How do trends in executive compensation spread?

Evidence from executive ownership guidelines

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Trends in compensation

- Key examples (cf. Murphy, 2012):
  - 1980s : Golden parachutes
  - 1990s : Equity-based pay and stock options
  - 2000s : “Clever” compensation
  - 2010s : Pay Restrictions
- Some proposed causes:
  - Firm characteristics (Gabaix and Landier 2008)
  - Managerial power (Bebchuk and Grinstein 2005)
  - CEO labor market (Murphy and Zábojník 2008)
- This paper examination dissemination mechanism

Contributions

1. We document a pervasive phenomenon over time
   - Executive ownership guidelines
2. We examine how this practice spreads through S&P-1500 firms
   - Relatively clean experimental setting
3. We find board members disseminate compensation practices based on their previous experience
   - Link between board connections and compensation policy

Trend: Executive ownership guidelines

- Managers should own minimum amount of stock
- $ multiple of salary (in 80% of the cases)
- Typical motivation (from the proxies):
  1. prevent managers from selling shares
  2. increase LT shareholder value.
- Confirmed for 1992-1995 by Core and Larcker (2002)

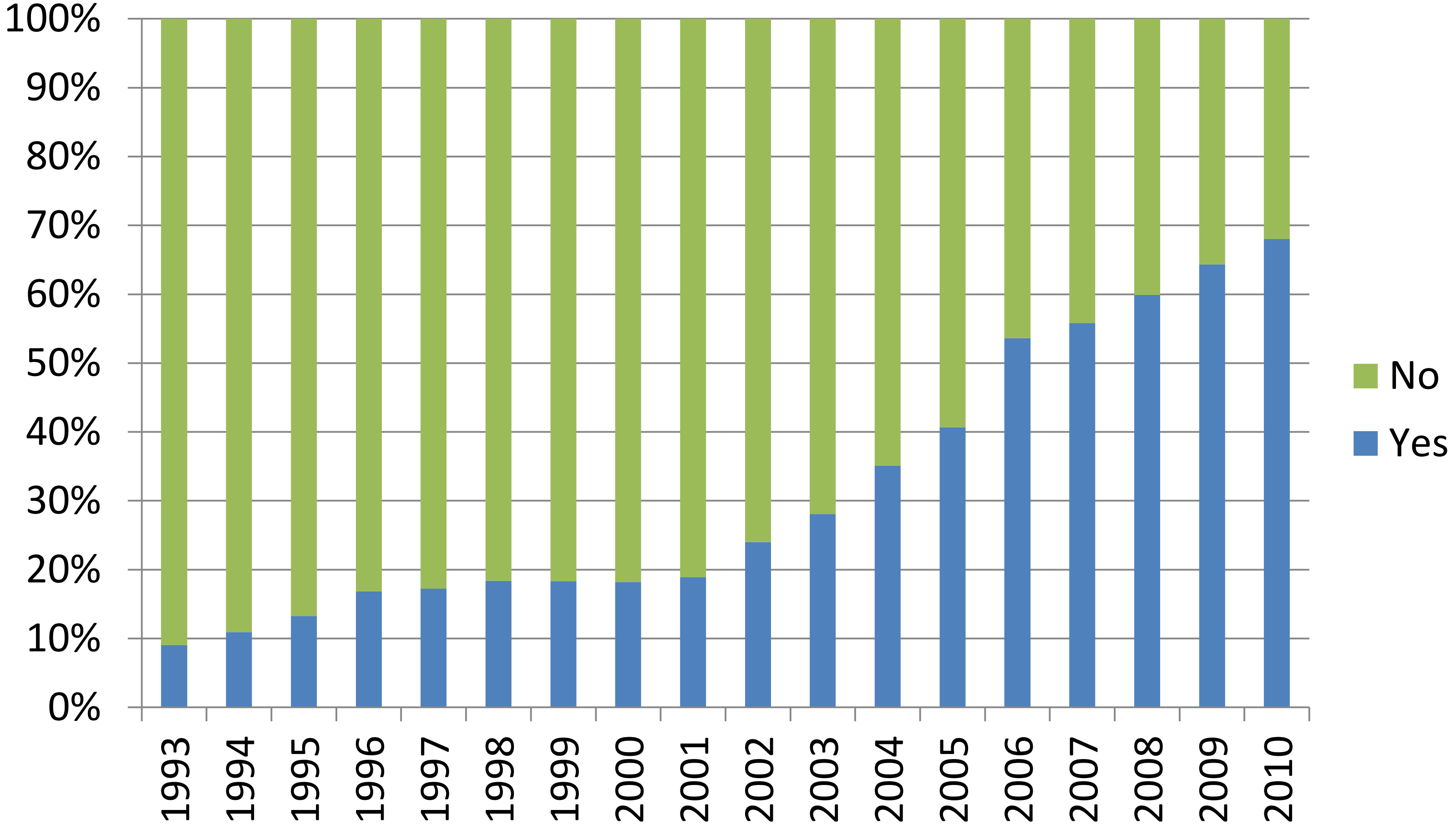
An example

4. Stock Ownership Guidelines. We require our senior executive officers to own significant amounts of GE stock. The number of shares of GE stock that must be held is set at a multiple of the officer's base salary rate as of September 2002, when the board of directors adopted this requirement. For senior executive officers elected after September 2002, the number of shares depends upon their base salary effective with their promotion to a senior executive officer position, as follows:

Position	Multiple	Time to Attain
CEO	10X	4 years
Vice Chair	5X	4 years
Senior VPs	4X	5 years

Executive ownership guidelines

- All S&P 1500 firm, 1992-2010:



EOG features

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Individual and joint holdings of GE stock with immediate family members as specified by the committee, including those shares held in the Company's 401(k) plan and any deferred compensation accounts, count toward the guidelines.

1. Long grace period

2. No penalties (next)

3. Can be changed (next)

4. Counting policies? (next)

2. Consequence of noncompliance

- Penalties are rarely explicit
- If explicit, EOGs typically require CEOs to retain 50% of new stock awards
- *Q*: Are there CEOs who
  - did not comply in the previous fiscal year
  - are not in their grace period
  - meaningfully increased ownership by open-market share purchase?
- *A:* 1 CEO from 2006-2010

3. EOGs can be changed

"With the onset of severe economic and market conditions in 2008, stock ownership guidelines were suspended." (2009 proxy)

4. What counts towards EOGs?

	Unspecified	Stock Options			Restricted Stock			Deferred Shares	
		Yes	*No*	*Vested*	*Yes*	*No*	*Vested*	*Yes*	*No*
1995	134	2	2	0	1	0	0	0	0
2000	248	3	6	1	5	0	0	4	0
2005	562	4	23	3	17	2	3	10	0
2010	982	16	52	14	66	1	15	63	2

EOGs and actual multiples

Given these features, actual compliance is high:

Shares owned times price, divided by salary

	Mean	Med.	10th Pct	90th Pct	Std Dev	%Compl.
1995	29	11	3	38	92	82%
2000	38	9	2	66	126	80%
2005	67	13	3	79	276	77%
2010	69	11	2	46	660	78%

EOGs and actual multiples

	No options, No restricted stock	With options, No restricted Stock	Restricted stock, Unexercisable Options
	%Compliance	%Compliance	%Compliance
1995	82%	91%	45%
2000	80%	83%	45%
2005	77%	83%	59%
2010	78%	89%	53%

So do EOGs improve ownership/performance?

EOGs do not increase ownership

`	Change in number of shares owned (t+1)			
Predicted EOG dummy (000)	0.558	0.659	-3.552	2.018
	(1.942)	(1.773)	(7.614)	(24.028)
EOG * (#new options awarded)	-0.394			-0.904
	(1.356)			(11.986)
EOG * (#options exercised)		-0.257		0.108
		(0.714)		(0.480)
EOG * (#restricted shares)			8.079	-3.586
			(17.733)	(43.843)
#new options awarded	-0.228			0.097
	(0.458)			(2.544)
#options exercised		-0.492**		-0.478*
		(0.193)		(0.515)
restricted shares			-0.296	0.149
			(0.680)	(1.421)
Stock return during the year	2.693***	2.432***	1.711	3.308***
	(0.814)	(0.699)	(1.362)	(2.960)
Intercept (000)	-0.237	-0.201	0.757	-0.332
	(0.656)	(0.588)	(1.532)	(4.532)
Number of observations	18291	21992	14527	11221
Adjusted R-squared	0.000	0.002	0.000	0.000

Ofek and Yermack (2000)

EOGs do not improve performance

334 J.E. Core, D.F. Larcker / Journal of Financial Economics 64 (2002) 317–340

1992-1995, Execucomp firms	*n*	Mean	*p*-value	Median	*p*-value
Panel A Operating performance					
Excess ROA computed using operating income after depreciation:					
Year 0	138	0.0%	0.463	0.0%	**0.268**
Year 1	138	0.5%	0.201	0.2%	**0.551**
Year 1 and 2	137	1.4%	0.178	0.5%	**0.494**
Excess ROA computed using operating income before depreciation:					
Year 0	135	-0.1%	0.061	0.0%	**0.085**
Year 1	135	1.2%	0.011	0.7%	**0.010**
Year 1 and 2	134	2.5%	0.029	1.6%	**0.020**
Panel B Stock price performance					
Excess returns:					
First six month of year 1	139	2.2%	0.374	1.4%	**0.865**
Year 1	139	5.4%	0.163	7.3%	**0.042**
Year 1 and 2	139	12.3%	0.017	10.0%	**0.042**

ian	*p*-value
.0%	0.321
.5%	0.024
.8%	0.002
.0%	0.462
.6%	0.017
.7%	0.025
.9%	0.041
.7%	0.160
.9%	0.171

EOGs do not improve performance

	Market Model			Fama-French 3-Factor Model			Fama-French 4-Factor Model		
	Year 0	*Year 1*	*Year 2*	*Year 0*	*Year 1*	*Year 2*	*Year 0*	*Year 1*	*Year 2*
alpha	**0.000**	**-0.004****	**-0.003****	**-0.001**	**-0.004****	**-0.003****	**-0.001**	**-0.004****	**-0.003***
	(-0.18)	**(-2.00)**	**(-1.69)**	**(-0.37)**	**(-2.02)**	**(-1.66)**	**(-0.57)**	**(-2.06)**	**(-1.55)**
mktrf	-0.018	0.036	0.000	-0.001	0.059	0.008	0.031	0.067	-0.007
	(-0.36)	(0.89)	(-0.01)	(-0.02)	(1.37)	(0.21)	(0.57)	(1.48)	(-0.17)
smb				0.021	-0.059	-0.024	0.010	-0.062	-0.016
				(0.31)	(-1.02)	(-0.47)	(0.15)	(-1.07)	(-0.32)
hml				0.107	0.061	0.016	0.132	0.067	0.007
				(1.50)	(1.01)	(0.32)	(1.81)	(1.10)	(0.14)
umd							0.071	0.020	-0.029
							(1.65)	(0.56)	(-0.95)

Recap So Far

- EOGs steadily diffuse over two decades to two-thirds of the largest 1500 firms
- In early years (1992-1995, CL'02), EOG adoption is followed by improved firm performance
- However:
  - EOG terms are not restrictive
  - EOGs do not increase ownership
  - EOGs do not improve shareholder performance
- EOGs seem to be "cheap talk"

What can we learn from EOGs?

- This practice is important: spreads pervasively throughout 67% of S&P1500
  - In contrast to many compensation 'fads'
  - Complements Core and Larcker (2002)
- It is clearly defined, and offers relatively clean experiment (more on this later)

→Allows us to investigate how trends spread

- For compensation
- Beyond mere correlations

Boards disseminate EOGs

- Board members play significant role in selection, monitoring, and retention/ dismissal of the CEO (Mace 1971, Vancil 1987, Weisbach 1988, amo)
- Boards set executive compensation
- Board members typically serve on >1 board

→ Adopting EOGs is more likely if director has EOG experience from other directorates

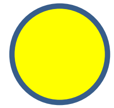
Boards disseminate EOGs

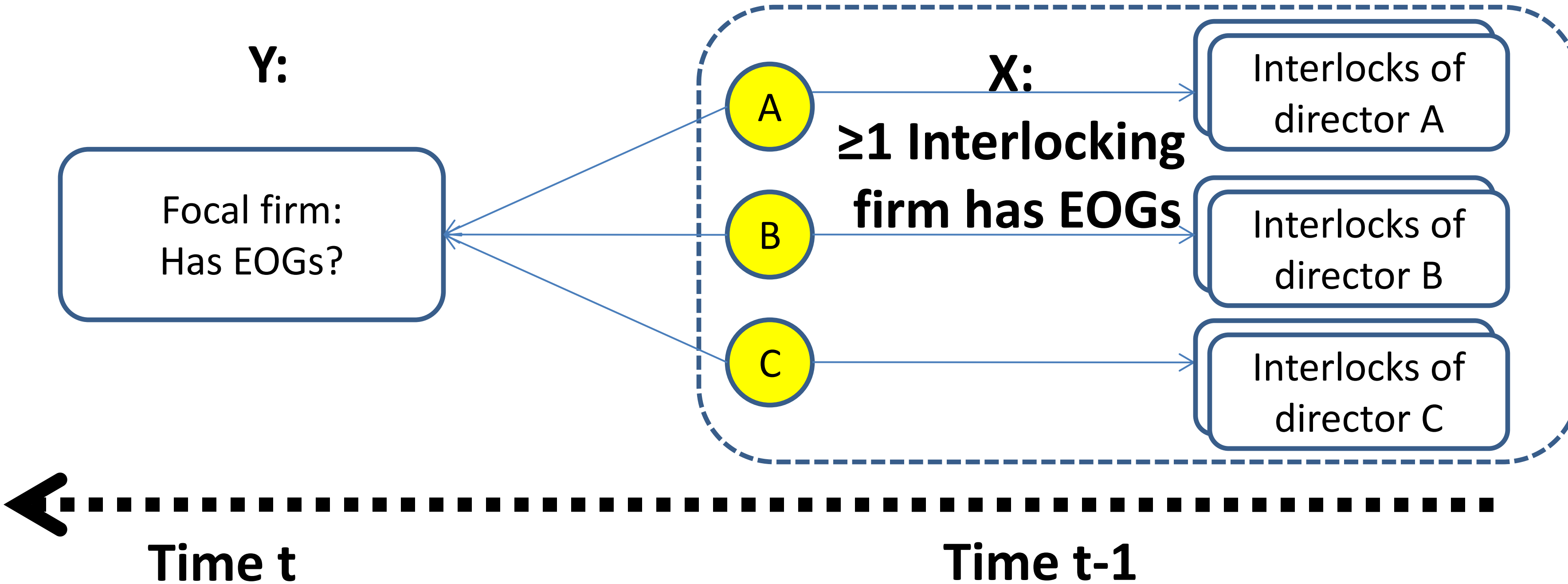
- Prior work shows that board connections correlate with spreading of:
  - Takeover provisions (Davis 1991)
  - Governance (Bouwman 2011):
  - Search for new CEO candidates (Khurana 2002)
  - Fraud and manipulation (Bizjak et al 2009; Chiu, Teoh, Tian 2012)
  - Private equity targeting (Stuart and Yim 2010)
- This paper: executive compensation policy

Empirical approach

1. Does propensity to adopt EOGs increase through director connections?
2. Which board member characteristics further affect propensity to adopt?
   – Timing of director interlocks
   – Quality of director interlocks
3. IV using changes in state tax rates

Measuring board connections

- "Interlocking" directors  are on the board of a firm that adopted EOGs previously



Variables

- Interlocked: **≥1** director has EOG experience
- Firm controls / private information
  - size, free cash flow, institutional ownership, return on assets, stock return, stock volatility, Durnev et al. private information, expected analyst coverage
- Governance controls
  - E-index, board size, CEO=Chairman, independent compensation committee
- Stock ownership
  - Ownership (ln #shares), ownership^2
  - Compliance ratio, compliance ratio^2

Endogeneity

- While EOGs do not have a clear <u>observed</u> purpose, they might be optimal in an unobserved way
- From prior work on interlocks, it’s difficult to know whether:
  1. Practice disseminates through boards,
  2. Practice spreads through alternative channels
  3. Directors self-select themselves into EOG-inclined firms
  4. Practice correlates with firm unobservables

Board interlocks explain EOGs

Table 7: Why do firms adopt guidelines? (All Execucomp firms)

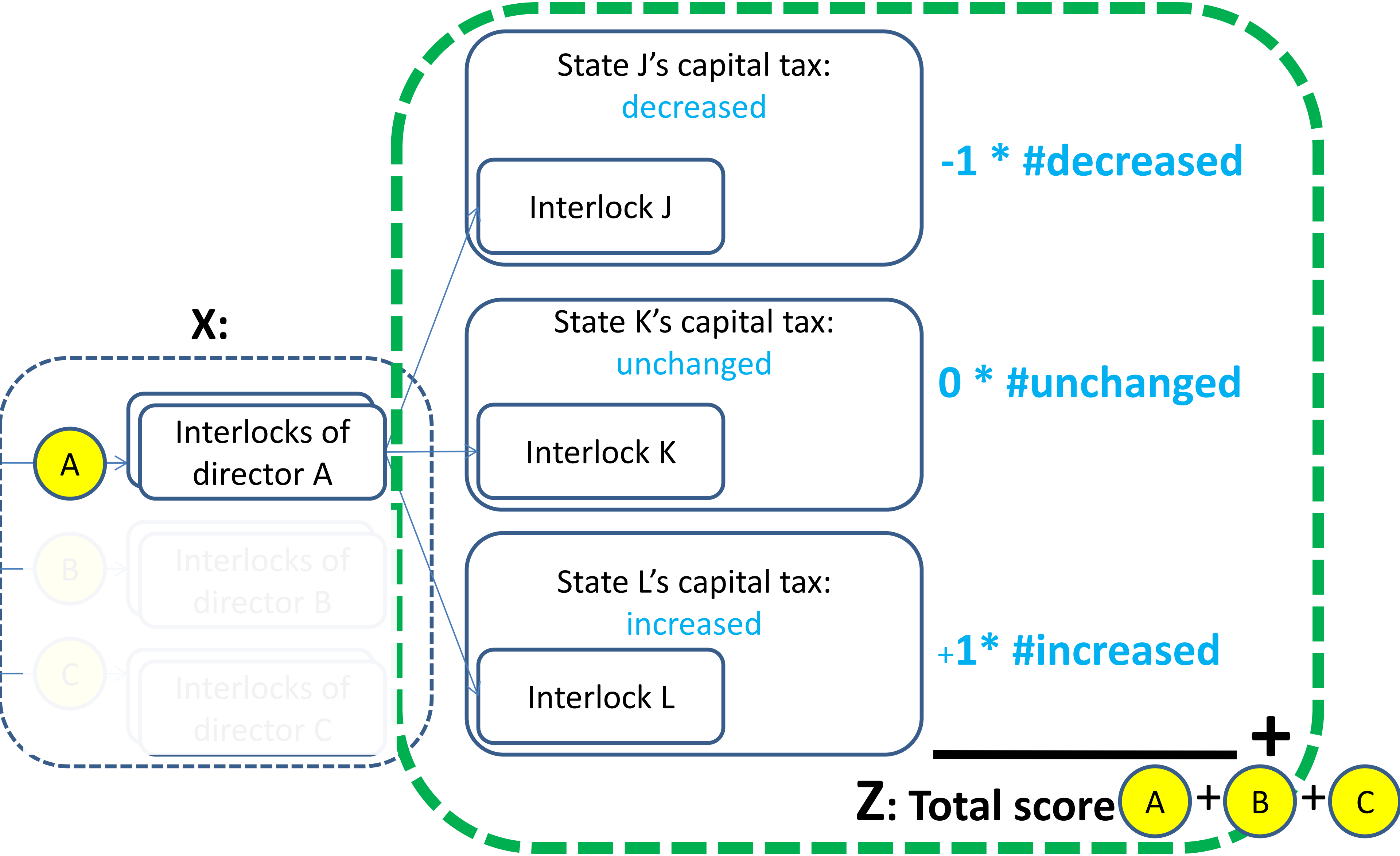
	Did firm adopt guidelines (0/1)?					
EOG interlocks	1.454***	1.182***	0.889***	1.107***	1.205***	1.510***
	(0.054)	(0.052)	(0.061)	(0.055)	(0.054)	(0.064)
* EOG carrier		0.300***				
		(0.023)				
* Director tenure			0.267***			
			(0.016)			
* post-ISS				1.019***		
				(0.060)		
* Compensation committee					0.437***	
					(0.028)	
Many controls	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
State dummies	No	No	No	No	No	Yes
Obs.	11084	11084	11084	11084	11084	9082
Pseudo R-squared	0.357	0.456	0.436	0.404	0.402	0.382

Endogeneity

- We instrument EOG interlocks by changes in capital tax rate in state of interlocking firm:
  - Capital tax rates vary across U.S. states
  - Unlikely to correlate with alternative explanations
- Tax decrease makes it cheap to sell shares, EOGs (intend to) limit such selling

→ State tax rate changes correlate negatively with EOG adoption

Proposed instrument



IV estimates

Table 7: Why do firms adopt guidelines?
(IV approach)

	Probit		**IV Probit**				
	(EOG)		Stage 1 (EOG Interlocks)	Stage 2 (EOG adoption)			
EOG interlocks	1.454*** (0.054)						
Interlock firm's change in tax rate		-0.013*** (0.005)	-0.005*** (0.001)				
Predicted EOG interlocks				2.628*** (0.407)	2.634*** (0.440)	2.661*** (0.373)	2.356** (0.975)
Average board tenure					0.000 (0.002)		
Director leaves interlock early						-1.042*** (0.256)	
Big-five consultant							0.120 (0.124)
Many controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of observations	11084	11084	11084	11084	11084	11084	5086

All independent variables are at t-1; standard errors clustered at firm level

Conclusion

- This paper is on ownership guidelines:
  - Clear trend (from 10% to 67% of S&P1500)
  - Why did this thing become a trend?
  - How did it spread across these large firms?
- Directors with EOG experience use their board connections to spread compensation policy