Bargaining over Leasing Contracts: Strong by Privilege but Weak by Risk Aversion

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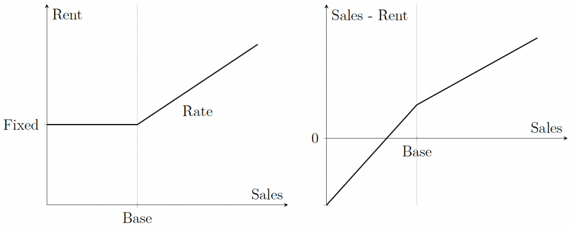
(Un)fair Trading in Complex Transactions

- Fair trading benefits the economy, and regulators like the FTC enforce it
- How can they detect unfair practices? $\rightarrow$ Clear evidence is required
  - Recordings of collusive meetings / High markups
- Problem: Real business transactions involve complex transfer schemes
- Example: Tenant leasing in shopping mall



(a) Share of Shopping Mall

(b) Share of Tenant

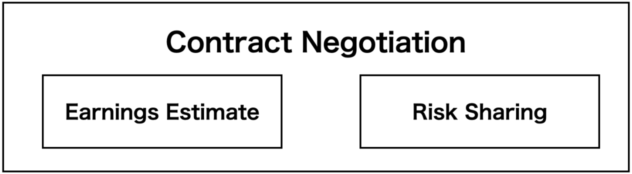
Figure 1. How Sales is Shared with Shopping Mall and Tenant

- Question: How does power balance appear in contract form?

Data Source

- Data covers two shopping malls over 6 years (2017-2023)
  - Managed by same company, by different managers
  - Located in same region (Western region of Japan)
  - One in downtown (*Mall 0*), one in suburb (*Mall 1*)
- For them, we have the following two data sources:
  1. performance data
  2. contract data
- They are used for actual leasing operation of the management company
- I focus on contract renewals not contracts with new entrants
  - In total, 226 tenants operate under 443 contracts

Background of Contract Negotiation



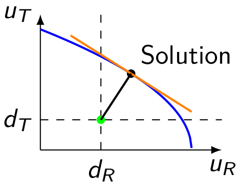
- Mall and Tenant has a negotiation table for a new contract term
- Each contract negotiation is composed of two tasks
  - **Earnings estimate**: Derive the sales distribution for the next period
  - **Risk sharing**: Shift the risk involved in the estimate toward each other
- Earnings estimate is not a simple observed average sales:
  - Tenant tries to increase the earnings estimate
  - Mall sticks to the realized sales history

Model of Contract Negotiation

Bargaining for Earnings Estimate → **Bargaining for Risk Sharing**

- The two tasks are sequentially resolved through separate Nash bargaining

- Reminder: **Nash bargaining solution**
  - Primitives: Bargaining frontier, Bargaining power ratio, Break-up point
  - Outcome: Surplus split between parties



- Solution concept: **Nash-in-Nash solution**
  - Multiple interrelated Nash bargaining problems are solved under "other problems fall into the Nash bargaining solution" assumption

- Two BP ratios for the first table and the second table
  - *Privilege* = First BP ratio ← Directly parametrized by covariates
  - Ratio of Risk Aversions = Inverse of second BP ratio ← Assumption

Result: More Privilege → Risk Averse → Favor Fixed Rent

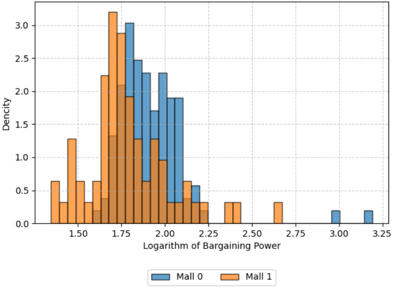


Figure: *Privilege*

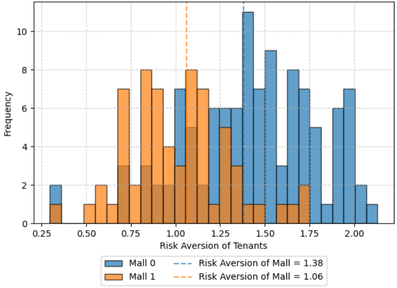


Figure: Risk aversions

- Mall 0 is more privileged due to high-traffic area
  → Earnings estimate is set to lower value
  → Commission component does not yield much rent
  → Mall manager emphasizes Fixed, i.e., she becomes more risk averse

Result: More Privilege → Forego Fixed Rent

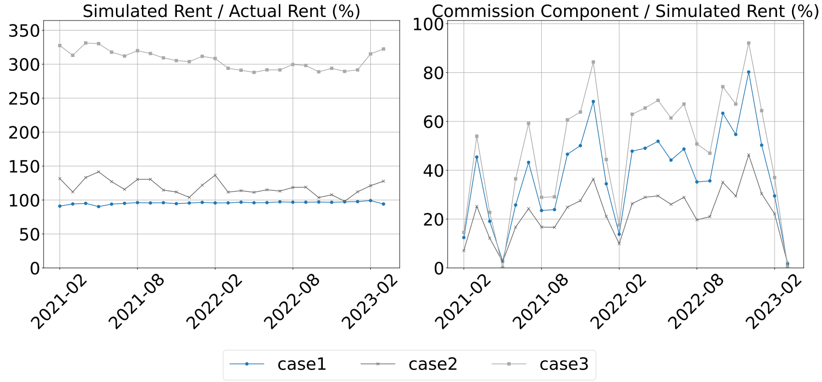
Mall	Mall 0			Mall 1		
Dep. Var	Rate	Base	Fixed	Rate	Base	Fixed
Avg. Sales	0.00204***	-0.135	0.00922	0.00533***	0.461***	0.0274
	(0.000720)	(0.0843)	(0.0134)	(0.000962)	(0.121)	(0.0202)
Var. Sales	0.000881	0.671***	0.0552**	-0.00307	-0.130	0.0299
	(0.00116)	(0.136)	(0.0216)	(0.00321)	(0.404)	(0.0675)
Privilege	-0.0480***	-2.987*	-0.0569	-0.0400***	-3.086**	-0.874***
	(0.0136)	(1.590)	(0.253)	(0.0101)	(1.275)	(0.213)
Risk loving	0.125***	-2.154	0.341	0.0985***	-1.350	-0.157
	(0.0121)	(1.416)	(0.225)	(0.00789)	(0.994)	(0.166)
N	90	90	90	62	62	62

- Findings:
  - Privilege leads to smaller fixed and lower base
    - Why? Privileged mall is more pessimistic about earnings estimate
  - Contract selection rule itself is consistent with risk attitude
    - Mall 0 (Risk averse): Large volatility → Higher Fixed
    - Mall 1 (Risk loving): Higher average sales → Higher base and Higher rate

Simulation Setting: Fairer Trade

- Situation:
  - Mall 0 potentially abuses its privilege when making contracts
  - Regulator enforces the fairer bargainings in renewal through warnings
- Question: How the amount of rent and its composition change?
  - Why is this an empirical question? → Two paths exist
    1. Weaker positions → Higher earnings estimate → Larger fixed rent
    2. Weaker position → Less risk averse → More commission component
- Scenarios:
  - Case 1: Replicate actual rents
  - Case 2: Mall 0's privilege is determined in the same way as in Mall 1
  - Case 3: Case 2 + Mall 0's risk aversion is set to the same value of Mall 1

Result: Fairer bargaining does not always lead to less rent



- Even in Case 2, the fairer situation does not always yield less rent
- In Case 3, I find sharp increase in commission component
- This increase could triple the amount of rent