Profits in Equilibrium

Chicago Price Theory Recap

1. Agents optimize given constraints
2. Preferences are stable
3. Markets tend toward equilibrium

Competitive Strategy

- Deep dive on (3)

- Longrun equilibrium is a moving target

- Shortrun equilibrium is a tautology

    - (Just like rationality!)
    - SR constantly moving toward LR
    - Chicago approach: SR != LR because of frictions

Shortrun vs. Longrun

- Other schools of thought name the SR vs LR difference

- Hakes & Sauer (2006) call it "mispricing"

    - Also Hakes & Sauer (2006): "Basic price theory implies a tight correspondence between pay and productivity when markets are competitive and rich in information, as would seem to be the case in baseball."
    - Chicago approach: So there are competition or information frictions!

Frictions in the Baseball Markets

- Productivity is hard to measure!

- What's the objective?

    - Classically economic profits
    - (Recall these include opportunity costs!)
    - If owner profits, how do you measure e.g. returns to reputation?
    - How do you adjust for risk?
    - Are the owner and manager incentives the same?
- OK, so suppose it's wins...

Figure 2

Frontier for Efficient Conversion of Team Salary into Team Winning Percentage, 1999–2003
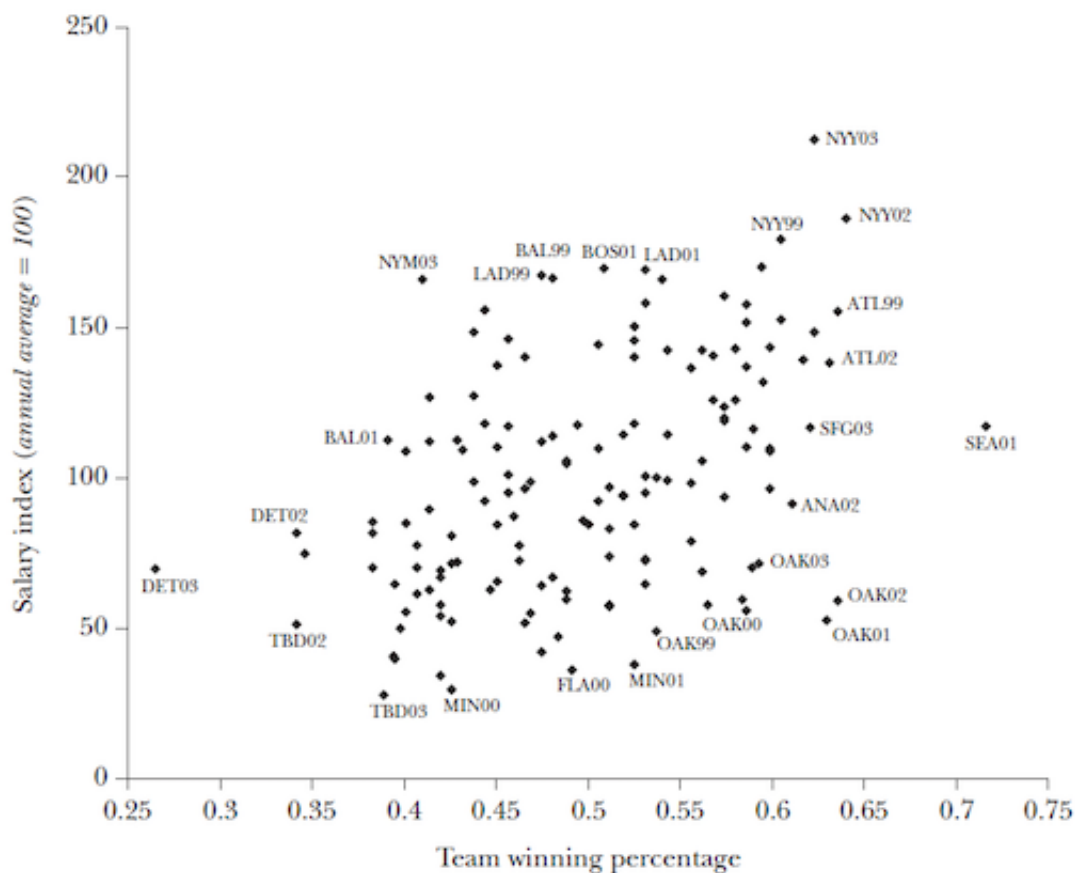
Understanding what causes wins is a kind of information. And evidently very valuable!

Table 3

The Baseball Labor Market's Valuation of On-Base and Slugging Percentage

	All Years	2000–2003	2000	2001	2002	2003	2004
On-Base	1.360	0.842	1.334	−0.132	0.965	1.351	3.681
	(0.625)	(0.678)	(1.237)	(1.230)	(1.489)	(1.596)	(1.598)
Slugging	2.392	2.453	2.754	3.102	2.080	2.047	2.175
	(0.311)	(0.338)	(0.628)	(0.613)	(0.686)	(0.850)	(0.788)
Plate appearances	0.003	0.003	0.003	0.003	0.003	0.003	0.003
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Arbitration eligible	1.255	1.242	1.293	1.106	1.323	1.249	1.323
	(0.047)	(0.048)	(0.102)	(0.100)	(0.100)	(0.111)	(0.115)
Free agency	1.683	1.711	1.764	1.684	1.729	1.663	1.575
	(0.044)	(0.185)	(0.096)	(0.092)	(0.097)	(0.107)	(0.105)
Catcher dummy	0.152	0.185	0.137	0.065	0.208	0.343	0.059
	(0.056)	(0.061)	(0.124)	(0.116)	(0.122)	(0.134)	(0.133)
Infielder dummy	−0.029	−0.007	0.060	0.069	−0.087	−0.054	−0.100
	(0.040)	(0.044)	(0.087)	(0.083)	(0.086)	(0.095)	(0.098)
Intercept	10.083	10.429	10.078	10.347	10.490	10.289	9.782
	(0.170)	(0.178)	(0.360)	(0.321)	(0.358)	(0.387)	(0.414)
Observations	1736	1402	353	357	344	342	340
R^2	0.675	0.687	0.676	0.728	0.695	0.655	0.635

Value of one-standard-deviation increase (in millions of dollars)

			2000	2001	2002	2003	2004
On-Base			0.14	0.16	0.17	0.19	0.49
Slugging			0.52	0.61	0.64	0.70	0.61

... but other teams learned very quickly once Michael Lewis published Moneyball (2003). Look at On-Base coefficient over time!

Takeaways

1. Markets tend toward equilibrium
2. Lots of value created and captured along the way
3. Key is to find valuable opportunities
4. And take advantage of them in full!

Questions for Next Week

1. How do you find these opportunities?
2. How do you keep the value going?

> The spice must flow...