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Legal Information Transparency and Capital Misallocation: Evidence from China

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This paper examines how legal transparency affects capital allocation by leveraging regional differences in the implementation of China's 2014 judicial reform, which mandated public disclosure of court judgment documents. Guided by a theoretical framework linking information frictions to capital misallocation, we empirically show that greater transparency reallocates credit and capital toward firms with initially higher marginal revenue products of capital (MRPK), leading to increased aggregate output. To address various endogeneity concerns, we employ region-by-year fixed effects, triple-difference and instrumental variable approaches, and explore heterogeneity across firm types and industries.

Keywords： Information Frictions, Capital Misallocation, Legal Transparency, Aggregate Output.

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Abstract

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1. Introduction

Information frictions, often manifested as financial or contractual frictions, are widely recognized as key drivers of resource misallocation, thereby undermining overall economic performance (Jovanovic, 1982; Kurlat, 2013; Bigio, 2015; Li and Whited, 2015; Fuchs, Green and Papanikolaou, 2016; David, Hopenhayn and Venkateswaran, 2016; David and Venkateswaran, 2019; Boehm and Oberfield, 2020). Despite their acknowledged importance, empirically identifying the impact of information frictions on misallocation remains challenging. First, such frictions are inherently difficult to measure. Second, they may be endogenous, as market participants can strategically decide the extent of information disclosure. This paper examines how information frictions affect capital misallocation across firms and aggregate economic outcomes by exploiting a large-scale legal transparency reform in China as a natural experiment.

In 2014, China launched a landmark judicial transparency reform that made lawsuit information, previously unavailable to the public, widely and easily accessible. Courts were required to publish the judgment documents online for nearly all cases,[1] and these documents were not anonymized, allowing users to search company names and view their legal histories. Third-party platforms further streamlined access by compiling and organizing this legal information, substantially improving the visibility of firms' legal risks.

We exploit regional variation in the implementation of the reform to examine how lawsuit information transparency affects capital misallocation and aggregate economic output. Our main explanatory variable, legal transparency, is constructed as the proportion of closed cases with publicly disclosed judgment documents in each region. Since the vast majority of court-disclosed cases involve local defendants—approximately 92.3% at the provincial level and 89.0% at the prefecture level—regional transparency measures effectively capture the extent of information availability of local firms. Our results are highly consistent across alternative measures, including the disclosure rate of civil cases, same-year case closures, contract disputes, and the disclosure rate adjusted for the informational richness of judgments.

We develop a theoretical framework to formalize how information frictions contribute to capital misallocation, highlighting the interplay between information frictions and financial frictions, which guides our subsequent empirical analysis. As legal transparency improves, lenders gain better access to firm-level information and can more easily distinguish between firms with strong and weak fundamentals. Consequently, credit is reallocated away from less productive firms and toward more productive ones. We adopt the approach proposed by Bau and Matray (2023), which considers a relative decline in MRPK and an increase in capital among initially high-MRPK firms as evidence of reduced misallocation. Accordingly, we expect that greater legal transparency will improve capital allocation efficiency and increase aggregate output.

[1] Except for cases related to national security and personal privacy.

Identification Assumptions To ensure the validity of our identification assumptions regarding the quasi-random implementation of the reform across regions, we conduct a series of empirical tests and adopt multiple identification strategies. First, similar to Bau and Matray (2023), our identification does not require the assumption that legal transparency and economic conditions are uncorrelated. To be specific, our main focus is on examining the *differential* impacts of legal transparency on high versus low MRPK firms, thus excluding confounders at the region-by-year and industry-by-year levels by including fixed effects.

Second, we confirm that the implementation of the reform is unlikely to be correlated with pre-reform economic factors related to misallocation. This is because the reform was primarily driven by judicial system dynamics rather than economic considerations.[2] To verify this, we show that post-reform legal transparency is uncorrelated with pre-reform economic fundamentals typically associated with misallocation, including MRPK dispersion (Hsieh and Klenow, 2009), the share of state-owned firms (Brandt, Kambourov and Storesletten, 2025), and market concentration ratios.

Third, we explicitly test the parallel trends assumption—that in the absence of the legal transparency reform, differences in outcomes between firms with ex-ante high and low MRPK across provinces with varying transparency levels would have evolved similarly. A triple-difference analysis, comparing firms by initial MRPK, province-level transparency, and pre/post-reform periods, confirms that high- and low-MRPK firms exhibited similar pre-reform trends in key outcomes, ensuring that post-reform effects are not driven by pre-existing differences.

Fourth, we employ an instrumental variable approach leveraging exogenous variation in regional legal transparency driven by provincial court leaders' central government and Supreme People's Court (hereafter, SPC) work experience. The rationale is that court leaders with such connections are less reliant on Zhou Qiang—the then-president of the SPC and key proponent of the reform—for career advancement, and therefore have weaker incentives to actively implement the reform. Importantly, the appointment of local court leaders is generally unrelated to regional economic fundamentals, as their responsibilities are largely independent of economic development. The IV estimates closely mirror our baseline results, suggesting that endogeneity is unlikely to be a major concern.

Finally, we examine the specific mechanism through which legal transparency affects capital allocation to further strengthen the case for causality. If transparency improves credit allocation by reducing information asymmetries, its effects should be more pronounced among firms or industries in which financing decisions are more sensitive to information. We test this by analyzing heterogeneity across firms' public listing status, ownership type, and industry-level contract intensity. The results are consistent with this mechanism and lend further support to our identification strategy.

[2]This is also verified by existing literature who find the post-reform transparency largely related to local courts' recognition of the Supreme People's Court's authority (Liu et al., 2022*b*; Chen, Liu and Tang, 2022) while generally unrelated to regional economic conditions (Tang and Liu, 2019).

Main Findings Our empirical findings show that improved legal transparency significantly mitigates capital misallocation. Specifically, for firms with initially high MRPK, a 10-percentage-point increase in the provincial legal transparency results in a 4.4% increase in physical capital and a 7.9% reduction in MRPK, relative to firms with lower MRPK. Our results are robust to alternative measures of legal transparency, including prefectural and county-level indicators, civil cases only, cases closed within the same year, contract dispute cases disclosure rate, and disclosure rates adjusted for information richness. They also hold when excluding large firms whose lawsuits may carry greater social impact, suggesting minimal concern that policy implementation was influenced by economic considerations. In addition, our results are robust when allowing concurrent judicial independence reform (studied in Liu et al. (2022*a*)) to have heterogeneous impact on high and low initial MRPK firms.

Next, we examine whether enhanced legal transparency stimulates industrial output at both firm and industry levels. We find that firms with initially high MRPK experience greater output growth relative to those with low MRPK as legal transparency improves. At the industry level, regions with larger increases in legal transparency exhibit more pronounced gains in industrial output, driven primarily by higher labor productivity rather than workforce expansion. Improved legal transparency also encourages new firm entry.

To uncover the mechanism, we directly examine firms' debt financing behavior. Intially high-MRPK firms in regions with higher legal transparency are able to secure more debt financing and exhibit higher overall leverage ratios than low-MRPK firms. To highlight the role of information, we show that long-term debt shifts more strongly toward high-MRPK firms than short-term debt—consistent with corporate finance theory that long-term debt is more information-sensitive. Additionally, firms with initially low (high) MRPK are more (less) likely to be sued and face higher (lower) lawsuit values relative to sales. Moreover, higher disclosed lawsuit values are associated with reduced borrowing in subsequent years. These results establish the mechanism of impact. The disclosure of lawsuits reduces information asymmetry: for firms involved in lawsuits, the disclosure sends a negative signal, while for those not sued, it conveys a positive signal. As a result, more productive firms—typically those with fewer legal disputes—gain relatively greater access to debt financing, leading to improved capital allocation.

To further support this mechanism, we examine heterogeneity along three closely related dimensions: information availability, contract intensity, and dependence on external finance. First, firms' public listing status reflects the level of information available to the market prior to the reform. Consistent with our mechanism, publicly listed firms—already subject to mandatory legal disclosures prior to the reform—exhibit weaker responses to the reform than non-listed firms, reinforcing the role of information frictions. Second, lawsuit disclosures are particularly informative in industries with higher contract intensity. Using the measure proposed by Nunn (2007), we find that such industries experience more pronounced improvements in capital allocation and greater increases in industrial output following the reform. Third, firm ownership serves as a proxy for financial frictions: private firms in China typically face higher financing constraints than state-

owned or foreign firms (Bai, Lu and Tian, 2018). We find that private firms respond more strongly to increased legal transparency, suggesting that improved information plays a key role in reshaping debt financing patterns.

Related Literature Our paper contributes to the literature on misallocation in developing countries. Influential studies by Hsieh and Klenow (2009) and Restuccia and Rogerson (2008) have inspired a growing interest in identifying specific factors driving capital misallocation. This body of research highlights key contributors such as financial frictions (Midrigan and Xu, 2014; Moll, 2014), information frictions (David, Hopenhayn and Venkateswaran, 2016), markup dispersion (Peters, 2020), or combinations of these factors (Song and Wu, 2015). Our paper focuses on the relationship between information frictions and capital misallocation. Relevant theoretical contributions include the works of Kurlat (2013), Bigio (2015), Fuchs, Green and Papanikolaou (2016), and David, Hopenhayn and Venkateswaran (2016), which model how information asymmetries result in capital misallocation and economic inefficiencies. David and Venkateswaran (2019) introduce an empirical methodology to disentangle the sources of capital misallocation, including information frictions. Building on this literature, our study provides empirical evidence showing that reducing information frictions through improved corporate legal transparency can enhance resource allocation and economic performance.

This paper relates to the literature on how information disclosure affects firms' debt financing. Existing studies show that litigation and subsequent declines in credit ratings significantly hinder publicly listed firms' access to bank loans and increase their financing costs (Deng, Willis and Xu, 2014; Oliviero, Park and Zou, 2024; Arena, 2018; Ni and Yin, 2018; Bayar et al., 2024). Local information environment also affects bank lending (Graham, Li and Qiu, 2008; Ma et al., 2023). Our paper makes two distinct contributions. First, rather than focusing solely on the affected firm, we examine the impact of information disclosure on equilibrium credit (mis)allocation across firms. Second, we use a comprehensive dataset primarily consisting of non-listed firms, for which evidence on how information influences credit allocation is relatively scarce.

Our paper is broadly related to the role of institutional quality in economic development. Numerous studies, including North (1991), Murphy, Shleifer and Vishny (1993), Mauro (1995), Barro (1997), Acemoglu, Johnson and Robinson (2001), and Acemoglu and Johnson (2005), argue that low institutional quality—such as widespread corruption, weak contract enforcement, and expropriation risk—impedes economic growth. Specific attention to the relationship between legal institutions, financial development, and economic growth has been given by La Porta et al. (1997), Demirgüç-Kunt and Maksimovic (1998), La Porta et al. (1998), Levine (1999), and Allen, Qian and Qian (2005). In the context of open economies, Wei (2000) pioneers empirical work on the connections between institutional quality and FDI, while Levchenko (2007), Nunn (2007), Costinot (2009), Chor (2010), and Cui, Yu and Zhang (2022) examine how institutions shape international trade. On the impact of judicial quality on socio-economic outcomes, prior research highlights the influence of judicial efficiency on economic performance (Visaria, 2009; Ponticelli and Alencar, 2016;

Boehm and Oberfield, 2020; Chemin, 2020). Our research also focuses on the judicial system as a key element of institutional quality in economic development, with a particular emphasis on how legal information transparency mitigates capital misallocation and promote economic growth.

This paper is also connected to the literature on the role of legal institutions in shaping economic outcomes in China. Allen, Qian and Qian (2005) argue that while the law-finance-growth nexus is relevant to China's state and listed sectors, the private sector—despite lacking robust legal and financial institutional support—has been the primary driver of China's growth. Li and Ponticelli (2022) highlight that the introduction of bankruptcy-specialized courts has facilitated insolvency resolution and improved capital productivity. Additionally, Liu et al. (2022*a*) study the effects of judicial independence reforms in reducing local protectionism and fostering cross-regional economic integration. Liu et al. (2025) examine how lawyers with prior experience as judges influence judicial decisions and broader economic outcomes. We study a distinct reform—legal transparency reform—and focus on its impact on capital misallocation.

The remainder of the paper is organized as follows. Section 2 presents the institutional background of the legal transparency reform in China. Section 3 outlines a theoretical framework that links information frictions to capital misallocation, which helps guide the empirical analysis. Section 4 outlines the measurement of regional legal transparency, presents the empirical specification, and describes the datasets used in the analysis. Section 5 examines firm-level response in capital allocation to changes in legal transparency. Section 6 discusses the output responses at both the firm level and the aggregate industry level. Section 7 examines the channel of impact and explores the heterogeneity in responses based on firms' public listing status, industry-level contract intensity, and firm ownership. Finally, Section 8 concludes the paper.

2. Institutional Background

2.1. The Legal Transparency Reform

China's court system consists of the SPC and three tiers of local courts: high people's courts at the provincial level, intermediate people's courts at the prefectural level, and primary people's courts at the county level.[3] The SPC supervises and manages courts at all levels, ensuring that laws and related directives are properly implemented.

In mid-2013, China initiated a judicial reform led by the then-president of the SPC, Zhou Qiang, aimed at enhancing legal transparency through the online disclosure of judicial information. The SPC issued a directive titled "Provisions of the Supreme People's Court on the Issuance of Judgments on the Internet by the People's Courts" (2013 SPC Notice), mandating the online publication of all judicial decisions starting in January 2014. Courts at all levels were required to upload their judgment documents to a centralized public platform. This reform was implemented

[3]The court system also comprises specialized courts, such as military and maritime courts.

in a top-down manner, with the SPC responsible for organizing, guiding, and supervising local courts to ensure its effective implementation.

The website for publishing judicial documents, China Judgments Online (CJO),[4] has been operational since late 2013. Judgments are typically uploaded within 90 to 180 days of the decision, with 95% of decisions posted within one year (Yang, Qin and He, 2019). As of December 2022, the website hosts over 139.2 million publicly available judicial documents, offering free and open access for users to search and retrieve complete judgments. The SPC requires all judicial documents to follow a standardized format, ensuring consistency in the categories of information provided.

More importantly, the SPC explicitly mandated that local courts could not selectively disclose decisions based on the case type, social impact, or judgment quality. Instead, disclosure was required for all cases, except for those involving state security and sensitive individual privacy.[5] Notably, the disclosed documents are not anonymized, allowing users to search for firm names and review their legal information. As shown in Figure 1, the number of disclosed cases increased substantially following the policy's implementation, with a sharp rise beginning in 2014.

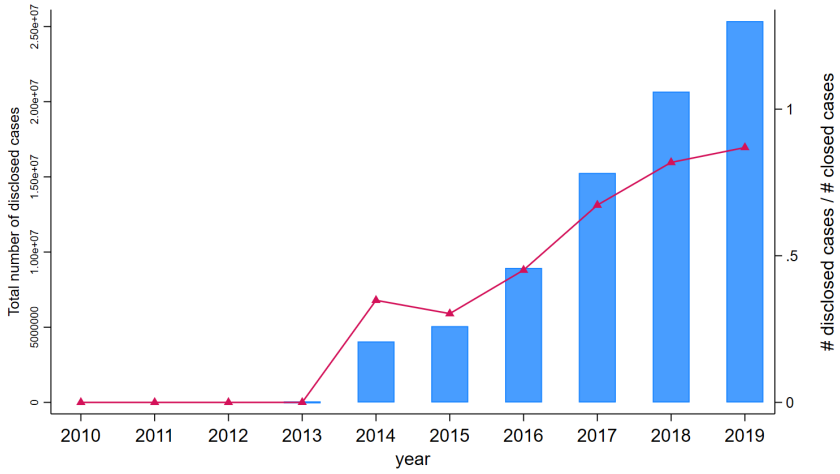

Figure 1. Total Disclosed Cases and Legal Transparency

Notes: This figure displays the total number of disclosed cases (left axis, blue bars) and legal transparency (right axis, connected line) from 2010 to 2019. Legal transparency is measured by the fraction of publicly released cases relative to the total number of closed cases.

Example Judgment Document Figure OA1 in the Appendix presents an example of a judgment document from CJO. Key details include the court name, the parties involved and their basic information, the facts of the case, court-accepted evidence, trial proceedings, applicable legal provisions, and the final decision. The case shown is a sales contract dispute, with detailed descriptions

[4]The website can be accessed at `http://wenshu.court.gov.cn`.

[5]Cases involving state secrets, juvenile defendants, divorce or child custody matters, and certain mediation-based resolutions are generally excluded from online publication to protect privacy, safeguard state secrets, and ensure the safety of those involved.

of Company A's failure to deliver goods on time, constituting a breach of contract. Figure OA2 in the Appendix displays the CJO search interface, which allows users to search for cases by cause of action, case name, court name, or the parties involved, etc. Since its launch, CJO has seen extensive use, with total visits reaching 100.2 billion by December 2022.

Pre-reform Anonymized Disclosure Before the 2013 reform, the SPC permitted lower courts to voluntarily publish judgments on their own official websites. This initiative aimed to educate judges by providing reference cases to improve legal understanding and application. However, the disclosed judgments were highly selective and required case-by-case approval to ensure that only high-quality decisions, which would not jeopardize the interests of the state or the judiciary, were made public (Liu et al., 2022*b*). Consequently, the overall disclosure rate of court decisions prior to 2013 was only 2.7% (Tang and Liu, 2019). More importantly, the SPC mandated that private information, such as names, addresses, and contact details, be anonymized, preventing the disclosed cases from being used to infer the fundamentals of specific firms before the 2013 reform.

Regional Variation in Reform Implementation During the main period studied in this paper, the initial three years of the reform (2014–2016), there was notable variation in implementation across regions. This variation was primarily driven by differences in local judicial systems (Liu et al., 2022*b*), while market development, measured by GDP, has played a limited role in explaining compliance disparities (Tang and Liu, 2019). In particular, the political connections of local court leaders to the central government influenced their willingness to comply with the reform (Chen, Liu and Tang, 2022). To strengthen our identification strategy, we show that the reform is unrelated to pre-reform economic fundamentals and construct an instrumental variable (IV) based on these political connections, as detailed in Section 5.2.

2.2. *Economic Cases Make Up the Majority of Disclosed Judgments*

The information disclosed under the legal transparency reform is predominantly economic in nature. We analyze the universe of first-instance civil judgment documents from 2014 to 2019, with detailed composition information presented in Appendix Figure OA3. Panel (a) shows that 62% of all published judgments involve at least one firm, while the remaining 38% pertain solely to individuals. Among firm-related cases, 60% (38/62) list at least one firm as a defendant.

Panel (b) demonstrates that contract disputes constitute the majority of judgments across all categories. Specifically, contract disputes represent 80.1% of firm-involved cases, 70.2% of cases with firms as defendants, and 66.1% of cases not involving firms. Panel (c) further indicates that these proportions have remained relatively stable over time, suggesting that the reform has meaningfully increased the visibility of contract-related legal risks and provided broader insights into firms' business activities.

To further characterize the nature of firm-related contract disputes, Panel (d) presents the top eight dispute categories involving firms as defendants. These include disputes related to sales, loans, labor, engineering, infringement disputes, leases, insurance, and service contracts. Together, they account for 64.4% of all published judgments and 91.7% of all firm-related contract disputes. Moreover, the most common dispute types for cases involving only individuals follow a broadly similar pattern.

2.3. The Influence of CJO on Credit Markets

Following the establishment of CJO, the Chinese government launched the National Enterprise Credit Information Publicity System to further enhance corporate transparency and information accessibility. Developed using judgment documents, this system aims to improve the availability of corporate legal data. Platforms like Qichacha[6] and Tianyancha[7] have been instrumental in this initiative. Before the policy, these platforms already provided detailed information on all registered firms in China, including registration details, equity structure, industry classification, and registered capital. After the policy's implementation, judicial cases were integrated into these platforms. As shown in Figure OA4 in the Appendix, users can search for a company's total number of historical legal disputes, view ongoing cases, and directly access judgment documents. By making such detailed legal information readily accessible, these platforms have significantly improved transparency and accountability within the business environment.

Before the establishment of CJO, banks and financial institutions in China primarily relied on the Central Bank's credit information platform to assess creditworthiness. This platform provided details on a company's past loans and default records across all banks. The launch of CJO, along with the integration of judicial documents into platforms like Qichacha and Tianyancha, has introduced new data sources, providing banks and financial institutions with easier access to more comprehensive information on corporate risk.

In 2015, China updated its corporate credit evaluation standard, Indicator for Enterprise Credit Evaluation (GB/T 23794-2015), established by the National Standardization Administration.[8] This update explicitly incorporated judicial risks into credit evaluations. Many commercial institutions now adopt this standard to rate companies, factoring in financial and other relevant information. Prior to this reform, only publicly listed companies were required to disclose material legal information. Existing research shows that litigation and subsequent declines in credit ratings significantly hinder a listed firm's ability to secure bank loans and increase its debt financing costs (Deng, Willis and Xu, 2014; Oliviero, Park and Zou, 2024; Arena, 2018; Ni and Yin, 2018; Bayar et al., 2024). Consequently, the establishment of CJO, which publicly discloses judicial risks for all firms, has shown a profound impact on the credit market.

[6] https://www.qcc.com

[7] https://www.tianyancha.com

[8] The full text of the standard is available at https://www.chinesestandard.net/PDF/English.aspx/GBT23794-2015 (in English, last accessed: June 24, 2025). The standard was replaced by GB/T 23794-2023, which includes more detailed provisions regarding the information disclosed on judicial document platforms.

There is no shortage of examples in China where firms facing lawsuits, such as being unable to repay account payables and subsequently being sued by their suppliers, have been denied loan extensions by banks.[9] The public disclosure of such disputes on platforms like CJO enables financial institutions to better monitor firms' legal risks, prompting them to scrutinize companies with litigation records more closely. Consequently, a firm's litigation history can significantly impact its ability to secure financing. We present formal empirical evidence supporting this point in Section 7.1.

3. Information Frictions and Capital Misallocation: A Theoretical Framework

In this section, we present a model showing how information frictions—arising from outsiders' lack of accurate information about firms' fundamentals (productivity)—can lead to capital misallocation, as reflected in dispersion in MRPK. The model underscores the interplay between information frictions and financial frictions, providing a foundation for the subsequent empirical analysis.

Consider a firm i operating in industry j, characterized by productivity Z_{ij}. Its output is determined by the production function:

$$Y_{ij} = (Z_{ij}K_{ij})^{\alpha_j^k} H_{ij}^{\alpha_j^h}, \tag{1}$$

where K_{ij} denotes capital input and H_{ij} represents a composite of other inputs, including labor and materials. The parameters $\alpha_j^k > 0$ and $\alpha_j^h > 0$ capture industry j's output elasticities of capital and other inputs, respectively. We assume decreasing returns to scale, such that $\alpha_j^k + \alpha_j^h < 1$.

Firms finance their capital input through external borrowing, so that $K_{ij} = B_{ij}$. Firms face a borrowing constraint based on expected cash flow:

$$B_{ij} \leq \theta \mathbb{E}[Y_{ij}], \tag{2}$$

where $\mathbb{E}$ denotes the expectation taken by lenders conditional on their information set.

Given capital input K_{ij}, the firm chooses input H_{ij} to maximize profits:

$$\max_{H_{ij}} (Z_{ij}K_{ij})^{\alpha_j^k} H_{ij}^{\alpha_j^h} - wH_{ij}, \tag{3}$$

where w is the price of the input bundle H_{ij}. The first-order condition yields the optimal input choice:

$$H_{ij}^* = \left(\frac{\alpha_j^h (Z_{ij}K_{ij})^{\alpha_j^k}}{w} \right)^{\frac{1}{1-\alpha_j^h}}. \tag{4}$$

[9] To give a few examples (in Chinese), see Lingshou County Court, Yangpu Government Online.

Substituting this back into the production function gives the firm's revenue (output):

$$R_{ij} = (Z_{ij}K_{ij})^{\frac{\alpha_j^k}{1-\alpha_j^h}} \left(\frac{\alpha_j^h}{w}\right)^{\frac{\alpha_j^h}{1-\alpha_j^h}}. \tag{5}$$

The marginal revenue product of capital (MRPK) is given by:

$$MRPK_{ij} = \alpha_j^k \frac{R_{ij}}{K_{ij}} = \alpha_j^k \, \alpha_j^{h \frac{\alpha_j^h}{1-\alpha_j^h}} Z_{ij}^{\frac{\alpha_j^k}{1-\alpha_j^h}} w^{-\frac{\alpha_j^h}{1-\alpha_j^h}} K_{ij}^{\frac{\alpha_j^k+\alpha_j^h-1}{1-\alpha_j^h}}. \tag{6}$$

Therefore, a lower K_{ij} implies a higher MRPK.

Note that the borrowing constraint can then be rewritten as

$$K_{ij} \leq \theta \mathbb{E}\left[\left(\frac{\alpha_j^h (Z_{ij}K_{ij})^{\alpha_j^k}}{w}\right)^{\frac{1}{1-\alpha_j^h}} w \frac{1}{\alpha_j^h}\right]. \tag{7}$$

Suppose the interest rate on borrowing is r. When the borrowing constraint is not binding, the firm equates the marginal revenue products of capital to the cost of borrowing directly, i.e., $MRPK_{ij} = r$.[10] However, when the borrowing constraint binds, the firm is unable to obtain its optimal level of capital, resulting in lower capital usage compared to the unconstrained case. We will proceed below with the interesting case that financial frictions always matter. With binding borrowing constraint, $MRPK_{ij}$ will be higher than r. Intuitively, a binding borrowing constraint implies the presence of a shadow cost of capital. Specifically, the binding constraint implies that

$$K_{ij}^{\frac{1-\alpha_j^h-\alpha_j^k}{1-\alpha_j^h}} = \theta \frac{1}{\alpha_j^h} \alpha_j^{h \frac{1}{1-\alpha_j^h}} w^{-\frac{\alpha_l}{1-\alpha_j^h}} \mathbb{E}\left[Z_{ij}^{\frac{\alpha_j^k}{1-\alpha_j^h}}\right]. \tag{8}$$

As a result, the marginal revenue product of capital under binding borrowing constraint is

$$MRPK_{ij} = \frac{\alpha_j^k}{1-\alpha_j^h} \frac{1}{\theta} \frac{Z_{ij}^{\frac{\alpha_j^k}{1-\alpha_j^h}}}{\mathbb{E}\left[Z_{ij}^{\frac{\alpha_j^k}{1-\alpha_j^h}}\right]} = \frac{\alpha_j^k}{1-\alpha_j^h} \frac{1}{\theta} \frac{A_{ij}}{\mathbb{E}[A_{ij}]}, \tag{9}$$

where we have used A_{ij} to denote $Z_{ij}^{\frac{\alpha_j^k}{1-\alpha_j^h}}$.

[10] With a capital depreciation rate δ, the marginal revenue product of capital equals $r + \delta$ when the borrowing constraint is not binding.

The above equation underscores the role of information frictions as a key driver of dispersion in the marginal revenue product of capital (MRPK) when financial frictions matter. When lenders possess more accurate information about firms' productivity, the ratio $\frac{A}{\mathbb{E}[A]}$ approaches 1, thereby reducing the dispersion in MRPK across firms.

Suppose firms' productivity Z (A) takes a binary distribution Z_H (A_H) and Z_L (A_L) with equal probability. To develop economic intuition, we first examine two limiting cases. Without information frictions ($\mathbb{E}[A] = A$), MRPK collapses to the same value within an industry and the dispersion of MRPK is 0. With information frictions such that lenders cannot distinguish high and low productive firms at all, the dispersion of MRPK is not longer 0. Specifically, for more productive firms, their $MRPK = \frac{\alpha_j^k}{1-\alpha_j^h}\frac{1}{\theta}\frac{A_H}{0.5A_H+0.5A_L} > \frac{\alpha_j^k}{1-\alpha_j^h}\frac{1}{\theta}$, and for low productive firms, their $MRPK = \frac{\alpha_j^k}{1-\alpha_j^h}\frac{1}{\theta}\frac{A_L}{0.5A_H+0.5A_L} < \frac{\alpha_j^k}{1-\alpha_j^h}\frac{1}{\theta}$.

Below, we summarize the general cases, accounting for the level of transparency explicitly.

Proposition 1. *Suppose a fraction $x \in [0,1]$ (representing the overall level of transparency in a region) of both high- and low-productivity firms are identifiable to lenders, while the remainder are not. Then the average log MRPK gap between the two types of firms (high-productivity vs. low-productivity firms) decreases as transparency x increases.*

Proof. For either group of firms, x fraction of firms are identifiable to lenders, while the remaining $1-x$ fraction are not. As a result, the average log MRPK of high-productivity firm group is

$$\log \frac{\alpha_j^k}{1-\alpha_j^h}\frac{1}{\theta} + [x \log 1 + (1-x)\log \frac{A_H}{0.5A_H + 0.5A_L}]$$

Similarly, the average log MRPK of low-productivity firm group is

$$\log \frac{\alpha_j^k}{1-\alpha_j^h}\frac{1}{\theta} + [x \log 1 + (1-x)\log \frac{A_L}{0.5A_H + 0.5A_L}]$$

The gap between the two groups is then $(1-x)[\log A_H - \log A_L]$. It decreases as transparency x increases.

□

Given the inverse relationship between $MRPK$ and K established in Equation 6, we conclude that the dispersion of average $\log K$ increases monotonically with transparency x. An analogous conclusion applies to credit B, since firm borrowing is positively correlated with capital stock K.

The discussion above assumes symmetric information frictions for both high- and low-productivity firms, we also explore the possibility of asymmetric disclosure. Specifically. We consider the case where low-productivity firms are more likely to be publicly revealed due to a higher likelihood of being sued—an empirical pattern we document in Section 7.1. We find that our main results remain generally robust to this asymmetry. Importantly, the absence of a firm's involvement in

legal cases also acts as a positive signal, enabling lenders to infer a higher likelihood that a firm has high productivity. We summarize this case's theoretical predictions on capital misallocation below.

Proposition 2. *Suppose that only low productive firms' are revealed with probability $x \in [0,1]$ to lenders. Then the average log MRPK gap between the two types of firms (high-productivity vs. low-productivity firms) decreases as transparency x increases.*

Proof. See Appendix A. □

As capital K and credit B are inversely related to MRPK, we also conclude that the dispersions of average $\log K$ and $\log B$ increase monotonically with transparency x when the disclosure is asymmetric.

4. Measurement and Empirical Specification

4.1. Measuring Legal Transparency

Provincial-level Measure The measure of legal transparency is constructed using two sets of data. The first is the number of cases publicly released each year by each province, sourced from the CJO. The second is the number of cases closed each year by each province, drawn from the Law Yearbook of China and the annual work reports of various high courts. Our key explanatory variable, representing the legal transparency of province c in year t, is denoted as $transparency_{ct}$. Formally, we define it as,

$$transparency_{ct} = \frac{\text{number of cases made public by province } c \text{ year } t}{\text{number of cases closed by province } c \text{ within year } t}, \text{when } t \geq 2014 \tag{10}$$

and $transparency_{ct} = 0$, when $t \leq 2013$. As shown in Figure 1, the fraction of publicly released cases was negligible before 2014, followed by steady growth from 2014 to 2019.

We primarily use province-level data to measure legal transparency for several reasons. First, data availability favors province-level measurements. Data on the number of closed cases of each province has been consistently available from the Law Yearbook of China or annual work reports since 2014, whereas prefecture-level data is only available from 2015 onward and contains significant missing values.[11] Given that legal transparency was already substantial in 2014 (as shown in Figure 1), province-level measure is more suitable. Second, there is considerable variation in legal transparency across provinces. Figure OB1 in the Appendix illustrates prefecture-level legal transparency in 2015, and a variance decomposition reveals that 63.89% of the total variance in transparency measures is explained by between-province differences. Third, aggregate outcome variables categorized by industry are only available at the province level. In contrast, at

[11] The SPC provided us with county- (and prefecture-) level data on closed cases from 2015 onward for research purposes; this data is not publicly disclosed.

the prefecture level, only aggregate manufacturing industrial output is available. Therefore, we primarily rely on provincial-level transparency measures for baseline analyses. For additional robustness checks, we construct alternative measures of legal transparency based on different case types, regional, and temporal definitions, as described below.

Prefecture-Level and County-Level Measures Where data permit, we additionally construct legal transparency measures at the prefecture and county levels. For localities with missing data, we impute using corresponding province-level measures to maintain coverage.

Civil Cases and Cases Closed Within the Same Year We also construct a disclosure rate based on civil cases, as most business-related legal disputes fall under civil rather than criminal or administrative categories.[12] Note that civil case transparency data are missing for some regions because certain yearbooks and annual reports do not report the number of closed cases by case type. To address the concern that the disclosed cases may include cases closed in prior years, we construct an alternative measure using only cases both closed and disclosed within the same calendar year.

Judgment Quality and Disclosure of Contract Disputes We also construct additional transparency measures to capture more detailed characteristics of the disclosed cases. Specifically, we use (i) the average length of the reasoning section in disclosed judgments as a proxy for information richness to augment the legal transparency measure; (ii) the number of disclosed contract dispute cases normalized by the number of industrial firm; and (iii) the number of disclosed contract dispute cases specifically involving firms as defendants, normalized by the number of industrial firms.

4.2. Empirical Specification at Firm level

We adopt the approach in Bau and Matray (2023) to construct our empirical model, focusing on whether the reform has a differential impact on firms with high versus low initial MRPK. Our main empirical setting at the firm level is as follows:

$$y_{icjt} = \beta * transparency_{ct} * I_i^{HighMRPK} + X_i * g(t) + \alpha_i + \gamma_{ct} + \delta_{jt} + \epsilon_{icjt}, \tag{11}$$

where i, c, j, and t denote firm, province, industry, and year, respectively. The dependent variable y_{icjt} represents firm-level outcomes of interest, including MRPK, fixed capital, output, and borrowing, all in logarithm. The variable $transparency_{ct}$ measures the legal transparency of province c in year t, as defined in Equation 10.

[12] Some economically relevant cases are classified as criminal, such as contract fraud, tax evasion, illegal fundraising, and bribery.

$I_i^{HighMRPK}$ is a dummy variable indicating whether firm i had an initial MRPK above the median within its CIC-4 digit industry. As shown in Equation 6, assuming that all firms within the same industry share the same capital elasticity α_j^k, we obtain $\frac{Revenue_{ijt}}{K_{ijt}}$ as a within-industry measure of MRPK. To classify firms into high or low MRPK categories prior to the reform, we calculate each firms' average MRPK from the period 2009-2012 and define firms with high initial MRPK as those with an average MRPK above the median within their CIC-4 digit industry. This period was chosen to exclude the potential effects of the 2008 financial crisis and to precede the policy's implementation in 2013. For robustness checks, we also use MRPK in 2011 as an alternative measure of initial MRPK, given that our firm-level analysis covers the period 2011-2016.

$X_i * g(t)$ represents the interaction terms between firms' initial log sales (in 2011) and year dummies, controlling macroeconomic policies that may be size-dependent. We add firm fixed effects α_i, province-by-year fixed effects γ_{ct}, and CIC 4-digit industry-by-year fixed effects δ_{jt}. Note that these fixed effects absorb any factors that similarly affect high- and low-MRPK firms at the province or industry level, such as fiscal policies, industrial policies, as well as judicial efficiency improvements or changes in social trust resulting from transparency reforms. Standard errors are clustered at the CIC 4-digit industry level.

β captures the reform's effect only if it has a differential impact on high- versus low-MRPK firms. For MRPK as the outcome variable, a negative β indicates that in regions with greater improvement in legal transparency, firms with initially high MRPK experience a larger reduction in MRPK relative to firms with low initial MRPK. For fixed capital, output, and borrowing as the outcome variables, a positive β implied that firms with initially high MRPK exhibit greater growth in these variables in regions with higher legal transparency.

4.3. Identification

The identification of the policy's effects leverages the quasi-exogeneity of the reform's implementation across regions. The key assumption is that, in the absence of the legal transparency reform, differences in outcomes between firms with ex-ante high and low MRPK across provinces with varying levels of transparency would have followed parallel trends. While this assumption is not directly testable, we implement a series of empirical strategies to validate its plausibility and mitigate potential sources of bias.

Region-by-Year and Industry-by-year Fixed Effects Similar to Bau and Matray (2023), our empirical model focuses on the differential responses of high- and low-MRPK firms to changes in legal transparency. This approach offers two key advantages over the conventional cross-sectional MRPK variation method. First, it isolates changes in capital misallocation specifically attributable to the reform—in this case, legal transparency, while controlling for other macroeconomic factors, such as changes in local economic conditions, judicial quality, and political environment, as well as measurement error in misallocation, through the inclusion of industry-by-year and province-by-year fixed effects. Second, it imposes weaker identification assumptions, requiring only that

unobserved factors affecting the gap in MRPK between high- and low-MRPK firms be uncorrelated with legal transparency, thereby mitigating the risk of bias from omitted variables.

Selection in Reform Implementation We provide evidence that variation in reform implementation is unrelated to pre-reform factors associated with capital misallocation. Specifically, we show that post-reform legal transparency is uncorrelated with pre-reform MRPK dispersion, the share of state-owned firms, and market concentration (Table 3).

Pre-existing Trends To assess the plausibility of the parallel trends assumption, we estimate a triple-difference event-study specification. The results confirm that high- and low-MRPK firms across regions with different transparency levels followed similar trends in key outcomes prior to the reform (Table 4).

Exogenous Variation in Reform Implementation To further strengthen causal identification, we exploit exogenous variation in reform intensity driven by provincial court leaders' prior experience in central government agencies. Leaders with central ties were less reliant on the SPC president Zhou Qiang for promotion, and thus had weaker incentives to implement a reform strongly associated with his agenda. Judicial appointments are generally unrelated to local economic conditions, supporting the plausibility of this instrument. The results are qualitatively and quantitatively robust (Table 5).

Heterogeneity We investigate the mechanism linking legal transparency to capital allocation to further strengthen the identification. If transparency reduces information asymmetries in credit markets, its impact should be stronger for firms or industries more sensitive to information and more financially constrained. We test this by examining heterogeneity across public listing status, ownership type, and industry-level contract intensity. The findings align with this mechanism (Section 7.4 to 7.6).

Excluding Firms with Large Social Impact To address concerns that high-profile firms may have influenced disclosure due to reputational or political considerations, we re-estimate our baseline results excluding large firms. The findings remain robust, suggesting that selective disclosure is not a major source of bias (Appendix Table OC6).

Concurrent Policies A judicial independence reform was also implemented between 2014 and 2016 (Liu et al., 2022*a*). We account for its potential confounding influence by allowing its effects to vary by firms' initial MRPK status. Our results remain robust after controlling for this overlapping policy (Appendix Table OC7).

4.4. Data Sources

Firm-level Variables The primary firm-level outcomes are sourced from a panel dataset derived from the China Tax Survey, covering the years 2011 to 2016. The China Tax Survey is an annual survey jointly conducted by the Ministry of Finance and the State Administration of Taxation, comprising approximately 700,000 observations per year. This dataset includes a diverse range of firms, with roughly half being industrial firms, and we focus our analysis on these industrial firms. The dataset captures a significant portion of China's economic activities, as the included firms contribute around 75% of the country's total tax revenue. The dataset provides detailed information on various firm-level variables, such as revenue, total output value, capital, total assets, employment, and ownership structure. The data is available to us from 2009 to 2016, and we use pre-reform data (from 2009 to 2012) to compute the initial MRPK.

The data set also contains firms' cash flow statements, which we use to measure borrowing conditions. We first use the total leverage ratio, defined as the ratio of total debt over fixed capital, to measure firms' overall borrowing capacity. We further analyze firms' total, long-term (non-current), and short-term (current) debt, recognizing that these types of debt differ in their sensitivity to information. Additionally, we follow Cun et al. (2022) to construct a measure of trade borrowing, using accounts payable as a proxy.

Legal Transparency and Disclosed Lawsuits We construct measures of legal transparency based on the number of disclosed cases obtained from China Judgments Online (CJO), disaggregated by case type (civil, criminal, administrative) and compiled at the provincial, prefectural, and county levels. Data on the number of closed cases come from the Law Yearbook of China and the annual reports of high courts. In addition, the SPC provided non-public data on case closures at the prefecture and county levels since 2015, which align well with yearbook aggregates. To further capture firm-level legal exposure, we match our dataset with lawsuit records from Qichacha to identify whether a firm has been involved in litigation and, if so, the associated claim amounts.

Industry Aggregate Output and Employment Industrial output serves as a key dependent variable and is sourced from the China Industrial Yearbook, which reports output and employment statistics for each CIC 2-digit industrial sectors across provinces. The data aggregate all state-owned enterprises and private firms with annual sales exceeding 20 million Renminbi (approximately 7 million U.S. dollars). To maintain consistency with the firm-level analysis, we use data from 2011 to 2016.

Registry Records of New Firms To complement the analysis of smaller firms, we use the registry records of newly established enterprises. We calculate the number of new registrations monthly for each province and CIC-2 digit industry from 2011 to 2019. Additionally, the dataset tracks the status of micro-small enterprises, defined as firms with registered capital below 10 million

Renminbi (approximately 1.4 million U.S. dollars), allowing us to specifically examine the entry dynamics of smaller firms.

4.5. Summary Statistics

Table 1 provides summary statistics for provincial legal transparency, key dependent variables, and control variables. The dataset encompasses all 31 province-level regions in mainland China. Panel A reports judicial transparency across different years. In 2014, the average disclosure rate was approximately 30%, with Inner Mongolia recording the lowest transparency score of 0.11, and Shaanxi Province the highest at 0.59. Over time, the disclosure rate steadily increased, reaching 88% in 2019.[13] While significant improvements in legal transparency were observed following the reform, noticeable regional disparities persist.

Panel B summarizes firm-level variables. The initial MRPK is expressed as a dummy variable indicating whether a firm's average MRPK from 2009 to 2012 is above or below the industry median. The sample size differs for each variable due to varying patterns of missing data. For measures of firm borrowing, the sample size is smaller than that for capital because of more limited data availability.

Panel C reports province-industry level dependent variables. Each year, the sample covers approximately 41 CIC 2-digit industries, depending on data availability. Labor productivity is calculated as the ratio of output to employment. Panel D summarizes data on newly registered firms, while Panel E presents control and instrumental variables. College share refers to the proportion of the population with education beyond the college level, which shows significant variation across provinces—Beijing has the highest share, while Tibet has the lowest. Similarly, Shanghai has the highest urbanization rate, while Tibet has the lowest. We also control for the ratio of foreign investment to GDP as a proxy for foreign investment. Infrastructure is measured by the road area per capita (in m^2) for each province. Additionally, we account for the judicial independence reform implemented between 2014 and 2016, as discussed by Liu et al. (2022*a*). When province-by-year fixed effects are included in the regressions, these variables are absorbed by the fixed effects and thus are not separately identified. The final variable, an indicator for the central connection of provincial high court leaders, is defined as 1 if the high court president previously held a position in the Ministry of Justice, the SPC, or other central government departments. This variable serves as an instrument for legal transparency, as discussed in Section 5.2.3.

[13] Our transparency measure may occasionally exceed 1 due to two reasons: (1) a single case may have multiple associated documents; (2) courts may disclose cases from previous years. For robustness checks, we also use an alternative transparency measure based solely on same-year cases.

Table 1: Summary Statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max	Median
A. Provincial Legal Transparency						
legal transparency 2014	24	0.287	0.130	0.109	0.591	0.270
legal transparency 2015	31	0.279	0.095	0.121	0.492	0.273
legal transparency 2016	31	0.446	0.173	0.130	1.062	0.453
legal transparency 2017	31	0.698	0.276	0.157	1.508	0.687
legal transparency 2018	31	0.810	0.203	0.360	1.271	0.806
legal transparency 2019	31	0.877	0.315	0.489	2.351	0.824
B. Firm-level Variables (2011-2016)						
log MRPK	773,157	1.482	1.477	-1.483	4.549	1.458
log capital	874,799	8.698	2.187	3.829	12.330	8.849
log output	781,947	10.226	1.854	6.052	13.274	10.330
leverage ratio (debt/capital)	826,919	6.731	10.945	0.136	48.782	2.628
log long borrowing	207,833	9.014	2.298	4.605	13.038	9.048
log short borrowing	849,343	9.676	1.923	5.420	12.902	10.008
log trade borrowing	719,868	8.421	1.966	4.205	11.664	8.531
indicator of (09-12 MRPK > median)	1,026,522	0.514	0.500	0	1	1
indicator of public listing status	805,110	0.009	0.093	0	1	0
C. Province by CIC-2 Digit Industry by Year Variables (2011-2016)						
log output	6,665	5.303	2.156	-4.605	10.393	5.621
log employment	6,467	10.023	1.922	4.605	15.043	10.278
log labor productivity	5,293	-4.631	0.729	-8.142	-0.441	-4.659
D. Province by CIC2-digit Industry by Month Variables (2011-2019)						
number of new firm	71,786	78.704	324.089	1	6,567	10
number of new small-micro firms	62,572	40.499	164.238	1	5,055	6
number of new other firms	64,519	48.291	214.355	1	4,303	6
E. Province-by-year Variables (2011-2019)						
college share	279	0.135	0.073	0.024	0.505	0.120
urbanization	279	0.574	0.132	0.227	0.896	0.561
FDI share	279	0.004	0.004	0.000	0.017	0.002
road per capita (m^2)	279	15.590	4.655	4.04	26.2	15
independence reform	279	0.534	0.500	0	1	1
central connection (2011-2016)	184	0.147	0.355	0	1	0

Notes: Panel A reports summary statistics for legal transparency across different provinces from 2014 to 2019. In 2014, seven provinces have missing values because the China Law Yearbook and Provincial High Courts Annual Report did not report the total number of disclosed cases in these regions. Panel B summarizes the manufacturing firms included in the China Tax Survey Data from 2011 to 2016, with each observation at the firm-year level. Marginal revenue product of capital (MRPK) is proxied by $Revenue/K$, where K denotes fixed capital. Capital is measured by the fixed capital stock in each year. The total leverage ratio is measured as the ratio of total debt to fixed capital. Long-term and short-term borrowing are measured by the value of noncurrent and current liabilities, respectively, while trade borrowing is proxied by accounts payable. A firm classified as ex-ante high MRPK if its average MRPK from 2009 to 2012 is exceeds the median within its CIC-4 digit industry. Panel C summarizes industrial output, employment, and labor productivity, with each observation at the CIC-2 digit industry-by-province-by-year level. Micro-small firms are defined as those with registered capital below 10 million RMB. Panel D reports summary statistics for the number of newly established firms at CIC-2 digit industry by province-by-month level. Panel E summarizes the control variables at the province-by-year level. College share refers to the proportion of the population with educational attainment beyond the college level. Road per capita is measured as road area per capita. FDI share refers to the ratio of foreign direct investment to GDP. The rollout of the judicial independence reform during 2014-2016, studied by Liu et al. (2022*a*), is captured by the independence reform variable. The indicator for the central connection of provincial high court leaders, is defined as 1 if the high court president previously held a position in the Ministry of Justice, the SPC, or other central government departments.

5. Legal Transparency and Capital Misallocation

5.1. Legal Transparency and Capital Allocation

We begin by examining the impact of the legal transparency reform on capital allocation through the estimation of Equation 11. The primary dependent variables in this analysis are firms' MRPK and fixed capital. The estimation results are reported in Table 2.

In Panel A, we use the logarithm of MRPK as the dependent variable. Column (1) includes legal transparency and its interaction with an indicator for high initial MRPK, along with firm fixed effects. The interaction term is negative and significant, while the coefficient on legal transparency is positive and significant. This suggests that in regions with higher legal transparency, firms with initially high MRPK experience a decline in MRPK, whereas firms with initially low MRPK see an increase. In Columns (2) and (3), we introduce CIC-4 digit industry-by-year fixed effects and interaction terms between initial firm size and year dummies. The magnitude of the interaction term slightly decreases, while the coefficient on legal transparency increases. Column (4) adds province-level controls, including urbanization rate, the proportion of the population with college-level education or higher, the ratio of foreign investment to GDP, road area per capita, and the rollout of judicial independence reform. The coefficient on legal transparency rises from 0.308 to 0.372, while the interaction term remains largely unchanged. This implies that although legal transparency correlates with some provincial characteristics, the differential impact on high versus low MRPK firms is unaffected by these controls. Finally, Column (5) includes province-by-year fixed effects. The interaction term's estimate remains consistent with those in Columns (3) and (4). A 10-percentage-point increase in legal transparency is associated with a 7.87% reduction in MRPK for firms with initially high MRPK, relative to firms with initially low MRPK.

In Panel B, the dependent variable is the logarithm of fixed capital. Across all specifications, the estimate on the interaction term remains largely stable. Column (4) reveals that, with provincial controls included, a 10-percentage-point increase in legal transparency leads to a 4.41% increase in capital for firms with initially high MRPK, while firms with initially low MRPK are not significantly affected. In Column (5), this impact on firms with initially high MRPK (relative to low MRPK firms) slightly decreases to 4.37%. These results indicate that regions with higher legal transparency allocate more capital to firms with initially high MRPK, thereby reducing MRPK dispersion within industries.

5.2. Addressing Threats to Identification

In this section, we address potential threats to the validity of our empirical strategy, focusing on the primary concern of the non-random assignment of lawsuit disclosure rates across firms. Our identification strategy relies on the assumption that, in the absence of the legal transparency reform, differences in outcomes between firms with ex-ante high and low MRPK across provinces with varying levels of legal transparency would have followed parallel trends. Importantly, our empirical specification does not require average firm outcomes prior to the reform to be entirely

Table 2: Legal Transparency and Capital Allocation

A. Marginal Revenue Products of Capital (MRPK)					
	(1)	(2)	(3)	(4)	(5)
Dependent Variable			log MRPK		
$Transparency_{ct}$	0.0744*	0.398***	0.308***	0.372***	
	(0.040)	(0.040)	(0.052)	(0.053)	
$Transparency_{ct} * I_i^{HighMRPK}$	-0.972***	-0.973***	-0.794***	-0.795***	-0.787***
	(0.033)	(0.032)	(0.034)	(0.034)	(0.033)
Firm FE	✓	✓	✓	✓	✓
CIC4-by-year FE		✓	✓	✓	✓
Initial Size$_i$*Years			✓	✓	✓
Provincial controls				✓	
Province-by-year FE					✓
Observations	773,157	768,625	526,953	526,953	526,951
R^2	0.826	0.830	0.828	0.828	0.828
B. Fixed Capital					
	(1)	(2)	(3)	(4)	(5)
Dependent Variable			log K		
$Transparency_{ct}$	-0.165***	-0.000	0.091**	0.018	
	(0.022)	(0.036)	(0.039)	(0.035)	
$Transparency_{ct} * I_i^{HighMRPK}$	0.491***	0.498***	0.441***	0.441***	0.437***
	(0.025)	(0.025)	(0.027)	(0.027)	(0.027)
Firm FE	✓	✓	✓	✓	✓
CIC4-by-year FE		✓	✓	✓	✓
Initial Size$_i$*Years			✓	✓	✓
Provincial controls				✓	
Province-by-year FE					✓
Observations	874,799	874,576	585,346	585,346	585,345
R^2	0.957	0.957	0.961	0.961	0.961

Notes: This table displays the effects of legal transparency on firms' MRPK and fixed capital. Each observation is at the firm-by-year level. MRPK is measured using $Revenue/Capital$. K is the fixed capital in each year. $Transparency_{ct}$ is the fraction of publicly released cases relative to the total number of closed cases for each province c in year t. $I_i^{HighMRPK}$ is a dummy variable indicating whether firm i's pre-reform average MRPK (calculated from 2009 to 2012) exceeds the median within its CIC-4 digit industry. Initial Size$_i$ is measured by firms' logged sales in 2011. Provincial-level controls include the urbanization rate, the proportion of the population with education above the college level, the ratio of foreign direct investment to GDP, road area per capita, and the rollout of the judicial independence reform. Standard errors are clustered at the CIC-4digit industry level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

uncorrelated with post-reform legal transparency. By incorporating province-by-year fixed effects, we control for all confounding factors at the province-year level. To further support the validity of this identification strategy, we present several pieces of evidence.

5.2.1. Legal Transparency and Pre-reform Misallocation

First, we test whether pre-reform provincial characteristics related to misallocation can predict post-reform legal transparency. Post-reform legal transparency is measured as the average disclosure rate from 2014 to 2016. As shown in Figure OB2 in the Appendix, the 2014-2016 average legal transparency is positively correlated with the annual values for each year, indicating that the average over this period largely reflects overall transparency trends.

We conduct a series of OLS regressions at the provincial level, using the 2014-2016 average legal transparency as the dependent variable and various provincial characteristics from 2011 to 2013 as independent variables. The results are presented in Table 3. Columns (1) to (7) report regressions with independent variables representing different market structure measures from 2011 to 2013, including the variance and mean of MRPK, the shares of sales and fixed capital held by state-owned enterprises (SOEs), the sales shares of the largest 20 firms (concentration ratio, CR20) and the largest 100 firms (CR100), and the MRPK gap between high- and low-MPRK firms. Across all columns, the raw correlations between market structure measures and legal transparency during 2014-2016 are statistically insignificant. This lack of significant association suggests that the policy was unlikely to have been targeted based on provincial fundamentals related to market structure.

In contrast, Column (8) examines the post-reform correlation between the legal transparency and the MRPK gap between ex-ante high and low MRPK firms, both from 2014-2016. The coefficient is negative and statistically significant at the 10% level. To graphically illustrate these findings, Figure OB3 in the Appendix presents a scatter plot. The left panel displays the MRPK gap between initially high and low MRPK firms in 2011-2013, while the right panel shows the gap during 2014-2016, both plotted against the 2014-2016 average legal transparency. The graph indicates no significant correlation before the policy, suggesting the absence of a systematic pre-policy pattern. However, a notable negative correlation emerges after the policy, indicating that higher legal transparency is associated with a smaller MRPK gap post-reform.

We also analyze the effect of legal transparency on firms' average MRPK. The results, presented in Column (1) of Table B1 in the Appendix, show no significant impact, suggesting that the reform enhances capital allocation efficiency rather than reducing the average cost of capital.[14]

5.2.2. Excluding Parallel Pre-existing Trend

To further address concerns over potential pre-policy trends, we implement a triple-difference event study to evaluate the legal transparency reform's impact. The first difference is based on

[14]We also report complementary results on firm output and borrowing, which are discussed in later sections.

Table 3: Association between Pre-reform Provincial-level Characteristics and Legal Transparency

Dependent Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Average Disclosure Rate 2014-2016							
MRPK Variance	-0.0333							
	(0.0638)							
MRPK Mean		0.0460						
		(0.0527)						
SOE Sales share			-0.164					
			(0.116)					
SOE Capital share				-0.138				
				(0.110)				
CR 20					-0.133			
					(0.125)			
CR 100						-0.128		
						(0.117)		
ΔMRPK							-0.0674	
							(0.141)	
ΔMRPK post								-0.159*
								(0.0883)
Observations	31	31	31	31	31	31	31	31
R^2	0.009	0.026	0.064	0.051	0.038	0.040	0.008	0.101

Notes: This table displays the association between legal transparency with various provincial fundamentals related to firm market structure prior to the reform. Each observation represents a province. The independent variables in Columns (1) to (7) are the average of different aspects of market structure from 2011 to 2013, including the variance and mean value of MRPK, the share of sales and fixed capital by state-owned enterprises (SOEs), the share of total sales by the largest twenty firms (Concentration Ratio 20, CR 20) and the largest one hundred firms (CR 100), and the MRPK gap between ex-ante high and low MRPK firms (ΔMRPK). In Column (8), the independent variable is the MRPK gap between ex-ante high and low MRPK firms during 2014 to 2016. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

firms' initial MRPK, represented by a dummy variable indicating whether a firm's MRPK exceeds the median within its CIC-4 digit industry. The second difference captures the intensity of provincial legal transparency reform, using a treatment dummy variable, $treat_c$, for each province c, which equals 1 if province c's average legal transparency during 2014-2016 exceeds the national average.[15] The third difference involves a temporal comparison, contrasting firm outcomes in the post-policy period (2014-2016) with those in the pre-policy period (2011-2013).

To ensure consistency with the construction of the treatment variable, we calculate firm-level averages of log capital (log K) and log MRPK as the dependent variables over the 2014-2016 period. The empirical specification is as follows:

$$y_{icj\tau} = \sum_{s=-2,-1,post} \beta_s Treat_c * I_i^{HighMRPK} * (\tau = s) + \sum_{s=-2,-1,post} \xi_s I_i^{HighMRPK} * (\tau = s) \tag{12}$$

$$+ X_i * g(\tau) + \alpha_i + \gamma_{ct} + \delta_{j\tau} + \varepsilon_{icj\tau}, \tau = -2, -1, post$$

Here, τ denotes the relative time from policy implementation, with 2013 set as the baseline year.

[15]The results remain robust when the treatment dummy is defined based on whether a province's average legal transparency exceeds the national median.

Specifically, $\tau = -2$ and $\tau = -1$ correspond to 2011 and 2012, while $\tau = post$ represents the average value from 2014 to 2016. $Treat_c$ is a dummy variable indicating whether the legal transparency of province c during 2014-2016 exceeded the national average. By incorporating separate trends for firms with initially high and low MRPK, as well as for provinces with high and low legal transparency (captured by the province-by-year fixed effects, γ_{ct}), the coefficients on the three-way interaction terms, β_{-2} and β_{-1}, capture potential pre-reform trends, while β_{post} measures the impact of the reform. Other settings follow those outlined in Equation 11. The results are reported in Table 4.

Table 4: Legal Transparency and Capital Allocation: A Triple-Difference Estimation

	(1)	(2)	(3)	(4)
Dependent Variables	log MRPK		log K	
$Treat_c * I_i^{HighMRPK} * 2011_t$	-0.004	0.004	0.007	-0.007
	(0.016)	(0.017)	(0.010)	(0.010)
$Treat_c * I_i^{HighMRPK} * 2012_t$	-0.003	0.004	0.010	-0.006
	(0.013)	(0.014)	(0.008)	(0.008)
$Treat_c * I_i^{HighMRPK} * post_t$	-0.045**	-0.053***	0.079***	0.080***
	(0.018)	(0.019)	(0.012)	(0.013)
Firm FE	✓	✓	✓	✓
CIC4-Year FE	✓	✓	✓	✓
$I_i^{HighMRPK}$*Years	✓	✓	✓	✓
Province-Year FE	✓	✓	✓	✓
Initial Firm Size*Years		✓		✓
Observations	704,951	498,612	787,641	550,075
R^2	0.846	0.840	0.963	0.965

Notes: This table displays the effects of legal transparency on firms' MRPK and fixed capital using a triple-difference model. Each observation is at the firm-by-year level. MRPK is measured using $Revenue/Capital$. K is the fixed capital in each year. $Treat_c$ is a dummy variable indicating whether province c's average legal transparency during 2014-2016 is above the national mean. 2011_t, 2012_t, and $post_t$ represent the years 2011, 2012, and the 2014-2016 average, respectively. $I_i^{HighMRPK}$ is a dummy variable indicating whether firm i's pre-reform average MRPK (calculated from 2009 to 2012) exceeds the median within its CIC-4 digit industry. Initial $Size_i$ is measured by firms' logged sales in 2011. Standard errors are clustered at the CIC-4 digit industry level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Columns (1) and (2) use log MRPK as the dependent variable. In Column (1), the estimates for β_{-2} and β_{-1} are both close to zero and statistically insignificant, while the estimate for β_{post} is negative and statistically significant. This indicates that post-policy legal transparency does not significantly affect the pre-policy difference in log MRPK between firms with initially high and low MRPK. However, after 2014, legal transparency significantly reduces log MRPK for firms with high initial MRPK relative to those with low initial MRPK. In Column (2), adding interaction terms between firms' initial size and year dummies yields similar point estimates. The results indicate that after the reform, the difference in log MRPK between high- and low-MRPK firms is 5.3% lower in regions with high legal transparency compared to those with lower legal trans-

parency. Columns (3) and (4) use log fixed capital as the dependent variable. The results show that post-reform, the difference in fixed capital between firms with initially high and low MRPK is 8.0% higher in regions with high legal transparency than in regions with lower legal transparency. These findings align with the benchmark results in Table 2, further confirming the parallel trends between high- and low-MRPK firms before the reform.

5.2.3. An Instrumental Variable Approach

This section adopts an alternative approach to help identify the causal impact of legal transparency on capital allocation, leveraging variation in disclosure rates driven by the political motivations of provincial high court leaders to comply with the legal transparency reform.

The legal transparency reform was strongly advocated by Zhou Qiang, the then-President of the SPC. Zhou had previously served in the Ministry of Justice until 1995, and after leaving his role as a department director, transitioned to the Communist Youth League, and later held leadership positions in Hunan province. In 2013, he returned to the judiciary as President of the SPC. Judicial transparency reform was one of his key initiatives upon taking office.

Given this context, it is reasonable to infer that high court leaders with extensive experience in the Ministry of Justice, the SPC, or other central government bodies would have stronger connections to central authorities and be less dependent on Zhou Qiang for promotion. In contrast, court leaders without such connections could view Zhou's forceful reform as an opportunity to demonstrate their performance and gain favor. For instance, Yan Qingwen, the former leader of the Shaanxi Province High Court, had no prior experience working with the central government. He explicitly mandated a 100% disclosure rate for courts in Shaanxi Province and actively encouraged lower courts leaders to monitor progress. Additionally, he introduced a monthly ranking system based on disclosure performance, holding lower court leaders accountable if their performance ranked in the bottom ten in the province.[16] As a result, the disclosure rate in Shaanxi province reached 59% in 2014, ranking first among all provinces with available data that year, and further rose to 97% in 2018.

On the other hand, a high court leader's central work experience is unlikely to correlate with economic variables, as judicial departments typically do not play a direct role in economic policymaking or development. Therefore, the variation in disclosure rates driven by political motivations provides a suitable source of exogenous variation for identifying the causal impact of legal transparency on capital allocation.

Therefore, we construct an indicator variable based on the work history of high court leaders in each province and year. The variable $Central_{ct} = 1$ if the high court president has prior experience working in the Ministry of Justice, the SPC, or other central government departments;[17] otherwise,

[16] See a report from https://www.chinacourt.org/article/detail/2014/08/id/1426709.shtml (in Chinese). Last accessed: June 24, 2025.

[17] The IV estimation remains robust when central experience is defined solely as experience in the Ministry of Justice and SPC, or when it includes other judicial branches, such as the procuratorate and public security systems.

$Central_{ct} = 0$. We use the interaction term between $Central_{ct} = 1$ and the post-2014 dummy as an instrument for legal transparency in the IV regression.

Table 5 displays the results. Column (1) reports the first-stage regression outcomes. The estimated coefficient is negative and significant, indicating that, all else equal, provinces where high court leaders have central government experience exhibit a disclosure rate approximately 0.11 lower than provinces where high court leader lacks such experience. This negative association supports the hypothesis that local legal cadres without central connections have stronger incentives to comply with the judicial transparency mandate, aiming to gain recognition from the SPC leadership, particularly Zhou Qiang. The F statistic is 287.88, effectively ruling out concerns about weak instruments.

Columns (2) to (3) focus on the outcome of log MRPK. Column (2) shows the reduced-form estimation of the interaction term between central connections and the dummy for initially high MRPK on log MRPK. The results suggest that provinces where high court leaders have central connections experience a reduction in MRPK for firms with ex-ante high MRPK relative to firms with ex-ante low MRPK. Column (3) presents the second stage IV regression results, which are consistent with the benchmark findings in Table 2, though with slightly larger magnitude (0.855 compared to 0.787).

Columns (4) and (5) present results using log fixed capital as the dependent variable. Column (4) reports the reduced-form estimation, showing that in provinces where the high court leaders have central connections, firms with ex-ante high MRPK experience an increase in fixed capital. Column (5) presents the second-stage IV results, which are consistent with the benchmark estimates, with the coefficient magnitude closely matching the benchmark results in Table 2 (0.465 compared to 0.437). These findings indicate that higher legal transparency leads to a significant increase in fixed capital for firms with initially high MRPK relative to firms with ex-ante low MRPK, thereby improving capital allocation. Furthermore, the OLS and IV estimates are quantitatively similar, suggesting that endogeneity does not pose a concern in this context.

5.3. Alternative Measures on Legal Information Availability

In addition to our baseline measure, which captures overall legal transparency, we construct two alternative measures that focus on specific informational aspects: (1) the disclosure rate of contract dispute cases, which are directly relevant to business activities; and (2) the legal transparency augmented by the richness of judgment information, measured by the average length of the reasoning section in disclosed judgment documents.

Contract Disputes Disclosures First, we focus on contract dispute cases and construct two indicators. The first measure is the total number of publicly disclosed contract dispute cases, normalized by the number of above-scale industrial firms. The second measure further refines this by counting only contract dispute cases that involve at least one firm as a defendant, again normalized by the number of above-scale industrial firms. These measures aim to capture the accessibility

Table 5: Legal Transparency and Capital Allocation: An Instrumental Variable Estimation

Dependent Variables	(1) $Trans_{ct}$ First Stage	(2) log MRPK OLS	(3) log MRPK IV	(4) log K OLS	(5) log K IV
$Central_{ct} * Post^{2014}$	-0.108***				
	(0.003)				
$Central_{ct} * Post^{2014} * I_i^{HighMRPK}$		-0.313***		0.0904***	
		(0.0329)		(0.0184)	
$Trans_{ct} * I_i^{HighMRPK}$			-0.850***		0.462***
			(0.035)		(0.028)
Firm FE	✓	✓	✓	✓	✓
CIC4-Year FE	✓	✓	✓	✓	✓
Initial Firm Size*Years	✓	✓	✓	✓	✓
Province-Year FE		✓	✓	✓	✓
F-statistics	287.88				
R^2	0.933	0.826	0.828	0.961	0.961
Observations	592,134	534,309	531,006	593,339	589,733

Notes: This table displays the effects of legal transparency on firms' MRPK and fixed capital in an instrumental variable estimation. Each observation is at the firm-by-year level. MRPK is measured using $Revenue/Capital$. K is the fixed capital in each year. $Central_{ct}$ is a binary indicator that equals 1 if the leader of the provincial high court has prior work experience in the Ministry of Justice, the SPC, or other central government departments, and 0 otherwise. $Transparency_{ct}$ is the fraction of publicly released cases relative to the total number of closed cases for each province c in year t. $I_i^{HighMRPK}$ is a dummy variable indicating whether firm i's pre-reform average MRPK (calculated from 2009 to 2012) exceeds the median within its CIC-4 digit industry. Initial $Size_i$ is measured by firms' logged sales in 2011. Column (1) shows the first stage regression. Columns (2) and (4) are reduced-form estimations. Columns (3) and (5) show the second stage estimations. Standard errors are clustered at CIC-4 digit industry level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

and relevance of legal information most directly affecting business entities. The results, presented in Panel A and B in Appendix Table B2, show that the effects of contract dispute transparency are consistent with those obtained using the benchmark measure of legal transparency.[18]

Legal Transparency Augmented by Information Richness Another important dimension of information is its richness—specifically, the level of detail contained in disclosed judicial documents regarding firm misconduct. We measure this by the average length of the reasoning section in judgment documents, calculated at the province-year level. Longer reasoning sections provide more comprehensive justifications and factual narratives, which help external parties better assess firm-specific risks and characteristics. In Panel C of Table B2, we replace the benchmark measure of legal transparency with legal transparency augmented by the average word count of reasoning sections. The results are consistent with the baseline findings.

[18]We also report complementary results on firm output and borrowing, which are consistent with the baseline results discussed in later sections.

5.4. *Alternative Concerns and Additional Robustness Checks*

Civil Cases We begin by addressing concerns related to the measurement of legal transparency. One potential issue is that different types of cases—such as civil, criminal, and administrative cases—may disclose varying information and have different impacts on capital reallocation across firms. Since most economic cases are civil cases, we construct a disclosure rate specifically for civil cases. By replacing the total disclosure rate with the civil case disclosure rate in our benchmark estimation, we find that the results, shown in Table OC1 in the Appendix, remain qualitatively consistent with our baseline estimations.

Cases Closed in the Same Year Another concern is that the cases disclosed each year may include those closed in the same year as well as in prior years. To address this, we construct a disclosure rate based only on cases closed in the same year as our measure of legal transparency. The results, presented in Table OC2 in the Appendix, are also consistent with our main findings.

Prefectural City- and County-level Transparency Although most of the variation in legal transparency occurs at the provincial level, we also test the robustness of our results using prefectural city- and county-level disclosure rates. The data on the number of closed cases at this level, provided to us by the SPC for research purposes, is available starting from 2015. Therefore, for years prior to 2014 and for missing values after 2015,[19] we use the province-level disclosure rate instead. The results, presented in Table OC3 and Table OC4 in the Appendix, show minimal changes from our benchmark estimation, further confirming the appropriateness of conducting our analysis at the provincial level.

Alternative Denominator We replace the denominator of legal transparency with the total number of above-scale industrial firms or GDP at the province-year level. The results remain highly robust as shown in Appendix Table OC5.

Excluding Large Firms Another concern is that large firms may be less likely to have their litigation information disclosed, potentially due to local governments' incentives to withhold negative information about prominent firms or the influence large firms may exert to keep their lawsuits private. However, this concern is not substantial for two reasons.

First, as shown in Section 5.2, legal transparency from 2014 to 2016 is not significantly correlated with provinces' market structure or concentration ratios before the policy (2011–2013), suggesting that selective disclosure based on firm size is unlikely.

Second, to directly address this concern, we conduct a robustness check by running regressions on a subsample that excludes large firms. We identify large firms using eight criteria: within each CIC 2-digit industry and at the county, city, and provincial levels, we exclude the top 5% of firms

[19] 15.7% and 23.0% of firm-year level observations have missing values for prefecture- and county-level transparency measures, respectively.

based on annual sales and employment within each unit of observation. The results, shown in Appendix Table OC6, indicate that all findings are robust, further confirming that market power and local market structure are unlikely to bias our analysis.

Accounting for Heterogeneus Impact of Concurrent Judicial Reform We also expand our analysis to allow the judicial independence reform to have a heterogeneous impact based on firms' initial MRPK. The results are shown in Table OC7. The primary findings regarding the reduction in capital misallocation in response to legal transparency remain largely unchanged.

Alternative Way to Construct High MRPK Dummy Finally, we replace the dummy for high initial MRPK (2009-2012) with one constructed using 2011 firm-level data. The results, shown in Table OC8, demonstrate that our findings are robust across different measures of legal transparency.

6. Legal Transparency and Output

Legal Transparency and Firm-Level Output Since the legal transparency reform enhances capital allocation efficiency, we expect it to contribute to output growth. To test this, we estimate Equation 11 using firm-level log output as the dependent variable. The results, shown in the first column of Table 6, indicate that a 10-percentage-point increase in legal transparency leads to a 2.36% increase in output for firms with initially high MRPK relative to firms with initially low MRPK. This finding implies the greater benefits of the reform for firms with higher initial MRPK, consistent with its role in enhancing resource allocation efficiency.

Legal Transparency and Industry-Level Output Next, we examine the impact of the legal transparency reform on industry-level outcomes. The main empirical setting at the industry level is as follows.

$$y_{cjt} = \beta * transparency_{ct} + \Gamma Z_{ct} + \alpha_{cj} + \delta_{jt} + \epsilon_{cjt}, \tag{13}$$

where c, j, and t represent province, CIC-2 digit industry, and year, respectively. The dependent variable y_{cjt} includes industrial output, employment, labor productivity, and number of new entrants, all in logarithm form. The variable $transparency_{ct}$ represents the judicial transparency, and Z_{ct} denotes province-year level control variables. Additionally, we include province-industry and industry-year fixed effects. Standard errors are clustered at the industry level.

Columns (2) to (7) in Table 6 display the regression results. Columns (2) and (3) use log output as the dependent variable. In Column (2), the coefficient on legal transparency is positive and statistically significant, indicating that a 10-percentage-point increase in judicial transparency is associated with a 1.74% increase in industrial output. Column (3) includes control variables, with the estimate remaining largely unchanged. In Columns (4) and (5), we use log employment in the industrial sector as the dependent variable. The results show that a 10-percentage-point increase

in judicial transparency corresponds to a 0.64% increase in employment, although the effect is weaker than that on output. This finding is consistent with expectations, given the migration constraints imposed by China's Hukou system. Consequently, the observed increase in output is primarily driven by labor productivity (i.e., output per worker), as shown in Columns (6) and (7).

Table 6: Legal Transparency and Industrial Output

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Firm	Province-by-CIC 2 digit Industry					
Dependent Variables	log output	log output		log employment		log labor productivity	
$Trans_{ct} * I_i^{HighMRPK}$	0.236***						
	(0.036)						
$Trans_{ct}$		0.174***	0.184***	0.066*	0.064*	0.125***	0.149***
		(0.055)	(0.054)	(0.034)	(0.032)	(0.034)	(0.034)
Firm FE	✓						
Initial $Size_i$*Years	✓						
CIC4-year FE	✓						
Province-year FE	✓						
Provine-CIC2 FE		✓	✓	✓	✓	✓	✓
CIC2-year FE		✓	✓	✓	✓	✓	✓
Provincial Controls			✓		✓		✓
Observations	512,737	6,382	6,382	6,181	6,181	5,012	5,012
R^2	0.901	0.981	0.983	0.982	0.983	0.927	0.928

Notes: This table displays the impact of legal transparency on industrial output. Each observation is at the firm by year level in Column (1), and at province by CIC2-digit industry by year level in Columns (3) to (7). $Transparency_{ct}$ is the fraction of publicly released cases relative to the total number of closed cases for each province c in year t. $I_i^{HighMRPK}$ is a dummy variable indicating whether firm i's pre-reform average MRPK (calculated from 2009 to 2012) exceeds the median within its CIC-4 digit industry. Initial $Size_i$ include firms' sales and MRPK (both in log) in 2011. Provincial-level controls in Columns (2) to (7) include the urbanization rate, the proportion of the population with education above the college level, the ratio of foreign investment to GDP, road area per capita, and the rollout of the judicial independence reform. Standard errors are clustered at CIC-4 digit industry level in Column (1), and at CIC-2 digit level in Columns (2) to (7). *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Legal Transparency and Firm Entry The industrial aggregate output is calculated by summing the output of firms with annual sales exceeding 20 million Renminbi, thereby excluding small firms. To complement our analysis, we specifically examine the impact of legal transparency on the number of new firms, with a particular focus on small firms. We estimate Equation 13 using the logarithm of the number of new firms as the dependent variable. Table 7 presents the results. In Column (1), the dependent variable is the log total number of new industrial firms in each industry and province by month. The findings indicate that a 10-percentage-point increase in judicial transparency is associated with a 1.36% increase in the total number of new industrial firms. In Columns (2) and (3), we distinguish between micro-small firms and other firms, finding similar magnitudes for both categories. These results are consistent with the notion that improved capital allocation enhances effective productivity under higher legal transparency. As potential entrants weigh their decision to enter the market, the expectation of increased effective productivity encourages more firms to enter.

Table 7: Legal Transparency and Firm Entry

Dependent Variables	(1) log Total Number	(2) log Number of Small-Micro Firms	(3) log Number of Other Firms
$Trans_{ct}$	0.136***	0.141***	0.149***
	(0.027)	(0.023)	(0.028)
Province-CIC2 FE	✓	✓	✓
CIC2-Time FE	✓	✓	✓
Provincial Controls	✓	✓	✓
Observations	71,786	62,572	64,519
R^2	0.915	0.902	0.878

Notes: This table displays the impact of legal transparency on the entry of new firms. Each observation is at province by CIC-2digit industry by year-month level. $Transparency_{ct}$ is the fraction of publicly released cases relative to the total number of closed cases for each province c in year t. Small-micro firms indicate those with registered capital lower than 10 million Renminbi. Provincial-level controls include the urbanization rate, the proportion of the population with education above the college level, the ratio of foreign investment to GDP, road area per capita, and the rollout of the judicial independence reform. Standard errors are clustered at CIC-2 digit level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

7. Mechanism Analysis

How do firms with initially high MRPK obtain relatively more capital following the legal transparency reform? To shed light on the underlying mechanism, we directly examine firms' borrowing behavior. First, we test whether firms with high initial MRPK secure more debt financing after the reform. Second, we provide direct evidence on the impact of legal disputes by showing that firms' borrowing declines following involvement in lawsuits. Third, we demonstrate that judicial fairness shows minimal sensitivity to legal transparency, mitigating concerns that transparency could shape economic results by improving judicial fairness. Finally, we explore heterogeneity along three key dimensions, including public listing status, contract intensity, and ownership structure, in order to further substantiate the proposed channel.

7.1. Legal Transparency and Firm Borrowing

Since most firms primarily rely on debt financing in China, we first examine the reform's impact on firm borrowing. We estimate Equation 11 with multiple measures of firm borrowing as dependent variables, including the total leverage ratio, log long-term borrowing, log short-term borrowing, and log trade credit borrowing. Details on the construction of these variables are provided in Section 4. The regression results are presented in Table 8.

Column (1) uses the leverage ratio, defined as the ratio of total debt to total fixed capital, as the dependent variable. The results show that a 10-percentage point-increase in legal transparency is associated with a 10.51-percentage-point relative increase in the total leverage ratio for firms with initially high MRPK compared to those with initially low MRPK. Column (2) examines the effect on the logarithm of firms' total borrowing, showing that a 10-percentage-point increase in legal transparency corresponds to a 1.59% relative increase in total debt for firms with initially high

MRPK. Columns (3) and (5) present results for short-term and long-term debt, while Column (4) focuses on trade credit from suppliers, which is considered a component of short-term debt.[20] Specifically, a 10-percentage-point increase in legal transparency is associated with a 1.21%, 0.96%, and 3.05% relative increase in short-term debt, trade credit, and long-term debt, respectively, for firms with initially high MRPK.

It is important to note that our dataset has a significantly smaller sample size for firms with long-term debt information.[21] The last two columns present the responses for total and short-term debt using a subsample that excludes firms with missing long-term debt information. Overall, these results suggest that increased legal transparency is associated with higher borrowing levels, particularly benefiting firms with initially high MRPK. Moreover, the response in long-term debt is more pronounced than in short-term debt, consistent with the corporate finance literature, which posits that long-term debt is more sensitive to information than short-term debt.

Table 8: Legal Transparency and Firm Borrowing

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
					subsample with long-term debt data		
Dependent Variables	Leverage ratio	Total borrow	Short borrow	Trade borrow	Long borrow	Total borrow	Short borrow
$Trans_{ct} * I_i^{HighMRPK}$	1.051***	0.159***	0.121***	0.096***	0.305***	0.101***	0.050
	(0.193)	(0.018)	(0.019)	(0.027)	(0.072)	(0.026)	(0.035)
	Initial firm $size_i$*years included Firm, CIC4-Year, and Province-Year FE included						
Observations	560,106	574,029	573,082	498,710	155,770	155,658	154,909
R^2	0.806	0.948	0.944	0.895	0.899	0.968	0.956

Notes: This table displays the effects of legal transparency on firms' borrowing. Each observation is at the firm-by-year level. The total leverage ratio is measured as the ratio of total debt to fixed capital. Long-term and short-term borrowing correspond to noncurrent and current liabilities, respectively, while trade borrowing is measured by accounts payable. $Transparency_{ct}$ is the fraction of publicly released cases relative to the total number of closed cases for each province c in year t. $I_i^{HighMRPK}$ is a dummy variable indicating whether firm i's pre-reform average MRPK (calculated from 2009 to 2012) exceeds the median within its CIC-4 digit industry. Initial $Size_i$ is measured by firms' logged sales in 2011. Standard errors are clustered at the CIC-4digit industry level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

7.2. *Lawsuit Involvement and Subsequent Borrowing*

To further illustrate the mechanism, we provide direct evidence on how the disclosure of lawsuit information affects the borrowing practice of defendant firms. As shown in Table B3 in the Appendix, our results support the hypothesis that lawsuit information significantly influences

[20] In developing countries like China, firms with limited access to banks loans often finance some of their operations through trade credit, borrowing from suppliers who may have better access to bank financing (Cun et al., 2022).

[21] It is unclear whether missing values in long-term debt represent zero or simply unreported figures. When treating missing values in long-term debt as zero and regressing log(1 + long-term debt) on legal transparency, the resulting point estimate remain similar to that in Column (5).

borrowing decisions. Specifically, we find that a one-percentage-point increase in the lawsuit value (as a percentage of the firm's annual sales) is associated with an 11.2% reduction in total debt for firms as defendants. Additionally, firms with initially lower MRPK are more likely to be sued (see Appendix Table B4), suggesting that increased disclosure of lawsuit information facilitates the reallocation of capital from lower MRPK firms to higher MRPK firms.

7.3. Responses of Judicial Fairness

Improvements in legal transparency could potentially lead to enhancements in judgment fairness (quality), as judges face greater public scrutiny. Such improvements in judicial fairness may benefit firms by fostering public trust and enhancing legal professionalism. This could potentially confound the effect of transparency through increased information availability. To explore this possibility, we examine whether legal transparency affects the rate of second-instance appeals—the proportion of cases appealed to a higher court after the initial judgment—which serves as an indicator of judicial fairness. Results in Appendix Table B5 show minimal evidence that the rate of second-instance appeals changes significantly following improvements in lawsuit information transparency, suggesting that the effects are likely driven primarily by increased information disclosure.

7.4. Heterogeneity by Public Listing Status

To further examine the underlying mechanism, we analyze heterogeneity along three closely related dimensions. If transparency indeed improves credit allocation by reducing information asymmetries, its effects should be more pronounced for firms or industries where financing decisions are especially sensitive to information. Firstly, we investigate whether the legal transparency reform has a differential impact based on a firm's public listing status. Under the Securities Law of China, publicly listed firms are required to disclose material legal information. Thus, even before the 2013 reform, listed firms were already partially transparent about their legal risks. We therefore hypothesize that the reform's effect would be weaker for publicly listed firms compared to non-listed firms. To test this hypothesis, we merge the tax survey data with the China Listed Firms dataset. In our sample, approximately 1% of firms are publicly listed.

The empirical specification for this test is,

$$y_{icjt} = \beta_1 * transparency_{ct} * I_i^{HighMRPK} + \beta_2 * transparency_{ct} * I_i^{HighMRPK} * I_i^{Public} \tag{14}$$

$$+\beta_3 * transparency_{ct} * I_i^{Public} + X_i * g(t) + \alpha_i + \gamma_{ct} + \delta_{jt} + \epsilon_{icjt},$$

where I_i^{Public} is a dummy variable indicating whether firm i is publicly listed. The key coefficient of interest, β_2, captures the differential impact of the legal transparency reform on publicly listed firms with high initial MRPK compared to their non-listed counterparts. The results are presented in Table 9.

Columns (1) and (2) report the results for log MRPK as the dependent variable. The coefficient estimate for β_2, representing the interaction between legal transparency, the high MRPK dummy, and the public listing dummy, is positive but not statistically significant. In Columns (3) and (4), where log fixed capital is the dependent variable, the coefficient for β_2 is negative and statistically significant at the 10% level in Column (4) with controls. This suggests that the effect of legal transparency on fixed capital is weaker for publicly listed firms compared to non-listed firms. Specifically, a 10-percentage-point increase in legal transparency results in a 4.4% increase in fixed capital for non-listed high MRPK firms, whereas the corresponding increase for listed firms is only 0.6% (4.42% - 3.82%).

Table 9: Legal Transparency and Capital Allocation: Heterogeneity based on Public Listing Status

	(1)	(2)	(3)	(4)
Dependent Variables	log MRPK		log K	
$Trans_{ct} * I_i^{HighMRPK}$	-0.837***	-0.790***	0.439***	0.442***
	(0.0317)	(0.0326)	(0.0268)	(0.0273)
$Trans_{ct} * I_i^{HighMRPK} * public_i$	0.226	0.221	-0.319	-0.382*
	(0.226)	(0.253)	(0.197)	(0.207)
$Trans_{ct} * public_i$	-0.127	-0.073	0.081	0.171*
	(0.103)	(0.123)	(0.079)	(0.088)
Firm FE	✓	✓	✓	✓
Initial $Size_i$*Years		✓		✓
CIC4-Year FE	✓	✓	✓	✓
Province-Year FE	✓	✓	✓	✓
Observations	599,157	526,951	670,791	585,345
R^2	0.828	0.828	0.960	0.961

Notes: This table displays the heterogeneous effects of legal transparency on firms' MRPK and fixed capital based on a firm's public listing status. Each observation is at the firm-by-year level. $public_i$ is an indicator for firms' public listing status. MRPK is measured using $Revenue/Capital$. K is the fixed capital in each year. $Transparency_{ct}$ is the fraction of publicly released cases relative to the total number of closed cases for each province c in year t. $I_i^{HighMRPK}$ is a dummy variable indicating whether firm i's pre-reform average MRPK (calculated from 2009 to 2012) exceeds the median within its CIC-4 digit industry. Initial $Size_i$ is measured by firms' logged sales in 2011. Standard errors are clustered at CIC-4digit industry level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

These findings further boost confidence in the identification of our analysis. The differential impact on listed versus non-listed firms reinforces the argument that the primary mechanism of the legal transparency reform is the reduction of information asymmetry. The relatively stronger impact on non-listed firms, who previously were not subject to the same disclosure requirements, highlights how the reform increased transparency and influenced capital allocation primarily by addressing gaps in publicly available information.

7.5. *Heterogeneity by Industry-Level Contract Intensity*

Another factor that may influence the heterogeneous impact of legal transparency across firms is their reliance on formal contracts. In industries where contracting plays a more critical role, the effects of judicial information disclosure are expected to be stronger. To test this hypothesis, we use the industry-level contract intensity constructed by Nunn (2007) to investigate whether industries with higher contract intensity are more responsive to legal transparency. This strategy is akin to the approach used by Rajan and Zingales (1995), who examined how financial development affects growth. The main specification at the firm level is:

$$y_{icjt} = \beta_1 * transparency_{ct} * I_i^{HighMRPK} + \beta_2 * transparency_{ct} * I_i^{HighMRPK} * contract_j \quad (15)$$

$$+\beta_3 * transparency_{ct} * contract_j + X_i * g(t) + \alpha_i + \gamma_{ct} + \delta_{jt} + \epsilon_{icjt},$$

where $contract_j$ represents the contract intensity of industry j.

The results are presented in Table 10. Columns (1) and (2) use the logarithm of MRPK as the dependent variable. It shows that for firms with initially high MRPK, increased legal transparency has a stronger effect on reducing MRPK in industries with higher contract intensity. Specifically, in industries with median contract intensity (0.51), a 10-percentage-point increase in legal transparency leads to a 7.87% (6.32+0.51*3.04) reduction in MRPK for firms with initially high MRPK, compared to a 6.32% reduction in industries with no contract dependence. In Column (2), after incorporating differential trends by initial firm size, the results remain largely consistent. Columns (3) and (4) present the results for log fixed capital. Column (3) shows that industry-level contract intensity significantly affects the response of fixed capital to the legal transparency reform for firms with initially high MRPK. Specifically, in industries with median contract intensity, a 10-percentage-point increase in legal transparency results in a 4.46% (2.48+0.51*3.89) increase in fixed capital for firms with initially high MRPK, compared to a 2.48% increase in industries with zero contract intensity. Column (4) provides similar results.

We also estimate industry-level regressions for aggregate outcomes, incorporating contract intensity:

$$y_{cjt} = \beta * transparency_{ct} * contract_j + \alpha_{cj} + \gamma_{ct} + \delta_{jt} + \epsilon_{cjt}, \quad (16)$$

where y_{cjt} denotes the dependent variables of interest, including industrial output, employment, and labor productivity, all in logarithmic form.

Table 11 reports the regression results. In Column (1), the estimate of legal transparency is not statistically different from zero, indicating minimal response in industries with zero contract intensity to improvements in legal transparency. However, the estimate of β is positive, statistically significant, and economically meaningful. Specifically, in an industry with a median contract intensity of 0.51, a 10-percentage-point increase in legal transparency corresponds to a 1.76% (0.345*0.51) increase in industrial output relative to an industry with zero contract dependence. In Column (2), after including province-by-year fixed effects, the estimate on the interaction term

Table 10: Legal Transparency and Capital Allocation: Heterogeneity based on Contract Intensity

Dependent Variables	(1) log MRPK	(2) log MRPK	(3) log K	(4) log K
$Trans_{ct} * I_i^{HighMRPK}$	-0.632***	-0.633***	0.248***	0.250***
	(0.0815)	(0.0790)	(0.0647)	(0.0641)
$Trans_{ct} * I_i^{HighMRPK} * Contract_j$	-0.304**	-0.306**	0.389***	0.396***
	(0.137)	(0.134)	(0.110)	(0.111)
$Trans_{ct} * Contract_j$	-0.0737	-0.0845	-0.0792	-0.103
	(0.242)	(0.242)	(0.142)	(0.141)
Firm FE	✓	✓	✓	✓
Initial Size$_i$*Years		✓		✓
CIC4-Year FE	✓	✓	✓	✓
Province-Year FE	✓	✓	✓	✓
Observations	477,128	472,988	527,223	522,668
R^2	0.815	0.815	0.960	0.960

Notes: This table displays the heterogeneous effects of legal transparency on firms' MRPK and fixed capital based on the contract intensity of each industry. Each observation is at the firm-by-year level. $Contract_j$ represents the contract dependence of each CIC-2 digit industry j, as defined by Nunn (2007). MRPK is measured using $Revenue/Capital$. K is the fixed capital in each year. $Transparency_{ct}$ is the fraction of publicly released cases relative to the total number of closed cases for each province c in year t. $I_i^{HighMRPK}$ is a dummy variable indicating whether firm i's pre-reform average MRPK (calculated from 2009 to 2012) exceeds the median within its CIC-4 digit industry. Initial Size$_i$ is measured by firms' logged sales in 2011. All regressions include firm and CIC-4 digit industry-by-year fixed effects. Standard errors are clustered at CIC-4digit industry level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

remains quantitatively similar. Columns (3) and (4) show that the interaction between legal transparency and contract intensity has a positive and statistically significant effect on employment, suggesting labor reallocation toward industries with higher contract dependence as legal transparency improves. When labor productivity is used as the dependent variable in Columns (5) and (6), we find consistently positive and significant coefficients on the interaction term.

7.6. Heterogeneity by Firm Ownership

In China, firms with different ownership types face significantly different levels of credit constraints (Bai, Lu and Tian, 2018), even within the same narrowly defined industries. In this subsection, we examine how the impact of legal transparency on capital allocation varies across firms with different ownership structures. Table 12 reports the results of estimating Equation 11 separately for state-owned, foreign/Hong Kong/Macau/Taiwan (HMT), and private firms. Columns (1) to (3) present the results using log MRPK as the dependent variable. The coefficients on the interaction term between legal transparency and the high MRPK dummy are -0.714, -0.682, and -0.827 for state-owned, foreign/HMT, and private firms, respectively. For comparison, the pooled sample estimate in Table 2 is -0.787. These results suggest that the effect of legal transparency on MRPK for firms with initially high MRPK is slightly stronger for private firms than for state-owned and foreign/HMT firms. Columns (4) to (6) present similar findings when the dependent

Table 11: Legal Transparency and Industrial Output: Heterogeneity based on Contract Intensity

Dependent Variables	(1)	(2)	(3)	(4)	(5)	(6)
	log output		log employment		log labor productivity	
$Trans_{ct}$	0.076		-0.135**		-0.053	
	(0.084)		(0.064)		(0.069)	
$Trans_{ct} * Contract_j$	0.345*	0.372*	0.367***	0.367***	0.398***	0.410***
	(0.188)	(0.181)	(0.119)	(0.119)	(0.123)	(0.123)
Province-CIC2 FE	✓	✓	✓	✓	✓	✓
CIC2-Year FE	✓	✓	✓	✓	✓	✓
Provincial controls	✓		✓		✓	
Province-Year FE		✓		✓		✓
Observations	4,754	4,754	4,711	4,711	3,845	3,845
R^2	0.984	0.987	0.984	0.987	0.937	0.946

Notes: This table displays the heterogeneous impact of legal transparency on industrial output based on the industry-level contract intensity. Each observation is at province by CIC-2 digit industry by year level. $Contract_j$ represents the contract dependence of each CIC-2 digit industry j, as defined by Nunn (2007). $Transparency_{ct}$ is the fraction of publicly released cases relative to the total number of closed cases for each province c in year t. Provincial-level controls include the urbanization rate, the proportion of the population with education above the college level, the ratio of foreign investment to GDP, road area per capita, and the rollout of the judicial independence reform. Standard errors are clustered at CIC-2 digit level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

variable is log fixed capital. Specifically, a 10-percentage-point increase in legal transparency is associated with a 5.0% increase in fixed capital for private firms with initially high MRPK. This effect is weaker for state-owned (3.38%) and foreign/HMT firms (2.98%).

To assess the statistical significance of these differential impacts, we also estimate a model that includes interaction terms between legal transparency, the dummy for initially high MRPK, and ownership dummies. The results are presented in Columns (7) and (8) of Table 12. For private firms, a 10-percentage-point increase in legal transparency is associated with an 8.26% reduction in MRPK and a 4.95% increase in fixed capital. The impact on MRPK is slightly weaker (and statistically insignificant) for state-owned firms and 1.48 percentage points weaker (and significant) for foreign/HMT firms. Similarly, the effect on capital is significantly weaker by 1.52 percentage points for state-owned firms and 1.85 percentage points for foreign/HMT firms.

8. Conclusion

This paper investigates how transparency in lawsuit information influences capital allocation and aggregate industrial output, using China's 2014 judicial transparency reform as a natural experiment. We show that greater transparency enhances access to firm-level legal information, enabling credit markets to better differentiate between firms based on their underlying fundamentals. Firms with higher marginal revenue products of capital (MRPK) receive more debt financing, expand investment, and experience reductions in MRPK, indicating improved capital allocation efficiency.

Furthermore, industrial output increases with higher judicial transparency, primarily driven

Table 12: Legal Transparency and Capital Allocation: Heterogeneity by Ownership

Dependent Variables	(1)	(2) log MRPK	(3)	(4)	(5) log K	(6)	(7) log MRPK	(8) log K
	SOE	FIE	Private	SOE	FIE	Private	Pooled	Pooled
$Trans_{ct} * I_i^{HighMRPK}$	-0.714***	-0.682***	-0.827***	0.338***	0.298***	0.500***	-0.826***	0.495***
	(0.081)	(0.050)	(0.041)	(0.072)	(0.030)	(0.037)	(0.039)	(0.035)
$Trans_{ct} * I_i^{HighMRPK} * SOE_i$							0.074	-0.152**
							(0.074)	(0.061)
$Trans_{ct} * I_i^{HighMRPK} * FIE_i$							0.148***	-0.185***
							(0.056)	(0.042)
Firm FE	✓	✓	✓	✓	✓	✓	✓	✓
CIC 4-Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Initial $Size_i$*Years	✓	✓	✓	✓	✓	✓	✓	✓
Province-Year FE	✓	✓	✓	✓	✓	✓		
Province-Year-Ownership FE							✓	✓
Observations	51,208	130,480	331,131	58,807	140,817	370,680	526,951	585,345
R^2	0.849	0.831	0.833	0.971	0.963	0.959	0.829	0.961

Notes: This table displays the heterogeneous effects of legal transparency on firms' MRPK and fixed capital based on firm ownership. SOE, FIE, and Private denote state-owned, foreign/Hong Kong/Macro/Taiwan, and private domestic firms, respectively. Columns (7) and (8) use the pooled sample containing firms of all ownerships. Each observation is at the firm-by-year level. MRPK is measured using $Revenue/Capital$. K is the fixed capital in each year. $Transparency_{ct}$ is the fraction of publicly released cases relative to the total number of closed cases for each province c in year t. $I_i^{HighMRPK}$ is a dummy variable indicating whether firm i's pre-reform average MRPK (calculated from 2009 to 2012) exceeds the median within its CIC-4 digit industry. Initial $Size_i$ is measured by firms' logged sales in 2011. All regressions include firm and CIC-4digit industry-by-year fixed effects. Standard errors are clustered at the CIC-4digit industry level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

by gains in productivity per worker rather than increases in employment. The reform is also associated with a notable rise in the number of newly registered firms. To further validate the information-based mechanism, we examine heterogeneous effects by firm ownership type, public listing status, and industry-level contract intensity. These results reinforce the interpretation that improved legal transparency facilitates more efficient debt financing by alleviating information frictions in credit markets.

We also recognize the potential for alternative channels through which legal transparency reforms might influence economic dynamics. For example, the disclosure of legal information could lead to changes in corporate behavior, prompting firms to adjust their strategies and risk management practices.[22] Exploring other important channels presents promising avenues for future research.

[22] Appendix Table B6 shows that the average case incidence per firm does not significantly change in response to legal transparency. This indicates that firms' efforts to alter their behavior in order to avoid being sued may not be substantial.

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Appendices

Appendix A. Proof of Proposition 2

Using Bayes rule, the posterior distribution for those firms not being revealed is

$$P(A = A_H|\text{no revealing}) = \frac{1/2}{1/2 + 1/2(1-x)} = \frac{1}{2-x}.$$

where $A_s = Z_s^{\frac{\alpha_j^k}{1-\alpha_j^h}}, s = H, L$.

As a result, the distribution of MRPK is

$$\log MRPK = \log\left[\frac{\alpha_j^k}{1-\alpha_j^h}\frac{1}{\theta}\right] + \begin{cases} 0, \text{ with probability } \frac{1}{2}x \\ \log\frac{A_L}{\frac{1}{2-x}A_H + \frac{1-x}{2-x}A_L} < 0, \text{ with probability } \frac{1}{2}(1-x) \\ \log\frac{A_H}{\frac{1}{2-x}A_H + \frac{1-x}{2-x}A_L} > 0, \text{ with probability } \frac{1}{2} \end{cases}$$

The gap of average log $MPRK$ between high and low productivity firms is

$$G(x) = \frac{1}{2}\log\frac{A_H}{\frac{1}{2-x}A_H + \frac{1-x}{2-x}A_L} - \frac{1}{2}(1-x)\log\frac{A_L}{\frac{1}{2-x}A_H + \frac{1-x}{2-x}A_L}$$

We can show that

$$G'(x) = \frac{1}{2}\log A_L - \frac{1}{2}\log D(x) - \frac{x}{2}\frac{A_H - A_L}{(2-x)^2 D(x)}$$

where $D(x) = \frac{A_H + (1-x)A_L}{2-x}$. Since $G'(x) < 0$ when $x \in [0,1]$, we conclude that an increase in legal transparency x will induce a decrease in the dispersion of MRPK (in log terms).

Appendix B. Additional Results

Appendix Table B1: Average Effect of Legal Transparency

Dependent Variables	(1) log MRPK	(2) log K	(3) leverage ratio	(4) long borrow	(5) short borrow	(6) trade borrow	(7) log output
$Trans_{ct}$	0.00183	0.223***	0.250	0.165*	0.145***	0.338***	0.246***
	(0.0507)	(0.0360)	(0.269)	(0.0957)	(0.0283)	(0.0540)	(0.0494)
	Initial firm $size_i$*years included Firm and CIC4-Year FE included Provincial controls included						
Observations	526,628	584,959	559,766	155,695	572,722	498,441	512,440
R^2	0.827	0.961	0.806	0.898	0.944	0.895	0.901

Notes: This table displays the effects of legal transparency on the average outcomes of firms. Each observation is at the firm-by-year level. MRPK is measured using $Revenue/Capital$. K is the fixed capital in each year. The total leverage ratio is measured as the ratio of total debt to fixed capital. Long-term and short-term borrowing correspond to noncurrent and current liabilities, respectively, while trade borrowing is measured by accounts payable. $Transparency_{ct}$ is the fraction of publicly released cases relative to the total number of closed cases for each province c in year t. Initial $Size_i$ is measured by firms' logged sales in 2011. Since province-by-year fixed effects cannot be included in this regression, we control for provincial-level variables listed in Table 1, including the urbanization rate, the proportion of the population with education above the college level, the ratio of foreign direct investment to GDP, road area per capita, and the rollout of the judicial independence reform. While we observe an increase in average capital in response to the legal transparency reform, the magnitude is smaller than that reported in Table 2 (0.437). Standard errors are clustered at the CIC-4digit industry level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Appendix Table B2: Alternative Measures of Legal Information Availability

Dependent Variables	(1) log MRPK	(2) log K	(3) leverage ratio	(4) long borrow	(5) short borrow	(6) trade borrow	(7) log output
A. $Cont.Dis._{ct}$ = **number of disclosed contract dispute cases / number of firms**							
$Cont.Dis._{ct} * I_i^{HighMPRK}$	-0.071***	0.031***	0.075***	0.037***	0.009***	0.007***	0.017***
	(0.003)	(0.005)	(0.018)	(0.007)	(0.002)	(0.003)	(0.004)
	Initial firm size$_i$*years included Firm, CIC4-Year, and Province-Year FE included						
R^2	0.827	0.961	0.805	0.898	0.944	0.895	0.900
Observations	534,309	593,339	567,929	158,628	580,941	505,832	519,833
B. $Cont.Defen.Dis._{ct}$ = **number of disclosed contract dispute cases involving firms / number of firms**							
$Cont.Defen.Dis._{ct} * I_i^{HighMPRK}$	-0.109***	0.048***	0.119***	0.056***	0.014***	0.011***	0.027***
	(0.005)	(0.003)	(0.028)	(0.011)	(0.003)	(0.004)	(0.006)
	Initial firm size$_i$*years included Firm, CIC4-Year, and Province-Year FE included						
R^2	0.827	0.961	0.805	0.898	0.944	0.895	0.900
Observations	534,309	593,339	567,929	158,628	580,941	505,832	519,833
C. $Aug.Transparency_{ct}$ = **legal transparency * average length of reasoning section**							
Dependent Variables	log MRPK	log K	leverage ratio	long borrow	short borrow	trade borrow	log output
$Aug.Transparency_{ct} * I_i^{HighMPRK}$	-0.130***	0.072***	0.175***	0.050***	0.020***	0.016***	0.039***
	(0.005)	(0.004)	(0.032)	(0.012)	(0.003)	(0.004)	(0.006)
	Initial firm size$_i$*years included Firm, CIC4-Year, and Province-Year FE included						
Observations	526,553	584,876	559,643	155,571	572,614	498,287	512,383
R^2	0.828	0.961	0.806	0.899	0.944	0.895	0.901

Notes: This table displays the effects of legal information on firms' MRPK, fixed capital borrowing, and output, using the disclosure of contract disputes as a measure. Each observation is at the firm-by-year level. MRPK is measured using $Revenue/Capital$. K is the fixed capital in each year. The total leverage ratio is measured as the ratio of total debt to fixed capital. Long-term and short-term borrowing correspond to noncurrent and current liabilities, respectively, while trade borrowing is measured by accounts payable. $I_i^{HighMRPK}$ is a dummy variable indicating whether firm i's pre-reform average MRPK (calculated from 2009 to 2012) exceeds the median within its CIC-4 digit industry. Initial Size$_i$ is measured by firms' logged sales in 2011. Standard errors are clustered at the CIC-4digit industry level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Appendix Table B3: Lawsuit Involvement as Defendants and Borrowing

Dependent Variables	(1) log capital	(2) log total borrow
Lawsuit Value as Defendants/Sales in 2014_i**Post*2014_t	-0.294*** (0.0523)	-0.112** (0.0503)
Firm FE	✓	✓
Year FE	✓	✓
Observations	189,545	186,511
R^2	0.935	0.931

Notes: This table displays the association between firms' involvement in lawsuits as defendants and their borrowing. Each observation is at the firm-year level. The data source for this analysis is the Tax Survey of industrial firms in China from 2011 to 2016, which was initially matched with data on above-scale industrial firms and then with disclosed lawsuit data from Qichacha for 2014-2016. Among the 342,925 firms in China's above-scale industrial firms data for 2013, we matched 216,008 firms (a 63.0% match rate) with judgment documents from Qichacha by firm name. Of these matched firms, 49.3% were involved in lawsuits as defendants at least once during 2014-2019. The variable *Lawsuit Value as Defendants/Sales in* 2014_i represents a firm's lawsuit value as a defendant, normalized by its annual sales value. *Post*2014_t is a dummy variable for the period 2014-2016. The dependent variable is log fixed capital in Column (1) and log total debt in Column (2). Standard errors are clustered at CIC-4 digit industry level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Appendix Table B4: MRPK and Lawsuit Involvement as Defendants

Dependent Variables	(1)	(2)	(3)	(4)	(5)	(6)
	lawsuit value/sales			indicator for being defendants		
log $MRPK_i$	-0.016*** (0.002)	-0.017*** (0.001)	-0.018*** (0.001)	-0.030*** (0.003)	-0.029*** (0.003)	-0.027*** (0.003)
I_i^{SOE}			-0.043*** (0.003)			-0.026* (0.013)
I_i^{Export}			-0.006*** (0.001)			-0.007* (0.004)
log L_i			-0.009*** (0.001)			0.040*** (0.003)
Industry FE		✓	✓		✓	✓
Province FE		✓	✓		✓	✓
Observations	208,627	208,581	208,510	208,627	208,581	208,510
R^2	0.014	0.038	0.043	0.005	0.025	0.028

Notes: This table displays the association between firms' MRPK and their (subsequent) involvement in lawsuits as defendants. Each observation is at the firm level. The data source for this analysis is China's above-scale industrial firms in 2013, which were matched with judgment documents from Qichacha by firm name, yielding a match rate of 63.0% (216,008 out of 342,925 firms). Among these firms, 49.3% were involved in lawsuits as defendants at least once during 2014-2019. MRPK is measured using *Revenue/Capital*. The dependent variable in Columns (1) to (3) is the ratio of lawsuit value to firms' annual sales value, while in Columns (4) to (6) it is an indicator of whether the firm was a defendant at least once from 2014 to 2019. Firm-level controls include indicators for state-owned status (SOE), export activity, and log employment. Standard errors are clustered at the CIC-2 digit industry level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Appendix Table B5: Legal Transparency and First-instance Appeal Rate

Dependent Variable	(1)	(2)	(3)	(4)
	First-instance Appeal Rate			
$Transparency_{ct}$	-0.0795	-0.0645		
	(0.0480)	(0.0402)		
$Transparency_{pt}$			-0.0577	-0.0446
			(0.0469)	(0.0449)
Provincial controls		✓		
Prefectural controls				✓
Province FE and Year FE	✓	✓		
Prefecture FE and Year FE			✓	✓
Observations	179	179	1,436	1,436
R^2	0.666	0.688	0.514	0.518

Notes: This table displays the impact of legal transparency on the first-instance appeal rate, with each observation at the province-by-year level in Columns (1) and (2), and the city-by-year level in Columns (3) and (4). The first-instance appeal rate is calculated as the ratio of second-instance cases to first-instance cases. $Trans_{ct}$ represents the proportion of publicly disclosed cases in all closed cases in each province c / each city p in year t. Province- and prefecture-level controls include urbanization rate, the proportion of the population with education above the college level, the ratio of foreign investment to GDP, road area per capita, and the rollout of judicial independence reform. Standard errors clustered at the province level in Columns (1) and (2) and at the city level in Columns (3) and (4). *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Appendix Table B6: Legal Transparency and Case Incidence

Dependent Variables	(1)	(2)	(3)	(4)
	All Cases		Civil Cases	
$Transparency_{ct}$	-0.00776	-0.00413	-0.00613	-0.00367
	(0.00572)	(0.00303)	(0.00414)	(0.00268)
Provincial controls		✓		✓
Province FE and Year FE	✓	✓	✓	✓
Observations	132	132	108	108
R-squared	0.913	0.939	0.848	0.899

Notes: This table displays the impact of legal transparency on the ratio of the number of cases to the number of firms, with each observation at the province-by-year level. $Trans_{ct}$ represents the proportion of publicly disclosed cases in all closed cases in each province c and year t. Province-level controls include urbanization rate, the proportion of the population with education above the college level, the ratio of foreign investment to GDP, road area per capita, and the rollout of judicial independence reform. Standard errors clustered at the province level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Online Appendix for "Legal Information Transparency and Capital Misallocation: Evidence from China" [†]

(not for publication)

Yang Jiao, Zhengwen Liu, and Xiao Tang

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Appendix OA. Supplementary Material for Institutional Background

Appendix Figure OA1. Example Judgment Document

Notes: This figure shows a screenshot of one example judgment document on *China Judgment Online*. The document is accessible at https://wenshu.court.gov.cn/website/wenshu/181107ANFZ0BXSK4/index.html?docId=6Dz40boryH9+4Jxys2TyGldqw/S4tZ2xTdyiTnGCEQcLtjkhma2px/UKq3u+IEo4OnKXqtyXNfptDjTsJDwNIgio796TzAuaeZhpFmw54NkgLlVuWYk5gD/TcHtOTtFA. Last accessed: June 24, 2025.

2015年9月23日，原告向被告华泽上海公司账户汇款3,010.50万元。

2016年，原告向被告华泽上海公司发出询证函，明确截止2016年3月31日被告华泽上海公司尚欠原告3,010.50万元，并注明：本函仅为复核账目之用，并非催款结算。被告华泽上海公司在该询证函上加盖公章。

2016年6月28日，被告华泽上海公司向原告发送一份情况说明，载明：被告华泽上海公司与原告签订合同后即向案外人朝能公司采购750吨电解铜，但案外人朝能公司无法按期交货，导致被告华泽上海公司无法向原告交付货物，被告华泽上海公司正向案外人朝能公司通过多途径手段解决问题。

另查明，被告华泽上海公司系一人有限责任公司，股东为陕西华泽公司。

据华泽上海公司2012年度财务报表显示，华泽上海公司与母公司陕西华泽公司的实际控制人均为王应虎、王涛、王辉。

庭审中，被告陕西华泽公司向本院提交了其书面财务账册及瑞华审字(2016)XXXXXXXX号、瑞华审字(2015)XXXXXXXX号审计报告，两份审计报告审计了被告陕西华泽公司的前一年度资产负债表、利润表、现金流量表和所有者权益变动表及财务报表附注，最终审计意见为：上述财务报表在所有重大方面按照企业会计准则的规定编制，公允反映了陕西华泽公司的财务状况及经营成果和现金流量。

证明上述事实的证据为：原告提交的《工业品购销协议》、汇款凭证、华泽上海公司2012年度财务报表，被告陕西华泽公司提交的财务账册、审计报告，以及原、被告当庭陈述。

本院认为，被告华泽上海公司逾期交货，导致合同目的不能实现，现原告诉请解除《工业品购销协议》，且被告华泽上海公司同意解除，故原告要求解除合同的诉讼请求，本院予以支持。合同解除后，被告华泽上海公司理应返还收到了货款3,010.50万元。被告华泽上海公司逾期交货导致合同解除，被告华泽上海公司系违约方，给原告造成货款资金利息损失，现原告要求自逾期交货日(2015年11月1日)起按中国人民银行同期贷款利率计算利息损失，于法有据，但截止日期以判决生效之日为妥。

被告陕西华泽公司系被告华泽上海公司的一人股东，原告认为两被告存在人格混同、财产混同、未及时清算情况，被告陕西华泽公司应对华泽上海公司债务承担连带责任。本院认为，首先，被告陕西华泽公司为证明其财产独立于被告华泽上海公司，向本院提交了书面财务账册和两份审计报告，审计报告显示被告陕西华泽公司依照企业会计准则的规定编制账册，该证据足以显示被告陕西华泽公司的财产独立。其次，原告认为两被告的实际控制人一致，导致两被告人格混同。本院认为，两被告实际控制人一致并不等同于两被告人员混同，更不能等同于两被告人格混同。故原告举证证明两被告存在人格混同的事实。最后，原告认为被告华泽上海公司未正常年检、应清算未及时清算，因企业未年检并非企业清算的法定事由，且原告未举证证明被告华泽上海公司存在其他应当清算事由，故原告该主张本院不予采信。综上，原告要求被告陕西华泽公司承担连带责任的诉讼请求，本院不予支持。

依照《中华人民共和国合同法》第九十四条、九十七条，《中华人民共和国公司法》第六十三条的规定，判决如下：

一、解除原告宁波山煤华泰贸易有限公司与被告华泽镍钴金属(上海)有限公司于2015年9月22日签订的《工业品购销协议》；

二、被告华泽镍钴金属(上海)有限公司于本判决生效之日起十日内返还原告宁波山煤华泰贸易有限公司货款3,010.50万元；

三、被告华泽镍钴金属(上海)有限公司于本判决生效之日起十日内偿付原告宁波山煤华泰贸易有限公司利息损失(3,010.50万元为本金，自2015年11月1日起至判决生效之日止，按中国人民银行同期贷款利率计算)；

四、驳回原告宁波山煤华泰贸易有限公司其余诉讼请求。

负有金钱给付义务的当事人，如果未按本判决指定的期间履行给付金钱义务，应当按照《中华人民共和国民事诉讼法》第二百五十三条之规定，加倍支付迟延履行期间的债务利息。

案件受理费196,745元，由被告华泽镍钴金属(上海)有限公司负担。

如不服本判决，可在判决书送达之日起十五日内，向本院递交上诉状，并按对方当事人的人数提出副本，上诉于上海市第一中级人民法院。

审　判　长　冯　静
审　判　员　杨仁感
人民陪审员　吴慈新
二〇一七年二月七日
书　记　员　沈晨炜

附：相关法律条文

Evidence recognized by the court

Court reasoning

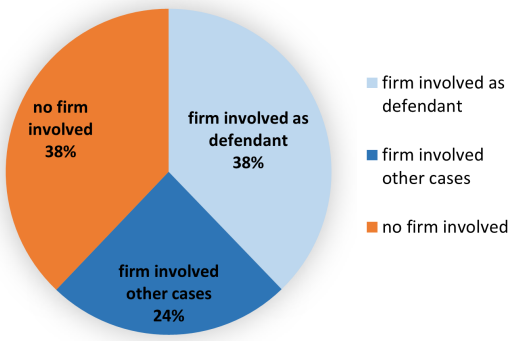
Legal provisions on which the judgment is based.
The decision of the judgment

Judges and date of delivering the judgment

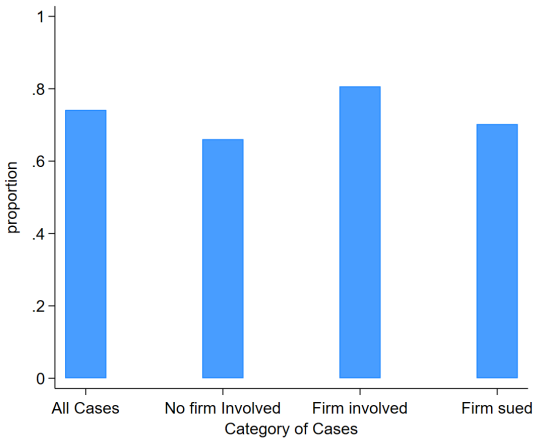
Appendix Figure OA2. Search Page of *China Judgments Online*

Notes: This figure shows a screenshot of the search page from https://wenshu.court.gov.cn/.

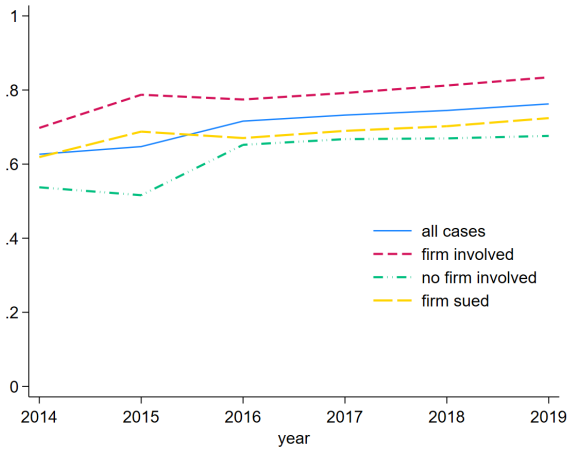
(a) Proportion of Firm-Involved Cases in Disclosed Cases



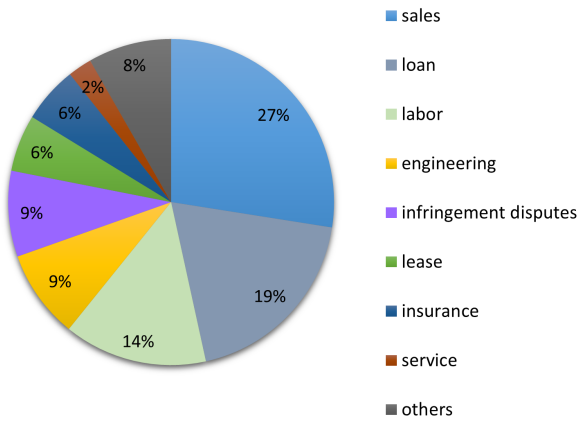
(b) Proportion of Contract Disputes in Disclosed Cases



(c) Proportion of Contract Disputes in Disclosed Cases: Trend



(d) Composition of Disclosed Contract Disputes



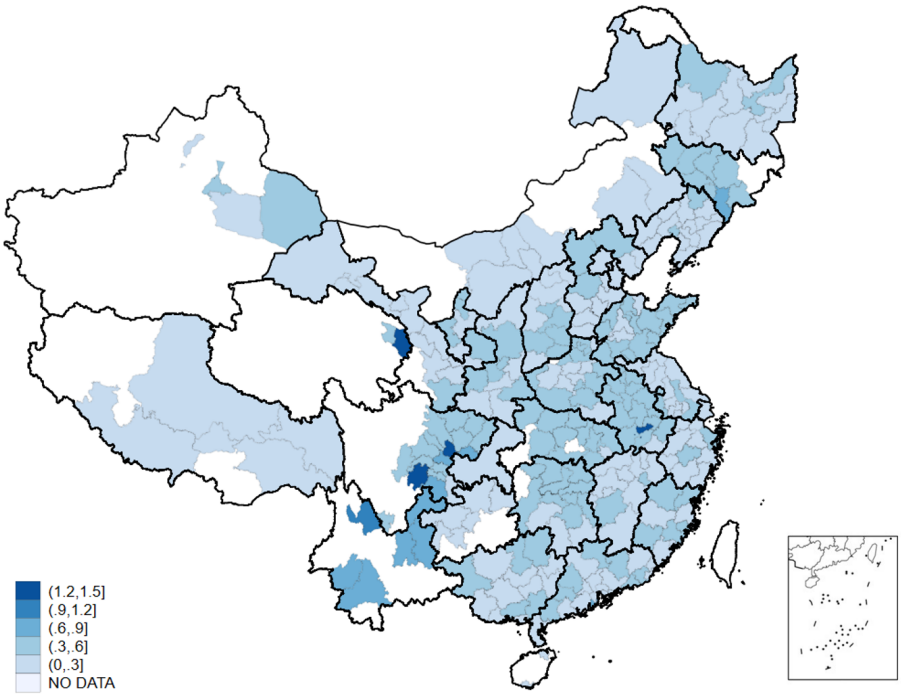
Appendix Figure OA3. Composition of Disclosed Cases

Notes: The data source for this analysis includes all publicly available first-instance judgments of civil cases from 2014 to 2019.

Appendix Figure OA4. Search Page of *Qichacha*

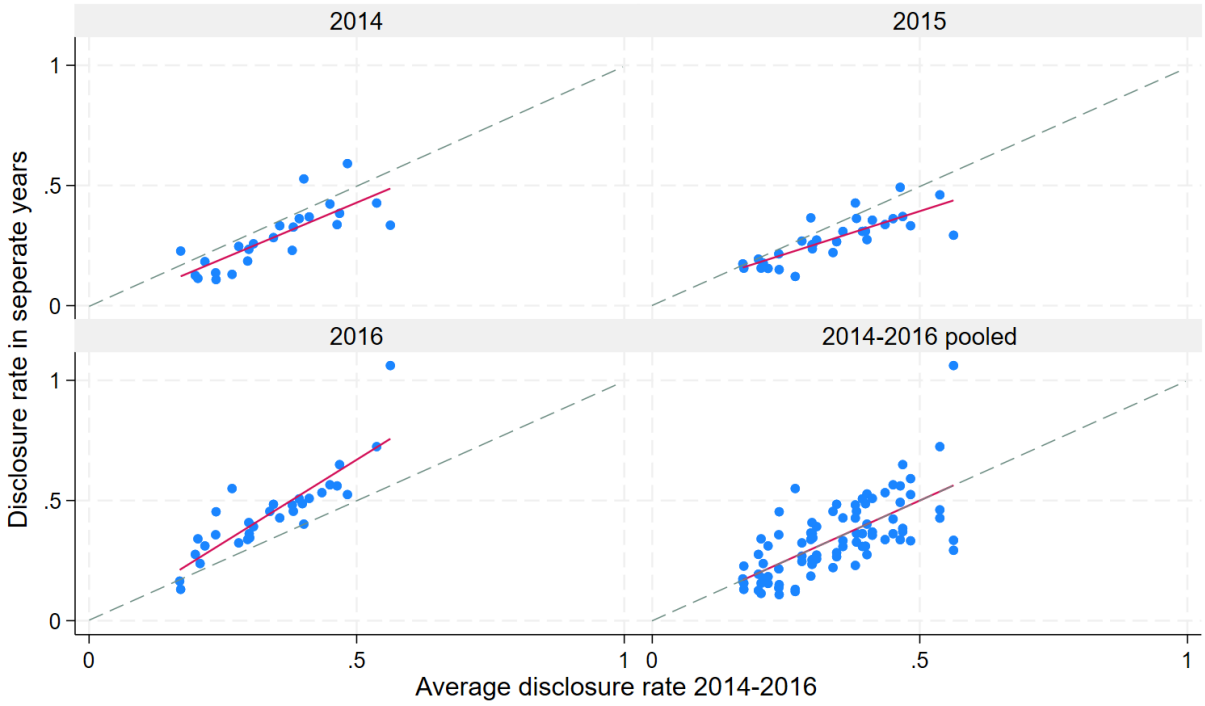
Notes: This figure shows a screenshot of https://www.qcc.com/.

Appendix OB. Supplementary Figures



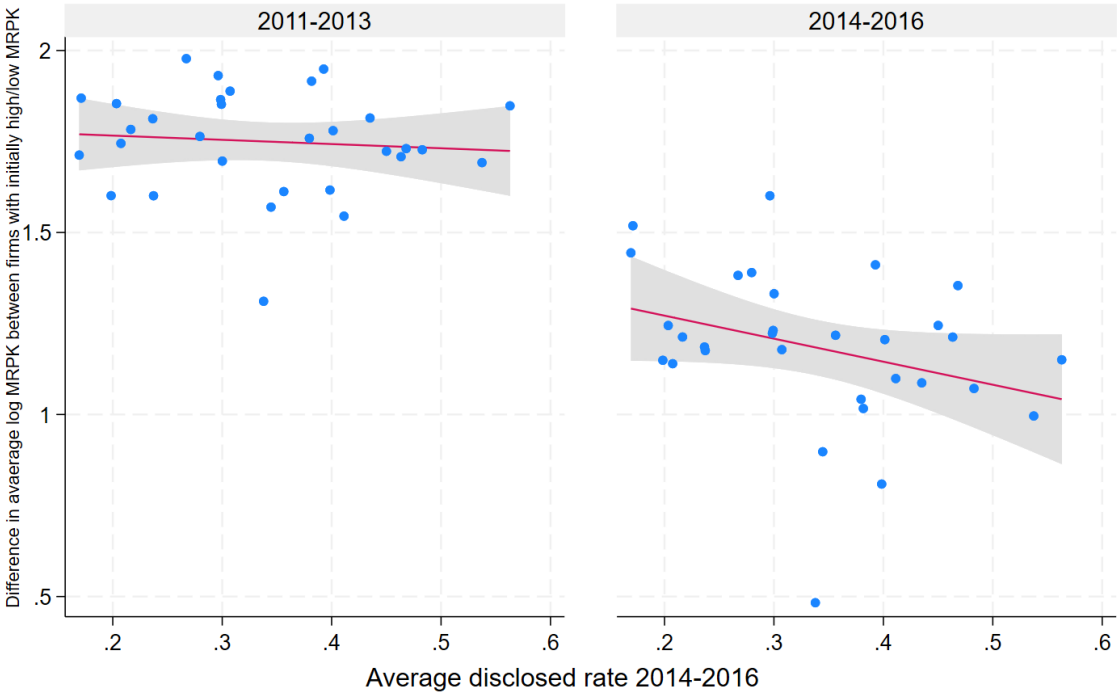
Appendix Figure OB1. Prefecture-level Legal Transparency in 2015

Notes: Legal transparency for each city is measured by the proportion of closed cases with judgment documents published online at the prefectural level. The numerator data is obtained from China Judgments Online, while the denominator data is provided by the SPC for research purposes. Roughly 25% cities have missing values for the number of closed cases.



Appendix Figure OB2. Legal Transparency in 2014-2016

Notes: This figure plots the scatter point graph between the average legal transparency in 2014-2016 and the annual values. Each observation is at the province-by-year level.



Appendix Figure OB3. Association between MRPK Dispersion and Legal Transparency

Notes: Each observation represents a province. The vertical axis shows the MRPK gap between firms with initially high (above median of their CIC-4 digit industry) and low MRPK (below median) for the periods 2011-2013 (left) and 2014-2016 (right). The horizontal axis represents the average disclosure rate (legal transparency) for each province from 2014-2016.

Appendix OC. Robustness Checks

Appendix Table OC1: Robustness: Civil Cases Transparency

Dependent Variables	(1) log MRPK	(2) log K	(3) leverage ratio	(4) long borrow	(5) short borrow	(6) trade borrow	(7) log output
$CivilTrans_{ct} * I_i^{HighMRPK}$	-0.746***	0.389***	1.230***	0.327***	0.135***	0.120***	0.234***
	(0.041)	(0.028)	(0.223)	(0.085)	(0.024)	(0.033)	(0.044)
	Initial firm size$_i$*years included Firm, CIC4-Year, and Province-Year FE included						
Observations	519,719	576,899	551,992	151,743	564,764	490,924	505,873
R^2	0.830	0.961	0.808	0.901	0.945	0.896	0.903

Notes: This table displays the effects of legal information on firms' MRPK, fixed capital borrowing, and output, using the disclosure rate of civil cases in each province c in year t as a measure ($CivilTrans_{ct}$). Each observation is at the firm-by-year level. MRPK is measured using $Revenue/Capital$. K is the fixed capital in each year. The total leverage ratio is measured as the ratio of total debt to fixed capital. Long-term and short-term borrowing correspond to noncurrent and current liabilities, respectively, while trade borrowing is measured by accounts payable. $I_i^{HighMRPK}$ is a dummy variable indicating whether firm i's pre-reform average MRPK (calculated from 2009 to 2012) exceeds the median within its CIC-4 digit industry. Initial Size$_i$ is measured by firms' logged sales in 2011. Standard errors are clustered at the CIC-4digit industry level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Appendix Table OC2: Robustness: Transparency of Cases Closed in the Same Year

Dependent Variables	(1) log MRPK	(2) log K	(3) leverage ratio	(4) long borrow	(5) short borrow	(6) trade borrow	(7) log output
$SYTrans_{ct} * I_i^{HighMRPK}$	-1.046***	0.549***	1.525***	0.418***	0.166***	0.132***	0.315***
	(0.047)	(0.035)	(0.267)	(0.096)	(0.027)	(0.037)	(0.052)
	Initial firm size$_i$*years included Firm, CIC4-Year, and Province-Year FE included						
Observations	526,951	585,345	560,106	155,770	573,082	498,710	512,737
R^2	0.828	0.961	0.806	0.899	0.944	0.895	0.901

Notes: This table displays the effects of legal information on firms' MRPK, fixed capital borrowing, and output, using the disclosure rate of cases closed in the same year in each province c in year t as a measure ($SYTrans_{ct}$). Each observation is at the firm-by-year level. MRPK is measured using $Revenue/Capital$. K is the fixed capital in each year. The total leverage ratio is measured as the ratio of total debt to fixed capital. Long-term and short-term borrowing correspond to noncurrent and current liabilities, respectively, while trade borrowing is measured by accounts payable. $I_i^{HighMRPK}$ is a dummy variable indicating whether firm i's pre-reform average MRPK (calculated from 2009 to 2012) exceeds the median within its CIC-4 digit industry. Initial Size$_i$ is measured by firms' logged sales in 2011. Standard errors are clustered at the CIC-4digit industry level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Appendix Table OC3: Robustness: Prefecture-level Legal Transparency

Dependent Variables	(1) log MRPK	(2) log K	(3) leverage ratio	(4) long borrow	(5) short borrow	(6) trade borrow	(7) log output
$CityTrans_{pt} * I_i^{HighMRPK}$	-0.789***	0.434***	0.945***	0.300***	0.118***	0.089***	0.196***
	(0.033)	(0.028)	(0.188)	(0.070)	(0.019)	(0.027)	(0.036)
	Initial firm size$_i$*years included Firm, CIC4-Year, and City-Year FE included						
Observations	526,855	585,260	560,018	155,634	572,988	498,618	512,638
R^2	0.831	0.961	0.807	0.901	0.945	0.896	0.903

Notes: This table displays the effects of legal information on firms' MRPK, fixed capital borrowing, and output, using the disclosure rate of cases in each city p in year t as a measure ($CityTrans_{pt}$). Each observation is at the firm-by-year level. MRPK is measured using $Revenue/Capital$. K is the fixed capital in each year. The total leverage ratio is measured as the ratio of total debt to fixed capital. Long-term and short-term borrowing correspond to noncurrent and current liabilities, respectively, while trade borrowing is measured by accounts payable. $I_i^{HighMRPK}$ is a dummy variable indicating whether firm i's pre-reform average MRPK (calculated from 2009 to 2012) exceeds the median within its CIC-4 digit industry. Standard errors are clustered at the CIC-4digit industry level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Appendix Table OC4: Robustness: County-level Legal Transparency

Dependent Variables	(1) log MRPK	(2) log K	(3) leverage ratio	(4) long borrow	(5) short borrow	(6) trade borrow	(7) log output
$CityTrans_{pt} * I_i^{HighMRPK}$	-0.531***	0.305***	0.689***	0.260***	0.101***	0.111***	0.184***
	(0.0259)	(0.0190)	(0.132)	(0.053)	(0.0141)	(0.0207)	(0.0270)
	Initial firm size$_i$*years included Firm, CIC4-Year, and County-Year FE included						
Observations	533,816	592,808	567,442	158,350	580,437	505,409	519,364
R^2	0.828	0.961	0.806	0.899	0.944	0.895	0.900

Notes: This table displays the effects of legal information on firms' MRPK, fixed capital borrowing, and output, using the disclosure rate of cases in each county q in year t as a measure ($CountyTrans_{qt}$). Each observation is at the firm-by-year level. MRPK is measured using $Revenue/Capital$. K is the fixed capital in each year. The total leverage ratio is measured as the ratio of total debt to fixed capital. Long-term and short-term borrowing correspond to noncurrent and current liabilities, respectively, while trade borrowing is measured by accounts payable. $I_i^{HighMRPK}$ is a dummy variable indicating whether firm i's pre-reform average MRPK (calculated from 2009 to 2012) exceeds the median within its CIC-4 digit industry. Standard errors are clustered at the CIC-4digit industry level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Appendix Table OC5: Robustness: Changing the Denominator

Dependent Variables	(1) log MRPK	(2) log K	(3) leverage ratio	(4) long borrow	(5) short borrow	(6) trade borrow	(7) log output
A. $Transparency_{ct}$ = **number of disclosed cases / number of firms**							
$Trans_{ct} * I_i^{HighMPRK}$	-0.016***	0.007***	0.019***	0.007***	0.002***	0.002***	0.004***
	(0.001)	(0.001)	(0.004)	(0.001)	(0.000)	(0.001)	(0.001)
	Initial firm size$_i$*years included Firm, CIC4-Year, and Province-Year FE included						
Observations	534,309	593,339	567,929	158,628	580,941	505,832	519,833
R^2	0.827	0.961	0.805	0.898	0.944	0.895	0.900
B. $Transparency_{ct}$ = **number of disclosed cases / GDP (in units *10)**							
$Trans_{ct} * I_i^{HighMPRK}$	-0.035***	0.020***	0.039***	0.015***	0.005***	0.004***	0.010***
	(0.001)	(0.001)	(0.008)	(0.003)	(0.001)	(0.001)	(0.002)
	Initial firm size$_i$*years included Firm, CIC4-Year, and Province-Year FE included						
Observations	534,309	593,339	567,929	158,628	580,941	505,832	519,833
R^2	0.827	0.961	0.805	0.898	0.944	0.895	0.900

Notes: This table displays the effects of legal information on firms' MRPK, fixed capital borrowing, and output using alternative measure of legal transparency. Each observation is at the firm-by-year level. MRPK is measured using $Revenue/Capital$. K is the fixed capital in each year. The total leverage ratio is measured as the ratio of total debt to fixed capital. Long-term and short-term borrowing correspond to noncurrent and current liabilities, respectively, while trade borrowing is measured by accounts payable. $I_i^{HighMRPK}$ is a dummy variable indicating whether firm i's pre-reform average MRPK (calculated from 2009 to 2012) exceeds the median within its CIC-4 digit industry. Legal transparency is measured by replacing the denominator in the benchmark measure with number of above-industrial firms (in Panel A) and GDP (in Panel B). All regressions include firm and CIC-4digit industry-by-year fixed effects. Standard errors are clustered at the CIC-4digit industry level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Appendix Table OC6: Robustness: Exclude Big Firms

Dependent Variables	(1) log MRPK	(2) log K	(3) log MRPK	(4) log K	(5) log MRPK	(6) log K	(7) log MRPK	(8) log K	(9) log MRPK	(10) log K
	exclude sample whose annual sales are among top 5%									
	all		in same CIC2		in same province		in same city		in same county	
$Trans_{ct} * I_i^{HighMPRK}$	-0.794***	0.474***	-0.801***	0.505***	-0.808***	0.520***	-0.793***	0.464***	-0.789***	0.446***
	(0.034)	(0.027)	(0.035)	(0.029)	(0.035)	(0.030)	(0.033)	(0.027)	(0.032)	(0.028)
	Initial firm size$_i$*years included Firm, CIC4-Year, and Province-Year FE included									
Observations	485,131	539,901	437,475	488,616	421,619	471,587	501,787	557,932	519,279	576,869
R^2	0.833	0.956	0.836	0.952	0.838	0.951	0.831	0.958	0.829	0.960

	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
	exclude sample whose annual employment size are among top 5%									
	all		in same CIC2		in same province		in same city		in same county	
$Trans_{ct} * I_i^{HighMPRK}$	-0.801***	0.471***	-0.803***	0.476***	-0.826***	0.496***	-0.796***	0.461***	-0.792***	0.454***
	(0.033)	(0.029)	(0.034)	(0.029)	(0.035)	(0.030)	(0.032)	(0.028)	(0.031)	(0.027)
	Initial firm size$_i$*years included Firm, CIC4-Year, and Province-Year FE included									
Observations	488,813	544,350	482,963	538,009	451,894	504,726	505,398	562,150	514,328	571,724
R^2	0.831	0.957	0.832	0.957	0.834	0.955	0.830	0.959	0.830	0.960

Notes: This table displays robustness checks on the impact of legal transparency on capital allocation by excluding the largest 5% of firms within each industry (CIC-2 digit) or within different geographic levels (province, city, county), based on annual sales and employment. Each observation is at the firm-by-year level. MRPK is measured using *Revenue/Capital*. K is the fixed capital in each year. $Trans_{ct}$ is the fraction of publicly released cases relative to the total number of closed cases for each province c in year t. $I_i^{HighMRPK}$ is a dummy variable indicating whether firm i's pre-reform average MRPK (calculated from 2009 to 2012) exceeds the median within its CIC-4 digit industry. Initial Size$_i$ is measured by firms' logged sales in 2011. Standard errors are clustered at the CIC-4digit industry level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Appendix Table OC7: Robustness: Allowing Heterogeneous Impact of Independence Reform

Dependent Variables	(1) log MRPK	(2) log K	(3) leverage ratio	(4) long borrow	(5) short borrow	(6) trade borrow	(7) log output
$Trans_{ct} * I_i^{HighMRPK}$	-0.805***	0.479***	1.021***	0.220***	0.112***	0.080**	0.231***
	(0.035)	(0.035)	(0.226)	(0.071)	(0.020)	(0.032)	(0.035)
	$Independence_{ct} * I_i^{HighMRPK}$ Included Initial firm size$_i$*years included Firm, CIC4-Year, and Province-Year FE included						
Observations	526,951	585,345	560,106	155,770	573,082	498,710	512,737
R^2	0.828	0.961	0.806	0.899	0.944	0.895	0.901

Notes: This table displays the effects of legal information on firms' MRPK, fixed capital borrowing, and output, in a robustness setting allowing the heterogeneous impact of the judicial independent reform $Independence_{ct}$ on firms with initially high and low MRPK. Each observation is at the firm-by-year level. MRPK is measured using $Revenue/Capital$. K is the fixed capital in each year. The total leverage ratio is measured as the ratio of total debt to fixed capital. Long-term and short-term borrowing correspond to noncurrent and current liabilities, respectively, while trade borrowing is measured by accounts payable. $Transparency_{ct}$ is the fraction of publicly released cases relative to the total number of closed cases for each province c in year t. $I_i^{HighMRPK}$ is a dummy variable indicating whether firm i's pre-reform average MRPK (calculated from 2009 to 2012) exceeds the median within its CIC-4 digit industry. Standard errors are clustered at the CIC-4digit industry level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Appendix Table OC8: Robustness: Indicator of High MRPK Measured using 2011 Data

Dependent Variables	(1) log MRPK	(2) log K	(3) leverage ratio	(4) long borrow	(5) short borrow	(6) trade borrow	(7) log output
A. $Trans_{ct}$ = **Disclosure Rate of all Cases**							
$Trans_{ct} * I_i^{HighMRPK}$	-0.968***	0.471***	0.780***	0.329***	0.093***	0.055*	0.183***
	(0.032)	(0.030)	(0.202)	(0.071)	(0.021)	(0.031)	(0.034)
	Initial firm size$_i$*years included Firm, CIC4-Year, and Province-Year FE included						
Observations	513,874	548,824	526,442	147,363	537,525	469,953	512,737
R^2	0.829	0.961	0.807	0.899	0.944	0.896	0.901
B. $CivilTrans_{ct}$ = **Disclosure Rate of Civil Cases**							
$CivilTrans_{ct} * I_i^{HighMRPK}$	-0.933***	0.427***	0.896***	0.390***	0.098***	0.067*	0.173***
	(0.040)	(0.032)	(0.229)	(0.087)	(0.025)	(0.036)	(0.041)
	Initial firm size$_i$*years included Firm, CIC4-Year, and Province-Year FE included						
Observations	506,959	540,865	518,771	143,533	529,680	462,622	505,873
R^2	0.830	0.962	0.809	0.901	0.945	0.896	0.903
C. $SYTrans_{ct}$ = **Disclosure Rate of Cases Closed in the Same Year**							
$SYTrans_{ct} * I_i^{HighMRPK}$	-1.297***	0.597***	1.150***	0.450***	0.127***	0.080*	0.239***
	(0.044)	(0.039)	(0.281)	(0.094)	(0.029)	(0.042)	(0.049)
	Initial firm size$_i$*years included Firm, CIC4-Year, and Province-Year FE included						
Observations	513,874	548,824	526,442	147,363	537,525	469,953	512,737
R^2	0.829	0.961	0.807	0.899	0.944	0.896	0.901

Notes: This table displays the effects of legal information on firms' MRPK, fixed capital borrowing, and output, in a robustness setting using an alternative definition of high initial MRPK using 2011 data. Each observation is at the firm-by-year level. MRPK is measured using $Revenue/Capital$. K is the fixed capital in each year. The total leverage ratio is measured as the ratio of total debt to fixed capital. Long-term and short-term borrowing correspond to noncurrent and current liabilities, respectively, while trade borrowing is measured by accounts payable. $Trans_{ct}$ is the fraction of publicly released cases relative to the total number of closed cases for each province c in year t. $CivilTrans_{ct}$ is the disclosure rate of civil cases in each province c in year t. $SYTrans_{ct}$ is the disclosure rate of cases closed in the same year. $I_i^{HighMRPK}$ is a dummy variable indicating whether firm i's pre-reform average MRPK (calculated from 2009 to 2012) exceeds the median within its CIC-4 digit industry. Standard errors are clustered at the CIC-4digit industry level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.