Human Capital Driven Acquisition: Evidence from the Inevitable Disclosure Doctrine[*]

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Abstract

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Keywords: Acquisition; Human Capital; Labor Market Friction; Inevitable Disclosure Doctrine

JEL Classification: G34, J24, J62, M51, M54

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Abstract

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Acquisitions are going to be an alternative to normal recruiting that people really haven't considered before.

Bernard Wysoki Jr. Wall Street Journal 06 Oct 1997 A1

1. Introduction

Anecdotal evidence suggests that obtaining human capital is a key driver of mergers and acquisitions (M&As), and that many M&As occur due to the acquirer's intention to acquire target firms' human capital. For example, Facebook CEO Mark Zuckerberg once stated "Facebook has not once bought a company for the company itself. We buy companies to get excellent people."[1] Despite some circumstantial examples, there is little empirical evidence on this matter. In this paper, we fill this gap and present evidence that the desire to gain human capital is an important motive for corporate acquisitions.

Our test exploits the staggered adoption of the Inevitable Disclosure Doctrine (IDD) by U.S. state courts, which prevents a firm's workers who have knowledge of its trade secrets from working for another firm. The recognition of the IDD could increase a local firm' likelihood of being acquired for two reasons. First, from an *ex ante* perspective, the IDD prevents the potential acquirer to poach the target firm's employees directly from the labor market, leaving a corporate acquisition a more effective alternative way for the acquirer to obtain the target's human capital. Second, from an *ex post* perspective, the IDD helps the acquirer to retain human talent of the acquired company after the acquisition, which reduces the costs of acquisitions associated with the employees' departure from the acquired firms.

This setting of employing the staggered recognition of the IDD by U.S. state courts is highly appealing from an empirical standpoint for two reasons. First, the motivation behind the IDD centers around state courts' determination to enhance the protection of trade secrets for

[1] http://www.huffingtonpost.com/2010/10/19/mark-zuckerberg-we-buy-co_n_767338.html

firms located in the state by reducing the risk that departing employees will reveal a firm's trade secrets to other firms in any states. As the IDD was not adopted with the intention of promoting M&As, potential effects on M&As are likely to be an unintended consequence of these policies. Second, the staggered adoption of the IDD in several U.S. states enables us to identify their effects in a difference-in-differences framework. Because multiple shocks affect different firms exogenously at different times, we can avoid the common identification difficulty faced by studies with a single shock: the potential biases and noise coinciding with the shock that directly affect corporate acquisitions (Roberts and Whited, 2012).

Using a panel of 122,367 U.S. public firms from 1980 to 2013 and a difference-in-differences approach, we show that, on average, firms headquartered in states that recognize the IDD experience an increase in the likelihood of being acquired by approximately 0.7 to 1 percentage point relative to firms headquartered in states that do not recognize such a doctrine. This effect is economically important considering that the unconditional probability for a firm to be acquired is around 5 percentage points in our sample. Under treatment reversals, we find that the rejection of previously-adopted IDD leads to a decrease in the firm's likelihood of being acquired by a similar magnitude.

The identifying assumption central to a causal interpretation of the difference-in-differences estimation is that treated and control firms share parallel trends prior to the policy changes. Our tests show that their pre-treatment trends are indeed indistinguishable. Moreover, most of the impact of the IDD on acquisition likelihood occurs after the policy changes, which suggests a causal effect.

However, it is possible that the recognition of the IDD is triggered by local business conditions that in turn increase M&A activities. To mitigate this concern, we additionally control

for local business conditions such as state GDP, population, unemployment rate, etc. Our inferences are largely unchanged. In further tests, we exploit the fact that economic conditions are likely to be similar in neighboring states, whereas the effects of the IDD stop at state borders. This discontinuity in the IDD allows us to difference away any unobserved confounding factors as long as they affect both the treated state and its neighbors. By comparing treated firms to their immediate neighbors, we can better identify how much of the observed change in firms' likelihood of being acquired is due to the IDD rather than other shocks to local business conditions. When we difference away changes in local business conditions by focusing on treated and control firms closely located on either side of a state border, we continue to find a significant increase in firms' likelihood of being acquired after their states recognize the IDD, relative to their neighboring firms. These results indicate that our results are not driven by local economic shocks.

To provide further evidence that the effects of the IDD on corporate acquisitions are indeed tied to human capital, we apply a double difference-in-differences approach to examine heterogeneous treatment effects. We find that the treatment effects are stronger for firms with greater human capital and for firms whose employees previously had better employment mobility. These cross-sectional variations in the treatment effects further increase our confidence in the presence of a human capital channel.

This paper provides at least three major contributions to the literature. First, our paper adds to the literature that examines the drivers of corporate acquisitions. Current research on this topic has focused on factors such as product market synergy (Hoberg and Phillips, 2010), technological overlaps (Bena and Li, 2014), relatedness of firm's industries (Fan and Goyal, 2006), customer-supplier relation (Ahern and Harford, 2014), and stock market misvaluation

(Shleifer and Vishny, 2003), etc. Although these studies enhance our understanding of the motivation for M&As (especially from the perspectives of the product market and the stock market), the role of the labor market is largely overlooked. This lack of evidence makes it difficult to fully understand the drivers of corporate acquisitions, given that human capital is one of the most promising sources of a sustainable advantage and is usually a focus in acquisitions (Coff, 2002; Prahalad and Hamel, 1990). Our paper helps to fill this gap by providing evidence that acquiring talents from the target firms is an important driver for M&As activities.

Second, our paper is broadly related to the surging literature examining the impacts of labor market on corporate finance outcomes. Gao et al. (2015) find that employee job-hopping activities in the labor market have significant impacts on the firm's compensation policies. Dhaliwal et al. (2014) show that higher employee firing costs lead to a lower level of corporate investment. Agrawal and Matsa (2013) and Simintzi et al. (2015) find that employee bargaining power significantly influences firms' capital structure decisions. Tate and Yang (2015) find that transferability of human capital is positively associated with corporate diversification. Ouimet and Zarutskie (2013) find that target firms with more employment usually have better post-acquisition employment outcomes. Our paper shed new insights into this strand of literature by documenting the impacts of labor market friction of obtaining human capital on corporate acquisition decisions.

Lastly, our paper has important policy implications. Although about 20 of the 50 U.S. states have adopted the IDD, legislators in the remaining states are still debating whether or not to follow suit, partially because the impacts of the IDD on the economy are still unclear. Our paper provides evidence that this legislation (unintendedly) spurs M&As activities.

The remainder of the paper is organized as follows. Section 2 reviews the background on the IDD. Section 3 develops our hypothesis. Section 4 describes our sample and key variable construction. Section 5 presents the empirical results. We conclude in Section 6.

2. Background on Trade Secrets Law and Inevitable Disclosure Doctrine

The legal protection of state secrets is largely governed by the state law. In 1979, the National Conference of Commissioners on Uniform State Laws issued the Uniform Trade Secrets Act (UTSA), which made trade secrets law develop as common law and follow universally applicable principles. A trade secret is defined as any valuable business information that is not generally known and is subject to reasonable efforts to preserve confidentiality. Misappropriation of trade secrets occurs when the trade secret is acquired by improper means (e.g., theft or breach of a duty to obtain the secret) or by disclosure without consent by the person who obtained the secret under situations giving rise to a duty to maintain the secret or limit its use.

It is worth noting that trade secrets law allows courts to provide injunctive relief for "actual or threatened misappropriation" of trade secrets. The term "threatened misappropriation" is directly related to the IDD. The IDD is a doctrine which maintains that if the new employment would inevitably lead to the disclosure of the firm's trade secrets to a competitor and cause the firm irreparable harm, then state courts can prevent the employee form working for the firm's competitor or can limit the worker's responsibility in the new firm.

The adoption of the IDD by state courts enhance the protection of trade secrets for firms located in the state by preventing employees from job-hopping to other firms in *any* states. Under the IDD, a firm's suit can be based on the threats of irreparable harm (even though the actual

harm has not occurred), as long as the firm can provide evidence that (1) the departing employee had access to its trade secrets, (2) the employee' duty in the new firm will make her inevitably disclose the trade secrets, and (3) the disclosure of the trade secrets would lead to irreparable economic harm to the firm. Moreover, the firm does not need to establish any actual wrongdoing by the employee or disclose the actual details of the underlying trade secrets in the lawsuits. As described by Malsberger (2004) and Garmaise (2011), the relevant jurisdiction for trade secrets related lawsuit when employees job-hop is typically the state where the job-hopping employee's former employer locates. As a result, the IDD prevents the job-hopping employee from working in a new firm even if the new firm operates in a state which has not adopted the IDD.

The details of the IDD adoptions and rejections are collected from Klasa et al. (2014). As shown in Table 1, New York is the first U.S. state to adopt the IDD (in 1919). By the end of our sample period, 21 states have adopted IDD once, 3 of which rejected the previously-adopted IDD a few years after the initial adoption. This allows us to examine the treatment effects and reverse treatment effects.

Klasa et al. (2014) describe a few key differences between the IDD and employment contracts with a non-disclosure agreement (NDA) and/or a covenant not to compete (CNC). First, a NDA or CNC usually have specific geographic restrictions; the scope of enforceable CNC/NDA is within a state (or a county/city). In contrast, the IDD typically can be enforced across all the U.S. states. Second, the IDD allows state courts to grant an injunction if allowing employment at the rival firm would inevitably lead to a future violation of NDAs (before the actual violation of NDAs), which greatly enhances the enforceability of NDAs because detecting and proving violation of an *ex post* violation of NDA is costly. Finally, the IDD allows courts to

grant an injunction even if the job-hopping employee did not sign any NDA or CNC with her previous company.

Png and Samila (2013) find that the IDD significantly reduces the labor market mobility for engineers and scientists and makes it difficult for rival firms to poach these employees. Klasa et al. (2014) find that firms increase leverage after the adoption of the IDD, because the IDD significantly reduces the firm's risk of losing key employees to rivals.

3. Hypothesis Development

As pointed out by Zingales (2000), human capital is emerging as the most crucial asset for a firm. There are typically two ways for a firm to obtain human capital: hiring from the labor market or acquiring via a corporate acquisition. Compared to the former model, the latter model is advantageous when the firm wants to bring in teams of employees and achieve a large jump to its human capital, and when it is difficult for the firm to directly poach its desired talents from the labor market (for example, its desired talents are closely tied to another firm and are unwilling or illegal to job-hop). Existing literature has provided ample evidence that acquisitions can bring to the acquiring firms desired knowledge and fresh talents, which in turn leads to greater innovation, speedy new product introduction, and enhanced firm performance (Ahuja and Katila, 2001; Puranam et al. 2006).

Despite these potential benefits, significant challenges exist for firms that pursue corporate acquisitions as a means to obtain human capital. Some physical assets and employees of the target firms may not be useful to the acquiring firms and thus, the acquirer needs to bear some additional costs to dispose of these redundant employees and physical assets (Kaplan and Weisbach, 1992). Moreover, following the completion of the acquisition, the target's pre-

existing employees (who are desired by the acquirer) can choose to leave and are not acquired in the same way the new owner gains controls for the target's pre-existing physical assets. Considering that target firms' knowledge is usually stored in the experience of its employees, the departure of employees immediately reduces the target's knowledge base and increases the risk of knowledge leakage to other firms, which decreases the effectiveness of using acquisition as a means to obtain human capital. Existing research has shown that how acquirers retain and motivate the employees of acquired companies is critical to synergy realization and acquisition performance (Ashkenas, et al. 1998; Buchholtz et al. 2003).

In equilibrium, the likelihood of acquiring human capital via corporate acquisition depends on the tradeoff of these benefits and costs. From both *ex ante* and *ex post* perspectives, we expect the recognition of the IDD to increase the likelihood of using corporate acquisition as a means to obtain human capital. From the *ex ante* view, the IDD increases the labor market frictions of hiring talents directly from rival firms, which in turn makes acquisition a relatively more effective way to obtain the target's human capital. From the *ex post* view, after the completion of the acquisition, the IDD helps to prevent target firm's employees from leaving for other firms, which reduces the risk associated with potential departure of acquired firm's employees.

In summary, when an exogenous change in law doctrine increases the frictions of hiring workers from the labor market and decreases the costs associated with employee departure in the post-acquisition stage, we expect an increase in the likelihood for local firms being acquired.

4. Sample Formation and Variable Construction

From CRSP-Compustat merged dataset, we start with all U.S. public firms traded on NYSE, AMEX or NASDAQ. To focus on more economically important companies, we require that our sample firms have a book value of total assets above $10 million. We then obtain the firm's headquarter information from Compustat, Compact Disclosure (which records headquarters' changes), and manually check any missing information.

Our dependent variable is the *Acquisition* indicator variable, which equals one if the firm is the target of an acquisition in a given year, and zero otherwise. Information on acquisition is obtained from Thomson Financial's SDC Database. We retain an acquisition only if the deal is completed and acquirer owns 100% of the target firm after the deal completion. Given that SDC database starts in 1980, our final sample consists of 122,367 firm-year observations (10,911 unique firms) from 1980 to 2013.

We control for a vector of firm characteristics that may affect a firm's likelihood of being acquired, and these controls are motivated by prior literature (e.g., Song and Walkling, 2000). These variables include firm size, asset tangibility, leverage, R&D expenditures, ROA, Tobin's *Q*, and excess stock return. All explanatory variables are lagged by one year. To minimize the effect of outliers, we winsorize all continuous variables at the 1st and 99th percentiles. Detailed variable definitions are provided in the Appendix.

Table 2 provides summary statistics. The *Acquisition* indicator has a mean value of 0.05, indicating that, on average, 5% of our sample firms become the target in an acquisition deal. Our median sample firms have book value assets of $450 million, are moderately levered with a book leverage ratio of 11.36%, and have 17.6% of total assets in the form of tangible assets. In terms

of performance, sample firms perform well with a median ROA of 3.21%, sales growth of 9.27%, and Tobin's *Q* of 1.27.

5. Empirical Results

5.1 Baseline Regression

Several U.S. state courts adopted the IDD in different years during the sample period. Thus, we can examine the before-after effect of the change in the IDD in affected states (the treatment group) compared to the before-after effect in states in which such a change was not effected (the control group). This is a difference-in-differences test design in multiple treatment groups and multiple time periods as employed by Acharya et al. (2014), Klasa et al. (2014), and Imbens and Wooldridge (2009). We implement this test through the following linear probability regression[2]:

$$Acquisition_{i,t} = \alpha + \beta_1 IDD_{s,t} + \beta_2 Other\ Firm\ Characteristics_{i,t} + Firm\ FE + Region \times Year\ FE + \varepsilon_{i,t}\,, \qquad (1)$$

where *i* indexes firm, *s* indexes the state in which the firm's headquarter is located, and *t* indexes the year. The dependent variable is an indicator variable that takes the value one if the firm is acquired in year *t*, and zero otherwise. The variable *IDD* is a dummy variable that equals one if the IDD is in place in state *s* in year *t*, and zero otherwise. It is worth noting that the *IDD* indicator can change either from zero to one (a state starts to adopt the IDD) or from one to zero (a state rejects its previously-adopted IDD). We include a set of control variables that may affect a firm's likelihood of being acquired, as discussed in Section 4. The year fixed effects enable us

[2] Considering that we have a large number of fixed effects, a non-linear model (such as a logit model) is impractical and likely to produce biased estimates due to incidental parameter problem (Lancaster, 2000). Moreover, the marginal effects in a linear probability model are easier to compute and interpret relative to non-linear models, especially for interaction terms. Nevertheless, in untabulated analysis, we re-estimate our tests based on a logit model and get the same inference.

to control for intertemporal technological shocks. Similarly, the firm fixed effects also allow us to control for time-invariant differences in the likelihood of being acquired across firms. Following Acharya et al. (2014), we also control for regional time trends through the interaction of region dummies with year dummies.[3] These interactions enable us to nonparametrically account for time-varying differences between geographic regions of the U.S. in corporate acquisitions and in the adoption of the IDD. Throughput the paper, we cluster standard errors by firm.

The coefficient of interest in this model is the $\beta_1$coefficient. As explained by Imbens and Wooldridge (2009), the employed fixed effects lead to $\beta_1$being estimated as the *within-state* differences before and after the policy change as opposed to similar before-after differences in states that did not experience such a change during the same period.

It is helpful to consider an example. Suppose we want to estimate the effect of the IDD adopted in Ohio in 2000 on likelihood of being acquired for firms in Ohio. We can subtract the likelihood before the IDD adoption from the likelihood after the IDD adoption for firms headquartered in Ohio. However, economy-wide shocks may occur at the same time and affect corporate acquisition in 2000. To difference away such factors, we calculate the same difference in the likelihood of being acquired for firms in a control state that does not adopt the IDD. Finally, we calculate the difference between these two differences, which represents the incremental effect of the law doctrine change on firms in Ohio compared to firms in the control state.

Table 3 presents the regression results. The coefficient estimates on *IDD* are positive and statistically significant in all columns. In column (1), we only include *IDD*, *Firm FE*, and

[3] Following Acharya et al. (2014), we distinguish four U.S. regions based on the classification of U.S. Census Bureau: Northeast, South, Midwest, and West.

Region×Year FE as the independent variables; the coefficient estimate on the *IDD* indicator is positive and significant at the 5% level, suggesting a positive effect of the policy change on the firm's likelihood of being acquired.

In columns (2) and (3), we additionally control for various firm characteristics and we obtain similar results. For example, we control for the full set of firm financial characteristics in column (3) and the coefficient estimation on IDD is 0.007 and significant at the 5% level. The economic magnitude is also sizeable: the adoption of the IDD leads to an increase in the firm's likelihood of being acquired by approximately 0.7 percentage points, relative to the unconditional probability of 5 percentage points (i.e., an increase of 14%).

With regards to control variables, firms with lower market valuation, firms with lower sales growth, R&D intensive firms, and firms with greater asset tangibility are more likely to be acquired. These results are broadly consistent with prior literature (e.g., Song and Walkling, 2000).

Our *IDD* indicator variable captures both the adoption of the IDD (the most frequent event that dominates our sample) and the three rejections of the IDD by states that had recognized the IDD in prior years. In Table 4, we conduct our difference-in-differences tests separately for the events associated with adoptions and rejections of the IDD.

In Table 4 column (1), the regression specification follows column (3) of Table 3, except that we exclude all firm-year observations in Florida, Michigan and Texas (the three rejection states). Removing these observations ensures that the rejections of the IDD occurring in our sample period do not confound the estimated impact of the adoption of the IDD. The key independent variable *IDD Adoption* is an indicator variable, which takes the value of one if the state has adopted the IDD in year *t*, and zero otherwise. We find a significant increase in the

likelihood of being acquired for firms headquartered in the adopting states relative to the non-adopting states. The coefficient estimation on *IDD Adoption* indicator is 0.010 and significant at the 5% level, indicating that the adoption of the IDD leads to an increase in the firm's likelihood of being acquired by1 percentage point.

Further, column (2) presents the results of examining the effects of IDD rejection on corporate acquisition. Given that the first IDD rejection is in 2001 (by Florida), we restrict the sample period from 1997 onwards, starting four years before the first rejection. To further ensure that the IDD adoptions in our sample period do not confound the estimated impacts of the IDD rejections on corporate acquisition, we also exclude all firm-year observations in states which adopted the IDD after 1997. The key independent variable is the *IDD rejection* indicator, which takes the value of one if the state has rejected the previously-adopted IDD in year *t*, and zero otherwise. We find a significant decrease in the likelihood of being acquired for firms headquartered in the rejecting states relative to non-rejecting states. The coefficient estimate on the *IDD rejection* indicator is -0.010, indicating that the rejection of the IDD leads to a decrease in the firm's likelihood of being acquired by 1 percentage point.

Taken together, the adoption of the IDD leads to an increase in the likelihood of local firms to be acquired, while the rejection of the IDD leads to a decrease this likelihood. Moreover, the economic magnitude of the IDD adoptions is similar to that of the IDD rejections. These results provide support to a causal effect of the IDD on the likelihood of a firm being acquired.

5.2 The Pre-treatment Trends

The validity of difference-in-differences estimation depends on the parallel trends assumption: absent the IDD, treated firms' likelihood of being acquired would have evolved in the same way as that of control firms. Table 5 presents the results that investigate the pre-trend between the treated group and control group.

In column (1) of Table 5, we focus on adoption of the IDD and re-estimate column (1) of Table 4 by replacing the *IDD adoption* indicator with the five indicator variables *IDD adoption*$^{-2}$, *IDD adoption*$^{-1}$, *IDD adoption*^{0}, *IDD adoption*^{1}, and *IDD adoption*$^{2+}$. These variables indicate the year relative to the adoption of the IDD. In particular, *IDD adoption*$^{-2}$ indicates that it is two years before the IDD adoption t; *IDD adoption*$^{-1}$indicates that it is the year before the IDD adoption; *IDD adoption*^{0} indicates the year in which the IDD is adopted; *IDD adoption*^{1} indicates that it is the year after the IDD adoption; and *IDD adoption*$^{2+}$ indicates that it is two or more years after the IDD adoption

The coefficients on the *IDD adoption*$^{-2}$ *and IDD adoption*$^{-1}$ indicators are especially important because their significance and magnitude indicate whether there is any difference between the treatment group and the control group prior to the adoption of the IDD. The coefficients on these two indicators are not statistically significant, suggesting that the parallel trend assumption of the difference-in-differences approach is not violated. The impact of the IDD starts to show up in the year after the adoption: the coefficient on the *IDD adoption*$^{2+}$ indicator becomes significantly positive.

In column (2) of Table 5, we focus on the rejection of the IDD and re-estimate column (2) of Table 4 by replacing the *IDD rejection* indicator with the five indicator variables, *IDD rejection*$^{-2}$, *IDD rejection*$^{-1}$, *IDD rejection*^{0}, *IDD rejection*^{1}, and *IDD rejection*$^{2+}$. We also find that the coefficients on *IDD rejection*$^{-2}$ and *IDD rejection*$^{-1}$ are not significantly different from

zero, and that the impacts of the IDD rejection on corporate acquisitions show up after the IDD rejection.

Overall, Table 5 shows that the treated group and the control group share a similar trend in the likelihood of being acquired prior to the policy changes, thus supporting the parallel trends assumption associated with the difference-in-differences estimation. Moreover, Table 5 also indicates that most of the impact of the IDD on corporate acquisitions occurs *after* they are recognized, which suggests a causal effect.

5.3 Confounding Local Business Conditions

In this subsection, we implement two tests to investigate whether our main results in Table 3 are spuriously driven by the state characteristics that we have not controlled for in our main specification. In our first test, we additionally control for a set of observable state characteristics in the regression. In our second test, we difference away unobservable local business conditions by focusing on treatment firms that are on one side of a state border and their neighboring control firms on the other side of the state border. In both tests, we continue to find a significant increase in the firms' likelihood of being acquired after the recognition of the IDD.

Table 6 presents our first test. In addition to our usual set of explanatory variables used in Table 3, we also account for various time-varying, state-level variables in our regressions. First, since larger and richer states may have more active M&A activities, we control for state GDP and state population. We further control for state business combination laws, which reduce the threat of hostile takeovers and thus affect the firm's likelihood of being acquired. We also include state establishment entry rate, state establishment exit rate and state unemployment rate to capture the local economic conditions. Data on state GDP is obtained from the Bureau of

Economic Analysis and state population data is obtained from U.S. Census Bureau. Information regarding state business combination laws is collected from Giroud and Mueller (2010). State business entry and exit rates are obtained from the Business Dynamics Statistics database of the US Census Bureau. State unemployment rate is from U.S. Bureau of Labor Statistics Local Area Unemployment Statistics Series.

We continue to find a positive and significant effect of state trade secrets law on the companies' likelihood of being acquired. Compared to Table 3, the coefficient on the *IDD* indicator is unchanged. None of the state-level variables has significant coefficient, probably because we have already controlled for *Region* × *Year FE* in the regression.

Although the above test accounts for *observable* local business conditions, some unobservable local economic shocks may be associated with both the recognition of the IDD and corporate acquisition activities. In our second test, we exploit the discontinuity of the IDD and examine the change in the likelihood of being acquired in the treatment firms on the state border relative to their neighboring control firms. The logic is as follows. Suppose that the IDD is driven by unobserved changes in local business conditions, and that it is these changes (not the IDD) that spur corporate acquisitions in reality. Then both firms in treated states and their neighbors in untreated states just across the state border would spuriously appear to react to the policy changes, because economic conditions, unlike state laws, have a tendency to spill across state borders (Heider and Ljungqvist, 2014). In this case, the change in acquisition likelihood in treated firms should be no different from that in the neighboring control firms that are located just across the state border.

To examine this possibility, we match each treated firm to a control firm that is in the same industry, is in an adjacent state without recognizing the IDD, and is closest to the treated

firm in distance. Obviously, treated firms may not necessarily share the same local economic condition with its "closest" control firm if the treated firm is in the middle of a large state. To alleviate this concern, we further require that the distance between the treated firm and its matched untreated firm be within a certain range (such as 40 miles, 60 miles, or 80 miles). If the distance between the treated firm and its closest control firm is beyond this range, we drop this pair from our sample. By doing so, we increase our confidence that our treated firm and control firm are truly close to each other geographically and thus face similar local economic shocks. Then, we re-estimate Equation (1) by focusing on this sub-sample of firms across the state borders. We also include a pair fixed effect for each pair of treated firms and neighboring control firms.

Table 7 presents the results. In column (1), we require that the distance between the treated firm and its closest neighboring control firm be within 40 miles. This requirement reduces the sample to 10,963 firm-year observations; yet, we still find a positive and significant coefficient (at the 10% level) on the *IDD* indicator. As a robustness check, we require the distance between the treated firm and its closest neighboring control firm to be within 60 and 80 miles in columns (2) and (3), respectively; we continue to find that the likelihood for firms being acquired is significantly increased after the recognition of the IDD. Overall, these results suggest that local business conditions are unlikely to drive our results.

5.4 Double Difference-in-differences Tests

To provide further evidence that the effects of the IDD on acquisitions are indeed tied to the human capital mechanism, in this subsection we implement double difference-in-differences tests to examine the heterogeneous treatment effects.

First, if the enhanced likelihood of being acquired after the IDD adoption is due to bidding firms' desire to acquire human capital, we expect this treatment effect to be stronger for the target firms that possess more human capital. Following Coff (2002), we measure human capital intensity as the number of knowledge workers as a proportion of all workers in the industry. We obtain employment data from Integrated Public Use Microdata Series database (IPUMS-USA, see Steven et al., 2010). Based on the IPUMS occupational codebook, we define knowledge workers to be those with an occupational code below 400. This definition includes occupations such as managers, scientists, engineers, computer programmers, IT professionals, and so forth. The IPUMS provides Census and American Community Survey (ACS) data on individual worker's occupational code, industry, state, etc. Occupational data is available every ten years before 2000, and available annually since 2000; so we use census data for the years 1980, 1990, 2000 for the periods of 1980-1985, 1986-1995, 1996-2000, respectively, and the annual ACS survey data after 2000. From the IPUMS data, we calculate the proportion of the total workforce being knowledge workers for a given three-digit NAICS industry in a given year, and then assign that measure to each focal firm in our sample. We then define the *High human capital intensity* indicator as one if the proportion of knowledge workers among all workers is above the sample median, and zero otherwise. Then, the *Low human capital intensity* indicator is defined as (1− *High human capital intensity*). We re-estimate Equation (1) by replacing the *IDD* indicator with *IDD* × *High human capital intensity* and *IDD* × *Low human capital intensity* indicators.

Table 8 column (1) presents the results. The coefficient on *IDD* × *High human capital intensity* is 0.013 and significant at the 1% level, while the coefficient on *IDD* × *Low human capital intensity* is only 0.002 and not significant different from zero. This indicates that the

treatment effect is significant for firms with great human capital, and is virtually absent for firms with little human capital.

Second, human capital, rather than physical capital, is particularly important for high-R&D industries (Zingales, 2000). Thus, we expect the treatment effects to be stronger for high-R&D industries. We define a *High R&D* indicator as one if the firm's industry level R&D (based on 3-digit NAICS code) is above the sample median, and zero otherwise. The *Low R&D* indicator is defined as (1− *High R&D*). We then re-estimate Equation (1) by replacing the *IDD* indicator with *IDD* × *High R&D* and *IDD* × *Low R&D* indicators. The coefficient on *IDD* × *High R&D* is positive and significant at the 1% level, while the coefficient on *IDD* × *Low R&D* is not significantly different from zero. This result indicates that the effect of the IDD on corporate acquisition likelihood is significant for high-R&D industries, whereas it is virtually absent in low-R&D industries.

Considering that the impact of IDD on corporate acquisition likelihood is due to the increased labor market frictions to hire talents directly, we expect the treatment effects to be stronger for firms whose employees were previously more poachable. Ippolito (1985) and Klasa et al. (2014) argue that it is more difficult to poach key employees from firms with defined benefit pension plans, because retirement benefits from these plans are less portable and thus it is more costly for workers to change employers. Hence, we expect the treatment effect to be less pronounced for firms with defined benefit pension plans. In column (3), we define the *Defined benefit plan* indicator as taking the value of one if the firm has a defined benefit plan, and zero otherwise. *Non-defined benefit plan* is (1− *Defined benefit plan*). Then, we re-estimate Equation (1) by replacing the *IDD* indicator with *IDD* × *Defined benefit plan* and *IDD* × *Non-defined benefit plan* indicators. The coefficient on *IDD* × *Defined benefit plan* is not significantly

different from zero, while the coefficient on *IDD* × *Non-defined benefit plan* is positive and significant at the 1% level. This result indicates that the effect of the IDD on corporate acquisition likelihood is significant for firms without defined benefit plans (whose employees are more likely to switch jobs *ex ante*), whereas it is virtually absent for firms with such a plan.

Lastly, Klasa et al. (2014) argue that a firm's employee market share (i.e., the firm's employee number normalized by the total number of employees in the same 3-digit NAICS industry and in the same state) is another proxy for *ex-ante* labor market mobility. A higher value indicates that the firm plays a dominating role in the local labor market and thus its employees are less likely to switch to other firms. Therefore, we expect the treatment effect to be weaker for firms with a higher employee market share. To examine this prediction, we define the *High employee market share* indicator as one if the firm's employee market share is above the sample median, and zero otherwise. The *Low employee market share i*ndicator is defined as (1− *High employee market share*). In column (4), we re-estimate Equation (1) by replacing the *IDD* indicator with *IDD* × *High employee market share* and *IDD* × *Low employee market share* indicators. The coefficient on *IDD* ×*High employee market share* is not significantly different from zero, while the coefficient on *IDD* × *Low employee market share* is positive and significant at the 1% level. This result indicates that the effect of the IDD on corporate acquisition likelihood is significant for firms with low employee market share (whose employees are more likely to switch jobs *ex ante*), whereas it is virtually absent for firms with a high employee market share.

Taken together, the effects of the IDD on a firm's likelihood of being acquired are much stronger for firms with greater human capital, and for firms whose employees were previously

more poachable. These results suggest that human capital acquisition is indeed the mechanism through which a state's IDD influences the M&A activities.

5.5 Additional analysis on employee job-hopping activities

To provide further evidence that the IDD indeed reduces the employment mobility in the labor market, we conduct additional analysis in Table 9. Following Gao et al. (2015), we measure the labor market mobility using the executive job-hopping activities recorded in the ExecuComp database, which covers the S&P 1500 firms starting from 1993. ExecuComp assigns a unique identifier (EXECID) to each executive in the database, allowing us to track EXECIDs to locate each executive's position across different firms over the sample period. We define an executive job-hopping event when one executive leaves her current firm and subsequently takes an executive position in another firm the following year. Considering that some job-hopping events may be confounded with forced executive turnover, we search all available news reports in Factiva, investigate the reason leading to each job-hopping event, and remove all "forced" ones, where a job-hopping is regarded as "forced turnover" if the press reports that the executive is fired, is forced out, or resigns due to pressure (Parrino, 1997). Finally, we define the indicator variable *Job-hopping* as taking the value of one if a firm experiences a job-hopping event in a given year (i.e. its executives job-hop to other firms), and zero otherwise. In total, we have 33,978 firm-year observations from 1993 to 2013, among which 1,360 firm-year observations (4%) experience job-hopping events.

We re-estimate Equation (1) by using the *Job-hopping* indicator as the dependent variable. We find a negative and significant coefficient on the *IDD* indicator, indicating that the IDD reduces the executive job-hopping activities in the labor market. In column (2), we replace the IDD indicator with the *IDD adoption* indicator and the *IDD rejection* indicator. We find that the coefficient on the IDD adoption is -0.015 and is significant at the 5% level. This indicates that the adoption of the IDD leads to a reduced likelihood of executive job-hopping by 1.5 percentage points, relative to the unconditional probability of job-hopping of 4 percentage points. The coefficient on the *IDD rejection* indicator is a significant 0.015, indicating that the rejection of previously adopted IDD leads to an increase in executive job-hopping activity by the same magnitude as the IDD adoption.

Overall, based on the executive job-hopping activity as a proxy of labor market mobility, we find that the IDD leads to labor market frictions and prevents employees from joining to other firms.

6. Conclusions

In this paper, we investigate whether obtaining human capital is an important motivation for corporate acquisitions, by exploiting various exogenous shocks from the staggered recognition of the Inevitable Discourse Doctrine (IDD) by U.S. state courts. The recognition of this doctrine increases the cost for the acquirer to directly poach the target's employees from the labor market, and decreases the likelihood of departure of target's employees following the acquisition completion, which makes acquisition a more effective way for the acquirer to obtain the target's human capital.

Supporting this prediction, we find a significant increase in the likelihood of being acquired for firms in the states that recognize the IDD, relative to firms in states that do not. In further support of a causal interpretation of our findings, our timing tests indicate that the firm's likelihood of being acquired changes after the recognition of the IDD. Finally, the cross-sectional variation of the treatment effects confirms the presence of a human capital channel: the impact of the IDD on the firm's likelihood of being acquired is more pronounced for firms with greater human capital, and for firms whose employees were previously more poachable. Overall, our findings are consistent with the view that corporate acquisitions can be used as a means for acquiring firms to overcome labor market frictions and get access to valuable human capital.

Lastly, although our paper emphasizes on corporate acquisitions, labor market frictions associated with the IDD could also play an important role in other corporate finance decisions. For example, in response to the IDD, do firms rely more on internal labor market relative to external labor market? To the extent that the IDD reduces firms' risk of losing key employees, will companies be more likely to make long-term investment? Examining these issues could be an interesting area for future research.

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Appendix. Variable Definitions

Variable	Definition
Acquisition	An indicator variable which equals to one if the firm becomes a target of a successful M&A deal in a given year, and 0 otherwise.
Business combination law	An indicator variable which equals to one if a state has adopted laws that reduce the threat of hostile takeover, and zero otherwise.
Defined benefit plan	An indicator variable which equals to one if the firm has defined benefit plan, and zero otherwise.
Excess return	One-year buy-and-hold abnormal return.
Fixed assets	Book value of property, plant and equipment divided by the book value of total assets.
High employee market share	An indicator variable which equals to one if the firm's employee market share in the 3-digit NAICS industry in the firm's state is above sample median, and zero otherwise.
High human capital intensity	An indicator variable which equals to one if the fraction of knowledge workers employed in the firm's 3-digit NAICS industry in a given year is above sample median, and zero otherwise.
High R&D	An indicator variable which equals to one if the 3-digit NAICS industry level R&D expense is above sample median, and zero otherwise.
IDD	An indicator variable which equals to one if the state where the firm's headquarter locates adopted the IDD previously and hasn't rejected it yet, and zero otherwise.
IDD adoption	An indicator variable which equals to one if the state where the firm's headquarter locates has adopted the IDD, and zero otherwise.
IDD rejection	An indicator variable which equals to one if the state where the firm's headquarter locates has rejected the IDD, and zero otherwise.
Job-hopping	An indicator variable which equals one if the firm's executives leave the firm and join other firms in a given year, and zero otherwise.
Leverage	Book value of long-term debt divided by the book value of total assets.
ROA	Return on assets, measured as net income over book value of total assets.
R&D	R&D expenditure divided by the book value of total assets (missing values are set to zero).
Sales growth	The percent increase of sales from previous year.
State establishment entry	State level establishment entry rate.
State establishment exit	State level establishment exit rate.
State GDP	The state's annual GDP.
State population	The state's population.
State unemployment rate	State level unemployment rate.
Tobin's Q	Book value of total assets minus book value of equity plus market value of equity, divided by book value of total assets.
Total assets	Book value of total assets.

Table 1. List of the Adoption and Rejection Years of the IDD by State

This table presents the years in which state courts adopted the Inevitable Disclosure Doctrine (IDD) and rejected it after adoption, if ever. The data is obtained from Klasa et al. (2014).

State	Adopt Year	Reject Year
New York	1919	
Florida	1960	2001
Delaware	1964	
Michigan	1966	2002
North Carolina	1976	
Pennsylvania	1982	
Minnesota	1986	
New Jersey	1987	
Illinois	1989	
Texas	1993	2003
Massachusetts	1994	
Indiana	1995	
Connecticut	1996	
Iowa	1996	
Arkansas	1997	
Washington	1997	
Georgia	1998	
Utah	1998	
Missouri	2000	
Ohio	2000	
Kansas	2006	

Table 2. Summary Statistics

The sample consists of 122,367 firm-year observations during the 1980−2013 period, obtained from the CRSP-Compustat merged database. All sample firms are U.S. public firms traded on NYSE, AMEX, or NASDAQ. Variable definitions are provided in the Appendix. All dollar values are in 2013 dollars. All continuous variables are winsorized at the 1st and 99th percentiles.

Variable	Mean	Std. Dev	P25	Median	P75
Acquisition	0.05	0.22	0.00	0.00	0.00
IDD	0.44	0.50	0.00	0.00	1.00
Total assets ($ million)	3557	11000	117	450	1879
ROA	1.00%	14.54%	0.39%	3.21%	7.32%
Excess return	4.60%	55.19%	-27.49%	-2.82%	24.06%
Tobin's Q	1.76	1.33	1.03	1.27	1.92
Sales growth	18.80%	46.43%	0.00%	9.27%	23.73%
Leverage	17.09%	18.39%	1.01%	11.36%	27.86%
R&D	3.31%	7.33%	0.00%	0.00%	2.90%
Fixed assets	25.21%	24.66%	4.13%	17.60%	38.60%
State Population (million)	13.21	10.04	5.44	10.74	18.37
State GDP ($ billion)	643.53	548.35	246.85	438.94	890.75
Unemployment Rate	6.23%	1.95%	4.87%	5.82%	7.36%
State Establishment Entry	12.20%	2.05%	10.70%	12.00%	13.40%
State Establishment Exit	10.67%	1.42%	9.60%	10.50%	11.40%
Business Combination Law	0.49	0.50	0.00	0.00	1.00

Table 3. The Inevitable Disclosure Doctrine and the Likelihood of Being Acquired

This table reports the difference-in-differences tests that examine the impacts of the Inevitable Disclosure Doctrine (IDD) on the firm's likelihood of being acquired. The dependent variable *Acquisition* is an indicator variable, which takes the value of one if the firm is acquired in a given year, and zero otherwise. The indicator variable *IDD* takes the value of one if the IDD is recognized in a state, and zero otherwise. Variable definitions are provided in the Appendix. All continuous variables are winsorized at the 1st and 99th percentiles. P-values based on robust standard error clustered at the firm level are reported in parentheses. The superscript ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Dependent Variable =Acquisition		
	(1)	(2)	(3)
IDD	0.007**	0.007**	0.007**
	(0.019)	(0.019)	(0.013)
Log(Total assets)		0.000	-0.001
		(0.762)	(0.329)
ROA			0.013*
			(0.054)
Excess return			0.001
			(0.220)
Tobin's Q			-0.011***
			(0.000)
Sales growth			-0.017***
			(0.000)
Leverage			0.008
			(0.223)
R&D			0.095***
			(0.000)
Fixed assets			0.027***
			(0.002)
Constant	-0.019	-0.021	-0.003
	(0.102)	(0.118)	(0.816)
Region ×Year FE	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes
Observations	122,367	122,367	122,367
R-squared	0.031	0.031	0.035

Table 4. Adoption of the IDD vs. Rejection of the previously Adopted IDD

This table reports the difference-in-differences tests that separately examine the adoption the Inevitable Disclosure Doctrine (IDD) and the rejection of the previously adopted IDD on the firm's likelihood of being acquired. In Column (1), we estimate the effect of the IDD adoption; to avoid the confounding effects from the IDD rejections, we exclude all firm-year observations in states which reject the previously adopted IDD during our sample period. The indicator variable *IDD adoption* takes the value of one if the IDD is adopted in a state, and zero otherwise. In Column (2), we estimate the effect of the IDD rejection; the sample in this column starts from 1997, four years before the first rejection (Florida in 2001). To avoid the confounding effects from the IDD adoption, we exclude all firm-year observations in states which adopt the IDD after 1997. The indicator variable *IDD rejection* takes the value of one if a state rejects the previously adopted IDD, and zero otherwise. The dependent variable *Acquisition* is an indicator variable, which takes the value of one if the firm is acquired in a given year, and zero otherwise. Variable definitions are provided in the Appendix. All continuous variables are winsorized at the 1st and 99th percentiles. P-values based on robust standard error clustered at the firm level are reported in parentheses. The superscript ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Dependent Variable =Acquisition	
	(1)	(2)
IDD adoption	0.010**	
	(0.014)	
IDD rejection		-0.010*
		(0.089)
Log(Total assets)	-0.002	-0.011***
	(0.267)	(0.000)
ROA	0.013*	0.025***
	(0.082)	(0.006)
Excess return	0.001	-0.002
	(0.605)	(0.156)
Tobin's Q	-0.011***	-0.009***
	(0.000)	(0.000)
Sales growth	-0.017***	-0.014***
	(0.000)	(0.000)
Leverage	0.009	-0.001
	(0.190)	(0.885)
R&D	0.096***	0.042
	(0.000)	(0.198)
Fixed assets	0.032***	0.020
	(0.001)	(0.145)
Constant	0.005	0.037
	(0.740)	(0.119)
Region × Year FE	Yes	Yes
Firm FE	Yes	Yes
Observations	103,850	61,950
R-squared	0.035	0.044

Table 5. Testing for Pre-treatment Trends and Reversals

This table investigates the pre-treatment trends between the treated group and control group. The regression specification in column (1) is the same as that in column (1) of Table 4, except that we replace the *IDD adoption* indicator with the *IDD adoption*$^{-2}$, *IDD adoption*$^{-1}$, *IDD adoption*^{0}, *IDD adoption*^{1}, and *IDD adoption*$^{2+}$ indicators. These five indicators flag the year relative to the state adoption of the IDD. The regression specification in column (2) is the same as that in column (2) of Table 4, except that we replace the *IDD rejection* indicator with the *IDD rejection*$^{-2}$, *IDD rejection*$^{-1}$, *IDD rejection*^{0}, *IDD rejection*^{1}, and *IDD rejection*$^{2+}$ indicators. These five indicators flag the year relative to the state rejection of the previously adopted IDD. The dependent variable *Acquisition* is an indicator variable, which takes the value of one if the firm is acquired in a given year, and zero otherwise. Variable definitions are provided in the Appendix. All continuous variables are winsorized at the 1st and 99th percentiles. P-values based on robust standard error clustered at the firm level are reported in parentheses. The superscript ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Dependent Variable =Acquisition	
	(1)	(2)
IDD adoption^{-2}	0.005	
	(0.536)	
IDD adoption^{-1}	-0.009	
	(0.178)	
IDD adoption^{0}	0.009	
	(0.242)	
IDD adoption^{1}	0.008	
	(0.226)	
IDD adoption^{2+}	0.009*	
	(0.059)	
IDD rejection^{-2}		-0.003
		(0.759)
IDD rejection^{-1}		-0.015
		(0.155)
IDD rejection^{0}		0.001
		(0.888)
IDD rejection^{1}		-0.026**
		(0.022)
IDD rejection^{2+}		-0.010
		(0.173)
Log(Total assets)	-0.002	-0.011***
	(0.270)	(0.000)
ROA	0.013*	0.025***
	(0.081)	(0.006)
Excess return	0.001	-0.002
	(0.607)	(0.150)
Tobin's Q	-0.011***	-0.009***

	(0.000)	(0.000)
Sales growth	-0.017***	-0.014***
	(0.000)	(0.000)
Leverage	0.009	-0.001
	(0.188)	(0.885)
R&D	0.096***	0.042
	(0.000)	(0.194)
Fixed assets	0.032***	0.020
	(0.001)	(0.143)
Constant	0.005	0.037
	(0.742)	(0.119)
Region×Year FE	Yes	Yes
Firm FE	Yes	Yes
Observations	103,850	61,950
R-squared	0.035	0.044

Table 6. Controlling for State-level Characteristics

This table reports the difference-in-differences tests that examine the impacts of the Inevitable Disclosure Doctrine (IDD) on the firm's likelihood of being acquired, controlling for state-level characteristics. The dependent variable *Acquisition* is an indicator variable, which takes the value of one if the firm is acquired in a given year, and zero otherwise. The indicator variable *IDD* takes the value of one if the IDD is recognized in a state, and zero otherwise. *Log (State GDP)* is the logarithm of annual real state GDP. *Log (State Population)* is the logarithm of a state's population. State *Unemployment Rate* is the state level unemployment rate. *State Business Combination Law* is an indicator variable, which takes the value of one if a state has adopted laws that reduce the threat of hostile takeover, and zero otherwise. *State Establishment Entry* and *State Establishment Exit* are state level establishment entry rate and exit rate. Variable definitions are provided in the Appendix. All continuous variables are winsorized at the 1st and 99th percentiles. P-values based on robust standard error clustered at the firm level are reported in parentheses. The superscript ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Dependent Variable =Acquisition					
	(1)	(2)	(3)	(4)	(5)	(6)
IDD	0.007**	0.007**	0.007**	0.007**	0.007**	0.007***
	(0.013)	(0.014)	(0.010)	(0.013)	(0.013)	(0.010)
Log (State GDP)	-0.000					-0.008
	(0.945)					(0.642)
Log (State GDP)		0.001				0.008
		(0.876)				(0.630)
State unemployment rate			-0.001			-0.002
			(0.110)			(0.111)
State establishment entry				-0.000		-0.000
				(0.995)		(0.791)
State establishment exit					0.000	0.001
					(0.811)	(0.414)
Business combination law						-0.003
						(0.440)
Log(Total assets)	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
	(0.330)	(0.328)	(0.305)	(0.329)	(0.330)	(0.304)
ROA	0.013*	0.013*	0.013*	0.013*	0.013*	0.013*
	(0.054)	(0.054)	(0.054)	(0.054)	(0.053)	(0.053)
Excess return	0.001	0.001	0.002	0.001	0.001	0.001
	(0.220)	(0.220)	(0.213)	(0.221)	(0.222)	(0.219)
Tobin's Q	-0.011***	-0.011***	-0.011***	-0.011***	-0.011***	-0.011***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Sales growth	-0.017***	-0.017***	-0.017***	-0.017***	-0.017***	-0.017***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Leverage	0.008	0.008	0.008	0.008	0.008	0.008

	(0.223)	(0.222)	(0.220)	(0.223)	(0.224)	(0.218)
R&D	0.095***	0.095***	0.095***	0.095***	0.095***	0.095***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Fixed assets	0.027***	0.027***	0.027***	0.027***	0.027***	0.027***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Constant	0.002	-0.011	0.008	-0.003	-0.006	0.029
	(0.982)	(0.836)	(0.604)	(0.867)	(0.741)	(0.753)
Region×Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	122,367	122,367	122,367	122,367	122,367	122,367
R-squared	0.035	0.035	0.035	0.035	0.035	0.035

Table 7. Treated Firms and Neighboring Control Firms across State Borders

This table reports the difference-in-differences tests that examine whether the impacts of the Inevitable Disclosure Doctrine (IDD) on the firm's likelihood of being acquired is confounded by unobserved changes in local business conditions. Firms in states that adopted the IDD during our sample period are treated firms. For each treated firm, we match to a control firm that is in the same 3-digit NAICS industry, in a neighboring state without adopting the IDD, closest in distance, and the distance is no more than 40 miles, 60 miles and 80 miles in Columns (1), Column (2) and Column (3), respectively. The dependent variable *Acquisition* is an indicator variable, which takes the value of one if the firm is acquired in a given year, and zero otherwise. The indicator variable *IDD* takes the value of one if the IDD is recognized in a state, and zero otherwise. Variable definitions are provided in the Appendix. All continuous variables are winsorized at the 1st and 99th percentiles. P-values based on robust standard error clustered at the pair level are reported in parentheses. The superscript ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Dependent Variable =Acquisition		
	(1)	(2)	(3)
VARIABLES	within 40 miles	within 60 miles	within 80 miles
IDD	0.014*	0.015***	0.014***
	(0.052)	(0.010)	(0.002)
Log(total assets)	0.001	-0.001	-0.003*
	(0.578)	(0.716)	(0.061)
ROA	-0.059***	-0.053***	-0.037**
	(0.006)	(0.004)	(0.032)
Excess return	-0.005	-0.002	-0.001
	(0.162)	(0.403)	(0.823)
Tobin's Q	-0.001	-0.003	-0.003**
	(0.508)	(0.174)	(0.040)
Sales growth	-0.005	-0.003	-0.005**
	(0.116)	(0.280)	(0.047)
Leverage	-0.014	0.000	0.020
	(0.440)	(0.980)	(0.125)
R&D	0.117***	0.091**	0.111***
	(0.007)	(0.024)	(0.004)
Fixed assets	0.079***	0.065***	0.026
	(0.001)	(0.002)	(0.124)
Constant	-0.003	0.006	0.032**
	(0.909)	(0.739)	(0.012)
Region ×Year FE	Yes	Yes	Yes
Pair FE	Yes	Yes	Yes
Observations	10,963	17,418	23,903
R-squared	0.065	0.057	0.044

Table 8. Heterogeneous Treatment Effects

This table reports the double difference-in-differences tests to examine the heterogeneous treatment effects. The dependent variable *Acquisition* is an indicator variable, which takes the value of one if the firm is acquired in a given year, and zero otherwise. The indicator variable *IDD* takes the value of one if the IDD is recognized in a state, and zero otherwise. In Column (1), the indicator variable *High human capital intensity* takes the value of one if the proportion of knowledge workers among all workers is above sample median, and zero otherwise. *Low human capital intensity* is (1− *High human capital intensity*). In Column (2), the indicator variable *High R&D* takes the value of one if the industry level R&D expense is above sample median, and zero otherwise. *Low R&D* is (1− *High R&D*). In Column (3), the indicator variable *Defined benefit plan* takes the value of one if the firm has defined benefit plan, and zero otherwise. *Non defined benefit plan* is (1− *Defined benefit plan*). In Column (4), the indicator variable *High employee market share* takes the value of one if the firm's share in the 3-digit NAICS industry's employment in the firm's state is above sample median, and zero otherwise. *Low employee market share* is (1− *High employee market share*). Variable definitions are provided in the Appendix. All continuous variables are winsorized at the 1st and 99th percentiles. P-values based on robust standard error clustered at the firm level are reported in parentheses. The superscript ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Dependent Variable =Acquisition			
	(1)	(2)	(3)	(4)
IDD × High human capital intensity	0.013***			
	(0.001)			
IDD × Low human capital intensity	0.002			
	(0.558)			
IDD × High R&D		0.011***		
		(0.002)		
IDD × Low R&D		0.004		
		(0.275)		
IDD × Defined benefit plan			-0.003	
			(0.490)	
IDD × Non defined benefit plan			0.012***	
			(0.000)	
IDD × High employee market share				-0.000
				(0.975)
IDD × Low employee market share				0.016***
				(0.000)
High human capital intensity	-0.001			
	(0.831)			
High R&D		-0.001		
		(0.848)		
Defined benefit plan			0.004	
			(0.160)	
High employee market share				0.012***
				(0.000)

Log(Total assets)	-0.001	-0.001	-0.001	-0.002
	(0.289)	(0.335)	(0.311)	(0.209)
ROA	0.013*	0.013*	0.013*	0.014*
	(0.054)	(0.056)	(0.057)	(0.050)
Excess return	0.001	0.001	0.001	0.001
	(0.226)	(0.231)	(0.235)	(0.224)
Tobin's Q	-0.011***	-0.011***	-0.011***	-0.011***
	(0.000)	(0.000)	(0.000)	(0.000)
Sales growth	-0.017***	-0.017***	-0.017***	-0.017***
	(0.000)	(0.000)	(0.000)	(0.000)
Leverage	0.008	0.008	0.008	0.008
	(0.227)	(0.219)	(0.207)	(0.220)
R&D	0.095***	0.094***	0.095***	0.094***
	(0.000)	(0.000)	(0.000)	(0.000)
Fixed assets	0.027***	0.027***	0.026***	0.026***
	(0.002)	(0.002)	(0.002)	(0.003)
Constant	-0.003	-0.003	-0.006	-0.008
	(0.856)	(0.839)	(0.670)	(0.544)
Region×Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Observations	122,367	122,367	122,367	122,367
R-squared	0.035	0.035	0.035	0.035
F Statistic (equality of interaction terms)	6.95***	3.62*	14.72***	10.91***

Table 9. The IDD and Executive Job-hopping

This table reports the difference-in-differences tests to examine the impact of the IDD on executive job-hopping activities. The dependent variable *Job-hopping* is an indicator variable, which takes the value of one if the firm's executives leave the firm and join other firms in a given year, and zero otherwise. Executive job-hopping information is obtained from ExecuComp database from 1993 to 2013. Variable definitions are provided in the Appendix. All continuous variables are winsorized at the 1st and 99th percentiles. P-values based on robust standard error clustered at the firm level are reported in parentheses. The superscript ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Dependent Variable =Job-hopping	
	(1)	(2)
IDD	-0.015***	
	(0.006)	
IDD adoption		-0.015**
		(0.032)
IDD rejection		0.015*
		(0.091)
Log(total assets)	0.017***	0.017***
	(0.000)	(0.000)
ROA	-0.031*	-0.031*
	(0.059)	(0.059)
Excess return	0.000	0.000
	(0.927)	(0.927)
Tobin's Q	-0.001	-0.001
	(0.618)	(0.618)
Sales growth	-0.006*	-0.006*
	(0.095)	(0.094)
Leverage	-0.002	-0.002
	(0.843)	(0.843)
R&D	-0.007	-0.007
	(0.898)	(0.898)
Fixed assets	0.002	0.002
	(0.915)	(0.915)
Constant	-0.117***	-0.117***
	(0.000)	(0.000)
Region ×Year FE	Yes	Yes
Firm FE	Yes	Yes
Observations	33,978	33,978
R-squared	0.012	0.012