

Competition with Partial Cover Price Ceilings

**Marco Haan, Maarten Pieter Schinkel, Simon van Tartwijk,
and Jan Tuinstra**

Discussant: Yossi Spiegel

Cresse, Rhodes, June 30-July 2

The problem

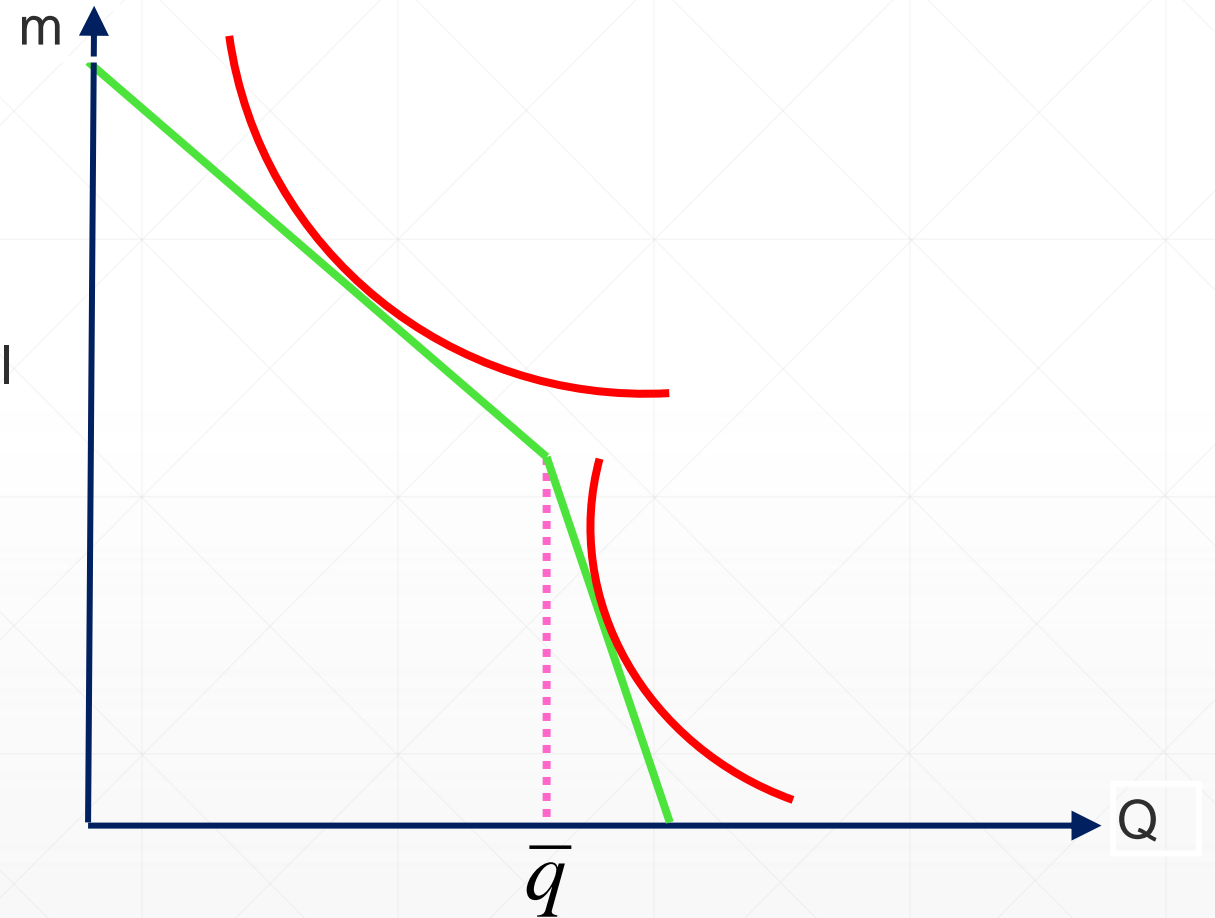
- A surge in the cost of supplying energy in 2022: how should the government respond?
 - Let prices increase?
 - Subsidize prices?
 - Subsidize firms?
- The Dutch government capped prices up to a ceiling
- Compensated firms for the "foregone profits" (the difference between their price and the price cap)

The main insight

- Many households pay the price cap and hence consume more than they should \Rightarrow inefficiency
- If firms are compensated for the foregone profit they have an incentive to raise prices:
 - When a firm raises its price it loses sales
 - But if consumers pay a price cap they are not affected by the price increase
 - Firms have an incentive to raise prices more than they would otherwise do:
 - High demand consumers who pay the actual price on the margin are harmed
 - The Government pays a large subsidy

Some comments

- Due to the price cap the budget constraint has a kink
- Low demand consumers pay the cap
- High demand consumers pay the actual price



Some comments

- Due to the price cap the budget constraint has a kink
- Low demand consumers pay the cap
- High demand consumers pay the actual price
- Medium demand consumers are at the kink
- There's bunching at the kink
- When the ceiling increases there may be more or less bunching



Another comment

- Suppose that we have a compensation scheme that pays firms the difference between m is the price cap for units sold up to the ceiling
- The firm's profit is

$$\pi = (m - c)Q^R + (p - c)Q^U$$

- The f.o.c for p is:

$$\pi' = (m - c) \frac{\partial Q^R}{\partial p} + (p - c) \frac{\partial Q^U}{\partial p} + Q^U = 0$$

- The effect of m on p :

$$\frac{\partial Q^R}{\partial p} \partial m + \pi'' \partial p = 0 \quad \Rightarrow \quad \frac{\partial p}{\partial m} = - \frac{\partial Q^R}{\partial p} \times \frac{1}{\pi''} < 0$$

- The result then holds very generally: by $p \uparrow$ the firm loses sales on which it earns $m - c$