



# **Discussion of impacts on competitiveness and other metrics**

Sophie Cruickshank

Stern Review

# Structure of presentation

- Metrics looked at here are:
  - Competitiveness and carbon leakage
  - Potential impact on stability of permit price
  - Travel behaviour
  - Ability to secure emission cuts from transport
  - Security of supply
  - Fit with other transport policy measures
  - Fit with strategic objectives of EU ETS

# Competitiveness and carbon leakage

- To the extent that tax/trade policy raises the cost of fuel relative to costs faced by others abroad, firms lose competitiveness.
- Carbon leakage arises when there is an opportunity for arbitrage.
- Those potentially affected by a higher fuel cost in EU relative to outside EU:
  - Refineries
  - Businesses that use road fuel (e.g. direct consumers of fuel may be hauliers; indirect users could be supermarkets)

# Theory: effect of a cost increase on sectors and whole economy

What happens when cost rises (because either tax is increased or permit is levied)?

- **Firstly, prices adjust**
  - The cost increase may be passed on as higher fuel prices, or lower wages or profits in fuel industry. The ability to pass cost through is affected by:
    - Degree of tradability of output
    - Own-price elasticity of demand for the product
    - Concentration of firms in the market
  - The increase in fuel costs faced by businesses (e.g. hauliers) will be passed on as higher prices to their consumers, or lower wages or profits in their own business
  - This could have a knock on effect to costs faced by other businesses (e.g. supermarkets).
  - If permit price rises, this impacts on all EU ETS industries.

# Theory: effect of a cost increase on sectors and whole economy

- **Secondly, quantity adjusts**

- Demand for road fuel (and other products made more expensive) will adjust. For example:

- Haulier may reduce demand for fuel by changing their driving style or buying a more fuel efficient vehicle
    - Supermarket may start buying locally produced produce
    - Supermarket shopper may stop buying produce with lots of road miles.

- **Thirdly, fixed capital adjusts**

- If competitiveness is sufficiently damaged, businesses may relocate. For example:

- Refinery move from EU to non-EU area (if permits upstream)
    - Haulage business move to non-EU area.
    - Etc.

# **Additional impacts on competitiveness arising from grandfathering**

- Grandfathering can mean that industry profitability is protected from full burden of environmental policy
- Inconsistent permit allocation across EU countries will protect some industries more than others.

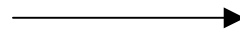
# Potential sources of carbon leakage

- If the cost of road fuel in the EU rises above cost in non-EU countries (whether due to a tax or trade system) then potential sources of carbon leakage are:
  - Imports of road fuel from non-EU countries (either from motorists fuelling up in non-EU countries or non-EU refineries exporting to EU).
  - Relocation of business from EU to non-EU area (unlikely?)

# Possible impact on stability of permit price

- Short run:

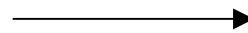
- New large purchaser of permit enters market;
- Uncertainty over relative abatement costs



Destabilise permit price

- Long run:

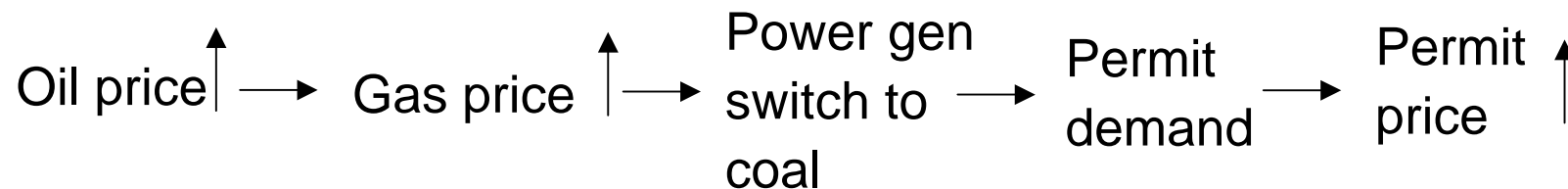
- More players makes scheme more liquid
- Road transport demand for permits would probably be large and predictable



More stable permit price

# Impact on travel behaviour

- Erratic fuel prices could make transport demand more erratic.
- Would trading make fuel prices more volatile?
  - Permit price and oil price could rise in step, e.g.:



# Ability to secure emission cuts from transport

- For road transport:
  - Trading might lead to less carbon savings than taxation because:
    - Nature of trading instrument
    - Coverage of trading instrument
  - Trading might lead to more carbon savings than taxation because:
    - If downstream permits, may be more effective at changing behaviour.
- But for *total* emissions, trading gives more certainty than taxation for achieving emission cuts.

# Security of supply

- Unclear whether tax or tradable permits are better for reducing dependence of transport on oil.
- Things that would reduce dependence on oil:
  - Higher fuel price
  - More innovation in low carbon technology
  - More behavioural change (e.g. achieved using downstream permits?)

# Fit with other transport policies and objectives

- Governments have other policy objectives for transport in, e.g.:
  - Air quality
  - Congestion
  - Social inclusion
- Not clear either tax/trade is inherently better/worse for these.
- Risk of double regulation in road transport.
- Distort the relative price of different modes?
- Would trading be in conflict with a deregulatory agenda?

# Fit with strategic objectives of EU ETS

- Is inclusion of road transport in EU ETS consistent with our strategic objectives for the scheme?
  - Possible trade off between widening and deepening?
  - Is road transport the top priority sector for inclusion?
  - Would it be better to demonstrate the merits of trading using a domestic scheme first?
- Deliverability: would we ever get EU25 to agree to it?

# Summary

- Carbon leakage could arise from imports of fuel from non-EU and relocation of firms.
- Competitiveness impact on refineries and hauliers will be dependent on ability to pass costs to consumers (crucially affected by tradability of fuel).
- Permit price may be destabilised initially, then more stable.
- Trading may be less effective at securing emission cuts from road transport than taxation.
- Unclear how including road transport in EU ETS fits with strategic objectives.

# [Extra slide]

## Distributional impacts of tax and trade

- Trading
  - Firstly, transfer of rents. If auctioned, the “polluter pays” and govt keeps the rents. If grandfathered, industry is being given an asset (windfall).
  - Secondly, cost pass through. Marginal cost passed through to prices/profits/wages.
- Tax
  - “Polluter pays” and govt keeps the rents.
  - Marginal cost passed through to prices/profits/wages.