Peer Effects in Corporate Governance Practices: Evidence from Universal Demand Laws

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Abstract

Firms in the same networks tend to have similar corporate governance practices. However, it is difficult to disentangle peer effects, where governance practices propagate from one firm to another, from selection effects, where firms with similar governance preferences self-select into linked groups. Studying board-interlocked firms, we utilize a novel instrument based on the staggered adoption of universal demand laws across states to identify causal peer effects in firms' decisions concerning CEO compensation, CEO duality, and anti-takeover provisions. Our results provide support for the existence of peer effect in the adoption of anti-takeover provisions. We find that the entrenchment index (E-Index) of a firm increases by 0.33 points for every point increase in the E-Index of firms in the same board interlock network. The impact of universal demand laws on the interlocking directors' prior experience in passing these provisions is a likely mechanism explaining these effects.

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1 Introduction

The impact of peers on firms' and managers' decisions has been the subject of a growing body of research in the economic and finance literatures. Peer practices and decisions can convey information or cause changes in the market environment that motivate firms and individuals to undertake similar actions. Theoretical studies present different frameworks in which social interactions may influence individual decisions (see, for example, Ellison and Fudenberg, 1995; DeMarzo et al., 2003). However, because the composition of peer groups and managerial decisions are endogenously determined, estimation of peer effects is a major challenge for empirical studies in this literature (Manski, 1993).

In this paper, we propose a novel method to identify peer effects in the arena of corporate governance. Specifically, we examine the question: do peer effects acting through board interlock networks influence firms' decisions to adopt particular governance practices?

Board directors have an important role in passing and repealing governance provisions (Bebchuk, 2005; Ertimur et al., 2010). Davis (1991) and Davis and Greve (1997) show that firms tend to adopt poison pills and golden parachutes when other firms in their board interlock networks have adopted similar provisions. Bouwman (2011) finds a link between board interlocks and the convergence of governance practices such as board size, outside directors, CEO duality, and compensation.[1] However, while peer effects may induce firms to adopt similar practices, Bouwman suggests that these empirical associations could alternatively arise from firms' decisions to recruit directors who are board members at firms with similar governance preferences. A clean identification strategy is required to establish a direct impact of peer groups on governance practices.

[1] Barzuza and Curtis (2014) provide a thorough review of studies on board interlocks and corporate governance.

In order to estimate peer effects, the identification strategy needs to deal with the possibility of reverse causality and omitted variables that may confound the estimation. Bouwman (2011) notes that reverse causality will arise when board-interlock networks are endogenously formed by firms with similar governance philosophies. Moreover, omitted variable bias can result from an unobserved common shock that causes all firms in a board interlock network to adopt similar practices. To overcome these concerns, we require an exogenous instrument for the propensity of firms to adopt specific governance provisions that is orthogonal to both board interlock formations and common factors affecting all firms in a particular network.

Our proposed instrument is the staggered passage of universal demand (UD) laws that govern only firms incorporated in the affected states. In the period 1989-2005, 23 states passed UD laws requiring the board's approval for shareholders' derivative litigation against directors and officers. This staggered passage is a relevant instrumental variable: Appel (2016) shows that after the passage of these laws, firms increasingly implement management- (as opposed to shareholder-) friendly governance policies such as higher CEO cash compensation, the adoption of poison pills, supermajority voting requirements, and classified boards. We find that firms incorporated in other states, but linked to affected companies through a *pre-existing* interlock network, are also more likely to adopt such anti-takeover provisions, even when their states of incorporation have not themselves adopted UD laws.

Figure 2 illustrates our method. UD laws were passed in Georgia in 1989 and in Virginia in 1992. Consider two firms, Firm G in Georgia and Firm V in Virginia. Firms G and V are interlocked by two board members; one is Ms. X, who was elected to *both* firms before 1989. This pre-existing interlock, therefore, is presumably exogenous to the passage of the UD law in either state. However, once Ms. X is exposed to new governance policies made feasible or preferable by the passage of the UD law in Georgia, her newly gained experience may

influence her incentives and inform her actions on the board of Firm V, on which she also serves. Crucially, because Ms. X was elected to both boards before UD laws were passed in either state, a chain of influence traceable to her would constitute evidence for a direct peer effect, not contaminated by group self-selection.

[Figure 2 near here]

In contrast, Mr. Y was elected to both firms between 1989 and 1992. It is possible that Mr. Y's selection by Firm G may have been related in part to Georgia's passage of the UD law. Therefore, to identify peer effects, we wish to measure only Ms. X's influence as the transmission mechanism. We therefore focus primarily on interlocks established before either state has a UD law in place. While we may use Mr. Y's inclusion on the board of Firm V as a control variable in explaining firms' governance choices, the key question will be how Ms. X's experience in one state affects the decisions of firms in the other states on which she serves.

The passage of UD laws addresses endogeneity concerns in several ways. First, UD laws are ratified by state legislators and are likely to be independent of board interlock networks. Moreover, for each pair of firms, we carefully select the interlocks that are already in place before the passage of a UD law affects either firm in the pair.[2] As illustrated in Figure 1, this procedure addresses the reverse causality concern in which board interlocks are established by firms with compatible governance practices. Second, to deal with unobserved common factors, we investigate peer effects in firm pairs where one firm is incorporated in a state with a UD law and the other is incorporated in a different state without a UD law. By isolating spillovers to

[2] A common problem in studies like this one, which focus on the impact of legislation, is that observers may anticipate the passage of new laws before they actually go into effect. Therefore, we use as critical dates to establish pre-existing interlocks the year in which UD legislation is passed, as well as one or two years prior to the actual ratification. Our empirical results are effectively unchanged regardless of which date we use, so we will present results using the passage year as the cut-off relevant for identifying pre-existing board interlocks.

the component that can be attributed to joint board members, we should eliminate the effects of common shocks that potentially could affect both firms. Finally, the remaining concern is that we will detect another effect (e.g., institutional investment) that is also triggered by the UD laws and flows through director networks, thus leading to correlation with the adoption of governance provisions at both firms. Although this mechanism is unlikely to generate our findings, we will include a range of firm-level control variables that are known to be correlated with the adoption of governance provisions to mitigate this concern.

Our analysis produces several findings. We find evidence that the adoption of take-over defenses (Specifically, adoption of components of the entrenchment index) propagates from one firm to another firm in the same board interlock network. A one point increase in the instrumented E-Index of peer firms leads to an increase of 0.333 point in the E-Index of the firm of interest. The impact on the E-Index arises primarily from the adoption of poison pills, classified boards, and limits to change bylaws. In contrast, we do not find evidence that firms follow others in the same board interlock network with regard to CEO cash compensation or CEO duality.

Our structural, 2SLS model shows that the projection of peer governance practices onto the prior UD law experience of a firm's interlocking directors is able to predict the firm's own governance practices. This projection is, by design, independent of potential self-selection effects, and thus provides evidence in support of causal peer effects. Consistent with this structural model, reduced form estimates confirm that firms with more board members who have experienced the passage of UD laws through their membership in other boards are significantly more likely to adopt several pro-management governance provisions.

There are several mechanisms through which Ms. X's experience can inform her practice as a director. First, serving on the board of a firm in a UD state, she may gain experi-

ence and expertise in the process and internal politics of modifying firm governance in favor of management interests. Second, she may simply gain greater exposure to a management-friendly corporate culture. Finally, her incentives to position herself as management- versus shareholder-friendly may change. These mechanisms are not mutually exclusive and, while we show some evidence consistent with all of them, we do not a stand on which is dominant.

For example, we find evidence that the adoption of takeover defenses propagates at least in part through a practice-transfer channel. The spillover effects from one firm to a second one are greater when board members on the second firm are either less experienced. Additionally, the effects are also greater when the interlocking directors on the first firm have had greater opportunity to observe and participate in changes in corporate governance. The effects are significantly greater if the interlocking directors are members of the governance committee. Finally, they are greater when board members are busier with other commitments.

An incentive channel for spillover effects emerges in Levit and Malenko (2015), who demonstrate the possibility of multiple governance equilibria. In a "strong governance" equilibrium, value-maximizing and shareholder-friendly policies will enhance the value of directors' human capital. But in a "weak governance" equilibrium, a director's human capital will be enhanced through management-friendly policies. When states pass UD laws, they ease the way for management-friendly policies, and risk tilting the equilibrium toward the weak governance outcome. In this event, affected firms are more likely to hire directors who are known for maintaining good relationships with managers, and potential directors will signal their value by demonstrating an affinity for management-friendly governance provisions. Consistent with these dynamics, we find that after the passage of a UD law, firms in affected states are increasingly prone to recruit directors with experience in firms that practice management-friendly governance. Moreover, our results suggest that interlocking board members who sit

on the board of a firm incorporated in a state that has passed a UD law are significant actors in the adoption of management-friendly governance provisions at the firms they serve in other states. Thus, while our empirical evidence is consistent with a simple learning model, it is also consistent with the Levit-Malenko model.

The literature on peer effects in corporations is relatively new and emerging. Recent studies have highlighted peer associations relating to firms' capital structure (Leary and Roberts, 2014), dividend payout (Popadak, 2014), and financial misconduct (Parsons et al., 2014). However, clean identification of a causal relationship is a major challenge for studies in this literature (Manski, 1993). As peer effects are not directly observable and are distinct from other industry and location factors, firm fixed-effects models cannot mitigate concerns about reverse causality and omitted variables. The identification challenge is tackled in previous studies using statistical methods (Leary and Roberts, 2014; Popadak, 2014)[3] or by controlled experiments (Shue, 2013; Ahern et al., 2014). The advantage of employing state-level policy changes in our identification strategy is that it can be executed for large samples of firms and for several different corporate decisions. Our findings regarding the role of board experience and the interaction among the board, management, and shareholders provide further understanding of the underlying mechanism for peer effects.

While it is not our primary focus, our results also shed light on the role of reputation in the labor market for directors. Directors presumably wish to build reputations regarding corporate governance so as to maximize their career prospects. But as the Levit and Malenko (2015) model shows, multiple equilibria are possible, and either management- or shareholder-friendly reputations may be optimal in different circumstances. One group of papers concludes that di-

[3]To identify peer effects, Leary and Roberts (2014) use idiosyncratic equity returns as an exogenous variation for peer firms' capital structure. Popadak (2014) identifies the effects using three separate methods: excess-variance, instrumental variables, and partial identification strategies.

rectors who are known as management-friendly are rewarded by the market through seating in more boards. For instance, Helland (2006) concludes that directors supporting weak governance actually enjoy a more successful career path. Using a sample of boardroom disputes, Marshall (2010) finds that directors who resign in dissent from one board are not rewarded by the market and suffer higher probabilities of losing other positions in the five years following their resignation. However, another group of papers finds that a reputation for being shareholder friendly is a valuable asset for directors. Fos et al. (2017) show that the closer directors of a board are to the end of their directorship term, the more likely they act in favor of shareholders. Facing shareholder class action lawsuits (Fich and Shivdasani, 2007) and proxy contests (Fos and Tsoutsoura, 2014) hurt a director's reputation and the likelihood of being selected for a directorship. Jiang et al. (2015) find that dissention from the board is rewarded in the form of outside directorships. Lel and Miller (2015) show that independent directors' reputational concern affects corporate governance practices. Our instrument allows us to demonstrate the potential impact of the legal framework on the equilibrium in the market for directors' services. Our results on the apparent shift toward a weak-governance equilibrium after passage of UD laws are new evidence on the importance of this determinant of corporate governance.

The rest of the paper is structured as follows. In Section 2, we discuss the institutional background of UD laws and their impact on corporations. In Section 3, we describe our data and empirical strategy. In Section 4, we develop our main hypotheses and discuss the results of our tests. We conclude in Section 5.

2 Institutional Background

2.1. *Derivative Litigation*

The importance of shareholder legal rights for corporate governance is well established (Shleifer and Vishny, 1997). A shareholder derivative lawsuit can be brought by a shareholder or group of shareholders to reclaim value lost due to inappropriate management actions. As opposed to class action lawsuits in which the plaintiff is a subset of shareholders, the plaintiff in derivative lawsuits represents the interests of all shareholders. Therefore, derivative litigation can be a distinct legal mechanism to address agency problems in public firms (Ferris et al., 2007; Appel, 2016).

A shareholder group can sue management only when the corporation has a valid cause of action, but has refused to use it. This failure often emerges when the defendant in the suit is someone close to the company, for example, a director or a corporate officer. In such a case, the plaintiff will be the suing shareholder(s) and the corporation, and the defendant will be the management or directors. In the suit, the plaintiff shareholder(s) must prove that the management or directors have breached their fiduciary duties either by performing or failing to perform certain actions. A key feature of this type of lawsuit is that if it is successful, the proceeds go to the corporation, not to the shareholders who brought the suit. They benefit in part by the damages awarded to the firm, but more importantly, by effecting a change in policy.

Shareholder derivative litigation has become increasingly common in merger and acquisition transactions. For example, shareholders in Bank of America, led by two pension funds, the Louisiana Municipal Police Employees' Retirement System and the Hollywood Police Officers' Retirement System in Florida, sued the bank's directors and former CEO, Kenneth Lewis, for misleading shareholders in the bank's acquisition of Merrill Lynch & Co. The shareholders claimed that the management and directors did not fully disclose that Merrill's losses totalled

$15.84 billion in the fourth quarter of 2008 and that Merrill was still paying $3.6 billion in bonuses in that quarter. The lawsuit was resolved with a settlement of $62.5 million paid to the bank and a $20 million cash payout to shareholders for attorney's fees.

As discussed, payouts in derivative lawsuits go to the corporation and are typically covered by the liability insurance of the firms' directors. In some cases, however, the managers or directors will pay the settlement to a separate entity with their own money. For instance, a derivative lawsuit was brought against Lawrence J. Ellison, Oracle Corporation's chief executive officer, for insider trading in 2001. Mr. Ellison was accused of selling Oracle shares worth approximately $894 million before disclosing that Oracle would miss its earnings target. The stock dropped 45 percent after the news release. After four years of litigation, Mr. Ellison agreed to pay with his own money a settlement of $100 million and $22 million in legal fees. Since Mr. Ellison owned 24.5 percent of the firm, a direct payment to Oracle would benefit Mr. Ellison himself. Therefore, the settlement was paid in form of a charitable donation under Oracle's name to a charity chosen by the firm.

2.2. *Universal Demand Laws*

While derivative suits have been called "the chief regulator of corporate management," [4] others argue that derivative suits may not be a governance tool but rather a means for plaintiffs' attornies to extract legal fees (Coffee and Schwartz, 1981; Romano, 1991). With regard to this concern, state jurisdictions have developed a number of procedural hurdles regarding derivative actions. First, the contemporaneous-share-ownership rule requires the shareholder to have owned shares of the company when the alleged wrongdoing(s) happened. Second, the business judgment rule requires that the potential suing shareholder(s) send a written demand

[4] Cohen v. Beneficial Indus. Loan Corp., 337 U.S. 541 (1949)

to the board for implementing internal corrective measures before commencing a derivative action. The courts usually dismiss a derivative action that is rejected by the board or is filed before the board has responded to the demand. However, if the directors and managers responding to the demand are themselves accused of the wrongdoing, the demand requirement will be exempted.

From 1989 to 2005, 23 states passed Universal Demand (UD) laws removing the exemption of the demand requirement even when the directors and managers are the defendants in the derivative actions. Figure 1 graphically presents the states that had passed UD laws by 2005. A list of states with UD laws including the time of enactment is presented in Table A1. For firms incorporated in these 23 states, UD laws significantly reduce the ability of shareholders to file derivative suits against the firms' directors and managers. Appel (2016) and Lin et al. (2016) find that the number of derivative suits drops significantly in a state after a UD law is adopted.

[Figure 1 about here]

3 Data and Methodology

The most important part of our identification strategy is the construction of the main explanatory variable, *UD Law Experience of Existing Directors*. Our goal is to construct a variable that captures the propagation through overlapping director networks of the effects of UD laws on the governance of firms in other, unaffected states. There are three steps in constructing this variable: determining each firm's state of incorporation and headquarters, identifying board

interlock networks, and constructing the firm-level variable, *UD Law Experience of Existing Directors*.

3.1. *State of Incorporation and State of Headquarter*

To deal with the potential for unobserved common factors to affect governance decisions, we track decisions that derive from board interlocks across firms incorporated in different states. Since the passage of UD laws in one state is unlikely to be correlated with an unobserved factor affecting firms in another state, we thereby mitigate concern about omitted variables. To collect each firm's historical state of incorporation and state of corporate headquarters, we use a web crawler to extract the relevant data from SEC filings archived on the EDGAR server.[5] As EDGAR contains filings only since 1994, we must use 1994 data to fill in missing entries for previous years. We merge the data on state of incorporation and state of headquarters with Compustat using the Central Index Key (CIK); for firms with missing CIK, we match using IRS employer number. We then create a dummy variable equal to 1 for state-years in which UD laws were passed as well as for following years. There are no cases in our sample where a UD law was later reversed by a state that had passed one in earlier years.

3.2. *Board Interlocks*

We use BoardEx as the main data source for constructing board interlock networks. BoardEx started collecting data on top managers and directors holding positions in public firms in 1999. The data were backfilled for managers' and directors' past positions, educational background, and other activities. Earliest positions reported on BoardEx date back to the 1920s. The data contain a unique identification number for each director, allowing us to identify interlocking

[5]Compustat reports only the current state of incorporation and current state of headquarters. This does not allow us to track firms that have been incorporated and reincorporated in different states during our sample period.

directors who sit on the boards of different firms. The data also contain the start date and end date of each board position. This allows us to build a panel in which each observation is a firm-director-position-year.

3.3. *UD Law Experience*

Next, we merge the board interlock data with data about the state of incorporation and the state of corporate headquarters. *UD Law Experience of Existing Directors* is constructed as follows. First, we build an experience variable that shows whether each director has experienced a UD shock during the life of her directorship. We give an initial value of 1 to this variable if a person is a board member of any firm incorporated in a state that passes a UD law. In Figure 1, because Ms. X is already a board member of firm G in Georgia in 1989, her experience variable for 1989 is set equal to one. However, because the impact of the UD status of any firm may decline over time, we set this experience variable equal to zero after three years.[6] Thus, a director will have a value of 1 if she serves on the board of any firm that has become subject to UD laws within the last 3 years. *UD Law Experience of Existing Directors* is the sum of this dummy variable for each director divided by the total number of board members.

To illustrate, if there are five board members of Firm V in Virginia during 1992, and two of them experienced the passage of UD law in 1989 in Georgia, the experience value of Firm V in 1992 is set equal to .4. By 1993, however, the variable would be set to zero unless some directors gained UD experience from other sources. Note that variable *UD Law Experience of*

[6] As an alternative to this zero-one variable, we also tried depreciating the experience variable using an exponential decay function that depends on the time gap between the year of each observation and the year in which the UD law was passed. In the example in Figure 1, assuming it is 1992 and Ms. X experienced the passage of the UD law in 1989 in Georgia, then using a depreciation rate of 0.15, the experience variable for Ms. X would equal $exp^{(-.15\times 3)} = 0.64$. This approach did not affect any of our empirical conclusions.

As noted earlier (see footnote 2), to guard against the possibility that the market anticipates the likelihood of coming legislation, we also check the robustness of our results by including only directors who have served in both boards for at least three years in our sample (compare Appendix, Table A4 to Table 5).

Existing Directors only considers board interlocks that are in place before a UD law is passed in either firm's home state. This minimizes any concern that our results are driven by selection effects, i.e., firms' decisions to appoint directors who already have prior UD law experience.

The effects of board members who have already experienced UD law passage before joining the firm in question are captured in the variable *UD Law Experience of New Directors*. This variable is constructed similarly to *UD Law Experience of Existing Directors*. In Figure 1, the UD experience of Mr. Y would be measured by this variable. As noted, we normalize both of these variables, *UD Law Experience of Existing Directors* and *UD Law Experience of New Directors*, by the total number of board members.

3.4. *Corporate Governance*

The data source for firms' governance provisions is the Institutional Shareholder Services (ISS), formerly known as Riskmetrics, database. Since these data are available only every other year, we follow the standard practice in the literature of filling in missing years with data from the previous year. We focus on the E-Index and its six component provisions: poison pills, golden parachute, supermajority voting, classified boards, limits-to-change bylaws, and limits-to-change charter. Our sample begins in 1990. As in the rest of the literature (see for example, Knyazeva et al., 2013; Appel, 2016; Appel et al., 2016), the sample ends in 2006. This ending date is chosen because the format of the ISS governance database in the post-2006 period is inconsistent with that of the pre-2006 period.

We use the data from Execucomp to construct the two other variables *Cash Compensation* and *CEO Duality*. As in Appel (2016), we define *Cash Compensation* as the ratio of CEO's cash compensation (the sum of Execucomp variables salary, bonus, ltip, and othcomp) to total compensation (Execucomp variable tdc1). *CEO Duality* is a dummy variable indicating that

the CEO is also the chairperson of the board.

3.5. *Control Variables*

Our main control variable is *Neighbor States UD Law Status*, which equals the number of neighboring state(s) (based on the firm's headquarters) that have passed a UD law. We include this control variable to account for the possibility that the UD law status of neighboring states could influence both the formation of board interlocks and firms' governance practices (John and Kadyrzhanova, 2008). Other control variables for firms' characteristics are derived from Compustat and CRSP. These include: total assets, leverage ratio, R&D expenditures, free cash flow, ROA, and firm age. The data appendix provides detail on the construction of these variables. We winsorize all accounting variables at the 2/98% levels. Table 1 reports the mean, median, standard deviation, top quartile and bottom quartile of each variable used in our analysis.

[Table 1 about here]

3.6. *Simple OLS Estimates*

Before presenting formal tests, we begin with some simple OLS estimates to motivate the analysis that follows. Previous studies (Davis, 1991; Davis and Greve, 1997; Bouwman, 2011) have established the association of governance practices among peer firms. This association characterizes our sample as well. Table 2 shows OLS regressions relating *Cash Compensation*, *CEO Duality*, and *E-Index* for firms of interest with the average value of that particular variable in other firms at which interlocking directors have board seats.[7] The coefficient for each

[7] As described below, the right-hand side variable (the average value of the governance variable in the interlocked firms) is lagged one year to account for the fact that governance provisions will take time to propagate

provision is positive and significant at better than a 1% level for all three governance variables: *Cash Compensation*, *E-Index*, and *CEO Duality*. These results, therefore, confirm the general message of prior studies for our sample. Of course, these are simple regressions without controls for endogeneity or even for fixed effects, and so they do not shed light on the direction of causation.

[Table 2 about here]

4 Empirical Strategy and Results

The main question that we wish to consider is whether (and how) existing director networks influence firms' propensities to mimic the governance provisions of connected firms. We hypothesize that firms sharing directors with other firms that have experienced the passage of UD Laws are more likely to adopt similar management-friendly governance provisions. Our hypothesis is tested in a regression framework in which adoption of various governance provisions, or the E-Index summarizing several of these provisions, is the dependent variable.

4.1. *Instrumental variable estimates*

As discussed above, endogeneity issues call into question the proper interpretation of the OLS regressions presented in Table 2. Using the staggered passage of universal demand (UD) laws as an exogenous instrument affecting adoption of governance practices, we are able address these concerns and disentangle peer effects from other mechanisms that might explain

from one firm to another. This lag structure explains the difference between the number of observations in Table 1 and the number of observations in Table 2, as we lose some observations for years in which lagged variables are not available.

these associations. Appel (2016) documents that firms in UD law states are systematically more management friendly, as evidenced by their higher E-Indexes and higher ratio of cash compensation to total compensation. We replicate the tests in Appel (2016) and report these results in Table ?? in the Appendix. The existence of a UD law is correlated with management-friendly governance practices and meets the relevance condition for the instrument in our analysis.

The structural equation we wish to estimate is the following:

$$\text{Firm Governance}_{i,s,t+1} = \beta_1 \text{Peer Governance}_{i,t} + \theta_i + \gamma_{s,t} + \epsilon_{i,s,t+1} \quad (1)$$

where *Firm Governance*$_{i,s,t+1}$ in various specifications denotes either the E-Index or a specific governance provision of firm i in state of incorporation s, and year $t+1$. *Peer Governance*$_{i,t}$ is the average value of that particular governance practice in other firms at which interlocking directors have board seats. θ_i is the firm fixed-effect, and $\gamma_{s,t}$ is the state-year fixed effect. Notice that the right-hand side variable is lagged one year relative to the dependent variable, as one would expect some time to elapse before peer effects can propagate from one firm to another.

However, to deal with the likely endogeneity of the *Peer Governance* variable, we estimate the equation in an IV-2SLS framework. In the first stage, we fit *Peer Governance* onto our instrumental variable, *UD Law Experience of Existing Directors*, and then use the fitted value of this variable in the second-stage regression.

Therefore the first-stage regression is:

$$\text{Peer Governance}_{i,s,t} = \beta_1 \text{UD Law Experience of Existing Directors}_{i,t} + \theta_i + \gamma_{s,t} + \epsilon_{i,s,t} \quad (2)$$

In the second-stage regression, we replace Peer Governance with its fitted value from equation 2 and thus estimate equation 3:

$$\begin{aligned}\text{Firm Governance}_{i,s,t+1} = \beta_1 \text{Instrumented Peer Governance}_{i,s,t} \\ + \text{Firm Controls}_{i,s,t} + \theta_i + \gamma_{s,t} + \epsilon_{i,s,t+1}\end{aligned} \tag{3}$$

where *Firm Controls*$_{i,s,t}$ is a vector of control variables for firm characteristics, θ_i is the firm fixed effect, and $\gamma_{s,t}$ is the state-year fixed effect. The 2SLS procedure ensures that the portion of peer governance that can be attributed to UD law experience, but not the portion due to self-selection, is allowed to influence governance in the treatment firms in the second-stage regression.

Table 3 reports estimates of the first-stage Equation (2), which is the relation between interlocking directors' UD Law experience, *UD Law Experience of Existing Directors*$_{i,t}$, and interlocking directors' governance experience at peer firms, *Peer Governance*$_{i,s,t}$. Interlocking directors' UD Law experience is strongly predictive of management-friendly governance practices at peer firms. The coefficient of variable *UD Law Experience of Existing Directors*$_{i,t}$ is positive and statistically significant at better than a 1 percent level. The results hold with the inclusion of firm fixed-effects, state-year fixed-effects, and firm controls. Specifically, when UD Law Experience increases from zero to 0.5, the average cash compensation of peer firms' CEO increases by 12.2 percentage points, the propensity of CEO Duality at peer firms increases 13.3 percentage points, and the average E-Index of peer firms increases by 0.51 points. Moreover, the Cragg-Donald Wald F statistic ranges from 20 to 40 for the three models, suggests that *UD Law Experience of Existing Directors* is unlikely to be a weak instrument. Our first-stage results thus indicate that interlocking directors' UD Law experience is a strong predictor of interlocking directors' governance experience at peer firms.

[Table 3 about here]

Table 4 reports estimates of the second-stage regression, Equation (3). While the coefficients on the instrumented peer firms' governance are insignificantly different from zero in the models for *Cash Compensation* and *CEO Duality*, in the model for E-Index, the coefficient on the instrumented peer firms' governance is positive and statistically significant at a 1 percent level. A one point increase in the instrumented E-Index of peer firms leads to an increase of 0.333 point in E-Index of the firm of interest.

[Table 4 about here]

As an alternative to the 2SLS estimation, we also estimate a reduced form version of our model, in which we specify governance practice as a function of *UD Law Experience of Existing Directors* as well as *UD Law Experience of New Directors*. The specific regression equation is:

$$\begin{aligned}\text{Firm Governance}_{i,s,t+1} = \beta_1 \text{UD Law Experience of Existing Directors}_{i,t} \\ + \beta_2 \text{UD Law Experience of New Directors}_{i,t} + \theta_i + \gamma_{s,t} + \epsilon_{i,s,t+1}\end{aligned} \quad (4)$$

where *Firm Governance*$_{i,j,k,s,t+1}$ is either the E-Index or each governance provision of firm i, in state of incorporation s, in year $t+1$. We emphasize that the sample period for this regression includes only years in which the second firm's state has not yet adopted a UD law. Therefore, a convergence of governance practices is presumably due only to the two firms' common, interlocking directors, and cannot be a common response to similar changes in their regulatory environments. The coefficient of *UD Law Experience of Existing Directors*$_{i,t}$, described in Section 2, is our main coefficient of interest. This coefficient tests the impact of those interlocking board members who were appointed before either state put in place a UD law.

UD Law Experience of New Directors$_{i,t}$, described in Section 2, is a control for the impact of directors appointed after the passage of a UD law in one state, but its coefficient may also reflect endogenous peer-group formation effects. θ_i is the firm fixed-effect and $\gamma_{j,t}$ is the state-year fixed effect. To ensure that time-varying characteristics are not driving the results, we control for the number of neighboring states that have already passed a UD Law, as well as total assets, firm age, book leverage, R&D, free cash flow, and return on assets.

Table 5 reports the estimation for regression Equation (4). The estimates confirm the results in 2SLS models that firms are more likely to adopt anti-takeover provisions when other firms in their director networks have experienced the passage of UD laws. As in Table 4, the coefficient on *UD Law Experience of Existing Directors* is not significant in the model for *Cash Compensation* and *CEO Duality*. However, in the model for *E-Index*, the coefficient of primary interest, *UD Law Experience of Existing Directors*, is positive and statistically significant at the 1 percent level. The economic and statistical significance of β_1, the coefficient on the *UD Law Experience of Existing Directors* (i.e., members appointed to both boards before either state passed a UD law), are mostly unchanged from the 2SLS estimates. Therefore, this result provides further evidence that the instrumental variable is excluable. The results remain significant with the inclusion of time-varying firm controls. Specifically, we control for the number of neighboring states that already passed UD Law, total assets, firm age, book leverage, R&D expenditures, free cash flow, and return on assets.

[Table 5 about here]

Next, we examine the time trend of the E-index following adoption of UD laws in states connected to the treatment group through a director network. Figure 3 depicts this analysis. The adoption of the law takes place sometime in the first fiscal-event-year, which in Figure

1 is between time -1 and time 0. The evolution of the E-index of the treatment firms can be contrasted with that of several control groups. The various controls in the four panels of the figure are formed by alternative matching criteria, including firm size in year 0, the initial E-index in earlier years (either 3 or 5 years prior to the passage of the UD law), and/or industry SIC code. For all matching criteria, the figure shows that the difference in the E-index between the treatment and control group rises most rapidly in years 1 and 2 before generally leveling out. The graphs clearly show that the passage of UD laws in one state predicts governance changes in firms in states with unchanged laws, at least when there is a connection through interlocking directors.

[Figure 3 about here]

The results so far show that the adoption of anti-takeover provisions propagates from one firm to another through a board-interlock network. In the next test, we utilize Equation (4) to determine which provisions composing the E-Index are mosted affected by interlocking directors. Table 6 reports the estimates of these models. The dependent variable in these models is a dummy variable indicating that the relevant takeover defense measure is in place during a firm-year. The coefficient of interest is on our instrumental variable, *UD Law Experience of Existing Directors*. We include all fixed-effects and control variables as in the models in Table 5. The coefficient on *UD Law Experience of Existing Directors* is positive and statistically significant at the 1 percent level for Poison Pills, Classified Board, and Bylaw Limits. If the average UD Law experience of a firm's board increases by .5 (roughly corresponding to half the board being newly exposed to UD law legislation through directorships in firms in other states), the firm's propensities to adopt a poison pill, classified board, or limits to change bylaws rise respectively by 7.55 percentage points, 6.40 percentage points, and 6.50 percentage

points, despite the fact that there has been no change in that firm's legal environment.

[Table 6 about here]

To conclude, our empirical strategy using UD Law as an instrument cleanly identifies governance practices of peer firms as important factors explaining firms' decisions to adopt important corporate governance provisions. Both the structural and reduced-form versions of the model tell a consistent story. In the next part of the paper, we provide further analysis to suggest that the governance practices transfered through interlocking directors is a likely channel explaining the detected effects.

4.2. *Evidence on a Practice-Transfer Channel*

One possible transmission mechanism is a simple learning and advocacy channel in which directors of UD-governed firms bring their expertise and/or governance perspective to the other firms on which they serve as board members. Table 7 presents evidence consistent with this hypothesis. The table re-estimates the reduced form Equation (4), but now including the prior average experience of board members as well as interaction terms as explanatory variables.

$$\begin{aligned}&\text{Firm Governance}_{i,s,t+1} = \\ &\beta_1 \text{UD Law Experience of Existing Directors}_{i,t} \times \text{Board Experience} \\ &+\beta_2 \text{Board Experience} + \beta_3 \text{UD Law Experience of New Directors}_{i,t} + \theta_i + \gamma_{s,t} + \epsilon_{i,s,t+1}\end{aligned} \tag{5}$$

This table presents results for the difference between non-UD firms with more experienced boards, defined as those boards for which average member tenure exceeds the sample median, and non-UD firms with less experienced boards. If goverance experience and background matter, we would expect to observe a greater impact on less experienced boards, where outside

perspective might carry greater weight. Consistent with this conjecture, we observe that β_1 is negative and significant for different specifications. Results in Table 7 also show that the experience of both executive directors as well as the experience of non-executive directors are important.

[Table 7 about here]

Next, if the advocacy of interlocking directors in favor of particular policies is an explanation for our findings, we would expect that interlocking directors who are also members of the governance committee to have a greater effect on firms' adoption of takeover defenses. Since the data on board committees are available only from 1999, we conduct our analysis as follows. We first redefine variables *UD Law Experience of Existing Directors* and *UD Law Experience of New Directors* to capture only the UD-law-passage experience of interlocking directors who *are not* governance committee members. We then reestimate the reduced-form Equation (4) using these two redefined variables and the firm-year sample from 1999 to 2006. The results are reported in columns (1) and (2) of Table 8. In contrast to our main results in Table 5, the coefficient on the variables *UD Law Experience of Existing Directors* is smaller and significant only at the 10 percent in column (1) and insignficant in column (2). We then define variable *UD Law Experience of Existing Directors* and *UD Law Experience of New Directors* to capture only the UD-law-passage experience of interlocking directors who *are* governance committee members and again reestimate Equation (4) with these variables. The results are reported in columns (3) and (4) of Table 8. The coefficients on *UD Law Experience of Existing Directors* are both statistically significant and economically larger than those in columns (1) and (2) (or for that matter, Table 5.) Consistent with a practice-transfer mechanism, the effect through members of the governance committee is signficantly greater than that through non-committee

interlocking directors.

[Table 8 about here]

Table 9 has a similar interpretation. Here, we use a "busy board" dummy, defined as 1 if the director serves on three or more boards.[8] The conjecture is that busy board members cannot devote as much attention to each firm, and therefore are more influenced by the opinion of the other directors. In fact, the interaction term between the busy board dummy and the *UD Law Experience of Existing Board* is significant and positive, implying that busy boards are more influenced by their members from UD states.

[Table 9 about here]

Finally, Table 10 focuses on the prior governance experience of UD-governed board members. Here, we attempt to home in on learning versus cultural issues. We hypothesize that if a UD-governed firm already has an E-index above some threshold, then there is little incremental opportunity to learn from participation in the adoption of new management-friendly governance provisions. In contrast, a firm with a low E-index that becomes newly governed by a UD law becomes more management friendly (see Appel, 2016), and board members see first-hand how such governance provisions are shepherded through the adoption process. Therefore, whereas our baseline reduced form equations in Table 5 weigh the experience of all interlocking directors equally, Table 10 weighs the experience of the interlocking directors in two different ways based on value of E-index in the peer UD-firm. Columns (1) and (2) repeat the baseline estimates from Table 5, whereas Columns (3) and (4) estimate similar regressions

[8]We also tried defining busy board members as those with four or more memberships and found similar results.

but weighting director experience in proportion to $1 - \text{E-index}/6$, and Columns (5) and (6) weighting director experience using $1/(1 + \text{E-index})$. The coefficients on *UD Law Experience of Existing Directors* are economically and statistically more signficant as more of weight is put on the experience of directors in peer UD-firms with good governance (low E-index). These results are consistent with a learning mechanism beyond "cultural" exposure to management friendly practice in UD-governed states.[9]

[Table 10 about here]

4.3. *Mediating Variables*

For further corroborating evidence, we ask whether the propagation of governance practice is mediated by the incentives confronting board members. Levit and Malenko (2015) show that one such incentive is related to the impact of governance philosophy on career outcomes in the labor market for board directors. They show that regulatory changes may help determine whether the economy settles on a strong- or weak-governance equilibrium. In a weak-governance equilibrium, a management-friendly environment can engender higher demand by corporations for directors with management-friendly reputations. On the supply side, to maximize their directorship prospects, directors may choose to act in favor of shareholders [in a strong-governance equilibrium] or management [in a weak-governance equilibrium] to signal that they are of the director type preferred by the market.

In the context of our model, the passage of UD laws presumably favors a weak-governance equilibrium. We first test this hypothesis, and then examine the impact of the passage of

[9]We also check the results if we condition the experience variable on adoption of an anti-takeover provision in a peer firm. The results reported in Table A5 show that the coefficient becomes stronger, which confirms the hypothesis that directors learn from their experience in other firms and transfer knowledge from one firm to another.

these laws on the actions of affected directors. We begin by confirming that the demand for experienced management-friendly directors rises after states pass UD laws.

We perform a univariate analysis in which each observation corresponds to a firm-year in which new directors are elected to a board. We then implement a before-and-after UD law passage comparison of newly appointed directors' governance reputations, as measured by the average value of the E-Index of the firms for which they have previously served (or alternatively by the average value of a specific component of the E-Index). We expect that after the passage of UD-laws, firms incorporated in these states are more likely to hire directors from firms with more management-friendly governance practices.

The results in Panel A of Table 11 confirm that passage of UD law favors the recruitment of management-friendly directors. After the passage of UD laws, the E-Index reputation of newly hired directors increases from 2.13 to 2.35. The effect is highly significant at better than the 1 percent level. Similarly, the changes in the average value of the six components of the E-Index are positive and, except for Poison Pill, all significant at better than the 1 percent level. In Panel B of Table 11, we perform a similar analysis but focus on newly hired members of the Governance, Audit, Compensation, and Nominating committees. We observe a significant increase, between 0.15 and 0.40 points, in the E-Index reputation of new committee members. These results indicate that the passage of a UD law makes directors who have served on management-friendly boards in other states more attractive to the firm. As such, it is consistent with the Levit and Malenko (2015) proposition that regulatory changes can tilt the system toward a weak-governance equilibrium.

[Table 11 about here]

The results in Table 11 demonstrate that the demand for directors with management-

friendly reputations increases when the legal environment encourages a "weak governance" equilibrium. These results indicate that interlocking board members' incentive to maximize their career prospects increases the impact of board interlocks in the propagation of governance practices.

4.4.*Economic Outcomes*

One possible way to distinguish two mechanisms which are explained in previous sections is testing the economic impact of adopting anti-takeover provisions in the presence of directors with UD experience. According to the learning mechanism, directors learn from their experience and transfer their knowledge from one firm to another. Learning about te process of ATPs adoption and their outcome would help these directors to do it when it is in favour of shareholder and the firm value. However, the directors incentive to build a management-friendly reputation by adopting anti-takeover provisions is not in line with long-term shareholders benefit. Therefore, comparing the economic effect of adoption of an anti-takeover provision in the presence of a director with UD experience with the same effect without the presence of such directors could help us better understand which mechanism i smore likely to explain the peer effect.

Positive coefficients of the interaction variable in the first two columns of Table 12 shows that directors that have experienced adopting anti-takeover provision in other firms use their knowledge in other firms and help adopting these provisions when they are in benefit of long-term shareholders. Last three columns of Table 12 show that the positive effect of directors experience depreciates over time.

[Table 12 about here]

5 Conclusion

While convergence of governance practices among firms linked through board interlocks has long been noted, the source of that convergence is extremely difficult to ascertain. It may be attributable to peer effects, whereby directors on one board are influenced by the experience and preferences of their peers. On the other hand, apparent convergence also would be observed simply through selection effects, in which firms with similar governance preferences recruit directors with similar preferences.

To tease out peer effects, one requires an instrument that is related to governance practice, but is unrelated to selection effects. The staggered adoption of Universal Demand laws across states provides just such an instrument. Using this instrument, we investigate peer effects in three main governance policies: CEO compensation, CEO duality, and takeover defenses (specifically, management entrenchement). In the first stage of our 2SLS model, we find that after the passage of such laws, firms in affected states increasingly adopt management-friendly policies. In second stage regresseions, we show anti-takeover provisions adopted by a firm governed by a UD law tend to be mimicked by other firms within that interlocking director network even when they are not governed by a UD law. Crucially, by restricting the sample to networks defined by overlapping board membership established prior to the adoption of a UD law by the state of either firm, we can be confident that this apparent propagation of policy cannot be due to selection effects.

These results are corroborated by patterns in the transmission of practice from one firm to another. For example, peer effects are stronger when: the board is less experienced; when the board is busier; when the interlocking directors are members of the governance commmittee; and when the board members have had greater prior opportunities to observe or

participate in the implementation of management-friendly changes to governance.

Variation in the propagation effects are also consistent with the career incentives of directors. In a strong-governance equilibrium, directors will increase the value of their human capital by signaling a proclivity for shareholder-friendly governance. But in a weak-governance equilibrium, a management-friendly reputation will be optimal. Universal Demand laws, which make it harder to sue directors for dereliction of their duties toward shareholders, can tilt the equilibrium toward the weak-governance outcome. We find that after passage of such laws, firms are more likely to recruit directors currently serving on other management-friendly boards; interlocking directors are thus incentivized to signal that they are management-friendly. We conclude that regulation can affect the nature of the equilibrium in the market for directors' services by changing the incentives faced by directors in dealing with conflicts of interest between managers and shareholders.

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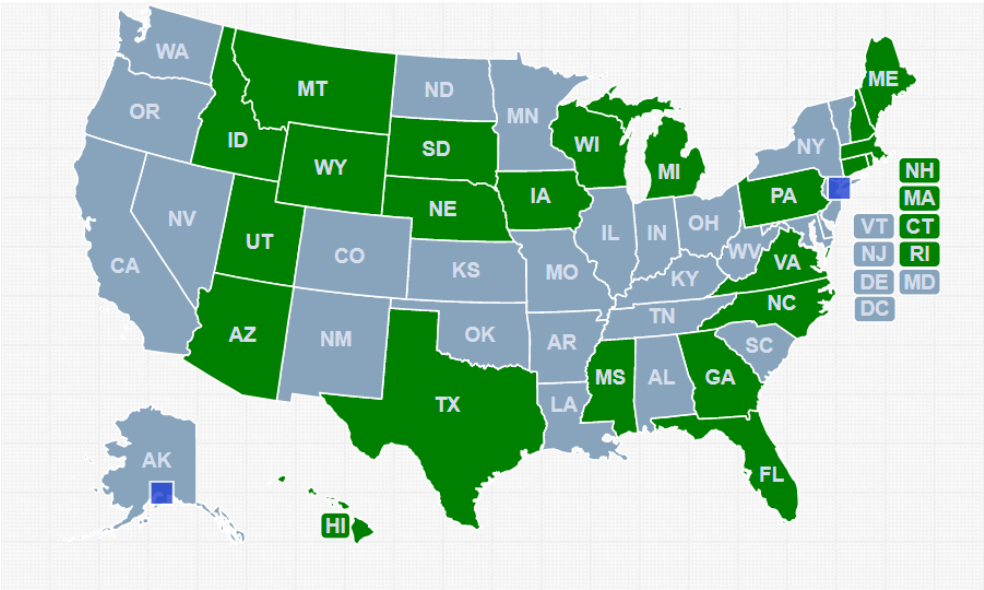


Figure 1: States with UD Laws - 2005
This figure presents geographically the states that adopted UD laws by 2005. States shaded in green adopted UD laws.

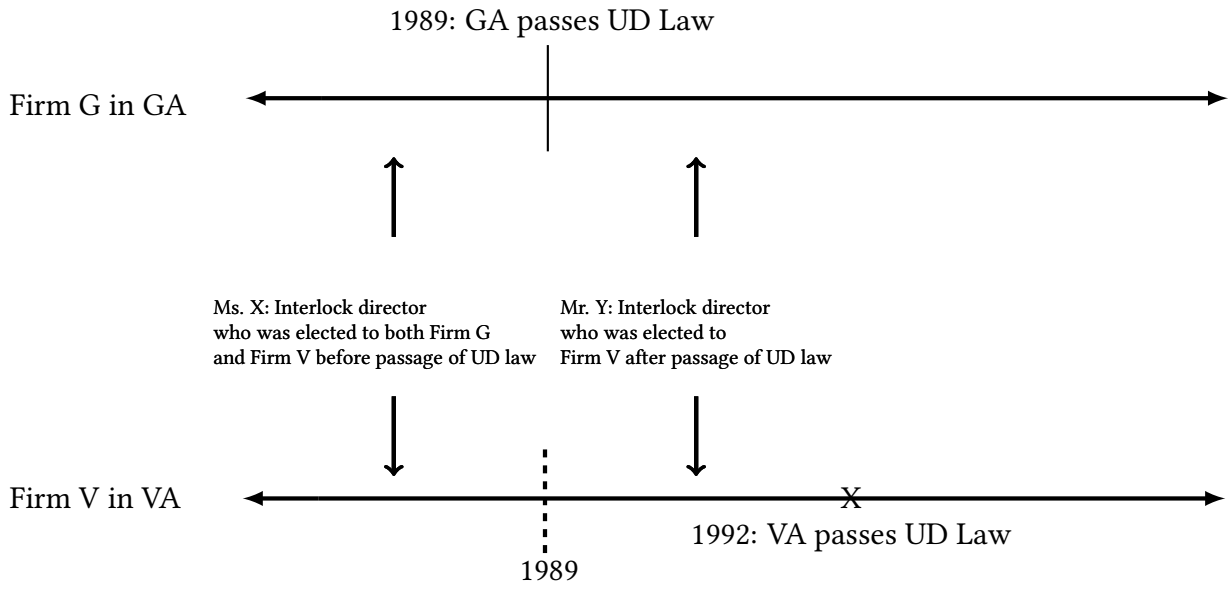
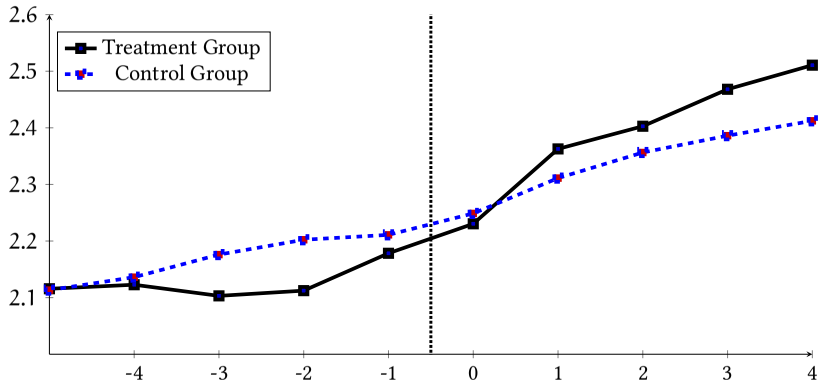
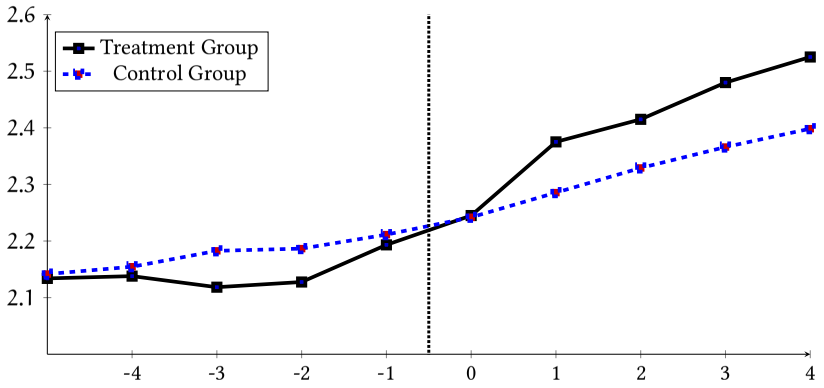


Figure 2: Illustrative Timeline for Adoption of Universal Demand Laws

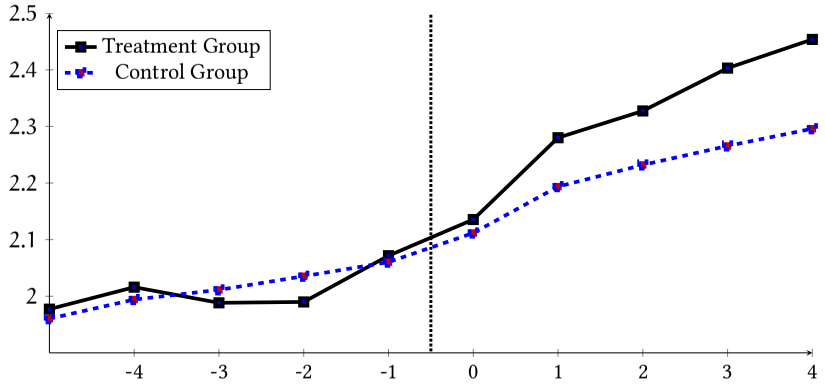
Time line showing hypothetical adoption of UD laws in two states and the appointment of board members of two firms in those states. Georgia adopts UD laws in 1989 and Virginia in 1992. Ms. X is appointed to both boards before the adoption of UD laws in either state. However, Mr. Y is appointed to both boards sometime between 1989 and 1992.



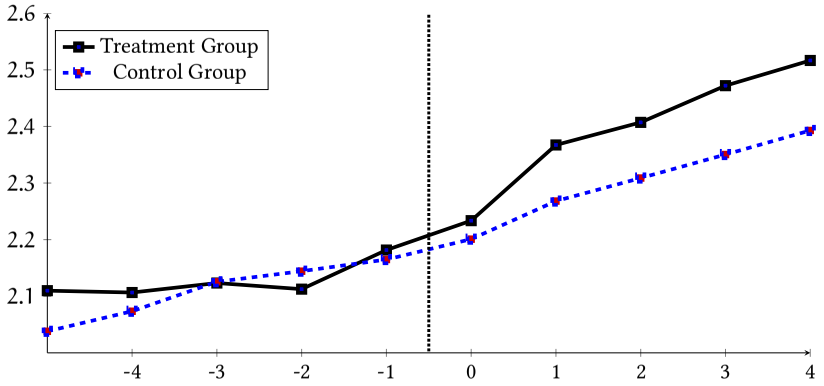
(a) Control sample is matched to treatment firms according to the size decile in year 0 (based on total assets) as well as the E-index in year -5.



(b) Control sample is matched to treatment firms according to the size quartile in year 0 (based on total assets) as well as the E-index in year -5.



(c) Control sample is matched to treatment firms according to the 2-digit SIC code in year 0 as well as the E-index in year -5.



(d) Control sample is matched to treatment firms according to the size decile in year 0 (based on total assets) as well as the E-index in year -3.

Figure 3: Evolution of E-index for firms linked to other firms that have experienced a change in UD laws compared to alternative control groups.

Table 1: Summary statistics

This table reports summary statistics for key variables. Panel A contains the information at firm-year-level for board-interlocked directors' experience in UD law passage and newly elected directors' experience in governance provisions from prior board positions. Panel B contains the information at firm-year-level for governance provisions and firm characteristics. Detailed variable definitions appear in Table A2

Panel A: Director Experience

Variable	Mean	25%	50%	75%	S.D.	N
UD Law Experience						
UD Law Experience of Existing Board Members	0.28	0.07	0.13	0.50	0.32	2,581
UD Law Experience of New Board Members	0.11	0.00	0.06	0.14	0.17	2,581
Number of Existing Directors with UD Law Experience	2.33	1.00	1.00	3.00	2.79	2,581
Number of New Directors with UD Law Experience	1.01	0.00	1.00	1.00	1.59	2,581
Neighbour States UD Law Status	1.21	0.00	1.00	2.00	1.20	2,581
Board Experience						
Board Experience of All Directors	7.18	6.33	7.33	8.18	1.43	13,830
Board Experience of Executive Directors	1.44	0.55	1.20	2.00	1.21	13,830
Board Experience of Non-Executive Directors	5.72	4.67	5.80	6.92	1.70	13,830
Newly Elected Director Reputation in Governance						
E-Index	2.22	1.50	2.00	3.00	1.09	2,539
Poison Pill	0.59	0.00	0.67	1.00	0.42	2,539
Classified Board	0.60	0.00	0.67	1.00	0.41	2,539
Classified Board	0.66	0.33	1.00	1.00	0.41	2,539
Supermajority	0.16	0.00	0.00	0.17	0.31	2,539
Limits to Amend Bylaws	0.02	0.00	0.00	0.00	0.13	2,539
Limits to Amend Charter	0.19	0.00	0.00	0.33	0.33	2,539

Panel B: Governance & Firm Characteristics

Variable	Mean	25%	50%	75%	S.D.	N
Governance Provisions						
E-Index	2.09	1.00	2.00	3.00	1.31	13,801
Poison Pill	0.55	0.00	1.00	1.00	0.50	13,801
Classified Board	0.59	0.00	1.00	1.00	0.49	13,801
Golden Parachute	0.59	0.00	1.00	1.00	0.49	13,801
Supermajority	0.17	0.00	0.00	0.00	0.37	13,801
Limits to Amend Bylaws	0.18	0.00	0.00	0.00	0.38	13,801
Limits to Amend Charter	0.02	0.00	0.00	0.00	0.14	13,801
Firm Characteristics						
Board Busyness	1.63	1.28	1.56	1.91	0.49	13,677
Total Assets	7.20	6.15	7.04	8.11	1.44	13,801
Book Leverage	0.37	0.14	0.36	0.55	0.30	13,801
R&D to Assets	0.03	0.00	0.00	0.04	0.06	13,801
Free Cash Flow	0.21	0.10	0.18	0.29	0.21	13,801
Return on Assets	0.11	0.06	0.10	0.16	0.11	13,801
Firm Age	3.10	2.56	3.30	3.71	0.68	13,801
Cash Compensation	0.53	0.27	0.50	0.80	0.31	17,091
CEO Duality	0.55	0.00	1.00	1.00	0.50	58,213

Table 2: OLS regressions relating governance practices of firms with those of board-interlocked firms

This table reports OLS regression results of the relation between a firm's governance practices versus those of its board-interlocked peer firms. The governance variables are *Cash Compensation*, *CEO Duality*, and *E-Index*. Each observation pair is the governance value of the firm and the average value of that particular governance provision in other firms at which interlocking directors have board seats. The sample period is from 1990 to 2006. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	Cash Compensation (1)	CEO Duality (2)	E-Index (3)
Peer Cash Compensation	0.093***		
	(0.008)		
Peer CEO Duality		0.056***	
		(0.006)	
Peer E-Index			0.174***
			(0.010)
Total Assets	-0.073***	0.023***	-0.088***
	(0.002)	(0.001)	(0.009)
Book Leverage	0.079***	0.019***	0.313***
	(0.010)	(0.007)	(0.043)
R&D to Assets	-1.008***	-0.147***	-0.744***
	(0.042)	(0.020)	(0.194)
Free Cash Flow	-0.084***	0.037***	0.023
	(0.015)	(0.006)	(0.067)
Return on Assets	-0.074***	-0.029***	-0.479***
	(0.027)	(0.009)	(0.126)
Firm Age	0.001***	0.001***	0.181***
	(0.000)	(0.000)	(0.019)
Number of Firm-Years	15,614	52,359	12,408
Adj. R-Square	0.125	0.024	0.045

Table 3: UD Law Experience and Governance Practices - IV-2SLS First Stage
This table reports the estimates of the first-stage regression relating the intrumental variable, *UD Law Experience of Existing Directors*, to interlocked peer-firms' corporate governance practices. The dependent governance variables, *Cash Compensation*, *CEO Duality*, and *E-Index*, are projected onto the *UD Law Experience of Existing Directors*. The sample period is from 1990 to 2006. Firm fixed-effects, state-year fixed-effects and firm characteristics are included in all specifications. Standard errors are clustered at the state of incorporation-year level and shown in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

$$\text{Peer Governance}_{i,s,t} = \beta_1 \text{UD Law Experience of Existing Directors}_{i,t} + \theta_i + \gamma_{s,t} + \epsilon_{i,s,t}$$

	Peer-Firm Cash Compensation (1)	Peer-Firm CEO Duality (2)	Peer-Firm E-Index (3)
UD Law Experience of Existing Directors	0.244***	0.266***	1.027***
	(0.064)	(0.048)	(0.201)
UD Law Experience of New Directors	0.378***	0.503***	0.812***
	(0.097)	(0.057)	(0.261)
Neighbour States UD Law Status	0.006	0.000	0.065**
	(0.007)	(0.004)	(0.032)
Total Assets	0.027***	0.020***	0.105***
	(0.005)	(0.002)	(0.022)
Book Leverage	0.003	-0.024***	-0.052
	(0.014)	(0.007)	(0.054)
R&D to Assets	0.031	0.089***	0.115
	(0.080)	(0.023)	(0.268)
Free Cash Flow	0.034*	0.002	0.112**
	(0.018)	(0.005)	(0.046)
Return on Assets	-0.048	-0.004	-0.247
	(0.032)	(0.007)	(0.170)
Firm Age	-0.012	0.002	0.319***
	(0.014)	(0.004)	(0.079)
Firm Fixed-Effects	Yes	Yes	Yes
State Year Fixed-Effects	Yes	Yes	Yes
Number of Firm-Years	12,980	45,261	10,539
Adj. R-Square	0.427	0.448	0.580

Table 4: UD Law Experience and Governance Practices- IV-2SLS Second Stage
This table reports the estimates of second-stage regressions relating peer firms' governance practices, instrumented in the first-stage regression, and a firm's corporate governance practices. The dependent variables are *Cash Compensation*, *CEO Duality*, and *E-Index*. Instrumented Peer Governance is the projection of the governance practice of board-interlocked firms onto the *UD Law Experience of Existing Directors*. The sample period is from 1990 to 2006. Firm fixed-effects, state-year fixed-effects and firm characteristics are included in all specifications. Standard errors are clustered at the state of incorporation-year level and shown in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

$$\text{Firm Governance}_{i,s,t+1} = \beta_1 \text{Instrumented Peer Governance}_{i,s,t} + \text{Firm Controls}_{i,s,t} + \theta_i + \gamma_{s,t} + \epsilon_{i,s,t+1}$$

	Cash Compensation (1)	CEO Duality (2)	E-Index (3)
Instrumented Peer Cash Compensation	-0.055		
	(0.344)		
Instrumented Peer CEO Duality		0.176	
		(0.162)	
Instrumented Peer E-Index			0.333***
			(0.108)
UD Law Experience of	-0.156	-0.096	0.394*
New Board Members	(0.160)	(0.110)	(0.235)
Neighbour States UD	0.001	-0.018***	-0.040***
Law Status	(0.007)	(0.004)	(0.014)
Total Assets	-0.025*	-0.001	-0.017
	(0.013)	(0.004)	(0.016)
Book Leverage	0.076***	0.010	0.026
	(0.017)	(0.009)	(0.040)
R&D to Assets	0.029	-0.002	-0.353
	(0.130)	(0.032)	(0.214)
Free Cash Flow	-0.064***	0.010*	-0.006
	(0.022)	(0.006)	(0.049)
Return on Assets	-0.263***	0.015*	-0.091
	(0.045)	(0.008)	(0.137)
Firm Age	0.015	0.016***	0.385***
	(0.014)	(0.006)	(0.064)
Firm Fixed-Effects	Yes	Yes	Yes
State Year Fixed-Effects	Yes	Yes	Yes
Number of Firm-Years	12,980	45,261	10,539
Adj. R-Square	0.412	0.468	0.834
F statistic	19.977	39.652	29.334

Table 5: UD Law Experience and Governance Practice - Reduced-Form
This table reports estimates of the reduced form Equation (4) for firm governance variable against UD Law Experience and various controls. The dependent variables are *Cash Compensation*, *CEO Duality*, and *E-Index*. The sample period is from 1990 to 2006. Firm fixed-effects, state-year fixed-effects and firm characteristics are included in all specifications. Standard errors are clustered at the state of incorporation-year level and shown in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

$$\text{Firm Governance}_{ist} = \beta_1 \text{UD Law Experience of Existing Directors}_{it} + \beta_2 \text{UD Law Experience of New Directors}_{it} + \theta_i + \gamma_{st} + \epsilon_{ist}$$

	Cash Compensation	CEO Duality	E-Index
	(1)	(2)	(3)
UD Law Experience of Existing Directors	-0.014	0.047	0.342***
	(0.083)	(0.045)	(0.092)
UD Law Experience of New Directors	-0.177*	-0.007	0.665***
	(0.099)	(0.063)	(0.236)
Neighbour States UD Law Status	0.001	-0.018***	-0.018
	(0.007)	(0.004)	(0.015)
Total Assets	-0.026***	0.003	0.018
	(0.007)	(0.002)	(0.011)
Book Leverage	0.076***	0.006	0.009
	(0.017)	(0.008)	(0.033)
R&D to Assets	0.028	0.013	-0.314
	(0.128)	(0.029)	(0.220)
Free Cash Flow	-0.066***	0.010*	0.031
	(0.016)	(0.006)	(0.041)
Return on Assets	-0.261***	0.014*	-0.174
	(0.044)	(0.008)	(0.108)
Firm Age	0.016	0.017***	0.492***
	(0.013)	(0.006)	(0.043)
Firm Fixed-Effects	Yes	Yes	Yes
Year Fixed-Effects	Yes	Yes	Yes
Number of Firm-Years	12,980	45,261	10,539
Adj. R-Square	0.415	0.478	0.866

Table 6: UD Law Experience and Takeover Defenses - Reduced-Form

This table reports the estimates of the reduced-form regression, Equation (4), of the relation between the UD law experience of interlocking directors and firms' decision to adopt anti-takeover provisions. The dependent variables are E-Index and each of its six components. Governance data are from ISS from 1990 to 2006. Firm fixed-effects, state-year fixed-effects and firm characteristics are included in all specifications. Standard errors are clustered at the state of incorporation-year level and shown in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

$$\text{Firm Governance}_{ist} = \beta_1 \text{UD Law Experience of Existing Directors}_{it} + \beta_2 \text{UD Law Experience of New Directors}_{it} + \theta_i + \gamma_{st} + \epsilon_{ist}$$

	E-Index	Poison Pill	Classified Board	Golden Parachute	Supermajority Voting	Bylaw Limits	Charter Limits
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
UD Law Experience of Existing Directors	0.342***	0.151**	0.128***	-0.030	-0.021	0.130***	-0.016
	(0.092)	(0.063)	(0.029)	(0.068)	(0.063)	(0.031)	(0.011)
UD Law Experience of New Directors	0.665***	0.273*	0.090	-0.026	0.167***	0.184***	-0.025
	(0.236)	(0.145)	(0.061)	(0.100)	(0.058)	(0.056)	(0.017)
Firm Fixed-Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State Year Fixed-Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm Characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of Firm-Years	10,539	10,539	10,539	10,539	10,539	10,539	10,539
Adj. R-Square	0.866	0.751	0.921	0.693	0.884	0.883	0.800

Table 7: UD Law Experience and Takeover Defenses - Reduced-Form with Board Experience Interactions

This table presents regression results of the relation between the UD law experience of interlocking directors, the experience of the board, and firms' decisions to adopt anti-takeover provisions. The dependent variable is the entrenchment index, E-Index. The right-hand side variables in the reduced form, Equation (4), are augmented by an interaction term between *UD Law Experience of Existing Directors* and variables measuring the level of board experience of directors. *Board Experience of All Directors* is the average board experience of all board members in the past 10 years. *Board Experience of Executive Directors* is the average board experience of executive board members in the past 10 years. *Board Experience of Non-Executive Directors* is the average board experience of non-executive board members in the past 10 years. Standard errors are clustered at the state of incorporation-year level and shown in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	E-Index (1)	E-Index (2)	E-Index (3)	E-Index (4)
UD Law Experience of Existing Board	-0.175*	-0.182**		
× Board Experience of All Directors	(0.093)	(0.093)		
Board Experience of All Directors	-0.003	-0.006		
	(0.006)	(0.006)		
UD Law Experience of Existing Directors	1.824**	1.859**	2.190**	2.226**
	(0.771)	(0.771)	(0.891)	(0.888)
UD Law Experience of New Directors	0.600**	0.593**	0.607**	0.598**
	(0.242)	(0.239)	(0.241)	(0.239)
UD Law Experience of Existing Board			-0.352**	-0.353**
× Board Experience of Executive Directors			(0.144)	(0.144)
UD Law Experience of Existing Board			-0.201*	-0.209*
× Board Experience of Non-Executive Directors			(0.107)	(0.107)
Board Experience of Executive Directors			0.011	0.008
			(0.009)	(0.009)
Board Experience of Non-Executive Directors			-0.005	-0.007
			(0.006)	(0.006)
Firm Fixed-Effects	Yes	Yes	Yes	Yes
State Year Fixed-Effects	Yes	Yes	Yes	Yes
Firm Characteristics	No	Yes	No	Yes
Number of Firm-Years	10,563	10,540	10,563	10,540
Adj. R-Square	0.864	0.864	0.864	0.864

Table 8: UD Law Experience of Interlocking Governance Committees and Takeover Defenses

This table reports regression results of the relation between the UD law experience of interlocking directors who are also members of the governance committee with firms' decision to adopt anti-takeover provisions. The dependent variable is E-Index. The right-hand side variables *UD Law Experience of Existing Directors* and *UD Law Experience of New Directors* in the reduced form, Equation (4), are constructed as constructed as follows: in columns (1) & (2), the variables capture the UD law experience of directors who are *not* in the governance committee; in columns (3) & (4), the variables capture the UD law experience of directors who are *are* in the governance committee. The sample period is from 1999 to 2006. Governance data are from ISS from 1990 to 2006. Firm fixed-effects and state-year fixed-effects are included in all specifications. Standard errors are clustered at the state of incorporation-year level and shown in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	Non-Governance Committee		Governance Committee	
	(1)	(2)	(3)	(4)
UD Law Experience of Existing Directors	0.282*	0.221	0.579**	0.441*
	(0.156)	(0.156)	(0.285)	(0.233)
UD Law Experience of New Directors	0.562*	0.518*	0.650	0.717*
	(0.303)	(0.300)	(0.401)	(0.415)
Neighbour States UD Law Status		-0.024		-0.024
		(0.021)		(0.021)
Total Assets		0.029		0.030
		(0.024)		(0.024)
Book Leverage		0.009		0.006
		(0.023)		(0.022)
R&D to Assets		-0.320*		-0.319*
		(0.182)		(0.182)
Free Cash Flow		-0.002		-0.000
		(0.024)		(0.024)
Return on Assets		0.272***		0.266***
		(0.055)		(0.054)
Firm Age		0.542***		0.548***
		(0.127)		(0.127)
Firm Fixed-Effects	Yes	Yes	Yes	Yes
State Year Fixed-Effects	Yes	Yes	Yes	Yes
Number of Firm-Years	5,361	5,348	5,361	5,348
Adj. R-Square	0.915	0.915	0.915	0.915

Table 9: UD Law Experience and Takeover Defenses - Reduced-Form with Board Busyness Interactions

This table presents the regression results of the relation between the UD law experience of interlocking directors, board busyness, and firms' decisions to adopt anti-takeover provisions. The dependent variable is E-Index. The right-hand side variables in the reduced form, Equation (4), are augmented by an interaction term between *UD Law Experience of Existing Directors* and a dummy variable *Busy Board* for whether those board members serve on 2 or more other boards. Governance data are from ISS from 1990 to 2006. Standard errors are clustered at the state of incorporation-year level and shown in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	E-Index (1)	E-Index (2)	E-Index (3)	E-Index (4)
Busy Board ×	0.373**	0.384*	0.385*	0.383*
UD Law Experience of Existing Directors	(0.194)	(0.199)	(0.196)	(0.200)
Busy Board	-0.043*	-0.046**	-0.042*	-0.044*
	(0.022)	(0.022)	(0.024)	(0.023)
UD Law Experience of	0.268**	0.241**	0.262**	0.244**
Existing Directors	(0.114)	(0.116)	(0.122)	(0.123)
UD Law Experience of	0.745***	0.756***	0.653***	0.651***
New Directors	(0.244)	(0.244)	(0.244)	(0.243)
Firm Fixed-Effects	Yes	Yes	Yes	Yes
Year Fixed-Effects	Yes	Yes	No	No
State Year Fixed-Effects	No	No	Yes	Yes
Firm Characteristics	No	Yes	No	Yes
Number of Firm-Years	10,653	10,630	10,563	10,540
Adj. R-Square	0.863	0.863	0.864	0.864

Table 10: UD Law Experience and Takeover Defenses: Effect of Board's Prior Governance Experience

This table presents the regression results of the relation between the UD law experience of interlocking directors, board's prior governance experience, and firms' decisions to adopt anti-takeover provisions. The dependent variable is E-Index. The right-hand side variables *UD Law Experience of Existing Directors* and *UD Law Experience of New Directors* in the reduced form, Equation (4), are constructed as follows: columns (1) & (2) are the baseline models as in Tables 6; in columns (3) & (4), the variable *UD Law Experience of Existing Directors* is weighted in proportion to $\texttt{director experience} = 1 - \texttt{E-index}/6$; in columns (5) & (6), the variable *UD Law Experience of Existing Directors* is weighted in proportion to $\texttt{director experience} = 1/(1 + \texttt{E-index})$. Standard errors are clustered at the state of incorporation-year level and shown in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	E-Index (1)	E-Index (2)	E-Index (3)	E-Index (4)	E-Index (5)	E-Index (6)
UD Law Experience of Existing Directors	0.400***	0.342***	0.554***	0.527***	0.673***	0.643***
	(0.096)	(0.092)	(0.137)	(0.145)	(0.226)	(0.236)
UD Law Experience of New Directors	0.629**	0.665**	0.631**	0.629**	0.633**	0.631***
	(0.244)	(0.236)	(0.245)	(0.243)	(0.245)	(0.244)
Firm Fixed-Effects	Yes	Yes	Yes	Yes	Yes	Yes
State Year Fixed-Effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm Characteristics	No	Yes	No	Yes	No	Yes
Number of Firm-Years	10,563	10,539	10,563	10,540	10,563	10,540
Adj. R-Square	0.864	0.866	0.864	0.864	0.864	0.864

Table 11: UD Laws and Newly Elected Directors' Reputation in Governance
This table presents a univariate analysis of the governance reputation of newly elected directors before and after the passage of UD Laws. The variables of interest are the average of newly elected directors' reputation based on the E-Index and each of its component provisions at the other firms at which the director has served. The sample is comprised of observations for which new directors are added to the boards, with firm-year observations from 1990 to 2006. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel A: UD laws and New Directors' Governance Reputation

	Non-UD Law Period	UD Law Period	Diff	T-Stats
E-Index Reputation	2.13	2.35	0.22***	7.63
Poison Pill Reputation	0.58	0.60	0.02*	1.68
Classified Board Reputation	0.63	0.65	0.11***	9.39
Golden Parachute Reputation	0.59	0.70	0.02***	2.12
Supermajority Voting Reputation	0.14	0.17	0.02***	3.20
Bylaw Limits Reputation	0.18	0.20	0.03***	2.93
Charter Limits Reputation	0.02	0.04	0.02***	7.33
Number of Observations	11,301	1,589		

Panel B: UD laws and New Committee Members' E-Index Reputation

	Non-UD Law Period		UD Law Period			
	Mean	N	Mean	N	Diff	T-Stats
Governance Committee	2.23	1,524	2.41	228	0.15***	3.76
Audit Committee	2.26	2,522	2.45	356	0.19***	3.08
Compensation Committee	2.16	2,008	2.70	296	0.53***	8.11
Nominating Committee	2.19	1,549	2.59	206	0.40***	5.19

Table 12: Economic Outcomes

This table shows the economic impact of adoption of an anti-takeover defense provision when the firm has directors who have experience UD laws in other firms. In columns (1) & (2), the sample is all firm-years that we can observ the E-index, the main variable and the control variables. In columns (3), (4) & (5), we show the impact of directors experience on the change in Tobin's Q after one year, three years, and five years. Standard errors are clustered at the state of incorporation-year level and shown in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	(1) Tobin's Q	(2) Tobin's Q	(3) TQ Diff-1	(4) TQ Diff-3	(5) TQ Diff-5
E-Index Increase Dummy ×	3.039***	2.615***			
UD Law Experience of New Directors	(0.966)	(0.909)			
UD Law Experience of Existing	-1.789***	-1.507***	3.452*	2.856	1.791
Directors	(0.372)	(0.327)	(2.063)	(2.127)	(2.026)
E-Index Increase Dummy	-0.218***	-0.168***			
	(0.053)	(0.060)			
UD Law Experience of New Directors	-2.129***	-1.267**	-0.742	2.941	2.166
	(0.536)	(0.554)	(3.817)	(2.537)	(2.296)
Firm Fixed-Effects	Yes	Yes	No	No	No
State Year Fixed-Effects	Yes	Yes	No	No	No
Year Fixed-Effects	No	No	Yes	Yes	Yes
Firm Characteristics	No	Yes	No	No	No
Number of Firm-Years	11,080	11,073	614	614	614
Adj. R-Square	0.478	0.535	0.102	0.065	0.091

Appendices

Table A1: Universal Demand Legislation
This table lists the states of incorporation with universal demand (UD) laws and the corresponding effective year and statute reference. The final column reports the number of firm-year observations in the sample. Source: Appel (2016)

Year	State	Citation
1989	GA	Ga. Code Ann. § 14-2-742
	MI	Mich. Comp. Laws Ann. § 450.1493a
1990	FL	Fla. Stat. Ann. § 607.07401
1991	WI	Wis. Stat. Ann. § 180.742
1992	MT	Mont. Code. Ann. § 35-1-543
	VA	Va. Code Ann § 13.1-672.1B
	UT	Utah Code. Ann. § 16-10a-740(3)
1993	NH	N.H. Rev. Stat. Ann. § 293-A:7.42
	MS	Miss. Code Ann. § 79-4-7.42
1995	NC	N.C. Gen. Stat. § 55-7-42
1996	AZ	Ariz. Rev. Stat. Ann. § 10-742
	NE	Neb. Rev. Stat. § 21-2072
1997	CT	Conn. Gen. Stat. Ann. § 33-722
	ME	Me. Rev. Stat. Ann. 13-C, § 753
	PA	Cuker v. Mikalauskas (547 Pa. 600, 692 A.2d 1042)
	TX	Tex. Bus. Org. Code. Ann. 607.07401
	WY	Wyo. Stat. § 17-16-742
1998	ID	Idaho Code § 30-1-742
2001	HI	Haw. Rev. Stat. § 414-173
2003	IA	Iowa Code Ann. § 490.742
2004	MA	Mass. Gen. Laws. Ann. Ch. 156D, § 7.42
2005	RI	R.I. Gen. Laws. § 7-1.2-710(C)
	SD	S.D. Codified Laws 47-1A-742

Table A2: Variable Description

Variable	Definition
UD Law Experience of Existing Directors	UD Law experience of board-interlocked directors that are in place before a UD law is passed in either firm's home state
UD Law Experience of New Directors	UD Law experience of board-interlocked directors who join the firm after a UD law is passed in either firm's home state
Number of New Directors with UD Law Experience	Number of board-interlocked directors that are in place before a UD law is passed in either firm's home state
Number of Existing Directors with UD Law Experience	Number of board-interlocked directors who join the firm after a UD law is passed in either firm's home state
Neighbor States UD Law Status	The number of neighboring states have passed UD law.
Board Experience of Executive Directors	The average board experience of executive board members in the past 10 years
Board Experience of Non-Executive Directors	The average board experience of non-executive board members in the past 10 years
Board Experience of All Directors	The average board experience of all board members in the past 10 years
New Directors' Reputation	Average governance practices of the firms in which an interlock director has served as a board member in the five years prior to joining a new firm
Board Busyness	The average number of board positions that a director hold in a firm-year
Logarithm of Total Assets	Logarithm of lagged asset value in COMPUSTAT
Book Leverage	Book value of debt(long-term debt + current liabilities) divided by the sum of book value of debt and book value of equity
R&D to Assets	R&D expenses in COMPUSTAT divided by lagged asset value
Free Cash Flow	Operating activities net cash flow minus investing activities net cash flow divided by lagged asset value
Return on Assets	Earnings before interest and tax divided by lagged asset value
Firm Age	The number of years since a firm's financial data is available on Compustat
Cash Compensation	Ratio of cash salary and bonus to total compensation (tdc1)
CEO Duality	The CEO is also the chairperson of the board

Table A3: UD Law Experience and Governance Practice - Reduced-Form with Matched Sample

The dependent variable is E-Index. The matched samples are constructed on the same year based on total assets and 2-digit SIC codes. In columns (1) & (2), the main test is repeated with the full sample. In columns (3) & (4), the samples are firms in the same decile of total assets and same 2-digit SIC codes. In columns (5) & (6), the samples are firms in the same quartile of total assets and same 2-digit SIC codes. Standard errors are clustered at the state of incorporation-year level and shown in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	E-Index (1)	E-Index (2)	E-Index (3)	E-Index (4)	E-Index (5)	E-Index (6)
UD Law Experience of Existing Directors	0.433***	0.342***	0.483***	0.470***	0.364***	0.357***
	(0.088)	(0.092)	(0.109)	(0.113)	(0.103)	(0.105)
UD Law Experience of New Directors	0.635**	0.665***	0.908***	0.932***	0.559**	0.582**
	(0.245)	(0.236)	(0.295)	(0.297)	(0.234)	(0.238)
Neighbour States UD Law Status		-0.018		-0.062***		-0.036**
		(0.015)		(0.020)		(0.014)
Total Assets		0.018		-0.008		0.003
		(0.011)		(0.018)		(0.017)
Book Leverage		0.009		-0.050		-0.009
		(0.033)		(0.040)		(0.033)
R&D to Assets		-0.314		-0.490*		-0.482*
		(0.220)		(0.269)		(0.262)
Free Cash Flow		0.031		0.059		0.041
		(0.041)		(0.055)		(0.049)
Return on Assets		-0.174		-0.390***		-0.279**
		(0.108)		(0.150)		(0.123)
Firm Age		0.492***		-0.015		0.922***
		(0.043)		(0.055)		(0.265)
Firm Fixed-Effects	Yes	Yes	Yes	Yes	Yes	Yes
State Year Fixed-Effects	Yes	Yes	Yes	Yes	Yes	Yes
Number of Firm-Years	10,563	10,539	4,886	4,879	6,967	6,958
Adj. R-Square	0.864	0.866	0.857	0.858	0.855	0.855

Table A4: Robustness Check - Sample of Directors with Over 3-year Board-Interlocking Experience
This table presents the regression results of the relation between the UD law experience of interlocking directors, board busyness, and firms' decisions to adopt anti-takeover provisions. The dependent variable is E-Index. The right-hand side variables in the reduced form, Equation (4). *UD Law Experience of Existing Directors* is calculated for the directors who have served in interlocking boards for at least 3 years. Governance data are from ISS from 1990 to 2006. Standard errors are clustered at the state of incorporation-year level and shown in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	E-Index	Poison Pill	Classified Board	Golden Parachute	Supermajority Voting	Bylaw Limits	Charter Limits
UD Law Experience of Existing Board	0.380***	0.179***	0.144***	-0.005	-0.050	0.126***	-0.014
	(0.097)	(0.063)	(0.029)	(0.072)	(0.063)	(0.030)	(0.010)
UD Law Experience of New Board Members	0.628**	0.257*	0.085	-0.040	0.165***	0.185***	-0.025
	(0.244)	(0.149)	(0.061)	(0.104)	(0.058)	(0.056)	(0.017)
Firm Fixed-Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State Year Fixed-Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm Characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of Firm-Years	10,540	10,540	10,540	10,540	10,540	10,540	10,540
Adj. R-Square	0.864	0.748	0.921	0.691	0.884	0.883	0.800

Table A5: Peer Effects - Conditioned on increased E-Index in peer firms
In this table, we test the learning channel by looking into adoption of anti-takeover provisions in the sources, the peer firms. The main variable, UD Law Experience of Existing Directors, is constructed based on the condition that directors' experience comes from their positions at UD state firms which have adopted anti-takeover provisions. Standard errors are clustered at the state of incorporation-year level and shown in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	E-Index (1)	E-Index (2)
UD Law Experience of Existing Directors	1.480***	1.467***
	(0.305)	(0.338)
UD Law Experience of New Directors	0.592**	0.629***
	(0.240)	(0.232)
Neighbour States UD Law Status		-0.015
		(0.016)
Total Assets		0.017
		(0.011)
Book Leverage		0.009
		(0.033)
R&D to Assets		-0.314
		(0.219)
Free Cash Flow		0.032
		(0.041)
Return on Assets		-0.176
		(0.109)
Firm Age		0.499***
		(0.043)
Firm Fixed-Effects	Yes	Yes
State Year Fixed-Effects	Yes	Yes
Number of Firm-Years	10,563	10,539
Adj. R-Square	0.864	0.866