Incentives in Organizations (and Between)

A. Pay for Performance
   1. Safelite Autoglass (NYT, 6/16/96)
   2. Classic Agency Model
   3. Lessons & Limits of Classic Model
   4. Performance Measurement Model
   5. Lessons & Limits of PM Model

B. Management Processes
   1. Lincoln Electric (HBS 376-028)
   2. Relational Contracts (Repeated Games)
   3. Credit Suisse First Boston (New Yorker, 7/26/93)
   4. Brainard, Bennis, and Farrell (HBS 9-495-037)
   5. Managing $w = s + bp + B(y)$
A1) Safelite Autoglass

— solo operators replace broken windshields
— no team prodn., little capital, almost perfect monitoring
— originally paid on salary $\rightarrow$ high turnover (costly) & “glass ceiling” = 3 windshields per day
— switch to piece rates $\rightarrow$ output up 40% (20% from same workers; 20% from switching workers)
— wages and profits up

— Economics works! (?)

— What is the underlying economics?
— How widely does it apply?
A2) Classic Agency Model

Production: \[ y = a + \varepsilon \]

Contract: \[ w = s + by \]

Payoffs: \[ \begin{align*}
P & : y - w \\
A & : w - c(a)
\end{align*} \]

A’s problem: \[ \max_a s + bE(y) - c(a) \]
A3) Lessons & Limits of Classic Model

Lesson 1: Margins matter

Q: total sales split vs. “franchising?”
A: 50-50 split of larger pie?

Q: contract shape (e.g., split above baseline)?
A: IBM vs. DEC

Lesson 2: Steeper slopes not always better

Risk-aversion → tradeoff between incentives and insurance
Limit 1: Motivation at $b = 0$?

- fear of firing
- career concerns
- raises, promotions
- tasks, authority
- intrinsic motivation

Limit 2: Agony of Pay for Performance

- Kerr: “On the Folly …”
- Heinz, Dun & Bradstreet, Sears, …
A4) Performance Measurement Model

“If you can measure it, that ain’t it.”

\[ y = \text{worker’s total contribution to firm value} \]

\[ p = \text{performance measurement} \]

\[ w = s + bp \rightarrow \text{incentives to increase } p \]

\[ = \text{incentives to increase } y? \]
Naive example:

\[ y = a + \varepsilon, \quad p = a + \phi \]

“Multi-task” problems:

\[ \text{actions} = a_1 \text{ and } a_2 \]

\[ \text{cost} = c(a_1) + c(a_2) \]

\[ y = a_1 + a_2, \quad p = a_1 \]

\[ y = a_1 \cdot a_2, \quad p = a_1 \]

\[ y = a_1, \quad p = a_1 + a_2 \]

\[ y = a_1 + \varepsilon, \quad p = a_2 + \varepsilon \]
A5) Lessons & Limits of PM Model

Lesson: A good performance measure induces valuable actions.

Corollary: Correlation of p & y is not the focus.

Limit: Just a formula; no judgment.

Q1: Who is paid only on formula?

Q2: Do formulas need managers? Why not outsource?
B1) Lincoln Electric

— piece rate (formula: “KPMG”)
— bonus (ideas, coop., …)

\[ w = s + bp + B(y) \]

— no ratchet
— employment security
— heavy screening
— closely held

— FIT: core comp. vs. core rigidity?
B2) Relational Contracts & Repeated Games

— informal agreement vs. formal contract

— water cooler vs. org. chart

— subjective bonuses, promotions, ...

One-shot game:

\[
\text{Player 1} \\
\text{Not Trust} \\
\text{Trust} \\
\text{Player 2} \\
\text{Honor} \\
\text{Betray} \\
\]

\[0 \quad 0 \quad 1 \quad 1 \quad -1 \quad -2\]

Repeated game:

\[C = \text{one-period payoff from keeping promise}\]
\[D = \text{one-period payoff from reneging on promise}\]
\[P = \text{one-period payoff from punishment after reneging}\]
\[r = \text{interest rate per period}\]

Optimal to cooperate if:

\[C + \frac{1}{r}C > D + \frac{1}{r}P\]

Lesson: Make relationship valuable (i.e., C-P large).
B3) Credit Suisse First Boston

— mid ‘80s: FB top player
— crash of ’87; collapse of M&A → CS
— Early ‘90s: FB underperforms;
  CS cuts bonuses;
  deep trouble
— What was the deal? \( w = s + B(y, Y) \)

Temporary fluctuations:

\[
C_t, D_t, P_t \text{ i.i.d. } \Rightarrow C_t + (1/r)\text{E}(C) > D_t + (1/r)\text{E}(P)
\]

*Lesson*: Manage extremes (*i.e.*, \( D_t - C_t \) large).

“Permanent” shocks:

IBM mainframes, FB junk bonds: low \( \text{E}(C) \)

*Lesson*: “Plan” for dissolution / change.
B4) Brainard, Bennis, and Farrell

— hard measures: hours billed & collected, originations

— soft concepts: quality of work, effect on firm’s reputation

— y vs. p ⇒ can’t use formula alone

— small partnership ⇒ large, diverse (corporate lawyers, litigators, tax, trusts, real estate)

— pay problem ⇒ leadership & strategy problems

— return to Cravath model? (WSJ, 1/13/97, p. B1)
B5) Managing \( w = s + bp + B(y) \)

- where do/should we see formula \( (w = bp) \)?
  
  — y vs. p: valuable actions?
  
  — role of manager? outsource?
  
  — dynamics \( \rightarrow \) subjectivity

- where do/should we see subjective bonus \( (w = B(y)) \)?
  
  — p misses quality, mentoring, teamwork, LR investments, unforeseen events, …
• where do/should we see salary system (w = s)?

— motivations: intrinsic, fear of firing, career concerns, and …

— more subjectivity: raises, tasks/territory, authority, “capital,” …

• keys to managing subjective bonus

— conceive

— communicate

— implement

— change