Labor market tightness and stock returns- evidence from quasi natural experience of inevitable disclosure doctrine*

Yen-Ju Hsu
Department of Finance and International Business, Fu Jen Catholic University, Taiwan
Center for Research in Econometric Theory and Applications, National Taiwan University, Taiwan

Yanzhi Wang
Department of Finance, National Taiwan University, Taiwan
Center for Research in Econometric Theory and Applications, National Taiwan University, Taiwan

Abstract

This study exploits U.S. state courts' staggered rejection of the inevitable disclosure doctrine (IDD), which curtails the exogenous legal protection of a firm's trade secrets by reducing the restriction on labor mobility who know the key invention secret. We adopt a quasi-natural experiment on the inevitable disclosure doctrine provided by several rejection US states, to examine this exogenous shock of adverse matching efficiency on the relation between labor market tightness and stock returns. Firms headquartered in states that do not recognize the IDD would following higher labor mobility and labor market friction cost, relative to firms headquartered else. The expected findings would reveal that after the rejection of the IDD, firms headquartered in these states experience a significant reduce in stock returns relative to unaffected firms due to the lower labor market tightness and higher labor market friction cost. Overall, the evidence supports that the exogenous restrictive shock on labor mobility would change the sensitivity of labor friction to adjustment cost shock, and extend this risk factor to equity market.

Keywords: Labor market tightness, stock returns, quasi natural experience, inevitable disclosure doctrine, labor market friction cost

* This work was financially supported by the Center for Research in Econometric Theory and Applications (Grant no. 112L900201) from The Featured Areas Research Center Program within the framework of the Higher Education Sprout Project by the Ministry of Education (MOE) in Taiwan. Yanzhi Wang and Yen-Ju Hsu gratefully acknowledge the financial support from the National Science and Technology Council in Taiwan (MOST 110-2410-H-030-028- and NSTC 112-2410-H-030-079-, respectively).

Labor market tightness and stock returns- evidence from quasi natural experience of inevitable disclosure doctrine

Abstract

This study exploits U.S. state courts' staggered rejection of the inevitable disclosure doctrine (IDD), which curtails the exogenous legal protection of a firm's trade secrets by reducing the restriction on labor mobility who know the key invention secret. We adopt a quasi-natural experiment on the inevitable disclosure doctrine provided by several rejection US states, to examine this exogenous shock of adverse matching efficiency on the relation between labor market tightness and stock returns. Firms headquartered in states that do not recognize the IDD would following higher labor mobility and labor market friction cost, relative to firms headquartered else. The expected findings would reveal that after the rejection of the IDD, firms headquartered in these states experience a significant reduce in stock returns relative to unaffected firms due to the lower labor market tightness and higher labor market friction cost. Overall, the evidence supports that the exogenous restrictive shock on labor mobility would change the sensitivity of labor friction to adjustment cost shock, and extend this risk factor to equity market.

Keywords: Labor market tightness, stock returns, quasi natural experience, inevitable disclosure doctrine, labor market friction cost

1. Introduction

The importance of human capital to firm's performance and investment decision has been widely discussed in the literature (Eiling, 2013; Donangelo, 2014). The distinct effect main derived from labor friction, which includes vacancy matching, hiring and new skill training. Besides, the employee friendly policy and environment are both engaged in reducing productive risk from labor friction cost (Flammer and Kacperczyk, 2016; Contigiani, Hsu and Barankay, 2018). The skill training for employees is a determinant of internal investment and the preparation for future innovative productive. It has treated as a form of self-insurance, which can against the uncertainty induced from labor mobility than the applied with income insurance (Grossman and Shapiro, 1982).

This study assesses the impact of the exogenous shock on the causal relation between labor market tightness and equity returns by exploiting the inevitable disclosure doctrine (IDD), which claims that based on the practical memory from prior work, it is possible that the employees perform their job without inevitably disclosing their respective prior employer's trade secret[1]. This doctrine is a legal protection to prevent competitors from obtain their key innovative knowledge through hiring their former employees. However, the limitation of labor mobility would diminish the employee innovation effort and outcomes (Contigiani et al., 2018). On the other hand, the additional cost associated with labor friction, knowledge leakage, employee incentive and potential operating risk would significant come out when the firms are without the legal protection of trade secret. Therefore, we focus on the risk source of Human capital- labor friction, which is the key internal determinant of firm development and would suffer from exogenous shock easily.

[1] Refer to the detail case in Appendix A Cellco Partnership v. Langston, No. 4:09CV00928 JMM (W.D. Ark. 2009)

Belo, Lin and Bazdresch (2014) reveals the impact of labor market hiring to equity market and they find that firms with high hiring rates are expanding firms that incur high adjustment costs because they receive a good idiosyncratic productivity shocks in the recent past. Belo, Lin and Zhao (2017) further consider the endogenous difference of labor skill and show that firms belong to the high-skill industry are exposure higher adjustment cost shock, which present a negative hiring future stock return relation. Kuehn, Simutin and Wang (2017) adopt the job vacancy and search data to construct a labor market tightness measure, and document that firms with low loadings are more exposed to adverse matching efficiency shocks and require higher expected stock returns. Firms will benefit the most from these lower labor friction costs and higher efficiency, allowing them to expand faster and make profits more quickly. The industry with higher labor mobile would come up with additional labor supply fluctuations and enhance the sensitive of operating cash flows to industry shocks (Donangelo, 2014). Furthermore, the high labor share firms are also more sensitive to economic shocks and have higher expected returns (Donangelo, Gourio, Kehrig and Palacios, 2019).

Klasa, Ortiz-Molina, Serfling and Srinivasan (2018) document that the recognition of the IDD reduces the mobility to rival firms of individuals in managerial and related occupations relative to that of individuals in other occupations. Donangelo, Gourio, Kehrig and Palacios (2019) high labor share firms have operating profits that are more sensitive to economic shocks and have higher expected returns. The occupational specificity of human capital generates different magnitude of labor mobility Kambourov and Manovskii (2009) and Sullivan (2010), which both induces endogenous and exogenous shock to equity returns at same time Donangelo (2014). The evidence reveals that firms in mobile industries earn higher returns than those in less mobile industries.

Although several measure of labor factors are adopted to examine the effect to equity market, the endogeneity concern could still exist, even asset pricing does not care about it that much. The concern of omitted variable is main derived from the confounding effect, which could alter the motivation of employee walk-out and knowledge leakage to rival firm. We suppose that the exogenous shock of IDD will change the sensitive of labor to system risk, especially for the high-skilled firms with higher labor-induced distress. Without the restriction of labor switching, the exogenously shock would increase the threat of labor mobility and adjustment costs shock. We hypothesize that exogenous shock of the rejection of the IDD to labor market would increase higher potential adjustment cost and generate higher equity returns. The evidence would support that the effect of the exogenous shock on labor market tightness, which is derived from significant effect from labor mobile motivation and adjustment cost shock.

Using a difference-in-differences empirical design, we expect to find that following the rejection of the inevitable disclosure doctrine, the equity returns significantly increase. The treatment group is the firm which is headquartered in a state that has rejected the inevitable disclosure doctrine. To distinguish the effect of the rejection IDD, this study employs propensity score matching to pair each affected firm with control firm by the condition of firm characteristics and labor market tightness. The identifying assumption to the difference-in-differences estimation is that treated and control firms have same parallel trends prior to the rejection of the IDD. To ensure that our main is not driven by chance, we will further perform a placebo test by replicating the analysis with the peer firms which are randomly chosen in a state with the adoption of the IDD. Based on the analysis of pseudo samples, we expected that the placebo peers do not yield significant results as the actual peer firms.

We next plan to present validation test to deal with the exclusion restriction, including the potential factors of employee relations, labor heterogeneity and the state-level restrictions. The first validation test focus on the degree of CSR engagement (Chen, Chen and Yang, 2018; Contigiani, Hsu and Barankay, 2018; Flammer and Kacperczyk, 2019), which can attract employee and build employee royalty through the better employee relations and incentive policies (Kaiser, Kongsted, Laursen and Ejsing, 2018). We repeat the difference-in-difference method with controlling the engagement of CSR, and then have subsample analysis by excluding the firms with the highest and the lowest CSR engagement. The relation of labor force heterogeneity and endogenous adjustment cost shock is the second validation test. The productive competition and skilled labor hiring cost in high-skill industries are more sensitive to exogenous shock on human capital and suffer stronger damage (Belo, Lin and Zhao, 2017). Therefore, the staggered of the rejection of the IDD would generate higher adjustment cost from the process of operating activities and labor market friction in the high skill industry. Geographic factor and economy situation would also affect the productive efficiency and labor structure, we thus include state-level characteristics[2] (Ljungqvist, Zhang and Zuo, 2017) in the last validation test.

The potential exogenous impact on the relation between internal labor friction and equity market is still ignored in the extant research. This paper contributes to the literature by proposing the inevitable disclosure doctrine as an important exogenous shock on the causal relation between labor market tightness and equity market. The evidence would show that the staggered rejection of the IDD exogenously increase labor mobility, which incur endogenous adjustment cost shock and then affect equity

[2] The real annual growth rate in gross state product (GSP growth rate), State unemployment rate, State investment tax credit rate, Democratic governor, State R&D credit rate, State job creation credit, State job creation grants, tax competition are included.

return. We proposal that the external shock would alter firms' decision on labor cost and internal investment. Firm with lower labor market tightness and locate in the rejection of the IDD inevitable disclosure doctrine would increase the motivation of leaving for rival frim. Therefore, the higher adjustment costs and potential innovative risk would lead higher stock return than firm is located in the state of the IDD adoption.

Our results show that the external shock on labor mobility would alter firms' decision on labor cost and internal investment. Firms with lower labor market tightness and locate in the IDD rejection state would increase the motivation of leaving for rival frim. Main findings are: (i) The staggered rejection of the IDD would exogenously increase labor mobility, which incur endogenous adjustment cost shock and then affect equity return. The higher adjustment costs and potential innovative risk would lead higher stock return than firm is located in the state of the IDD adoption. (ii) The absent of the rejection of the IDD, the treatment firms would have evolved in the same way as that of the control firms. The parallel trend assumption is not violated. (iii) The effect of the exogenous shocks on the causal relation between labor market and equity market would not diminish, even though we further control the potential factors of employee relations, labor heterogeneity and the state-level restrictions. (iv) The concern of exogenous shock on asset pricing should be evaluated.

Moreover, our paper has important managerial implications. The exogenous of the rejection of IDD present impact on labor friction cost and matching efficiency, which further extend to innovative competition and equity market. The threat of labor mobility on trade secret protection would change to against the exogenous shock, which further incur significant influence to firm operating decision. This study expected to provide reference for the labor market tightness and equity market, with regarding to the exogenous shock of labor mobility.

The reminders of this proposal are as follows. Section 2 describes our data measurement and the inevitable disclosure doctrine. Section 3 reports the results of the characteristics portfolio sorted by labor market tightness. Section 4 introduces difference-in-differences model, results, and pretreatment trends tests. Section 5 concludes.

2. Data and variable definitions

This study uses all New York Stock Exchange (NYSE), the American Stock Exchange (Amex), and National Association of Securities Dealers Automated Quotation (NASDAQ) nonfinancial firms listed on the Center for Research in Security Prices (CRSP) monthly stock returns. The financial and utility firms are excluded in the study since the different information disclosure practices. The other financial data measurement comes from Compustat. Available Inevitable disclosure doctrine data restricts our analysis which ranges from 1980 to 2016. In addition, we only include firm-year observations for which the necessary accounting variables, and the firms should exist in the state at least 5 years before and after rejection IDD.

2.1 Inevitable disclosure doctrine

The inevitable disclosure doctrine (IDD), a form of trade secret legal protection, which prevents the firm's private knowledge spillover by labor mobility to rival firm. The doctrine enjoins a former employee from working in a specific job if doing so would inevitably lead to the disclosure of his former employer’s trade secrets. Human capital is a key competitive and valuable asset to enhance firm’s productivity and development; nevertheless, it is also a double-edged sword to firm. The endogeneity problem of human source is induced from the higher job shifting uncertainty and

knowledge spillover to rival firms. This paper focus on impact of the rejection of IDD on labor market, because it would cause great damage because the less restriction on labor mobility and important knowledge outflow especially the flow to rival firms, than either a nondisclosure agreement (NDA) or a noncompetition covenant (NCC).

Human capital is likely to matter more for firms with more knowledge workers and headquartered in states that do not recognize the inevitable disclosure doctrine. Due to the lack of outside threat of legal protection, CSR is implicated to mitigate the threat of knowledge leakage (Flammer and Kacperczyk, 2019). On the other hand, under the staggered recognition of IDD, gain human capital is an important motive for corporate acquisitions (Song, Almeida and Wu, 2003; Chen, Gao Ma, 2018). Another field of literatures investigate both the impact of adoption and rejection of IDD on firm's innovation (Acharya, Baghai, and Subramanian, 2014; Contigiani, Hsu and Barankay, 2018), venture capital investment (Castellaneta, Contib, Veloso and Kemenya, 2016) and capital structure (Klasa et al. 2018). The literature shows that the IDD indeed leads to a significant impact on firm's internal decision and external investment.

The details case of IDD in Appendix B are collected from Gao, Zhang and Zhang (2018), Klasa et al. (2018), Contigiani, Hsu and Barankay (2018) and Flammer and Kacperczyk (2019). Figure 1 presents both rejection and adoption cases of the inevitable disclosure doctrine rulings. The court precedents of the IDD in some states change over time, therefore we decide to adopt the result of the last precedent as the identification reference. The IDD rejection states include Arkansas, Florida, Georgia, Massachusetts, Michigan, Minnesota, New York, Ohio, Washington, California, Wisconsin, Louisiana, Maryland, New Hampshire, Virginia, New Jersey. Figure 2 displays the distribution of the Inevitable disclosure doctrine in the United States, the rejection states are marked with yellow, and the adoption states are marked with blue.

The rest states with grey are the states without court precedent of IDD.

2.2 Labor market tightness

This study purposes that the exogenous effect of inevitable disclosure doctrine would reduce the matching efficiency of labor market and enhance the hiring and training cost. We follow Kuehn, Simutin and Wang (2017), who define the labor market tightness as the ratio of aggregate vacancy postings to unemployed workers.

$$\theta_t = \frac{Vacancy\ Index_t}{Unemployment\ Rate_t \times LFPR_t} \quad (1)$$

Where the denominator is calculated by the unemployment rate multiplied by the labor force participation rate (LFPR). The vacancy postings information is collected from Barnichon (2010), who combines the print and online data to create a composite vacancy index[3]. The monthly labor force participation and unemployment rates are obtained from the Current Population Survey of the Bureau of Labor Statistics (BLS).

$$\vartheta = \log(\theta_t) - \log(\theta_{t-1}) \quad (2)$$

Figure 3 plots the monthly time series of the vacancy index, the labor force participation rate, the unemployment rate, and labor market tightness from 1980 to 2016.Labor market tightness is driven by the interaction of the labor recruiting market, which presents the opposite trend to the unemployment rate. As expected, the vacancy index of the labor market shows a similar trend with labor market tightness. A higher vacancy index accompanies a more competitive and costly recruiting process, increasing labor market friction.

To measure the sensitivity of firm value to labor market conditions, this study follows Kuehn et al. (2017) that estimates the loadings of equity returns on the log

[3] The data is available on his website, http://sites.google.com/site/regisbarnichon/.

changes in labor market tightness controlling for the market return. They show that firms with low loadings are more exposed to adverse matching efficiency shocks and require higher expected stock returns, as shown in Eq (3).

$$R_{i,t}^{e} = \alpha_{i,\tau} + \beta_{i,\tau}^{M} R_{t}^{M} + \beta_{i,\tau}^{\theta} \vartheta_{t} + \varepsilon_{i,t} \quad (3)$$

where $R^{e}_{i,t}$ is the excess return on stock i in month $t \in \{\tau\text{-}35, \tau\}$. To obtain meaningful risk loadings at the end of month τ months.

The higher labor market tightness β^{θ} implies that filling a vacancy is difficult because the number of unemployed workers is not enough to supply the demand of labor market. The situation of job-to-job flows would occur in the firms with high needed of knowledge workers. On the other hand, the smaller loading of labor market tightness on equity returns implies that the firm accompanies with higher labor search friction. Belo, Lin and Bazdresch (2014) find that firms with high hiring rates which incur high adjustment costs.

Refer to previous literatures, this study assumes that the firms located in the states with the rejection of IDD would derived lower loadings of labor market tightness and generate high threat on the firms with high demand of skilled jobs. Therefore, we include the loadings of labor market tightness of firms in the sample matching process to control the different unobservable factors on labor market derived from the IDD. Figure 4 plots the monthly time series of the labor market tightness loading. Compared with the components of labor market tightness, the loading of labor market tightness is more volatile.

2.3 Dependent variable and control variable

The variable of interest is firm month returns which would exist cover the period around the rejection of IDD. We calculate the month returns from June in the next fiscal

year, which is after rejection decision in the court precedents of each state. Firm observation with missing month returns data would be excluded. Refer to Donangelo et al. (2019), the control variables include firm size, return on assets (ROA), market-to-book ratio (MB), leverage, profitability, labor share, and state GDP growth at the end of year t - 1.

Size is the natural logarithm of market value of equity. Asset is the logarithm of the book value of assets. ROA is the ratio of operating income before depreciation to the book value of total assets. The market-to-book ratio is the ratio of the market value of total assets (obtained as the book value of total assets plus the market value of common stock minus the sum of the book value of common stock and balance sheet deferred taxes) to the book value of total assets. Leverage is defined as the ratio of the book value of debt minus cash and marketable securities over the book value of assets minus cash and marketable securities. Profitability defined as earnings before interest, taxes, depreciation and amortization (EBITDA) divided by total assets. GP is gross profitability, measured by gross profit minus cost of goods sold and divided by the lagged term of total assets. Labor share is the ratio of labor expenses over the sum of labor expenses, operating profits, and the change in inventories of final goods, capital, constructed as in Donangelo, Gourio, Kehrig and Palacios (2019). State GDP growth is the annual GDP growth rate in the state.

<Insert Table I here>

This table reports statistics for the monthly labor market tightness factor (ϑ), changes in the vacancy index (VAC), changes in the unemployment rate (UNEMP), changes in the labor force participation rate (LFPR), labor market tightness beta (β^{θ}), market beta (β^{M}), labor market tightness (θ) and labor market tightness factor (ϑ). The mean and standard deviation of ϑ are 0.05% and 4.17, respectively. It's significant nd

positive related to the vacancy index and changes in the labor force participation rate, and negative related to changes in the unemployment rate. The labor market tightness present significant correlation with the vacancy index, changes in the unemployment rate and changes in the labor force participation rate.

3. Characteristics and performance of labor market tightness portfolios

We first measure the characteristics of different level of labor market tightness beta (β^{θ}) by sorting stocks into deciles. The characteristics include book to market ratio (BM), market value of equity (ME), asset growth (AG), leverage (Lev), return on asset (ROA) and gross profitability (GP). Table II reports average characteristics for portfolios of stocks sorted by their loadings on labor market tightness (β^{θ}). The range of β^{θ} is from -1.0042 to 0.9330. Firms in the high- and low-β^{θ} groups are on average larger with higher asset growth, leverage, ROA, GP than firms in the other deciles. On the other hand, the lowest and highest labor market tightness β^{θ} decile of individual firms are larger firms.

<Insert Table II here>

To measure the effect of labor market friction on stock returns, we next compute the portfolios sorted by labor market tightness beta (β^{θ}). At the end of each month, we rank stocks into ten portfolios and calculate mean monthly value-weighted monthly portfolio returns without rebalancing for one year between 1980 and 2016. Following Kuehn et al. (2017), we skip a month to allow information on labor market components to become publicly and available, and then calculate average monthly portfolio returns during the holding period from the month *m+2*.

Table III reports raw returns and alphas for each decile of each portfolios. The lowest decile shows the highest return and alpha based on the CAPM, Fama-French

(1993) three-factor model and Carhart (1997) four-factor model. The bottom row reports the results of hedge portfolios, that is long the decile with low loadings and short the decile with high loadings on labor market tightness. The results show significant and positive returns and alphas of every pricing models between the lowest and highest deciles. The last four columns of the table show market (MKT), value (HML), size (SMB), and momentum (UMD) betas for each decile.

<Insert Table III here>

4. Methodology

4.1 Difference-in-difference test

To investigate the exogenous effect of inevitable disclosure doctrine on labor market and stock returns, this study uses a difference-in-differences methodology based on the treatment group of the firm located in state that has rejected IDD to examine the difference effect on stock returns between the affected and unaffected firms. This study conducts propensity score matching and pairs each of the firms affected by the rejection of the IDD with a control firm[4].

This study includes labor market factor to control the condition of hiring and labor mobility in the process of constructing the matched firm group. Each firm-year observation with the restriction of IDD is matched (without replacement) to a counterfactual within the same two-digit SIC industry-year, the closest size, loading of labor market tightness, i.e., a firm-year observation in the IDD adoption state similar along observable relevant firm characteristics. We implement this test through the following Ordinary Least Squares regressions:

$$Return_{i,t+1} = \alpha_0 + \gamma \times \beta^{\theta} * IDD_{i,s,t} + \gamma' Z_{i,t} + u_j + \varepsilon_{i,t} \qquad (4)$$

Where $Return_{i,t+1}$ is the monthly return for firm i in fiscal year $t+1$, $IDD_{i,s,t}$ is the

[4] To reduce the potential self-selection bias during the sample matching process, we also have a three-to-one and five-to-one matching approach except for the widely used one-to-one matching method.

"treatment dummy" that equals one if the firm is headquartered in state *s* that has rejected the inevitable disclosure doctrine by year *t*. *Z* is the vector of control variables, which includes firm size, return on assets (*ROA)*, market-to-book ratio (*MB*), leverage, Profitability, R&D to asset ratio, labor share, and state GDP growth. v_i are firm fixed effects; τ_t are year fixed effects; u_j are industry fixed effects, respectively. ε is the error term. The sample firms share the same two-digit Standard Industrial Classification as defined as the same industry. The standard errors are adjusted for heteroscedasticity and clustered by state of headquarters to account for potential time-varying correlations in unobservable factors within the same state (Bertrand and Mullainathan, 2003; Bertrand, Duflo, and Mullainathan, 2004; Contigiani, Hsu and Barankay, 2018; Flammer and Kacperczyk, 2019). To diminish the concern of headquarters relocations which are not recorded in compustat, we use the annual SEC Form 10-K report filing state as the headquarter location (Garcia and Norli, 2012).

The rejection case of Arkansas state in 2009, *Cellco Partnership v. Langston*, No. 4:09CV00928 JMM (W.D. Ark. Dec. 23, 2009)[5], the court denied plaintiff's motion[6] for injunction, in part because the court did not believe that the defendant would inevitably disclose trade secrets that he acquired with his former employer[7]. Once the rule is established through court precedents of each state, it will become a effectively reference to the similar the IDD motion cases thereafter. This study focuses on the effect of the rejection of the inevitable disclosure doctrine by U.S. states on firm returns. By taking the last precedent of Arkansas state in 2009 as the identification reference, we will compute the difference in the firm monthly returns post-2009 versus pre-2009 for companies located in Arkansas state ("treated firms"). Next, we pair treated firms and

[5] Please refer to the detail motion in Appendix A.
[6] https://dockets.justia.com/docket/arkansas/aredce/4:2009cv00928/80446
[7] http://www.robertbfitzpatrick.com/papers/Non-Compete-Paper.pdf

control firms which are located in the state with the recognition of the IDD, based on firm size and labor market tightness.

The difference between the treated firms and controlled firms presents the exogenous shock from IDD to labor market friction, which indeed induce higher cost and risk of knowledge spillover and affect the equity returns. Therefore, the difference-in-differences coefficients β measure the effect of the rejection of the inevitable disclosure doctrine on monthly return.

Table IV reports the results of difference-in-differences tests that examine the impacts of the rejection of the inevitable disclosure doctrine on the relationship between labor market friction and monthly stock returns. We find that the coefficient estimates on the IDD* β^{θ} indicator is -0.258 and significant at the 10% level, suggesting a negative effect of labor market tightness on stock returns. Firms headquartered in the states with the rejection of IDD would decrease in individual firms' returns due to the higher cost and hiring friction of the labor matching process. The results still consist with considering treatment dummy, post dummy and control variables in Model (3) and Model (5). As can be seen in the results, the coefficient of the treatment dummy (IDD) is not significant in all specifications. Since the channel effect of the rejection of IDD on stock returns which is induced by the change of labor market tightness. Therefore, individual firms with serious recruiting problem (i.e. higher labor market tightness) would generate lower returns after the staggered rejection of the IDD.

<Insert Table IV here>

4.2 Test for parallel trends in the pre-treatment period

We also check the parallel path assumption prior to treatment through the year-specific treatment effects analysis: absent the impact from the rejection of IDD on labor

market tightness, the equity returns of treated firms would present the same way as the control firms (Klasa et al., 2018; Flammer and Kacperczyk, 2019).

The key variables of interest in parallel trends test are time indicator which test the difference between matching firms and control firms in the pre-trend period. The indicator variables include IDD Year−3 dummy, IDD Year−2 dummy, IDD Year−1 dummy, which are equal to one if the firm is headquartered in a state with the rejection of the IDD three years ago, two years age, and one year ago, respectively, and zero otherwise. We also control for whether the state where a firm is headquartered has rejected the IDD by year t, year+1, year+2 and year+3.

Based on the parallel trends assumption of difference-in-differences estimation, the results show that the treated firms and the control firms share a similar trend in equity returns prior to the rejection of IDD. The insignificant differential of pre-trend would reveal the inconsistent with the trends post-treatment, which suggests that the rejection of IDD indeed interferes equity returns. The validity of a difference-in-differences estimation depends on the parallel trend assumption. That is the absence of the rejection of IDD, the effect of IDD on treated firms' returns would have evolved in the same way as that of control firms.

In particular, we define seven dummies for previous three years, rejected IDD year and post three years, to indicate the year relative to the staggered rejected of IDD. Model (1) and Model (2) of Table V present the results of seven dummies regards with the distinguish of the staggered rejected of IDD. However, the results do not support the parallel trend assumption. Thus, we further consider the level of labor market tightness of different year and states which could alter the interaction of employee and labors. The coefficients on Year+2 indicator is significantly negative, which means the impact of the staggered rejected of IDD starts to show up two years after the enactment

in the headquartered state.

<Insert Table V here>

5. Conclusion

This study proposals the inevitable disclosure doctrine (IDD) as an exogenous shock, and examines this external impact on the causal relation between labor market tightness and equity market. To obtain this exogenous variation in the labor market friction, we exploit U.S. state courts' staggered rejection of the IDD, which releases the restriction of labor mobility, but on the contrary, that is the risk source to the knowledge outflow firm.

To maintain the competitive advantage and innovative development of firms, how to attract and keep high skilled-labor become an important and costly task. Yet, this internal labor-induced distress is also associated with the external incentive condition. The exogenous shock changes the sensitivity of labor market, which is due to the impact of labor capital flow on the additional labor friction cost including vacancy matching, hiring and new skill training. Using a difference-in-differences empirical design, the results would suggest that following the rejection of the IDD, the exogenous shock on labor adjustment cost would incurs more risk and results in higher equity returns.

The main findings reveal that after the rejection of the IDD, firms headquartered in these states experience a significant decrease in stock returns relative to unaffected firms through the stronger impact on labor market. Firms with smaller loadings of labor market tightness are more exposed to higher cost of labor market friction and require higher expected stock returns. We expect that our results survive after the validation tests, with controlling the potential factors of employee relations, labor heterogeneity and the state-level restrictions.

This study contributes to demonstrate that the exogenous shock of key talent

employee departure would cause significant impact on labor friction and expand the influence to equity market. Our study has important managerial implications. To mitigate the exogenous shock on employee matching efficiency and knowledge leakage, firm should establish better employee relation and efficient training standard, especially for the firms relying heavily on knowledge workers.

References

Acharya, V., Baghai, R. and Subramanian, K, 2014. Wrongful discharge laws and innovation. *Review of Financial Studies* 27(1), 301-346.

Barnichon, R., 2010. Building a composite help-wanted index. *Economics Letters* 109, 175-178.

Belo, F., Lin, X. Bazdresch, S., 2014. Labor hiring, investment, and stock return predictability in the cross section. *Journal of Political Economy* 122(1), 129-177.

Belo, F., Li, J., Lin, X. and Zhao, X., 2017. Labor-force heterogeneity and asset prices: The importance of skilled labor. *Review of Financial Studies* 30(10), 3669-3709.

Bertrand, M., Mullainathan, S., 2003. Enjoying the quiet life? Corporate governance and managerial preferences. *Journal of Political Economy* 111(5), 1043-1075.

Bertrand, M., Duflo, E., Mullainathan, S., 2004. How much should we trust differences-in-differences estimates? *The Quarterly Journal of Economics* 119(1), 249-275.

Castellaneta, F., Contib, R., Veloso, F.M. Kemenya, C., 2016. The effect of trade secret legal protection on venture capital investments: Evidence from the inevitable disclosure doctrine. *Journal of Business Venturing* 31(5), 524-541.

Chatterji, A.K., Durand, R., Levine, D.I., and Touboul, S., 2016. Do ratings of firms converge? Implications for managers, investors and strategy researchers. *Strategic Management Journal* 37(8), 1597-1614.

Chen, T.K., Chen, Y.S. and Yang, H.L., 2018. Employee treatment and its implications

for bondholders. *European Financial Management* 25 (4), 1047-1079.

Chen, D., Gao, H., and Ma, Y., 2018. Human Capital Driven Acquisition: Evidence from the Inevitable Disclosure Doctrine. Available at SSRN: https://ssrn.com/abstract=2713600 or http://dx.doi.org/10.2139/ssrn.2713600

Contigiani, A., Hsu, D.H., and Barankay, I., 2018. Trade secrets and innovation: Evidence from the "inevitable disclosure" doctrine. *Strategic management Journal* 39(11), 2921-2942.

Davis, S.J., Faberman, R.J. and Haltiwanger, J.C., 2013. The establishment-level behavior of vacancies and hiring. *Quarterly Journal of Economics* 128(2), 581-622.

Donangelo, A., 2014. Labor Mobility: Implications for Asset Pricing. *The Journal of Finance* 69 (3), 1321-1346.

Donangelo, A., Gourio, F., Kehrig, M., and Palacios, M., 2019. The cross-section of labor leverage and equity returns. *Journal of Financial Economics* 132, 497-518.

Eiling, E., 2013. Industry-Specific Human Capital, Idiosyncratic Risk, and the Cross-Section of Expected Stock Returns. *The Journal of Finance* 68 (1), 43-84.

Flammer, C., and Kacperczyk, A., 2016. The impact of stakeholder orientation on innovation: Evidence from a natural experiment. *Management Science* 62(7), 1982-2001.

Flammer, C., and Kacperczyk, A., 2019. Corporate social responsibility as a defense against knowledge spillovers: Evidence from the inevitable disclosure doctrine. *Strategic management Journal* 40(8), 1243-1267.

Garcia, D., and Norli, O., 2012. Geographic dispersion and stock returns. *Journal of Financial Economics* 106(3), 547-565.

Gao, H., and Zhang, H, 2017. Employment Nondiscrimination Acts and Corporate

Innovation. *Management Science* 63(9), 2982-2999.

Grossman, G.M., and Shapiro, C., 1982. A theory of factor mobility. *Journal of Political Economy* 90 (5), 1054-1069.

Kaiser, U., Kongsted, H.C., Laursen, K., and Ejsing, A.-K., 2018. Experience matters: The role of academic scientist mobility for industrial innovation. *Strategic management Journal* 39(7), 1935-1958.

Kaiser, U., Kongsted, H. C., and Rønde, T., 2015. Does the mobility of R&D labor increase innovation? *Journal of Economic Behavior & Organization* 110, 91-105.

Kambourov, G., and Manovskii, I., 2009. Occupational specificity of human capital. *International Economic Review* 50(1), 63-115.

Klasa, S., Ortiz-Molina, H., Serfling, M., and Srinivasan, S., 2018. Protection of trade secrets and capital structure decisions. *Journal of Financial Economic*s 128(2), 266-286.

Kuehn, L.-A., Simutin, M., and Wang, J.J., 2017. A labor capital asset pricing model. *The Journal of Finance* 72 (5), 2131-2178.

Ljungqvist, A., Zhang, L. and Zuo, L., 2017. Sharing risk with the government: how taxes affect corporate risk taking. *Journal of Accounting Research* 55(3), 669-707.

Qiu, B. and Wang, T., 2018. Does Knowledge Protection Benefit Shareholders? Evidence from Stock Market Reaction and Firm Investment in Knowledge Assets. *Journal of Financial and Quantitative Analysis* 53(3), 1341-1370.

Sullivan, P., 2010. Empirical evidence on occupation and industry specific human capital. *Labour Economics* 17, 567-580.

Song, J., Almeida, P., and Wu, G., 2003. Learning-by-hiring: When is mobility more likely to facilitate interfirm knowledge transfer? *Management Science* 49(4), 351-365.

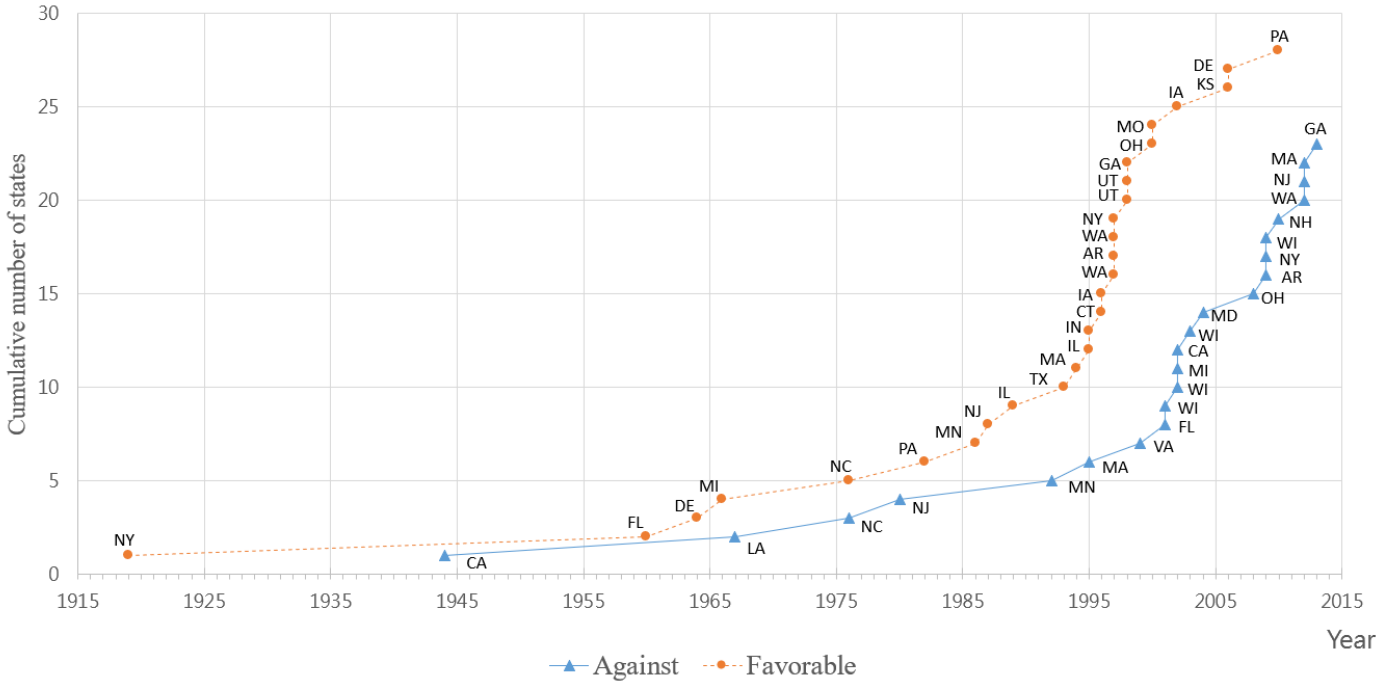

Figure 1 Inevitable disclosure doctrine rulings over time

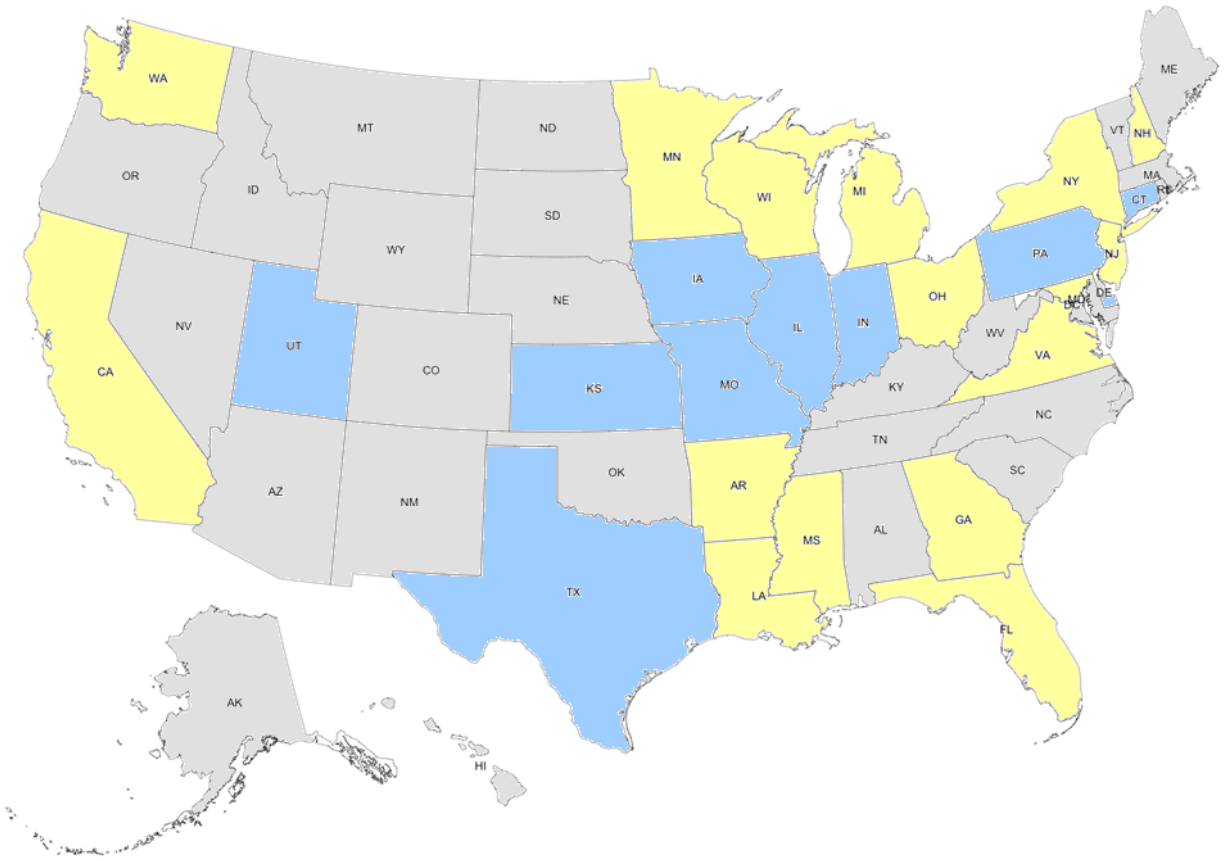

Figure 2 The distribution of the Inevitable disclosure doctrine in the United States

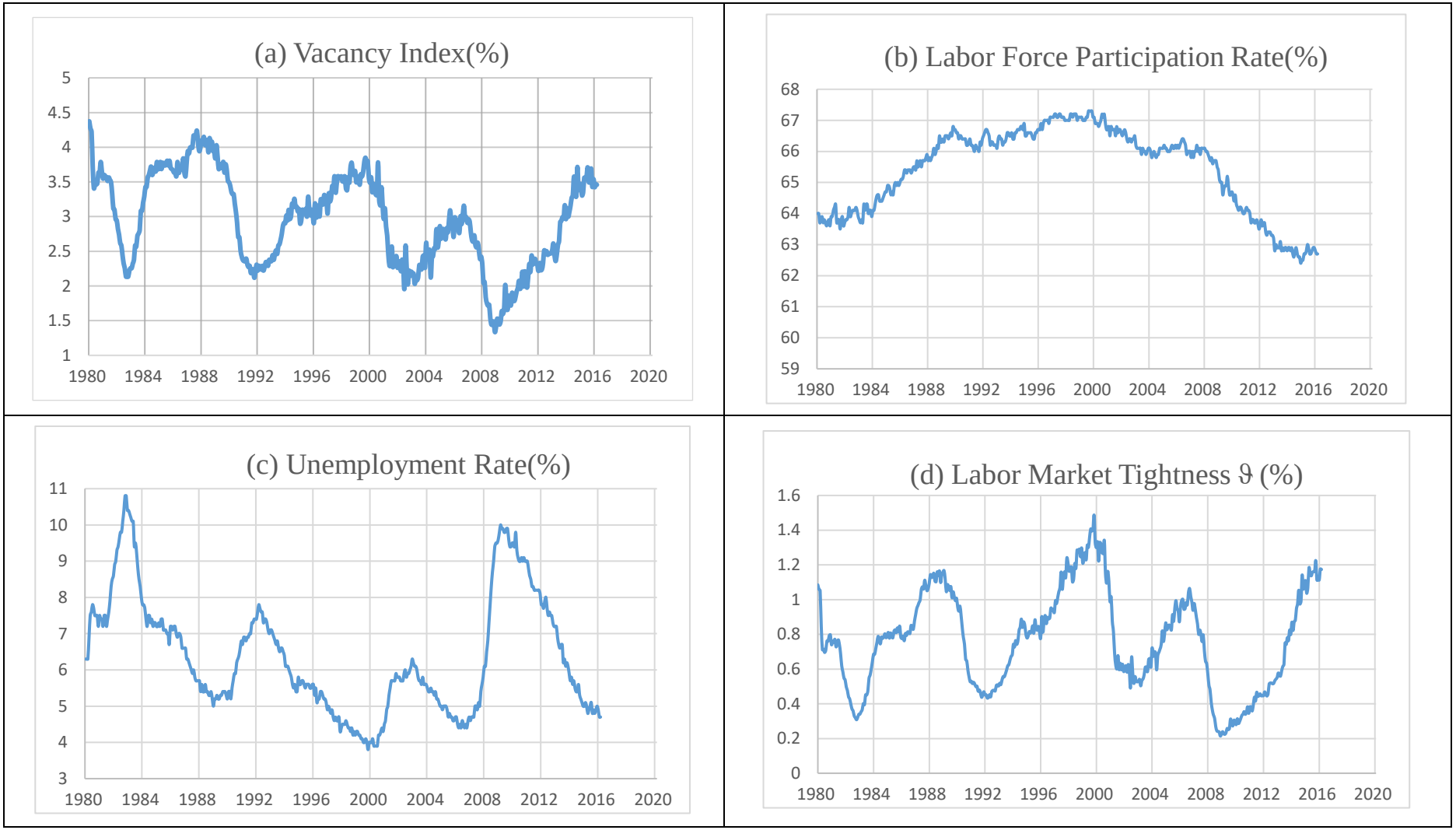

Figure 3 Labor market tightness and its components

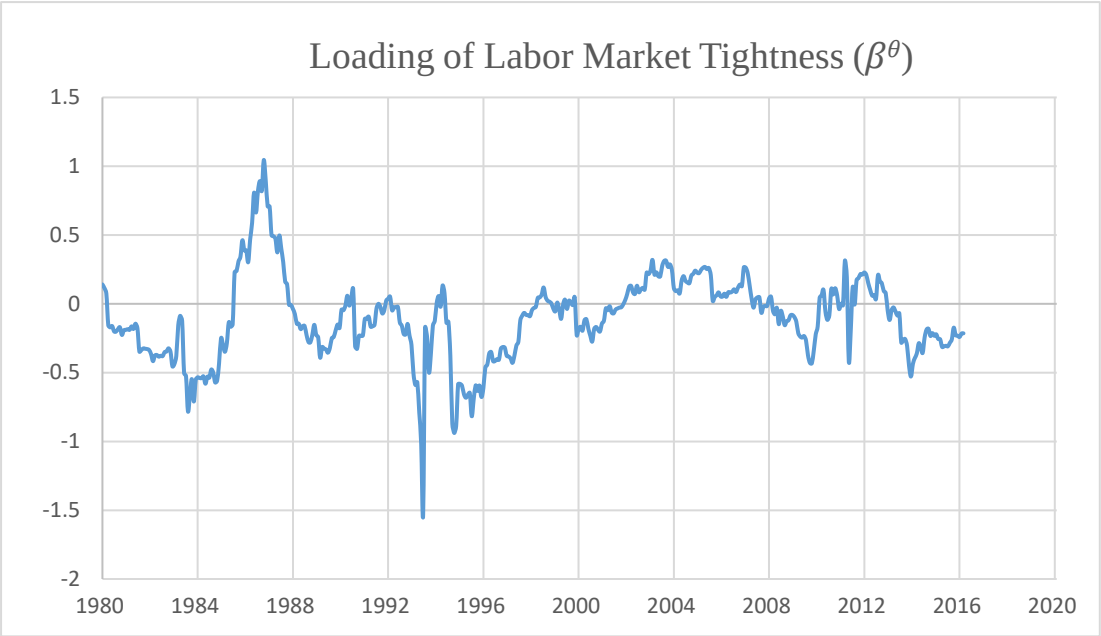

Figure 4 Loading of Labor Market Tightness

Table I Summary statistics

This table reports statistics and correlation analysis for the monthly labor market tightness factor (β^{θ}), β^{M} market beta, changes in the vacancy index (VAC), changes in the unemployment rate (UNEMP), changes in the labor force participation rate (LFPR). Summary statistics are in percent.

			Correlation						
Variable	Mean	Std	VAC	UNEMP	LFPR	β^{M}	β^{θ}	θ	ϑ
VAC	2.9664	0.6548							
UNEMP	6.2676	1.6045	0.0648						
LFPR	65.5611	1.3412	0.0685	0.0034					
β^{M}	1.0316	0.7557	0.0655	0.0898	0.0577				
β^{θ}	-0.0234	0.5374	0.1020	0.0890	0.0863	0.1610			
θ	0.0783	0.2853	0.8316	-0.8414	0.344	-0.046	0.0373		
ϑ	0.0507	4.1767	0.1089	-0.0048	-0.0606	0.0099	-0.0139	0.0834	1

Table II Characteristics of Labor Market Tightness Portfolios

This table reports average characteristics for portfolios of stocks sorted by their loadings on labor market tightness (β^{θ}). β^{M}denotes the market beta in Eq(3). Size is defined as the market value of common equity, which is the closing stock price multiplied by the number of shares outstanding at the end of June of year t. The larger firms would experience higher risk and cost induced by labor unemployment. ME the market equity decile. LEV is leverage, measured by sum of long-term debt and debt in current liabilities, scaled by total assets. BM ratio is the book value of equity at the end of the previous fiscal year divided by the market value of equity at the end of December of the previous year. ROA and GP are return on asset and gross profit.

Decile	β^{M}	β^{θ}	BM	ME	AG	Lev	ROA	GP
1	1.3089	-1.0042	0.9098	0.8972	0.9078	0.9101	0.9087	0.9104
2	1.0998	-0.4594	0.7440	0.7405	0.7437	0.7437	0.7404	0.7448
3	0.9931	-0.2806	0.6519	0.6515	0.6517	0.6512	0.6467	0.6516
4	0.9408	-0.1619	0.5740	0.5722	0.5741	0.5743	0.5732	0.5751
5	0.9146	-0.0661	0.5635	0.5621	0.5630	0.5626	0.5657	0.5625
6	0.9054	0.0245	0.5794	0.5787	0.5796	0.5800	0.5801	0.5806
7	0.9236	0.1217	0.5674	0.5675	0.5675	0.5686	0.5699	0.5664
8	0.9728	0.2406	0.6287	0.6301	0.6298	0.6284	0.6300	0.6303
9	1.0472	0.4186	0.6625	0.6598	0.6623	0.6630	0.6646	0.6616
10	1.2097	0.9330	0.7650	0.7603	0.7639	0.7649	0.7615	0.7633

Table III Performance of Labor Market Tightness Portfolios

The table reports the monthly average raw returns, hedge portfolio returns, and asset pricing test alphas (in %) and the corresponding factor loadings of the Carhart (1997) four-factor model for ten portfolios sorted on labor market tightness. Monthly portfolio abnormal returns are computed by running time series regressions of portfolio excess returns on risk factors with the capital asset pricing model, the Fama and French (1993) three-factor model, and the Carhart (1997) four-factor model. We rank firms into deciles at the end of each month and the value-weighted portfolios are held without rebalancing for 12 months. We calculate value-weighted hedge portfolio returns between subgroups with the lowest (L) and highest (H) sorting variable. The bottom row gives t-statistics for the lowest-highest portfolio. The sample period is 1980 to 2016.

		Unconditional Alpha			Four-factor Loadings			
Decile	Raw return	CAPM	3-Factors	4-Factors	MKT	SMB	HML	UMD
Lowest	2.4278	1.3060	1.3642	1.2574	1.1433	0.4614	-0.1265	0.1250
2	1.8022	0.7829	0.7072	0.6965	1.0777	0.0090	0.1699	0.0125
3	1.7111	0.7623	0.6874	0.6945	0.9694	-0.0431	0.1652	-0.0083
4	1.7104	0.7860	0.7402	0.7061	0.9397	-0.1050	0.1285	0.0399
5	1.5748	0.6532	0.6324	0.5646	0.9374	-0.1255	0.0927	0.0793
6	1.5153	0.5993	0.5384	0.5204	0.9267	-0.0956	0.1528	0.0211
7	1.5490	0.6201	0.6003	0.6073	0.9292	-0.1348	0.0550	-0.0082
8	1.5597	0.5878	0.5647	0.6098	0.9695	-0.0121	0.0299	-0.0528
9	1.5865	0.5775	0.5409	0.6221	1.0133	0.0565	0.0342	-0.0950
Highest	1.8719	0.7264	0.7815	0.8796	1.1410	0.3570	-0.2081	-0.1149
Low-High	0.5559	0.5796	0.5827	0.3777	0.0023	0.1044	0.0817	0.2399
t-stat	[9.123]	[9.4202]	[9.3714]	[6.1327]	[0.1588]	[5.0028]	[3.7545]	[17.4314]

Table IV Rejection of the IDD and Labor Market Tightness

This table reports the difference-in-differences tests that examine the impacts of IDD on stock returns. IDD is the "treatment dummy" that equals one if the firm is headquartered in state that has rejected the inevitable disclosure doctrine in a given state and year. β^{θ} is the loading on labor market tightness measured by Eq (3). Firm size, asset growth (AG), market-to-book ratio (MB), gross profitability (GP), Leverage(Lev), labor share, state GDP growth, state Unemployment rate are Control variables. Robust standard errors clustered by state are in parentheses. Superscripts ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Dependent variable: Returns							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
IDD*$\boldsymbol{\beta^{\theta}}_{t-1}$	-0.258*			-0.266*	-0.237*			-0.252*
	(0.136)			(0.137)	(0.140)			(0.144)
IDD_{t-1}		-0.0568	-0.0738	-0.0842		-0.107	-0.143	-0.153
		(0.105)	(0.0983)	(0.0998)		(0.125)	(0.110)	(0.112)
$Post_{t-1}$			0.0251	0.0250			0.0547*	0.0548*
			(0.0219)	(0.0219)			(0.0319)	(0.0319)
log_size_{t-1}					-0.0215***	-0.0215***	-0.0212***	-0.0212***
					(0.00726)	(0.00730)	(0.00714)	(0.00714)
log_BM_{t-1}					0.180***	0.180***	0.182***	0.182***
					(0.0187)	(0.0188)	(0.0188)	(0.0188)
AG_{t-1}					-0.00520	-0.00520	-0.00525	-0.00525
					(0.0135)	(0.0135)	(0.0135)	(0.0135)
GP_{t-1}					-0.0905**	-0.0905**	-0.0905**	-0.0904**
					(0.0391)	(0.0391)	(0.0391)	(0.0391)
Lev_{t-1}					0.114***	0.112**	0.119***	0.119***
					(0.0419)	(0.0423)	(0.0419)	(0.0417)
$Labor_{t-1}$					2.410**	2.465**	2.277*	2.270*
					(1.145)	(1.152)	(1.180)	(1.178)
GDP_{t-1}					4.596***	4.664***	4.730***	4.725***
					(0.978)	(1.017)	(1.003)	(1.003)
$Unemp_{t-1}$					6.418***	6.465***	6.531***	6.533***
					(1.764)	(1.793)	(1.669)	(1.667)
Constant	-0.935***	-0.935***	-0.936***	-0.936***	-2.167***	-2.184***	-2.184***	-2.183***
	(0.169)	(0.169)	(0.168)	(0.168)	(0.318)	(0.327)	(0.316)	(0.315)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013

Table V Parallel Trend Tests

This table investigates the pretreatment trends between the treated group and control group. β^{θ} is the loading on labor market tightness measured by Eq (3).The indicator variables Pre(-3), Pre(-2), Pre(-1), Pre(0), Post(+1), Post(+2), and Post(+3) and afterward, indicate the year relative to the rejection of inevitable disclosure doctrine in a given state and year. Firm size, asset growth (AG), market-to-book ratio (MB), gross profitability (GP), Leverage(Lev), labor share, state GDP growth, state Unemployment rate are Control variables. Robust standard errors clustered by state are in parentheses. Superscripts ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable: Returns					
	(1)	(2)		(3)	(4)
Pre^{-3}	0.305	0.264	$Pre^{-3}*\boldsymbol{\beta^{\theta}}$	0.194	0.431
	(0.371)	(0.366)		(0.200)	(0.340)
Pre^{-2}	0.240	0.168*	$Pre^{-2}*\boldsymbol{\beta^{\theta}}$	0.135	-0.200
	(0.149)	(0.0939)		(0.159)	(0.476)
Pre^{-1}	0.126	0.215**	$Pre^{-1}*\boldsymbol{\beta^{\theta}}$	-0.259***	-0.0370
	(0.0923)	(0.0922)		(0.0787)	(0.320)
$Post^{0}$	-0.0117	-0.122	$Post^{0}*\boldsymbol{\beta^{\theta}}$	-0.263*	-0.628**
	(0.127)	(0.130)		(0.143)	(0.303)
$Post^{+1}$	0.108	0.0868	$Post^{+1}*\boldsymbol{\beta^{\theta}}$	-0.152	-0.0435
	(0.159)	(0.130)		(0.215)	(0.223)
$Post^{+2}$	-0.0393	-0.0131	$Post^{+2}*\boldsymbol{\beta^{\theta}}$	-0.0117	0.897***
	(0.106)	(0.104)		(0.127)	(0.269)
$Post^{+3}$	0.116	0.0871	$Post^{+3}*\boldsymbol{\beta^{\theta}}$	-0.112	-0.0254
	(0.101)	(0.0982)		(0.136)	(0.409)
log_size		-0.255***			-0.255***
		(0.0185)			(0.0187)
log_BM		0.193***			0.191***
		(0.0287)			(0.0291)
AG		-0.00180			-0.00133
		(0.00865)			(0.00852)
GP		-0.0345			-0.0338
		(0.0221)			(0.0218)
Lev		-0.297***			-0.310***
		(0.0806)			(0.0842)
Labor		2.184			2.718
		(2.588)			(2.716)
GDP		7.363***			7.205***
		(1.676)			(1.693)
Unemp		10.06***			10.46***
		(2.446)			(3.031)
Constant	-0.781***	-1.322***		-0.776***	-1.381***
	(0.121)	(0.358)		(0.119)	(0.450)
R-squared	0.013	0.013		0.013	0.013

Appendix A Cellco Partnership v. Langston, No. 4:09CV00928 JMM (W.D. Ark. 2009)

FILED
U.S. DISTRICT COURT
EASTERN DISTRICT ARKANSAS
DEC 11 2009
JAMES W. McCORMACK, CLERK
By: DEP CLERK

IN THE UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF ARKANSAS
WESTERN DIVISION

CELLCO PARTNERSHIP and
ALLTEL CORPORATION
D/B/A VERIZON WIRELESS **PLAINTIFFS**

V. **CASE NO.** 4:09cv928 -JMM

LEWIS E. LANGSTON, III **DEFENDANT**

ORDER GRANTING MOTION TO SEAL

On this 11th day of December 2009, there is presented to the Court the Motion of Plaintiff Cellco Partnership and Alltel Corporation d/b/a Verizon Wireless to seal the Declaration of Leighann McGinnis, all exhibits to the Declaration of Leighann McGinnis, and Exhibit B to the Declaration of Sara A. Orr, filed in support of its Motion for Temporary Restraining Order, Preliminary Injunction and Request for Expedited Hearing. The Court finds that said Motion should be granted.

IT IS THEREFORE CONSIDERED, ORDERED AND ADJUDGED that Plaintiff's AND ADJUDGED that Plaintiff's Motion to Seal is GRANTED.

U.S. DISTRICT COURT JUDGE

Dec 11, 2009
DATE

Appendix Table List of the Inevitable disclosure doctrine cases[8]

This table show the cases of Inevitable disclosure doctrine which are collected from Castellaneta, Conti, Veloso and Kemeny (2016), Klasa et al. (2018) and Flammer and Kacperczyk(2019).

State	Abbr.	Date	Rule	Case
Arkansas	AR	1997	Favorable	Southwestern Energy Co. v. Eickenhorst, 955 F. Supp. 1078 (W.D. Ark. 1997)
Arkansas	AR	2009	Against	Cellco Partnership v. Langston, No. 4:09CV00928 JMM (W.D. Ark. 2009)
Arkansas	AR	2017	Favorable	Systems Spray-Cooled, Inc. v. FCH Tech, LLC et al, No. 1:2016cv01085 - Document 66 (W.D. Ark. 2017)
California	CA	1944	Against	Continental Car-Na-Var Corp. v. Moseley, 24 Cal. 2d 104, 107, 148 P.2d 9, 11 (1944)
California	CA	2002	Against	Whyte v. Schlage Lock Co., No. G028382 (Ct. of App. of California 2002)
California	CA	2015	Against	Cypress Semiconductor Corp. v. Maxim Integrated Prods., Inc.,2015
Connecticut	CT	1996	Favorable	Branson Ultrasonics Corp. v. Stratman, 921 F. Supp. 909 (D. Conn. 1996)
Delaware	DE	1964	Favorable	E.I. duPont de Nemours & Co. v. American Potash & Chem. Corp., 200 A.2d 428 (Del. Ch. 1964)
Delaware	DE	2006	Favorable	W.L. Gore & Associates, Inc. v. Huey-Shen Wu, et al. C.A. No. 263-N (Del. Ch. 2006)
Florida	FL	1960	Favorable	Fountain v. Hudson Cush-N-Foam Corp., 122 So. 2d 232 (Fla. Dist. Ct. App. 1960)
Florida	FL	2001	Against	Del Monte Fresh Produce Co. v. Dole Food Co., Inc., 148 F. Supp. 2d 1322 (S.D. Fla. 2001)
Georgia	GA	1998	Favorable	Essex Group Inc. v. Southwire Co., 501 S.E.2d 501 (Ga. 1998)
Georgia	GA	2013	Against	Holton v. Physician Oncology Servs., LP, No. S13A0012, 2013 WL 1859294 (Ga. 2013)
Illinois	IL	1989	Favorable	Teradyne Inc. v. Clear Communications Corp., 707 F. Supp. 353 (N.D. 111. 1989)
Illinois	IL	1995	Favorable	PepsiCo, Inc. v. Redmond, 54 F.3d 1262, 1272 (7th Cir. 1995).
Illinois	IL	2017	Against	Molon Motor and Coil Corporation et al v. Nidec Motor Corporation, No. 1:2016cv03545 - Document 81 (N.D. Ill. 2017)
Illinois	IL	2017	Against	Primesource Building Products, Inc. v. Huttig Building Products et al, No. 1:2016cv11390 - Document 160 (N.D. Ill. 2017)
Illinois	IL	2019	Against	Archer Daniels Midland Co. v. Sinele,2019
Illinois	IL	2020	Against	Pactiv LLC v. Perez, No. 1:2020cv01296 - Document 24 (N.D. Ill. 2020)
Indiana	IN	1995	Favorable	Ackerman v. Kimball Int'l Inc., 652 N.E.2d 507 (Ind. 1995)
Iowa	IA	1996	Favorable	Uncle B's Bakery v. O'Rourke, 920 F. Supp. 1405 (N.D. Iowa 1996)

[8] https://law.justia.com/cases/federal/district-courts/FSupp/955/1078/1516231/

State	Abbr.	Date	Rule	Case
Iowa	IA	2002	Favorable	Barilla America, Inc. v. Wright, No. 4-02-CV-90267, 2002 WL. 31165069 (S.D. Iowa Jul. 5, 2002).
Kansas	KS	2006	Favorable	Bradbury Co. v. Teissier-duCros, 413 F. Supp. 2d 1203 (D. Kans. 2006)
Louisiana	LA	1967	Against	Standard Brands, Inc. v. Zumpe et al., 264 F. Supp. 254 (E.D. La. 1967).
Maryland	MD	2004	Against	LeJeune v. Coin Acceptors, Inc., 849 A.2d 451, 471 (Md. 2004).
Massachusetts	MA	1994	Favorable	Bard v. Intoccia, 1994 U.S. Dist. LEXIS 15,368 (D. Mass. 1994)
Massachusetts	MA	1995	Against	Campbell Soup Co. v. Giles 47 F.3d 467, 472 (1st Cir. 1995).
Massachusetts	MA	2012	Against	U.S. Elec. Servs. v. Schmidt, Civil Action No. 12-10845-DJC (U.S. Dist. CT. for the Dist. of Mass. 2012)
Michigan	MI	1966	Favorable	Allis-Chalmers Manuf. Co. v. Continental Aviation & Eng. Corp., 255 F. Supp. 645 (E.D. Mich. 1966)
Michigan	MI	2002	Against	CMI Int'l, Inc. v. Intermet Int'l Corp., 649 N.W.2d 808, 812 (Mich. Ct. App. 2002)
Minnesota	MN	1986	Favorable	Surgidev Corp. v. Eye Technology Inc., 648 F. Supp. 661 (D. Minn. 1986)
Minnesota	MN	1992	Against	International Business Machine Corp. v. Seagate Technology Inc. 941 F. Supp. 98 (D. Minn. 1992).
Missouri	MO	2000	Favorable	H&R Block Eastern Tax Servs. Inc. v. Enchura, 122 F. Supp. 2d 1067 (W.D. Mo. 2000)
New Hampshire	NH	2010	Against	Allot Communications v. Cullen, 10-E-0016 (N.H. Merrimack Superior Ct. 2010)
New Jersey	NJ	1980	Against	Continental Group, Inc. v. Amoco Chem. Corp., 614 F.2d 351, 359 (3d Cir. 1980).
New Jersey	NJ	1987	Favorable	Nat'l Starch & Chem. Corp. v. Parker Chem. Corp., 530 A.2d 31 (N.J. Super. Ct. 1987)
New Jersey	NJ	2012	Against	SCS Healthcare Marketing, LLC v. Allergan USA, Inc., N.J. Super. Unpub. LEXIS 2704 (N.J. Sup. Ct. Ch. Div. 2012)
New York	NY	1919	Favorable	Eastman Kodak Co. v. Powers Film Prod., 189 A.D. 556 (N.Y.A.D. 1919)
New York	NY	1997	Favorable	DoubleClick, Inc. v. Henderson, No. 116914/97, 1997 N.Y. Misc. Lexis 577 (Sup. Ct. N.Y. Co. Nov. 7, 1997).
New York	NY	2009	Against	American Airlines, Inc. v. Imhof , U.S. Dist. LEXIS 46750 (S.D.N.Y. 2009)
North Carolina	NC	1976	Against	Travenol Labs., Inc. v. Turner, 228 S.E.2d 478, 483 (N.C. Ct. App. 1976).
North Carolina	NC	1976	Favorable	Travenol Laboratories Inc. v. Turner, 228 S.E.2d 478 (N.C. Ct. App. 1976)
Ohio	OH	2000	Favorable	Procter & Gamble Co. v. Stoneham, 747 N.E.2d 268 (Ohio Ct. App. 2000)
Ohio	OH	2008	Against	Hydrofarm, Inc. v. Orendorff, Ohio App. LEXIS 5717 (Ohio App. Ct. 2008)
Pennsylvania	PA	1982	Favorable	Air Products & Chemical Inc. v. Johnson, 442 A.2d 1114 (Pa. Super. Ct. 1982)

State	Abbr.	Date	Rule	Case
Pennsylvania	PA	2010	Favorable	Bimbo Bakeries USA Inc. v. Botticella, No. 10-cv-00! 4 (E.D. Penn. Feb. 9, 2010).
Texas	TX	1993	Favorable	Rugen v. Interactive Business Systems Inc., 864 S.W.2d 548 (Tex. App. 1993)
Texas	TX	2019	Against	Global Supply Chain Solutions, LLC v. Riverwood Solutions, Inc., and Lori Austin Appeal from 416th Judicial District Court of Collin County (memorandum opinion,2019)
Texas	TX	2019	Against	McAfee, LLC v. Kinney et al, No. 4:2019cv00463 - Document 97 (E.D. Tex. 2019)
Utah	UT	1998	Favorable	Novell, Inc. v. Timpanogos Research Group, Inc., 46 U.S.P.Q.2d 1197 (Utah Dist. Ct. 1998).
Utah	UT	1998	Favorable	Novell Inc. v. Timpanogos Research Group Inc., 46 U.S.P.Q.2d 1197 (Utah D.C. 1998)
Virginia	VA	1999	Against	Government Technology Services, Inc. v. Intellisys Technology Corp., 51 Va. Cir. 55 (Va. Cir. Ct., 1999).
Washington	WA	1997	Favorable	Solutec Corp, Inc. v. Agnew, 1997 WL 794496, 8 (Wash. Ct. App.).
Washington	WA	2012	Against	Amazon.com, Inc. v. Powers, Case No. C12-1911RAJ (W.D. Wash. 2012)
Wisconsin	WI	2001	Against	Del Monte Fresh Produce Co. v. Dole Food Co. Inc., 148 F. Supp. 2d 1326 (S.D. Fla. 2001)
Wisconsin	WI	2002	Against	CMI Int'l, Inc. v. Intermet Int'l Corp., 649 N.W.2d 808 (Mich. Ct. App. 2002)
Wisconsin	WI	2003	Against	Cardinal Health Staffing Network Inc. v. Bowen, 106 S.W.3d 230 (Tex. App. 2003)
Wisconsin	WI	2009	Against	Clorox Co. v. SC Johnson & Son Inc., 2:09-cv-00408-JPS (U.S. District Court, Eastern District of Wisconsin 2009)