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Impact of Labor Protection Laws on the Operating and Financial Risks of Firms: The Case of China

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This dissertation is dedicated to my wife, Shu Lin, my mother, Chaomei Gao and my father, Zhouxiong Huang.

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Abstract

A debate exists regarding the effect of labor protection laws on labor costs. Whether labor protection laws increase or decrease labor costs has implications for risk exposure of affected firms. If the labor costs go up, all else the same, the firm's breakeven point goes up. Facing increased business risk, the firm must resort to strategies that inhibit the risk exposure, especially if the higher labor costs cannot be transferred, without adverse consequences, to consumers. The strategies include reigning in, if at all possible, operating leverage and financial leverage. Conversely, if the labor costs decrease, a firm's business risk declines, and the firm has options to increase its operating leverage and/or financial leverage, lower the product price, or do nothing. By examining the Chinese firms' reactions to the 2007 labor protection laws, we draw conclusions about laws' directional impact on labor costs. We find that Chinese firms attempt to reduce business risk by lessening labor intensity, and labor-intensive firms are able to reduce the labor intensity at a significantly higher rate than capital-intensive firms. Neither group is able to significantly reduce asset tangibility. We also find that all firms significantly reduce their financial leverages. Consequently, firms' investments, as measured by sales growth, decline in the post-reform period. These results are consistent with the cost of labor increasing as a result of the stricter labor protection laws.

Keywords: Labor Contract Law, Operating Risk, Financial Risk, Operating Leverage, Financial Leverage, Labor Intensity, Corporate Investment, China

Chapter 1

Impact of Labor Protection Laws on the Operating and Financial Risks of Firms: The Case of China

1. Introduction

How do stricter labor laws affect the labor costs? There are two opposing viewpoints: On the one hand, researchers like Titman (1984) and Agrawal and Matsa (2013) argue that, in the absence of strict labor laws, employees demand a wage premium because they can be more easily fired by their employers. If higher firing costs due to greater labor protection reduce an employee's risk of dismissal, the wage premium shrinks and so does the cost of labor. On the other hand, Mandelker and Rhee (1984), Mauer and Triantis (1994), and Simintzi et al. (2014) argue that higher firing costs increase the labor costs.

How the cost of labor impacts a firm's business risk exposure can be demonstrated via breakeven analysis. The breakeven model is expressed in the following manner:

Breakeven point=

[(Fixed costs) / (Price per unit –Variable cost per unit)]

Given that fixed costs are by definition fixed and price at a given point in time is invariant in a competitive market, the breakeven point (and, therefore, the business risk) rises as the cost of labor (a major component of the variable cost) rises. Similarly, business risk decreases, when the cost of labor decreases.

Titman (1984) and Agrawal and Matsa (2013) who argue that stricter protection laws lower the labor costs, suggest that lower business risk will allow firms to employ higher financial leverage. On the other hand, the opponents (e.g., Mandelker and Rhee, 1984; and Mauer and

Triantis, 1994), who argue that stricter labor laws lead to increased cost of labor, propose a decrease in the financial leverage. Ofek, (1993) and Kang and Shivdasani, (1997) argue, based on the classic trade-off theories, that the effects of higher total costs of distress derived from higher firing costs would counteract the tax benefit derived from debt. Serfling (2016) finds that firms in the states (in the USA) that face higher discharging costs due to labor law reforms subsequently lower their debt ratios.

In this paper, we empirically test the implications of labor protection laws on the business risk, financial risk, and investment decisions of firms. If the laws lead to a decrease in the labor costs, we would find firms to increase their financial leverage. The absence of an immediate positive change in financial leverage does not necessarily imply that the cost of labor did not decrease as firms might have chosen to build a debt reserve to take advantage of future investment opportunities. Implications of higher labor costss pursuant to the passing of stricter labor laws are more straightforward. We posit that, facing higher business risk, a firm is likely to be engaged in a two-pronged attack----decrease both business risk and financial risk.

Given that in a competitive product market, a firm cannot unilaterally increase the product price without confronting a loss of sales, a firm will attempt to reduce its breakeven point (i.e., business risk) by lowering either the future labor costs or the future fixed costs or both. We hypothesize that a labor-intensive firm would more likely address this problem by lowering the number of labor hired, while a capital-intensive firm is more likely to tackle this problem by investing less in fixed assets in the post- relative to pre-reform period.[1] Both groups

[1] A capital- intensive firm will have difficulty cutting its labor to asset ratio, because of the specialized labor force it needs.

of firms are also likely to engage in reducing their financial leverages: the extent of the leverage reduction will be reciprocal to the extent of business risk reduction.

Stricter labor laws should have implication for a firm's investment decision as well. If the laws reduce the cost of labor, and therefore, the business risk, a firm's cost of capital should decrease, leading to greater investment opportunities with positive NPVs.[2] On the other hand, if the cost of labor increases pursuant to stricter labor protection, the firm's marginal investments would decrease resulting from reduced investments in labor (and/or fixed assets) as well as decline in financial leverage.[3]

The purpose of this paper is to empirically test the impact of stricter labor protection laws on business risk, financial risk and investment decisions of a firm. In doing so, we investigate the impact of labor protection laws that were enacted in 2007 in China. The labor laws that took effect starting in 2008 consist of three sets: Labor Contract Law, Law on Mediation and Arbitration, and Labor Promotion Law. These laws were designed to provide enhanced rights and protections to the Chinese labor force. We investigate whether, and to what extent, Labor Contract Law (LCL) affects a firm's business risk, financial leverage, and investment decisions of Chinese firms. Three major hypotheses that we test in this paper are as follows:

Hypothesis 1. The LCL will have no impact on the business risk of Chinese firms;

[2] Stricter labor protection should lead to higher corporate investment and sales growth for reasons other than business risk reduction: a) increased productivity (e.g., Nickell and Layard, 1999; Belot et al, 2007), or b) use of relatively cheaper physical capital (e.g., Blanchard, 1997; Caballero and Hammour, 1998; Koeniger and Leonardi, 2007). Some argue that greater employment protection results in higher innovation outputs even if capital expenditures decrease (e.g., Acharya et al, 2014; Griffith and Macartney, 2014).

[3] Pindyck (1991) suggests a negative relation between employment protection and investment rates because stricter labor laws create greater investment irreversibility of projects.

Hypothesis 2. The LCL will have no impact on the financial leverage of Chinese firms.

Hypothesis 3. The LCL will have no impact on the investments of Chinese firms.

Our findings are consistent with the LCL being associated with an increase in a firm's labor costs. The results indicate that, in handling rising labor costss, Chinese firms resort to a two-pronged attack: reducing business risk (by curbing labor intensity) as well as financial risk (by lowering financial leverage). We find that, following LCL, labor-intensive firms decrease their labor intensity as well as market leverage to a greater extent than capital-intensive firms. The adopted strategies to combat rising labor costss lead to lower investments in the post-reform period.

The paper proceeds along the following lines. In section 2, we present a brief background of the law. Section 3 discusses sample, variables and methodology. Section 4 provides analyses of results, while Section 5 concludes.

2. Chinese Labor Laws---A Historical Perspective

2.1 1994 Labor Law

Prior to the labor market reform in 2007, the prevailing law pertaining to labor relations in China were established in 1994. The focus of the 1994 Labor Law was on work time, paid holidays, annual vacations, overtime pay and settlement of labor disputes. It had been playing a very significant role in founding China's labor contractual system. However, there are still several shortage and gaps in the labor contract system. For example, there are only 17 provisions about labor contract in the 1994 labor law, which is very simple. The provisions like the establishment of labor contract, the enforcement of the labor contract, contract duration, contract

terms, and the change, termination, and the release of the contract were included in the law, but the contents are basically principle-based and guidance-based. The narrow provisions in the 1994 labor law cannot fulfill the demand of the regulations of complex labor relation during the transition period from planned economy to market economy in China.

2.2 Motivation of the enactment of the 2007 LCL

There existed some problems and gaps related to the labor contract since the enactment of the labor law in 1994. These issues motivate the enactment of the 2007 LCL.

A. Low establishment rate of contract

Provision 16 in the 1994 Labor Law says that the labor contact law must be established in order to build a labor relation. However, in practice, the problem of employment without signing labor contract was dreadfully severe, especially in some labor-intensive industries. Before the completion of the first State-Owned Enterprises (SOEs) reform, very few employees in public sectors and SOEs had signed contracts with the employers even though those employees experienced job security as they could hardly be fired. The situation was worse for the employees in privately-owned firms as their jobs were much less secured than the ones in the public sectors and SOEs.

B. Short Labor Contract Duration

Even if some firms signed contracts with employees, short-termism problem of the contract was quite common. Signing short-term contracts with employees is good for the employers because they can easily cut the number of employees to reduce the human-capital costs and lower the operating costs. However, short-term contracts provide relatively low job security for the employees bearing the risk of being jobless. Consequently, unstable labor relation might lead to low productivity and even the disharmony of the whole society.

C. Diversity of Labor Relation

During the transition period of Chinese economy, there exist various types of employer like foundation, law firm, self-employed organization and departments of central and local governments, etc. The diverse employment entities bring more complicated labor relations than before such as labor dispatch, which is specifically regulated in the 2007 LCL but not in the 1994 Labor Law.

D. Ambiguity of the 1994 Labor Law

As mentioned above, contract-related provisions in the 1994 Labor Law are quite ambiguous. For example, the regulations about probation period, default penalties, and non-competition agreement are very unclear. The ambiguity leads to a so-called 'power-asymmetry' between employers and employees. The opacity in the 1994 Labor Law was mitigated in the 2007 LCL.

E. Some slave scandals and mining accidents

Since the beginning of the reform in 1978, Chinese economy was originally based on the labor-intensive industries, which are supported by the cheap labors from the poor-regulated labor market (Ni and Zhu, 2016). However, 2007 slave scandal in Shanxi province was like a trigger to accelerate the passage of the LCL. According to exposure of the scandal, the working conditions was dangerous in the illegal brickyards. Child labors were hired. What is more serious was that some workers were beat to death. Thus, as we can see, the 2007 LCL is more employee-friendly than employer-friendly.

2.3 Adoption of the LCL and its effects

On June 29, 2007, the LCL was passed in the 28th session of the 10th Standing Committee of the Chinese National People's Congress and officially took effect on January 1,

2008. The 2007 LCL was not designed to replace the 1994 law but to strengthen it. Many new and detailed provisions have brought huge challenge to the firms' employment policies and strategies. Moreover, the increased costs of the violation of the law push the firms to innovate in the management of establishing the labor relation.

A. Purpose of Legislation

According to the article 1 of the LCL, '*this Law is established for the purposes of enhancing the labor contractual system, elucidating the rights and obligations of both parties of labor contracts, protecting the legitimate rights and interests of employees, and creating and developing a harmonious and stable employment relationship'.* It is very clear that the general purpose of the LCL is to '*protect the legitimate rights and interests of employees'* but not to protect the legitimate rights and interest of employees of both parties of labor contracts. That means the country intervenes the power-asymmetric labor relation via the adoption of more employee-friendly employment protection law.

B. Severe consequences for firms

Prior to the 2007 LCL, some enterprises, especially Non-State-Owned Enterprises (Non-SOEs), did not sign labor contracts with employees and provided social insurance. They sacrificed the employees' benefits to reduce the firms' operating costs. When labor dispute occurred, the employees could not show the formal contracts to protect their legitimate rights. Thus, the LCL has established rules requiring a formal written contract between employer and employee within a month of hire and penalizing the employer failing to sign a contract. For example, according to provision 82, the employee receives double pay staring in the second month until the contract is set up and signed. According to provision 14, if an employee is without a contract for more than a year, the employment is automatically considered to be

indefinite and open-ended (Allard and Garot, 2010). There is no doubt that these specific and more strictly penalty rules will lead to an increased firing cost.

C. No deposit allowed anymore

Before the adoption of the LCL, some firms requested security deposit from employees while hiring to reduce the risk of employment. The 1994 Labor Law did not clarify whether the firms were allowed to collect security money from employees or not. In the new LCL, provision 9 explicitly forbids employers, by any means, to charge employees during the hire. In the meantime, violators would be imposed a fine from 500 Chinese yuan up to 2000, in accordance with provision 82.

D. Probation Period

In the 1994 Labor Law, the provision related to probation period is lack of operable terms leading to that the violators were hard to be punished. As a result, some firms indirectly switched probation period to so-called ‘free-labor period’ or ‘cheap-labor period’. The LCL has set up some detailed rules about the duration of probation period and requiring a probation-period salary, which cannot be lower than the minimum salary in the region where the enterprise is located (Provision 20). In addition, provision 83 specifies the legal liabilities the employers must bear.

E. Open-ended labor contract

Detailing the terms related to the open-ended labor contract is a huge breakthrough of labor market reform. Previously, a number of firms applied a rolling one-year contract to avoid their legal responsibilities. The action had a big impact on the employees’ job stability. Theoretically, the 1994 Labor Law has a rule that if an employee works for the same employer for 10 years or more, both parties of the contract can sign an open-ended labor contract based on

their agreement. In reality, signing rate of open-ended contract was very low. According to provision 14, the huge breakthrough is presented as:

a. The signing of an open-ended labor contract based on the agreement between employer and employee is not restricted by the employee's length of service for the employer.
b. If an employee works for the same employer for 10 years, the employer must sign an open-ended labor contract with the employee except the employee proposes to sign a fixed-term contract.
c. If an employee has sign two fixed-term contract with the same employer consecutively, in the following renew of the contract, he employer must sign an open-ended labor contract with the employee except the employee proposes to sign a fixed-term contract.
d. If the employer fails to sign a formal written labor contract with the employee for one full year since the date when the employee starts to work, it shall be deemed that the open-ended contract has been concluded between the employer and the employee.
e. If the employer violates the rules about open-ended contract, from the date when the open-ended contract shall be established, the employer shall pay the employee double.

F. Invalid contract

The 2007 LCL additionally clarifies the situations when the signed contract shall be deemed as an invalid contract. For example, if a party, by the means of deception, intimidation, or taking advantage of the other party's difficulties, forces the other party to establish a labor contract or amend the labor contract, which is contrary to his will, the contract shall be deemed

as an invalid contract. The contract that the employer disclaims its legal responsibilities and or denies the employee's legitimate rights is invalid or partially invalid. The employer must compensate the employee harmed during the period of hire. The clauses that the employer disclaims its legal liabilities for the employee's illness, injury, physical disability and death are invalid.

G. Termination of the labor contract

Prior to the new LCL, an employee had difficulties in proposing to terminate the labor contract and even bear the liquidated damage. On the other hand, the cost for an employer to fire an employee was relatively low. The LCL adds the legal situations those an employee can propose to terminate the labor contract and specifies the legal situations those an employer can or cannot terminate the labor contract (provision 38). For example, if an employer terminates the labor contract on the grounds that an employee violates the firm's rules and regulations, the employer must examine whether or not the contents of the rules and regulations fulfill the laws or have been established and announced publicly to employees via democratic processes. Entity and procedural requirements must be integral.

Furthermore, the LCL inserts the legal situations those employer shall provide employee with severance pay and also the rule that employer shall compensate employee twice of the benchmark of the severance pay.

H. Labor Dispatching

As we mentioned above, labor dispatching is a labor relation which separate the hiring and employment. One party hires workers but not uses workers, while the other party uses workers but not hire workers. Both parties establish the relation of dispatching and employment. In the old labor law, the provision of labor dispatching was missing. Some employers took

advantage of the legal loophole to use labor dispatching to avoid their legal liabilities, leading to an infringement to the dispatched workers' legitimate rights. The 2007 LCL has established rules related to the legal liabilities of both labor dispatching party and employment party, details of labor dispatching agreement, dispatched workers' legitimate rights, etc.

F. Non-competition

Provision 23 & 24 detail the rules related to non-competition. Provision 23 clarifies that an employer and his or her employees may make an agreement in the labor contract requiring the employees to keep the firm's business secrets and intellectual property of the firm confidential. Provision 24 additionally establishes the rules related to the non-competition range and duration. Intuitively, the more strictly non-competition clauses can relieve the damage to a firm's value of innovation due to the job-hopping of the firm's key employee. Consequently, the firm is more likely to increase the investment in the research and development.

2.4 Prior research

To our best knowledge, four decent papers study the impact of 2007 LCL.

Park et al (2012) apply a survey of 1644 manufacturing firms from Chinese central bank in 2009 and firstly find that 95.9% of the respondent firms deem that the 2007 LCL is strictly or very strictly enforced indicating that the new law is more enforced than the previous one (1994 Labor Law).The second conclusion they reach is that the 2007 LCL leads to slower growth in employment in the regions with greater increase in the law enforcement. Their conclusions verify a common and straightforward intuition about the labor protection law: firms suffer from the more strictly labor protection law and bear the increased costs and damaged employment.

The second paper, by Freeman and Li (2013), utilize a set of survey data of migrant workers from nine cities in the Pearl River Delta region and show that the signing rate of the

formal written labor contract increased after the law within migrant workers. In addition, the LCL also increased the employers' compliance with payments into social insurance coverage and lowered the risk of wage arrears faced by the migrant worker prior to the LCL.

The third paper related to the 2007 LCL, authored by Ji and Wei (2013), provide the evidence that enhanced labor protection due to the adoption of the LCL brings up the increase of stock prices in the more labor-intensive firms relative to those of less labor-intensive firm since stronger protection enforcement corrects previous non-compliance problem by smaller and less inefficient firms.

The most recent paper, conducted by Ni and Zhu (2017), applies the enactment of the 2007 LCL as an exogenous shock and show the positive effect of the more rigid labor protection on stock price informativeness in labor-intensive firms. The results show that the LCL generates an improvement in firm transparency and exerts operating pressure, which increase firms' operating leverage.

The LCL is considered by many to be one of most consequential pieces of legislation in China. Ngok (2008) suggests that changes brought about new labor laws "*indicate the paradigmatic shifts of China's labor policy in the reform era.*" Thus, potential impacts of the LCL on the financial decisions of Chinese firms are worth investigation. However, studies pertaining to the impact of the augmented labor laws in China on various dimensions of firms' financial decisions have been few and far between.

3. Literature Review

3.1 Labor costs and Capital Structure

How would increased labor costs affect a firm's capital structure decisions? There are two competing theories addressing the link between labor protection measured as firing costs and capital structure. One strand of the theories documents the positive relationship between firing costs and debt ratios (Titman, 1984; Agrawal and Matsa,2013). Specifically, higher firing costs drive firms to increase their financial leverage (debt ratios) via lowering employees' risk of unemployment measured by wage premium. Agrawal and Matsa (2013) apply changes in state unemployment insurance benefit laws to explore the relation between firms' leverage and unemployment risk. They find that a wage premium is demanded by employees for bearing the increased risk of unemployment that arises from using financial leverage. In the sub-sample analysis, they show that the impact of lowered unemployment risk on firms' financial leverage is enhanced in the firms with higher layoff separation rates, greater labor intensity, and more financial constraints. Thus, if higher firing costs due to the greater labor protection reduce an employee's risk of layoff, the wage premium cringes and firms could increase debt ratios to obtain higher tax benefit of debt.

Another strand of the theories state the negative association via two channels. On the one hand, based on the classic trade-off theories that firms balance the tax advantages of borrowing against the costs of financial distress, related papers (e.g. , Ofek, 1993; Kang and Shivdasani, 1997) elaborate that the effects of higher total costs of distress derived from higher firing costs would counteract the tax benefit. Consequently, firms reduce the optimal financial leverage ratios. Ofek (1993) investigates how capital structure decision is related to a firm's reaction to financial distress in the short-term. Using a sample of 358 firms with poor firm performance in a

year, he finds that higher predistress leverage leads to more-likely asset restructuring, employee dismissals, and dividend cuts. On the other hand, higher managerial holdings lead to lower probability of operational actions, especial those that do not general cash. In the second channel stating the negative relation between firing costs and financial leverage, higher firing costs enforce firms to become more difficult to reduce employment resulting in more fixed labor costss. Thus, firms decrease the debt ratios due to the higher operating leverage that brings up higher risk of becoming distressed (e.g., Manderlker and Rhee, 1984; Mauer and Triantis, 1994). Kaul, Lunn, and Nilsson (2014) explore the importance of the operating leverage in the financing decisions and show that firms with higher constant costs have lower debt ratios and more cash holdings relative to firms with lower fixed costs. They suggest that the results are not solely explained by the classic trade-off theory between operating leverage and financial leverage. They also show that these financing-conservative firms with high fixed-cost are also value maximizing. Their results confirm the negative relationship between financial leverage and firing costs resulting an increased operating leverage. In addition, Simintzi et al (2015) provide the evidence on the negative relation between employment protection and financial leverage across countries. Applying a difference-in-difference approach, they find that firms suffer 187 basis point reduction in leverage due to enhanced labor protection and document that the employment protection leads to higher operating leverage, crowding out financial leverage. In the sub-sample tests, they find that the negative relation is enhanced in groups relying more on labors, hiring and firing people more frequently and being less liquidated.

In order to help protect employees from unfair discharge, many states in the U.S. started to recognize and implement Wrongful Discharge Laws (WDLs) which includes three common law exceptions: the good faith exception, the implied contract exception and the public policy

exception. Serfling (2016) applies these labor protection laws as an exogenous shock to examine how the increase in firing costs due to these laws impacts firms' capital structure decisions. He finds that firms tend to reduce debt ratios following the adoption of WDLs. The findings are supportive to the theory that higher firing costs squeeze out financial leverage via increasing financial distress costs.

3.2 Labor protection and investment decisions

How would the enhanced job security due to labor protection affect the firms' investment decisions and growth rate? There are two opposing theories addressing the link between labor protection and investment decisions. One strand of the theories documents that more stringent employment protection could lead to greater corporate investment via two channels. On one hand, greater employment protection makes firms become less likely to discharge workers. A reduction of the threat of dismissal could incentivize workers to increase their firm-specific human capital, resulting in greater productivity and higher investment rates (e.g., Nickell and Layard, 1999; Belot, Boone, and Van Ours, 2007). In addition, stronger labor protection leads to more innovation. Acharya et al (2014) find a positive relation between dismissal laws and innovation outputs because the enhanced employment protection can encourage firms to increase the investment in the risky but potentially groundbreaking projects. They also show that the positive impact of the dismissal laws is greater in the innovation-intensive industries.

On the other hand, greater employment protection can also lead to higher investment rates via relatively cheaper physical capital. Specifically, physical capital compared with human capital, following the higher labor protection taken effect, becomes relatively less expensive. For example, in general, workers have been hired before the investment decision are made. When job security is enhanced, it becomes costlier to replace workers. Thus, in the long run, relatively

more expensive labor-intensive capital would be substituted with more physical capital. The ultimate outcome of this substitution effect would be higher corporate investment rates (e.g., Blanchard, 1997; Caballero and Hammour, 1998; Koeniger and Leonardi, 2007).

Another strand of the theories state the negative association between employment protection and investment expenditure by increasing the irreversibility of corporate investments. In particular, Pindyck (1991) states that enhanced labor protection could lessen investment rates by making projects more irreversible because greater employment protection makes it costlier to divest or scale back poorly performing projects. Therefore, greater investment irreversibility owing to employment protection reduces the recovery value of projects and hence the number of projects with positive NPV, resulting in lower firms' ex ante incentives to invest (e.g., Bernanke, 1983; Pindyck, 1991; Bertola and Caballero, 1994; Abel et al., 1996). Recent empirical work like the paper of Bai et al. (2018) adopts U.S. state-level wrongful discharging laws to evaluate the effect of labor protection on corporate investment and growth and provide the evidence consistent with the theories addressing that more stringent labor protection could lead to lower investment rates by making projects more irreversible. They find that the firms reduce the corporate investment after the labor laws are taken effect, resulting in a slower rate of firms' growth. They also show a negative relationship between employment protection and investment rates that less sensitive to changes in investment opportunities (Tobin's q).

4. Sample, Variables and Data

4.1 Sample

Following Ni and Zhu (2017), we select the 2005 to 2011 sample period. As mentioned by Ni and Zhu (2017), the sample period starts with 2005 because of the 2005 Split-Share Structure Reform (SSSR) act that mandated the conversion of state-owned non-tradable shares to

tradable shares. A major consequence of the SSSR was to link incentive compensations of executives to the market performance of company stocks. We follow Bertrand et al. (2004) and select 2011 as the end year to avoid the serial selection bias due to the longer post-treatment period.

To construct the sample, we follow Ni and Zhu (2017) and clean the data in three steps. First, we only include the non-financial listed firms in the Chinese A-share market (both Shanghai and Shenzhen). Specifically, we use classification standard of CSRC to identify and exclude financial companies. Second, we keep firms in special treatment like suspension and delisted firms to evade survivorship bias. In addition, all continuous variables are winsorized at 1%. Our final sample includes 10918 firm-year observations (1606 firms).

For further exposition, we derive two subsamples based on the degree of labor intensity. Treatment group (Group 1) consists of firms from labor-intensive industries including 1) Coal Mining and Processing, 2) Wine, drinks and refined tea manufacturing, 3) Textile, and 4) Textiles, Garments and Apparel industry. Control group (Group 2) consists of firms from capital-intensive industries including 1) Automobile Manufacturing, 2) Highway Transport, and 3) Civil Engineering Construction. The selected industries have substantial firm-year observations allowing us to draw reliable conclusions. We check the level of labor intensity of the two subsamples before and after reform and find that relative ranking of each group in the intensity index remains about the same in the two periods.

4.2 Variables

4.2.1 Main variables

The main dependent variables in the paper are financial leverage, labor intensity, tangibility (capital expenditures) and growth. We use two measures to compute financial leverage: a) book leverage and b) market leverage. Book Leverage is the book value of total debt divided by the book value of total assets, while market leverage is defined as the book value of total debt divided by total market value of total assets (Frank and Goyal, 2009). Labor Intensity is the ratio of total employees to total asset (Dewenter and Malatesta, 2001). Tangibility is measured as net capital expenditure divided by the lag value of the net fixed assets (Aivazian et al., 2005). The growth rate is measured in the firm's one-year growth rate in sales.

4.2.2 Control variables

Other control variables used in our analyses are Size, Risk, Tangibility, Profitability, Nondebt Tax Shields, Dividend Payers, Tobin's Q, Cash Holdings, and Cash Flows. Definitions of all variables are provided in Table 1. We obtain financial data from CSMAR databases, which is the main provider of Chinese data. In this section, we firstly summarize the theories in the capital structure literature. Secondly, we show the evidence of predictions of these theories on the selected control variables.

4.2.2.1 Capital structure theories

The starting of modern theory of capital structure, Modigliani and Miller (1958) illustrates that under certain key assumptions, firm's value is unaffected by its capital structure. Capital market is assumed to be perfect in MM world, where insiders and outsiders have symmetric information; no transactions cost, bankruptcy cost or distortionary taxation exist; equity and debt choice becomes irrelevant and internal and external funds can be perfectly

substituted. If these key assumptions are relaxed, capital structure may become relevant to the firm's value. Thus, there exists two competing capital structure theories: trade-off theory and pecking order theory.

A.Trade-off theory

According to trade-off theory, the leverage of a firm is optimized at the level based on a trade-off between the benefits and costs of debt. Due to the variations of benefits and costs, there exists two views of 'trade-off'. The first view is that the firm chooses the level of debt, where interest tax shields and costs of financial distress are equal at the margin. The second one is the classic 'agency' perspective that debt can either mitigate agency problems of free cash flow or lead to bankruptcy if debt is not repaid (Jensen and Meckling, 1976; Jensen, 1986). In addition, stockholder-debtholder conflicts arise although shareholder-manager conflicts are alleviated via the use of debt (Stulz, 1990). Shleifer and Vishny (1992) state that asset liquidity is an important determinant of the costs of financial distress, and the optimal debt level is limited by asset illiquidity, firms with illiquid assets have a lower optimal level of debt. The optimal leverage also depends on the leverage of other firms in its industry. Flannery and Rangan (2005) provide evidence that firms have target capital structures and that they return relatively quickly to their target leverage ratios when they are shocked away from their targets.

B.Pecking order theory

The pecking order theory shows that firms prefer internal to external finance (Myers, 1984; Myers and Majluf, 1984). Based on the extent of the adverse selection problem, a firm choose source of funds with the following order: retained earnings, safe debt, risky debt, and equity as a last resort. There is no optimal leverage in this theory.

4.2.2.2 Predictions on selected control variables.

Following Frank and Goyal (2009) and capital structure literature of Chinese case (e.g., Chen, 2004; Huang and Song, 2006; Zou and Xiao, 2006), we select firm size, risk, tangibility, profitability, non-debt tax shield and dividend paying status. We will summarize the predictions of theories on each variable in the following part.

A.Leverage and Firm Size

On the one hand, the trade-off theory implies that larger and more mature firms have higher leverage ratio due to the lower default risk of big firms (e.g., Marsh, 1982; Rajan and Zingales, 1995; Chittenden et al., 1996; Frank and Goyal, 2009). On the other hand, the negative relationship between leverage and firm size is explained by the pecking order theory. The information asymmetries between insiders and outsiders in the capital market are relatively lower for large firms. Thus, informative funds like equity would be preferred than debt (Kester, 1986; Titman and Wessels, 1988). In the Chinese case, almost all the empirical evidence supports the positive relation predicted by trade-off theory (e.g., Chen, 2004; Huang and Song, 2006; Zou and Xiao, 2006; Bahabra et al. , 2008; Qian et al., 2009; Li et al., 2009; Chang et al., 2014).

B.Leverage and Risk

The trade-off theory indicates that higher risk leads to lower debt ratio since cash flows with higher volatility increase firms' financial distress risk and offset the tax shield benefits. Alternatively, if risky firms suffer from adverse selection, then positive relation between firm risk and leverage would be predicted by the pecking order theory. For Chinese firms, the relation between leverage and risk is quite unclear. While Chen (2004) uses the change of earnings to

measure risk and observes a negative relation, Qian et al (2009) apply the standard deviation of stock returns to measure firm risk and find a positive relationship between leverage and risk.

C.Leverage and Tangibility

Tangibility, a measure of nature of assets, is the ratio of tangible assets to the book value of total asset. Compared to intangible assets, tangible assets are considered as low-risk assets, which lower the distress costs. Thus, firms should choose to have high leverage ratio according to the trade-off theory (e.g., Long and Malitz, 1985; Frank and Goyal, 2009). The prediction of the pecking order theory on tangibility is ambiguous. Since tangible assets have relatively low information asymmetry problem, firms with high tangibility should issue equity rather than debt. Oppositely, tangible assets might increase adverse selection leading to higher debt ratio (Frank and Goyal, 2009). In the literature of capital structure for China, most papers mentioned above confirms positive relationship between leverage and tangibility explained by either the trade-off theory and the pecking order theory. The only exception is the inverse relation shown in Li et al (2009).

D.Leverage and Profitability

The positive relationship between leverage and profitability is predicted by the trade-off theory in two way. The 'tax-financial distress' view points out those profitable firms have relatively low bankruptcy cost and high benefits from interest tax shields (e.g., Bowen et al, 1982). The 'agency' perspective generated by Jensen (1986) interprets that profitable firms might have severe free cash flow problem, but the high debt can solve the problem via providing discipline. The explanation of the pecking order theory on the inverse relation between leverage and profitability is quite straightforward. Profitable firms choose use less debt if the investment

and dividends keep unchanged (e.g., Kester, 1986; Friend and Lang, 1988; Baskin, 1989; Frank and Goyal, 2009). For Chinese firms, most of the findings from the papers mentioned above confirm the negative relationship supported by the pecking - order theory. Chen (2004) provide an alternative explanation called 'new pecking order' theory: retained profit, equity and long-term debt. There are several aspects of this explanation. Firstly, due to the lack of investor protection, equity is a kinda 'free' source of funds. Issuing equity is preferred to incurring debt by management. Secondly, retained profit is a better source of finance than equity because of the transaction costs associated to equity issuance.

E.Leverage and Tax

The trade-off theory predicts that firms apply high leverage to take advantage of the interest tax shields when the tax rate is high. Alternatively, non-debt tax shields in this paper, measured by the ratio of depreciation expenses to the book value of total assets, is expected to be negatively related to leverage since non-debt tax shields are a substitute to interest tax shields (DeAngelo and Masulis, 1980). Most papers related to Chinese capital structure topic find a significantly inverse relation when they use non-debt tax shields.

F.Leverage and Dividend-Paying Status

According to Frank and Goyal (2009), they find a negative relationship between leverage and dividend-paying dummy indicating whether the firms pay dividends. However, the prediction of the existing theories on this relation is still ambiguous. Fama and French (2004) sorts the firms' leverage by quantile and observe that nonpayers have higher leverage than dividend payers. In Chinese case, no solid evidence is provided in the literature. Definitions of

all variables are provided in Table 1. We obtain financial data from CSMAR databases, which is the main provider of Chinese data.

Table 1: Variable Definition

This table presents the detailed definitions of variables.

Variable	Definition
Book Leverage	The book value of long term debt divided by book value of total assets
Market Leverage	The book value of long term debt divided by total market value of total assets
CapEx	Capital expenditures scaled by beginning of year book value of total assets
Sales Growth	One-year sales growth rate
Labor Intensity	The ratio of total employees to book value of total assets (per 1 million)
LCL	A year dummy variable set to1 if it is in 2008 or after and 0 otherwise
Firm Size	The natural logarithm of total assets in year t
Tangibility	Net Fixed Assets divided by total assets
Profitability	Operating profit divided by total assets
Dividend Payer	A dummy variable equals 1 if a firms pays dividend in year t and zero otherwise
Risk	Coefficient of variations of the sales in the past three years
Nondebt Tax Shields	Ratio of depreciation to book value of total assets
Tobin's Q	The ratio of market value of assets to book value of total assets
Cash Holding	Cash and cash equivalents divided by book value of total assets
Cash Flow	Net cash from operating activities divided by book value of total assets

5. Empirical Results

5.1. Univariate Analysis

Panel A of Table 2 provides summary statistics for dependent and all control variables in our sample. The averages book (market) leverage 0.222 (0.532) of the entire sample, with the median leverage being 0.207(0.158). The mean (median) of labor intensity of the industrial firms included in the sample is 1.185 (0.893). The firm size, measured as the logarithm value of total assets, of our sample averages 21.560 which is equivalent to about 2.309 billion Chinese Yuan. The sample firm also commands the mean risk and *profitability* ratio of 0.264 and 0.027, respectively. Tangible assets accounts for 28.4% of the total assets for the firms in the sample, while 51.2% of the sample firms pay dividend. Tax Shields (nondebt tax shields), measured as the ratio of depreciation to total assets, averages 0.025. Tobin's Q value averages 2.652. The mean of cash holding and cash flow are 0.158 and 0.051, respectively.

Panel B of Table 2 provides univariate results based on the full sample. The results show that the changes in the following variables from the pre-reform to the post-reform period are significant at the 1% level.

i. The book (market) leverage decreases from 0.238 (0.581) to 0.211 (0.498).

ii. Labor intensity decreases by 0.288 from 1.354 before to after.

iii. Firm size goes up from before to after.

iv. Proportion of fixed asset to total assets (Tangibility) and nondebt tax shields (depreciation as a% of total assets) decrease.

v. In addition, more firms choose to pay dividend after 2008.

vi. Tobin's Q value at the beginning of the year almost doubles after 2008.

vii. The year-beginning value of cash holding rises to 0.164 after 2008.

Overall results from Panel B of Table 2 seem to imply that the cost of labor increased for Chinese firms as a result of the stricter labor law. Consequently, firms attempt to combat the rising labor costs by reducing operating leverage (via reduced labor intensity and reducing investment in fixed assets) as well as financial leverage.

Table 2: Univariate Results

The table presents the univariate results. Panel A reports the summary statistics for full sample consisting of CSMAR industrial firms (excluding financial and utilities) from 2005 to 2011 and including 10 firm-year observations (1606 firms). Panal B reports the results of univariate analysis for the full sample. All continuous variables are winsorized at their 1st and 99th percentile. Standard deviation of each variable below the corresponding mean value are reported in parentheses. *, **, and *** marked with coefficients represent significance level 10%, 5%, and 1% respectively. Panel C reports the univariate results of Group 1 and Group 2 respectively.

Panel A: Summary Statistics for Full Sample					
Variable	Mean	Std Dev	P25	Median	P75
Book Leverage	0.222	0.171	0.086	0.207	0.326
Market Leverage	0.532	1.535	0.045	0.158	0.420
$CapEx_t$	0.065	0.083	0.011	0.039	0.090
Sale $Growth_t$	0.239	0.716	-0.018	0.138	0.315
Labor Intensity	1.185	1.127	0.401	0.893	1.576
Firm Size	21.560	1.287	20.714	21.471	22.306
Risk	0.264	0.233	0.116	0.199	0.323
Tangibility	0.284	0.189	0.137	0.254	0.410
Profitability	0.027	0.096	0.007	0.033	0.068
Nondebt Tax Shields	0.025	0.017	0.013	0.022	0.035
Dividend Payer	0.481	0.500	0.000	0.000	1.000
Tobin's Q_{t-1}	2.652	2.363	1.337	1.904	3.002
Cash $Holding_{t-1}$	0.158	0.119	0.072	0.128	0.213
Cash $Flow_{t-1}$	0.051	0.085	0.008	0.050	0.098

Panel B: Univariate Results for Full Sample			
	Before 2008 (1)	After 2008 (2)	Difference (2)-(1)
Book Leverage	0.238	0.211	-0.027***
	(0.172)	(0.169)	(0.170)
Market Leverage	0.581	0.498	-0.083***
	(1.621)	(1.471)	(1.534)
$CapEx_t$	0.064	0.065	0.001
	(0.084)	(0.083)	(0.083)
Sale $Growth_t$	0.236	0.241	0.005
	(0.673)	(0.743)	(0.716)
Labor Intensity	1.354	1.067	-0.288***
	(1.234)	(1.029)	(1.118)
Firm Size	21.324	21.725	0.401***
	(1.146)	(1.354)	(1.272)
Risk	0.262	0.265	0.003
	(0.217)	(0.243)	(0.233)
Tangibility	0.309	0.266	-0.041***
	(0.188)	(0.187)	(0.188)
Profitability	0.026	0.027	0.001
	(0.098)	(0.095)	(0.096)
Nondebt Tax Shields	0.027	0.025	-0.002***
	(0.017)	(0.017)	(0.017)
Dividend Payer	0.460	0.500	0.040***
	(0.498)	(0.500)	(0.499)
Tobin's Q_{t-1}	1.775	3.236	1.461***
	(1.333)	(2.696)	(2.252)
Cash $Holding_{t-1}$	0.148	0.164	0.016***
	(0.114)	(0.121)	(0.118)
Cash $Flow_{t-1}$	0.054	0.050	-0.004***
	(0.080)	(0.088)	(0.085)

Panel C: Univariate Results for Group 1 and Group 2						
	Group 1			Group 2		
	Before 2008 (1)	After 2008 (2)	Difference (2)-(1)	Before 2008 (1)	After 2008 (2)	Difference (2)-(1)
Book Leverage	0.210	0.160	-0.050***	0.212	0.180	-0.032***
	(0.171)	(0.149)	(0.158)	(0.158)	(0.152)	(0.155)
Market Leverage	0.481	0.303	-0.178*	0.480	0.465	-0.014
	(1.523)	(0.891)	(1.193)	(1.075)	(1.096)	(1.087)
$CapEx_t$	0.071	0.070	-0.001	0.074	0.061	-0.013**
	(0.082)	(0.078)	(0.079)	(0.081)	(0.070)	(0.074)
Sale $Growth_t$	0.191	0.206	0.015	0.251	0.230	-0.021
	(0.480)	(0.577)	(0.541)	(0.687)	(0.643)	(0.661)
Labor Intensity	2.417	1.755	-0.662***	1.272	1.003	-0.269***
	(1.686)	(1.276)	(1.458)	(1.366)	(1.165)	(1.251)
Firm Size	21.242	21.701	0.460***	21.790	22.260	0.470***
	(1.088)	(1.378)	(1.266)	(1.096)	(1.295)	(1.216)
Risk	0.227	0.229	0.003	0.245	0.236	-0.010
	(0.169)	(0.203)	(0.190)	(0.223)	(0.200)	(0.209)
Tangibility	0.350	0.295	-0.056***	0.304	0.227	-0.077***
	(0.153)	(0.154)	(0.154)	(0.190)	(0.169)	(0.178)
Profitability	0.041	0.062	0.022***	0.036	0.040	0.004
	(0.112)	(0.102)	(0.106)	(0.082)	(0.078)	(0.080)
Nondebt Tax Shields	0.032	0.030	-0.002	0.027	0.023	-0.004***
	(0.017)	(0.017)	(0.017)	(0.019)	(0.018)	(0.018)
Dividend Payer	0.497	0.551	0.055	0.523	0.637	0.114***
	(0.501)	(0.498)	(0.499)	(0.500)	(0.481)	(0.489)
Tobin's Q_{t-1}	1.975	3.546	1.571***	1.612	2.500	0.887***
	(1.734)	(2.686)	(2.352)	(1.496)	(2.221)	(1.958)
Cash $Holding_{t-1}$	0.157	0.173	0.016	0.152	0.161	0.010
	(0.123)	(0.127)	(0.125)	(0.104)	(0.112)	(0.109)
Cash $Flow_{t-1}$	0.073	0.089	0.016**	0.068	0.057	-0.011*
	(0.085)	(0.097)	(0.092)	(0.083)	(0.082)	(0.082)

Panel C presents the univariate results of Group 1 and Group 2. The results show that, in terms of business risk, both groups reduce their labor intensity and tangibility during the post-reform period. However, consistent with our expectation, Group 1 (i.e., the firms in the high labor-intensive group) displays a greater declines in labor intensity. In terms of financial leverage, the declines in the book as well as market leverages for Group 1 are significantly greater than those of Group 2. Among other findings, profitability significantly increases for group 1 while the percentage of dividend payer significantly increases for group 2.

5.2. Multivariate Analysis

5.2.1. Operating Leverage and LCL

5.2.1.1. Full Sample

We start our analysis to test the impact of LCL on operating leverage. We follow a similar approach to Eisfeldt and Papanikolaou (2013) and Serfling (2016). The model is as followed:

$$\Delta logEBIT_{i,t} = \alpha_0 + \alpha_1 LCL_t + +\alpha_2 \Delta LogSales_{i,t} + \alpha_3 LCL_t * \Delta LogSales_{i,t} + \mu X_{it} + \gamma_i + \theta_t + \varepsilon_{it,,}$$

where $\Delta logEBIT_{i,t}$ represents earnings before interest and taxes at firm i in year t., *LCL* is a dummy variable which equals to 1 if the year is 2008 or after, and 0 otherwise, $Sales_{i,t}$ is total sale at firm i in year t. Control variables X_{it} mentioned previously are included in the regression model. Additionally, we control for firm fixed effects (γ_i), and year fixed effects (θt). The firm-fixed effects help us to control time-invariant unobservable firm characteristics while year fixed effects capture the aggregate time-series trends.

Panel A of Table 3 presents results of the full sample. Column 1 includes only year and firm fixed effects and the results show that 1% decrease in sales is related to 0.730% decrease in EBIT before the enactment of the LCL. Following the adoption of the LCL, 1% decrease in sales

is associated with 0.993% decrease in EBIT. The coefficient 0.207 indicates a relative increase of 36.0% (0.263/0.730) in sensitivity of changes in EBIT to changes in sales (degree of operating leverage). In column (2), a set of control variables are included. The results indicate a relative 30.0% increase in the degree of operating leverage.

5.2.1.2. Comparison between Group1 and Group2

In order to test the differential impact of LCL on operating leverage between two groups, we follow Eisfeldt and Papanikolaou (2013) and Serfling (2016) and modify their models slightly due to the fact that LCL is a national law in China. The assignment of labor-intensive group (Group 1) and capital-intensive group (Group 2) is mentioned previously and the modified model is as follows:

$$\Delta logEBIT_{i,t} = \beta_0 + + \beta_1 LCL_t * Group1 + \beta_2 \Delta LogSales_{i,t} + \beta_3 LCL_t * Group1 * \Delta LogSales_{i,t} + \mu X_{it} + \gamma_i + \theta_t + \varepsilon_{it,,}$$

where *Group1* is set to 1 if the firms are included in the selected labor-intensive industries and 0 otherwise. We control for the firm and year fixed effects as well.

Panel B of Table 3 provide the results. The results in column 1 show that, relative to firms in Group 2, 1% decrease in sales is related to 0.738% decrease in EBIT before the enactment of LCL in the labor-intensive group (Group1): following the adoption of LCL, 1% decrease in sales is associated with 1.215% decrease in EBIT. The coefficient 0.345 indicates a relative increase of 64.6% (0.477/0.738) in sensitivity of changes in EBIT to changes in sales (degree of operating leverage) for Group 1. After including the control variables, the degree of operating leverage still suffers a 50.5% increase. The results are still significant after the book leverage is controlled in column 3. The main take-away from Panel B is that the labor-intensive firms face higher business risk than the capital-intensive group stemming from the LCL.

Table 3: Operating Leverage and LCL

This table provides regression results of the impact of LCL on operating leverage for industrial firms from 2005 to 2011.Panel A reports the results of full sample. Panel B reports the results of comparison between Group 1 and Group 2. The dependent variable, Δ*Log(EBIT)*, is the one-year change in the natural logarithm of earnings before interest and taxes. *LCL* is an indicator variable set to 1 if the year is in or after 2008 and zero otherwise. Δ*Log(Sales)* is the one-year change in the natural logarithm of total sales. *Group1* is an indicator variable set to 1 if the firms are included in the selected labor-intensive industries (Group 1) and zero (Group 2) otherwise. All continuous variables are defined in table 1 and winsorized at their 1st and 99th percentiles. Firm and year fixed effects are both controlled. T-values are reported in parentheses. *, **, and *** marked with coefficients represent significance level 10%, 5%, and 1% respectively.

Panel A: Full Sample		
Variable	ΔLog(EBIT)	
	(1)	(2)
LCL	-0.013	-0.056
	(-0.41)	(-1.42)
ΔLog(Sales)	0.730***	0.624***
	(24.76)	(14.3)
LCL*ΔLog(Sales)	0.263***	0.187***
	(6.05)	(3.50)
Firm Size		0.019
		(0.68)
Risk		-0.379***
		(-7.27)
Tangibility		-0.083
		(-0.62)
Profitability		6.612***
		(26.54)
Nondebt Tax Shields		1.05
		(1.09)
Dividend Payer		0.111***
		(4.35)
Year Fixed Effects	Yes	Yes
Firm Fixed Effects	Yes	Yes
Observations	8,527	8,012
Adjusted R^2	0.215	0.276

Panel B: Comparison between Group1 and Group2			
Variable	ΔLog(EBIT)		
	(1)	(2)	(3)
LCL*Group1	-0.092	-0.104	-0.099
	(-1.21)	(-1.41)	(-1.35)
ΔLog(Sales)	0.738***	0.707***	0.568***
	(12.18)	-12.04	(7.16)
LCL*Group1*ΔLog(Sales)	0.477***	0.357***	0.460***
	(3.85)	(2.95)	(3.62)
Firm Size		0.160**	0.113*
		(2.38)	(1.72)
Risk		-0.287**	-0.290**
		(-2.42)	(2.49)
Tangibility		-0.162	-0.108
		(-0.64)	(-0.44)
Profitability		4.889***	5.659***
		(8.00)	(9.33)
Nondebt Tax Shields		-2.72	-2.737
		(-0.96)	(-0.98)
Dividend Payer		0.035	0.015
		(0.62)	(0.26)
Book Leverage			0.941***
			(4.11)
Year-Industry Fixed Effects	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes
Observations	1016	1082	1051
Adjusted R^2	0.357	0.329	0.306

5.2.2. Effect of LCL on Labor Intensity

5.2.2.1. Full Sample

We firstly dig in how a firm deals with labor intensity. We run an OLS regression of labor intensity on LCL for the full sample. The model is as followed:

$$LaborInt_{i,t} = a_0 + a_1 LCL_t + b X_{it} + \gamma_i + \theta_t + \varepsilon_{it,}$$

where $LaborInt_{i,t}$ represents labor intensity at firm i in year t., LCL is a dummy variable which equals to 1 if the year is 2008 or after, and 0 otherwise. Control variables X_{it} mentioned previously are included in the regression model. Additionally, we control for firm fixed effects (γ_i), and year fixed effects (θ_t).

Panel A of Table 4 presents results of the full sample. Model 1 in the first column only incudes the LCL without any control variables. The results show that labor intensity of the sample firms experience a significant decline. In model 2, we include all control variables. The coefficient is still negative and significant. The adjusted-R^2 increases by a slight 2.9%. The small rise in adjusted-R^2 implies that the labor contract law explains most of the decline in the labor intensity for the full sample.

5.2.2.2. Group1 vs Group2

We further test the differential impact of LCL on labor intensity between Group 1 and Group2, and still follow Serfling (2016) and Ni & Zhu (2017) to set up a modified model shown as followed:

$$LaborInt_{i,t} = b_0 + + b_1 LCL_t + b_2 Group\ 1_{i,t} + b_3 LCL_t * Group\ 1_{i,t} + \mu X_{it} + \gamma_i + \theta_t + \varepsilon_{it,}$$

Panel B of Table 4 presents results. The coefficient of the interaction variable is our main interest. Model 1 in the first column includes the LCL only. The results show that labor intensity

of firms in Group 1 experience a greater decline than that of firms in Group 2. In model 2, we include all control variables. The coefficient of the interaction variable is negatively and significant at the 1% level. The adjusted-R^2 increases by a slim 3.3%. The small increment in adjusted-R^2 implies that the labor contract law explains most of the decline in the labor intensity.

Table 4. Labor Intensity and LCL

This table provides OLS regression results of the impact of LCL on Labor Intensity for industrial firms from 2005 to 2011.The dependent variable is *Labor Intensity* defined as the ratio of total employees to book value of total assets (per 1 million). *LCL* is an indicator variable set to 1 if the year is in or after 2008 and zero otherwise. *Group1* is an indicator variable set to 1 if the firms are included in the selected labor-intensive industries (Group 1) and zero (Group 2) otherwise. All continuous variables are the same as table 3 and winsorized at their 1st and 99th percentiles. Firm and year fixed effects are both controlled. T-values are reported in parentheses. *, **, and *** marked with coefficients represent significance level 10%, 5%, and 1% respectively. Panel A reports the results of Full sample. Panel B reports the results of differential effects of the LCL between Group 1 and Group 2.

Panel A: Full Sample		
Variable	Labor Intensity	
	(1)	(2)
LCL	-0.523***	-0.234***
	(-26.21)	(-18.11)
Control Variables	No	Yes
Year Fixed Effects	Yes	Yes
Firm Fixed Effects	Yes	Yes
Observations	10,257	9,686
Adjusted R^2	0.783	0.812

Panel B: Group 1 vs Group 2		
Variable	Labor Intensity	
	(1)	(2)
LCL	-0.517***	-0.245***
	(-7.02)	(-3.10)
LCL*Group1	-0.392***	-0.397***
	(-5.65)	(-6.10)
Control Variables	No	Yes
Year Fixed Effects	Yes	Yes
Firm Fixed Effects	Yes	Yes
Observations	1,320	1,251
Adjusted R^2	0.821	0.854

5.2.3. Effect of LCL on Tangibility

5.2.3.1. Full Sample

We then explore how LCL has impact on tangibility. We run an OLS regression of tangibility on LCL for the full sample. The model used in the test of labor intensity is still applied with the new dependent variable of tangibility.

Panel A of Table 5 presents results of the full sample. Model 1 in the first column only incudes the LCL without any control variables. The results reveals that tangibility of the sample firms significantly declines in the post-law period. In model 2, we include all control variables. The coefficient is still negative and significant. The adjusted-R^2 increases by 7.4%. The results from both models imply that firms respond to the increasing labor costs via reducing tangibility.

5.2.3.2. Group1 vs Group2

We then further investigate the differential impact of LCL on tangibility between two groups. We still use the model of labor intensity and change the dependent variable to tangibility. Panel B of Table 5 presents results. The coefficient of the interaction variable is our main

interest. Model 1 in the first column includes the LCL only, while model 2 in the second column includes all control variables. However, the coefficients of the interaction item (main interest) in both models are insignificant. We argue that Group 1 (labor-intensive firms) have lower percentage of fixed assets than Group 2 (capital-intensive firms) and as such Group 1 firms have little room to reduce fixed assets to lessen the influence of higher labor costss. We also used Group 2 as a dummy that takes on a value of 1, the interaction coefficient is negative but the level of significance is 10.4%.

Table 5. Labor LCL and Tangibility

This table provides OLS regression results of the impact of LCL on Tangibility for industrial firms from 2005 to 2011.The dependent variable is *Tangibility* defined as the ratio of net fixed asset to book value of total assets. *LCL* is an indicator variable set to 1 if the year is in or after 2008 and zero otherwise. *Group1* is an indicator variable set to 1 if the firms are included in the selected labor-intensive industries (Group 1) and zero (Group 2) otherwise. All continuous variables are the same as table 3 and winsorized at their 1st and 99th percentiles. Firm and year fixed effects are both controlled. T-values are reported in parentheses. *, **, and *** marked with coefficients represent significance level 10%, 5%, and 1% respectively. Panel A reports the results of Full sample. Panel B reports the results of comparison between Group 1 and Group 2.

Panel A: Full Sample		
Variable	Tangibility	
	(1)	(2)
LCL	-0.073***	-0.060***
	(-21.76)	(-18.80)
Control Variables	No	Yes
Year Fixed Effects	Yes	Yes
Firm Fixed Effects	Yes	Yes
Observations	10,915	10,339
Adjusted R^2	0.764	0.838

Panel B: Group 1 vs Group 2		
Variable	Tangibility	
	(1)	(2)
LCL	-0.107***	-0.079***
	(-5.67)	(-4.50)
LCL*Group1	0.017	0.008
	(0.83)	(0.48)
Control Variables	No	Yes
Year Fixed Effects	Yes	Yes
Firm Fixed Effects	Yes	Yes
Observations	1329	1259
Adjusted R^2	0.725	0.822

5.2.4. Effect of LCL on Financial Leverage

5.2.4.1. Full Sample

In this section, we investigate the effect of the LCL on financial leverages of Chinese firms. We start with an OLS approach for the full (pooled) sample. Panel A of Table 6 presents the results of full sample analysis examining the effect of LCL on book leverage within different specification. In column 1, we only include LCL.We find that, following the adoption of LCL, firms' book leverage significantly declines by 4.5%. Accounting for control variables in column 2, the relation between book leverage and LCL is still negative and significant. The results also reveal that *firm size* and *tangibility* are positively, but *risk, profitability, nondebt tax shields* and *dividend payer* are negatively related to a firm's book leverage. The positive coefficient of the size is justified by the easier access of larger firms to external financing at cheaper costs (e.g., Chittenden et al., 1996; Marsh, 1982; Rajan and Zingales, 1995). Similarly, the positive sign of tangibility is supported by the lower bankruptcy costs (e.g., Chen, 2004; Long and Malitz, 1985). The negative relation between profitability and leverage is supported by Myers and Majluf's

pecking order theory (1984). In addition, the negative relation between nondebt tax shields and leverage is consistent with the prediction of DeAngelo and Masulis (1980).

Additionally, in column 3, we investigate the relation between book leverage and labor intensity before and after the LCL. The coefficient implies a positive relation between book leverage and labor intensity. However, the coefficient is not significant. After the LCL, this relation switches to be negative. The net effects of LCL on book leverage imply that, following the adoption of LCL, labor-intensive firms are likely to lower their book leverage more than the capital-intensive firms.

Panel B of Table 6 shows a similar relationship between market leverage and the enactment of LCL. The effects of LCL on market leverage is negative and significant. The result does not change when we control for *firm size, risk, tangibility, profitability, nondebt tax shields* and *dividend payer* However, R^2 improves by 1%. Column 3 further shows that before the adoption of LCL, 1% increase in labor intensity leads to 2.1% increase in market leverage. Following its passage, however, 1% increase in labor intensity induces 0.3% decrease in market leverage. The switch of the direction of the effect of LCL on market leverage reveals that labor-intensive firms lower their market leverage more than their capital intensive counterparts in response to the LCL.

Table 6: Financial Leverage and LCL

This table provides OLS regression results of the impact of LCL on Financial Leverage for industrial firms from 2005 to 2011.The dependent variables are *Book Leverage* and *Market Leverage* defined in Table 1. *LCL* is an indicator variable set to 1 if the year is in or after 2008 and zero otherwise. *Group1* is an indicator variable set to 1 if the firms are included in the selected labor-intensive industries (Group 1) and zero (Group 2) otherwise. All continuous variables are the same as Table 3 and winsorized at their 1st and 99th percentiles. Firm and year fixed effects are both controlled. T-values are reported in parentheses. *, **, and *** marked with coefficients represent significance level 10%, 5%, and 1% respectively. Panel A and Panel B report the results of Full sample. Panel C reports the results of comparison between Group 1 and Group 2.

Panel A: Book Leverage and LCL (Full Sample)			
Variable	Book Leverage		
	(1)	(2)	(3)
LCL	-0.045***	-0.072***	-0.065***
	(-11.97)	(-17.76)	(-13.61)
Labor Intensity			0.003
			(1.56)
LCL*Labor Intensity			-0.004**
			(-2.20)
Firm Size		0.059***	0.056***
		(24.42)	(21.79)
Risk		-0.015***	-0.016***
		(-2.69)	(-2.75)
Tangibility		0.165***	0.159***
		(12.55)	(11.80)
Profitability		-0.487***	-0.501***
		(-32.34)	(-32.03)
Nondebt Tax Shields		-0.247*	-0.330**
		(-1.75)	(-2.21)
Dividend Payer		-0.010***	-0.010***
		(-3.31)	(-3.09)
Year Fixed Effects	Yes	Yes	Yes
Firm Fixed Effect	Yes	Yes	Yes
Observations	10,820	10,250	9,608
Adjusted R^2	0.644	0.706	0.705

Panel B: Market Leverage and LCL (Full Sample)			
Variable	Market Leverage		
	(1)	(2)	(3)
LCL	-0.272***	-0.515***	-0.276***
	(-10.04)	(-16.24)	(-13.40)
Labor Intensity			0.021**
			(2.20)
LCL*Labor Intensity			-0.024***
			(-2.82)
Firm Size		0.367***	0.211***
		(19.20)	(18.83)
Risk		-0.023	0.002
		(-0.52)	(0.08)
Tangibility		0.468***	0.278***
		(4.53)	(4.79)
Profitability		-1.055***	-0.925***
		(-8.87)	(-13.63)
Nondebt Tax Shields		-0.513	-3.296***
		(-0.46)	(-5.11)
Dividend Payer		-0.068***	-0.063***
		(-2.76)	(-4.66)
Year Fixed Effects	Yes	Yes	Yes
Firm Fixed Effect	Yes	Yes	Yes
Observations	10,753	10,225	9,583
Adjusted R^2	0.772	0.782	0.722

Panel C: Group 1 vs Group 2		
Variable	Book Leverage	Market Leverage
	(1)	(2)
LCL	-0.070***	-0.577***
	(-5.41)	(-3.19)
LCL*Group1	-0.030***	-0.369**
	(-2.97)	(-2.28)
Control Variables	Yes	Yes
Year Fixed Effects	Yes	Yes
Firm Fixed Effects	Yes	Yes
Observations	1146	1146
Adjusted R^2	0.744	0.507

5.2.4.2. Group1 vs Group2

Next, we further explore the differences of changes in financial leverage between Group 1 and Group 2. We still follow and modify the Serfling (2016) and set up a panel regression for our test. The model is as follow:

$$DR_{i,t} = c_0 + c_1 LCL_t + c_2 Group\ 1_{i,t} + c_3 LCL_t * Group\ 1_{i,t} + d * X_{it} + \gamma_i + \theta_t + \varepsilon_{it}$$

where $DR_{i,t}$ represents book leverage and market leverage for firm i in year t.

Panel C of Table 6 presents the results. The results confirm a significantly negative relation between financial leverage and stricter labor law, a result that is consistent with the findings of Serfling (2016), among others. The coefficient of the interaction part is our main interest. The results in Table 6 show that a firm's book (market) leverage in the labor-intensive group experience a decline of 3.0% (36.9%) greater than that in the capital-intensive group.

Taking Table 4 and 6 together, we observe that Chinese firms face higher labor costs as a consequence of the LCL. Facing higher labor costss, Chinese firms resort to lowering both

operating and financial risks. On the operating leverage side, the firms reduce the labor intensity, with the labor-intensive firms being able to lower the intensity more than capital intensive firms. Another way Chinese firms confront the rising labor costss is by lowering the financial leverage, with a high labor-intensive firm needing to lower the financial leverage more than a low labor-intensive firm.

5.2.5. Effect of LCL on Corporate Investment

5.2.5.1. Full Sample

Previously, we have found firms choose to reduce labor intensity and financial leverage to respond to the increased labor costs due to the adoption of LCL. In the following sections, we continue to investigate how firms adjust their corporate investment, measured as capital expenditures scaled by beginning of year total assets. Firstly, we explore the relationship between corporate investment and LCL for full sample. The OLS model is as followed:

$$CapEx_{i,t} = \kappa_0 + \kappa_1 \ LCL_t + \rho X_{i,t-1} + \gamma_i + \theta_t + \varepsilon_{it,}$$

where $CapEx_{i,t}$ represents capital expenditures scaled by beginning of year total assets at firm i in year t. Different set of control variables from previous analysis are applied in the above model. The beginning of year value of Tobin's Q, cash flow, cash holding and firm size are all defined in Table 1. In addition, we control for firm fixed effects and year-industry fixed effects. The firm-fixed effects help us to control time-invariant unobservable firm characteristics while year-industry fixed effects capture the time-varying industry characteristics.

Table 7: Capital Expenditure and LCL

This table provides OLS regression results of the impact of LCL on Capital Expenditure for industrial firms from 2005 to 2011.The dependent variables is *CapEx* defined as Capital expenditures scaled by beginning of year book value of total assets. *LCL* is an indicator variable set to 1 if the year is in or after 2008 and zero otherwise. *Group2* is an indicator variable set to 1 if the firms are included in the selected capital-intensive industries (Group 2) and zero (Group 1) otherwise. All continuous variables are defined in Table 1 and winsorized at their 1st and 99th percentiles. Firm and year fixed effects are both controlled. T-values are reported in parentheses. *, **, and *** marked with coefficients represent significance level 10%, 5%, and 1% respectively. Panel A reports the results of Full sample. Panel B reports the results of DiD approach between Group 2 and Group 1.

Panel A: Capital Expenditure and LCL(Full Sample)		
Variable	$CapEx_t$	
	(1)	(2)
LCL	-0.004	-0.039***
	(-1.51)	(-1.73)
Tobin's Q $_{t-1}$		0.005***
		(8.36)
Book Leverage $_{t-1}$		0.012
		(1.47)
Cash Holding $_{t-1}$		-0.002
		(-0.19)
Cash Flow $_{t-1}$		0.038***
		(3.53)
Firm Size $_{t-1.}$		0.043***
		(20.85)
Year Fixed Effects	Yes	Yes
Firm Fixed Effects	Yes	Yes
Observations	10,246	9,124
Adjusted R^2	0.373	0.395

Panel B: Capital Expenditure and LCL (Group 2 vs Group 1)		
Variable	$CapEx_t$	
	(1)	(2)
LCL	-0.002	-0.063***
	(-0.19)	(-4.54)
LCL*Group 2	-0.011	-0.024**
	(-1.13)	(-2.27)
Control Variables	No	Yes
Year Fixed Effects	Yes	Yes
Firm Fixed Effects	Yes	Yes
Observations	1,366	1,189
Adjusted R^2	0.217	0.285

Panel A of Table 7 provides the results. Column 1 includes only firm and year effects as control variables and shows a positive but insignificant relation between capital expenditures and LCL. The insignificant relation could be due to other known predictor of capital expenditures. After adding the set of control variable mentioned above, we capture a negative and significant relation between capital expenditures and the enactment of LCL. Capital expenditures in fixed assets declines by 3.9% following the adoption of LCL.

5.2.5.2. Group 2 vs Group 1

We further test the relation between capital expenditures and LCL via comparing the ex-post changes in capital expenditures between two groups. The assignment of the groups in this model is different from previous model. Capital-intensive firms (Group 2) are included in treatment group while labor-intensive firms (Group 1) are assigned into control group. The model is as followed:

$$CapEx_{i,t} = d_0 + d_1 LCL_t + d_2 Group\ 2_{i,t} + d_3 LCL_t * Group\ 2_{i,t} + f * X_{it} + \gamma_i + \theta_t + \varepsilon_{it}$$

where *Group2* is set to 1 if the firms are included in the selected capital-intensive industries or 0 else. Firm and year fixed effects are still controlled.

Panel B of Table 7 presents the results. The coefficient estimate of the interaction item is our main interest. Column 1 includes indicator variables for LCL and group, the interaction of LCL and group dummies, firm fixed effects and year fixed effects as control variables. The results show a negative and but insignificant relation between capital expenditures and LCL. Column B controls investment opportunities (Tobin's Q), cash flow, cash holding, financial leverage and firm size. The results indicates that, relative to labor-intensive firms, capital-intensive firms decrease the capital expenditures in fixed assets by 2.4% following the adoption of LCL.

5.2.6. Sales Growth and LCL

5.2.6.1. Full Sample

We have shown the negative relation between corporate investment and the enactment of LCL. The increasing labor costs due to the enhanced employment protection hinder the investment activity. The lower rate of investment could also restrict the firm's growth. Therefore, in this section, we explore the association between sales growth and the adoption of LCL. Full-sample analysis is implemented firstly. The model, similar to that in capital expenditure analysis, uses sales growth as dependent variable. The results in Panel A of Table 8 also indicate a negative relationship between sales growth and LCL after controlling Tobin's Q, cash flow, cash holding, financial leverage, firm size, firm fixed effect and year-industry fixed effect.

Table 8: Sales Growth and LCL

This table provides OLS regression results of the impact of LCL on Sales Growth for industrial firms from 2005 to 2011.The dependent variables is *Sales Growth* defined as one-year growth rate. *LCL* is an indicator variable set to 1 if the year is in or after 2008 and zero otherwise. *Group2* is an indicator variable set to 1 if the firms are included in the selected capital-intensive industries (Group 2) and zero (Group 1) otherwise. All continuous variables are defined in Table 1 and winsorized at their 1st and 99th percentiles. Firm and year fixed effects are both controlled. T-values are reported in parentheses. *, **, and *** marked with coefficients represent significance level 10%, 5%, and 1% respectively. Panel A reports the results of Full sample. Panel B reports the results of differential effects of the LCL between Group 2 and Group 1.

Panel A: Sale Growth and LCL(Full Sample)		
Variable	Sale Growth$_t$	
	(1)	(2)
LCL	-0.141	-0.279***
	(-0.68)	(-8.19)
Tobin's Q$_{t-1}$		0.046***
		(8.21)
Book Leverage$_{t-1}$		-0.684***
		(-8.37)
Cash Holding$_{t-1}$		0.007
		(0.07)
Cash Flow$_{t-1}$		0.860***
		(7.64)
Firm Size$_{t-1}$		0.475***
		(22.41)
Year Fixed Effects	Yes	Yes
Firm Fixed Effects	Yes	Yes
Observations	10,639	9,516
Adjusted R^2	0.019	0.071

Panel B: Sales Growth and LCL(Group 2 VS Group 1)		
Variable	Sale Growth$_t$	
	(1)	(2)
LCL	0.067	-0.530***
	(1.24)	(-3.10)
LCL*Group 2	-0.027	-0.297**
	(-0.51)	(-2.18)
Control Variable	No	Yes
Year*Industry Fixed Effects	Yes	Yes
Firm Fixed Effects	Yes	Yes
Observations	1,422	1,221
Adjusted R^2	0.028	0.091

5.2.6.2. Group 2 vs Group 1

We test the relation between sales growth and the LCL via investigating the differential impacts of the LCL between Group 2 and Group 1. The model used is the same as used in corporate investment except the different dependent variable, which is sale growth. Panel B of Table 8 presents the results of the comparison between two groups. The coefficient estimate of the interaction item is our main interest. Column 1 includes indicator variables for LCL and group, the interaction of LCL and group dummies, firm fixed effects and year fixed effects as control variables. The results reveal a negative and significant association between sales growth and the adoption of LCL. Relative to labor-intensive firms, capital-intensive firms' sales growth is 29.7% significantly slower after the enactment of LCL after adding the same set of controls variables as in our corporate investment regression in column 2.

5.2.7. Dynamic Model

Although the discussions above indicate stronger employment protection leads to lower labor intensity, financial leverage, and capital expenditure, and slower growth rate, the results

might be affected by a potential endogeneity bias. The endogeneity concerns stems from two aspects:

a. The potential reverse causality as firms could have increased labor intensity, borrowed more money or invested more in fixed assets in anticipation of the passing of LCL.
b. Two groups might trend differently before the enactment of LCL.

The main purpose of the dynamic test is to validate the assumption that both group trend the same way before LCL. To solidify our results, we follow Bertrand and Mullainathan (2003) and apply dynamic models as follow:

$$G1_t = \alpha_0 + \tau_1 Group1_{i,t} * LCL_t (-2,-1) + \tau_2 Group1_{i,t} * LCL_t (0) + \tau_3 Group_{i,t} * (1) + \tau_4 Group1_{i,t} * (\geq 2) + \mu X1_{it} + \gamma_i + \theta_t + \varepsilon_{it},$$

$$G2_{t+1} = \alpha_0 + \tau_4 Group2_{i,t} * LCL_t (-2,-1) + \tau_5 Group2_{i,t} * LCL_t (0) + \tau_6 Group2_{i,t} * (1) + \tau_7 Group2_{i,t} * (\geq 2) + \mu X2_{it} + \gamma_i + \theta_t + \varepsilon_{it},$$

where $G1_t$ represents Δ*Log (EBIT), Labor Intensity, Book Leverage and Market Leverage* in different specifications, respectively. $G2_{t+1}$ represents *CapEx* and *Sales Growth,* respectively. *LCL (-2,-1)* is an indicator variable set to 1 if the year is in 2006 or 2007 and zero otherwise. *LCL (0)* is an indicator variable set to 1 if the year is in 2008 zero otherwise. *LCL (1)* is an indicator variable set to 1 if the year is in 2009 zero otherwise. *LCL (≥2)* is an indicator variable set to 1 if the year is in 2010 or after and zero otherwise. *Group1* is an indicator variable set to 1 if the firms are included in the selected labor-intensive industries (Group 1) and zero (Group 2) otherwise. The interaction item, *Group1*LCL (-2,-1),* is the independent variable with main interest. *X1,* a set of control variables used in the first dynamic models, includes firm size, risk, tangibility, profitability, non-debt taxshields and dividend payer status. *X2,* another set of control

variables used in the second dynamic models, includes Tobin's q value, book leverage, cash flow, cash holding and firm size.

In Table 9, we report the estimates of dynamic model. According to the results in Panel A, the coefficients of our main interest *Group1*LCL (-2, -1)* in all 4 columns are all insignificant, demonstrating that there does not exist pre-law trend in Δ*Log (EBIT), Labor Intensity, Book Leverage and Market Leverage* . The coefficients of *Group1*LCL(0), Group1*LCL(1),* and *Group1*LCL(≥2)* for labor intensity, book leverage, and market leverage become significant after the passage of LCL. In addition, the significance level increase as year goes by. We argue the effect of the LCL on a firm become more significant with the passage of time, so does the firm's reaction. In Panel B, the coefficients of our main interest *Group2*LCL (-2, -1)* for corporate investment and sales growth are both insignificant as well. A firm adjusts its investment decision to reduce its capital expenditure in fixed assets more significantly as the year goes on. Overall, we conclude that firms' operating leverage, labor intensity, financial leverage, investment and sale growth rate all change significantly in response to the shock of the LCL, and our results are not subject to 'different-trend' endogeneity issue.

Table 9. Dynamic Model

This table presents results of Dynamic Model. Panel A reports the results from pre-treatment trend analysis relating to operating leverage, labor intensity and financial leverage. The dependent variables from column (1) to column (4) in Panel A are Δ*Log (EBIT), Labor Intensity, Book Leverage and Market Leverage*, respectively. Panel B reports the results from pre-treatment trend analysis related to investment and sale growth. The dependent variables from column (1) and column (2) in Panel B are *CapEx* and *Sales Growth*, respectively. *LCL (-2,-1)* is an indicator variable set to 1 if the year is in 2006 or 2007 and zero otherwise. *LCL (0)* is an indicator variable set to 1 if the year is in 2008 zero otherwise. *LCL (1)* is an indicator variable set to 1 if the year is in 2009 zero otherwise. *LCL (≥2)* is an indicator variable set to 1 if the year is in 2010 or after and zero otherwise. *Group1* is an indicator variable set to 1 if the firms are included in the selected labor-intensive industries (Group 1) and zero (Group 2) otherwise. The interaction item, *Group1*LCL (-2,-1)*, is the independent variable with main interest. All continuous variables are winsorized at their 1st and 99th percentiles. Firm and year fixed effects are both controlled. T-values are reported in parentheses. *, **, and *** marked with coefficients represent significance level 10%, 5%, and 1% respectively.

Panel A: Pre-Treatment Trend relating to Operating Leverage, Labor Intensity, and Financial Leverage				
Variable	ΔLog(EBIT)	Labor Intensity	Book Leverage	Market Leverage
	(1)	(2)	(3)	(4)
Group1*LCL(-2,-1)	0.200	0.044	-0.025	-0.293
	(1.43)	(0.41)	(-1.24)	(-1.17)
Group1*LCL(0)	0.172	-0.258**	-0.043*	-0.500*
	(0.51)	(-2.13)	(-1.85)	(-1.72)
Group1*LCL(1)	0.004	-0.338***	-0.048**	-0.542*
	(0.02)	(-2.83)	(-2.20)	(-1.82)
Group1*LCL(≥2)	0.807***	-0.435***	-0.045**	-0.672**
	(4.29)	(-4.08)	(-2.27)	(-2.56)
Control Variable	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes
Observations	1,082	1,251	1126	1126
Adjusted R^2	0.317	0.854	0.647	0.505

Panel B: Pre-Treatment Trend relating to Investment and Sale Growth		
Variable	CapEx	Sales Growth
	(1)	(2)
Group2*LCL(-2,-1)	-0.020	-0.074
	(-1.09)	(-0.33)
Group2*LCL(0)	-0.039*	-0.235
	(-1.93)	(-0.91)
Group2*LCL(1)	-0.036*	-0.254
	(-1.81)	(-0.99)
Group2*LCL(≥2)	-0.039**	-0.456**
	(-2.19)	(-2.00)
Control Variable	Yes	Yes
Year Fixed Effects	Yes	Yes
Firm Fixed Effects	Yes	Yes
Observations	1,189	1,221
Adjusted R^2	0.283	0.090

6. Conclusions

A debate exists regarding the effect of labor protection laws on labor costss. Whether labor protection laws increase or decrease labor costss has implications for risk exposure of affected firms. If the labor costs goes up, all else the same, the firm's breakeven point goes up. Facing increased business risk, the firm takes on a two-pronged attack: reduce operating leverage as well as financial leverage. On the other hand, if the labor costs decreases, a firm's business risk declines, entailing different reaction from firms.

By examining the Chinese firms' reactions to the 2007 labor protection laws, we draw conclusions about laws' directional impact on the labor costs. We find that Chinese firms attempt to reduce business risk by lessening labor intensity and investments in tangible assets. We consider two subsamples—one that fall in the high labor-intensive group (Group 1) and the other that fall in the high capital-intensive group (Group 2). Group 1 firms are able to reduce the labor intensity at a significantly higher rate than Group2 firms. Neither group is able to significantly reduce tangibility. Full sample as well as both subsamples significantly reduce financial leverages. As a result of these strategies, firms' investments, as measured by capital expenditures and sales growth, decline. These results are consistent with the cost of labor increasing consequent to the passing of stricter labor protection laws.

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