Outside employment opportunities and tournament incentives

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Motivation

Pay gap/inequality, in different forms, is of interest to academics and regulators

Pay gap arising from the relative positions (rather than the absolute performance) within a firm, however, can introduce incentives

Rank order tournament incentives:

- Lazear and Rosen (1981): In a competitive economy, the promotion of subordinates is alike a tournament
- The winner, with the best relative performance among candidates, can receive the pay gap as the tournament prize

The CEO position attracts the highest pay and reputation within a firm. Also, the executive pay gap (internal tournament) is particularly significant between vice presidents (VPs) and CEOs

- The internal tournament induces VPs to exert effort and boost their willingness to take risk
- Empirical studies in economics, finance, and management areas find that the pay gap is associated with many firm-level outcomes, e.g., performance (Kale et al., 2009) and risks (Kini and Williams, 2012)

However, evidence on the determinants of the pay gap is still scant

Theoretical Predictions

We argue executive mobility is an important determinant of internal tournaments

Intuitions:

- In a mobile market, VPs are also incentivized by employment opportunities outside the firm (external tournaments)
  - CFO mobility is higher and has increased faster than CEO mobility since the last century (Graham et al., 2020)
  - 40% of the VPs in S&P 500 firms become CEOs after moving across firms (Kale et al., 2014)
- VPs are more likely to be active participants in internal tournaments when the external labor market is less mobile

We use the variations in the U.S. state-level enforceability of non-compete agreements (NCAs) as a shock to executive mobility. Stronger (weaker) enforceability expects to decrease (increase) mobility

Predictions:

- An increase in NCA enforceability may lead to a larger pay gap:
  - A larger pay gap enhances the utility associated with future promotions and makes up for the lost external opportunities of VPs
  - A more competitive internal tournament is useful to find an ideal CEO candidate when external recruitment is difficult
- An increase in NCA enforceability may not lead to a larger pay gap:
  - VPs are motivated to perform better in their current jobs given the fewer outside opportunities
  - Executives face higher dismissal risks under stricter NCA enforcement (Kini et al., 2021; Lin et al., 2022)

Institutional setting

Non-compete Agreements (NCAs) are frequently used in employment contracts to prevent employees from working for competitors in the future to protect legitimate business interests

However, the extent of their restrictiveness is determined by the state laws. For example, even if over half of the S&P firms in California use NCAs, the state has long had a tradition of not enforcing them

We follow the existing metrics as Malsberger (1996) and Garmaise (2011) and consider answers to twelve questions to evaluate and track the change in the state-level NCA enforceability. In our sample:

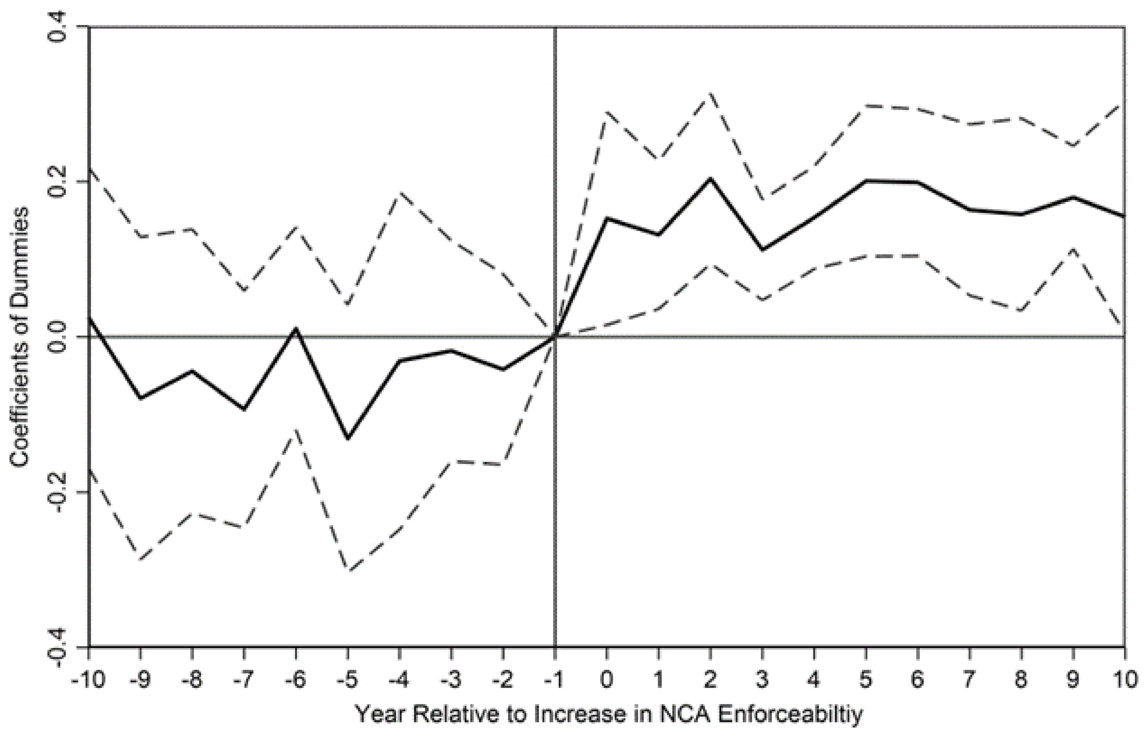
- Nine (six) states have experienced increases (decreases) in NCA enforceability
- VP turnover decreases (increases) by about 29.7% (19.1%) when the enforceability gets stronger (weaker)

Sample & Main Results

Sample:

- Data of S&P 1500 Companies (excluding financial and utility firms) are mainly from ExecuComp, BoardEx, Compustat, and CRSP
- 2,368 unique firms from 1993 to 2018

The effect of increases in NCA enforceability on executive pay gaps:



Baseline results:

	Ln (Total Gap)	
NCA Enforceability Up	0.184***	0.185***
	(5.06)	(5.13)
Observations	28,449	28,449
R-squared	0.620	0.637
Controls	No	Yes
Firm FE	Yes	Yes
Year FE	Yes	Yes
State FE	Yes	Yes

- Average pay gap for treated firms increases about 20.3%, \$0.70 million equivalent (sample mean = \$3.44 million), compared to the control firms
- Robust to: propensity score matched sample, alternative specifications (Callaway and Sant'Anna (2021) estimator, stacked regression), and falsification tests
- Heterogeneity: The substitution effect is stronger if: Within-firm promotion expectations are limited or across-firm movements are more rewarding, VPs have more significant outside job opportunities, or in years close to CEO forced turnover events
- Rule out the following plausible alternative mechanisms: CEO power, Talent differentials, and CEO bargaining power

Asymmetric effects

- A reduction in NCA enforceability has negative but weaker effects on executive pay gaps
  - Firms are reluctant to reduce CEO pay, because of considerations of incentives (Dittmann et al., 2011) or perception of fairness (Edmans et al., 2023)

	Ln (Total Gap)	
NCA Enforceability Up (a)	0.185***	0.185***
	(5.09)	(5.10)
NCA Enforceability Down (b)	-0.082**	-0.060**
	(-2.63)	(-2.28)
p-value ($a+b=0$)	(0.04)	(0.01)
Observations	28,449	28,449
R-squared	0.620	0.637
Controls	No	Yes
Firm FE	Yes	Yes
Year FE	Yes	Yes
State FE	Yes	Yes

Firm value implications

- A trade-off on the firm performance under stricter NCA enforcement due to:
  - Restrictions on the talent reallocation (↑)
  - More competitive internal tournament (↓)
- Stock-market-based evidence: long (short) in a portfolio comprising treated companies with (without) increased pay gaps generate positive abnormal returns

	Pay gap change (year $[t-1,t]$)		Pay gap change (year $[t-1,t+1]$)	
	(1) Equally Weighted Portfolio	(2) Weighted Average Portfolio	(3) Equally Weighted Portfolio	(4) Weighted Average Portfolio
Alpha for holding:				
12 months	1.140%*	1.365%*	0.837%	1.214%*
	(1.77)	(1.85)	(1.13)	(1.87)
24 months	0.907%**	0.931%*	1.015%**	1.081%**
	(2.07)	(1.84)	(2.23)	(1.99)
36 months	0.913%***	0.842%**	0.832%**	1.180%***
	(2.61)	(2.09)	(2.59)	(2.83)
Observations	264		252	

Conclusions & Contributions

Conclusions

- A positive shock to the NCA enforceability causes a significant decrease in executive turnover and, more importantly, an increase in the pay gap
- A widened pay gap capturing tournament incentives can protect shareholder value from the negative effects of a less mobile managerial labor market

Contributions

- Provide the first *direct* evidence showing a substitution effect between external and internal tournament incentives for top executives
- Extend the related topic on the effects of labor mobility on managerial compensation (e.g., Chen et al., 2022; Kini et al., 2021)
- Focus on the internal labor market of executives and show the firm value implications of this practice