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## Law and Finance: How the Xinfang System Influences Modern Finance in China

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### 1. Introduction

An extensive literature explores how legal systems shape the operation of financial markets. As discussed by La Porta et al (1998, 1999, 2008), Gennaioli and Shleifer (2007), and Levine (2005), legal systems differ in how effectively they safeguard private property from encroachments by the state or others, enforce contracts, resolve disputes, and adapt to support<sup>4</sup> the evolving demands of firms and individuals in a dynamic economy. In turn, a large body of empirical work confirms that these legal system differences impact the functioning of financial systems and the financing of firms, e.g., La Porta et al (1997, 1998, 1999, 2000, 2008), Demirguc-Kunt and Maksimovic (1998), Beck et al (2003), and Djankov et al (2003, 2008), Qian and Strahan (2007), Brown et al (2013, 2017), and many others.

Evidence from China, however, challenges this law and finance view. Allen et al. (2005) find that the fastest growing firms in China do not rely on formal legal and financial systems, raising questions about the applicability of the law and finance view to China. Using a much larger database, however, Ayyagari et al. (2010) show that Chinese firms receiving bank loans experience faster growth than firms receiving informal financing. None of these authors, however, provides direct evidence on how the Chinese legal system shapes the operation of financial markets and the financing of firms.

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<sup>4</sup> For example, Berkowitz, Lin and Ma (2015) find that the Chinese legal system has adapted to meet the demand of a new economic environment by implementing the private property protection law. The law gave creditors more rights over the assets underlying their secured loans and gave private firms more protections against the potential expropriation of their assets. Upon the property law enactment, firms' values are found to increase significantly, indicating that the adoption of the law meets the demand of the economy.

## 2. Overview of Xinfang system

Xinfang has operated in China for over three thousand years (Liu, 2005). During imperial times, Xinfang served a crucial governance role: It allowed citizens to report grievances against local officials to authorities at the provincial or even central government level, helping to mitigate agency problems between the emperor and his hierarchy of officials through provinces, prefectures, counties, townships, etc. The agency problem may arise when local governors acted in their best interests instead of the emperor, who, essentially, was the owner of the country. This governance role continued after the Communist Party came to power in 1949.

More recently, Xinfang has expanded its role to address disputes concerning the legal rights of individuals and the enforcement of contracts among individuals and firms. In particular, the explosive growth of the Chinese economy since the 1970s created demands for an assortment of new commercial and financial arrangements<sup>5</sup>. The Chinese courts have been slow to supply these services, partially because the courts require the enactment of new bodies of law and the development of procedures for enforcing those new statutes. Xinfang, however, has evolved to address modern commercial and financial disputes in a manner that parallels, and sometimes replaces, the courts. Today, individuals and firms in China can initiate a case in the courts or use the Xinfang system. If a plaintiff or defendant is unsatisfied with a court's decision, they can file a grievance with Xinfang to have the decision overruled.

## 3. Contribution

In this paper, we construct a new dataset on a central institution for protecting private property, enforcing contracts, and resolving disputes in China--the Xinfang system. We analyze the data to re-evaluate the relationship between law and finance in China. Although the Xinfang system is not part of the judicial system, and therefore has often been ignored by western scholars studying the Chinese legal system, the Xinfang system is a formal institution that plays key roles in addressing a wide array of legal system disputes. Indeed, the Xinfang system often handles more cases than the judicial system. Therefore, ignoring Xinfang will yield only a partial view of the formal systems in China that address commercial and financial disputes and might, therefore, lead researchers to draw misleading inferences about the law and finance nexus in China.

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<sup>5</sup> For example, before 1978, China was an absolute command economy; therefore, private contract played no role in the economy. After 1978, small private business were allowed to operate in the market; this thus created demands for contract law and enforcement.

To get a further sense of how omitting the Xinfang system could impede research on the law and finance nexus in China, it is helpful to compare Xinfang and the Chinese judiciary with respect to two key traits of the legal system: independence and adaptability. First, La Porta, Lopez-de-Silanes, Pop-Eleches, and Shleifer (2004) note that independence tends to enhance the ability of legal systems to protect individuals and their property from the potentially coercive power of the state. Across much of China, Xinfang enjoys greater independence from local politics than the judiciary, potentially giving it an advantage in addressing disputes. In particular, local governments (prefectures, counties and townships) have considerable influence over local courts by setting budgets and appointing, promoting, and dismissing court officials. This influence can adversely affect the objective application of the law through the courts at the local level. In contrast, local officials typically have less influence over local Xinfang bureaus, because participants in Xinfang disputes can readily appeal cases to the provincial (and national) Xinfang offices. While it would be wrong to argue that Xinfang is independent of the government, as Xinfang officials are government bureaucrats, it would also be wrong to characterize the Xinfang systems as reflecting the political preferences of local officials to the same degree as the courts. Thus, omitting Xinfang could materially affect research which studies the degree to which the Chinese legal system objectively and effectively protects private property, enforces contracts, and facilitates the operation of the financial system in China.

Second, there are notable differences between the Xinfang and court systems with respect to adaptability. As emphasized by Levine (2005) and Gennaioli and Shleifer (2007), adaptability shapes how effectively legal institutions evolve to support the commercial and financial needs of dynamic economies. In China, the government enacts laws and courts implement them, with little avenue for the law to evolve. Specifically, a dispute in court is resolved as following in China: after the case is investigated and evidence is collected by court's officials, the judge can *only* rely on the formal written legal rules to resolve the case. This is in sharp distinction to a common law system, where a case is typically resolved through a jury who can base their judgement on a collection of law, social norms and inherited values in the society. Under the Xinfang system however, disputes are resolved by consulting the law, social norms, and principles of fairness articulated in the constitution. As such, the Xinfang system can adapt to changing economic conditions as it seeks efficient resolutions to particular cases. The ability of Xinfang to adapt effectively to changing economic conditions is further enhanced by the provincial-level organization of Xinfang: each province adapts to the demands of its firms and individuals. Thus, ignoring Xinfang could materially distort studies of the Chinese legal system, especially during China's recent period of extraordinary GDP growth.

## 4. Data

We develop cross-province, cross-time measures of the effectiveness of Xinfang institutions in protecting private property, enforcing contracts, and resolving disagreements. We believe that we are the first to construct such measures. We then evaluate whether the relationship between cross-province differences in Xinfang and corporate financing patterns are consistent with key predictions from the law and finance literature.

To construct a cross-year, cross-provincial index of Xinfang institutions, we hand collect data on Xinfang procedures from China's 31 provinces over the period 1991-2014. More specifically, we gather information on 52 Xinfang features for each province in each year. These features measure the speed of dispute resolution (*speed features*), the degree to which a province's Xinfang regulations ease the ability of individuals and firms to access the Xinfang system (*access features*), and the degree to which Xinfang motivates its employees to treat participants well and resolve cases expeditiously and fairly (*incentive features*). Specifically, the *speed measures* gauge how many days that a regional Xinfang system needs to resolve a case; the *access features* measure how easily a Xinfanger can get access to the system, for example that some provinces offer free posting service when file a Xinfang case in remote distance; and the *incentive features* gauge the incentives of the workers in the Xinfang system, examples include rewards when Xinfang workers exceed their workload and complete their jobs well and punishments when they fail to meet the requirements of the Xinfang bureau. We create and analyze several provincial Xinfang indexes that apply different weights to the individual features.

## 5. Results

We first document that provinces with stronger Xinfang institutions tend to have firms that obtain more external finance than other provinces, where external finance is measured by short-term loans, long-term debts and trade credit. This pattern holds when including province and year fixed effects, as well as individual province time trends. These results are also robust to controlling for cross-province differences in output, output per capita, the size of the government, government corruption, government intervention in the provincial economy, the quality of accounting and judicial services, literacy, and province exports and imports to other countries. However, there might be other time invariant factors that drive our results. For example, some provinces are endowed by their locations to the capital and financial centres and provincial locations may in turn influence both the quality of Xinfang system and financial development. This omitted variable problem may render our estimates biased. Provincial time trends could cause similar effects on our estimation. Thus, by controlling

for all time-invariant province effects, province time trends, and an array of time-varying province characteristics, we attempt to reduce omitted variable concerns by “saturating” the regression.

Second, we move from these cross-provinces analyses and further differentiate by industries and firms to assess whether the relationship between Xinfang and firm finance varies across provinces, industries, and firms in ways that are consistent with the law and finance view. In particular, the law and finance view suggests that more effective legal systems facilitate external finance, so that provinces with more effective legal systems should foster a greater flow of external finance to firms, especially firms in industries that depend heavily on external finance for technological reasons. Therefore, we test whether the level of Xinfang development has a more pronounced, positive relationship with external finance in industries that depend more on external finance for technological reasons.<sup>6</sup> We follow Rajan and Zingales (1998) and use the external financing of U.S. industries as a proxy for the degree to which an industry depends on external finance for technological reasons. We assign a value of one to an industry if it is above the median of external finance across Chinese industries and zero if it is below. This external financial dependence dummy variable provides information of the degree to which the industry heavily depends on external finance for technological reasons. We then test whether provinces with better Xinfang institutions facilitate the flow of external finance to firms in industries that are heavily dependent on it for technological reasons.

The results are consistent with predictions from the law and finance literature: In provinces with stronger Xinfang institutions, more external finance flows to industries that depend heavily on external finance. This result holds when controlling for both province-year and industry-year fixed effects, reducing concerns that the results are driven by an omitted variable. The estimated coefficients suggest that the economic magnitudes are large. If a province were to move its Xinfang index from the 25th percentile to the 75th percentile of the cross-province distribution, the coefficient estimates imply that the external finance measures for industries that depend heavily on external credit would rise higher than the measures of industries with less dependence on external credit by 12%-18% of the sample means.

Finally, we show that the predictions of the law and finance view hold when examining cross-firm

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<sup>6</sup> For example, pharmaceuticals firms naturally require high initial investment than financial service firms because of the high research and development costs. Similarly, heavy industrial firms require more initial investment than a typical service firm. Therefore, pharmaceuticals and heavy industrial firms are more financially dependent than financial and other service firms. This technological, or natural, difference in dependence on external finance is our main identification assumption.

differences. In particular, we evaluate the hypothesis that privately-owned firms rely more on the judicial and Xinfang enforcement of contracts than state-owned firms, as stressed by Acemoglu and Johnson (2005). We therefore test whether Xinfang has a more pronounced, positive relationship with firm financing in privately-owned firms. Our findings are consistent with the hypothesis. We find that positive relationship between external finance and cross-province Xinfang effectiveness is much more pronounced among privately-owned firms than it is among state-owned firms.

## **6. Conclusions**

In this paper, we provide new data about a central institution for protecting private property and enforcing contracts in China and then use these data to reassess the law-finance nexus. Specifically, we first note the central role of Xinfang in protecting private property rights, addressing contract disputes, and adapting to support a burgeoning array of commercial and financial interactions in China. Although Xinfang is not defined as part of the judicial system, and therefore has been largely ignored by western scholars, it nevertheless provides these vital legal functions to the economy and should be incorporated into assessments of the law and finance in China. Second, we develop measures of the cross-province effectiveness of Xinfang institutions and show that Xinfang are associated with cross-province, cross-industry, and cross-firm differences in corporate financing patterns that are consistent with key predictions from the law and finance view.

Our work emphasizes the importance of institutional adaptability. Although the transformation of the Chinese economy over the last three decades created demands for—and perhaps required—the development of legal institutions to support new commercial, corporate, and financial arrangements, the legislature and courts were unable to adapt effectively by writing, enacting, and implementing new statutes. Xinfang, however, evolved to satisfy these demands. The evidence suggests that Xinfang helped reduce the gap between the contracting needs of the economy and the capabilities of the legal system.