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Aiyesha Dey Joshua T. White

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Aiyesha Dey Harvard Business School

Joshua T. White Vanderbilt University

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Labor Mobility and Antitakeover Provisions

Aiyesha Dey* Harvard Business School Harvard University

Joshua T. White Owen Graduate School of Management Vanderbilt University

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Abstract

How do firms protect their human capital? We test whether firms facing an increased threat of being acquired strengthen their antitakeover provisions (ATPs) in order to bond with their employees. We use the adoption of the Inevitable Disclosure Doctrine (IDD) by US state courts, which exogenously decreases knowledge-worker mobility, thus elevating takeover risk and reducing employee incentives to innovate. Firms respond to IDD adoption by strengthening ATPs that defend against hostile takeovers, especially when they have greater ex-ante human capital and place greater importance on employee relations. Ex-post increases in employee morale, productivity, innovation, and accounting performance suggest that strengthening ATPs helps offset the negative consequences of IDD adoption. Our findings show that ATPs can be used to credibly commit to employees in order to protect long-term value creation.

Keywords: Labor mobility, human capital, antitakeover provisions, trade secrets, employee relations.

JEL Classification: G34, G38, K22, L14

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1. Introduction

Human relations theories argue that employees are a key organizational asset crucial to a firm's performance (Lev and Schwartz, 1971). Recent evidence documents that human capital comprises a significant and growing portion of firm value (Klemesh et al., 2019). Managers therefore design institutional arrangements to stabilize employment (Doeringer and Piore, 1985; Erkens, 2011), thus encouraging employee investments in firm-specific skills which benefit productivity and performance (Auer et al., 2005).¹ In this paper, we examine the use of antitakeover provisions (ATPs) as a mechanism to protect these investments.

We study ATPs around the adoption of the Inevitable Disclosure Doctrine (IDD) by US state courts. The IDD protects firms' trade secrets by preventing employees from working for rivals if doing so would unavoidably divulge those secrets.² Thus, IDD adoption significantly reduces employee mobility (Klasa et al., 2018) and, in turn, exogenously increases the probability of competitors acquiring the firm for its intellectual capital (Chen et al., 2020).

Reduced mobility and increased takeover risk together reduce employee incentives to invest in firm-specific human capital. Such incentives are contingent upon implicit agreements that effort will eventually bring higher wages (Shleifer and Summers, 1988). Mobility restrictions diminish employee effort by reducing the potential rewards from external labor markets (Contigiani et al., 2018). Takeover risk also reduces employee incentives due to uncertainty about post-merger employment and compensation (Cremers et al., 2008; Fulghieri and Sevilir, 2011).

We posit that, to combat the negative shock of IDD to employees' incentives, firms are likely to bond with their employees by strengthening antitakeover arrangements that reduce and/or delay the likelihood of being acquired. To our knowledge, we are the first to study ATPs as a mechanism for committing specifically to employees, who research shows contribute substantially to firm value and accounting performance (Edmans, 2012; Flammer, 2015).

The IDD provides an appealing setting to test the notion of bonding with employees via ATPs. First, its staggered adoption by state courts allows us to study the relation between employee mobility, takeover risk, and the use of ATPs in a difference-in-differences framework. Second, state courts adopted IDD solely to protect the trade secrets of firms in their jurisdiction and did not

¹ Workforce stability helps protect trade secrets as former employees are the greatest risk for divulging them (Almeling, 2012). R&D-intensive firms often use time-vested stock compensation to reduce turnover (Erkens, 2011).

² Trade secrets include all types of sensitive information that give firms a competitive advantage (Glaeser, 2018a).

intend to promote takeover activity or induce changes in governance structures. Thus, any effects on these factors are likely unintended and exogenous.

We first confirm that takeover risk increases for firms headquartered in states adopting IDD during our sample period 1990 to 2011. We find a 27% increase in takeover risk from the mean unconditional probability of being acquired, which is similar to estimates including earlier periods in Chen et al. (2020). When combined with a 25% reduction in knowledge-worker mobility resulting from IDD (Klasa et al., 2018), there is strong evidence that IDD adoption significantly restricts mobility and increases takeover risk, thereby supporting our identification strategy.

Our main tests and findings can be summarized as follows. First, we examine whether managers strengthen ATPs when faced with elevated takeover risk due to the IDD—and if so, which ATPs—using data on 22 firm-level ATPs from Institutional Shareholder Services (ISS). We consider provisions in four categories specified in Gompers et al. (2003) based on their function: delaying or defending against hostile bidders (Delay Provisions); voting rights (Voting Provisions); director/officer protection (Protection Provisions); and other provisions (Other Provisions).

Delay Provisions, which include classified boards, blank check, and limits to written consent and to special meetings, are among the most powerful ATPs, as they provide a barrier to hostile acquirers (Klausner, 2013). We predict and find that firms in states adopting IDD significantly strengthen Delay Provisions versus firms in non-IDD states. For an average 25% decrease in knowledge-worker mobility and a 27% increase in takeover risk after IDD adoption, firms strengthen Delay Provisions by 7% of a standard deviation. The size of this variation is meaningful given that firms typically resist altering ATPs after going public (Johnson et al., 2015).

We find that the strengthening of Delay Provisions takes place in the years just after—and not before—IDD adoption. The findings are robust to controlling for the level of other ATPs and in states that both adopt and reject the IDD. We find no evidence of significant changes in the other ATP groups (Voting, Protection, or Other Provisions) after IDD adoption, likely because they contain provisions unrelated to takeover protection (Catan and Kahan, 2019).

To further validate our identification strategy, we test and find that firms strengthen Delay Provisions more after IDD if their employees have greater ex-ante mobility, proxied by state-level variation in enforcing noncompete agreements (Ertimur et al., 2018), trade secrets protection outside of IDD (Glaeser, 2018a), number of in-state rivals (Gao et al., 2015), disclosing the "ability to attract and retain" employees as a risk factor (Qiu and Wang, 2019), and a composite score based on a principal component analysis (PCA) of these mobility proxies.

We next turn to our tests of employee bonding. If firms strengthen Delay Provisions to commit to employees, we expect larger treatment effects for firms whose human capital is key to value creation. Consistent with this prediction, we find greater strengthening of Delay Provisions after IDD for firms in states with larger research and development (R&D) tax credits (Glaeser, 2018b), with higher R&D and intangible-asset intensity, in industries with more knowledge workers, and with a higher PCA-developed measure of these human capital proxies.

We also expect that firms placing a higher ex-ante importance on employee relations will strengthen Delay Provisions more after IDD. This prediction is supported by results using the following moderating variables: states permitting a firm's board to consider stakeholders in business decisions (Flammer and Kacperczyk, 2016), firm-level ratings of employee strengths and concerns in the Kinder, Lydenberg, and Domini database, frequency with which a firm's annual report discusses employees, and a PCA-based measure of employee relations.

Because the tests using ex-ante partitions suggest that firms strengthen Delay Provisions in order to bond with employees, we explore the correlation between this choice and several expost employee outcomes. While we cannot infer causation from these tests, the findings support the bonding hypothesis. Firms that strengthen Delay Provisions after IDD partially offset declines in employee morale and productivity, exhibit greater trade-secret intensity, and have better accounting performance, as proxied by return on assets, return on sales, and net profit margins.

While these tests collectively point to employee bonding as a value-adding incentive for strengthening Delay Provisions after IDD, we consider—but ultimately reject—two alternative motives for strengthening ATPs. First, although many studies points to ATPs as a mechanism to protect managers from the market for corporate control (Bebchuk et al., 2008), we find no evidence that firms with entrenched executives strengthen Delay Provisions more after IDD. Second, because IDD adoption elevates takeover risk, managers could use Delay Provisions to increase bargaining power for higher takeover premiums (Bates et al., 2008). However, we find no evidence of this outcome.

Our study relies on several assumptions. First, we assume that employees are aware that IDD adoption reduces their mobility. To support this assumption, we point to anecdotal evidence of widely publicized lawsuits against former employees possessing trade secrets. Second, we

assume that employees become aware of elevated takeover risk after IDD. We find that IDD firms average 60% more news articles mentioning them as rumored acquisition targets. Third, we assume that employees know that their firms altered their Delay Provisions. US Census data and prior research (Erkens, 2011) show that R&D-intensive employees are often compensated with stock; they would likely be notified of plans to alter ATPs via shareholder material.

Finally, as in any difference-in-differences setup, we assume that differences in ATPs after IDD adoption are due to this event and that, absent this change, pre-treatment trends would continue. We therefore provide tests that fail to falsify the parallel trends assumption. We also include standard controls used in tests of ATPs and takeover activity, firm fixed effects to control for time-invariant firm-level factors, and year fixed effects to control for time trends. Our results are also robust to entropy-balancing the covariates for firms in IDD and non-IDD states.

Subject to the above, our study makes several contributions. Our primary contribution is to the corporate governance literature, which we advance along three dimensions. First, many studies argue that ATPs reduce firm value by shielding managers from the market for corporate control (e.g., Larcker et al., 2007; Bebhcuk et al., 2008). In this context, firms with more ATPs are labelled as having weaker governance (Gompers et al., 2003). More recently, scholars argue that, because ATPs can promote long-term decision making, one size of governance does not fit all (Brickley and Zimmerman, 2010; Ge et al., 2016). We identify a setting in which firms strengthen ATPs for value-adding rather than value-impeding purposes, such as managerial entrenchment. We show that firms facing elevated takeover risk strengthen certain ATPs to bond with their knowledge workers. Thus, our work adds to studies arguing that ATPs can serve as a mechanism for bonding with other stakeholders, such as customers and suppliers (Johnson et al., 2015; Cremers et al., 2017).

Second, our results speak to the literature on employee contracting and incentives as aspects of governance (Antle and Smith, 1986; Core et al., 1999; Bushman and Smith, 2001; Core et al., 2003). Several studies examine stock compensation as a mechanism to retain and motivate non-executive employees (Core and Guay, 2001; Ittner et al., 2003; Erkens, 2011). Another employee incentive, particularly for levels below the executive ranks, is the implicit agreement that efforts will be rewarded with higher wages and promotions (Shleifer and Summers, 1988). Our findings suggest that when employees face implicit contract uncertainty due to elevated takeover risk, firms use ATPs to offset potential deterioration in incentives. Thus, we contribute

to the literature highlighting employee-targeted mechanisms as a means to protect innovation incentives (e.g., Ittner et al., 2003; Flammer and Kacperczyk, 2016).

Third, we add to the governance literature examining ATPs and takeover activity (e.g., Bates et al., 2008; Karpoff et al., 2017) by providing evidence on the specific ATPs that firms use when facing higher takeover risk. We also contribute to work showing that one of these provisions—classified boards—can enhance the value of innovative firms (Cremers et al., 2017). Our findings that firms strengthen classified boards and limits to written consent after IDD empirically support legal arguments that these provisions are among the most powerful for deterring changes in corporate control (Klausner, 2013; Catan and Kahan, 2019).

We also contribute to the research on the value relevance of nonfinancial performance measures (Amir and Lev, 1996; Banker et al., 2000). Scholars argue that improvements in nonfinancial areas (e.g., employee satisfaction and product quality) are not fully captured by accounting measures (Lev and Schwartz, 1971; Ittner and Larcker, 1998; Banker and Mashruwala, 2007). Accordingly, nonfinancial indicators of investing in intangibles such as employee relations can help predict firm performance (Dhaliwal et al., 2012). Our findings show that strengthening Delay Provisions after IDD is associated with a partial offset of deterioration in employee morale, productivity, and innovation output. IDD firms that bond with employees via ATPs also exhibit better relative accounting performance, supporting the notion that employee satisfaction can be a leading indicator of firm performance (e.g., Huang et al., 2020).

Finally, we add to the emerging literature on the real effects of restricting employee mobility. Recent studies link mobility restrictions to changes in disclosure properties (Aobdia, 2018; Ali et al., 2019) and book leverage (Klasa et al., 2018). Additionally, Contigiani et al. (2017) find that mobility restrictions reduce employees' innovation output by reducing the ability to signal quality to external labor markets. We demonstrate that ATPs can be used as a mechanism to attenuate some of the detrimental consequences of mobility restrictions on innovation output. Thus, we add to the literature on how firms adjust corporate policies due to labor mobility concerns (e.g., Erkens, 2011), which is particularly important in the context of protecting trade secrets (Glaeser, 2018a).

2. The Inevitable Disclosure Doctrine

A trade secret is "any information, including a formula, pattern, compilation, program device, method, technique, or process, that: (i) derives independent economic value, actual or

potential, from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use, and (ii) is the subject of efforts that are reasonable under the circumstances to maintain its secrecy" (Uniform Trade Secrets Act [UTSA], 1985). The UTSA, which increases trade secrets protection in adopting states, defines "misappropriation" of trade secrets as the acquisition of a trade secret by another person or entity who knows or has reason to know that it was acquired by improper means. Prior work shows that approximately 80% of trade secret litigation in state courts involved allegations of employee misappropriation, with former employees posing the largest risk (Almeling, 2012).

The IDD also helps protects trade secrets by allowing state courts to restrict employees with knowledge of trade secrets from joining or starting rival companies. IDD maintains that, if the new employment would inevitably lead to the disclosure of the former employer's trade secrets to a competitor and, therefore, cause the firm irreparable harm, then state courts can prevent the employee from working for the rival or limit his or her responsibilities.

There are important distinctions between the UTSA and IDD. Under the UTSA, asking a court to prevent a former employee from working for a competitor requires evidence of actual or threatened trade secret misappropriation (Kitch, 1995; Glaeser, 2018a). Under the IDD, such evidence is not required and employers can ask courts to prevent an employee from taking a position with a rival on the grounds that it would inevitably lead to divulging trade secrets.³

Employee mobility can also be limited through employment contracts such as a nondisclosure agreement (NDA) or a covenant not to compete (CNC). However, the IDD provides substantially stronger protection of a firm's trade secrets than a CNC does because it does not entail specific geographic restrictions (Klasa et al., 2018). Moreover, IDD can ex-ante limit an individual's employment at a competitor even if a secret has not been disclosed, whereas an NDA requires evidence of actual or threatened misappropriation in order to litigate.

The IDD provides an ideal setting for us to examine the effect of reduced mobility and increased takeover risk on firms' antitakeover provisions. It provides cleaner identification because the court's positions regarding IDD adoption vary over time across states, which generates a plausibly exogenous source of variation in labor mobility and takeover risk.

³ To obtain an injunction, a firm must show that (a) the employee in question has access to its trade secrets, (b) the employee's duties at the rival firm would be similar to those at the focal firm, so that in performing them he or she will inevitably disclose the trade secrets, and (c) disclosure of the trade secrets would produce irreparable economic harm to the focal firm's business.

3. Conceptual Framework

3.1 Consequences of IDD Adoption on Employees

The literature demonstrates that a state's adoption of IDD significantly reduces labor mobility for knowledge workers in that state. For example, using data from the Census Bureau's Survey of Income and Program Participation, Klasa et al. (2018) find that individuals employed in occupations in which they are likely to know trade secrets are 25% less likely to move to a rival after IDD adoption. They find that IDD reduces labor movement to both in- and out-of-state rivals.

Labor mobility restrictions can have negative consequences. Garmaise (2011) studies variation in enforcement of noncompete agreements and finds that mobility restrictions significantly reduce employee effort and firm investment in human capital. Similarly, Contigiani et al. (2018) find a decline in innovation outcomes following IDD, which they attribute to reductions in employee-level incentives to signal quality to external labor markets.

IDD also increases takeover risk (Chen et al., 2020), which is disruptive to employee relations through two channels. First, employees—unlike diversified shareholders—bear substantial firm-specific risk. Shleifer and Summers (1988) note that employee incentives to invest in firm-specific human capital are subject to the implicit agreement that such efforts will be rewarded. The possibility that implicit contracts will be broken, as in a takeover, undermines investment in relationship-specific capital. When workers become aware of higher takeover risk, they have fewer incentives to innovate because they might never get the expected raise. Second, a horizontal merger between firms in similar product markets may harm employees' incentives to innovate and develop new products as it reduces competition for human capital much as mobility restrictions do (Fulghieri and Sevilir, 2011).

IDD both restricts employee mobility and increases takeover risk, so its negative effects on employee incentives are likely to be amplified, heightening the firm's incentives to bond with its employees. We predict and test whether firms respond to IDD by strengthening ATPs to credibly commit to employees by lowering takeover risk.

3.2 Use of ATPs for Bonding with Employees

Our enquiry is related to research on the bonding hypothesis, which identifies takeover deterrence as a powerful, value-increasing mechanism for committing to key stakeholders. Johnson et al. (2015) find evidence supporting the bonding hypothesis for ATPs. They show that IPO firms use ATPs to reduce takeovers, as the latter could have a negative effect on customers,

large suppliers, and strategic partners. Firms with strengthened ATPs enjoy more favorable contracting terms. Cen et al. (2015) find that reductions in takeover risk from business combination laws (rather than ATPs) strengthen relations with large customers, leading to improved accounting performance. Cremers et al. (2017) show that a specific ATP—classified boards—can have a powerful bonding effect. While they do not study employees specifically, they argue that classified boards are "an efficient commitment device towards firm-specific investments of a firm's stakeholders, such as top employees, large customers, suppliers, and strategic alliance partners" (p. 424).

We expect that managers responding to elevated takeover risk in order to bond with employees are likely to strengthen provisions that delay and/or deter unsolicited takeovers and render the firm less attractive or more difficult or expensive to acquire. We consider the 22 firmlevel ATPs from ISS and group them in the four functional categories in Gompers et al. (2003): delaying or deterring hostile bidders (Delay Provisions); voting rights (Voting Provisions); director/officer protection (Protection Provisions); and other provisions (Other Provisions).

The Delay Provisions group, comprising blank check, classified board, limits to special meetings, and limits to written consent, is designed to deter takeover attempts. These provisions make it harder or costlier or make it take longer for the acquirer to gain control over the target. Several papers argue that Delay Provisions enhance firm value by promoting long-term decision making (e.g., Ge et al., 2016; Cremers et al., 2017). Some legal scholars argue that once Delay Provisions are in place, other takeover defenses are superfluous. They note that classified boards, limits to special meetings, and limits to written consent are especially powerful ATPs that add substantial and costly time barriers to hostile acquirers by tempering shareholder rights (Catan and Kahan, 2019) and preventing bidders from gaining control of the board (Klausner, 2013). We therefore expect firms to primarily increase their Delay Provisions after IDD.

The Voting Provisions group contains six provisions (bylaws, charter, cumulative voting, secret ballot, supermajority, and unequal voting) related to shareholders' rights in elections or charter/bylaw amendments. The Protection Provisions group contains six provisions (compensation plan, contracts, golden parachutes, indemnification, liability, and severance) designed to insure officers and directors against job-related liability or to compensate them following a termination. The Other Provisions group includes antigreenmail, director's duties, fair price, pension parachutes, poison pills, and silver parachutes.

Some of the Voting Provisions and Other Provisions can also help deter a takeover by making it more expensive. For example, poison pills make the target less attractive to the acquirer by diluting its voting power. However, recent literature argues that poison pills can be adopted on short notice and do not always require shareholder approval (Catan and Kahan, 2016). Thus, IDD firms might not alter poison pills, on average, since the option to quickly adopt and trigger a pill remains in place.

Similarly, top executives and directors may wish to strengthen Protection Provisions, such as golden parachutes, after IDD to safeguard their private interests in case of a takeover. While these provisions are useful to compensate officers once the change in control has occurred, they are not necessarily effective in preventing takeovers. For example, Fich et al. (2013) link golden parachutes to a greater probability of merger completion. Since the Voting, Protection, and Other groups include provisions that are not related to takeover defenses (Klausner, 2013), we do not expect significant changes in these groups following IDD.

3.3 Cross-sectional Predictions

3.3.1 Employee Mobility

IDD affects a firm's takeover risk by increasing labor market frictions and limiting the ability of rival firms to hire away its human capital (Chen et al., 2020). We expect the effect of IDD on Delay Provisions to be stronger for firms whose employees have higher ex-ante mobility.

Prior to IDD, knowledge workers likely had grater mobility at firms domiciled in states with stronger worker rights. Thus, our first proxy for employee mobility is *strength of CNCs*, which is the enforcement index of covenants not to compete from Ertimur et al. (2018), who extend the index from Garmaise (2011) through the end of our sample period.⁴ In the context of trade secrets, we also expect ex-ante employee mobility to be stronger when the firm's trade secrets are not protected by the UTSA since prior work argues that UTSA adoption reduces employee mobility (Kitch, 1995). Accordingly, we generate a *non-UTSA* variable equal to 1 if the firm is domiciled in a state that has not adopted the UTSA.⁵

⁴ Strength of CNCs does not account for IDD adoption. We tabulate the index values in the Internet Appendix.

⁵ The Internet Appendix provides UTSA effect dates, which are from Glaeser (2018a). Glaeser notes that UTSA extends the statute of limitations on trade secrets litigation, increases the remedies for trade secret misappropriation, and reduces legal uncertainty. Glaeser finds that UTSA and IDD adoption are both positively related to trade secrecy. Thus, one could view the UTSA as a shock to investments in trade secrecy. We expect that firms in non-UTSA states will strengthen their Delay Provisions at a greater rate after IDD as its adoption would be a proportionally larger shock to trade secrets protection in non-UTSA states.

We also expect higher ex-ante employee mobility when there are more local rivals that, prior to IDD, could lure knowledge workers away hoping to gain access to trade secrets (Chen et al., 2020). After IDD, rivals must acquire firms to access their intellectual capital. To capture local competition, we count the number of *in-state rivals*, which is the number of public firms in the same headquarters state and three-digit SIC industry (Gao et al., 2015). We also expect greater employee mobility when managers acknowledge that attracting and retaining skilled workers is a significant risk factor (Qiu and Wang, 2019). Thus, we generate a disclosure-based measure, *employee mobility risk*, that counts the number of paragraphs noting the ability to "attract and retain" employees in the firm's annual SEC Form 10-K.

Each of our employee mobility proxies—*strength of CNCs, non-UTSA, in-state rivals,* and *employee mobility risk*—contains unique information, so we construct a composite score, *employee mobility,* using a PCA approach. We also note that, while variation in local industry peers and management disclosures are potentially endogenous moderating variables, variation in CNC enforcement and UTSA adoption are plausibly exogenous.

3.3.2 Human Capital

Acquisition risk can be especially disruptive for employees of innovative firms that focus on long-term relations for value creation (Cremers et al., 2008). Thus, bonding with employees by reducing takeover risk may be important for firms that focus heavily on human capital. Theoretical developments by Sapra et al. (2014) show that long-term job security via reductions in takeover threat is essential to motivate employees to be more innovative. Such innovation often requires substantial firm-specific investment by knowledge workers. Elevated takeover risk reduces their incentives to devote effort to long-term and hard-to-value investments, such as R&D (Bushee, 1988; Stein, 1988; Shleifer and Summers, 1988; Ge et al., 2016). Therefore, IDD could be costlier for firms with more knowledge workers who likely know trade secrets (Klasa et al., 2018).

We also expect greater takeover threat after IDD in firms with more human capital, as competitors prefer to acquire firms with more knowledge workers (Coff, 2002). Thus, in our second set of cross-sectional tests, we examine whether firms strengthen Delay Provisions more after IDD when they depend highly on human capital investments for innovation.

Our first two human capital measures focus on R&D investments. Prior work shows that R&D investments increase the importance of human capital due to their complementary relation (Wilson, 2009). We also contend that R&D is a strong proxy for human capital since US Census

Bureau surveys shows that more than half of R&D spending goes to scientists' wages.⁶ We use variation in R&D credit rates from Wilson (2009), which represents a plausibly exogenous source of variation in R&D spending.⁷ For example, Glaeser (2018b) finds a positive relation between R&D credit rates and firm-level R&D spending and innovation output. As a second measure, we use R&D intensity, which is the firm's proportion of reported R&D expenditures to total assets.

Firms using fewer tangible assets for income production tend to rely more on human capital for cash flows (Barth et al., 2001). Accordingly, our third proxy for human capital is the ratio of intangible assets to total assets (*intangible asset intensity*). Our fourth proxy is the proportion of *knowledge workers* in the firm's three-digit NAICS industry in a given year. This variable uses employment data from the Integrated Public Use Microdata Series (IPUMS) database. Knowledge workers are those with an occupational code below 200, which includes managers, scientists, engineers, computer programmers, and information technology workers.⁸

We posit that firms with higher *R&D credit rates*, *R&D intensity*, and *intangible asset intensity* and those in industries with more *knowledge workers* will strengthen Delay Provisions more after IDD to bond with employees. We also create a PCA-based measure, *human capital*, which captures unique aspects of these four proxies.

3.3.3 Employee Relations

We expect that firms placing a greater ex-ante importance on employee relations will strengthen Delay Provisions more after IDD. Theories on human relations view employees as key assets who generate value through innovation and relations with other key stakeholders (McGregor, 1960; Lev and Schwartz, 1971). Companies that prioritize employee relations can improve retention, motivation, and productivity, all of which can enhance firm performance (Flammer and Kacperczyk, 2016). It may be necessary, however, to shield managers from short-term market pressures to encourage long-term growth via employee relations (Edmans, 2012).

⁶ See US Census Bureau, "Business Research and Development Survey," available at <u>https://www.nsf.gov/statistics/</u> <u>srvyindustry/</u>. For example, in 2011, "salaries, wages, and fringe benefits" make up 53% of domestic R&D spending by surveyed firms. The percentage of R&D spent on salaries remains above 50% throughout our sample period.

⁷ Data on state R&D tax credit are from Daniel Wilson's website: <u>https://www.frbsf.org/economic-research/</u> <u>economists/daniel-wilson/RDusercost.xls</u>. Like Glaeser (2018b), we use the highest-tier effective tax credit rate as the *R&D credit rate* to account for variation in how R&D credits are applied across states and time. Data on R&D credit rates end in 2006, so we forward-fill 2007 to 2011, but results are similar if we exclude this period.

⁸ We use IPUMS data on occupation codes, industry, and state from the US Census and the American Community Survey (ACS), which provides decennial data before 2000 and annual data thereafter. Following Chen et al. (2020), we use 1990 ACS data for 1990–1995, and 2000 data for 1996–2000. We use annual ACS data for 2001 onward.

Takeover risk might be particularly acute for companies with strong employee relations, since stock prices might not fully reflect the value of these relations (Dhaliwal et al., 2012). We therefore expect firms with a greater focus on employee relations to strengthen Delay Provisions at a higher rate after IDD.

Because employee relations are difficult to observe empirically, we examine several measures. First, we use plausibly exogenous variation in incorporation-state adoption of *constituency statutes*, which allow the board of directors to consider stakeholder interests in making business decisions.⁹ Flammer and Kacperczyk (2016) show that constituency statutes significantly increase engagement with employees in the innovation process, which the authors link to greater innovation output. Given that employees are a primary stakeholder, we expect firms incorporated in states with constituency statutes to place a higher priority on bonding with employees after IDD by strengthening their Delay Provisions.¹⁰

Second, we follow prior literature (Lins et al., 2017; Adhikari et al., 2019) in using firmlevel employee ratings in the Kinder, Lydenberg, and Domini (KLD) database from 1995 to 2011. KLD rates employee relations along dimensions of strengths and concerns. Our variable *employee strengths* is the sum of the following positive employee relations variables from KLD: cash profit sharing, retirement benefits strength, and human capital strengths; *employee concerns*, is the sum of the following negative employee relations variables from KLD: labor relations, workplace health and safety, workforce reductions, and retirement benefits concerns.

Our fourth proxy for employee relations is *employee disclosure*, the number of paragraphs in the firm's annual SEC Form 10-K that discuss employees. We posit that greater discussion of employees in annual reports reflects the importance of employee relations and we expect firms with more discussion to place a higher priority on bonding. Finally, the variable *employee relations* captures unique aspects of the four proxies of employee relations, using a PCA approach.

⁹ Data on the states enacting constituency statutes, which we tabulate in the Internet Appendix, are from Flammer and Kacperczyk (2016). Although 34 states have such statutes, just over half of our sample incorporates in Delaware, which does not. We exclude the *Delaware incorporation* control from regressions of partitions on constituency statutes. Results are similar if we drop firms incorporated in Delaware.

¹⁰ In the Internet Appendix, we test employee relations using variation in headquarters-state unemployment benefits as a shock to employee incentives. Flammer and Luo (2017) find that firms respond to increases in unemployment benefits by strengthening employee engagement via corporate social responsibility activities. We find that the effect of IDD on Delay Provisions is stronger for firms headquartered in states with greater unemployment benefits, which is consistent with employee bonding via ATPs to offset potential reductions in the incentives to be productive.

3.4 Ex-post Predictions

We expect that, in isolation, IDD will have a negative effect on employee morale and productivity. Given the reduction in employee mobility and elevated takeover risk, employee incentives to invest in firm-specific human capital are diminished, since productivity efforts may not lead to rewards (Shleifer and Summers, 1988; Auer et al., 2005; Contigiani et al., 2018). However, we predict that firms strengthening Delay Provisions will offset some of the deterioration in morale and productivity as employee incentives approach pre-IDD levels. Indeed, some work argues that firms invest in employee relations to strengthen incentives to be productive (Flammer and Luo, 2017).

We measure employee morale in two ways. First, we obtain employee ratings from the website Glassdoor.com for the period 2008 to 2012. These represent individual employee satisfaction, on a scale of one to five, for overall employer quality and other dimensions that proxy for morale, such as work/life balance, compensation and benefits, and senior management. Prior work links Glassdoor ratings to employee productivity and firm performance (Huang et al., 2020). We filter out ratings by interns and take a yearly average for each category. We then use a PCA approach to create *Glassdoor ratings*, a single summary measure across categories.

As a second measure of morale, we use the indicator *high employee relations*, equal to 1 if the PCA-based *employee relations* exceeds the yearly median. This allows us to study more years than the Glassdoor data does. We use the indicator *high employee relations* for ease of interpreting coefficients, but inferences are similar using the continuous measure. In untabulated tests, we find *employee relations* positively but not perfectly related to *Glassdoor ratings*, which helps validate that *employee relations* captures important elements of morale.

We examine several measures of employee productivity and performance. First, following prior work (e.g., Lins et al., 2017), we generate *employee productivity*, the natural log of sales per employee, using Compustat data. We expect IDD to reduce *employee productivity* by lowering morale, but expect increasing Delay Provisions to moderate this decline.

Our second measure of productivity is the intensity of trade secrecy, based on frequency of redacted information in annual reports. Boone et al. (2016) examine confidential treatment requests to redact proprietary information in SEC filings. They find that redacted content often includes sensitive information such as trade secrets. Glaeser (2018a) finds an increased propensity

to redact information in 10-Ks when firms begin pursuing trade secrecy.¹¹ We therefore examine the frequency of redactions in annual 10-K filings as a measure of trade-secret intensity. Specifically, we use WRDS SEC Analytics Suite to count the keywords "confidential treatment" and "redact" in each firm's 10-K over 1998 to 2011, which we term *trade secret intensity*.

We also examine the correlation between strengthening Delay Provisions after IDD and accounting performance. If firms strengthen Delay Provisions to bond with employees and improve morale, we expect that to have performance implications (Edmans, 2012). Prior work establishes a link between firm value and nonfinancial measures such as employee satisfaction (e.g., Amir and Lev, 1996; Ittner and Larcker, 1998; Banker et al., 2000; Banker and Mashruwala, 2007).¹² Moreover, investments in firm-specific intangible assets, such as employee satisfaction, should correlate with future accounting performance (Dhaliwal et al., 2012).

We measure accounting performance along three dimensions. First, we examine *return on assets*, which is operating income divided by total assets. We adjust this measure by subtracting the industry average using three-digit SIC codes. We follow Ittner and Larcker (2008) in examining two additional performance measures scaled by revenues rather than assets: *return on sales*, which is gross profit divided by total sales, and *net profit margin*, measured as net income as a percentage of sales. We expect firms strengthening Delay Provisions after IDD in order bond with employees to exhibit improved accounting performance.

3.5 Alternative Mechanisms

3.5.1 Managerial Entrenchment

We hypothesize that firms will use ATPs after IDD to bond with their employees. We expect that these actions will be value-adding by attenuating the negative effects of IDD on employee morale, productivity, and performance. However, the majority of governance studies identify ATPs, such as classified boards, as *destroying* value by shielding managers from the market for corporate control (e.g., Larcker et al., 2007; Bebchuk et al., 2008). Since IDD elevates takeover risk (Chen et al., 2020), one alternative motivation for strengthening Delay Provisions is to protect private managerial benefits.

¹¹ To identify the presence of trade secrecy, Glaeser (2018a) creates a dummy variable indicating that a firm mentions "trade secrecs" or "trade secrecy" in its 10-K. Because we are interested in the intensity of trade secrecy, we use the redaction-based measure in our tests.

¹² For instance, Ittner and Larcker (1998) show that customer satisfaction measures are leading indicators of accounting performance (e.g., business-unit revenues, profit margins, and return on sales). Banker and Mashruwala (2007) find an association between employee satisfaction and future profits.

To test this notion, we use several ex-ante proxies of managerial power to examine whether entrenched managers strengthen Delay Provisions after IDD more than non-entrenched executives. We follow prior literature that identifies entrenchment based on CEOs with longer tenure (Dechow and Sloan, 1991), lower pay-for-performance sensitivity (Core and Guay, 2001), and the lack of a large shareholder monitor (Bushee, 1998). *CEO tenure* is the number of years the CEO has held that position, gathered from Execucomp. *CEO delta* is the pay-performance sensitivity of a CEO's wealth to stock price changes, measured as the change in the value of the executive's stock and options for a 1% change in the stock price. For *CEO monitoring*, we identify whether a firm has at least one 5% blockholder.

3.5.2 Bargaining Power

Prior work identifies ATPs—specifically, Delay Provisions such as classified boards—as a mechanism for target firms to increase takeover premiums in both hostile and friendly takeover attempts (Bates et al., 2008). Since IDD elevates takeover risk, managers might strengthen Delay Provisions to enhance their bargaining power in a takeover attempt. If this is a strong motivation, we would expect target firms to strengthen Delay Provisions after IDD. Conversely, if firms strengthen Delay Provisions to bond with employees, then we would not expect this outcome. We measure takeover premiums using acquisition announcement returns, which we further describe in Subsection 4.9.2.

4. Data and Results

4.1 Data

We begin our sample by merging the Compustat, CRSP, and ISS databases over 1990–2011. Our sample period is bound by ISS data availability for firm-level ATPs. We initially filter on US-headquartered firms, which yields 38,125 firm-years. We remove firm-years with missing information in Compustat, no control variable data for our primary regressions, or only one firm-year of data, leaving a final sample with 28,852 firm-years and 3,120 unique firms.

Our analysis of IDD adoption uses headquarters-state location. One concern is that Compustat backfills headquarters and incorporation state data to prior years based on the current location. To address this issue, we obtain non-backfilled data from Jennings et al. (2017), which corrects headquarters (incorporation) state location for 6,861 (326) sample firm-years.

Details on IDD adoption dates are from Klasa et al. (2018). Appendix A reports the states

that adopt or reject IDD and the precedent-setting court cases and dates. New York was the first state to adopt IDD, in 1919, followed by three states in the 1960s, one in the 1970s, four in the 1980s, nine in the 1990s, and three in the 2000s. Of those 21 adoptions, 12 occurred during our sample period. Three states that had adopted IDD rejected it during our sample period as well. As in Klasa et al. (2018), for the 21 states whose courts adopted the IDD, we create an indicator variable, *IDD*, that equals 0 in all years preceding the adoption date and 1 in the year of adoption and afterwards.¹³ For the remaining 29 states that did not explicitly adopt the IDD or subsequently rejected it, we set *IDD* to 0.

We obtain ATP information from ISS. Appendix B defines all provisions. ISS ascertains ATP data from corporate bylaws and charters, annual reports, proxy statements, and SEC filings. These data cover S&P 1500 members, which make up 90% of the market capitalization of the New York Stock Exchange, American Stock Exchange, and Nasdaq during our sample period. ISS publishes ATP data for 1990, 1993, 1995, 1998, 2000, 2002, 2004, 2006, and annually from 2007 to 2011. Following prior literature (Karpoff et al., 2017), we forward-fill the missing years with values from the most recent year in ISS. For example, we use the 1990 values for 1991 and 1992, which reduces our ability to identify variation in ATPs around IDD adoption.

Our main provisions of interest are the four categorized by Gompers et al. (2003) as Delay Provisions: classified boards, blank check, and limits to written consent and to special meetings. We consider this group, as well as each provision within it, in our tests. For comparison, we also examine the changes in the Protection Provisions, Voting Provisions, and Other Provisions groups, which we further detail in Appendix B.¹⁴

Based on prior research (e.g., Bebchuk et al., 2008; Karpoff et al., 2017), we use a wide range of control variables that may affect a firm's ATP structure. Appendix C defines these variables, which include size, market-to-book, return on assets, leverage, property ratio, sales growth, abnormal return, R&D intensity, institutional ownership, and risk. We also control for CEO ownership, higher levels of which can be a takeover defense (Catan and Kahan, 2016). Results are similar if we substitute CEO pay-for-performance sensitivity for CEO ownership.

¹³ For court decisions after July 1, we set IDD adoption to the following year since firms must typically seek shareholder approval to alter ATPs. The results are not sensitive to this adjustment, which works against our findings. ¹⁴ To avoid confusion, we report tests of state law antitakeover provisions in Internet Appendix. Unlike IDD, which is based on headquarters state, state antitakeover provisions are based on the incorporation state's laws. We find no relation between IDD adoption and variation in incorporation state antitakeover laws, which we interpret as a falsification test supporting our results.

We include a Delaware indicator since firms incorporated in Delaware have differing levels of takeover protection under state law (Catan and Kahan, 2016). We control for state GDP growth using data from the Bureau of Economic Analysis. The notion here is that higher GDP growth might correlate with acquisition activity, elevating takeover risk for local firms.

4.2 Descriptive Statistics

Table 1 provides summary statistics for our main dependent and independent variables. Panel A provides statistics on ATPs. The average sample firm-year has 2.3 Delay Provisions, 2.1 Protection Provisions, 2.5 Voting Provisions, and 0.9 Other Provisions. Among the Delay Provisions, 88% of firm-years have blank check, 58% have classified board, 42% have limits to written consent, and 39% have limits to special meetings. Among Protection Provisions, approximately 66% of firm-years have golden parachutes and 52% have compensation plans. Among the Voting Provisions, the median firm uses anti-cumulative voting and anti-secret ballot. Within Other Provisions, 52% of firm-years have a poison pill and 26% have fair price provisions.

[Insert Table 1 here]

Panel B reports that 51% of sample firm-years are from companies headquartered in a state that has adopted the IDD. Our median sample firm-years have a leverage ratio of 16.7% of total assets and a market-to-book ratio of 1.06 and have 44.4% of total assets in the form of property, plant, and equipment. The average CEO owns 1.6% of the firm. In terms of performance, the median sample firm has 8.1% return on assets, 7.6% sales growth, and around 0% abnormal average daily returns. The median firm has 37.2% institutional ownership and average state GDP growth rate is just under 5%. Approximately 56% of sample firm-years are for companies incorporated in Delaware.

Within the moderating variables, the median firm-year has 6.9% intangible asset intensity and the proportion of knowledge workers is about 25%. The average state CNC strength is 3.97 on a scale of 0 to 12. Approximately 31% of firm-years are in states that have not adopted UTSA, while 32% are in states with constituency statutes. The median firm-year has two in-state public rivals within its three-digit SIC code. The average firm-year mentions the ability to attract or retain employees in 1.1 paragraphs and employees in 11 paragraphs of its 10-K. On average, 82% of firms have at least one blockholder. The median CEO has a tenure of 5.6 years.

4.3 Difference-in-Differences Design

Our primary research design is to use a difference-in-differences methodology to compare

the changes in takeover risk and ATPs following the adoption of IDD (the treatment group) to the changes in takeover risk and ATPs in states which did not adopt IDD (the control group). Estimating the local average treatment effect (LATE) is possible because several state courts adopt the IDD in different years during the sample period. However, we note that this methodology relies upon three assumptions.

First, the parallel trends assumption holds that firms in IDD states would have exhibited variation in takeover risk and ATPs similar to those in non-IDD states had these states *not* adopted the IDD. Although this counterfactual is unobservable, the parallel trends assumption is supported if IDD adoption is exogenous with respect to changes in takeover risk and ATPs. As Klasa et al. (2018) argue, precedent-setting state court adoption of IDD is based on striking a balance between protecting firms' trade secrets and protecting freedom of employment. State courts were likely not considering firms' takeover risks or governance structures in making these decisions. In addition, state court judges are independent of the federal and other state governments. Their decisions are less influenced by the lobbying actions of labor unions, firms, or political parties and are based primarily on the merits of specific cases (Klasa et al., 2018). Firms were unlikely to anticipate IDD decisions because a court's issuance of a precedent is idiosyncratic to the details of a particular case. Therefore, IDD recognition is likely exogenous in our setting in relation to takeover risk and firms' choice of ATPs.

Second, the stable unit treatment value assumption (SUTVA) requires that the treatment status does not affect potential outcomes of firms in other groups (Armstrong and Kepler, 2018). In other words, we assume that IDD adoption does not influence the takeover risk and ATP outcomes of firms in non-IDD states and vice versa. However, it is possible that variation in takeover risk and ATP outcomes could have peer or spillover effects. For example, if IDD induces takeover activity and the resulting change in competition stimulates acquisition activity within an industry, then takeover risk and the use of ATPs could increase even in non-IDD states. In addition, firms in non-IDD states observe IDD firms strengthening their ATPs, which could prompt them to strengthen their own ATPs. These spillover effects would bias the estimated treatment effect of IDD on ATPs downward. Alternatively, if increased takeover activity in IDD states lowers acquisitions of firms in non-IDD states, then IDD adoption could decrease ATPs likely works against this possibility (e.g., Johnson et al., 2015).

Third, we rely on the perfect compliance assumption; namely, that no firms receive treatment prior to IDD adoption and that only firms in IDD states receive treatment (Glaeser and Guay, 2017). Of course, some firms in non-IDD states do experience takeover risk and do establish ATPs prior to IDD; some may also alter these provisions and exhibit variation in takeover risk after IDD, thus violating the perfect compliance assumption. Further, some firms in IDD states may not change their ATPs. As Glaeser (2018a) notes, few quasi-natural experiments enjoy perfect compliance, but this violation does not prevent causal inferences, as the perfect compliance assumption is replaced by the monotonicity assumption, which holds that IDD must have a monotone effect on IDD firms. In other words, we should not observe firms in IDD states that *reduce* their ATPs in response to IDD treatment. In our setting, it is indeed highly unlikely that IDD would lead firms to lower their ATPs, especially in response to elevated takeover risk.

Since IDD is based on where employees work, our research design also relies on our ability to identify the state in which they work. We assume that a significant proportion of knowledge workers work in the firm's headquarters state. Although firms might employ knowledge workers in other states—for example, in innovation hubs—we do not have location data for all of our sample firms' employees. However, we expect that scientists and other employees who possess knowledge of trade secrets likely work near corporate headquarters, as survey evidence in Lund (1986) shows that managers strategically locate their R&D facilities near corporate headquarters to facilitate knowledge transfer to marketing personnel and executives. Moreover, Glaeser et al. (2020) find that one-third (one-half) of successful inventors live within approximately 30 (70) minutes travel time of their employer's headquarters, which further supports our assumption that knowledge workers likely work in the headquarters state.

4.4 IDD and Takeover Risk

Chen et al. (2020) report a significant increase in the likelihood of being acquired for firms headquartered in states that adopt IDD over the sample period 1980 to 2013. Thus, we begin our analysis by replicating their findings for our own sample period, 1990 to 2011. Specifically, we estimate the following linear probability model:

$$Acquisition_{it} = \alpha + \beta_1 IDD_{s,t-1} + \beta_2 Firm \ Characteristics_{i,t-1}$$

$$+ \beta_3 State \ Characteristics_{s,t-1} + Firm \ FE + \varepsilon_{i,t}, \tag{1}$$

where i indicates firm, s indicates the headquarters state, and t indicates year. The dependent variable is an indicator equal to 1 if the firm is acquired in year t and 0 otherwise, using data from

the SDC M&A database. The variable *IDD* is an indicator equal to 1 if IDD is in place in state s in a given year and 0 otherwise. β_1 is the coefficient of interest and represents the difference in takeover risk before and after the IDD adoption.

In our baseline regression, we include firm and state controls as described in the prior section. We also present results in Table 2 with supplementary state-level controls used by Chen et al. (2020) in some specifications. These controls include the natural log of the state population, the state unemployment rate, the net changes in establishment entry and exit, business combination laws, the strength of CNCs, and wrongful discharge laws. All regressions include firm fixed effects and, in some specifications, we include region-by-year fixed effects to control for local time trends, where regions are based on the US Census Bureau classification (Northeast, South, Midwest, and West). We cluster standard errors at the state level.

[Insert Table 2 here]

In Column (1), we use our primary control variables and firm fixed effects. We find a positive and significant relation between IDD adoption and the probability of being acquired in the subsequent year. In Column (2), we layer in the additional state-level control variables and find the coefficient on *IDD* still positive and significantly different from zero. Column (3) adds the *Region* × *Year* fixed effects. The coefficient on *IDD* is positive at 0.007 and significantly different from zero (p=0.077). This coefficient is similar to that in Column (3) of Table 3 in Chen et al. (2020). The IDD coefficient is also economically significant, as the 0.69-percentage-point increase in the likelihood of being acquired is an increase of 27.2% from the mean unconditional probability of 2.54 percentage points. Thus, we confirm that IDD adoption leads to a statistically and economically significant increase in takeover risk for our sample period, which Chen et al. (2020) link to the desire to acquire human capital.

4.5 IDD and Antitakeover Provisions

We next examine whether firms alter ATPs after IDD. We specify the following regression: Antitakeover $Provisions_{it} = \beta_1 IDD_{s,t-1} + \beta_2 Firm Characteristics_{i,t-1} + \beta_3 State Characteristics_{s,t-1} + Firm FE + Year FE + \varepsilon_{i,t},$ (2)

where the dependent variable is one of the four categories of ATPs: *Delay Provisions*, *Protection Provisions*, *Voting Provisions*, and *Other Provisions*. The notation and the firm and state characteristics are identical to those in Equation (1). We use firm and year fixed effects in our

primary specifications and cluster standard errors at the state level.¹⁵ Our coefficient of interest is β_1 , which is the within-state local average treatment effect of recognizing IDD on ATPs. Panel A of Table 3 presents the regression results.

[Insert Table 3 here]

The coefficient estimates on *IDD* are positive and statistically significant only in Column (1), where the dependent variable is *Delay Provisions*. The coefficient estimate on the *IDD* indicator is 0.078 and statistically significant at the 1% level (p=0.001), suggesting a positive average effect of IDD adoption on *Delay Provisions*. The coefficient on *IDD* is also economically meaningful, as it represents an increase of 7% of a standard deviation in *Delay Provisions*. Thus, managers respond to the 25% decrease in knowledge-worker mobility (Klasa et al., 2018) and the 27% increase in takeover risk (Table 2) by markedly strengthening their *Delay Provisions*. The treatment effect of IDD is not statistically different from zero for any of the other groups of provisions (*Protection, Voting*, or *Other*).

Among control variables, larger firms, those with higher sales growth and property ratios, those with lower return on assets, and those incorporated in Delaware are more likely to have additional Delay Provisions. The Delaware indicator is not absorbed by firm fixed effects because 132 firms switch to Delaware incorporation during our sample period. The results are robust to excluding this control or using a control for business combination laws in the incorporation state.

One concern with our analysis is that the control group might not be comparable across IDD and non-IDD states. To examine this possibility, we verify the robustness of the results using an entropy-balancing technique to ensure that firms in IDD and non-IDD states are comparable. In the Internet Appendix, we balance the first three moments (mean, variance, and skewness) of the treatment (IDD) and control (non-IDD) firms' variables and reestimate regressions on this entropy-balanced sample. The results are nearly identical to those in Table 3.

Recall from Subsection 4.3 that our difference-in-differences estimation relies on the parallel trends assumption; namely, that absent the IDD, treated and control firms' tendencies to vary ATPs would have evolved in the same way. In Panel B of Table 3, we investigate whether

¹⁵ The Internet Appendix shows that the results are similar if we use *Region* \times *Year* fixed effects. The coefficient on *IDD* for tests of *Delay Provisions* is 0.070 and statistically different from zero at the 1% level (*t*-statistic=3.29). The results are also similar using *Industry* \times *Year* fixed effects, where the coefficient on *IDD* is 0.072 (*t*-statistic=3.12). We do not use these fixed effects in our main specification because controls already capture regional-level (e.g., state GDP growth) and firm-level (e.g., R&D) variation in factors that are likely influenced by industry forces.

the pre- and post-IDD trends in ATPs falsify this assumption. Specifically, we reestimate Equation (2) by replacing the IDD indicator with six indicator variables— IDD^{-2} , IDD^{-1} , IDD^{0} , IDD^{+1} , IDD^{+2} , and IDD^{3+} —which indicate the year relative to the adoption of the IDD. The coefficients on IDD^{-2} and IDD^{-1} are important because their significance and magnitude will indicate any differences between the ATPs of the treatment and control groups before adoption of the IDD.

The coefficients on IDD^{θ} , IDD^{+1} , and IDD^{+2} are important for two reasons. First, changing ATPs is difficult and can take time, as it often requires shareholder approval. If firms must wait for their annual meeting or must convince shareholders to alter ATPs in a special meeting, then there could be a lag in adjusting certain provisions. Second, we had to forward-fill the ATP data from ISS due to non-annual data prior to 2007. If a state adopts IDD in a year for which antitakeover data is unavailable, then we will not observe the effect until one or two years later. Given the forward-filling and the constraints of shareholder approval for ATPs, the IDD^{3+} indicator is also important since it captures longer-term changes.

In Panel B, the coefficients on IDD^{-2} and IDD^{-1} are not significantly different from zero in any of the four columns. Thus, we fail to falsify the parallel trends assumption. The impact of the IDD shows up in the first two years after adoption for *Delay Provisions*, as the coefficients on IDD^{0} and IDD^{+1} are significantly positive at the 5% level. The coefficient on IDD^{3+} is also positive and statistically significant at the 1% level. None of the other groups exhibit any statistically significant pre- or post-IDD trends.

4.6 IDD and Delay Provisions

Since firms strengthen Delay Provisions just after IDD adoption, we examine the individual provisions within this group. We repeat the regressions in Equation (2) using the individual Delay Provisions as dependent variables. We focus on these provisions from this point onwards, as this is the only group for which we observe variation after IDD—in line with our predictions.

[Insert Table 4 here]

In Panel A of Table 4, the coefficients on *IDD* are positive and statistically different from zero at the 1% level for limits to written consent (0.035), classified board (0.015), and blank check (0.011). The coefficient on *IDD* is positive but not statistically significant in our two-tailed test for limits to special meetings (p=0.174). Results are similar when controlling for the level of Protection, Voting, and Other Provisions, which we report in the Internet Appendix.

In Panel B, we find that changes in limits to written consent and blank check occur just

after the adoption of IDD. Increases in classified board and limits to special meetings take longer to manifest, based on the significant coefficient on IDD^{3+} . When we combine limits to written consent, classified board, and blank check in Column (5), we observe significant increases in each of the years just after IDD adoption. Taken together, the results in Tables 3 and 4 imply that managers significantly strengthen Delay Provisions after their headquarters state adopts the IDD.

4.7 Cross-sectional Tests of Employee Bonding

We conduct several cross-sectional tests to identify heterogenous treatment effects of IDD on Delay Provisions based on employee mobility, human capital, and employee relations. We estimate the following equation:

$$\begin{aligned} Delay \ Provisions_{it} &= \beta_1 IDD_{st} + \beta_2 Firm \ Characteristics_{i,t-1} \\ &+ \beta_3 State \ Characteristics_{s,t-1} + Firm \ FE + Year \ FE + \epsilon_{ist}, \end{aligned} \tag{3}$$

where firm and state characteristics and fixed effects are identical to those in Equation (2). To explore whether firms have differential variation in Delay Provisions after IDD, we partition the sample—typically on the median value—for all cross-sectional factors discussed below.

4.7.1 Employee Mobility

Our first cross-sectional analysis tests the assertion that firms in states adopting IDD strengthen Delay Provisions more when its effect on employee mobility is marginally greater. Our measures of labor mobility are *strength of CNCs*, *non-UTSA*, *in-state rivals*, and *employee mobility risk*. For each of these variables except *non-UTSA*, we split the sample on the median yearly value and then estimate the effects of IDD separately for each subsample. Those firms with above-median yearly values of *strength of CNCs*, *in-state rivals*, and *employee mobility risk* are labeled *high mobility*, while those at or below the median value are labeled *low mobility*.¹⁶ We designate UTSA and non-UTSA states as *low mobility* and *high mobility*, respectively. We estimate Equation (3) for each subsample and report the *IDD* coefficients in Panel A of Table 5.

[Insert Table 5 here]

In Column (1), the coefficient on *IDD* for *strength of CNCs* is 0.140 in the high-mobility subsample, which is statistically different from zero at the 1% level (p<0.001). In Column (2), the coefficient on *IDD* for the low-mobility subsample is not statistically different from zero. When

¹⁶ Splitting the sample at the median value across these moderating variables is analogous to interacting the *high mobility* and *low mobility* indicators with each of the covariates and fixed effects in our model. We note that the results are similar if we partition at the 75th percentile or use the full sample period rather than the yearly median.

using *non-UTSA*, *in-state rivals*, and *employee mobility risk*, again the coefficient on *IDD* is positive and significant at the 1% level for the high-mobility subsample, but not statistically different from zero for the low-mobility subsample. Thus, the treatment effects of IDD on Delay Provisions are significantly larger when employees had higher ex-ante mobility.

4.7.2 Human Capital

We next test for heterogenous effects of IDD on Delay Provisions for firms with varying levels of human capital, using *R&D credit rates*, *R&D intensity*, *intangible asset intensity*, and *knowledge workers*. For each, we partition the sample on the median yearly value and label those firm values above the median as *high human capital* and those at or below the median as *low human capital*. We then reestimate Equation (3) in Panel B of Table 5 for each subsample, where *Delay Provisions* is the dependent variable and *IDD* is the variable of interest.

In all four regressions, firms with more human capital strengthen *Delay Provisions* more after IDD than firms with less human capital. For example, in the case of R&D credit rates, the coefficient on *IDD* is 0.104 for the high-human-capital subsample, which is statistically different from zero at the 1% level. The coefficient on *IDD* is not statistically different from zero for the low-human-capital subsample.¹⁷ Using R&D intensity, intangible asset intensity, and knowledge workers, we again find that firms with more human capital investment increase *Delay Provisions* more after IDD than firms with less human capital investment. The *IDD* coefficient is significantly different from zero at the 5% level or better for the high-human-capital subsample and is not statistically significant for any of the low-human-capital subsamples.¹⁸

Collectively, the results in Panel B indicate that the managerial response of strengthening Delay Provisions after IDD is significantly higher for firms with greater ex-ante human-capital intensity, which supports the notion of using these provisions to bond with valuable employees.

4.7.3 Employee Relations

To provide further evidence of bonding with employees via Delay Provisions, we examine several moderating variables that proxy for employee relations. We define *high relations* as an

¹⁷ One might interpret these findings as firms protecting prior R&D investment rather than human capital. Because R&D and human capital investments are typically complementary, it is difficult to tease out these factors in isolation. While we cannot rule out R&D protection as a factor, our tests of employee relations and productivity collectively support the bonding hypothesis for strengthening Delay Provisions after IDD.

¹⁸ In untabulated tests, we find no difference in the propensity to strengthen Delay Provisions after IDD based on exante levels of capital expenditures as a percent of assets (i.e., investments in tangible assets).

indicator equal to 1 if the firm incorporates in a state with *constituency statutes*. We categorize firms incorporating in states without a constituency statute as *low relations*. For *employee strengths* and *employee disclosure*, we assign firms with values above the yearly sample median to the high-employee-relations subsample and those with values at or below the median to the low-employee-relations subsample. For *employee concerns*, we consider values below the median to be *high relations*. In Panel C of Table 5, we reestimate Equation (3) using the employee relations moderating variables, with *Delay Provisions* as the dependent variable.

The coefficient on *IDD* for firms with constituency statutes is 0.088, which is statistically significant at the 5% level (p=0.029). The coefficient on *IDD* is not statistically different from zero for firms in states without constituency statutes. Thus, the tendency to strengthen Delay Provisions after IDD is stronger when boards have the legal ability to consider stakeholders in business decisions, which is consistent with employee bonding. The results are similar using *employee strengths*, *employee concerns*, and *employee disclosure* to proxy for employee relations. Taken together, these findings indicate that firms with higher ex-ante employee relations tend to strengthen their Delay Provisions more after the shock of IDD to employee bonding incentives.

4.7.4 Principal Component Analysis

Next, we present cross-sectional tests using the PCA-based measures of *employee mobility*, *human capital*, and *employee relations*. We reestimate Equation (3) after splitting the sample using the yearly median value of each measure for the firm's two-digit SIC industry. Those with abovemedian values are labeled *high mobility*, *high human capital*, and *high relations* and those at or below the median are labeled *low mobility*, *low human capital*, and *low relations*.

Panel D of Table 5 presents the results. *IDD* is positive and significant at the 5% level or better in the "high" subsamples of mobility, human capital, and relations. The coefficient on *IDD* is not statistically different from zero in the "low" subsamples. Thus, when capturing unique variation in the moderating variables, the results reinforce that firms strengthening Delay Provisions after IDD tend to have higher ex-ante employee mobility, human capital, and employee relations.

4.8 Employee Outcomes and Performance

In this subsection, we turn to ex-post consequences of strengthening Delay Provisions after the IDD. These tests come with the caveat that, although the IDD is a source of plausibly exogenous variation in labor mobility and takeover risk, the choice to alter Delay Provisions is an endogenous response. Nevertheless, since the evidence suggests that firms strengthen Delay Provisions to bond with employees, we explore the correlation between using Delay Provisions for commitment and long-run employee outcomes and performance.

We study ex-post employee outcomes by estimating the following equation:

$$Y_{i,t+1} = \beta_1 IDD_{st} + \beta_2 Delay \ Provisions_{it} + \beta_3 IDD_{st} \times Delay \ Provisions_{it} + \beta_4 Firm \ Characteristics_{it} + \beta_5 State \ Characteristics_{st} + FE + \epsilon_{ist}, \tag{4}$$

where the outcome variables Y are Glassdoor ratings, high employee relations, employee productivity, trade secret intensity, return on assets, return on sales, and net profit margin. As in Equation (4), the coefficient of interest is β_3 , the interaction of *IDD* and *Delay Provision* on employee outcomes. Firm and state characteristics and fixed effects (FE) are similar to those in Equation (2) except for tests of *Glassdoor ratings*, where we use industry and year rather than firm and year fixed effects, as no states adopted IDD during the period of available data. We do not control for *return on assets* in tests of accounting performance. Standard errors are clustered at the state level.

4.8.1 Employee Morale

Table 6 presents tests of Equation (4) using measures of employee morale as the dependent variable. Column (1) of Panel A shows that IDD adoption is negatively and significantly related to *Glassdoor ratings*, which is consistent with limitations on employee mobility and elevated takeover risk reducing morale. Higher levels of *Delay Provisions* are also negatively related to *Glassdoor ratings* in Column (2). Importantly, Column (3) reports a coefficient of 0.202 on *IDD* × *Delay Provisions*, which is significant at the 5% level (p=0.027). Thus, IDD firms with higher Delay Provisions offset some of the decline in employee ratings stemming from reduced employee mobility. In Panel B, the results are similar when using *high employee relations* to proxy for morale. In Column (3), the coefficient on *IDD* × *Delay Provisions* is 0.036, which is significantly different from zero at the 1% level (p<0.001).

[Insert Table 6 here]

4.8.2 Employee Productivity and Performance

Table 7 presents tests of employee productivity, trade secret intensity, and firm performance. Column (1) of Panel A shows a negative relation between IDD and productivity. The coefficient on *IDD* is -0.026 and is significant at the 1% level (*p*=0.002). This is just over 3.0% of the standard deviation of *employee productivity*. Thus, firms produce less revenue per employee

after IDD restricts mobility and elevates takeover risk. Column (2) adds a control for the number of *Delay Provisions*, which has a coefficient of 0.006 with a corresponding *p*-value of 0.051. In Column (3), *IDD* × *Delay Provisions* is positive and significant at the 1% level (p<0.001), suggesting that higher *Delay Provisions* offset a portion of the post-IDD productivity losses.

[Insert Table 7 here]

In untabulated analyses, we verify that productivity changes are not due to changes in the number of employees.¹⁹ We find similar results when using non-log-transformed sales per employee to measure productivity or when using a production function in which the output (sales) is generated by the inputs labor (employees) and capital (PP&E).

In Panel B, the dependent variable is *trade secret intensity*. In Column (1), the coefficient on *IDD* is positive but just misses marginal significance (p=0.106). Column (2) shows no relation between *Delay Provisions* and *trade secret intensity* in the full sample. However, in Column (3), the interaction on *IDD* × *Delay Provisions* is positive and significant at the 5% level (p=0.031).

In Panel C, we examine ex-post accounting performance. In tests of *return on assets* in Column (1), the coefficient on *IDD* × *Delay Provisions* is positive and significant at the 5% level (p=0.039). Similarly, the results in Columns (2) and (3) show that IDD firms enjoy higher ex-post *return on sales* and *net profit margins* after strengthening Delay Provisions.

Taken together, the tests of employee outcomes and performance suggest that strengthening Delay Provisions after the IDD is associated with attenuations in the declines in employee morale and productivity stemming from IDD. Moreover, firms strengthening Delay Provisions after IDD show better accounting performance. Although these results do not provide causal evidence, they are consistent with managerial attempts to mitigate negative consequences of IDD on employees by strengthening Delay Provisions to credibly bond with employees.

4.9 Alternative Mechanisms

4.9.1 Managerial Entrenchment

We consider two alternative motivations for strengthening ATPs after IDD. We first conduct cross-sectional tests using CEO entrenchment measures as moderating variables. We

¹⁹ To verify that productivity changes are not due to variation in the number of employees, we add a control for employee growth and the results are similar. We also estimate employee growth as a function of *IDD*, *Delay Provisions*, and *IDD* × *Delay Provisions*. This regression is similar to Equation (4) except productivity is replaced with employee growth. There is no significant relation between employee growth and *IDD*, *Delay Provisions*, or *IDD* × *Delay Provisions*, which further suggest that changes in sales per employee are not driven by changes in employees.

reestimate Equation (3) after splitting the sample on the entrenchment proxies of *CEO tenure*, *CEO delta*, and *CEO monitoring*. We assign firms to the *high entrench* subgroup when they have values above the yearly median for *CEO tenure*, below the yearly median for *CEO delta*, and zero for *CEO monitoring*. We define *low entrench* as 1 minus *high entrench*.

[Insert Table 8 here]

Panel A of Table 8 presents the results. Firms with higher managerial entrenchment do not increase Delay Provisions at a greater rate than those with lower entrenchment. For example, the coefficient on *IDD* after splitting on *CEO tenure* is only marginally different from zero in the low-entrench subsample. For *CEO monitoring* and *CEO delta*, the coefficients on *IDD* are not statistically different from zero for any of the partitions. Thus, we find no evidence that Delay Provisions are strengthened after IDD in order to protect private managerial benefits.

4.9.2 Bargaining Power

Another possible reason to strengthen Delay Provisions after IDD is to improve the firm's bargaining power in an acquisition. To test this possibility, we estimate the following equation for the subsample of firms acquired from 1991 to 2012, using the SDC M&A database:

$\begin{aligned} Takeover \ Premium_{i,t+1} &= \beta_1 IDD_{st} + \beta_2 Delay \ Provisions_{it} \\ &+ \beta_3 IDD_{st} \times Delay \ Provisions_{it} + \beta_4 Firm \ Characteristics_{it} \\ &+ \beta_5 State \ Characteristics_{st} + \ Region \ \times Year \ FE + \epsilon_{ist}, \end{aligned} \tag{5}$

where, following Mulherin and Simsir (2015), *takeover premium* is the cumulative abnormal returns over the window [-5,+5] around the acquisition announcement date.²⁰ We also use their SDC announcement date correction methodology. Abnormal returns are estimated separately using both the equal-weighted and value-weighted index returns from CRSP. In this regression, the coefficient of interest is β_3 , the interaction of *IDD* and *Delay Provisions*. Firm and state characteristics are identical to those in Equation (2). We use *Region* × *Year* fixed effects, but the results are similar when adding industry fixed effects. Standard errors are clustered at the state level. We present the results in Panel B of Table 8.

We find no evidence that firms with stronger Delay Provisions after IDD generate higher takeover premiums. When using the value-weighted returns, the coefficient on $IDD \times Delay$ *Provisions* in Column (3) is 0.006 and is not statistically different from zero (p=0.619). The results are similar in Column (6) when using the equal-weighted returns as the benchmark. Overall, the

²⁰ Results are similar using alternative return windows (e.g., [-1,+1], [-10,+10]).

results in Table 8 provide no evidence that managers increase Delay Provisions after IDD to preserve managerial entrenchment or to enhance bargaining power in takeover negotiations.

5. Additional tests

5.1 Adopting and Rejecting IDD

Our primary analyses set *IDD* to 0 if the IDD is not in place in a state in a given year. These tests include all states that did not consider the IDD, that considered but explicitly rejected it, or that adopted it but subsequently rejected it. To examine if an increase in labor mobility and reduction in takeover risk from IDD rejection has an effect on Delay Provisions, we modify Equation (2) to add an *IDD rejection* indicator equal to 1 for states that considered and rejected the IDD. While we expect rejection to be associated with fewer Delay Provisions, the treatment effects might not be symmetric with adoption. As Kim et al. (2020) note, the states that rejected IDD during our sample period (Texas, Florida, and Michigan) had earlier altered other aspects of trade secret protection. Thus, these changes and the small number of rejections might diminish the effect of IDD rejection. Moreover, managers might be more hesitant to repeal Delay Provisions than to adopt them (Johnson et al., 2015). Results are presented in Table 9.

[Insert Table 9 here]

In Column (1), we include only fixed effects and find that *IDD rejection* is negative (-0.107) and statistically significant at the 1% level (p=0.001). The results are similar in Column (2) when we add in control variables. In Column (3), when we include an *IDD adoption* variable, the *IDD rejection* coefficient remains negative (-0.045) but misses statistical significance (p=0.227). The *IDD adoption* coefficient remains positive (0.061) and significant (p=0.035). Thus, while managers tend to strengthen Delay Provisions in response to the adoption of the IDD, they appear slightly more hesitant to repeal such provisions when employee mobility restrictions are eased or takeover risk is reduced due to IDD rejection.

5.2 Employee Awareness

Our findings rely on the assumption that knowledge workers understand that IDD adoption reduces their labor mobility and increases takeover risk. While such assumptions are difficult to test, we provide the following anecdotal and empirical evidence. First, we posit that employees become aware of labor mobility restrictions via media coverage of lawsuits. For example, we find numerous articles detailing cases of employers bringing action to prevent a former employee from joining a rival company to protect trade secrets. We find examples of articles generated by national and regional newspapers and by broadcast news services, some of which explicitly mention the IDD.²¹ These anecdotes provide some evidence that employees likely become aware of the IDD's effect on mobility via news based on lawsuits. Moreover, one article noted how the number of lawsuits to prevent former employees from moving to a competitor using trade secrets laws or CNCs tripled between 2000 and 2014.²²

Next, we present empirical evidence that employees are aware of elevated takeover risk. We obtain media information from the RavenPack Dow Jones Edition, which reflects Dow Jones Newswires, *Barron's*, MarketWatch, and regional editions of the *Wall Street Journal*. In each subsample year from 2002 to 2011, we compute the following variables: *M&A articles* is a count of the number of articles in which the focal firm is mentioned in some context of an acquisition or merger and *target acquisition rumors* is a count of the number of *M&A articles* in which the focal firm is mentioned as a potential acquisition target. We also generate log-transformed values of these variables to normalize the distribution. In Table 10, we test for differences in the number of articles between firms in IDD and non-IDD states using two-tailed *t*-tests.

[Insert Table 10 here]

Table 10 shows that IDD firms have 20% more *M&A articles* than non-IDD firms (5.3 versus 4.3) and 60% more *target acquisition rumors* (0.016 versus 0.010). These differences are statistically different from zero at the 5% level or better. Differences are similar using the log-transformed values. We therefore contend that employees become aware of elevated takeover risk after IDD adoption through media coverage.

Finally, we assume that employees know that their firms have strengthened ATPs and reduced takeover risk. Firms often seek shareholder approval to alter ATPs in their charters or bylaws. Knowledge workers tend to receive a mix of salary and stock-based compensation, which prior work shows is a mechanism to protect trade secrets (Erkens, 2011). Indeed, census data shows

²¹ See Lazarus, J. (1994, Dec. 21). "Exec Told to Keep Pepsi Information Bottled Up." Chicago Tribune. Retrieved from https://www.chicagotribune.com/news/ct-xpm-1994-12-21-9412210059-story.html; Neuman, W. (2010, Aug. 6). "A man with muffin secrets, but no job with them." New York Times. Retrieved from https://www.nytimes.com/2010/08/07/business/07muffin.html; Blackburn, B. (2010, Jun. 14). "English muffin bakery and recipe." protect 'nooks crannies' in secret ABC News. sues to Retrieved from https://abcnews.go.com/WN/thomas-english-muffin-sues-employee-protect-nooks-crannies/story?id=10911722. Poletti, T. (2010, Sep. 9). "H-P's suit against former CEO is half-baked." MarketWatch. Retrieved from https://www.marketwatch.com/story/h-ps-suit-against-hurd-doesnt-have-much-heft-2010-09-09.

²² See Bessen, J. (2014, Oct. 17). "How companies kill their employees' job searches." *The Atlantic*. Retrieved from https://www.theatlantic.com/business/archive/2014/10/how-companies-kill-their-employees-job-searches/381437/.

that, during our sample period, 6% of R&D spending and 10% of total R&D-expensed compensation comes in the form of stock-based pay.²³ We therefore surmise that such employees would be notified of ATP modifications through proxy statements and other SEC filings. We also expect that higher-level executives who have knowledge of trade secrets would be keenly aware of any changes to ATPs.

6. Conclusion

We examine the use of ATPs to bond with employees in a setting that exogenously affects employee incentives. Our study exploits the adoption by US state courts of the IDD, which protects a firm's trade secrets. IDD adoption significantly reduces knowledge-worker mobility and increases takeover risk due to labor market frictions. Managers respond to IDD by strengthening Delay Provisions, especially when they have higher ex-ante measures of human-capital intensity and stronger employee relations. Such results are consistent with the use of ATPs as a mechanism to credibly commit to long-term investments in human capital and maintain incentives for knowledge workers to innovate. We also find that firms strengthening Delay Provisions exhibit attenuations in the negative consequences of IDD on employee morale and productivity. These firms also experience greater trade-secret intensity and better accounting performance. We find no evidence that managers alter ATPs after IDD to preserve managerial entrenchment. Thus, our findings offer a value-adding explanation for using ATPs.

More broadly, our paper addresses the growing literature on the interaction of the properties of human capital with firm policies. As the US has shifted from a manufacturing to a service economy, the importance of adjusting corporate policies to protect human capital and trade secrets has grown significantly (Erkens, 2011; Glaeser, 2018a; Klemesh et al., 2019). Thus, it is important to study how managerial decisions affect employees and the subsequent consequences on their performance and on firm value. We believe our study contributes to this endeavor and has important implications for academics, policymakers, and corporate leaders.

²³ US Census Bureau, "Business Research and Development Survey," <u>https://www.nsf.gov/statistics/srvyindustry/</u>.

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Appendix A. Court Adoptions and Rejections of the Inevitable Disclosure Doctrine

Dates of Inevitable Disclosure Doctrine (IDD) adoption or rejection based on state court decisions in Klasa et al. (2018).

State	Precedent-setting case	Date	Decision
Arkansas	Southwestern Energy Co. v. Eickenhorst, 955 F. Supp. 1078 (W.D. Ark. 1997)	3/18/1997	Adopt
Connecticut	Branson Ultrasonics Corp. v. Stratman, 921 F. Supp. 909 (D. Conn. 1996)	2/28/1996	Adopt
Delaware	E.I. duPont de Nemours & Co. v. American Potash & Chem. Corp., 200 A.2d 428 (Del. Ch. 1964)	5/5/1964	Adopt
Florida	Fountain v. Hudson Cush-N-Foam Corp., 122 So. 2d 232 (Fla. Dist. Ct. App. 1960)	7/11/1960	Adopt
	Del Monte Fresh Produce Co. v. Dole Food Co. Inc., 148 F. Supp. 2d 1326 (S.D. Fla. 2001)	5/21/2001	Reject
Georgia	Essex Group Inc. v. Southwire Co., 501 S.E.2d 501 (Ga. 1998)	6/29/1998	Adopt
Illinois	Teradyne Inc. v. Clear Communications Corp., 707 F. Supp. 353 (N.D. 111. 1989)	2/9/1989	Adopt
Indiana	Ackerman v. Kimball Int'l Inc., 652 N.E.2d 507 (Ind. 1995)	7/12/1995	Adopt
Iowa	Uncle B's Bakery v. O'Rourke, 920 F. Supp. 1405 (N.D. Iowa 1996)	4/1/1996	Adopt
Kansas	Bradbury Co. v. Teissier-duCros, 413 F. Supp. 2d 1203 (D. Kan. 2006)	2/2/2006	Adopt
Massachusetts	Bard v. Intoccia, 1994 U.S. Dist. LEXIS 15368 (D. Mass. 1994)	10/13/1994	Adopt
Michigan	Allis-Chalmers Manuf. Co. v. Continental Aviation & Eng. Corp., 255 F. Supp. 645 (E.D. Mich. 1966)	2/17/1966	Adopt
-	CMI Int'l, Inc. v. Intermet Int'l Corp., 649 N.W.2d 808 (Mich. Ct. App. 2002)	4/30/2002	Reject
Minnesota	Surgidev Corp. v. Eye Technology Inc., 648 F. Supp. 661 (D. Minn. 1986)	10/10/1986	Adopt
Missouri	H&R Block Eastern Tax Servs. Inc. v. Enchura, 122 F. Supp. 2d 1067 (W.D. Mo. 2000)	11/2/2000	Adopt
New Jersey	Nat'l Starch & Chem. Corp. v. Parker Chem. Corp., 530 A.2d 31 (N.J. Super. Ct. 1987)	4/27/1987	Adopt
New York	Eastman Kodak Co. v. Powers Film Prod., 189 A.D. 556 (N.Y.A.D. 1919)	12/5/1919	Adopt
North Carolina	Travenol Laboratories Inc. v. Turner, 228 S.E.2d 478 (N.C. Ct. App. 1976)	6/17/1976	Adopt
Ohio	Procter & Gamble Co. v. Stoneham, 747 N.E.2d 268 (Ohio Ct. App. 2000)	9/29/2000	Adopt
Pennsylvania	Air Products & Chemical Inc. v. Johnson, 442 A.2d 1114 (Pa. Super. Ct. 1982)	2/19/1982	Adopt
Texas	Rugen v. Interactive Business Systems Inc., 864 S.W.2d 548 (Tex. App. 1993)	5/28/1993	Adopt
	Cardinal Health Staffing Network Inc. v. Bowen, 106 S.W.3d 230 (Tex. App. 2003)	4/3/2003	Reject
Utah	Novell Inc. v. Timpanogos Research Group Inc., 46 U.S.P.Q.2d 1197 (Utah D.C. 1998)	1/30/1998	Adopt
Washington	Solutec Corp. Inc. v. Agnew, 88 Wash. App. 1067 (Wash. Ct. App. 1997)	12/30/1997	Adopt

Appendix B. Definitions of Antitakeover Provisions

This appendix describes the antitakeover provisions in the ISS database based on the categories used in the paper. The descriptions are based heavily on the definitions in Gompers et al. (2003) and Bebchuk et al. (2008). Refer to these papers for more detailed definitions.

Delay Provisions

- *Limits to written consent:* a provision limiting shareholders' ability to act via written consent (as opposed to acting through a vote at the shareholders' meeting).
- *Classified board:* a board in which directors are divided into separate classes (typically three) with each class being elected to overlapping terms.
- *Blank check*: this is a type of preferred stock that, when authorized, gives the board broad discretion in establishing the stock's voting, dividend, and other rights when issued.
- *Limits to special meetings:* a provision limiting shareholders' ability to act by calling a special meeting (as opposed to waiting for the regularly scheduled shareholders' meeting).

Protection Provisions

- *Compensation plan:* a plan that accelerates benefits in the event of a change in control. Compensation plan data are not available in IRRC after 2006. The results for the Compensation category are similar when we restrict our tests to the relevant sample period.
- *Director indemnification contract:* a contract with individual officers and directors promising them indemnification against certain legal expenses and judgments as a result of their conduct.
- *Golden parachute:* a severance agreement that provides benefits to management/board members in the event of firing, demotion, or resignation following a change in control.
- *Director indemnification:* a charter or bylaw provision indemnifying the firm's officers and directors against certain legal expenses and judgments as a result of their conduct.
- Director liabilities: a provision that limits the personal liability of the firm's directors.
- Severance agreement: a contract that ensures executives some income protection in the event of losing their positions.

Voting Provisions

- *Limits to amend bylaws*: provisions that constrain shareholders' ability to amend the governing documents of the corporation. Common limitations include a supermajority vote requirement for bylaw amendments and the total elimination of shareholders' ability to amend bylaws.
- *Limits to amend charter:* provisions that limit shareholders' ability to amend the governing documents of the corporation. A common limitation requires a supermajority vote for charter amendments.
- *Cumulative voting:* a provision that permits shareholders to apportion the total number of votes they are entitled to cast in the election of directors in any fashion they desire. To be consistent with the rest of the provisions—i.e., such that higher values reflect lower shareholder power—we rescale this provision to have a higher value if it does not exist and call it *Anti-cumulative voting*.

Appendix B (continued)

- *Secret ballot:* a system of voting that ensures that management does not look at individual proxy cards. To be consistent with the rest of the provisions—i.e., such that higher values reflect lower shareholder power—we rescale this provision to have a higher value if it does not exist and call it *Anti-secret ballot*.
- Supermajority: a provision that requires more than a majority of shareholders to approve a merger.

Unequal voting: a provision by which voting power changes based on certain conditions.

Other Provisions

- *Antigreenmail:* a provision that prevents an entity from acquiring a block of stock in a company and selling it back to the company at an above-market price.
- *Directors' duties:* a provision that permits the board to consider nonshareholder interests in evaluating a possible change in control.
- *Fair price:* a requirement that a bidder pay all shareholders a "fair price," typically the highest price paid by a bidder prior to a tender offer being made.
- *Pension parachute*: provisions that limit the ability of an acquirer to use surplus money in a firm's pension plan to fund the acquisition.
- *Poison pill:* a shareholder right that is triggered in the event of an unauthorized change in control that typically renders the target company financially unattractive or dilutes the voting power of the acquirer.
- *Silver parachute*: a severance agreement that provides benefits to a large number of firm employees in the event of firing, demotion, or resignation following a change in control.

Variable	Definition
Abnormal return	The daily stock return of the firm's common stock less the returns of the CRSF equal-weighted index averaged over the year.
CEO delta	The pay-performance sensitivity of a CEO's wealth to stock price changes measured as the change in the dollar value of the executive's stock and options for a 1% change in the stock price, using data from Execucomp.
CEO monitoring	Indicator equal to 1 if the firm has at least one outside institutional owner holding more than 5% of outstanding shares, from Thomson Reuters 13F Institutional Holdings database.
CEO ownership	The number of shares outstanding owned by the CEO excluding options, from Execucomp, divided by common shares outstanding, from Compustat. Missing values are set to zero.
CEO tenure	The number of years the CEO has held that position, from Execucomp.
Constituency statute	Indicator equal to 1 if the state of incorporation allows the board of directors to consider stakeholder interests when making business decisions, and (otherwise.
Delaware incorporation	Indicator equal to 1 if the firm is incorporated in Delaware, and 0 otherwise.
Employee concerns	The sum of negative employee relations variables from the KLD database including union relations, workplace health and safety, workforce reductions and retirement benefits concerns.
Employee disclosure	A count of the number of paragraphs mentioning employees in the firm's annua SEC Form 10-K.
Employee mobility	A summary measure of labor mobility based on a principal component analysis of <i>Strength of CNCs, non-UTSA, in-state rivals</i> , and <i>employee mobility risk</i> .
Employee mobility risk	A count of the number of paragraphs noting the ability to "attract and retain employees from the firm's annual SEC Form 10-K.
Employee productivity	The natural log of sales divided by the number of employees, from Compustat
Employee relations	A summary measure of employee relations based on a principal componer analysis of <i>employee strengths</i> , <i>employee concerns</i> , and <i>employee disclosure</i> .
Employee strengths	The sum of positive employee relations variables from the KLD database including cash profit sharing, retirement benefits strength, and other huma capital strengths.
Firm risk	The standard deviation of daily abnormal returns averaged over the year Abnormal returns are calculated using the CRSP equal-weighted index.
Firm size	The natural log of the book value of total assets, from Compustat.
Glassdoor rating	A summary measure of Glassdoor.com ratings based on a principal componen analysis of ratings on Work/Life Balance, Compensation and Benefits, Senio Management, CEO Approval, and Overall.
Human capital	A summary measure of human capital intensity based on a principal componen analysis of <i>knowledge workers</i> , <i>R&D intensity</i> , and <i>intangible asset intensity</i> .
IDD	Indicator equal to 1 if the state recognizes the IDD, and 0 otherwise.
IDD ^{+/- n}	Superscript denotes the number of years before or after the IDD is recognized
In-state rivals	The number of Compustat firms headquartered in the same state that operate in the same 3-digit Standard Industrial Classification (SIC) code during the year.

Appendix C. Variable Definitions

Variable	Definition
Institutional ownership	Percent of shares owned by institutions managing at least \$100 million.
Intangible asset intensity	Intangible assets divided by total assets, from Compustat. Intangible assets include copyrights, engineering drawings, goodwill, licenses, trademarks computer software, etc.
Knowledge workers	The fraction of knowledge workers among all workers in a firm's industry from the Integrated Public Use Microdata Series database.
Leverage	Total debt divided by total assets, from Compustat.
M&A articles	A count of the number of articles in which the firm is mentioned in some context of an acquisition or merger, from RavenPack. These articles contain the RavenPack variable GROUP = "acquisitions-mergers," TYPE = "acquisition," "merger," or "unit-acquisition."
Market-to-book	Market value of equity and debt divided by total assets, from Compustat.
Net profit margin	Net income divided by sales, from Compustat.
Non-UTSA	Indicator equal to 1 if the headquarters state has not adopted the Uniform Trad Secrets Act (UTSA), and 0 otherwise.
Property ratio	The gross property, plant, and equipment (PP&E) value divided by total assets We use net PP&E for observations with missing gross PP&E in Compustat.
R&D credit rate	The headquarters state highest-tier effective tax credit rate, from Wilson (2009
R&D intensity	R&D expenses divided by total assets, from Compustat. Missing values of R&l are set to zero.
Return on assets	Operating income divided by total assets, from Compustat.
Return on sales	Gross profit divided by sales, from Compustat.
Sales growth	The average growth in total sales over the past three years, from Compustat.
State GDP growth	One-year growth rate of the annual state gross domestic product (GDP), from the Bureau of Economic Analysis.
Strength of CNCs	Index of the enforceability of covenants not to compete (CNC), from Ertime et al. (2018). The index takes the value of 0 to 12, where larger values represen a higher level of CNC enforceability in the headquarters state.
Takeover premium	The cumulative abnormal return over the window [-5,+5] around the acquisitio announcement date. Announcement dates, which are obtained from the SD M&A database, are corrected following Mulherin and Simsir (2015).
Target acquisition rumors	A count of the number of articles in which the firm is mentioned as a potentia acquisition target, from RavenPack. These articles contain the RavenPac variable GROUP = "acquisitions-mergers," TYPE = "acquisition," SUB_TYP = "rumor" or "rumor-denied," and PROPERTY = "acquiree" and no "acquiror."
Trade secret intensity	A count of the number of redactions and requests for confidential treatment i the firm's annual SEC Form 10-K.

Appendix C (continued)

Summary statistics

Summary statistics of antitakeover provisions (Panel A) and firm and employee characteristics (Panel B) for the sample period 1990–2011. In Panel B, the variables *employee mobility*, *human capital*, *employee relations*, and *Glassdoor ratings* were developed using a principal component analysis factor score, which is standardized to have a mean of zero. See Appendix C for variable definitions.

Panel A: Antitakeover provisions	Mean	Std. dev.	P25	Median	P75
Delay	2.27	1.15	1	2	3
<i>Limits to written consent</i>	0.42	0.49	0	0	1
Classified board	0.58	0.49	0	1	1
Blank check	0.88	0.33	1	1	1
Limits to special meetings	0.39	0.49	0	0	1
Protection	2.07	1.23	1	2	3
Compensation plans	0.52	0.50	0	1	1
Director indemnification contracts	0.10	0.30	0	0	0
Golden parachutes	0.66	0.47	0	1	1
Director indemnification	0.26	0.44	0	0	1
Director liabilities	0.45	0.50	0	0	1
Severance agreements	0.07	0.26	0	0	0
Voting	2.53	1.02	2	2	3
Limits to amend bylaws	0.35	0.48	0	0	1
Limits to amend charter	0.23	0.42	0	0	0
Anti-cumulative voting	0.88	0.32	1	1	1
Anti-secret ballot	0.89	0.32	1	1	1
Super majority	0.16	0.36	0	0	0
Unequal voting	0.02	0.15	0	0	0
Other	0.94	0.91	0	1	1
Antigreenmail	0.04	0.20	0	0	0
Director duties	0.08	0.27	0	0	0
Fair price	0.26	0.44	0	0	1
Pension parachute	0.02	0.14	0	0	0
Poison pill	0.52	0.50	0	1	1
Silver parachute	0.02	0.14	0	0	0

Table 1 (Continued)

	Mean	Std. dev.	P25	Median	P75
Treatment variable					
IDD	0.51	0.50	0.00	1.00	1.00
Control variables					
Firm size	7.56	1.68	6.34	7.40	8.62
Market-to-book	1.41	1.77	0.72	1.06	1.68
Return on assets (%)	8.18	10.87	3.68	8.12	12.92
Leverage (%)	19.34	17.99	3.80	16.72	29.71
Property ratio (%)	52.47	40.84	19.35	44.41	79.52
Sales growth (%)	16.12	727.14	1.28	7.64	16.70
Abnormal return (%)	-0.03	0.19	-0.12	-0.03	0.06
<i>R&D intensity (%)</i>	2.67	5.91	0.00	0.00	2.63
Delaware incorporation (%)	55.98	49.64	0.00	100.00	100.00
CEO ownership (%)	1.60	4.98	0.00	0.15	0.67
Institutional ownership (%)	38.08	38.27	0.00	37.18	75.75
Firm risk (%)	2.44	1.49	1.52	2.07	2.92
State GDP growth (%)	4.82	2.84	3.49	4.86	6.67
Ex-ante moderating variables					
Strength of CNCs	3.97	2.21	3.00	5.00	5.00
Non-UTSA (%)	30.88	46.20	0.00	0.00	100.00
In-state rivals	16.10	35.42	1.00	2.00	13.00
Employee mobility risk	1.13	1.44	0.00	1.00	2.00
Employee mobility	0.00	1.23	-0.81	-0.31	0.41
<i>R&D credit rates (%)</i>	3.89	4.95	0.00	0.60	7.26
Intangible assets (%)	14.13	17.21	0.75	6.94	22.05
Knowledge workers (%)	27.72	14.28	15.67	24.89	39.44
Human capital	0.00	1.15	-0.88	-0.22	0.65
Constituency statute (%)	32.06	46.67	0.00	0.00	100.00
Employee strengths	0.22	0.48	0.00	0.00	0.00
Employee concerns	0.44	0.63	0.00	0.00	1.00
Employee disclosure	13.65	11.30	7.00	11.00	17.00
Employee relations	0.00	1.01	-0.50	-0.11	0.73
Ex-post outcome variables					
Glassdoor ratings	0.00	1.77	-1.01	0.05	1.07
Employee productivity	5.49	0.87	4.99	5.43	5.96
Trade secret intensity	1.04	13.34	0.00	0.00	0.00
Return on sales (%)	38.06	20.78	22.76	34.77	51.92
Net profit margin (%)	3.43	18.23	1.59	5.40	10.24
Managerial entrenchment variables					
CEO tenure	8.00	7.73	2.70	5.59	10.52
CEO monitoring (%)	82.22	38.24	100.00	100.00	100.00
CEO delta (\$000s)	1.18	12.19	0.07	0.19	0.55

Effect of IDD on takeover likelihood

Difference-in-differences estimates of Equation (1) from OLS regressions of the likelihood of being acquired after IDD adoption. The dependent variable, *acquired*, equals 1 if the firm is acquired in year *t*, and 0 otherwise. The variable *IDD* equals 1 if the headquarters state recognizes the IDD, and 0 otherwise. ***, **, and * indicate significance at the 1%, 5%, and 10% level using two-tailed tests. We define control variables in Appendix C.

	Dependent variable = <i>acquired</i>					
	(1)	(2)	(3)			
IDD	0.015**	0.012**	0.007*			
	(2.29)	(2.10)	(1.81)			
Firm size	0.010***	0.011***	-0.004			
	(3.20)	(3.32)	(-1.33)			
Market-to-book	-0.000	-0.001	-0.001			
	(-0.68)	(-0.75)	(-1.05)			
Return on assets	0.016	0.011	0.019			
	(1.11)	(0.77)	(1.30)			
Leverage	0.006	0.003	0.003			
	(0.60)	(0.24)	(0.32)			
Property ratio	0.024**	0.031***	0.020*			
	(2.35)	(2.70)	(1.89)			
Sales growth	-0.000	-0.000*	0.000			
	(-0.59)	(-1.78)	(0.10)			
Abnormal return	0.294	0.250	-0.373			
	(0.62)	(0.57)	(-0.86)			
<i>R&D intensity</i>	-0.032	-0.035	-0.065**			
	(-0.79)	(-1.26)	(-2.35)			
Delaware incorporation	0.007	0.006	0.008			
	(0.71)	(0.55)	(0.71)			
CEO ownership	-0.035	-0.043	-0.053*			
	(-1.55)	(-1.67)	(-1.90)			
Institutional ownership	0.056***	0.054***	0.038***			
	(5.99)	(5.88)	(4.53)			
Firm risk	-0.121	-0.322***	-0.295***			
	(-1.02)	(-2.84)	(-3.50)			
State GDP growth	0.188***	0.059	-0.036			
	(3.39)	(0.99)	(-0.58)			
Firm FE	Yes	Yes	Yes			
Additional state-level controls	No	Yes	Yes			
Region × year FE	No	No	Yes			
Observations	28,852	28,774	28,774			
Adjusted R ²	0.121	0.123	0.141			

Adopting IDD and categories of antitakeover provisions

Difference-in-differences estimates from OLS regressions of antitakeover provisions (ATPs) on IDD adoption by state courts using Equation (2). In Panel A, we separately test Delay Provisions, Protection Provisions, Voting Provisions, and Other Provisions. The variable *IDD* equals 1 if the headquarters state recognizes the IDD, and 0 otherwise. Panel B tests the timing of changes in ATPs. We replace the variable *IDD* with six indicator variables (IDD^{-2} , IDD^{-1} , IDD^{0} , IDD^{+1} , IDD^{+2} , IDD^{3+}) to capture pre- and post-IDD adoption trends. All regressions include firm and year fixed effects. ***, **, and * indicate significance at the 1%, 5%, and 10% level using two-tailed tests. All variables are defined in Appendix C.

Panel A: IDD and categorie	s of ATPs			
	(1)	(2)	(3)	(4)
Dependent variable:	Delay	Protection	Voting	Other
IDD	0.078***	-0.012	-0.009	-0.012
	(3.28)	(-0.83)	(-0.81)	(-1.10)
Firm size	0.071***	-0.033***	0.046***	0.039***
	(5.61)	(-2.83)	(6.30)	(5.28)
Market-to-book	0.004	-0.007**	-0.002	-0.001
	(1.31)	(-1.97)	(-1.63)	(-0.70)
Return on assets	-0.237***	-0.032	-0.089***	-0.056*
	(-3.89)	(-0.70)	(-2.68)	(-1.74)
Leverage	-0.018	0.028	-0.021	-0.060***
	(-0.47)	(0.96)	(-0.87)	(-2.95)
Property ratio	0.105***	0.041	0.061***	0.044**
	(3.37)	(1.44)	(3.05)	(2.00)
Sales growth	0.001***	-0.001***	0.000***	0.000
	(7.50)	(-6.93)	(13.75)	(0.44)
Abnormal return	-0.861	-0.591	1.306	1.821*
	(-0.51)	(-0.33)	(1.04)	(1.69)
<i>R&D intensity</i>	-0.063	-0.339***	0.068	0.031
	(-0.43)	(-2.77)	(0.62)	(0.39)
Delaware incorporation	0.347***	0.064	0.104***	0.071**
	(7.85)	(1.59)	(3.59)	(2.35)
CEO ownership	-0.115	-0.374***	0.041	-0.156***
	(-0.93)	(-3.75)	(0.61)	(-2.83)
Institutional ownership	-0.021	0.038*	-0.019	-0.019
	(-0.84)	(1.73)	(-1.21)	(-1.17)
Firm risk	-0.375	-1.017***	-1.135***	-0.942***
	(-0.84)	(-2.68)	(-3.85)	(-4.47)
State GDP growth	-0.274	-0.020	-0.151	-0.179
	(-1.05)	(-0.12)	(-1.05)	(-1.33)
Controls	Yes	Yes	Yes	Yes
Firm & year FE	Yes	Yes	Yes	Yes
Observations	28,852	28,852	28,852	28,852
Adjusted R ²	0.751	0.863	0.886	0.879

Panel B: Pre- and post-t	trend analysis of IDD a	nd categories of AT	TPs	
	(1)	(2)	(3)	(4)
	Delay	Protection	Voting	Other
IDD ⁻²	0.005	-0.012	0.020	0.025
	(0.21)	(-0.40)	(1.59)	(1.19)
IDD^{-1}	-0.010	-0.022	-0.009	0.021
	(-0.45)	(-1.09)	(-0.89)	(1.53)
IDD^0	0.069**	0.017	-0.000	0.024
	(2.14)	(0.73)	(-0.01)	(1.32)
IDD^{+1}	0.062**	0.004	-0.004	0.001
	(2.35)	(0.16)	(-0.19)	(0.03)
IDD^{+2}	0.009	-0.010	0.012	0.003
	(0.18)	(-0.46)	(0.43)	(0.12)
IDD^{3+}	0.095***	-0.018	-0.001	-0.013
	(3.56)	(-1.19)	(-0.04)	(-0.35)
Controls	Yes	Yes	Yes	Yes
Firm & year FE	Yes	Yes	Yes	Yes
Observations	28,852	28,852	28,852	28,852
Adjusted R ²	0.752	0.863	0.886	0.879

Table 3 (continued)

IDD and individual Delay Provisions

Difference-in-differences estimates from OLS regressions of Delay Provisions on IDD adoption by state courts, using Equation (2). In Panel A, we separately test individual Delay Provisions: limits to written consent, classified board, blank check, and limits to special meetings. The variable *IDD* equals 1 if the headquarters state recognizes the IDD, and 0 otherwise. Panel B tests the timing of changes in Delay Provisions. We replace the variable *IDD* with six indicator variables (*IDD*⁻², *IDD*⁻¹, *IDD*⁰, *IDD*⁺¹, *IDD*⁺², *IDD*³⁺) to capture pre- and post-IDD adoption trends. All regressions include firm and year fixed effects. ***, **, and * indicate significance at the 1%, 5%, and 10% level using two-tailed tests. All variables are defined in Appendix C.

	(1)	(2)	(3)	(4)
	Written	Classified	Blank	Special
	consent	board	check	meeting
IDD	0.035***	0.015***	0.011***	0.022
	(3.34)	(3.96)	(2.66)	(1.36)
Controls	Yes	Yes	Yes	Yes
Firm & year FE	Yes	Yes	Yes	Yes
Observations	28,852	28,852	28,852	28,852
Adjusted R ²	0.669	0.903	0.828	0.498

Panel B: Pre- and p	ost-trend analy	sis of IDD and I	Delay Provision	S	
	(1)	(2)	(3)	(4)	(5)
	Written consent	Classified board	Blank check	Special meeting	Written consent + classified board + blank check
IDD ⁻²	0.020	-0.010	-0.009	0.002	0.003
	(1.67)	(-1.18)	(-1.40)	(0.16)	(0.15)
IDD^{-1}	0.006	-0.008	-0.007	-0.003	-0.007
	(0.62)	(-1.02)	(-1.32)	(-0.21)	(-0.58)
IDD^{0}	0.036***	-0.001	0.016**	0.017	0.051**
	(2.73)	(-0.13)	(2.42)	(0.87)	(2.42)
IDD^{+1}	0.037***	-0.001	0.030***	-0.008	0.069***
	(2.72)	(-0.08)	(2.79)	(-0.46)	(3.18)
IDD^{+2}	0.034***	0.001	0.007	-0.035	0.044*
	(2.70)	(0.13)	(0.81)	(-0.94)	(1.91)
IDD^{3+}	0.032**	0.018**	0.006	0.039**	0.055***
	(2.05)	(2.48)	(0.85)	(2.09)	(3.37)
Controls	Yes	Yes	Yes	Yes	Yes
Firm & year FE	Yes	Yes	Yes	Yes	Yes
Observations	28,852	28,852	28,852	28,852	28,852
Adjusted R ²	0.670	0.903	0.828	0.499	0.825

Controls

Firm & year FE

Observations

Adjusted R²

Heterogenous treatment effects

Triple difference-in-differences estimates of heterogenous treatment effects of IDD adoption on Delay Provisions. Using Equation (3), we examine variation in Delay Provisions based on ex-ante partitions of employee mobility (Panel A), human capital (Panel B), and employee relations (Panel C). In Panel A, we designate a firm as having *high mobility* if it has a value above the median yearly value of *strength of CNCs, in-state rivals,* or *employee mobility risk,* or is headquartered in a state that has not adopted the UTSA. All others are considered *low mobility.* In Panel B, we split the sample into high human capital and low human capital based on *R&D credit rates, R&D intensity, intangible asset intensity,* or *knowledge workers.* In Panel C, we label a firm as high employee relations if it incorporates in a state with *constituency statutes,* has a value above the yearly median value of *employee strengths* or *employee disclosure,* or at or below the yearly median value of *employee concerns.* Panel D partitions the sample based on a composite score from a principal component analysis of each proxy for employee mobility, human capital, and employee relations. All regressions include firm controls described in Equation (3) and firm and year fixed effects. ***, **, and * indicate significance at the 1%, 5%, and 10% level using two-tailed tests. All variables are defined in Appendix C.

Panel A: Employee mobilit	y							
			Depe	ndent variable	e = Delay Provi	sions		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Strength	of CNCs	UT	SA	In-state	e rivals	Employee n	nobility risk
	High	Low	High	Low	High	Low	High	Low
	mobility	mobility	mobility	mobility	mobility	mobility	mobility	mobility
IDD	0.140***	0.008	0.170***	0.022	0.149***	0.039	0.103***	0.038
	(6.00)	(0.18)	(4.86)	(0.77)	(5.30)	(0.93)	(2.96)	(0.84)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm & year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	17,159	11,636	8,887	19,915	13,175	15,530	15,533	12,738
Adjusted R ²	0.774	0.737	0.777	0.751	0.758	0.756	0.809	0.718
Panel B: Human capital								
			Depe	ndent variable	e = Delay Provi	sions		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	R&D cr	edit rate	R&D ir	tensity	Intangible as	set intensity	Knowledg	e workers
	High human	Low human	High human	Low human	High human	Low human	High human	Low human
	capital	capital	capital	capital	capital	capital	capital	capital
IDD	0.104***	0.043	0.148***	0.026	0.119**	0.065	0.105**	0.038
	(3.32)	(0.95)	(2.74)	(0.71)	(2.28)	(1.55)	(2.24)	(1.06)

Yes

Yes

16,857

0.760

Yes

Yes

14,372

0.764

Yes

Yes

14,050

0.780

Yes

Yes

15,662

0.774

Yes

Yes

13,056

0.735

Yes

Yes

11,934

0.751

Yes

Yes

13,426

0.753

Yes

Yes

15,230

0.768

Table 5 (continued)

Panel C: Employee relat	tions							
			Deper	ndent variable	= Delay Provis	ions		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Constituence	Constituency statutes		strengths	Employee	concerns	Employe	e disclosure
	High	Low	High	Low	High	Low	Low	High
	relations	relations	relations	relations	relations	relations	relations	relations
IDD	0.088**	0.039	0.137***	0.069	0.086*	-0.009	0.123**	0.059
	(2.26)	(0.75)	(2.77)	(1.59)	(1.98)	(-0.11)	(2.10)	(1.60)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm & year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	9,235	19,575	2,178	9,289	6,184	2,868	13,005	15,171
Adjusted R ²	0.779	0.763	0.786	0.758	0.808	0.813	0.771	0.771
Panel D: Principal comp	oonent analysis		Depend	lent variable =	= Delay Provisio	ons		
	(1)	(2)	1	(3)	(4)	(5)	(6)
	Employe	ee mobility		Human c		(Employee rela	ations
	High	Low	Hig	h human	Low human	Hig	A 4	Low
	mobility	mobility	, c	apital	capital	relati	ions	relations
IDD	0.135***	-0.005		0.112**	0.034	0.1	14**	0.053
	(3.20)	(-0.09)	((2.03)	(1.06)	(2.1	6)	(0.69)
Controls	Yes	Yes		Yes	Yes	Ye	es	Yes
Firm & year FE	Yes	Yes		Yes	Yes	Ye	es	Yes
Observations	8,486	9,436	1	2,489	12,133	4,5	92	4,502
Adjusted R ²	0.688	0.691	(0.744	0.772	0.7	52	0.715

Adjusted R²

Delay Provisions and employee morale

Difference-in-differences estimates from OLS regressions of employee morale using Equation (4). In Panel A, the dependent variable is *Glassdoor ratings*, which measures employee ratings of compensation and benefits, work-life balance, senior management, and overall environment for the subsample period 2008–2011. In Panel B, the dependent variable is *high employee relations*, which equals 1 for firms with an above-median value of *employee relations*, which is based on a principal component analysis of *constituency statutes*, *employee strengths*, *employee concerns*, and *employee disclosure*. The variable *IDD* equals 1 if the headquarters state recognizes the IDD, and 0 otherwise. The variable *Delay Provisions* is a count of the following antitakeover provisions: limits to written consent, classified board, blank check, and limits to special meetings. Regressions in Panel A (Panel B) include industry and year (firm and year) fixed effects. ***, **, and * indicate significance at the 1%, 5%, and 10% level using two-tailed tests. All variables are defined in Appendix C.

	Depender	Dependent variable = <i>Glassdoor ratings</i>					
	(1)	(2)	(3)				
IDD	-0.194**	-0.188**	-0.669***				
	(-2.46)	(-2.39)	(-2.70)				
Delay Provisions		-0.087*	-0.193***				
		(-1.85)	(-2.80)				
IDD imes Delay Provisions			0.202**				
			(2.22)				
Controls	Yes	Yes	Yes				
Industry & year FE	Yes	Yes	Yes				
Observations	2,035	2,035	2,035				
Adjusted R ²	0.095	0.097	0.099				
Panel B: Employee relations							
	Dependent v	ariable = high emplo	oyee relations				
	(1)	(2)	(3)				
IDD	0.014	0.014	-0.071*				
	(0.70)	(0.71)	(-1.86)				
Delay Provisions		-0.002	-0.019***				
		(-0.19)	(-2.76)				
IDD × Delay Provisions			0.036***				
			(3.74)				
Controls	Yes	Yes	Yes				
Firm & year FE	Yes	Yes	Yes				
Observations	7,642	7,642	7,642				

0.288

0.288

0.288

Delay Provisions and employee productivity

Difference-in-differences estimates from OLS regressions of employee productivity and innovation output using Equation (4). In Panel A, the dependent variable is *employee productivity*, which is the natural log of sales divided by the number of employees. In Panel B, we use *trade secret intensity* as the dependent variable, which is a count of the redaction keywords in the firm's annual 10-K. In Panel C, the dependent variables are *return on assets*, which is the industry-adjusted value of operating income divided by total assets; *return on sales*, which is gross profit divided by sales; and *net profit margin*, which is net income divided by sales. The variable of interest in these panels is the interaction of *IDD* with *Delay Provisions*. *IDD* equals 1 if the headquarters state recognizes the IDD, and 0 otherwise. *Delay Provisions* is a count of the following antitakeover provisions: limits to written consent, classified board, blank check, and limits to special meetings. All regressions include firm and year fixed effects. ***, **, and * indicate significance at the 1%, 5%, and 10% level using two-tailed tests. All variables are defined in Appendix C.

	Depend	lent variable = employed	e productivity
	(1)	(2)	(3)
IDD	-0.026***		-0.064***
	(-3.17)	(-3.23)	(-4.86)
Delay Provisions	(2117)	0.006*	-0.002
		(1.96)	(-0.67)
IDD \times Delay Provisions		(1.90)	0.017***
			(3.83)
Controls	Yes	Yes	Yes
Firm & year FE	Yes	Yes	Yes
Observations	27,074	27,074	27,074
Adjusted R ²	0.907	0.907	0.907
Augusted R	0.907	0.907	0.907
Panel B: Trade secrecy			
	Dependen	t variable = trade secret	t intensity
	(1)	(2)	(3)
IDD	0.402	0.403	-0.640
	(1.65)	(1.63)	(-1.25)
Delay Provisions		-0.022	-0.262
		(-0.11)	(-0.96)
IDD × Delay Provisions			0.439**
2			(2.16)
Controls	Yes	Yes	Yes
Firm & year FE	Yes	Yes	Yes
Observations	20,498	20,498	20,498
Adjusted R ²	0.060	0.060	0.060
Panel C: Accounting performance			
-	(1)	(2)	(3)
	Return on assets	Return on sales	Net profit margin
IDD	-0.275	-0.100*	-0.195*
	(-1.67)	(-1.81)	(-1.92)
Delay Provisions	-0.093**	0.028**	0.039**
	(-2.14)	(2.01)	(2.12)
IDD × Delay Provisions	0.113**	0.056**	0.080**
	(2.12)	(2.45)	(2.05)
Controls	Yes	Yes	Yes
Firm & year FE	Yes	Yes	Yes
Observations	28,839	28,839	28,839
Adjusted R ²	0.107	0.139	0.124

Alternative motivations for strengthening Delay Provisions

Panel A reports the difference-in-differences estimates from OLS regressions of Delay Provisions on IDD adoption by state courts, using Equation (3). We examine cross-sectional partitions of managerial entrenchment using the following measures: *CEO tenure* is the number of years the CEO has held that position; *CEO monitoring* equals 1 if the firm has at least one 5% blockholder; *CEO delta* is the change in the dollar value of the executive's stock and options for a 1% change in the stock price. We assign firms with values above the yearly median for *CEO tenure*, below the yearly median for *CEO delta*, and zero for *CEO monitoring* to the *high entrench* subgroup. *Low entrench* equals 1 minus *high entrench* for firms with non-missing values. Tests in Panel A include firm and year fixed effects. Panel B reports tests of bargaining power using Equation (5) for firms acquired in the subsequent year. The dependent variable is *takeover premium*, which is the cumulative announcement return over the window [-5,+5] around the acquisition announcement date. Columns (1) to (3) estimate abnormal returns using the value-weighted (VW) index of CRSP returns, while Columns (4) to (6) use the equal-weighted (EW) index. All regressions in Panel B include *region* × *year* fixed effects. ***, **, and * indicate significance at the 1%, 5%, and 10% level using two-tailed tests. All variables are defined in Appendix C.

Panel A: Managerial entrenchment									
		Dependent variable = Delay Provisions							
	(1)	(2)	(3)	(4)	(5)	(6)			
	CEO t	tenure	CEO mo	onitoring	CEO	delta			
	High	Low	High	Low	High	Low			
	entrench	entrench	entrench	entrench	entrench	entrench			
IDD	0.084	0.094*	0.020	0.069	0.029	0.062			
	(1.54)	(1.87)	(0.26)	(1.21)	(0.56)	(1.57)			
Controls	Yes	Yes	Yes	Yes	Yes	Yes			
Firm & year FE	Yes	Yes	Yes	Yes	Yes	Yes			
Observations	11,070	11,863	3,405	17,334	11,216	11,268			
Adjusted R ²	0.771	0.750	0.821	0.722	0.786	0.712			

Panel B: Bargaining power								
	Dependent variable = <i>takeover premium</i>							
	(1)	(2)	(3)	(4)	(5)	(6)		
IDD	0.016	0.016	0.002	0.004	0.004	-0.016		
	(0.85)	(0.83)	(0.04)	(0.21)	(0.20)	(-0.41)		
Delay Provisions		0.001	-0.002		0.001	-0.004		
-		(0.12)	(-0.39)		(0.11)	(-0.56)		
IDD × Delay Provisions			0.006			0.009		
			(0.50)			(0.65)		
Return weighting	VW	VW	VW	EW	EW	EW		
Controls	Yes	Yes	Yes	Yes	Yes	Yes		
Region × year FE	Yes	Yes	Yes	Yes	Yes	Yes		
Observations	711	711	711	711	711	711		
Adjusted R ²	0.116	0.115	0.114	0.134	0.133	0.132		

Adopting and rejecting IDD

Difference-in-differences estimates from OLS regressions of *Delay Provisions* on IDD adoption and rejection. In these tests, we augment Equation (2) to include *IDD rejection*, an indicator equal to 1 for firms in states which considered and explicitly rejected the IDD, and 0 otherwise. *IDD adoption* is an indicator equal to 1 for firms in states which adopt the IDD, and 0 otherwise. Appendix A provides dates of adoption and rejection. All regressions include firm and year fixed effects and controls described in Equation (2). ***, **, and * indicate significance at the 1%, 5%, and 10% level using two-tailed tests. All variables are defined in Appendix C.

	Dependen	t variable = Delay Pro	ovisions
	(1)	(2)	(3)
IDD rejection	-0.107***	-0.101***	-0.045
	(-3.48)	(-3.22)	(-1.21)
IDD adoption			0.061**
			(2.11)
Controls	No	Yes	Yes
Firm & year FE	Yes	Yes	Yes
Observations	28,852	28,852	28,852
Adjusted R ²	0.749	0.751	0.751

Employee awareness of takeover risk

We identify all merger-and-acquisition-related articles using the RavenPack Dow Jones Edition, which provides information on news from Dow Jones Newswires, *Barron's*, MarketWatch, and regional editions of the *Wall Street Journal*. In each year of the subsample period 2002–2011, we identify articles in which the firm is mentioned in some context of M&A. We then generate two variables. *M&A articles* is a count of the number of articles in which the focal firm is mentioned in some context of an acquisition or merger. We also test a log-transformed estimate of this variable, Ln(1+M&A articles). *Target acquisition rumors* is a count of articles in which the firm is mentioned specifically as a potential acquisition target. We test for differences in these variables between firms in IDD (Column 1) and non-IDD (Column 2) states using two-tailed *t*-tests. In Column (3), ***, **, and * indicate differences significantly different from zero at the 1%, 5%, and 10% level, respectively, based on the corresponding *t*-statistic Column (4).

	(1)	(2)	(3)	(4)
	IDD	Non-IDD	Difference $(1) - (2)$	<i>t</i> -statistic
M&A articles	5.250	4.338	0.912***	5.537
Ln(1+M&A articles)	1.087	0.986	0.101***	5.529
Target acquisition rumors	0.016	0.010	0.006**	1.984
$Ln(l + target \ acquisition \ rumors)$	0.009	0.006	0.003**	2.075
Observations	7,441	7,334		

INTERNET APPENDIX

Table IA-1

Additional robustness tests

Panel A reports the difference-in-differences estimates from OLS regressions of *Delay Provisions* on IDD adoption using alternative fixed effects for Equation (2). Panel B entropy-balances the first three moments (mean, variance, and skewness) of the covariates for treatment (IDD) and control (non-IDD) firms and reestimates Equation (2) using this entropy-balanced sample. Panel C presents estimates of Equation (2) when excluding *Delaware incorporation* as a control variable. ***, **, and * indicate significance at the 1%, 5%, and 10% level using two-tailed tests. All variables are defined in Appendix C.

	D	Dependent variable =	= Delay Provisions	
	(1)	(2)	(3)	(4)
IDD	0.089***	0.078***	0.070***	0.072***
	(3.28)	(3.28)	(3.29)	(3.12)
Controls	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Year FE	No	Yes	No	No
Region × year FE	No	No	Yes	No
Industry × year FE	No	No	No	Yes
Observations	28,852	28,852	28,852	28,774
Adjusted R ²	0.742	0.751	0.751	0.759
Panel B: Entropy-balancing	tests			
17 6	(1)	(2)	(3)	(4)
Dependent variable:	Delay	Protection	Voting	Other
IDD	0.076***	0.000	-0.002	-0.014
	(3.01)	(0.03)	(-0.19)	(-1.34)
Controls	Yes	Yes	Yes	Yes
Firm & year FE	Yes	Yes	Yes	Yes
Observations	28,852	28,852	28,852	28,852
Adjusted R ²	0.746	0.862	0.886	0.881
Panel C: Excluding the Del	aware incorporation	n control		
0	(1)	(2)	(3)	(4)
Dependent variable:	Delay	Protection	Voting	Other
IDD	0.078***	-0.012	-0.009	-0.012
	(3.29)	(-0.83)	(-0.81)	(-1.10)
Controls	Yes	Yes	Yes	Yes
Firm & year FE	Yes	Yes	Yes	Yes
Observations	28,852	28,852	28,852	28,852
Adjusted R ²	0.750	0.863	0.886	0.879

Incorporation state antitakeover laws

Difference-in-differences estimates from OLS regressions of incorporation state antitakeover provisions on IDD adoption by state courts, using Equation (2). While IDD is based on a firm's headquarters state, state-level antitakeover provisions are based on its opting into or out of incorporation state laws; we therefore do not expect variation for IDD versus non-IDD firms. Note that more than half of the sample firm-years incorporate in Delaware, so most firms do not incorporate in their headquarters state. Panel A presents univariate statistics. Panel B tests the net value of opting into minus opting out of the group of *incorporation state antitakeover laws*. The variable *IDD* equals 1 if the headquarters state recognizes the IDD, and 0 otherwise. All regressions include firm and year fixed effects. ***, **, and * indicate significance at the 1%, 5%, and 10% level using two-tailed tests. All variables are defined in Appendix C.

	Mean	Std. dev.	P25	Median	P75
Incorporation state antitakeover laws	-0.11	0.48	0	0	0
Business combination law	-0.03	0.18	0	0	0
Fair price law	-0.01	0.11	0	0	0
Control share acquisition law	-0.06	0.23	0	0	0
Directors duties law	0.01	0.08	0	0	0
Cash-out law	0.00	0.07	0	0	0
Recapture of profits law	0.01	0.12	0	0	0

Panel B: Opting into incorporation state antitakeover laws

	Dependent variable = <i>incorporation state antitakeover laws</i>
IDD	0.001
	(0.01)
Controls	Yes
Firm & year FE	Yes
Observations	28,852
Adjusted R ²	0.757

Controlling for antitakeover provision groups

Difference-in-differences estimates from OLS regressions of *Delay Provisions* on IDD adoption by state courts, using Equation (2). In Panel A, we test *Delay Provisions* after controlling for the level of Protection, Voting, and Other Provisions. In Columns (1) and (2), the variable *IDD* equals 1 if the headquarters state recognizes the IDD, and 0 otherwise. In Columns (3) and (4), we replace *IDD* with six indicator variables $(IDD^{-2}, IDD^{-1}, IDD^{0}, IDD^{+1}, IDD^{+2}, IDD^{3+})$ to capture pre- and post-IDD adoption trends. In Panel B, we separately test individual Delay Provisions: limits to written consent, classified board, blank check, and limits to special meetings. All regressions include firm and year fixed effects and controls from Equation (2). ***, **, and * indicate significance at the 1%, 5%, and 10% level using two-tailed tests. All variables are defined in Appendix C.

Panel A: Delay Provisions				
	(1)	(2)	(3)	(4)
Dependent variable:	Delay	Delay	Delay	Delay
IDD	0.078***	0.083***		
	(3.28)	(3.63)		
IDD ⁻²			0.005	-0.005
			(0.21)	(-0.20)
IDD ⁻¹			-0.010	-0.011
			(-0.45)	(-0.53)
IDD^0			0.069**	0.062*
			(2.14)	(1.87)
IDD^{+1}			0.062**	0.061**
			(2.35)	(2.29)
IDD^{+2}			0.009	0.007
			(0.18)	(0.14)
IDD^{3+}			0.095***	0.099***
			(3.56)	(3.87)
Protection		0.070***		0.070***
		(7.14)		(7.15)
Voting		0.237***		0.237***
C .		(16.31)		(16.33)
Other		0.200***		0.200***
		(15.16)		(15.18)
Other controls	Yes	Yes	Yes	Yes
Firm & year FE	Yes	Yes	Yes	Yes
Observations	28,852	28,852	28,852	28,852
Adjusted R ²	0.751	0.760	0.751	0.760

Panel B: Individu	Panel B: Individual Delay Provisions								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
	Written	Written	Classified	Classified	Blank	Blank	Special	Special	
	consent	consent	board	board	check	check	meetings	meetings	
IDD	0.035***	0.041***	0.015***	0.017***	0.011***	0.012***	0.022	0.024	
	(3.34)	(3.70)	(3.96)	(4.40)	(2.66)	(2.75)	(1.36)	(1.48)	
Protection		0.018***		0.017***		0.000		0.035***	
		(4.03)		(5.65)		(0.02)		(6.44)	
Voting		0.111***		0.032***		0.020***		0.074***	
0		(15.17)		(8.29)		(5.54)		(8.31)	
Other		0.071***		0.060***		0.021***		0.048***	
		(12.17)		(13.05)		(6.25)		(6.00)	
Other controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Firm & year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Observations	28,852	28,852	28,852	28,852	28,852	28,852	28,852	28,852	
Adjusted R ²	0.669	0.678	0.903	0.906	0.828	0.829	0.498	0.504	

State-level information on UTSA and constituency statutes

Panel A reports information on the year in which the Uniform Trade Secrets Act (UTSA) becomes effective for each state, including those after the end of our sample period. These data are from Appendix A of Glaeser (2018a), which provides additional details on UTSA for North Carolina, South Carolina, and Wisconsin. New York has not adopted any version of the UTSA as of September 2020. Panel B reports the year in which states enact constituency statutes. N/A indicates that the state has not enacted a constituency statute during our sample period. These data are from Table 1 of Flammer and Kacperczyk (2016). Panel C reports the *strength of CNC index* values for each state during our sample period. These data are from Table 4 of Ertimur et al. (2018).

Panel A: UTSA informa	tion				
State	Year	State	Year	State	Year
Alabama	1987	Kentucky	1990	North Dakota	1983
Alaska	1988	Louisiana	1981	Ohio	1994
Arizona	1990	Maine	1987	Oklahoma	1986
Arkansas	1981	Maryland	1989	Oregon	1988
California	1985	Massachusetts	2018	Pennsylvania	2004
Colorado	1986	Michigan	1998	Rhode Island	1986
Connecticut	1983	Minnesota	1980	South Carolina	1992
Delaware	1982	Mississippi	1990	South Dakota	1988
District of Columbia	1989	Missouri	1995	Tennessee	2000
Florida	1988	Montana	1985	Texas	2013
Georgia	1990	Nebraska	1988	Utah	1989
Hawaii	1989	Nevada	1987	Vermont	1996
Idaho	1981	New Hampshire	1990	Virginia	1986
Illinois	1988	New Jersey	2012	Washington	1982
Indiana	1982	New Mexico	1989	West Virginia	1986
Iowa	1990	New York	N/A	Wisconsin	1986
Kansas	1981	North Carolina	1981	Wyoming	2006

Panel B: Constituency s	statute inform	ation			
State	Year	State	Year	State	Year
Alabama	1987	Kentucky	1989	North Dakota	1993
Alaska	N/A	Louisiana	1988	Ohio	1984
Arizona	N/A	Maine	1986	Oklahoma	N/A
Arkansas	N/A	Maryland	1999	Oregon	1989
California	N/A	Massachusetts	1989	Pennsylvania	1990
Colorado	N/A	Michigan	N/A	Rhode Island	1990
Connecticut	1997	Minnesota	1987	South Carolina	N/A
Delaware	N/A	Mississippi	1990	South Dakota	1990
District of Columbia	N/A	Missouri	1989	Tennessee	1988
Florida	1989	Montana	N/A	Texas	2006
Georgia	1989	Nebraska	2007	Utah	N/A
Hawaii	1989	Nevada	1991	Vermont	1998
Idaho	1988	New Hampshire	N/A	Virginia	1988
Illinois	1985	New Jersey	1989	Washington	N/A
Indiana	1989	New Mexico	1987	West Virginia	N/A
Iowa	1989	New York	1987	Wisconsin	1987
Kansas	N/A	North Carolina	1993	Wyoming	1990

State (years)	Score	State (years)	Score	
Alabama (1980-2011)	5	Minnesota (1980-2011)	5	
Alaska (1980-2011)	3	Mississippi (1980-2008)	4	
Arizona (1980-2011)	3	Mississippi (2009-2011)	5	
Arkansas (1980-2011)	5	Missouri (1980-2011)	7	
California (1980-2011)	0	Montana (1980-2011)	2	
Colorado (1980-1991)	1	Nebraska (1980-2011)	4	
Colorado (1992-2011)	2	Nevada (1980-2011)	5	
Connecticut (1980-1991)	4	New Hampshire (1980-2011)	2	
Connecticut (1992-2011)	3	New Jersey (1980-2011)	4	
Delaware (1980-2011)	6	New Mexico (1980-2011)	2	
D.C. (1980-2011)	7	New York (1980-2011)	3	
Florida (1980-1996)	7	North Carolina (1980-2011)	4	
Florida (1997-2011)	9	North Dakota (1980-2011)	0	
Georgia (1980-2004)	5	Ohio (1980-1991)	4	
Georgia (2005-2011)	6	Ohio (1992-2011)	5	
Hawaii (1980-2006)	3	Oklahoma (1980-2011)	1	
Hawaii (2007-2011)	4	Oregon (1980-2011)	6	
Idaho (1980-1991)	5	Pennsylvania (1980-2011)	6	
Idaho (1992-2008)	6	Rhode Island (1980-2011)	3	
Idaho (2009-2011)	7	South Carolina (1980-2011)	5	
Illinois (1980-2011)	5	South Dakota (1980-2011)	5	
Indiana (1980-2011)	5	Tennessee (1980-2011)	7	
Iowa (1980-2011)	6	Texas (1980-1994)	5	
Kansas (1980-2007)	6	Texas (1995-2011)	3	
Kansas (2008-2011)	7	Utah (1980-2011)	6	
Kentucky (1980-2011)	6	Vermont (1980-2011)	5	
Louisiana (1980-1991)	2	Virginia (1980-1991)	4	
Louisiana (1992-2001)	4	Virginia (1992-2005)	3	
Louisiana (2002-2003)	0	Virginia (2006-2011)	4	
Louisiana (2004-2011)	4	Washington (1980-2011)	5	
Maine (1980-2011)	4	West Virginia (1984-1991)	3	
Maryland (1980-2011)	5	West Virginia (1992-2011)	2	
Massachusetts (1980-2011)	6	Wisconsin (1980-1991)	3	
Michigan (1980-2011)	5	Wyoming (1980-1991)	4	

Heterogenous treatment effects using unemployment benefits

Triple difference-in-differences estimates of heterogenous treatment effects of IDD adoption on Delay Provisions after partitioning on unemployment benefits. Unemployment benefits data are obtained from the US Department of Labor's "Significant Provisions of State UI Laws" publications (https://oui.doleta.gov/unemploy/statelaws.asp) from 1990 to 2011. For each state, we generate the variable *unemployment benefits* by multiplying the maximum weekly benefit amount by the maximum benefit duration in weeks. We label firms in states with *unemployment benefits* above the median yearly value as *high benefits* and those at or below the yearly median as *low benefits*. All regressions include firm controls described in Equation (3) and firm and year fixed effects. ***, **, and * indicate significance at the 1%, 5%, and 10% level using two-tailed tests. All variables are defined in Appendix C.

	Dependent variable = Delay Provision		
	(1)	(2)	
	Unemployment benefits		
	Low benefits	High benefits	
IDD	0.048	0.118**	
	(0.89)	(2.30)	
Controls	Yes	Yes	
Firm & year FE	Yes	Yes	
Observations	15,755	12,907	
Adjusted R ²	0.744	0.785	