

A Theory of Fair CEO Pay

Pierre Chaigneau Alex Edmans Daniel Gottlieb

October 2024

Standard CEO Pay Models

- CEO only cares about consumption utility
- Edmans, Gosling, and Jenter (2023) survey: “Fairness concerns play an important role in both the level and structure of CEO pay”
 - CEOs “assess their pay against their expectation of a fair reward, rather than based only on the consumption utility it provides”

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What is Fair?

- Firm value is a key reference point
 - 75%/76%: flow pay should rise if “good recent CEO performance”
 - * “The retrospective acknowledgement of exceptional performance is important”
 - 79%/84%: incentive pay is “so that the CEO shares risks with investors and stakeholders, even if out of the CEO’s control”
 - * Most popular reason for no RPE is “the CEO should benefit from an industry upswing, since investors and stakeholders do”

Other Evidence on Fairness

- Ultimatum game
- Hertzberg (1959): pay is a hygiene factor; unfair pay is a demotivator
- Fehr, Kirchsteiger, and Riedl (1993), Rabin (1993), Fehr and Schmidt (1999), Charness and Rabin (2002), Sobel (2005), Fehr, Klein, and Schmidt (2007): fairness models where agents are
 - All paid in the same units
 - Concerned with others' utility
 - Dislike inequity

The Model

- Standard one-period principal-agent model
- Timeline:
 - $t = 0$: manager exerts $e \in [0, \bar{e}]$ at cost $C(e)$
 - $t = 1$: $q \in [0, \bar{q}]$ realized; manager paid $w(q)$ where $0 \leq w(q) \leq q \forall q$
- Principal minimizes cost of contract s.t.
 - IC: manager exerts at least e^T
 - IR: manager accepts contract; outside option is $\bar{U}$
 - LL and monotonicity: $0 \leq w(q) \leq q \forall q$ and $w'(q) \geq 0 \forall q$
- Manager's utility function is $u(w, q)$

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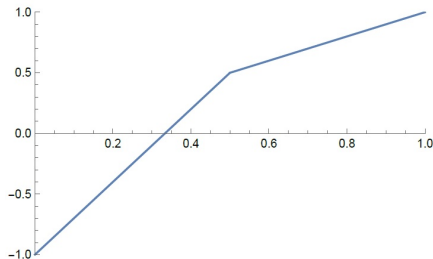
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Linear Model

- [illegible]

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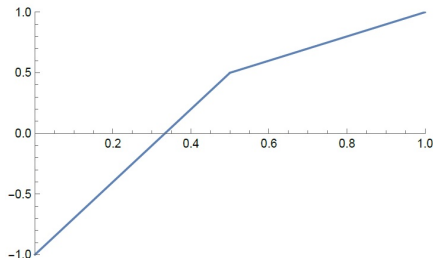
- $u(w, q) \equiv w - \gamma \max \{w^*(q) - w, 0\}$
 - $w^*(q) \equiv \rho q$ is the perceived fair wage
- $q = 1, \rho = 0.5, \gamma = 2$



- Similar to loss aversion, but reference point depends on output
 - De Meza and Webb (2007): median of wage distribution
 - Dittmann, Maug, and Spalt (2010): last salary (+ inherited equity)

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Optimal Contract, No Moral Hazard

- Fix $e^T = 0$. If $\bar{U}$ is sufficiently high and $C(\hat{e})$ is sufficiently low, the principal implements $e^* > 0$
 - Contract involves financial incentives even if they're unnecessary
 - Principal obtains effort for free
- In Holmström (1979), higher effort is always costly to the principal
 - Any $e \in [0, \bar{e}]$ can in principle be optimal
- With fairness concerns, low effort levels may never be optimal.
Requires either:
 - Unfair wages for high outputs (violates IR)
 - Above fair wage for low outputs (costly)
- Without fairness concerns, it's costly to incentivize high effort; with fairness concerns, it can be costly to incentivize low effort
- Oyer (2004) retention model: sensitivity on upside but not downside

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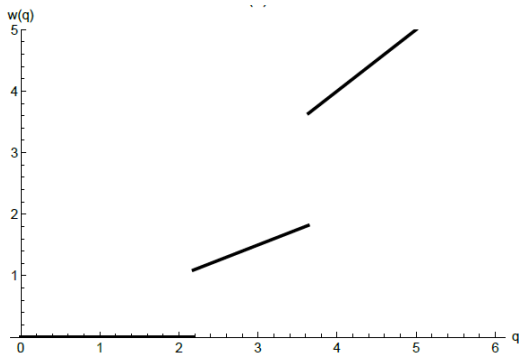
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Optimal Contract

$$\bullet \ w(q) = \begin{cases} 0 & \text{for } q < q_m \\ w^*(q) & \text{for } q \in [q_m, q_M) \\ q & \text{for } q \geq q_M \end{cases}$$



Optimal Contract

- Might think fairness concerns motivate fair wages: $w^*(q) \forall q$
 - But threat of unfair wages is a powerful motivator. Punish manager with most unfair possible wage for low output (negative LR)
 - For high output, pay the entire output even though more than fair. Concentrate rewards in the highest LR state
- With $\gamma = 0$, $q_m = q_M$ so contract is “live-or-die” as in Innes (1990)
- With $\gamma > 0$, suboptimal
 - Doesn't satisfy IR efficiently: manager sometimes receives unfair wage
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- Threshold q_m is decreasing in γ : manager receives fair wages over a larger range of outputs

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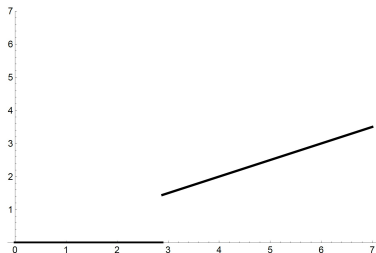
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Optimal Contract (cont'd)

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- Manager receives **performance shares**: shares worth ρq , forfeited if $q < q_m$

Discontinuous Contracts

- In standard models where LR is continuous in output (e.g. Holmström, 1979), optimal contract is continuous in output
- In Innes (1990), optimal contract is discontinuous if no monotonicity constraint, but all-or-nothing
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 - PPS is 1
 - No discontinuities
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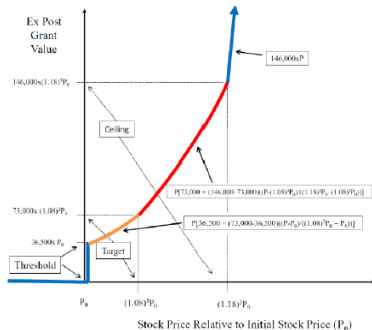
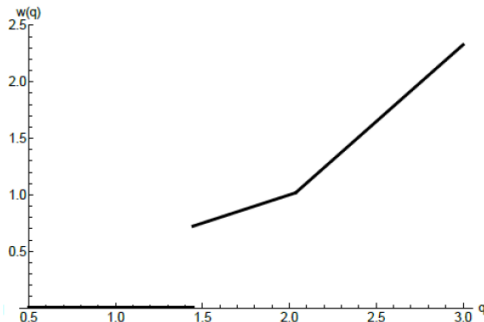
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Nonlinear Model

- Utility function that is weakly concave above the fair wage and weakly convex below



Conclusion

- First step in introducing fairness into CEO pay, where reference point is proportional to firm value
- Fairness concerns may motivate unfair pay to induce effort
- Optimal contract resembles performance shares: discontinuous without monotonicity constraint; not live-or-die
- Incentive pay is justifiable even without incentive concerns; some effort levels can be induced for free

Other Potential Reference Points

- How important are the following factors in determining the level of pay for a new CEO?

	Directors	Investors
The new CEO's ability	1.28	1.49
CEO pay at peer firms	0.83	0.46
How attractive our firm is to run	0.76	0.61
The new CEO's other employment options	0.55	0.26
The new CEO's pay in their previous position	0.28	-0.21
How financially motivated the new CEO is	0.06	-0.23
The outgoing CEO's pay	-0.01	-0.55

- DeMarzo and Kaniel (2023) and Liu and Sun (2023): relative wealth concerns

Other Extensions

- Last year's pay as a reference point
 - May be similar to costly adjustment models
- Shareholders have fairness concerns
 - Inequity aversion would have no bite as shareholders would always want to lower pay, as in a standard model