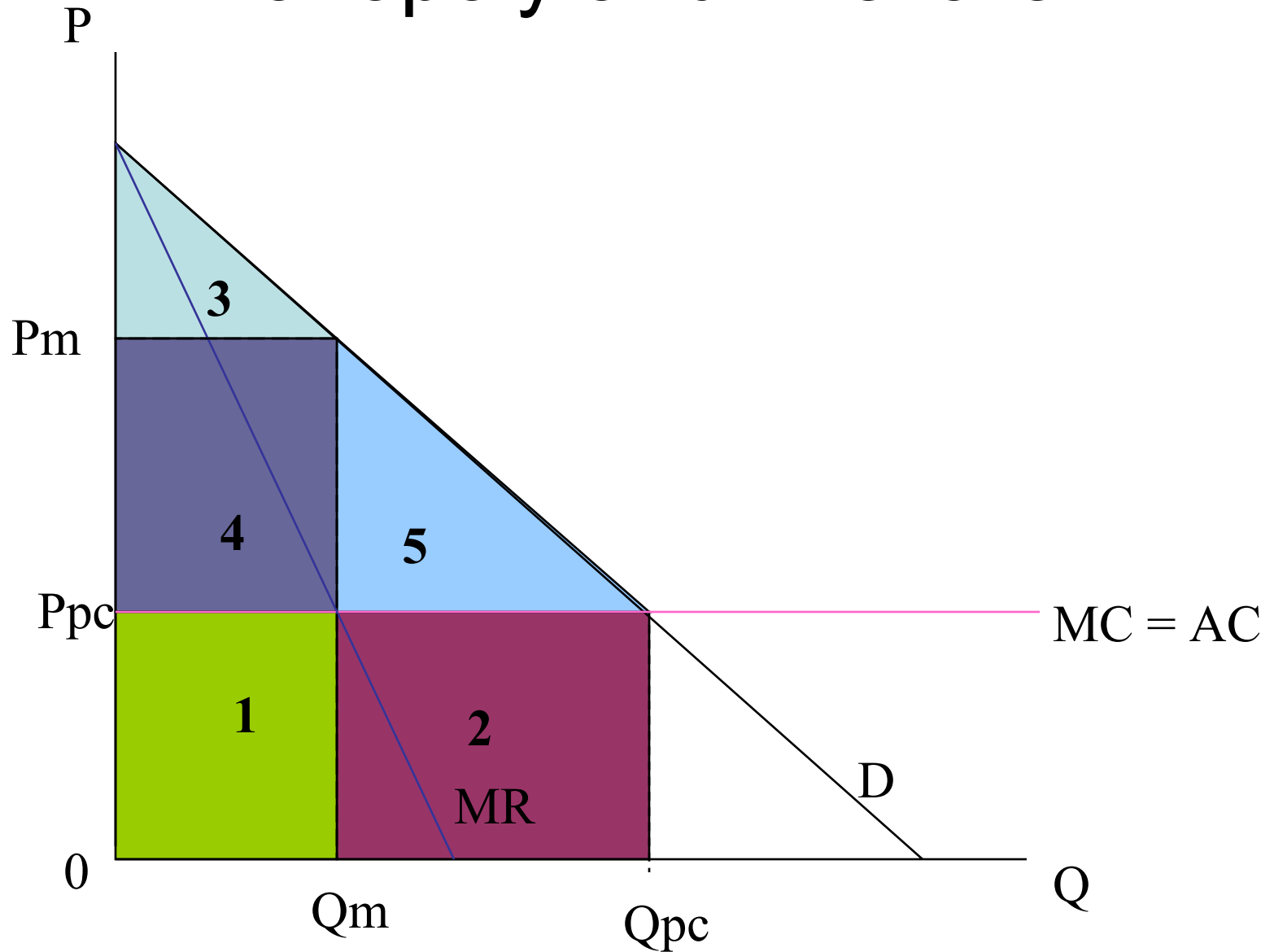


Monopoly and "welfare"



Is it necessary to intervene?

- Durable good monopolist (Coase, 1972)
 - Commitment problem
 - Most favored nation clause
- Contestable markets theory (Baumol et al. 1982)
 - Threat of entry
 - Monopoly incumbent prices at average cost
 - Realistic?
 - Price flexibility
 - Sunk costs
 - Switching costs
 - Network effects

Market power in practice

Firms' capacity to profitably raise price above marginal costs

1. Define the relevant market:
 - Set of products
 - Geographic areas
2. Assess market power

How to identify a “Market”?

- March 2002, Diageo won takeover battle for Seagram drinks business (\$8.15 bn)
- Other big rum producer: Bacardi

QUESTION: Are Seagram’s Captain Morgan (The Original Rum, spiced) and Diageo’s Malibu (Caribbean White Rum with Coconut) part of the same market?

Market Definition

- Census

- 316214: Women's footwear (excluding athletic)
- 3111111341: Dry and semi-moist dog food in bags >25lbs

- Legal (European Union)

"A **relevant product market** comprises all those products and/or services which are regarded as interchangeable or substitutable by the consumer, by reason of the products' characteristics, their prices and their intended use."

"The **relevant geographic market** comprises the area in which the undertakings concerned are involved in the supply and demand of products or services, in which the conditions of competition are sufficiently homogeneous and which can be distinguished from neighbouring areas because the conditions of competition are appreciably different in those areas".

SSNIP Test (Canada and US)

- Small significant non-transitory increase in price
- Thought experiment: suppose one firm controlled all products in the candidate market
 1. Would it be profitable to increase all prices by 5%?
 2. NO: If new prices don't give higher profits then need to add suppliers of substitute products to make it a market. ADD THOSE SUPPLIERS & GO BACK TO 1 .
 3. YES: If new prices give higher profits then have identified the market. STOP!
- Supply side substitutability

SSNIP Test weakness: The “Cellophane Fallacy”

- Are cellophane and other flexible wrapping materials in the same market?
- SSNIP test said... yes!
- Du Pont: dominant seller of cellophane investigated
- Price increase not profitable, precisely because of high market power!
- Problem: we should have asked relative to *competitive* prices and not *current* prices
- Still valid in merger cases
- Price correlation tests (Nestle / Perrier)
- Consumer surveys,

Measuring market power (1)

1. Lerner index $L_i = (p_i - C'_i)/p_i$

– Problems:

- Computation not feasible
- High marginal costs may be due market power

– But...

$$L_i = \frac{1}{\varepsilon_i}$$

“inverse elasticity rule”

Measuring market power (2)

2. Market shares

Concentration ratio (CR4): sum of the four largest firms' market shares

- **Canadian Merger Guidelines:**

“The commissioner generally will not challenge a merger on the basis of concern related to a coordinated exercise of market power when

- The post-merger market share accounted for the four largest firm in the market (CR4) would be less than 65 per cent.
- The post-merger market share of the merged entity would be less than 10 per cent.”

Measuring market power (3)

3. Herfindahl index (HI or HHI): the sum of the squared market shares of all firms in the industry

$$HI = \sum_{i=1}^N MS_i^2$$

- Examples:
 - 10 equally sized firms: $HI=10*(10)^2=1000$
 - 1 firm with 20% and 8 with 10%: $HI=(20)^2+8*(10)^2=1200$
 - 1 firm with 55% and 9 with 5%: $HI=(55)^2+9*(5)^2=3250$

Application of HI by US DoJ

US Department of Justice classification	Herfindahl index	DoJ “safe haven” for merger
“Unconcentrated”	HI < 1000	any merger
“Moderately concentrated”	1000 < HI < 1800	$\Delta HI < 100$
“Concentrated”	HI > 1800	$\Delta HI < 50$

ΔHI = Change in HI due to merger of firm i with firm j

Before merger, $HI = \text{Sum of squared MS of others} + MS_i^2 + MS_j^2$

After merger, $HI = \text{Sum of squared MS of others} + (MS_i + MS_j)^2$

$$\Delta HI = 2 * MS_i * MS_j$$

Market share measurement problems

- Present or future market share
- Excess capacity
- Entry
- Buyer power