Collusion and Horizontal Agreements
What is collusion?

- Agreements on sale prices
- Quota allocation
- Market segmentation

- Explicit collusion
- Tacit collusion

- Definition:
  “Situation in which prices are higher than some benchmark”
Colluder Problems

• Example
• Temptation to deviate
• Therefore participants need….
  – Ability to detect
  – Possibility of punishment
• Comparison between short-term deviating gains with long-term collusive gains
• Where should we coordinate?
When is collusion more likely?

• Incentive constraint

• Collusion is more likely to arise when...
  – Lower immediate gains
  – Lower profits after punishment starts
  – More weight to the future

• Factors relax or tighten incentive constraint
Factors (1)

- Concentration
- Entry (and entry barriers)
- Cross-ownership and other links among competitors
- Regularity and frequency of orders
- Buyer power
Factors (2)

- Demand elasticity
- Product homogeneity
- Symmetry
- Multi-market contacts
- Price observability
Collusion in Practice

• Difficult to infer from market prices:
  – Limited available data
  – Difficult to define monopoly price
  – How high is “too high”?
  – High prices may reflect high willingness to pay

• Evolution of prices?

• Soda-Ash case
What should be illegal?

- Explicit agreements
- Hard evidence
- Avoid exchange of price and quantity info

- Can we avoid tacit collusion?
  - Difficult to enforce
  - Need to coordinate leads to communication
Policies against tacit collusion

• Ex-ante policies:
  – High expected fines
  – Black list of facilitating practices
  – Merger analysis

• Ex-post policies:
  – Surprise inspections
  – Leniency programs
Joint ventures

• Example: research joint venture
• Similar to merger analysis: market power versus efficiency
• Research joint ventures:
  – Spillovers and non-rivalry
  – Avoid cost duplication
  – Lenient treatment in competition law