The Labor Market for Directors and Externalities in Corporate Governance

Doron Levit
University of Pennsylvania

Nadya Malenko
Boston College

Fourth FARFE conference
October 2013
Motivation

What determines the composition of corporate boards?

- Labor market for directors:
  - Demand: firms invite directors based on their reputation
  - Supply: directors build reputation to gain board seats

  ⇒ Directors’ reputation is important (Fama and Jensen, 1983)

Our main question

- How do directors’ reputational concerns affect board structure, corporate governance, and firm value?
Conflicting reputational concerns

What reputation is rewarded in the labor market?

- **Shareholder-friendly** reputation is rewarded:
  Coles and Hoi 2003; Fich and Shivdasani 2007; Farrell and Whidbee 2000; Harford 2003; Yermack 2004; Srinivasan 2005

- **Management-friendly** reputation is rewarded:
  Helland 2006; Marshall 2010; Ertimur, Ferri, and Maber 2011
Conflicting reputational concerns

What determines which reputation is rewarded?

- It depends on who controls the nomination process:

  - **Weak Governance**
    - Management Control
      - Demand for management-friendly reputation
  
  - **Strong Governance**
    - Shareholder Control
      - Demand for shareholder-friendly reputation

- Evidence: Zajac and Westphal 1996; Eminet and Guedri 2010; Bouwman 2011
This paper

What we do

- Develop a theory of the labor market for directors
- Key feature: which reputation is rewarded, shareholder-friendly or management-friendly, is endogenous
This paper

What we do

- Develop a theory of the labor market for directors
- Key feature: which reputation is rewarded, shareholder-friendly or management-friendly, is endogenous

What we find

- **Main result**: Directors’ reputational concerns lead to corporate governance externalities across firms
  - Reason: directors’ actions affect both demand and supply in the labor market
- Implications for transparency, shareholder activism, multiple directorships, and peer effects in corporate governance
Reputational concerns
Holmstrom 1999; Dewatripont, Jewitt, and Tirole 1999; Bar-Isaac and Deb 2013; Bouvard and Levy 2012
Song and Thakor 2006; Ruiz-Verdu and Singh 2011; Levit 2012

Strategic complementarities in the labor market
Acemoglu 1996; Laing, Palivos, and Wang 1995; Diamond 1982; Benhabib and Farmer 1994

Externalities in corporate governance
Acharya and Volpin 2010; Cheng 2010; Burkart and Raff 2011; Dicks 2012

Board structure
Hermalin and Weisbach 1998; Adams and Ferreira 2007; Harris and Raviv 2008; Chakraborty and Yilmaz 2011; Levit 2012; Malenko 2012
Model

Players

- Two firms, the board of each firm consists of one director
- Each firm can be controlled either by shareholders ($\chi_i = 1$) or by management ($\chi_i = 0$)

Timeline

1. Directors choose the allocation of control in their firms
2. Firms appoint directors based on their needs
Stage I - Corporate governance decisions

- Each director decides whether to improve his firm’s corporate governance:
  - no effort $\Rightarrow$ management retains control
  - effort $\Rightarrow$ shareholders obtain control with probability $\rho$
- Allocation of control $(\chi_i, \chi_j)$ is observable
- Examples:
  - increase the percent of independent directors
  - separate CEO and board chairman roles
  - remove antitakeover provisions (e.g., declassify the board)
  - adopt proxy access or majority voting for director elections
Model

Directors’ shareholder-friendliness:

- Directors differ in preferences over allocation of control $v(\chi, \theta)$ and/or costs of effort $c(\theta)$

- Type $\theta$’s relative net benefit from shareholder control is:
  \[
  \Delta(\theta) \equiv v(1, \theta) - v(0, \theta) - c(\theta)
  \]

  - $\Delta'(\theta) > 0 \Rightarrow$ high $\theta$ implies shareholder-friendliness
  - $\Delta(\theta)$ is unbounded and continuously differentiable

- $\theta_i \sim F$ is director $i$’s private information $\Rightarrow$ directors’ decisions signal their degree of shareholder-friendliness
Shareholder-friendliness

What does shareholder-friendliness stand for?

1. Ability to monitor the management
   - expertise, personality traits

2. Disagreement on the objective of the board
   - shareholder vs. stakeholder value maximization

3. Disagreement on the implementation of the board’s objective
   - is shareholder value maximized by giving management control?
Model

Stage II - Director labor market

- With prob. $\lambda$ each director is hit by a shock and resigns
- If director of firm $i$ resigns, firm $i$ chooses between:
  1. the director of firm $j$ - reputation $\mathbb{E}[\theta_j|\chi_j]$
  2. an outside candidate - reputation $\mathbb{E}[\theta]$
Model

Stage II - Director labor market

- With prob. $\lambda$ each director is hit by a shock and resigns
- If director of firm $i$ resigns, firm $i$ chooses between:
  1. the director of firm $j$ - reputation $\mathbb{E}[\theta_j|\chi_j]$
  2. an outside candidate - reputation $\mathbb{E}[\theta]$

- The appointment decision is made by the controlling party
  - shareholders prefer high shareholder-friendliness (high $\theta$)
  - management prefers low shareholder-friendliness (low $\theta$)

$\Rightarrow$ corporate governance affects firms’ demand for directors
Model

Stage II - Director labor market

- With prob. $\lambda$ each director is hit by a shock and resigns
- If director of firm $i$ resigns, firm $i$ chooses between:
  1. the director of firm $j$ - reputation $\mathbb{E}[\theta_j | \chi_j]$
  2. an outside candidate - reputation $\mathbb{E}[\theta]$

- The appointment decision is made by the controlling party
  - shareholders prefer high shareholder-friendliness (high $\theta$)
  - management prefers low shareholder-friendliness (low $\theta$)

$\Rightarrow$ corporate governance affects firms’ demand for directors

- If director $j$ is invited to the board of firm $i$, he gets additional utility $\alpha(\chi_i, \theta_j) > 0$
Endogenous reputational concerns

The decision of firm $B$ to hire director $A$ depends on:

1. the reputation of director $A$ relative to an outside candidate
2. the preferences of the controlling party of firm $B$

Why is the type of reputation that is rewarded endogenous?

- because who controls firm $B$ depends on the actions of director $B$, which are determined in equilibrium
Equilibrium strategies

- **Stage I**: Director $j$ transfers control to shareholders iff

\[ -c(\theta_j) + \nu(1, \theta_j) + \alpha\lambda(1 - \lambda) \Pr(hire|\chi_j = 1) \]

\[ > \nu(0, \theta_j) + \alpha\lambda(1 - \lambda) \Pr(hire|\chi_j = 0) \]
Equilibrium strategies

- **Stage I**: Director $j$ transfers control to shareholders iff

$$-c(\theta_j) + v(1, \theta_j) + \alpha \lambda (1 - \lambda) \Pr(hire|\chi_j = 1) > v(0, \theta_j) + \alpha \lambda (1 - \lambda) \Pr(hire|\chi_j = 0)$$

$$\Delta(\theta_j) > \alpha \lambda (1 - \lambda) \left[ \Pr(hire|\chi_j = 0) - \Pr(hire|\chi_j = 1) \right]$$

$$\Leftrightarrow \theta_j > \theta^*_j$$
Equilibrium strategies

- **Stage I**: Director $j$ transfers control to shareholders iff

$$-c(\theta_j) + v(1, \theta_j) + \alpha \lambda (1 - \lambda) \Pr(hire | \chi_j = 1)$$

$$> v(0, \theta_j) + \alpha \lambda (1 - \lambda) \Pr(hire | \chi_j = 0)$$

$$\Delta(\theta_j) > \alpha \lambda (1 - \lambda) \left[ \Pr(hire | \chi_j = 0) - \Pr(hire | \chi_j = 1) \right]$$

$$\iff \theta_j > \theta_j^*$$

$$\Rightarrow \mathbb{E}[\theta | \chi_j = 1] > \mathbb{E}[\theta] - \text{more SH-friendly than outside candidate}$$

$$\mathbb{E}[\theta | \chi_j = 0] < \mathbb{E}[\theta] - \text{less SH-friendly than outside candidate}$$
Equilibrium strategies

- **Stage I**: Director $j$ transfers control to shareholders iff

$$
-c(\theta_j) + v(1, \theta_j) + \alpha \lambda (1 - \lambda) \Pr(hire|\chi_j = 1) \\
> v(0, \theta_j) + \alpha \lambda (1 - \lambda) \Pr(hire|\chi_j = 0)
$$

$$
\Delta(\theta_j) > \alpha \lambda (1 - \lambda) \left[ \Pr(hire|\chi_j = 0) - \Pr(hire|\chi_j = 1) \right] \\
\iff \theta_j > \theta_j^*
$$

$$
\implies \mathbb{E}[\theta_j|\chi_j = 1] > \mathbb{E}[\theta] \quad \text{- more SH-friendly than outside candidate} \\
\mathbb{E}[\theta_j|\chi_j = 0] < \mathbb{E}[\theta] \quad \text{- less SH-friendly than outside candidate}
$$

- **Stage II**: A shareholder-controlled firm $i$ ($\chi_i = 1$) chooses director $j$ over an outside candidate iff $\chi_j = 1$, and vice versa
Equilibrium strategies

- **Stage I**: Director $j$ transfers control to shareholders iff

$$-c(\theta_j) + v(1, \theta_j) + \alpha \lambda (1 - \lambda) \Pr(hire|\chi_j = 1)$$

$$> v(0, \theta_j) + \alpha \lambda (1 - \lambda) \Pr(hire|\chi_j = 0)$$

$$\Delta(\theta_j) > \alpha \lambda (1 - \lambda) [F(\theta_i^*) - (1 - F(\theta_i^*))]$$

$$\iff \theta_j > \theta_j^*$$

$$\Rightarrow \mathbb{E}[\theta_j|\chi_j = 1] > \mathbb{E}[\theta]$$ - more SH-friendly than outside candidate

$$\mathbb{E}[\theta_j|\chi_j = 0] < \mathbb{E}[\theta]$$ - less SH-friendly than outside candidate

- **Stage II**: A shareholder-controlled firm $i$ ($\chi_i = 1$) chooses director $j$ over an outside candidate iff $\chi_j = 1$, and vice versa
Strategic complementarity

- Best response function:

$$\theta_j^* = \beta(\theta_i^*) \equiv \Delta^{-1} \left( \alpha \lambda (1 - \lambda) (2F(\theta_i^*) - 1) \right)$$

- Directors’ corporate governance decisions exhibit strategic complementarity
Strategic complementarity

Directors’ reputational concerns create strategic complementarity (externalities) in corporate governance across firms
Strategic complementarity

Directors’ reputational concerns create strategic complementarity (externalities) in corporate governance across firms

Corporate governance in firm B determines who controls the nomination process
Directors’ reputational concerns create strategic complementarity (externalities) in corporate governance across firms.

Director A
Corporate governance in firm A determines who controls the nomination process

Corporate governance in firm B determines who controls the nomination process
Directors’ reputational concerns create strategic complementarity (externalities) in corporate governance across firms.
Directors’ reputational concerns create strategic complementarity (externalities) in corporate governance across firms.

Director A
Corporate governance in firm A
determines who controls the nomination process

Director B
Corporate governance in firm B
determines who controls the nomination process
Equilibria of the game

Equilibrium is called shareholder-friendly if directors with a shareholder-friendly reputation are more likely to be hired:

$$Pr[\text{shareholder control}] = \Pr[\theta > \theta] > 0.5$$

Equilibrium is called management-friendly if directors with a management-friendly reputation are more likely to be hired:

$$Pr[\text{shareholder control}] = \Pr[\theta > \theta] < 0.5$$

**Diagram:**

- **Y-axis:** Best response threshold of director $j$, $\theta_j^*$
- **X-axis:** Threshold of director $i$, $\theta_i^*$
- **Line:** $\beta(\theta_i^*)$
Equilibria of the game

- Equilibrium is called *shareholder-friendly* if directors with a *shareholder-friendly* reputation are more likely to be hired
  - \( \Pr[\text{shareholder control}] \equiv \Pr[\theta > \theta^*] > 0.5 \)

- Equilibrium is called *management-friendly* if directors with a *management-friendly* reputation are more likely to be hired
  - \( \Pr[\text{shareholder control}] \equiv \Pr[\theta > \theta^*] < 0.5 \)
Multiple governance equilibria

1. If reputational concerns are low \((\alpha < \bar{\alpha})\), equilibrium is unique
2. If reputational concerns are high \((\alpha \geq \bar{\alpha})\), multiple equilibria exist
   - at least one shareholder-friendly
   - at least one management-friendly

Implications

- The quality of aggregate corporate governance is self-fulfilling
- Countries or industries with similar characteristics can have very different governance systems (Doidge, Karolyi, Stulz, 2007)
Comparative statics

Proposition

The probability of shareholder control increases with directors’ reputational concerns if and only if the equilibrium is shareholder-friendly.

Implications

- Directors’ reputational concerns amplify corporate governance:
  - strong governance systems become stronger
  - weak governance systems become weaker

- Limits on the number of directorships are beneficial in weak governance systems, but harmful in strong governance systems.
Comparative statics: Amplification

- When directors have **reputational concerns**, shocks to corporate governance are **amplified** due to externalities.
Transparency

- If director exerts effort, shareholders get control with prob. $\rho < 1$
- Transparency: public signal reveals director’s effort with prob. $\eta$
  - 2004 SEC law: disclose if a director leaves in dissent
  - 2004 law in China: disclose if a director votes in dissent

**Result:** Probability of shareholder control increases with $\eta$ if and only if the equilibrium is shareholder-friendly

Implication

- In weak governance systems, increasing boardroom transparency weakens governance even further
Other extensions

- Shareholder activism
  - directors’ governance decisions are strategic complements $\Rightarrow$
    activists’ intervention decisions are strategic substitutes
- Multiple directors on the board (board size)
  - board size and voting rule affect governance through
    externalities in the director labor market
- Multiple firms
- Both management and shareholder control can be optimal
Conclusions

Key idea

- Directors’ corporate governance decisions affect both their own reputation and their firms’ demand for new directors

  ⇒ which type of reputation is rewarded is *endogenous*
  ⇒ corporate governance externalities across firms

Implications: peer effects in governance; board regulations

Other settings: CEO’s choice of corporate culture; an academic’s choice of research agenda