1.5: Measuring Market Power

Key concepts of the SCP paradigm (or "framework"):

- Relevant market
- Conditions of entry
- Concentration
- The collusion hypothesis

An alternative framework: The Chicago School

- Tradeoff analysis
- The efficiency hypothesis

Measures of concentration:

- Concentration ratio
- Herfindahl index
- Lerner index

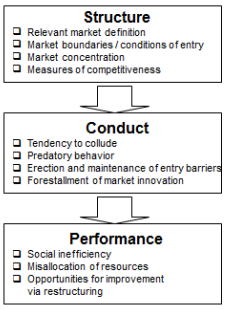
Degree of market power depends on three (four?) factors:

- Demand elasticity
- Market concentration
- Collusive behavior

(Conditions of entry?)

Relevant exercises: Problem Set 1, exercises 6 and 7.

The Structure-Conduct-Performance Paradigm



Measures of Industry Concentration

Concentration Coefficient:

$C_4 = \sum_{i=1}^{4} s_i$ where s_i is the market share of firm i

Herfindahl-Hirschman Index:

$HHI = \sum_{i=1}^{n} s_i^2$ where s_i is the market share of firm i

Sometimes calculated as $HHI = \sum_{i=1}^{n} s_i^2 * 10{,}000$

Lerner Index:

$L = \sum_{i=1}^{n} s_i * \left(\frac{p - MC_i}{p} \right)$ where s_i is the market share of firm i; p is the market price; MC_i is the marginal cost for firm i

Industry Structure: Beer

U.S. Beer Industry, 2005

	Shipments (000s barrels)	Market Share	
Anheuser Busch	101,840	43.2%	$C_4 = 72.4$
Miller	38,450	16.3%	
Coors	22,795	9.7%	
Heineken USA	7,385	3.1%	
Pabst	6,800	2.9%	$HHI \cong 2{,}264$
Gambrinus	5,914	2.5%	
Barton	5,090	2.2%	
InBev	3,990	1.7%	
Guinness	3,214	1.4%	
Yuengling	1,575	0.7%	
Boston	1,353	0.6%	
High Falls	500	0.2%	
Others	10,941	4.6%	
Imports	25,707	10.9%	
Total	235,554		

Source: http://www.beerinsights.com

Estimating the "Degree of Cooperation"
(Cabral, section 9.3)

	Market 1	Market 2	Market 3	Market 4	Market 5
Firm 1	100%	50%	70%	20%	12.5%
Firm 2		50%	15%	20%	12.5%
Firm 3			15%	20%	12.5%
Firm 4				20%	12.5%
Firm 5				20%	12.5%
Firm 6					12.5%
Firm 7					12.5%
Firm 8					12.5%
HHI	10,000	5,000	5,350	2,000	1,250
Cabral's H	1.00	0.500	0.535	0.200	0.125
Cabral's θ	1.00	2.00	1.87	5.00	8.00