

Fiduciary Duty of Loyalty and Corporate Culture¹

Maggie Hu

Department of Finance, Chinese University of Hong Kong
maggiehu@cuhk.edu.hk

Cheng Jiang

Department of Finance, Carroll School of Management, Boston College
cheng.jiang@bc.edu

Kose John

Department of Finance, Stern School of Business, New York University
kjohn@stern.nyu.edu

Ming Ju

Department of Economics and Finance, College of Business, Louisiana Tech University
mingju@latech.edu

Abstract

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JEL Classification Number: G34, G38, M14

Keywords: Corporate opportunity waiver, fiduciary duty, corporate culture

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Abstract

We investigate the effect of fiduciary duty of loyalty on corporate culture measured by a novel machine learning approach. We apply a difference-in-differences method exploiting the staggered adoption of the Corporate Opportunity Waiver (COW) law across the U.S. states as an exogenous decline in the fiduciary loyalty requirement. We document that the enactment of the COW law weakens corporate culture. Moreover, we show that the COW law adoption leads to a higher degree of outbound board overlapping and busier directors, which serves as a plausible channel through which the COW law adoption erodes corporate culture. Additionally, we find that the negative effect of the COW law adoption on corporate culture is more pronounced among firms with legal expert directors, weaker corporate governance, or attractive outside business opportunities. Our results hold in a rich battery of robustness checks with alternative measures of corporate culture, subsample period, and confounding legislative events. Our findings highlight the importance of fiduciary duty requirement as a disciplinary tool in improving corporate culture, which ultimately enhances firm performance.

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1. Introduction

As a system of shared norms and values formed inside a firm, corporate culture serves as the glue that binds employees together and directs their collective behavior in the workplace. It permeates to the core of a company's ideology and practice, affecting every aspect of a business (O'Reilly and Chatman 1996). Prior studies document that corporate culture plays an important role in influencing organizations' effectiveness and resource allocation (Deal and Kennedy 1982; Wilkins and Ouchi 1983; Schein 1992; Gordon 2020). A strong and positive corporate culture results in feelings of solidarity and a greater sense of autonomy among employees within an organization (O'Reilly and Chatman 1996), which not only facilitates attracting and retaining talent manpower, but also directs employees in the right direction and alleviates potential principal-agent issues (Van den Steen 2010; Guiso et al. 2006, 2009, 2015; Luttmer and Singhal 2011; Zingales 2015; Gorton 2021). Prior studies document that a strong culture improves operating efficiency and firm value (Graham et al. 2022; Li et al. 2021).

Corporate culture, as an intangible asset of a firm that is difficult to value and quantify, lacks empirical evidence regarding its determinants. Guiso et al. (2015) propose five top culture aspects (namely, innovation, integrity, quality, respect, and teamwork) and find that a firm's board directors or CEO play a significant role in shaping its corporate culture. Previous studies have primarily relied on interviews or survey questionnaires to measure corporate culture. For example, Graham et al. (2022) suggest, based on their survey evidence, that corporate governance differs from corporate culture, but it could affect corporate culture. However, the recent development of machine learning approach has generated a breakthrough in the quantitative measuring of corporate culture. In a groundbreaking study, Li et al. (2021) employ advanced machine learning algorithms to textually analyze over 200,000 earnings call transcripts of U.S. public firms from 2001 to 2021, generating numeric scores for each of the five corporate cultural

components proposed by Guiso et al. (2015).² The availability of quantitative measures of corporate culture in U.S. public firms provides an excellent opportunity for empirical analysis of its determinants.

In this paper, we adopt a unique perspective to investigate the impact of fiduciary duty of loyalty on corporate culture in the U.S., exploiting the culture value scores developed in Li et al. (2021). This research question holds significance as it provides insights into the persistent agency cost problem and the delicate balance within organizations between principles and flexibility. The fiduciary duty of loyalty, mandated by the corporate opportunity doctrine (referred to as "COD" hereafter), prohibits corporate fiduciaries (including directors, officers, and dominant shareholders) from appropriating new business prospects for themselves without first offering them to their company. The COD serves as a crucial regulatory tool to address conflicts of interest and necessitates that corporate fiduciaries prioritize their company's interests over their own. Our study sheds light on decision-making processes when corporate fiduciaries face valuable external opportunities amidst a reduced emphasis on loyalty in their fiduciary duty. Specifically, we can infer whether relaxing fiduciary duty leads to an optimized corporate outcome or encourages the pursuit of managerial self-interest at the expense of weakening corporate values.

Empirically examining the impact of fiduciary duty of loyalty on corporate culture presents significant challenges due to potential endogeneity concerns, such as omitted variables and reverse causality. For instance, fiduciary duty and corporate culture could be simultaneously affected by omitted firm characteristics or managerial features such as CEO personality. Moreover, reverse causality may arise, where a stronger corporate culture may lead to a higher level of fiduciary duty. To tackle these empirical challenges, we exploit the staggered adoption of the corporate opportunity waiver (hereafter referred to as "COW law") by nine states, beginning with Delaware in 2000, as a quasi-natural experiment for reducing fiduciary duty. The adoption of the COW law by state legislatures is exogenous to the firms incorporated

² A higher score of a corporate culture component, as developed by Li et al. (2021), implies stronger culture in a certain positive aspect. For example, a higher score in integrity culture component indicates that the firm promotes honesty among its employees to a greater extent. Li et al. (2021) validate their corporate culture measures using well-established markers in corporate innovation, integrity, product quality, respect and teamwork and show the corporate cultural values are positively and significantly associated with those markers.

within those states. When a state adopts the COW law, it waives the requirement of the COD, allowing fiduciaries to pursue new business opportunities independently without first presenting them to their employers. Consequently, this leads to a significant reduction in the fiduciary duty of loyalty (Rauterberg and Talley, 2017).

The impact of the loosened fiduciary duty of loyalty resulting from the adoption of the COW law on corporate culture is ex-ante ambiguous. Waiving the fiduciary duty of loyalty can potentially influence corporate culture in two opposite directions. On the one hand, the enactment of the COW law could improve the corporate culture as companies embrace the COW law for the purpose of maximizing shareholder value. This is in line with the underlying rationale for states adopting the COW law. The duty of loyalty requirements imposed by the COD, along with the litigation risks associated with violating the COD, can hinder corporations' ability to raise capital, establish efficient investor bases, and secure optimal management arrangements. Existing studies (Bénabou and Tirole 2010; Chu and Zhao 2021) show that the adoption of the COW law can enhance contractual flexibility, allowing corporations to expand their investor base and attract additional capital investments. This is particularly relevant for emerging sources of capital, such as private equity and venture capital, where financial sponsors often face conflicts with fiduciary obligations owed to other business entities. Studies (e.g., Rauterberg and Talley 2017) also suggest that the COW law passage could potentially benefit the firms by enhancing monitoring quality and corporate governance through the participation of both existing and external directors. The emerging opportunities for serving on other companies' boards created by the COW law provide strong incentives for existing directors to establish themselves as monitoring specialists through high-quality monitoring services. Additionally, the passage of the COW law also enables external directors to join the company's board and bring prestige, visibility, experience, and commercial contacts. Consequently, waiving the COD requirement and reducing the duty of loyalty could potentially improve corporate culture by enhancing contractual flexibility, attracting more investment, and improving monitoring quality.

On the other hand, it is possible that the adoption of the COW law and the weakened fiduciaries' duty of loyalty exacerbate agency conflicts and have a detrimental impact on corporate culture. With the COD requirement waived, it is expected that corporate fiduciaries would exhibit reduced loyalty towards their companies and become more inclined to pursue their own interests. Consequently, the adoption of the COW law leads to a redistribution of new business opportunities between corporate fiduciaries and the ultimate owners of the company, the shareholders, which intensifies agency conflict and potentially erodes corporate culture. Also, the COW law encourages directors to serve on multiple boards concurrently, increasing their workload and diminishing their effectiveness in monitoring corporate management. Fich and Shivdasani (2006) find that corporate monitoring becomes weaker in firms where a majority of directors are busy with holding three or more directorships. Empirical evidence (Fich et al. 2021) documents that the passage of the COW law reduces firms' R&D expenditure, as corporate managers are more likely to appropriate these business opportunities associated with the R&D investment themselves, hence lowering the return on innovation investment to shareholders. Similarly, Wang (2022) finds that shareholders are less inclined to vote for directors who potentially enjoy protection under the COW law. Boyd et al. (2022) observe a significant decrease in corporate social responsibility following the enactment of the COW law. These findings from prior studies imply that the COW law exacerbates the agency conflict between corporate fiduciaries and shareholders, leading to a deterioration in corporate culture.

In light of these two competing views on the effect of the COW law adoption on corporate culture, we aim to empirically test which effect plays a dominant role using a comprehensive sample of U.S. firms. As the staggered adoption of the COW law by nine states in the U.S. leads to an exogenous reduction in fiduciary duty, it provides us an ideal setting of quasi-natural experiment to examine the impact of duty of loyalty on corporate culture. We conduct a difference-in-differences (DID) analysis comparing changes in corporate culture between firms incorporated in states that have adopted the COW law (the treatment group) and firms in states that have not adopted the COW law (the control group). Our findings reveal a significant decline in corporate culture following the enactment of the COW law. On average, firms in the treatment

group experience a decrease of 0.447 points in their corporate culture score after the adoption of the COW law. This is a statistically significant drop, considering that the median value of total corporate culture score is 14.07. These findings confirm that the adoption of the COW law and the weakened fiduciaries' duty of loyalty contribute to an intensification of agency conflicts of interest and a decline in corporate culture, outweighing any potential benefits.

While the adoption of the COW law at the state level is exogenous to firms incorporated in the state, we acknowledge the possibility that some eligible firms in the COW-adopted states can choose not to implement the waiver at the firm level (Fich et al. 2021).³ Hence, the DID analysis in our context is an intention-to-treat analysis (Angrist and Pischke 2009), which may lead to an underestimation of the true effect of the COW law. Therefore, the estimated effects we obtain should be interpreted as the lower bound of the actual treatment effect of the COW law, as suggested by prior studies (Fich et al. 2021; Wang 2022; Li and Ni 2022).⁴

To ensure that our results are not driven by systematic differences between the treatment firms and control firms, we perform a coarsened exact matching to better control for firm characteristics. We repeat the baseline DID analysis using a matched sample to identify the impact of the adoption of the COW law on the deterioration of corporate culture. In addition, to ensure the soundness of our identification strategy and establish the staggered state adoption of the COW law as an exogenous shock to corporate culture, we test and validate the parallel-trend assumption in our DID design. This assumption suggests that, in the absence of the COW law, treatment and control groups would have experienced similar trends in corporate culture over time. We find that there is no significant difference in corporate culture during the years before the adoption of the COW law, and the impact of the COW law on corporate culture starts to occur three years after its adoption.

³ The firms in the COW-adopted states that execute the waiver cannot be completely identified, because most COW-adopted states' statutes allow firms' execution across a wide spectrum of contracts, disclosure, and corporate governance documents such as bylaws, charter, board resolution, etc.

⁴ Rauterberg and Talley (2017) document that the vast majority of public firms (i.e., thousands of public firms) in the COW-adopted states have executed the waiver, which alleviates the concern of underestimation.

We then delve into the channels through which the COW law could worsen corporate culture. We focus on director overlap, as the main objective of the COW reform is to address conflicts arising from capital raising and overlapping directorships among venture capital and private equity investors. Prior literature by Rauterberg and Talley (2017) also show that corporate directors are the major beneficiaries of the COW law, accounting for nearly three-quarters of waivers in their sample. We expect that the passage of the COW law encourages directors to serve on boards of multiple companies, leading to a higher degree of corporate board overlap and weaker corporate culture.

Our analysis on overlapping directorship reveals that the adoption of the COW law indeed increases both outbound board overlap, where focal firm's directors joining other firms' board, and inbound board overlap, where other firms' directors joining the focal firms' board. This observation aligns with our expectation that the COW law reduces fiduciary loyalty and improves contractual flexibility. Moreover, we show that a higher degree of outbound director overlap leads to a significant decline in corporate culture, while inbound director overlap has no effect. This result suggests that outbound board overlap makes the existing directors busier and distracted from monitoring the focal firm, leading to weakened corporate culture. On the contrary, inbound board overlap does not have a significant impact on corporate culture, consistent with prior studies that the experience or business contacts brought by newly joined busy directors mainly provide advising benefit rather than monitoring (Field et al. 2013). Our results suggest that outbound board overlap serves as a plausible channel through which the COW law impacts corporate culture.

We further conduct heterogeneity analysis to explore how the effect of COW law adoption on corporate culture varies across firms. We specifically investigate the influence of directors' legal background, corporate governance practices, and outside business opportunities on the relationship between the COW law and corporate culture. First, we undertake a cross-sectional analysis regarding the legal background of directors. We find that the negative impact of the COW law adoption on corporate culture is more pronounced among firms whose board of directors possess law education experience. This finding is consistent with the rationale that directors with legal expertise are more aware of the passage of the COW

law in the incorporated states of their companies, and better understand the effects of the COW law adoption on waiving fiduciary duty of loyalty and reducing litigation risk. As a result, these legal expert directors tend to take actions that potentially worsen the agency issues and deteriorate corporate culture.

Second, we conduct a cross-sectional analysis on corporate governance, and document that the negative effect of the COW law adoption on corporate culture is more pronounced among firms with weaker corporate governance, as evidenced by higher E-index values, lower gender diversity amongst board of directors, lower financial analyst coverage, and the presence of co-opted board directors. The findings are consistent with the notion that in firms with weaker governance structures, corporate fiduciaries are more inclined to exploit business opportunities for their own benefit, potentially harming corporate culture.

Third, we explore how the variation in outside business opportunities affects the impact of the COW law adoption on corporate culture. The results show that the negative effect of COW law adoption on corporate culture is stronger when directors face greater outside business opportunities relative to the internal opportunities, as measured by sales growth and Tobin's Q. The findings suggest that directors' incentives to pursue outside corporate opportunities are heightened when external opportunities are more attractive and joining other firms' boards is permitted under the COW law.

Furthermore, our analysis demonstrates a positive relationship between corporate culture and a firm's financial performance. We document that stronger corporate culture improves a firm's liquidity, efficiency, and dividend payment, consistent with Graham et al. (2019) and Li et al (2021). These findings suggest that the fiduciary duty requirement serves as a crucial disciplinary tool in mitigating conflicts of interest between fiduciaries and the corporation they serve. By upholding fiduciary duty, firms are better equipped to foster strong corporate culture, ultimately leading to enhanced financial performance.

For robustness check, we conduct a rich battery of additional tests to corroborate our results. First, we explored alternative measures of overall corporate culture based on principal components analysis and factor analysis approaches, in addition to the sum of a firm's five cultural value scores used in the main analysis. These alternative measures yield consistent results, reinforcing the robustness of our findings.

Second, in addition to using the continuous corporate culture variables as in the main analysis, we introduce two indicator variables of strong corporate culture that identified firms with a sum of cultural value scores in the top quartile (25%) or top tercile (33%) in a given year. We find consistent results that a 3% decrease in the likelihood of having a strong corporate culture following the adoption of the COW law. Third, we conduct a subsample analysis by excluding the financial crisis period to ensure that the decline of corporate culture is not driven by the financial crisis. Fourth, to mitigate concerns related to confounding laws, we show that findings are robust after we control for other state-level legal changes during the same period. Our results continue to hold in these robustness tests, lending further support to our main hypothesis that reduced corporate loyalty due to the COW law adoption erodes corporate culture.

Our paper makes significant contributions to several strands of literature. First, it adds to the growing body of research on the effects of the implementation of the COW law on firm outcomes (Rauterberg and Talley 2017; Eldar et al. 2020; Fich et al. 2021; Geng et al. 2022; Li and Ni 2022; Wang 2022). While previous studies have explored various aspects of the COW law's impact, our paper focuses specifically on its effect on corporate culture. We test two competing hypotheses and show that the negative effect of agency conflict dominates. Additionally, we identify outbound overlapping board as a key channel through which the COW law influences corporate culture (Field et al. 2013, Masulis and Zhang 2019).

Second, our study advances the broad literature on law and finance, which investigates the role of legal frameworks in addressing agency conflicts (e.g., La Porta et al. 1998, 2000). Specifically, we explore the impact of the understudied COW law and examine its impact on a unique corporate outcome, corporate culture. We extend this line of literature by showing that the passage of the COW law by states as an exogenous shock that intensifies agency conflicts, which erodes corporate culture. Moreover, our study highlights the significance of director legal expertise, corporate governance practices, and outside business opportunities in shaping this relationship.

Third, our paper adds to the emerging literature on the application of machine learning approach to quantitatively measure corporate culture and to understand its determinants. Building upon the work of Li

et al. (2021), which applies machine learning techniques to generate numeric scores for corporate culture, numerous studies ensue. Lee (2021) documents how hedge fund activism reengineers corporate culture. Zhang (2021) studies how CEO individualism affects corporate innovation through its impact on corporate culture. To the best of our knowledge, our research is the first to provide empirical evidence on the impact of fiduciary duty and the COW law adoption on corporate culture.

The remainder of the paper is structured as follows. Section 2 describes the institutional background and outlines the hypotheses. We describe the sample of data in Section 3 and depict empirical results of the baseline regressions in Section 4. Section 5 shows the channel analysis and Section 6 presents the cross-sectional analysis. Section 7 conducts additional analysis and Section 8 depicts a rich battery of robustness checks. The paper concludes in Section 9.

2. Institutional Background and Hypotheses Development

2.1 Institutional Background

A fundamental principle of corporate law is the fiduciary duty of loyalty, which requires corporate fiduciaries, such as directors, officers, and controlling shareholders, to subordinate their own interests to that of the corporation when conflicts of interest arise. A key component of this duty is the COD, which prohibits fiduciaries from undertaking any new business prospects for themselves without first presenting them to their company. The purpose of the COD is to address conflicts of interest by ensuring that the fiduciaries do not approach business opportunities for themselves that could otherwise benefit to the corporation.

However, in July 2000, Delaware passed the COW law, which allows corporate fiduciaries of companies incorporated in Delaware to waive the fiduciary duty of loyalty when pursuing new business opportunities, the duty that is governed by the COD. This waiver enables fiduciaries to explore and acquire new business opportunities on their own without first offering them to their employers. Essentially, it

bypasses the duty of loyalty, allowing fiduciaries to personally benefit from opportunities that should have been presented to the corporation's shareholders. Subsequently, eight more states adopted the COW, including Oklahoma in November 2001, Missouri in October 2003, Kansas in January 2005, Texas in January 2006, Nevada in October 2007, New Jersey in March 2011, Maryland in October 2014, and Washington in January 2016, thereby exempting numerous U.S. corporations from the corporate opportunity doctrine.

These states have passed the COW law mainly because the fiduciary duties and loyalty requirement could be overly restrictive in certain situations. The existing doctrine lacks the flexibility for a corporation to contract on specific boundaries of loyalty (Fitch et al. 2021). In the modern business landscape, various sources of capital, such as venture capital and private equity, subject their financial sponsors to fiduciary duties, raising concerns about potential conflicts of interest. The requirements of COD create fiduciary conflicts for directors and impede capital raising from sources like private equity or venture capital. Additionally, waiving the duty of loyalty could improve directors' monitoring quality. The market for outside directorships serves as an important incentive for directors to provide high-quality monitoring to develop reputations as monitoring specialists (Fich and Shivdasani 2007). The newly joined directors from other companies can improve corporate governance, value, and access to capital by bringing in additional resources, expertise, experience, visibility, and commercial contacts. The waiver of fiduciary duties of loyalty can enhance contractual flexibility, attract more capital investment, reduce litigation risk, and improve monitoring quality from existing directors and newly joined directors.

2.2 Hypothesis Development

Although there has been a substantial shift in the law underpinning corporate duty, very few studies have explored how these regulatory changes would affect corporate culture. The effects of the passage of the COW law and the loosening of fiduciary duty of loyalty on corporate culture are uncertain and can potentially go in two opposite directions.

On the one hand, there are valid reasons for states and companies to embrace the COW law for the sake of corporate value. The requirements of the duty of loyalty imposed by the COD and the litigation risk threats of COD violation impede corporations' ability to raise capital and build efficient investor bases, because many emerging sources of capital, such as private equity and venture capital, subject their financial sponsors to the conflicts of fiduciary obligation. Existing studies (Bénabou and Tirole 2010; Chu and Zhao 2021) show that the waiver of duty of loyalty could improve contractual flexibility by expanding investor base and attracting more capital investment. Rauterberg and Talley (2017) show that public companies have strong preference for tailoring the duty of loyalty when freed to do so.

The passage of the COW law could also potentially benefit the firms by enhancing monitoring quality from both existing directors and newly joined external directors. Fama (1980) and Fama and Jensen (1983) show that reputational effects serve as important incentives for outside directors. Mace (1986) suggests that the newly joined external directors help to improve the corporate governance and firm value by providing executives with prestige, visibility, experience, and commercial contacts. Therefore, waiving the COD requirement and the duty of loyalty enhances contractual flexibility, attracts more investment, reduces litigation risk, and improves monitoring quality, which in turn can contribute to the development of a stronger corporate culture. Based on this rationale, we propose the first hypothesis as follows:

H1a: The passage of the COW law boosts corporate culture.

On the other hand, another strand of literature documents evidence suggesting that the COW law adoption weakens corporate fiduciaries' duty of loyalty and intensifies agency conflicts. For example, Fich et al. (2021) show that the passage of the COW law reduced firms' R&D expenditure, as corporate managers are more likely to appropriate these business opportunities associated with the R&D themselves, thereby lowering the return on R&D to shareholders. Wang (2022) finds that shareholders are less likely to vote for directors potentially protected by the COW law, indicating a concern about weakened fiduciary duty. Boyd et al. (2022) demonstrates a significant decrease in corporate social responsibility following the adoption of the COW law.

The agency conflict worsened by the COW law documented in prior studies potentially lead to weaker corporate culture. As companies that are not restricted by the COD, corporate fiduciaries are expected to be less loyal to their companies and more likely to pursue their own interests, which will likely play a dampening role on corporate culture. Additionally, the COW law encourages directors to serve on multiple boards at the same time, making them busier and rendering them ineffective monitors of corporate management, resulting in weaker corporate culture. This view is supported by Fich and Shivdasani (2006), who find that firms with busy boards, where a majority of directors hold multiple directorships, tend to have weaker corporate governance. Along this line, we also propose a competing hypothesis as follows:

H1b: The passage of the COW law deteriorates corporate culture.

3. Data and Variables

Our sample period spans from 2001 to 2021, as determined by the availability of novel corporate culture data by Li et al. (2021). In their study, Li et al. (2021) employ a machine learning approach, specifically a word embedding model, to analyze the textual content of CEOs' responses during the Q&A sections of earnings call transcripts. By doing so, Li et al. (2021) generate numerical scores for each of the top-five corporate culture perspectives proposed by Guiso et al. (2015): innovation, integrity, quality, respect, and teamwork. A higher score of corporate culture component, as developed by Li et al. (2021), implies stronger culture in a certain positive perspective. For example, a higher score in integrity culture indicates that the firm promotes honesty among its employees to a greater extent. Previous research by Matsumoto et al. (2011) suggests that the Q&A section provides more insightful information compared to the prepared management presentation, largely due to the active involvement of analysts. Li et al. (2021) demonstrate that the spontaneous nature of CEOs' responses in the Q&A section better reflects their genuine thoughts, thus conveying the implicit cultural values that are important to them. Li et al. (2021) also validate the corporate cultural measures using well-established markers and empirically prove the accuracy of their machine learning-based scores in capturing the five key dimensions of corporate culture. They also

document that strong corporate culture positively affects firms' business outcome, such as operation efficiency, long-term orientation, higher firm value, etc.

We measure the overall corporate culture using a continuous variable called *TotalCulture*, which is calculated as the sum of a firm's scores in the five cultural dimensions: innovation, integrity, quality, respect, and teamwork. This continuous variable serves as our main dependent variable in the analysis. To further validate our results, we also employ alternative measures of overall corporate culture. Firstly, we utilize principal component analysis (PCA) and common factor analysis to derive two additional variables: *TotalCulture_PCA* and *TotalCulture_Factor*. These alternative measures capture the underlying structure and patterns of the five cultural components. Additionally, following the approach by Li et al. (2021), we construct two indicator variables of strong corporate culture: *TotalCulture_TopQuartile* and *TotalCulture_TopTercile*. These indicators identify whether a firm's TotalCulture score falls within the top quartile (25%) or tercile (33%), respectively, in a given year. These binary variables help us examine the presence of a strong corporate culture among firms. By employing multiple measures of corporate culture, we aim to ensure the robustness and consistency of our findings.

In our study, we examine the staggered adoption of the COW law by different states. We obtain the states and the dates when firms were first permitted to adopt the waivers from Rauterberg and Talley (2017). Based on this information, we construct the indicator variable, *COW*, which equals 1 for the years in which the waiver from the COD is effective in a firm's state of incorporation, and 0 otherwise. To account for the confounding effect of related laws that are passed in the same period, we obtain the year that the poison pill law was adopted in each state from Karpoff and Wittry (2018), and create an indicator variable, *PPLaw*, which equals 1 for the years in which poison pill law is effective in a firm's state of incorporation, and 0 otherwise.

We include a set of firm-level control variables to account for various firm characteristics, obtained from Compustat. These firm attributes include firm size measured by the log value of total assets (*FirmSize*), cash holdings scaled by total assets (*CashHoldings*), property, plant and equipment scaled by total assets

(*Tangibility*), sales growth rate (*SalesGrowth*), as well as Tobin's Q (*TobinsQ*). We also control for GDP growth rate (*GDPGrowth*), GDP per capita (*GDPPerCapita*), and unemployment rate (*UnemploymentRate*) of a state to capture the state characteristics. Data on state GDP is obtained from the Bureau of Economic Analysis and data on state unemployment rate is from the Bureau of Labor Statistics' Local Area Unemployment Statistics Series.

We conduct a channel analysis to examine whether the board overlap is a channel through which the COW law passage affects corporate culture. Two measures of board overlap are used, namely *OutboundOverlap* and *InboundOverlap*. An outbound overlapping director is a board member who is appointed to the board of the focal firm before joining the board of other firms. *OutboundOverlap* is the percentage of outbound overlapping directors of all the firm's board members, capturing the extent to which focal firm's directors join the board of the other firms. An inbound overlapping director is defined as a board member who is appointed to the board of the focal firm after joining the board of other firms. *InboundOverlap* is the percentage of inbound overlapping directors of all the firm's board members, which captures the extent to which other firms' directors join the board of the focal firm. Both measures are constructed using data obtained from BoardEx.

In the cross-sectional analysis, we further examine the heterogeneity of the effects of the COW law adoption on corporate culture by dividing our full sample into different subsamples based on various criteria. First, we divide the sample based on the presence of legal expert directors (*LegalExpertDirector*) and whether the percentage of legal expert directors is above the industry average in a certain year (*LegalExpertDirectorPct_High*). We identify directors with legal expertise by considering those who hold degrees such as LL.B., LL.M., J.D., or Ph.D. in Jurisprudence. This information is obtained from BoardEx and hand-collected data, following the methodology of Henderson et al. (2018). Next, we divide our sample into firms with strong and weak corporate governance based on corporate governance measures, including whether the E-Index is above the industry average in a certain year (*EIndex_High*), whether the board member gender diversity is above the industry average in a certain year (*BoardDiversity_High*), whether

the analyst coverage is above the average in a certain year (*AnalystCoverage_High*), and whether the firm has a co-opted board (*CoOp*). The E-Index is calculated based on six provisions: staggered boards, limits to shareholder bylaw amendments, poison pills, golden parachutes, supermajority requirements for mergers and charter amendments, whose data is from Institutional Shareholder Services (ISS) – Governance. Board gender diversity is measured by the fraction of female directors on the board, which is from ISS – Director. We obtain the number of analysts covering a firm in a certain year from I/B/E/S. Co-op directors are directors appointed after the CEO assumes office, and the data is obtained from Lalitha Naveen’s website.⁵ In our last set of cross-sectional analysis, we divide our sample based on the presence of attractive outside business opportunities in the same industry or other industries, based on the comparison of sales growth rate or Tobin’s Q. Sales growth rate and Tobin’s Q are computed from variables available on Compustat. The definitions of all the above-mentioned variables are available in Appendix A.

Table 1 reports summary statistics for the full sample. Firms have an average score of 15.10 for *TotalCulture* and a median score of 14.07. The *COW* indicator has a mean of 0.72, indicating that 72% of the state-year observations in the sample are affected by the waiver. We winsorize the continuous variables at the top and bottom 1% of the distribution to mitigate the impact of outliers. The full sample comprised 43,442 firm-year observations of 4,833 unique firms.

[Insert Table 1 about here]

4. Empirical Analysis

4.1 Baseline Results with Full Sample

In our main analysis, we examine the effect of the staggered adoption of the COW law on firms’ corporate culture by employing a DID approach. The treatment group comprises firms incorporated in states

⁵ <https://sites.temple.edu/lnaveen/data/>

that have adopted the COW law, while the control group consists of firms incorporated in states that have not adopted the COW law. The empirical model has the specification as equation (1) shown below.

$$\begin{aligned}
 \text{Culture} = & \alpha + \beta \text{COW} + \gamma \text{Firm Characteristics} + \delta \text{State Characteristics} + \text{Firm FE} \quad (1) \\
 & + \text{State FE} + \text{Year FE} + \varepsilon
 \end{aligned}$$

The dependent variable in our analysis is the total corporate culture (*TotalCulture*), and the key explanatory variable is the *COW* indicator. To account for various firm characteristics that may influence corporate culture, we include control variables such as firm size, cash holdings, tangibility, Tobin's Q, and sales growth. We also control for state characteristics including GDP growth, GDP per capita, and unemployment rate, as they may affect the adoption of COW law and firms' corporate culture. Firm, state, and year fixed effects are included to capture the firm-level and state-level time-invariant effects, and economy-wide shocks within a certain year. Furthermore, to address potential correlation and heteroskedasticity within the same state and year, we cluster the standard errors at the level of the incorporated state and year pair. This clustering approach has been commonly employed in prior literature (Lin et al. 2021; Li et al. 2018; Geng et al. 2022) that examines the effects of staggered state adoption of laws, such as Universal Demand law, the Inevitable Disclosure Doctrine, and the COW law.

Table 2 reports the results of baseline regressions. Columns (1) and (2) report the regression results using *TotalCulture* as the dependent variable. The coefficients on the *COW* indicator are negative and statistically significant in both columns. In terms of economic significance, holding other variables unchanged, the adoption of the COW law in the state where the firm is incorporated decreases the total corporate culture score by 0.447 points. The results support the hypothesis *H1b* that the adoption of the COW law deteriorates corporate culture. The findings suggest that the passage of the COW law waives the fiduciary duty of loyalty and reduces the litigation risk for corporate directors to serving on multiple boards, potentially leading to a lack of sufficient time and attention devoted to the focal company. This heightened agency conflict ultimately harms the corporate culture.

One caveat of the empirical design is that, although the adoption of the COW law at the state level is exogenous to firms incorporated in those state, some eligible firms in the COW-adopted states can choose not to implement the waiver at the firm level. Hence, the DID analysis in our context can be viewed as an intention-to-treat analysis (Angrist and Pischke 2009), which may lead to an underestimation of the true effect of the COW law. Our estimated effects can be interpreted as the lower bound of the COW law's treatment effect (Fich et al. 2021; Wang 2022; Li and Ni 2022). While it is not possible to identify the exact firms within the COW-adopted states that have executed the waiver, previous research by Rauterberg and Talley (2017) provides evidence that the vast majority of public firms in the COW-adopted states have indeed executed the waiver. This finding helps alleviate concerns regarding potential underestimation of the true effect of the COW law.

[Insert Table 2 about here]

4.2 Baseline Results with Matched Sample

To ensure that our results are not driven by systematic differences between the treated firms and control firms, we perform a coarsened exact matching and DID analysis to identify the impact of the adoption of the COW law on corporate culture. Specifically, the treatment group (i.e., firms incorporated in the states where the COW law has been adopted) and the control group (i.e., firms incorporated in the states where the COW law has not been adopted) are matched on six background variables: firm size, cash holdings, Tobin's Q, sales growth, industry, and year. We coarsen each of the firm characteristics variables using ten equally spaced strata and perform matching on each stratum for each variable. We also match on the exact value of the two-digit SIC industry and year without coarsening.

Panel A of Table 3 reports the univariate comparison of the means of each background variable between the treated and control firms. The t-statistics indicate that there are significant differences between treated and control firms before matching. However, after matching, these differences become statistically insignificant, indicating that the matching procedure successfully generated a matched sample with similar characteristics. The number of observations decreases from 43,422 in the full sample to 8,022 in the

matched sample. We then re-estimate our baseline regressions using the matched sample and present the regression results in Panel B of Table 3. Consistent with our earlier findings using the full sample, the impact of the COW law adoption on corporate culture using the matched sample continues to be negative and significant. These results with matched ample provide further support for the hypothesis *H1b* that the adoption of the COW law deteriorates corporate culture.

[Insert Table 3 about here]

4.3 Parallel Pre-trend Analysis

One critical assumption of the DID approach is the parallel pre-trend assumption, which requires that the corporate culture of treated and control firms would have followed a parallel trend if the exogenous shock, i.e., the adoption of the COW law, did not occur. Therefore, we examine the timing of changes in corporate culture relative to the adoption of the COW law. We run regressions of corporate culture on indicators for the timing of states' adoption of the COW law. The variables of interest are COW^{-2} , COW^{-1} , COW , COW^{+1} , COW^{+2} , and COW^{3+} , which are equal to 1 if the firm is incorporated in a state that will adopt the COW law in two years, will adopt the COW law in one year, adopts the COW law in the current year, adopted the COW law one year ago, adopted the COW law two years ago, and adopted the COW law three or more years ago, respectively, and 0 otherwise. We control for a comprehensive set of firm attributes and state characteristics in the regressions and include firm, state, and year fixed effects. We implement the regression using the specification in equation (2).

$$\begin{aligned}
 Culture = & \alpha + \beta_1 COW^{-2} + \beta_2 COW^{-1} + \beta_3 COW^0 + \beta_4 COW^{+1} + \beta_5 COW^{+2} & (2) \\
 & + \beta_6 COW^{3+} + \gamma Firm\ Characteristics + \delta State\ Characteristics \\
 & + Firm\ FE + State\ FE + Year\ FE + \varepsilon
 \end{aligned}$$

Table 4 presents the results on the pre-trend analysis between the treatment group and the control group. The dependent variable we use is *TotalCulture*. We find that β_1 and β_2 (i.e., the coefficients on the indicators COW^{-2} and COW^{-1}) are not significantly different from zero, indicating that the corporate culture

between the treatment group and the control group is statistically similar before the COW law is adopted and the parallel trend assumption of the DID approach is satisfied. Furthermore, the coefficients on the indicator COW^{3+} are significantly negative, showing that the deteriorating impact of the COW law on corporate culture starts to occur three years after the adoption. This empirical finding aligns with the notion that corporate culture is a persistent and slowly changing measure, as suggested by Li et al. (2021). Overall, the pre-trend analysis provides evidence that supports the parallel trend assumption, enhancing the credibility of our DID estimates regarding the negative effect of the COW law adoption on corporate culture.

[Insert Table 4 about here]

5. Channel Analysis

In this section, we examine board overlap as a potential channel through which the adoption of the COW law affects the corporate culture. Prior literature by Rauterberg and Talley (2017) show that corporate directors are the most frequent beneficiaries of the COW law. This finding is consistent with the objective of the COW reform, which aims to address conflicts arising from capital raising and overlapping directorships among venture capital and private equity investors. As the COW law waives the fiduciary duty of loyalty for directors, we expect that the passage of the COW law may affect board composition and director behavior, which subsequently affects corporate culture. However, it is possible that the change in board composition and its effect on corporate culture is asymmetrical.

To assess the level of board overlap, we construct two variables: *OutboundOverlap* and *InboundOverlap*. *OutboundOverlap* represents the percentage of board members in the focal firm that serve the boards of other firms after joining the board of the focal firm, which indicates the extent to which the focal firm's directors are involved in other companies. *InboundOverlap*, on the other hand, measures the percentage of board members who joined the board of the focal firm *after* being appointed as a board

member of other firms. It captures the extent to which directors from other firms are involved in the focal firm's board.

We implement a two-step process following Foroughi et al. (2022). In the first step, we regress the two board overlapping variables on the COW indicator to capture the effect of the adoption of the COW law on board overlap. Panel A of Table 5 presents the results of the first-step regressions. The effects of the adoption of the COW law on outbound board overlap and inbound board overlap are reported in Columns (1) and (2), respectively. We find that the coefficients on the COW law indicator are significantly positive in both regressions, suggesting that the adoption of the COW law and the waived fiduciary duty encourage directors to serve on multiple companies' boards, increasing the degree of both outbound and inbound board overlap.

In the second step, we use the fitted value of the board overlapping variables obtained from the first step to examine how COW-affected board composition subsequently impacts corporate culture. The results are presented in Panel B of Table 5, demonstrating the asymmetric effect of board composition change on corporate culture. We find that the coefficients on *OutboundOverlap* are negative and statistically significant in Column (1). This suggests that when directors from the focal firm join the boards of other firms, their loyalty to the focal firm diminishes, and their ability to effectively monitor the focal firm decreases due to their increased busyness. Consequently, this results in a decline in the focal firm's corporate culture. On the other hand, the coefficients on *InboundOverlap* are insignificant in Columns (2), indicating the experience or business contact brought by newly joined directors does not improve the focal firm's corporate culture. Our findings confirm that the negative effect of the COW law dominates its potential positive effect, revealing that the passage of the COW law deteriorates corporate culture through the channel of outbound board overlap.

[Insert Table 5 about here]

6. Cross-sectional Analysis for Heterogeneity

In this section, we explore whether the effect of the COW law adoption on corporate culture varies across firms with different characteristics, including the presence and proportion of legal expert directors, corporate governance qualities, and outside business opportunities.

6.1 Directors' Legal Expertise

Directors with legal expertise are more likely to be aware of the adoption of the COW law in the states where their firms are incorporated and have a better understanding of its implications for waiving the fiduciary duty of loyalty. Such directors are more inclined to take advantage of the reduced litigation risk and join other firms' boards, which could result in less time and effort dedicated to monitoring their original firm and potentially harm its corporate culture. Consequently, we expect that the negative association between the adoption of the COW law and corporate culture would be more pronounced among firms with directors who possess legal expertise.

Following Henderson et al. (2018), we consider a board director to possess legal expertise if he or she holds a law degree, such as an undergraduate degree in law such as an LL.B., or a graduate law degree such as LL.M., J.D., or Ph.D. in Jurisprudence. We first divide the full sample into two subsamples based on whether the firm has at least one legal expert director on its board (*LegalExpertDirector*). In Columns (1) and (2) of Panel A in Table 6, we document that the adoption of the COW law leads to a significant drop in the score of corporate culture (i.e., a decrease of 0.661 points) for firms with at least one legal expert director, whereas the COW law adoption does not affect corporate culture for firms without any legal expert director. We then divide the full sample into two subsamples based on whether the percentage of directors with legal expertise on the board is above the industry average in a certain year (*LegalExpertDirectorPct_High*). In Columns (3) and (4) of Panel A in Table 6, we show that the adoption of the COW law significantly decreases the score of corporate culture (i.e., a decrease of 0.607 points) in firms with a high percentage of legal expert directors. However, the adoption of the COW law does not affect the corporate culture in firms with a below-the-average proportion of legal expert directors. The

results of Panel A of Table 6 show that the negative impact of the COW law adoption on corporate culture is more pronounced in firms with legal expert directors and firms with more legal expert directors, which is consistent with our expectation.

6.2 Corporate Governance

To examine the potential moderating role of corporate governance, we investigate whether the effect of the COW law adoption on corporate culture is influenced by various corporate governance measures, including the E-index, board gender diversity, analyst coverage, and the presence of co-opted directors. Since the COW law reduces the fiduciary duties of directors and triggers more board overlap, directors in poorly governed firms are more inclined to exploit new opportunities for themselves and put fewer monitoring efforts into their original firms, leading to worse corporate culture. As a result, we expect that the negative association between the adoption of the COW law and corporate culture is more pronounced in poorly governed firms.

First, we divide the full sample into two subsamples based on whether the firm has a higher E-index that is above the industry average in a certain year (*EIndex_High*). A higher E-index represents a higher degree of entrenchment and hence poorer corporate governance (Bebchuk et al. 2009). As shown in Columns (1) and (2) in Panel B of Table 6, the adoption of the COW law significantly reduces the corporate culture score by 1.270 points for firms with a higher E-index (i.e., weaker corporate governance). However, we find that the adoption of the COW law has no impact on the corporate culture in firms with a lower E-index (i.e., stronger corporate governance).

Next, we use the board gender diversity as an alternative corporate governance measure to divide the full sample. Board gender diversity is measured by the fraction of female directors on the board. Prior literature shows that female directors are associated with better monitoring (Adams and Ferreira 2009). A board with a fraction of female directors above the industry average in a certain year (*BoardDiversity_High*) is considered as a diverse board with stronger corporate governance. The results are presented in Columns (3) and (4) of Panel B of Table 6. We find that, for the firms with lower board gender diversity (i.e., weaker

corporate governance), the adoption of the COW law results in a significant 1.246-point drop in corporate culture score, while it has no effect on the corporate culture for firms with higher board gender diversity (i.e., stronger corporate governance).

We further examine analyst coverage as an external corporate governance measure, based on which we split the full sample into two subsamples. A more transparent environment and better information symmetry facilitated by higher analyst coverage (*AnalystCoverage_High*) can reduce agency costs (Leuz et al. 2003). In Columns (5) and (6) of Panel B of Table 6, we document that among the firms with a below-industry-average level of analyst coverage (i.e., weaker corporate governance), the adoption of the COW law results in a significant 0.475-point decline in corporate culture score. However, among firms with an above-industry-average level of analyst coverage (i.e., stronger corporate governance), the adoption of the COW law has no impact on the corporate culture.

Last, we split the full sample based on whether the firm has any co-opted board directors (*CoOp*), who are appointed after the CEO assumes office. Coles et al. (2014) argue that co-opted directors' interests are more aligned with the CEO than with shareholders. Therefore, we expect that having co-opted directors would result in less effective board monitoring and weaker corporate governance. As shown in Columns (7) and (8) in Panel B of Table 6, the adoption of the COW law significantly reduces the corporate culture score by 0.753 points for firms with co-opted board directors (i.e., weaker corporate governance) but has no impact on the corporate culture in firms without co-opted directors (i.e., stronger corporate governance).

6.3 Outside Business Opportunities

In this section, we investigate if the corporate culture declines more severely following the passage of the COW law among firms whose directors face attractive external business opportunities. We follow Boyd et al. (2022) to measure outside opportunities using sales growth and Tobin's Q. We expect that, if the focal firm has worse sales growth and Tobin's Q compared to the peer firms in the same industry or firms in the other industries, directors are more likely to seek outside opportunities such as joining other

firms' board when permitted by the COW law. The distraction of serving on multiple boards can result in reduced efforts exerted on monitoring the focal firm, and a decline in corporate culture.

We first divide the full sample by the outside business opportunities within the *same* industry based on sales growth comparison. If the focal firm's sales growth is above the average sales growth of peer firms in the same industry in a certain year (*IntraIndustryGrowth_High*), the outside opportunities within the industry are considered unattractive, and the directors of the focal firm are less inclined to join the board of other firms in the same industry. In Columns (1) and (2) of Panel C of Table 6, we show that the adoption of the COW law significantly reduces the corporate culture score by 0.514 points among firms with below-average sales growth rate (i.e., better outside opportunities) but has no impact on the corporate culture in firms with above-average sales growth rate (i.e., worse outside opportunities). The findings indicate that directors have a higher tendency to join other firms' boards when there exist attractive outside opportunities among peer firms in the same industry, leading to less monitoring efforts exerted in monitoring the focal firm and weaker corporate culture.

We then divide the full sample by outside business opportunities in *other* industries based on sales growth comparison. If the focal firm's sales growth is above the average sales growth of firms in other industries in a certain year (*InterIndustryGrowth_High*), it implies that the outside opportunities from other industries are unattractive, and the directors of the focal firm are less likely to join the board of firms in the other industries. According to the results shown in Columns (3) and (4) of Panel C of Table 6, corporate culture score decreases by 0.694 points among firms with below-average sales growth (i.e., better outside opportunities), but it remains unchanged among firms whose sales growth is above the average (i.e., worse outside opportunities). It is confirmed that, if there exist attractive outside opportunities in firms from other industries, directors have a higher probability to join other firms' boards, leading to less effective monitoring of the focal firm and weaker corporate culture.

We repeat the above analysis using Tobin's Q as a measure of outside business opportunities and find similar results. We first consider the outside business opportunities as unattractive if the focal firm's

Tobin's Q is above the average of peer firms in the *same* industry in a certain year (*IntraIndustryTobinsQ_High*). As shown in Columns (5) and (6) of Panel C of Table 6, we find that the adoption of the COW law significantly reduces the corporate culture score by 0.785 points among firms with attractive outside opportunities measured by Tobin's Q but has no impact on the corporate culture in firms without attractive outside opportunities. We then define the outside business opportunities as unattractive if the focal firm's Tobin's Q is above the average of firms in *other* industries in a certain year (*InterIndustryTobinsQ_High*). In Columns (7) and (8) of Panel C of Table 6, we observe a decline of 0.771 points in the corporate culture score among firms with attractive outside opportunities, while there is no change among firms without such opportunities.

[Insert Table 6 about here]

7. Additional Analysis on Corporate Culture and Firm Financial Performance

Our study also examines the relationship between corporate culture and a firm's financial performance. Our findings reveal a positive association between corporate culture and various aspects of financial performance, including liquidity, efficiency, and dividend payment, consistent with Graham et al. (2019) and Li et al (2021). Specifically, as shown in Columns (1) and (2) of Table 7, we document that stronger corporate culture improves a firm's liquidity, measured as the ratio of cash and short-term investment to current liabilities. Additionally, our results in Columns (3) and (4) of Table 7 show that stronger corporate culture increases a firm's efficiency, which is measured by the cost of goods sold as a fraction of the average inventories of the most recent two periods. Moreover, in Columns (5) and (6) of Table 7, we show that the corporate culture is positively related to a firm's dividend payment, measured as the dividend to stock price ratio. These findings suggest that fiduciary duty requirement is an important disciplinary tool in alleviating conflict of interest, which in turn enhances corporate culture and ultimately contributes to improved firm performance.

[Insert Table 7 about here]

8. Robustness Checks

We perform a rich battery of robustness checks on the baseline regression results. First, instead of summing up the culture scores of five individual components, we apply both principal component analysis and common factor analysis to generate overall corporate culture indices as the alternative dependent variables. As shown in the results listed in Panel A of Table 8, the adoption of the COW law weakens the overall corporate culture, extracted from five cultural components either through principal component analysis (*TotalCulture_PCA*) or common factor approach (*TotalCulture_Factor*). This reaffirms the negative impact of the COW law adoption on overall corporate culture in our main analysis.

Next, in addition to the continuous measure of corporate culture, we examine the regression results using two indicator variables of strong corporate culture as the dependent variables. The variable *TotalCulture_TopQuartile* (*TotalCulture_TopTercile*) equals 1 if the *TotalCulture* score is among the top 25% (33%) in a certain year and 0 otherwise. The coefficients on the *COW* indicator are significantly negative, ranging from -0.029 to -0.038, indicating that the adoption of the COW law reduces a firm's likelihood of having a strong culture by 2.9% to 3.8%. The results are shown in Panel B of Table 8, which confirm the hypothesis *H1b* that the adoption of the COW law deteriorates corporate culture.

To address the concerns that the results of corporate culture decline are driven by the influence of financial crisis period, we exclude the years 2007 to 2009 from the analysis. Panel C of Table 8 shows similar results, indicating that the adoption of the COW law is associated with weaker corporate culture, even when excluding the financial crisis period. This confirms that our main findings are not driven by the effects of the financial crisis period.

Lastly, to mitigate concerns related to confounding legal events, we control for the other state-level legal changes during the same period, such as the poison pill law adoption by the states. The staggered state

adoption of the anti-takeover poison pill law can entrench management and potentially weaken the corporate culture. Following Obaydin et al. (2021), we include an additional indicator variable, *PPLaw*, which is set to 1 for a state-year in which the poison pill law is active, and zero otherwise. As is shown in Panel D of Table 8, the coefficients of *COW* indicator in both models remain negative and statistically significant, indicating that our findings are robust after we control for the state adoption of poison pill law. The results address the potential concerns of confounding effects of the other legislative events.

[Insert Table 8 about here]

9. Conclusion

This paper investigates the effect of fiduciary duty of loyalty on firms' corporate culture, which is measured quantitatively using a novel machine learning approach (Li et al. 2021). We exploit the staggered adoption of the COW law by states in the U.S., which waives the duty of loyalty of corporate fiduciaries, especially directors. We employ a difference-in-differences approach and an intention-to-treat analysis to examine the lower bound effect of the COW law adoption on corporate culture. We find that the adoption of the COW law decreases the total corporate culture score, supporting the notion that the waived fiduciary duty of loyalty worsens the agency issue and intensifies the conflict of interest. We further investigate the mechanisms through which the COW law negatively impacts corporate culture. We show that the passage of the COW law encourages directors to serve on the board of multiple companies, leading to a higher degree of outbound board overlap. Those outbound directors of the current firms are distracted and busier due to serving on multiple boards, rendering them ineffective corporate monitors and resulting in weaker corporate culture.

We also conduct heterogeneity analysis and document how the effect of the COW law adoption on corporate culture varies across firms with different characteristics, including the presence and proportion of legal expert directors, corporate governance qualities, and outside business opportunities. Our paper also shows that the corporate culture is positively related to a firm's financial performance, lending support to

our argument that fiduciary duty plays a vital role in mitigating conflicts of interest, enhancing corporate culture, and ultimately improving firm performance.

Overall, our study contributes to the literature on fiduciary duty and corporate culture by exploiting the staggered state COW law adoption as a quasi-natural experiment. We document declining corporate culture in response to the relaxed fiduciary duty after the COW law passage, highlighting the importance of fiduciary loyalty in shaping firms' corporate culture and solving agency problems. Our study also contributes to the law and finance literature in general by shedding light on how corporate laws can be utilized to address conflicts of interest.

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Appendix A Variable Definitions

Variable	Definition
<i>AnalystCoverage_High</i>	Indicator variable that equals 1 if firm's analyst coverage is above the industry average in a given year, and 0 otherwise. Analyst coverage is the number of analysts following the firm (I/B/E/S).
<i>BoardDiversity_High</i>	Indicator variable that equals 1 if the fraction of the firm's female directors is above the industry average in a given year, and 0 otherwise. (Institutional Shareholder Services – Director).
<i>CashHoldings</i>	Cash and short-term investments scaled by total assets. (Compustat).
<i>CoOp</i>	Indicator variable that equals 1 if the firm has co-opted board director, who is appointed after the CEO assumed office, and 0 otherwise. (Lalitha Naveen's website).
<i>COW</i>	Indicator variable that equals 1 for the year in which the waiver from the corporate opportunity doctrine is effective in a firm's state of incorporation, and 0 otherwise (Rauterberg and Talley 2017).
<i>Dividend</i>	Indicated dividend rate as a fraction of price (Compustat, CRSP).
<i>Efficiency</i>	Cost of goods sold as a fraction of the average inventories based on the most recent two periods (Compustat).
<i>EIndex_High</i>	Indicator variable that equals 1 if firm's E-Index is above the industry average in a given year, and 0 otherwise. E-index (Entrenchment index) is calculated based on six provisions: staggered boards, limits to shareholder bylaw amendments, poison pills, golden parachutes, supermajority requirements for mergers and charter amendments (Institutional Shareholder Services – Governance).
<i>FirmSize</i>	The log value of total assets (Compustat).
<i>GDPGrowth</i>	Percent increase of GDP from the previous year (Bureau of Economic Analysis).
<i>GDPPerCapita</i>	Annual GDP per capita for each incorporation state (U.S. Bureau of Economic Analysis, U.S. Census Bureau).
<i>InboundOverlap</i>	The percentage of inbound overlapping directors of all the firm's board members. An inbound overlapping director is defined as a board member who is appointed to the board of the focal firm <i>after</i> joining the board of other firms (BoardEx).
<i>InterIndustryGrowth_High</i>	Indicator variable that equals 1 if firm's sales growth rate is above the average of firms in other industries in a given year, and 0 otherwise. Sales growth is the percent increase of sales from the previous year (Compustat).
<i>InterIndustryTobinsQ_High</i>	Indicator variable that equals 1 if firm's Tobin's Q is above the average of firms in other industries in a given year, and 0 otherwise. (Compustat).
<i>IntraIndustryGrowth_High</i>	Indicator variable that equals 1 if firm's sales growth rate is above the average of peer firms in the same industry in a given year, and 0 otherwise. Sales growth rate is the percent increase of sales from the previous year (Compustat).
<i>IntraIndustryTobinsQ_High</i>	Indicator variable that equals 1 if firm's Tobin's Q is above the average of peer firms in the same industry in a given year, and 0 otherwise. (Compustat).
<i>LegalExpertDirector</i>	Indicator variable that equals 1 if at least one of the directors possesses legal expertise, and 0 otherwise. We consider a board member to possess legal expertise if s/he holds a law degree such as LLB, LL.M., J.D., or Ph.D. in Jurisprudence (BoardEx and hand collected data).
<i>LegalExpertDirectorPct_High</i>	Indicator variable that equals 1 if the percentage of board of directors with legal expertise is above the average and 0 otherwise. We consider a board member to possess legal expertise if s/he holds a law degree such as LLB, LL.M., J.D., or Ph.D. in Jurisprudence (BoardEx and hand collected data).

<i>Liquidity</i>	Cash and short-term investments as a fraction of current liabilities (Compustat).
<i>OutboundOverlap</i>	The percentage of outbound overlapping directors of all the firm's board members. An outbound overlapping director is a board member who is appointed to the board of the focal firm <i>before</i> joining the board of other firms (BoardEx).
<i>PPLaw</i>	Indicator variable that equals 1 for the year in which the poison pill law is effective in a firm's state of incorporation, and 0 otherwise (Karpoff and Wittry 2018).
<i>SalesGrowth</i>	Percent increase of sales from the previous year (Compustat).
<i>Tangibility</i>	Firm's property, plant, and equipment scaled by assets (Compustat).
<i>TobinsQ</i>	Book value of total assets minus book value of equity plus market value of equity, divided by book value of total assets (Compustat).
<i>TotalCulture</i>	The sum of a firm's five cultural scores. Corporate culture data are from Li et al. (2021), who compute the scores of the top five cultural values proposed by Guiso et al. (2015): innovation, integrity, quality, respect, and teamwork.
<i>TotalCulture_Factor</i>	A total culture index constructed from the five cultural scores using factor analysis (Li et al. 2021).
<i>TotalCulture_PCA</i>	A total culture index constructed from the five cultural scores using principal component analysis (Li et al. 2021).
<i>TotalCulture_TopTercile</i>	Indicator variable that equals 1 if the sum of a firm's five cultural scores is among the top 33% in a certain year and 0 otherwise (Li et al. 2021).
<i>TotalCulture_TopQuartile</i>	Indicator variable that equals 1 if the sum of a firm's five cultural scores is among the top 25% in a certain year and 0 otherwise (Li et al. 2021).
<i>UnemploymentRate</i>	The unemployment rate of a state, calculated as the age unemployment rate over the 12 months in a year (U.S. Bureau of Labor Statistics, Local Area Unemployment Statistics Series).

Table 1 Summary Statistics

This table reports summary statistics for the variables used, including the number of observations, mean, standard deviation, median, minimum, and maximum. All variables are defined in Appendix A.

Variable	N	Mean	SD	Median	Min	Max
<i>AnalystCoverage_High</i>	43,442	0.40	0.49	0.00	0.00	1.00
<i>BoardDiversity_High</i>	15,866	0.49	0.50	0.00	0.00	1.00
<i>CashHoldings</i>	43,442	0.20	0.22	0.11	0.00	0.93
<i>CoOp</i>	43,442	0.33	0.47	0.00	0.00	1.00
<i>COW</i>	43,442	0.72	0.45	1.00	0.00	1.00
<i>Dividend</i>	13,416	0.02	0.02	0.02	0.00	0.10
<i>Efficiency</i>	26,255	19.37	51.11	5.32	0.12	464.63
<i>EIndex_High</i>	19,671	0.45	0.50	0.00	0.00	1.00
<i>FirmSize</i>	43,442	6.86	2.00	6.84	2.22	12.01
<i>GDPGrowth</i>	43,442	0.84	3.33	1.40	-10.80	22.40
<i>GDPPerCapita</i>	43,442	63,860	8,975	66,715	30,564	85,575
<i>InboundOverlap</i>	38,904	0.18	0.17	0.14	0.00	1.00
<i>InterIndustryGrowth_High</i>	43,442	0.41	0.49	0.00	0.00	1.00
<i>InterIndustryTobinsQ_High</i>	43,442	0.44	0.50	0.00	0.00	1.00
<i>IntraIndustryGrowth_High</i>	43,442	0.39	0.49	0.00	0.00	1.00
<i>IntraIndustryTobinsQ_High</i>	43,442	0.41	0.49	0.00	0.00	1.00
<i>LegalExpertDirector</i>	31,607	0.62	0.49	1.00	0.00	1.00
<i>LegalExpertDirectorPct_High</i>	31,105	0.39	0.49	0.00	0.00	1.00
<i>Liquidity</i>	31,361	1.27	2.11	0.56	0.00	20.77
<i>OutboundOverlap</i>	38,904	0.16	0.16	0.14	0.00	1.00
<i>PPLaw</i>	43,442	0.30	0.46	0.00	0.00	1.00
<i>SalesGrowth</i>	43,442	0.14	0.45	0.07	-0.66	3.17
<i>Tangibility</i>	43,442	0.23	0.24	0.15	0.00	0.89
<i>TobinsQ</i>	43,442	2.10	1.56	1.56	0.70	9.79
<i>TotalCulture</i>	43,442	15.10	5.86	14.07	0.00	56.32
<i>TotalCulture_Factor</i>	43,442	0.00	0.76	-0.14	-1.86	5.18
<i>TotalCulture_PCA</i>	43,442	0.00	1.37	-0.26	-3.43	9.37
<i>TotalCulture_TopQuartile</i>	43,442	0.25	0.43	0.00	0.00	1.00
<i>TotalCulture_TopTercile</i>	43,442	0.33	0.47	0.00	0.00	1.00
<i>UnemploymentRate</i>	43,442	5.57	1.87	4.79	2.10	13.73

Table 2 The Effect of the COW Law Adoption on Corporate Culture – Main Results

This table reports the baseline regression results of the relationship between the adoption of the COW law and corporate culture using the difference-in-differences method with the full sample. The unit of analysis is firm-year level from 2001 to 2021. Firm, year, and state fixed effects are included. The standard errors are clustered at the level of incorporated state and year pair. T-statistics are reported in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10% levels, respectively (two-tailed). All variables are defined in Appendix A.

	(1)	(2)
Dependent Variable =	<i>TotalCulture</i>	<i>TotalCulture</i>
<i>COW</i>	-0.437** (-2.572)	-0.447** (-2.561)
<i>FirmSize</i>	-0.281*** (-5.976)	-0.281*** (-5.977)
<i>CashHoldings</i>	0.786*** (3.613)	0.784*** (3.611)
<i>Tangibility</i>	-0.004 (-0.014)	-0.006 (-0.019)
<i>TobinsQ</i>	0.011 (0.388)	0.011 (0.389)
<i>SalesGrowth</i>	-0.040 (-0.716)	-0.040 (-0.723)
<i>GDPGrowth</i>		0.000 (0.054)
<i>GDPPerCapita</i>		0.000 (0.386)
<i>UnemploymentRate</i>		0.001 (0.031)
Constant	17.172*** (44.284)	17.000*** (27.360)
Observations	43,442	43,442
Adjusted R-squared	0.675	0.675
Firm Fixed Effects	YES	YES
Year Fixed Effects	YES	YES
State Fixed Effects	YES	YES

Table 3 The Effect of the COW Law Adoption on Corporate Culture – Matched Sample

This table reports the baseline regression results of the relationship between the adoption of the COW law and corporate culture with a matched sample based on the coarsened exact matching. Treatment group (i.e., firms incorporated in the states where the COW law has been adopted) and control group (i.e., firms incorporated in the states where the COW law has not been adopted) are matched on four continuous background variables: firm size, cash holdings, Tobin’s Q, and sales growth, which are coarsened using ten equally spaced strata, as well as the exact value of year and industry without coarsening. Panel A reports the differences in firm characteristics of the control group and the treatment group before and after matching. Panel B uses the difference-in-differences method with the matched sample. Firm, year, and state fixed effects are included. The standard errors are clustered at the level of incorporated state and year pair. T-statistics are reported in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10% levels, respectively (two-tailed). All variables are defined in Appendix A.

Panel A: Pre-Match vs. Post-Match Diagnostic Test on Firm Characteristics

Variable	Sample	Pre-Match (Number of Observations: 43,442)			Post-Match (Number of Observations: 8,022)		
		Mean	Difference	T- statistics	Mean	Difference	T- statistics
<i>FirmSize</i>	Non-COW	6.934			7.352		
	COW	6.834	0.100	4.654***	7.355	-0.003	-0.091
<i>CashHoldings</i>	Non-COW	0.158			0.104		
	COW	0.214	-0.056	-23.929***	0.106	-0.002	-0.624
<i>TobinsQ</i>	Non-COW	1.901			1.471		
	COW	2.171	-0.270	-16.217***	1.461	0.010	0.768
<i>SalesGrowth</i>	Non-COW	0.103			0.047		
	COW	0.160	-0.057	-11.902***	0.046	0.001	0.308

Panel B: The Effect of the COW Law Adoption on Corporate Culture Using the Matched Sample

	(1)	(2)
Dependent Variable =	<i>TotalCulture</i>	<i>TotalCulture</i>
<i>COW</i>	-0.749** (-2.233)	-0.764** (-2.295)
<i>FirmSize</i>	-0.554*** (-3.742)	-0.555*** (-3.739)
<i>CashHoldings</i>	0.319 (0.397)	0.343 (0.429)
<i>Tangibility</i>	0.609 (0.869)	0.622 (0.886)
<i>TobinsQ</i>	-0.038 (-0.316)	-0.037 (-0.308)
<i>SalesGrowth</i>	-0.121 (-0.514)	-0.123 (-0.524)
<i>GDPGrowth</i>		0.033** (2.323)
<i>GDPPerCapita</i>		0.000 (0.511)
<i>UnemploymentRate</i>		0.026 (0.363)
Constant	17.574*** (14.233)	17.007*** (11.312)
Observations	8,022	8,022
Adjusted R-squared	0.630	0.630
Firm Fixed Effects	YES	YES
Year Fixed Effects	YES	YES
State Fixed Effects	YES	YES

Table 4 Parallel Pre-trend Analysis: The Timing of Changes in Firm's Corporate Culture

This table reports the results from OLS regressions of the corporate culture variable on indicators for the timing of states' adoptions of the COW law. COW^{-2} , COW^{-1} , COW^0 , COW^{+1} , COW^{+2} , and COW^{3+} are equal to one if the firm is headquartered in a state that will adopt the COW law in two years, will adopt the COW law in one year, adopts the COW law in the current year, adopted the COW law one year ago, adopted the COW law two years ago, and adopted the COW law three or more years ago, respectively, and zero otherwise. Firm, year, and state fixed effects are included. The standard errors are clustered at the level of incorporated state and year pair. T-statistics are reported in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10% levels, respectively (two-tailed). All variables are defined in Appendix A.

Dependent Variable =	(1)	(2)
	<i>TotalCulture</i>	<i>TotalCulture</i>
COW^{-2}	0.027 (0.112)	0.027 (0.112)
COW^{-1}	0.087 (0.273)	0.084 (0.267)
COW^0	-0.033 (-0.157)	-0.033 (-0.157)
COW^{+1}	0.254 (0.932)	0.252 (0.928)
COW^{+2}	-0.380 (-1.580)	-0.379 (-1.521)
COW^{3+}	-0.693*** (-3.346)	-0.695*** (-3.330)
<i>FirmSize</i>	-0.279*** (-5.957)	-0.279*** (-5.957)
<i>CashHoldings</i>	0.790*** (3.635)	0.789*** (3.638)
<i>Tangibility</i>	-0.001 (-0.002)	-0.001 (-0.003)
<i>TobinsQ</i>	0.010 (0.374)	0.011 (0.375)
<i>SalesGrowth</i>	-0.044 (-0.796)	-0.044 (-0.799)
<i>GDPGrowth</i>		-0.001 (-0.167)
<i>GDPPerCapita</i>		0.000 (0.027)
<i>UnemploymentRate</i>		-0.000 (-0.006)
Constant	17.331*** (43.964)	17.323*** (26.909)
Observations	43,442	43,442
Adjusted R-squared	0.675	0.675
Firm Fixed Effects	YES	YES
Year Fixed Effects	YES	YES
State Fixed Effects	YES	YES

Table 5 Channel Analysis

This table reports the channel analysis results from OLS regressions. Panel A reports the impact of the COW law adoption on inbound/outbound board overlap. The dependent variables are *OutboundOverlap* in Column (1) and *InboundOverlap* in Column (2). Panel B reports the impact of the COW-affected board overlap measures on corporate culture. Firm, year, and state fixed effects are included. The standard errors are clustered at the level of incorporated state and year pair. T-statistics are reported in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10% levels, respectively (two-tailed). All variables are defined in Appendix A.

Panel A: The COW Law Adoption and Inbound/Outbound Board Overlap

Dependent Variable =	(1) <i>OutboundOverlap</i>	(2) <i>InboundOverlap</i>
<i>COW</i>	0.013** (2.325)	0.012** (2.263)
<i>FirmSize</i>	0.015*** (9.980)	0.008*** (4.373)
<i>CashHoldings</i>	-0.011 (-1.241)	-0.002 (-0.215)
<i>Tangibility</i>	-0.005 (-0.394)	-0.001 (-0.075)
<i>TobinsQ</i>	0.002*** (3.717)	0.000 (0.209)
<i>SalesGrowth</i>	-0.008*** (-4.666)	0.004** (2.363)
<i>GDPGrowth</i>	-0.000* (-1.672)	0.000 (0.119)
<i>GDPPerCapita</i>	-0.000 (-0.504)	0.000 (0.789)
<i>UnemploymentRate</i>	0.001 (0.792)	-0.002* (-1.857)
Constant	0.057** (2.174)	0.113*** (4.705)
Observations	38,904	38,904
Adjusted R-squared	0.483	0.527
Firm Fixed Effects	YES	YES
Year Fixed Effects	YES	YES
State Fixed Effects	YES	YES

Panel B: Inbound/Outbound Board Overlap and Corporate Culture

Dependent Variable =	(1) <i>TotalCulture</i>	(2) <i>TotalCulture</i>
<i>OutboundOverlap</i>	-24.482** (-2.395)	
<i>InboundOverlap</i>		-13.666 (-1.275)
<i>FirmSize</i>	0.047 (0.300)	-0.207** (-2.120)
<i>CashHoldings</i>	0.499* (1.848)	0.737*** (3.037)
<i>Tangibility</i>	-0.063 (-0.198)	0.041 (0.129)
<i>TobinsQ</i>	0.069* (1.792)	0.011 (0.392)
<i>SalesGrowth</i>	-0.235** (-2.240)	0.010 (0.146)
Constant	18.424*** (24.111)	18.580*** (13.633)
Observations	38,904	38,904
Adjusted R-squared	0.682	0.682
Firm Fixed Effects	YES	YES
Year Fixed Effects	YES	YES
State Fixed Effects	YES	YES

Table 6 Cross-sectional Analysis for Heterogeneity

This table reports the cross-sectional analysis on the relationship between the COW law adoption and corporate culture by dividing the full sample into subsamples based on indicator variables *LegalExpertDirector* and *LegalExpertDirectorPct_High* (in Panel A), *EIndex_High*, *BoardDiversity_High*, *AnalystCoverage_High*, *CoOp* (in Panel B), *IntraIndustryGrowth_High*, *InterIndustryGrowth_High*, *IntraIndustryTobinsQ_High*, and *InterIndustryTobinsQ_High* (in Panel C). Firm-, year-, and state-fixed effects are included. The standard errors are clustered at the level of incorporated state and year pair. T-statistics are reported in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10% levels, respectively (two-tailed). All variables are defined in Appendix A.

Panel A: Legal Expert Directors

Dependent Variable =	(1)	(2)	(3)	(4)
	<i>TotalCulture</i>	<i>TotalCulture</i>	<i>TotalCulture</i>	<i>TotalCulture</i>
	<i>LegalExpertDirector</i>		<i>LegalExpertDirectorPct_High</i>	
	Yes	No	Yes	No
<i>COW</i>	-0.661*** (-2.693)	0.338 (1.028)	-0.607** (-2.062)	-0.146 (-0.594)
<i>FirmSize</i>	-0.249*** (-3.248)	-0.413*** (-3.695)	-0.336*** (-3.393)	-0.284*** (-3.546)
<i>CashHoldings</i>	0.094 (0.271)	1.212*** (2.946)	-0.011 (-0.024)	1.144*** (3.566)
<i>Tangibility</i>	-1.246*** (-3.065)	-0.455 (-0.623)	0.723 (1.290)	-1.425*** (-2.962)
<i>TobinsQ</i>	0.000 (0.005)	-0.078 (-1.630)	0.020 (0.448)	-0.070* (-1.694)
<i>SalesGrowth</i>	-0.090 (-1.272)	-0.141 (-1.289)	-0.011 (-0.112)	-0.165** (-2.120)
<i>GDPGrowth</i>	-0.006 (-0.607)	-0.009 (-0.578)	-0.010 (-0.759)	0.005 (0.425)
<i>GDPPerCapita</i>	-0.000 (-0.458)	0.000* (1.662)	-0.000 (-0.937)	0.000* (1.784)
<i>UnemploymentRate</i>	-0.070 (-1.110)	0.009 (0.103)	-0.109 (-1.368)	0.002 (0.024)
Constant	17.495*** (12.911)	15.408*** (9.398)	18.781*** (11.485)	15.076*** (12.356)
Observations	19,201	11,724	11,695	18,574
Adjusted R-squared	0.679	0.690	0.685	0.686
Firm Fixed Effects	YES	YES	YES	YES
Year Fixed Effects	YES	YES	YES	YES
State Fixed Effects	YES	YES	YES	YES

Panel B: Corporate Governance

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dependent Variable =	<i>TotalCulture</i>	<i>TotalCulture</i>	<i>TotalCulture</i>	<i>TotalCulture</i>	<i>TotalCulture</i>	<i>TotalCulture</i>	<i>TotalCulture</i>	<i>TotalCulture</i>
	<i>EIndex_High</i>		<i>BoardDiversity_High</i>		<i>AnalystCoverage_High</i>		<i>CoOp</i>	
	Yes	No	Yes	No	Yes	No	Yes	No
<i>COW</i>	-1.270*** (-3.702)	0.185 (0.608)	-0.411 (-1.048)	-1.246*** (-3.438)	0.017 (0.068)	-0.475** (-2.015)	-0.753*** (-2.707)	-0.249 (-1.028)
<i>FirmSize</i>	-0.108 (-0.819)	-0.062 (-0.583)	-0.043 (-0.311)	-0.066 (-0.471)	-0.057 (-0.592)	-0.466*** (-8.258)	-0.043 (-0.446)	-0.321*** (-5.929)
<i>CashHoldings</i>	-0.347 (-0.583)	1.071* (1.873)	0.606 (0.837)	0.405 (0.713)	0.960** (2.393)	0.632** (2.430)	0.550 (1.145)	0.827*** (3.349)
<i>Tangibility</i>	-1.637** (-2.566)	0.221 (0.376)	0.390 (0.487)	0.294 (0.372)	-0.886* (-1.956)	0.167 (0.332)	-0.553 (-1.122)	-0.082 (-0.195)
<i>TobinsQ</i>	0.034 (0.809)	0.135*** (2.834)	-0.213*** (-2.986)	0.146** (2.541)	0.019 (0.418)	0.023 (0.764)	-0.062 (-1.343)	0.018 (0.595)
<i>SalesGrowth</i>	-0.124 (-0.776)	-0.042 (-0.398)	-0.194 (-1.331)	-0.401*** (-3.220)	-0.068 (-0.914)	-0.026 (-0.414)	-0.189 (-1.570)	-0.029 (-0.483)
<i>GDPGrowth</i>	0.013 (0.865)	0.022* (1.673)	0.017 (1.234)	0.013 (1.008)	-0.018 (-1.524)	0.011 (1.127)	0.025** (2.391)	-0.012 (-1.139)
<i>GDPPerCapita</i>	-0.000 (-0.476)	0.000 (0.615)	0.000 (1.022)	-0.000 (-0.103)	0.000 (0.684)	0.000 (0.421)	0.000 (0.728)	-0.000 (-0.742)
<i>UnemploymentRate</i>	-0.059 (-0.705)	0.034 (0.540)	-0.045 (-0.483)	0.083 (0.967)	-0.175*** (-2.760)	0.065 (1.398)	-0.036 (-0.564)	0.028 (0.612)
Constant	16.740*** (10.061)	13.595*** (10.268)	13.447*** (6.641)	14.125*** (7.388)	15.486*** (12.756)	17.768*** (22.690)	14.103*** (10.262)	18.127*** (26.530)
Observations	8,394	10,383	7,523	7,888	16,903	25,910	14,275	28,825
Adjusted R-squared	0.719	0.708	0.677	0.703	0.746	0.646	0.678	0.670
Firm Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES
Year Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES
State Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES

Panel C: Outside Business Opportunities

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dependent Variable =	<i>TotalCulture</i>	<i>TotalCulture</i>	<i>TotalCulture</i>	<i>TotalCulture</i>	<i>TotalCulture</i>	<i>TotalCulture</i>	<i>TotalCulture</i>	<i>TotalCulture</i>
	<i>IntraIndustryGrowth_High</i>		<i>InterIndustryGrowth_High</i>		<i>IntraIndustryTobinsQ_High</i>		<i>InterIndustryTobinsQ_High</i>	
	Yes	No	Yes	No	Yes	No	Yes	No
COW	-0.204	-0.514**	-0.121	-0.694***	-0.461	-0.785***	-0.390	-0.771***
	(-0.630)	(-2.361)	(-0.373)	(-3.204)	(-1.624)	(-3.679)	(-1.485)	(-3.371)
<i>FirmSize</i>	-0.038	-0.403***	-0.074	-0.418***	-0.095	-0.368***	-0.232***	-0.387***
	(-0.453)	(-5.425)	(-1.064)	(-5.881)	(-1.245)	(-5.702)	(-3.095)	(-6.335)
<i>CashHoldings</i>	0.740**	0.771**	0.519	1.277***	0.494	1.155***	0.687**	1.006***
	(1.976)	(2.289)	(1.620)	(3.739)	(1.214)	(3.851)	(2.095)	(2.702)
<i>Tangibility</i>	0.003	0.014	0.034	0.121	0.419	-0.245	0.919	-0.318
	(0.007)	(0.035)	(0.069)	(0.262)	(0.774)	(-0.551)	(1.516)	(-0.774)
<i>TobinsQ</i>	0.064*	-0.031	0.053	-0.041	0.048	-0.064	0.037	-0.089*
	(1.754)	(-0.867)	(1.612)	(-0.942)	(1.497)	(-1.439)	(1.115)	(-1.901)
<i>SalesGrowth</i>	0.095	-0.089	0.042	-0.032	-0.089	-0.021	-0.058	0.011
	(1.394)	(-1.183)	(0.584)	(-0.419)	(-1.123)	(-0.352)	(-0.650)	(0.171)
<i>GDPGrowth</i>	0.001	-0.004	0.004	-0.011	0.004	-0.003	0.005	-0.009
	(0.121)	(-0.384)	(0.322)	(-0.957)	(0.348)	(-0.263)	(0.416)	(-0.823)
<i>GDPPerCapita</i>	0.000**	-0.000	0.000	0.000	0.000	0.000	0.000	-0.000
	(2.275)	(-0.236)	(0.775)	(0.705)	(0.038)	(1.141)	(1.011)	(-0.087)
<i>UnemploymentRate</i>	0.059	-0.035	0.048	-0.060	-0.029	0.028	-0.074	0.041
	(0.802)	(-0.634)	(0.608)	(-0.996)	(-0.450)	(0.653)	(-1.145)	(0.902)
Constant	13.168***	18.394***	14.925***	17.912***	16.253***	17.114***	17.113***	17.378***
	(12.014)	(19.849)	(13.582)	(18.592)	(13.868)	(21.869)	(15.877)	(21.988)
Observations	16,165	25,776	17,147	24,824	17,204	25,243	18,781	23,737
Adjusted R-squared	0.717	0.654	0.721	0.642	0.730	0.646	0.720	0.625
Firm Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES
Year Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES
State Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES

Table 7 The Effect of Corporate Culture on Firm Outcomes

This table reports the baseline regression results of the relationship between corporate culture and firm outcomes using the ordinary least squares method with the full sample. The unit of analysis is firm-year level using data from 2001 to 2021. The dependent variables are *Liquidity*, *Efficiency*, and *Dividend*. The key independent variable is *TotalCulture*. We include firm and year fixed effects in all models. The t-statistics are reported in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10% levels, respectively (two-tailed). All variables are defined in Appendix A.

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable=	<i>Liquidity</i>		<i>Efficiency</i>		<i>Dividend</i>	
<i>TotalCulture</i>	0.007*** (3.351)	0.004* (1.942)	0.291*** (3.818)	0.276*** (3.592)	0.009** (2.307)	0.009** (2.572)
<i>Size</i>		0.176*** (5.330)		-2.498*** (-3.655)		-0.033 (-0.691)
<i>CashHoldings</i>		3.832*** (21.769)		3.962 (1.250)		0.103 (0.552)
<i>Tangibility</i>		-0.308* (-1.925)		-4.380 (-0.966)		0.151 (0.592)
<i>TobinsQ</i>		0.059*** (3.433)		-1.112*** (-3.110)		-0.222*** (-11.571)
<i>SalesGrowth</i>		-0.090** (-1.965)		1.104 (0.856)		-0.080 (-1.170)
<i>Constant</i>	1.165*** (35.258)	-0.814*** (-3.200)	15.295*** (14.281)	35.748*** (6.413)	2.168*** (43.265)	2.799*** (6.512)
Observations	31,361	31,361	26,255	26,255	13,416	13,416
Adjusted R-squared	0.676	0.705	0.686	0.687	0.626	0.632
Firm FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES

Table 8 Robustness Checks

This table reports the robustness checks on the baseline regression results of the relationship between the COW law adoption and corporate culture. Panel A reports the OLS regression results using alternative corporate culture measures as the dependent variables. The five culture components are combined through the principal component analysis and factor analysis. The dependent variables are *TotalCulture_PCA* in Columns (1) and (2), and *TotalCulture_Factor* in Columns (3) and (4). Panel B uses *TotalCulture_TopQuartile* in Columns (1) and (2) and *TotalCulture_TopTercile* in Columns (3) and (4) as the alternative dependent variables that indicate strong corporate culture. Panel C uses the regression results with the subsample excluding the financial crisis period (2007-2009). Panel D reports the results after controlling for the confounding law, the poison pill laws (*PPLaw*), as an additional variable. Firm, year, and state fixed effects are included. The standard errors are clustered at the level of incorporated state and year pair. T-statistics are reported in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10% levels, respectively (two-tailed). All variables are defined in Appendix A.

Panel A: Alternative Total Corporate Culture from Principal Components Analysis and Factor Analysis

	(1)	(2)	(3)	(4)
Dependent Variable =	<i>TotalCulture_PCA</i>	<i>TotalCulture_PCA</i>	<i>TotalCulture_Factor</i>	<i>TotalCulture_Factor</i>
COW	-0.104** (-2.557)	-0.108** (-2.579)	-0.057*** (-2.604)	-0.060*** (-2.635)
<i>FirmSize</i>	-0.068*** (-6.033)	-0.067*** (-6.035)	-0.036*** (-5.853)	-0.036*** (-5.855)
<i>CashHoldings</i>	0.213*** (4.163)	0.212*** (4.163)	0.121*** (4.331)	0.121*** (4.330)
<i>Tangibility</i>	-0.032 (-0.409)	-0.033 (-0.418)	-0.024 (-0.557)	-0.024 (-0.567)
<i>TobinsQ</i>	0.000 (0.051)	0.000 (0.051)	-0.000 (-0.069)	-0.000 (-0.068)
<i>SalesGrowth</i>	-0.021 (-1.533)	-0.021 (-1.541)	-0.011 (-1.497)	-0.011 (-1.507)
<i>GDPGrowth</i>		0.001 (0.383)		0.000 (0.399)
<i>GDPPerCapita</i>		0.000 (0.563)		0.000 (0.652)
<i>UnemploymentRate</i>		0.003 (0.350)		0.002 (0.364)
Constant	0.506*** (5.364)	0.432*** (2.844)	0.274*** (5.252)	0.229*** (2.753)
Observations	43,442	43,442	43,442	43,442
Adjusted R-squared	0.675	0.675	0.681	0.681
Firm Fixed Effects	YES	YES	YES	YES
Year Fixed Effects	YES	YES	YES	YES
State Fixed Effects	YES	YES	YES	YES

Panel B: Strong Corporate Culture Measured by Indicator Variables

	(1)	(2)	(3)	(4)
Dependent Variable =	<i>TotalCulture_ TopQuartile</i>	<i>TotalCulture_ TopQuartile</i>	<i>TotalCulture_ TopTercile</i>	<i>TotalCulture_ TopTercile</i>
COW	-0.038** (-2.479)	-0.038** (-2.488)	-0.031** (-2.011)	-0.029* (-1.869)
<i>FirmSize</i>	-0.026*** (-6.393)	-0.026*** (-6.394)	-0.022*** (-4.776)	-0.022*** (-4.777)
<i>CashHoldings</i>	0.065*** (2.976)	0.065*** (2.948)	0.082*** (3.623)	0.082*** (3.617)
<i>Tangibility</i>	0.014 (0.507)	0.015 (0.509)	0.004 (0.154)	0.005 (0.168)
<i>TobinsQ</i>	-0.002 (-0.718)	-0.002 (-0.723)	-0.003 (-1.273)	-0.003 (-1.282)
<i>SalesGrowth</i>	-0.002 (-0.437)	-0.003 (-0.458)	-0.001 (-0.112)	-0.001 (-0.116)
<i>GDPGrowth</i>		0.000 (0.095)		0.000 (0.084)
<i>GDPPerCapita</i>		0.000 (0.841)		-0.000 (-0.201)
<i>UnemploymentRate</i>		-0.005 (-1.532)		-0.004 (-1.253)
Constant	0.445*** (13.207)	0.439*** (7.803)	0.496*** (14.291)	0.527*** (9.235)
Observations	43,442	43,442	43,442	43,442
Adjusted R-squared	0.487	0.487	0.506	0.506
Firm Fixed Effects	YES	YES	YES	YES
Year Fixed Effects	YES	YES	YES	YES
State Fixed Effects	YES	YES	YES	YES

Panel C: Excluding Financial Crisis Period

	(1)	(2)
Dependent Variable =	<i>TotalCulture</i>	<i>TotalCulture</i>
<i>COW</i>	-0.548*** (-2.908)	-0.583*** (-3.026)
<i>FirmSize</i>	-0.352*** (-7.800)	-0.352*** (-7.803)
<i>CashHoldings</i>	0.568** (2.352)	0.564** (2.343)
<i>Tangibility</i>	-0.145 (-0.427)	-0.153 (-0.450)
<i>TobinsQ</i>	0.004 (0.127)	0.004 (0.136)
<i>SalesGrowth</i>	-0.023 (-0.381)	-0.024 (-0.397)
<i>GDPGrowth</i>		0.001 (0.063)
<i>GDPPerCapita</i>		0.000 (0.990)
<i>UnemploymentRate</i>		0.025 (0.635)
Constant	18.079*** (48.138)	17.510*** (28.010)
Observations	36,390	36,390
Adjusted R-squared	0.683	0.683
Firm Fixed Effects	YES	YES
Year Fixed Effects	YES	YES
State Fixed Effects	YES	YES

Panel D: Addressing Confounding Law Effect

	(1)	(2)
Dependent Variable =	<i>TotalCulture</i>	<i>TotalCulture</i>
<i>COW</i>	-0.409** (-2.369)	-0.418** (-2.366)
<i>PPLaw</i>	-0.689** (-2.224)	-0.699** (-2.242)
<i>FirmSize</i>	-0.280*** (-5.965)	-0.280*** (-5.966)
<i>CashHoldings</i>	0.788*** (3.622)	0.786*** (3.619)
<i>Tangibility</i>	-0.001 (-0.003)	-0.003 (-0.009)
<i>TobinsQ</i>	0.011 (0.397)	0.011 (0.398)
<i>SalesGrowth</i>	-0.040 (-0.719)	-0.040 (-0.728)
<i>GDPGrowth</i>		0.000 (0.027)
<i>GDPPerCapita</i>		0.000 (0.427)
<i>UnemploymentRate</i>		-0.001 (-0.027)
Constant	17.348*** (44.515)	17.171*** (27.596)
Observations	43,442	43,442
Adjusted R-squared	0.675	0.675
Firm Fixed Effects	YES	YES
Year Fixed Effects	YES	YES
State Fixed Effects	YES	YES