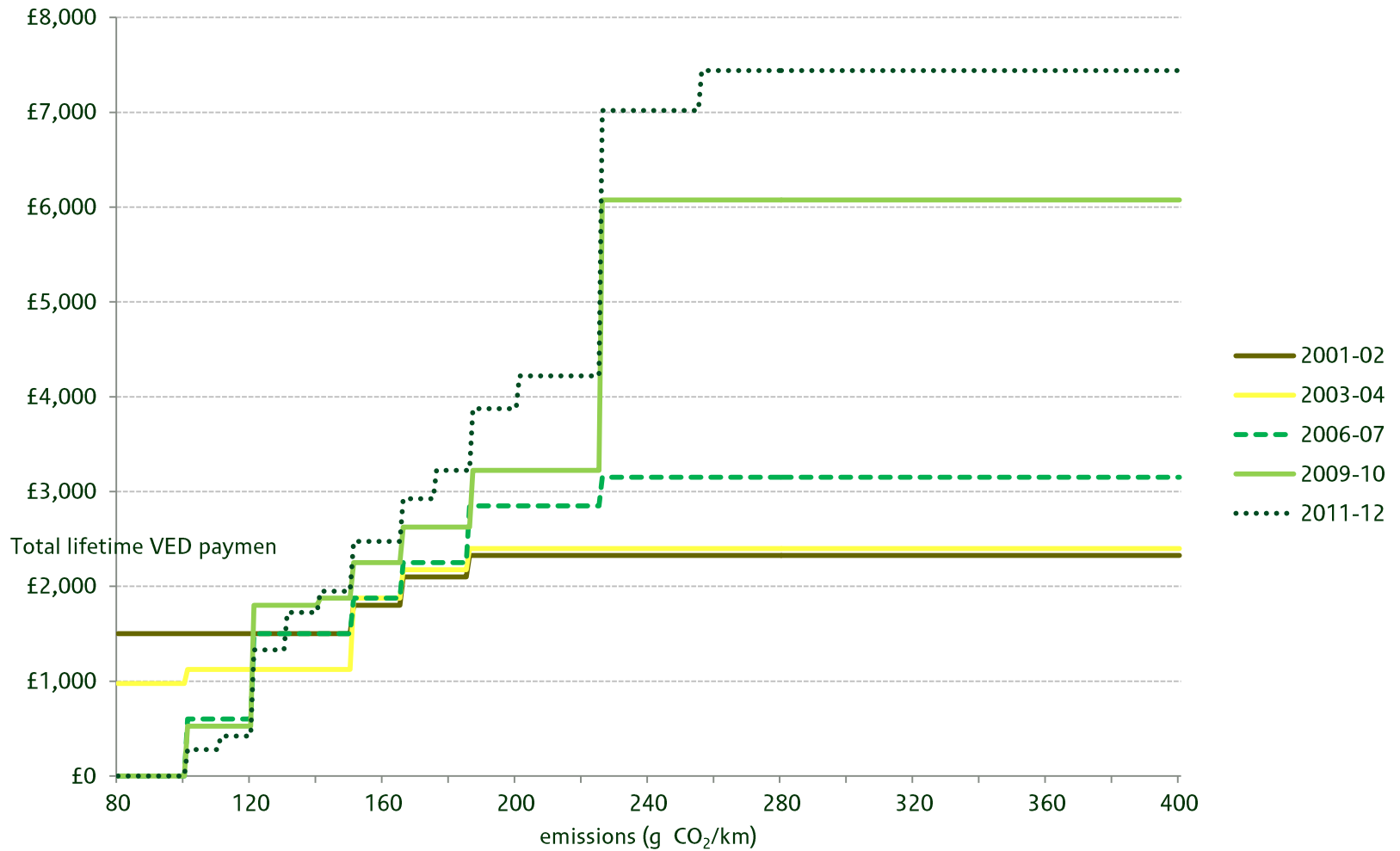
Fuel duty policy decisions

- Escalator – 1993 to 1999 and 2008 to 2010.
- Between 2000 and 2008, policy was extremely uncertain.
 - No real terms increases in this period
 - Inflation-only increases frequently delayed or scrapped
- Since 2011, policy has once again been uncertain.
 - Penny reduction in March 2011
 - Escalator scrapped
 - Delayed inflation-only increases in 2011 Autumn Statement



Vehicle Excise Duty

Annual rates vary up to £460 (£1,000 in year 1)



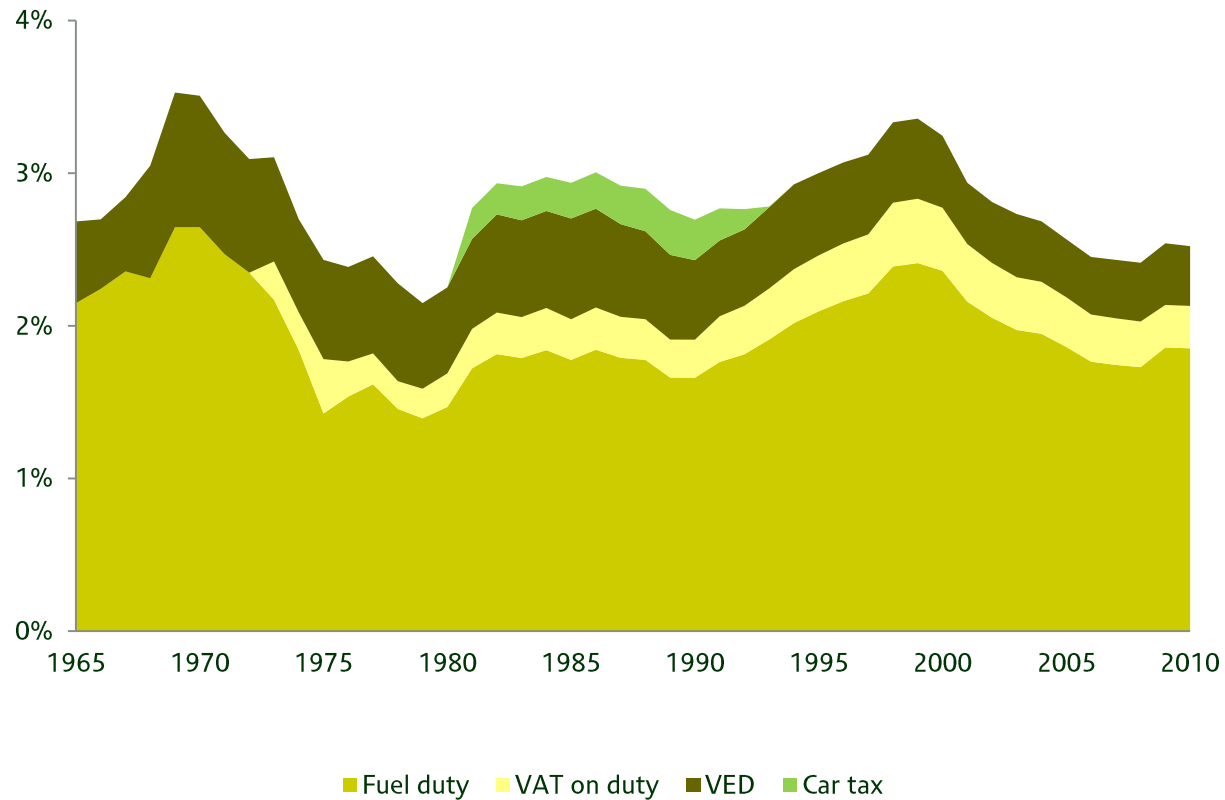
Very hard to know effect of differential VED rates



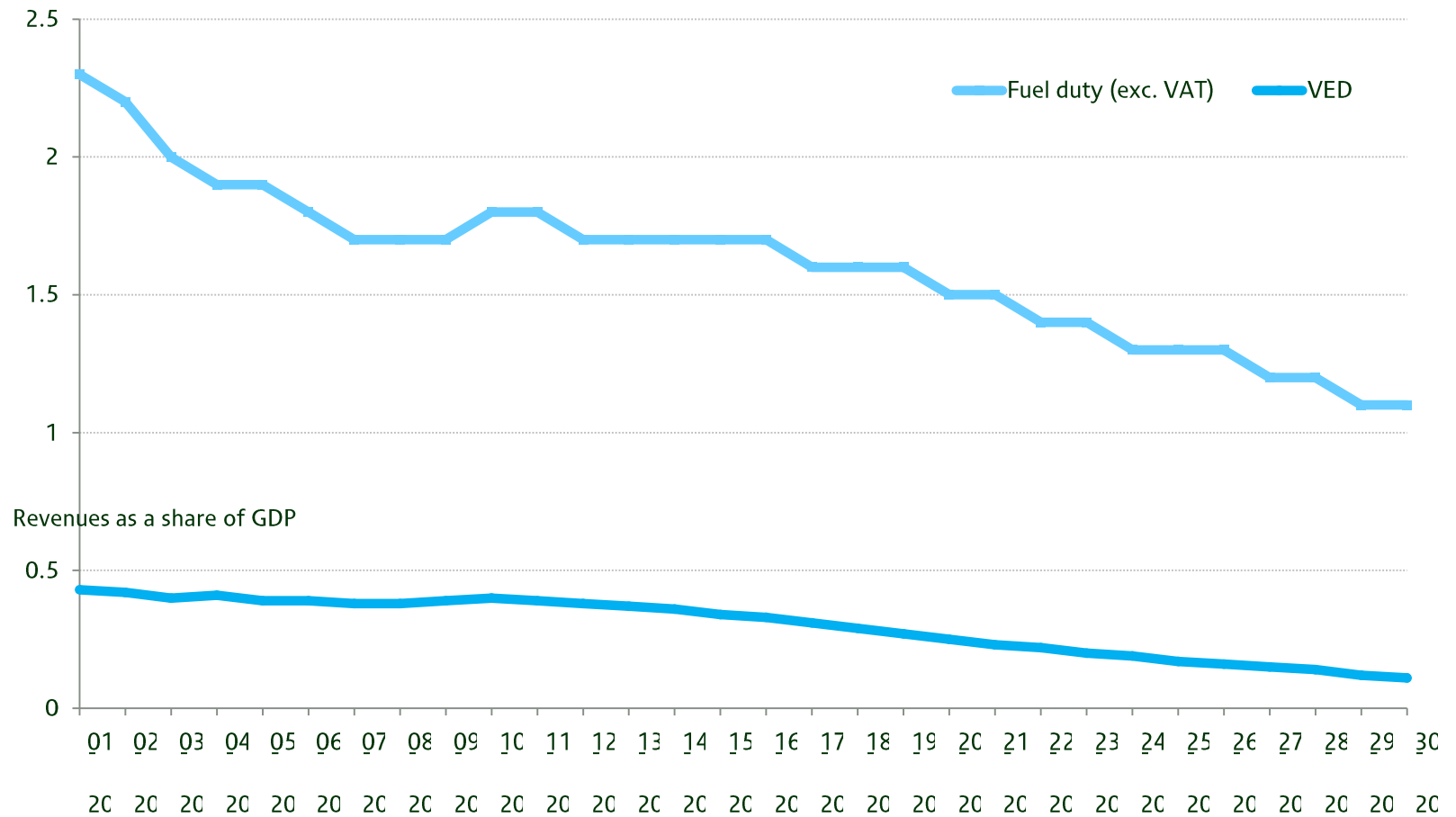
But new car emissions have fallen pretty fast

Falling revenues of greatest concern at HMT

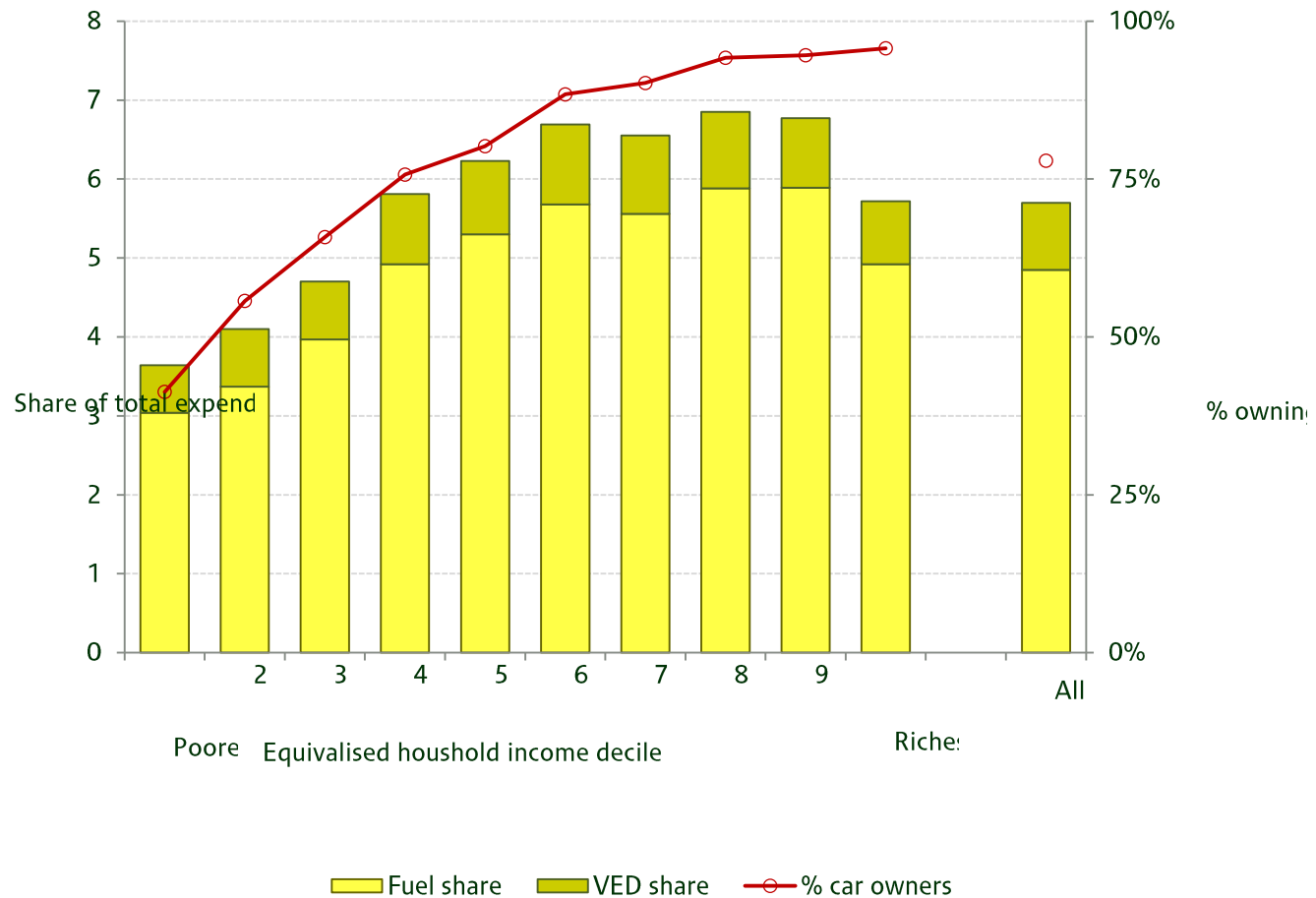
Revenues as a percent of GDP 1965 - 2010



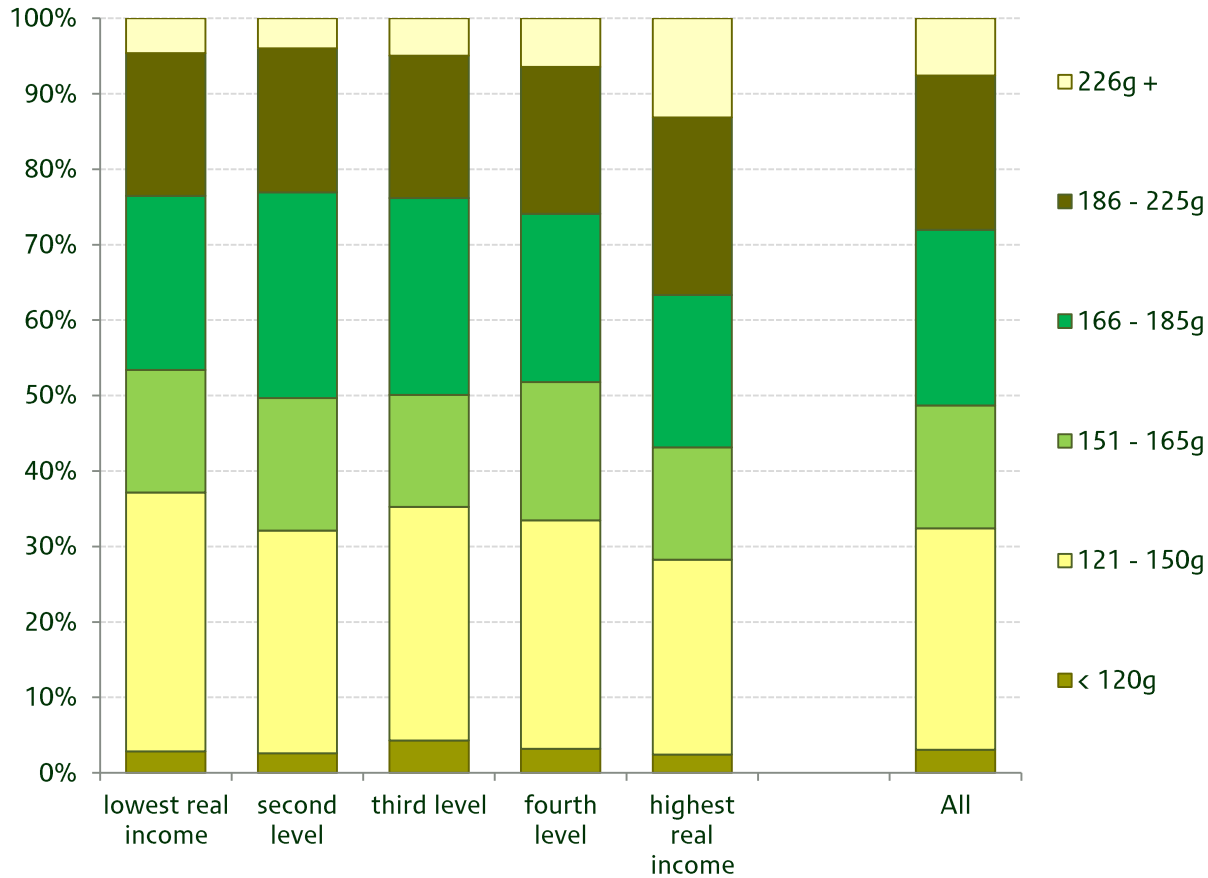
Becoming increasingly important



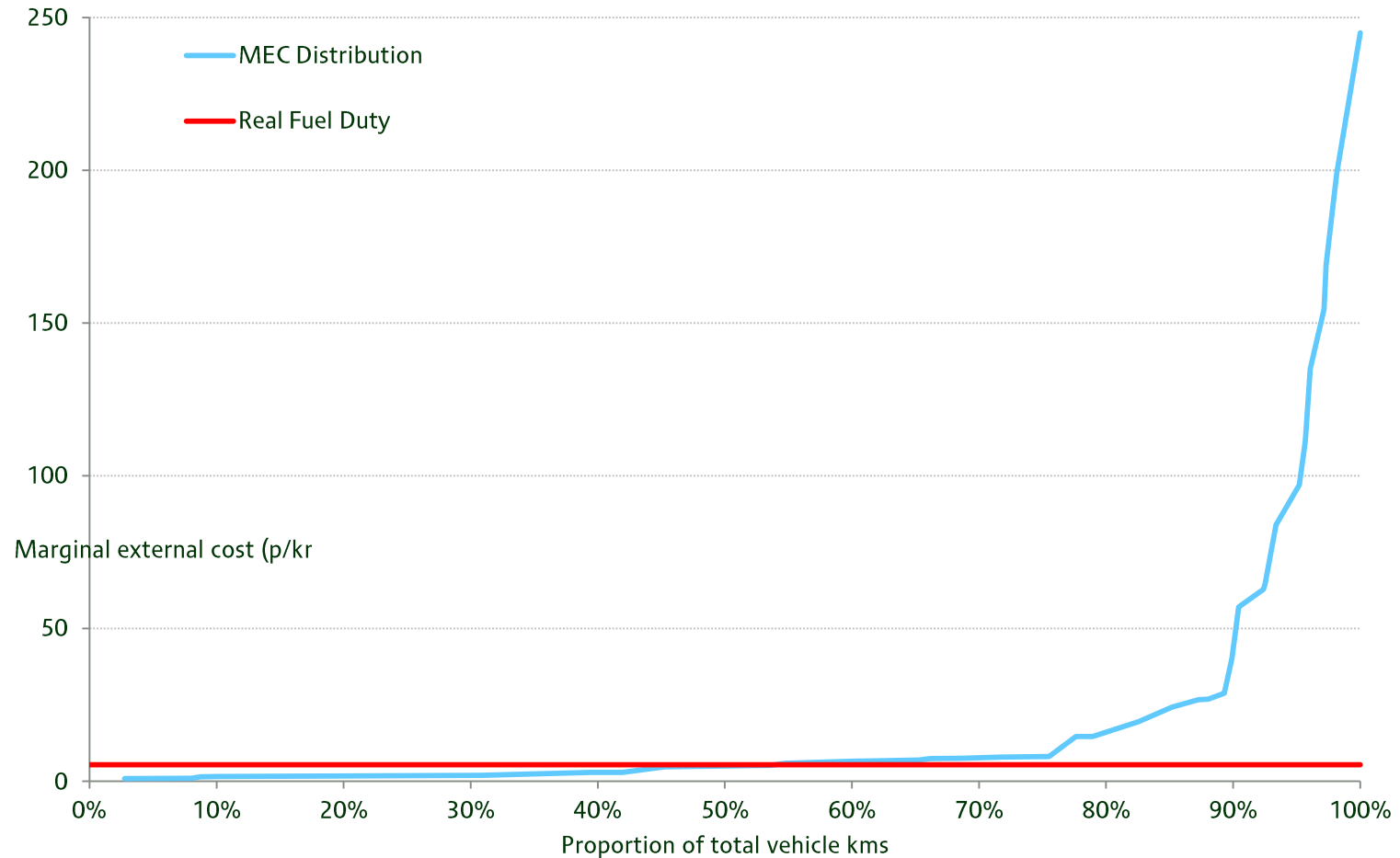
It remains the case that motor taxes are broadly progressive



But note limited relationship between emissions levels and incomes



Real problem is huge distribution of congestion costs – and bluntness of tax on fuel



Hard to read off an “optimal” fuel duty level

- Not just the average of the marginal costs
 - Those creating highest costs probably least price sensitive and most sensitive to the congestion
- But going forward optimal duty level will rise as:
 - efficiency improves,
 - cost of carbon increases and
 - costs of congestion rise

Some form of congestion charging is needed

- National scale road pricing clearly controversial and complex
 - But welfare gains are very big
- Much of the gain available from simpler systems
- Some proposals suggest multi-part instruments
 - Charging higher VED or petrol duties then rebating people who can show they have not driven in congested areas/times
 - Incentive compatible and introduces road pricing in “voluntary” manner

Conclusions

- Using limited instruments correct design and level of taxes is not straightforward
 - But excessive uncertainty and change no good
- Fuel duty is a very blunt instrument
 - And revenues will fall substantially over time
- Little evidence on effectiveness of differential VED rates
- Distributional issues may become more important
- Introduction of road pricing really does look like the only way forward