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Abstract

This paper examines the long-term effect of historical financial institutions on the development of informal finance in contemporary China. By using data on 137 counties in north China, our analysis finds that the density of local financial institutions (*qianzhuang* and *diandang*) in the late Qing period (circa 1911) has a positive effect on the number and total assets of Small Loan Companies, a dominant institution of informal finance today. This finding is robust to the inclusion of a variety of confounding variables and instru-menting historical financial institutions using the frequency of crop failures in the Qing period. We also find that the persistent effect of historical financial institutions can be explained by Confucian culture, which instills integrity, lineage solidarity and acquaint-ance networks.

Keywords: Informal Finance, Small Loan Companies, History, Confucian Culture, China

JEL classification: G21, N25

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1. Introduction

In the past few decades China has recorded sustained growth of informal finance. Informal finance refers to financial activities that operate outside the state banking system, which aim to provide micro-credits and financial services to small businesses that have difficulty accessing (formal) banking services. Given China's underdeveloped capital market, informal finance has played an important role in sustaining private enterprise growth (Allen, Qian and Qian, 2005). Having recognised the importance of informal finance, China's state authorities have started to liberalise the informal financial market to encourage the development of micro-credits. A variety of informal financial institutions, in particular Small Loan Companies (*xiao'e daikuan gongsi*), rotating savings and credit associations (*hehui* or ROSCA), pawns, and even (illegal) underground banks (*dixia qianzhuang*), emerged and expanded rapidly. Using Small Loan Companies, a dominant form of informal financial institutions, as an example, the annual growth rate amounts to 45.8% in total number and 64.8% in total loans between 2008 and 2014. As a whole, the annual growth rate in total loans of the entire informal finance sector was allegedly about 17.8% between 1978 and 2008 (Li, 2010).

The phenomenal rise of informal finance in China has received growing attention among scholars and policy makers (e.g., Allen, Qian and Qian, 2005; Ayyagari, Demirguc-Kunt and Maksimovic, 2010; Qian and Weng, 2009; Tsai, 2002; Yao, 2009; Zhang, Xu and Qin, 2013). In explaining the rise of informal finance, however, most studies focus on contemporary institutional and social-economic determinants.[1] In this paper we attempt to examine the same question from a historical perspective. Specifically, we examine whether the development of informal finance in China is still (positively) affected by historical financial development, particularly the late Qing period when the Chinese native financial institutions (*qianzhuang* and *diandang*) reached their heyday.

By shaping people's beliefs and preferences, historical institutions may have bred cultures that tend to endure through the ages (e.g., Alesina and Giuliano, 2015; Nunn and Wantchekon, 2011; Voigtländer

[1] In terms of the determinants of informal finance in contemporary China, existing studies mainly focus on the role of economic development (Zhang, Xu and Qin, 2013), the development of formal financial sector (Ngalawa and Viegi, 2013; Yao, 2009), policy of local governments (Zhang, 1997), and social capital (Qian and Weng, 2009).

and Voth, 2012). It is through the cultural channel that historical institutions affect economic or financial development in the long run (Alesina and Fuchs-Schündeln, 2007; Becker, Boeckh, Hainz and Woessmann, 2016; Grosjean, 2011; 2014; La Porta, Lopez-de-Silanes, Shleifer and Vishny, 1998). A thesis central to our study is that, although these historical financial institutions vanished for nearly a century, the culture they embodied, in particular the (Confucian) norms of integrity, lineage solidarity, and acquaintance network, which could help enforce the credit relationship in traditional Chinese society, may survive to this day. In light of the fact that informal financial activities in China operate in an environment without clear legal protection, they may still rely on the traditional business culture to sustain their growth.

Anecdotes suggest that the business model of historical finance has manifested in contemporary informal finance. Today's *hehui,* or ROSCA, for instance, can find its historical prototype in the Song dynasty (960-1279) (Wang, 1935). In the same vein, many informal financial institutions not only still use the names of their historical counterparts (eg *qianzhuang*, *biaohui*, *hehui*, *diandang*), their lending is still based on the lineage or community network. Observed at the regional level, in provinces that were historically prosperous in finance (e.g., Zhejiang, Fujian, Jiangsu and Shandong), informal financial activities are also more active relative to other places today. Using the 137 counties of Shandong Province (on the north China plain) as an example, there is a significant positive correlation between the number of financial institutions (*qianzhuang* and *diandang*) in the late Qing period and the number of Small Loan Companies in 2013 (Figure 1).

To account for the persistent effect of historical finance on the development of informal finance today, we choose the 137 counties of Shandong Province as our sample regions. Shandong not only had a prosperous native financial market in historical China, but also had a fast-growing informal financial sector in the past few decades. More importantly, a unique advantage of Shandong is that, as the birthplace of Confucius, Shandong was deeply influenced by Confucian culture, which provides us with a suitable setting for examining the effect of Confucian norms in sustaining the long-term persistence of historical finance.

We draw upon the variation in the number of native financial institutions (*qianzhuang* and *diandang*) in each county of Shandong (normalised by population) in the late Qing dynasty (1911) as our key independent variable. Similar to their modern counterparts, these historical financial institutions

operated deposit, loans and other professional services and played an important role in facilitating industrial development and economic modernisation after China was forced to open in 1840s (Zhang, 2007). To measure the development of contemporary informal finance, we use the number or total assets of Small Loan Companies at the county level between 2009 and 2013. To deal with the change in county administrative boundaries between the late Qing period and today, we match the boundaries using the China Historical Geographic Information System (CHGIS).

To avoid the possibility that the relationship between historical financial institutions and today's informal finance may be spurious, we first include a vector of confounding variables that may be correlated with historical finance and informal finance today. These include historical economic prosperity (proxied by urbanisation rate and population density in 1920s), Western influence (treaty ports) and various contemporary correlates of informal finance, including GDP per capita, share of private employments, industrial structure, dominance of formal finance, ratio of fiscal revenue to expenditure and geographical factors (terrain ruggedness, distance to coast).

To deal with the concern that there may still be some unobserved factors which are simultaneously correlated with historical finance and contemporary informal finance, we employ the frequency of crop failures in the Qing dynasty as the instrument of the number of historical financial institutions. This is premised on the reasoning that, given Qing China (Shandong), a rain-fed agricultural culture, weather shocks and the resulted crop failures represented a primarily survival risk in peasant communities. As a result, an important function of financial institutions at the time was to mitigate the survival risk by providing loans to peasants (Lu, 2000). We therefore expect a positive relationship between the frequency of crop failures and the density of financial institutions in the Qing time. Given that crop failures were a natural (exogenous) event, it is unlikely to affect the development of informal finance today, other than through the channel of historical financial institutions.

Our empirical analysis shows that the number (and total assets) of Small Loan Companies in contemporary China is positively affected by the number of historical financial institutions. This result is robust to the inclusion of other confounding variables and across different estimations. In terms of magnitudes, our instrumented results suggest that a 1% increase in the number of financial institutions (per 10,000 people) in the late Qing period increases 0.096% of the number (and 0.158% of total assets) of Small Loan Companies (per 10,000 people) in 2013.

To examine whether Confucian culture is a channel through which historical financial institutions affect today's informal finance, we use the number of Confucian temples in each county in the Qing dynasty as the proxy for the strength of Confucianism. In Qing China, the erection of Confucian temples and the associated rituals represented an important means of promoting Confucianism (Yang, 1961). Stronger Confucian norms would not only give rise to more Confucian temples being built, but would be further deepened by the temples in turn (Ho, 1962). By examining the interaction term between the number of Confucian temples and historical financial institutions, we find that the persistent effect of historical financial institutions on today's Small Loan Companies becomes significantly greater in counties that had more Confucian temples, suggesting Confucian culture is likely to sustain the long-term persistence of historical finance.

Our study contributes to two corpus of literature. The first pertains to the determinants of the development of informal finance (e.g., Ahlin, Lin and Maio, 2011; Ayyagari, Demirguc-Kunt and Maksimovic, 2010; Bogan, 2012; Kaboski and Townsend, 2005; Tsai, 2002). While most studies focus on contemporary institutional and social-economic determinants, our unique contribution is to incorporate historical and cultural factors into analysis. This suggests that today's informal financial activities would likely still be shaped by the local historical financial institutions with strong cultural norms embedded.

By providing fresh evidence to the persistence of financial activities in the context of China, our study is also closely related to the literature on the long-term persistence of historical institutions and its cultural channel (e.g., Alesina and Fuchs-Schündeln, 2007; Alesina and Giuliano, 2015; Becker, Boeckh, Hainz and Woessmann, 2016; Grosjean, 2011; 2014; Nunn and Wantchekon, 2011; Voigtländer and Voth, 2012, among others). Particularly, our study coincides with that of Grosjean (2011), who finds that the historical Islamic rule which prohibited interest lending resulted in an underdeveloped financial market today. Likewise, Pascali (2014) finds that, in Italian cities where Jews had developed charity-lending institutions (Monti di Pietà) during the 15th century, the banking sector still performs better now.

The remainder of this paper proceeds as follows. The next section provides a historical background on the development of informal finance in China. Section 3 describes our data. The persistent effects

of historical finance on contemporary Small Loan Companies are examined in Section 4. Section 5 examines the cultural channel. Section 6 provides a brief conclusion.

2. Background

2.1. A Brief Financial History of China

China's financial activities have a long history of more than 2000 years. Thanks to the expansion of domestic and overseas trade following the forced opening in the 1840s, Chinese native financial institutions achieved unprecedented development. There were three types of institutions that dominated the native financial market at the time. The first is *qianzhuang*, or literally money house. *Qianzhuang* was the local native bank, operating deposits, loans, money exchange and issuance of commercial papers. With the increasing financial demand from foreign trade and native industrialisation, *qianzhuang* developed rapidly in the late Qing period. By 1911 its total number had amounted to 4,365. The second is *piaohao*, or literally exchange shop, which dealt with inter-regional money transfer. *Piaohao* was controlled by the merchants of Shanxi Province. From 1823 onwards, the Shanxi merchants had opened 51 head offices and more than 600 branches across all Chinese provinces by the early 20th century (Huang, 2002). The third is *diandang,* or pawnshop. As the oldest financial organisation in China, pawnshops lent cash and collected interest from borrowers who provided collateral. By the same token, the commercialisation in the late Qing period contributed substantially to the prosperity of pawnshops, whose number allegedly reached at least 23,000 by the early 19th century (Luo, 1978).

But native financial institutions declined drastically from the early 20th century onward. Competition from modern banks (foreign banks, official banks and native commercial banks) notwithstanding, the Republic government also restricted the business of traditional financial institutions by enacting a new monetary system in 1930s. After the founding of the People's Republic of China in 1949, private financial institutions were replaced by public banks and socialist credit co-operatives during the socialist transformation.

After the reform and opening up in the early 1980s, the private economy's revival generated a growing demand for private financing. Having recognised this, the government began to allow private finance to "moderately" develop.[2] As a result, various types of informal financial organisations emerged and developed rapidly. In the last decade, a representative for informal financial institutions is Small Loan Companies (*xiao'e daikuan gongsi*).[3] According to People's Bank of China statistics, the annual growth rate of the number of Small Loan Companies was 45.8% between 2008 and 2014. By providing micro-credit, Small Loan Companies have become an important financial support to the development of small and medium-sized enterprises.[4] Moreover, the age-old *hehui* has also been revived after decades of disappearance. Jiangsu and Zhejiang provinces also recorded the emergence of private banks that operate deposit and lending businesses. Pawnshops (*diandang*) have also developed rapidly since the late 1980s; as of 2014, there were 7,574 pawnshops in China. However, contemporary informal finance mostly operates in the "gray area" of the legal system. There are almost no clear legal recognitions that protect and regulate private financial activities.

2.2. The Persistence of Historical Finance

Although China's historical financial organisations disappeared in the early 20th century, their long-term historical accumulation in business models and culture may continue to affect the development of contemporary informal finance, especially in an environment where the formal (legal) protection on informal finance is weak.

This is true in the context of China, a culture that has long been associated with historical financial activities pertaining to Confucian norms, in particular morality, integrity, trust and kinship solidarity (Peng, Chen and Yuan, 2008). On the one hand, by restricting economic transactions with a small

[2] In 1985, the Chinese central government proposed to "appropriately develop private credit". But it was not until 2010 that the state issued *Several Opinions of the State Council on Encouraging and Guiding the Healthy Development of Private Investments*, which allows private capital to set up financial institutions.

[3] The small loan or micro-credit program aims to provide small loans and other financial services to low-income groups through professional micro-financial institutions. In August 2005, the People's Bank of China initiated the pilot program of Small Loan Companies in five provinces (Shanxi, Sichuan, Shaanxi, Guizhou and Inner Mongolia). On this basis, the People's Bank of China and China Banking Regulatory Commission jointly issued the *Guidance on the Pilot Project of Small Loan Companies* in 2008, to regulate the further development of Small Loan Companies in other provinces of China.

[4] ROSCA refers to Rotating Savings and Credit Associations, also known as *biaohui*, *lunhui*, *yaohui* in China. According to the National Industrial Survey conducted by the Ministry of Industry of the Republic of China in 1934, there were 1,922 associations in the surveyed 22 provinces.

network of acquaintances and emphasising clan obligation, Confucianism substantially mitigates private lending transaction costs. However, it can also help enforce financial contracts (Chen, 2007).[5] In light of the fact that the legal protection on business was weak in the Ming-Qing period,[6] the operation of traditional finance often relied on the cultural arrangements of Confucianism.[7] A notable example is the operation of *qianzhuang*, which clearly indicated in the slogan of the storefront that the deposit and loan businesses must follow the principle of "integrity and righteousness", which means that the guarantee depends on moral promise rather than material. Accordingly, the loan business of *qianzhuang* was mainly the unsecured, credit loan (Chen, 1997). Similarly, *piaohao* also insisted of "righteousness over profits" (*xian yi hou li*) and "from righteousness to profits" (*yi yi zhi li*) as their business philosophy. They only provided services to respected, credible people (Huang, 2002).

Given the slow-moving nature of cultural evolution, culture is likely to remain broadly stable and transmit from one generation to the next (e.g., Bisin and Verdier, 2000; Richerson and Boyd, 2008).[8] This is arguably the case for Confucianism, which has accumulated for millennia as Chinese orthodoxy. Although historical financial institutions have long vanished, the business models based on Confucian norms may continue to this day. For example, Confucian lineage, or the relationship capital (*guanxi*) in general, played a key role in financing the rural industrialisation in the early period of the reform (Peng, 2004). In terms of various private lending activities, they still rely on a network of acquaintances to obtain information about money demanders (Lin and Sun, 2005), and use reputation, integrity and social networks to enforce their contracts (Zhuo, 2006). Even Small Loan Companies employ a variety of "relational capital" in selecting their loan targets, assessing default risks and supervising loan use (Zhou and Li, 2013). According to our survey on the 134 Small Loan Companies in Shandong Province in 2014,[9] 54% obtained borrowers' information by consulting their relatives, whereas the loans from the acquaintances accounted for up to 63% of total loans.

[5] For example, a popular Confucian norm in historical China was *fuzhai zichang* (father's outstanding debt should be repaid by his son), which means that the family or lineage network provides an implicit security to the implementation of the loan contract.

[6] Until 1908, the Qing government promulgated China's first banking regulation, *yinhang tongxing zeli* (The Common Rules of Banks) to supervise the banking sector (Huang, 2002).

[7] While Confucianism can help reduce transaction costs and enforce contracts, it may restrict economic transaction within the lineage network, which may impede the development of market institutions and capitalism (Weber, 1922).

[8] The persistence or change of cultural traits depends on their relative payoff in the changing environment. Giuliano and Nunn (2016), for example, show that culture would be less likely to persist in areas subject to a less-stable (natural) environment.

[9] In May 2014, thanks to the coordination of the Provincial Finance Office of Shandong, the School of Economics of the Shandong University organised students to conduct a survey on the 134 randomly sampled Small Loan Companies in

3. Data

To examine the persistent effect of historical financial institutions on contemporary informal finance, we chose the 137 counties of Shandong Province as our sample regions. As a representative province in north China, Shandong had a prosperous native financial market in the Qing dynasty. For instance, in 1911 Shandong had 977 *qianzhuang*, accounting for 22% of the total *qianzhuang* in the country. The average number of *qianzhuang* per county was about 8, which was substantially greater than the national average of 3. More importantly, as the birthplace of Confucius, Shandong had been deeply influenced by Confucian culture. There was also no significant influx of immigrants into Shandong after the Qing dynasty, which arguably ensured the cultural heritage from the late Qing could be better preserved.

Small Loan Companies. Given the dominant role of Small Loan Companies in contemporary informal finance, we employ the number and total assets of Small Loan Companies (normalised by population) at the county level between 2009 and 2013 as the measures of informal finance, our dependent variables. The data is from the Association of Small Loan Companies of Shandong Province.[10] Shandong has recorded a fast-growing Small Loan Company sector in the past decade. From the start of the pilot program in 2008, the number of Small Loan Companies in Shandong grew from zero to 344 by 2013, with an annual average growth rate of 68%. The development has also shown a clear regional pattern, in which more companies concentrate in the north and the centre of the province, whereas few are in the south and southwest (Figure 2).

Historical Financial Institutions. To measure the development of historical finance, we use the total number of historical financial institutions, i.e., *qianzhuang* and *diandang* at the county level (normalised by population) in the late Qing period (1911) as the proxy.[11] The data are from the *nong*

Shandong Province. The survey asks the company owners a range of questions pertinent to the background, operation, performance and perceived institutional environment.

[10] Established in May, 2011, the association is a non-profit social organisation supervised by the Provincial Finance Office of Shandong. All the Small Loan Companies must be approved by the association for establishment, and report to it each month. Therefore, the association can provide a complete list of the Small Loan Companies in Shandong.

[11] There is no record of *piaohao* in Shandong Province in 1911.

shang tongji biao (Statistics of Agriculture and Commerce), compiled by the Agricultural and Commercial Department of the Republic of China in 1912. The statistics provide the most systematic records of the number of *qianzhuang* and *diandang* in each county of China proper (see Figure 3 for the distribution of historical financial institutions).

China's administrative boundaries have changed drastically over the past 100 years. To examine the effect of historical finance on contemporary finance, we first match the historical financial institutions enumerated at the county level with the contemporary demarcation of the boundaries of the 137 counties using the China Historical Geographic Information System (CHGIS). Once this is done, we can link the number of historical financial institutions (based on current geographical demarcation) with contemporary Small Loan Companies.

Historical Controls. Historical correlates of financial development in the Qing dynasty may also have a long-term effect on contemporary informal finance. The first and foremost is economic prosperity. Following Bairoch (1988), we use the population density and urbanisation rate of the 1920s to proxy for local economic prosperity at the time, reasoning that these two measures were positively correlated with the levels of agricultural output and commercialisation (Skinner, 1977). The data are obtained from Stauffer (1922).

A related factor is treaty ports that opened in the late Qing period. By generating financial demand from overseas trade, treaty ports fostered the growth of Chinese native banks in late Qing time (Zhang, 1989). Moreover, regions of treaty ports still perform better than other regions in terms of economic development today (Jia, 2014). Therefore we control for a dummy indicating whether a county was ever a treaty port.

In addition, religions also play an important role in shaping financial activities (Kumar, Page and Spalt, 2011; Stulz and Williamson, 2003). In China's context, the Buddhist temples were actively involved in the lending business from the 7th century onwards. Similarly, the Taoist temples also have the function of financing in rural communities. To account for their possible effects we control for the number of Taoist and Buddhist temples in the Qing dynasty. The data are obtained from *Shandong tongzhi* (Provincial Gazetteer of Shandong) complied in the late Qing period.

Contemporary Controls. We also control for a rich set of contemporary covariates of informal finance. The first and foremost are regional economic conditions and formal financial development, which are considered primary determinants of informal financial activities (Ahlin, Lin and Maio, 2011; Hermes, Lensink and Meesters, 2009). We employ per capita GDP to control for the overall economic conditions, and the total loans of banks (normalised by county GDP) as the proxy for the level of formal financial development.

Moreover, since private capital is the main source of setting up Small Loan Companies, we use the balance of savings deposits per capita to approximately capture the volume of private capital. To the extent that the main customers of Small Loan Companies are private enterprises and self-employments, we also control for the share of employment in private enterprises and self-employment in the county's total employment.

Last, but not least, we also control for the ratio of fiscal revenue to expenditure, the share of the added value of the second and third industries to GDP, a dummy indicating whether a county is in the Shandong-specific "blue-yellow region" in which the provincial government distinctly supports the informal finance, and two geographic indictors (terrain ruggedness and distance to coast). Table 1 reports the descriptive statistics and data sources for all the variables.

4. Empirical Results

To examine whether the number of financial institutions in the late Qing period has an effect on the development of Small Loan Companies today, we employ the following specification:

$$y_i = \beta_0 + \beta_1 HFI_i + X_i'\delta + \varepsilon_i \quad (1)$$

where y_i refers to our dependent variable measured by the number (or total assets) of Small Loan Companies in 2013;[12] HFI_i denotes the total number of financial institutions (*qianzhuang* and *diandang*) in 1911. To reduce the skewness in distribution we take the natural logarithm of y_i and HFI_i.

[12] We also used the average of 2009-2013 as alternative measures, which yield similar results (hence not reported separately).

X' represents a vector of control variables as indicated in Section 3. To provide a benchmark we first use the OLS estimation. But, since there are 11.68% counties that have no Small Loan Companies (zero value), we use the Tobit estimation to check robustness.

The baseline results are reported in Table 2. We use the number of Small Loan Companies as the dependent variable in columns 1-3, and alternatively use total assets in columns 3-6. In both cases, we first exclude all the additional control variables before fully including them. The results show that financial institutions of late Qing have a significantly positive effect on the number and total assets of today's Small Loan Companies. These results are robust to the inclusion of other confounding variables and across different specifications. In terms of magnitude, taking columns 2 and 5 for examples, a 1% increase in the number of historical financial institutions increases the number (or total assets) of small companies by 0.026% (or 0.04%).

4.1. Instrumented Evidences

Although we have controlled for a gamut of confounding variables, some unobserved factors, such as the quality of local governance, human capital and tradition, may be simultaneously correlated with historical financial institutions and contemporary informal finance. Another concern is measurement error. Although *qianzhuang* and *diandang* were dominant native financial institutions in Shandong Province during the Qing dynasty, other financial organisations, such as trade unions and various private lending activities, were unobserved. The omitted variables and measurement errors would bias our estimates in Table 2.

To deal with these endogenous problems we employ the number of crop failures in the Qing dynasty as the instrument of the number of financial institutions. Our justifications are as follows. First, an important function of the native financial institutions (*qianzhuang* and *diandang*) in the Qing period was to mitigate economic hardship caused by crop failures. This is especially the case of Shandong, a predominantly rain-fed agricultural province on the north China plain.[13] Specifically, due to the frequent droughts on the western plain and the floods from the levee breach of the Yellow River,

[13] Until the 1920s the share of agricultural population in Shandong was still above 95% (Sun, 1957).

Shandong was frequently struck by natural calamities.[14] This resulted in endemic crop failures and famines.

The frequent crop failures gave rise to a strong demand for borrowing to circumvent the survival risk. According to the records in the *Shandong tongzhi* (Provincial Gazetteer of Shandong), during famine peasants usually pledged their farm tools or cloth to the pawnshops and, to meet an urgent need, they even went to loan sharks.[15] As a result, in areas that were subject to the vicissitudes of the weathers, financial institutions prospered. According to a survey of Luo and Jing (1985), it was not uncommon that landlords in Shandong operated loan businesses in the Qing time, which accounted for 86.3% of the 131 landlords surveyed in the 46 sample counties.

We therefore expect a positive relationship between the frequency of crop failure and the density of financial institutions in the Qing period. Thanks to the systematic records on famine reliefs by the Qing authorities, we enumerate the total number of crop failures in each county during the entire Qing period based on the *Qing shilu* (Veritable Records of the Qing Emperors).[16] The correlation coefficient between crop failures and financial institutions was 0.14 and significant at the 1% level. Given that crop failures at the time were mostly caused by natural calamities, our instrument is exogenously random and is unlikely to affect today's Small Loan Companies (other than through the channel of historical financial institutions).

The instrumented results are reported in Table 3. We use the number of Small Loan Companies as the dependent variable in columns 1 and 2, and use the total assets in columns 3 and 4. In both cases we first use the 2SLS estimation, before using the IV-Tobit to address the over-zero problem in the dependent variables. In all regressions we control for the covariates and use the robust standard errors. The instrumented results importantly confirm that historical financial institutions have a significantly positive effect on today's number (or total assets) of Small Loan Companies. Moreover, the instrumented effect of historical financial institutions is greater than that of OLS (or Tobit) in Table

[14] There were 1,772 floods and 828 droughts in the Qing dynasty, among which 298 (16.8%) floods and 148 (17.9) droughts occurred in Shandong (Yuan and Zhu, 2009). In the late Qing period, the levee breach of the Yellow River led to more than 7 million victims in Shandong, whereas the great drought that occurred in the late 1870s allegedly resulted in the deaths of nearly 10 million people on the north China plain (Li, Cheng, Liu and Xia, 1994).

[15] According to Lu (2000), during the great drought of the 1870s, rich families pawned clothes, whereas the poor pawned farming implements for borrowing money in the Qingzhou Prefecture of Shandong Province.

[16] The *Qing shilu* is the official record of imperial edicts and official memorials about events of national significance.

2. Taking columns 1 and 3 of Table 3 for examples, a 1% increase in the number of historical financial institutions increases the number (or total assets) of small loan companies by 0.096% (or 0.158%). While our instrumented results reinforce the validity of our OLS (or Tobit) estimates, they also suggest that the OLS (or Tobit) models might underestimate the long-term effect of historical finance.

4.2. Panel Data Results

Since the start of the pilot project in 2008, the institutional environment of Small Loan Companies has gradually improved. Specifically, while the provincial government of Shandong initially restricted the number and business scope of Small Loan Companies, many restrictions had been removed by 2010 when the provincial government issued the *Notice on Further Promotion of Small Loan Companies*. The market of Small Loan Companies was further liberalised upon the *Opinions on Accelerating Financial Reform and Development of Shandong* promulgated by the provincial government in 2013.

Given the gradual market liberalisation, we want to ask whether, and to what extent, the effect of historical finance on Small Loan Companies may change over time, or be mitigated by the sustained improvement in policy environment. To deal with this concern we exploit the temporal change in the number (and total assets) of Small Loan Companies between 2009 and 2013 on an annual basis, and examine the effect of the interaction terms between historical financial institutions and the year dummies. The regression equation is as follows:

$$y_{it} = \beta_0 + \sum_{t=2009}^{2013} \beta_{1t} HFI_i \times I_t + X_{it-1}^{'}\delta + \sum_{t=2009}^{2013} \alpha_t Z_i \times I_t + \eta_i + I_t + \varepsilon_{it} \quad (2)$$

where y_{it} is the number (or total assets) of Small Loan Companies in county i in year t. $HFI_i \times I_t$ is the key of interests, meaning the interactions between the number of financial institutions in the late Qing and the year dummies between 2009 and 2013. To untangle the (interactive) effect of HFI_i from the other confounding variables, we also interact the time-invariant controls with the year dummies, denoted by $Z_i \times I_t$. Finally, η_i and I_i denote the county and year fixed-effects, respectively.

Reported in Table 4, the effect of historical finance on contemporary Small Loan Companies not only remains significantly positive, but becomes greater over time. This result is robust to whether or not

including the other controls and using different estimations. This suggests that the persistent effect of historical finance might not be mitigated by the improvement in institutional environments.[17]

5. The Cultural Channel

To examine whether Confucian culture is a channel through which historical finance affects contemporary Small Loan Companies, we use the number of Confucian temples that a county had established in the Qing dynasty as the proxy for the strength of Confucianism. Confucian temples refer to the temples in which people perform sacrificial rites to worship the Confucian sages and exemplars. Based on the specific Confucians for honoring, the temples mainly include *wenmiao* (for honoring Confucius and other sages), *minghuan xiangxian ci* (for honoring the notable officials and local virtuous Confucians), and *zhongxiao jieyi ci* (for honoring the local loyal and filial men), among others (Yao, 2000). The erection of Confucian temples represented an important means of promoting Confucianism in late imperial China (Yang, 1961; Ho, 1962). Following Kung and Ma (2014), we assume that more Confucian temples would be built in counties with stronger Confucian norms, and this would further deepen the Confucian norms. The data on Confucian temples is obtained from *Shandong tongzhi* (Provincial Gazetteer of Shandong).

We first examine whether the development of historical finance was positively affected by Confucian culture in the Qing period. Reported in Table 5, we find that the number of Confucian temples has a significant positive effect on the number of historical financial institutions (*qianzhuang* and *diandang*). These results remain robust when we control for several confounding variables of Confucianism and historical finance, and use OLS or Tobit estimations. The results suggest that the native financial institutions were more likely to develop in areas that had a strong Confucian culture. Stated differently, Confucian norms were closely associated with the operation of financial activities in historical China.

[17] Of course, this finding should be explained with caution, simply because the year dummies cannot precisely measure the institutional change over time.

Now we examine the possible role of Confucian culture in sustaining the long-term persistence of historical finance. Our empirical strategy is to introduce the interaction terms between the number of Confucian temples and the number of financial institutions in the Qing period, and examine their effects on the number of Small Loan Companies today, based on the following specification:

$$y_i = \beta_0 + \beta_1 HFI_i \times Confucian_i + \beta_2 HFI_i + \beta_3 Confucian_i + X_i'\delta + \varepsilon_i \quad (3)$$

The results in Table 6 show that the interaction term between Confucian culture and historical financial institutions is significantly positive, which means that the effect of historical financial institutions on Small Loan Companies would become greater in counties having stronger Confucian culture. In contrast, the insignificant coefficient of historical financial institutions suggests that it has no (independent) effect on contemporary Small Loan Companies in counties where there is no Confucian temple.

For robustness, we employ county-level panel data (2009-2013) to examine the possible change in the effect of Confucian culture over time. Accordingly, we focus on the effect of the triple interactions among Confucian temples, historical financial institutions, and year dummies. Reported in Table 7, the coefficient of the triple interaction terms remain significantly positive across all specifications, and even become greater over time. While these results reinforce our finding on the persistent effect of Confucian culture (Table 6), they also suggest that the effect of Confucian culture in sustaining the long-term persistence of historical finance is not mitigated by the improvement in institutional environment, but may play a more important role over time.

6. Conclusion

Using the 137 counties of Shandong Province in China, our analyses indicate that the number and total assets of Small Loan Companies today are still positively affected by the number of local financial institutions (*qianzhuang* and *diandang*) in the late Qing period. Regardless of the extent to which we controlled for a variety of confounding variables, and using the frequency of crop failure as the instrument of historical financial institutions, we obtained the same robust results. Moreover, we

document that the persistent effect of historical financial institutions on contemporary Small Loan Companies can be (partially) explained by the Confucian culture measured by the density of Confucian temples in the Qing period.

Our findings suggest that it is necessary to incorporate the historical and (Confucian) cultural factors in understanding the regional variations in the development of informal finance in China. This coincides with that of Grosjean (2011), who finds that the historical Islamic rule which prohibited interest-lending resulted in an underdeveloped financial market today, and Pascali (2014), who finds that the charity-lending institutions in 15th-century Italy still affect the performance of the contemporary banking sector.

Notwithstanding the dominance of Small Loan Companies in the informal finance sector of China, our study does not suggest that the other forms of informal finance (ROSCA, underground banks and private lending, among others) are also similarly shaped by historical finance. Another limitation is that our findings, based on a single province, should be interpreted with due caution in regard to other Chinese provinces. To better understand the rise of informal finance in contemporary China, more effort is needed to collect systematic data on other forms of informal finance and in an extended, more representative sample region.

References

Alesina, Alberto, and Nicola Fuchs-Schündeln. 2007. "Good-Bye Lenin (or Not?): The Effect of Communism on People's Preferences." *American Economic Review*, 97(4): 1507-28.

Alesina, Alberto, and Paola Giuliano. 2015. "Culture and Institutions." *Journal of Economic Literature*, 53(4): 898-944.

Ahlin, Christian, Jocelyn Lin, and Michael Maio. 2011. "Where Does Microfinance Flourish? Microfinance Institution Performance in Macroeconomic Context." *Journal of Development Economics*, 95(2): 105-120.

Allen, Franklin, Jun Qian, and Meijun Qian. 2005. "Law, Finance, and Economic Growth in China." *Journal of Financial Economics*, 77: 57–116.

Ayyagari, Meghana, Asli Demirguc-Kunt, and Vojislav. Maksimovic. 2010. "Formal versus Informal Finance: Evidence from China." *The Review of Financial Studies*, 23 (8): 3048-3097.

Bairoch, Paul. 1988. *Cities and Economic Development: From the Dawn of History to the Present.* Chicago: University of Chicago Press.

Becker, Sascha O., Katrin Boeckh, Christa Hainz, and Ludger Woessmann. 2016. "The Empire Is Dead, Long Live the Empire! Long-Run Persistence of Trust and Corruption in the Bureaucracy." *The Economic Journal,* 126 (590): 40–74.

Bisin, Alberto, and Thierry Verdier. 2000. "Beyond the Melting Pot: Cultural Transmission, Marriage, and the Evolution of Ethnic and Religious Traits." *The Quarterly Journal of Economics*, 115 (3): 955-988.

Bogan, Vicki L. 2012. "Capital Structure and Sustainability: An Empirical Study of Microfinance Institutions." *Review of Economics and Statistics*, 94 (4): 1045-1058.

Chen, Mingguang. 1997. *qianzhuang shi* (History of Qianzhuang), Shanghai wenyi chubanshe.

Chen, Zhiwu. 2007. "dui rujia wenhua de jinrongxue fansi (Reconsidering Confucianism in the Perspective of Finance)," *zhidu jingjixue yanjiu*, 1: 183-199.

Giuliano Paola, and Nathan Nunn. 2016. "Understanding Cultural Persistence and Change." Working Paper.

Grosjean, Pauline. 2011. "The Institutional Legacy of the Ottoman Empire: Islamic Rule and Financial Development in South Eastern Europe." *Journal of Comparative Economics*, 39 (1): 1-16.

Grosjean, Pauline. 2014. "A History of Violence: the Culture of Honor and Homicide in the US South." *Journal of European Economic Association,* 12(5): 1285-1316.

Hermes, Niels, Robert Lensink, and Aljar Meesters. 2009. "Financial Development and the Efficiency of Microfinance Institutions." SSRN Working Paper, No. 1396202.

Ho, Ping-ti, 1962. *The Ladder of Success in Imperial China*. New York: Columbia University Press.

Huang, Jianhui. 2002. *Shanxi piaohao shi* (History of Shanxi Banks), Shanxi jingji chuban she.

Jia, Ruixue. 2014. "The Legacies of Forced Freedom: China's Treaty Ports." *The Review of Economics and Statistics*, 96 (4): 596-608.

Kaboski, Joseph P., and Robert M. Townsend. 2005. “Policies and Impact: An Analysis of Village-level Microfinance Institutions.” *Journal of the European Economic Association*, 3 (1) 1-50.

Kumar, Alok, Jeremy K. Page, and Oliver G. Spalt. 2011. “Religious Beliefs, Gambling Attitudes, and Financial Market Outcomes.” *Journal of Financial Economics*, 102 (3): 671-708.

Kung, James K., and Chicheng Ma. 2014. “Can Cultural Norms Reduce Conflicts? Confucianism and Peasant Rebellions in Qing China.” *Journal of Development Economics*, 111: 132-149.

La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert W. Vishny. 1998. “Law and Finance.” *Journal of Political Economy*, 106(6), 1113-1155.

Li, Jianjun. 2010. “zhongguo wei guance xindai guimo de bianhua (The Changes in the Volume of the Unobserved Credit in China, 1978-2008).” *jinrong yanjiu,* 4: 40-49.

Li, Wenhai, Xiao Cheng, Yangdong Liu, and Mingfang Xia. 1994. *Zhongguo jindai shida zaihuang* (The Ten Great Famines in Modern China). Shanghai renmin chuban she.

Lin, Yifu, and Xifang Sun. 2005. “xinxi, fei zhenggui jinrong yu zhongxiao qiye touzi (Information, Informal Finance, and SME Finance)”, *jingji yanjiu*, 7: 35-44.

Lu, Yao. 2000. *Shandong daxue yihetuan diaocha ziliao huibian* (Shandong University Collections of Survey Data on the Boxers). Shandong daxue shubanshe.

Luo, Bingmian. 1978. “jindai zhongguo diandangye de fenbu qushi yu tongye zuzhi (The Distribution of Pawnshops and Their Guilds in Modern China),” *shihuo yuekan*, 8 (2).

Luo, Lun, and Su Jing. 1985. *Qingdai Shandong jingying dizhu jingji yanjiu* (Studies on the Economy of Managerial Landlords in the Shandong Province in the Qing Dynasty). qilu shushe.

Ngalawa, H., and N. Viegi, 2013, “Interaction of Formal and Informal Financial Markets in Quasi-emerging Market Economies”, *Economic Modelling*, Vol. 31, 614-624.

Nunn, Nathan and Leonard Wantchekon. 2011. “The Slave Trade and the Origins of Mistrust in Africa.” *American Economic Review,* 101(7): 3221-3252.

Pascali, Luigi. 2014. “Banks and Development: Jewish Communities in the Italian Renaissance and Current Economic Performance”, *The Review of Economics and Statistics*, forthcoming.

Peng, Kaixiang, Zhiwu Chen, Weipeng Yuan. 2008. “jindai zhongguo nongcun jiedai shichang de jizhi—jiyu minjian wenshu de yanjiu (The Mechanisms of Rural Credit Market in Modern China—A Research Based on Raw Documents),” *jingji yanjiu*, 5: 147-159.

Peng, Yusheng. 2004. “Kinship Networks and Entrepreneurs in China’s Transitional Economy.” *American Journal of Sociology*, 2004, 109(5), 1045-1074.

Qian, Shuitu, Lei Weng. 2009. “shehui ziben, fei zhenggui jinrong yu chanye jiqun fazhan (Social Capital, Informal Finance and Development of Industrial Cluster),” *jinrong yanjiu*, 11: 194-206.

Richerson, Peter J., and Robert Boyd. 2008. *Not by Genes Alone: How Culture Transformed Human Evolution*. Chicago: University of Chicago Press.

Skinner, G. William. 1977. *The City in Late Imperial China*. Stanford. Stanford: Stanford University Press.

Stauffer, Milton T. 1922. *The Christian Occupation of China: A General Survey of the Numerical Strength and Geographical Distribution of the Christian Forces in China*. Shanghai.

Stulz, René M., and Rohan Williamson. 2003. “Culture, Openness, and Finance”, *Journal of Financial Economics*, Vol. 70(3), 313-349.

Tsai, Kellee S. 2002. “Imperfect Substitutes: The Local Political Economy of Informal Finance and Microfinance in Rural China and India.” *World Development*, 32: 1487–507.

Voigtländer, Nico, and Hans-Joachim Voth, 2012. “Persecution Perpetuated: the Medieval Origins of Anti-Semitic Violence in Nazi Germany.” *The Quarterly Journal of Economics,* 127(2):1339-1392.

Wakeman, Frederic E. 1975. *The Fall of Imperial China*. New York: Free Press.

Weber, Max. 1922 (translated and edited by Hans H. Gerth in 1951). *The Religion of China: Confucianism and Taoism*. New York: Free Press.

Yang, C. K., 1961. *Religion in Chinese Society: A Study of Contemporary Social Functions of Religion and Some of Their Historical Factors*. University of California Press, Berkeley.

Yao, Xinzhong. 2000. *An Introduction to Confucianism*. Cambridge: Cambridge University Press.

Yao, Yaojun. 2009. “fei zhenggui jinrong fazhan de quyu chayi jiqi jingji zengzhang xiaoyong (Regional Variations in the Development of Informal Finance and Its Impacts on Economic Growth),” *caijing yanjiu*, 12: 129-139.

Yuan, Zuliang, and Fengxiang Zhu. 2009. *Zhongguo zaihai tongshi* (A General History of Disasters in China: the Volume of the Qing Dynasty). Zhengzhou daxue chuban she.

Zhang, Jun. 1997. “gaige hou zhongguo nongcun de fei zhenggui jinrong bumen: Wenzhou anli (The Informal Financial Sector in Post-reform Rural China: the Case of Wenzhou),” *zhongguo shehui kexue jikan*, 20: 10-20.

Zhang, Guohui. 1989. *wanqing qianzhuang he piaohao yanjiu* (Studies on Qianzhuang and Piaohao in Late Qing Dynasty). Zhonghua shuju.

Zhang, Xuechun, Zhong Xu, and Duo Qin. 2013. “minjian jiedai lilv yu minjian ziben chulu: Wenzhou anli (Private Lending Rates and the Outlet of Private Capital: the Case of Wenzhou),” *jinrong yanjiu*, 3: 1-14.

Zhou, Yueshu, and Yang Li. 2013. “nongcun xiao’e daikuan gongsi di nongcun xiaowei qiye zhenggui xindai peiji de yingxiang fenxi (The Impact of Small Loan Companies on the Formal Financing of Small-size Enterprise in Rural China),” *zhongguo nongcun jingji*, 1: 85-96.

Zhuo, Kai. 2006. “fei zhenggui jinrong qiyue zhili de weiguan lilun (A Microeconomic Theory on the Contract of Informal Finance),” *caijing yanjiu*, 8: 112-123.

Figure 1. The Relationship between Historical Financial Institutions (1911) and Small Loan Companies (2013) in the 137 Counties of Shandong Province

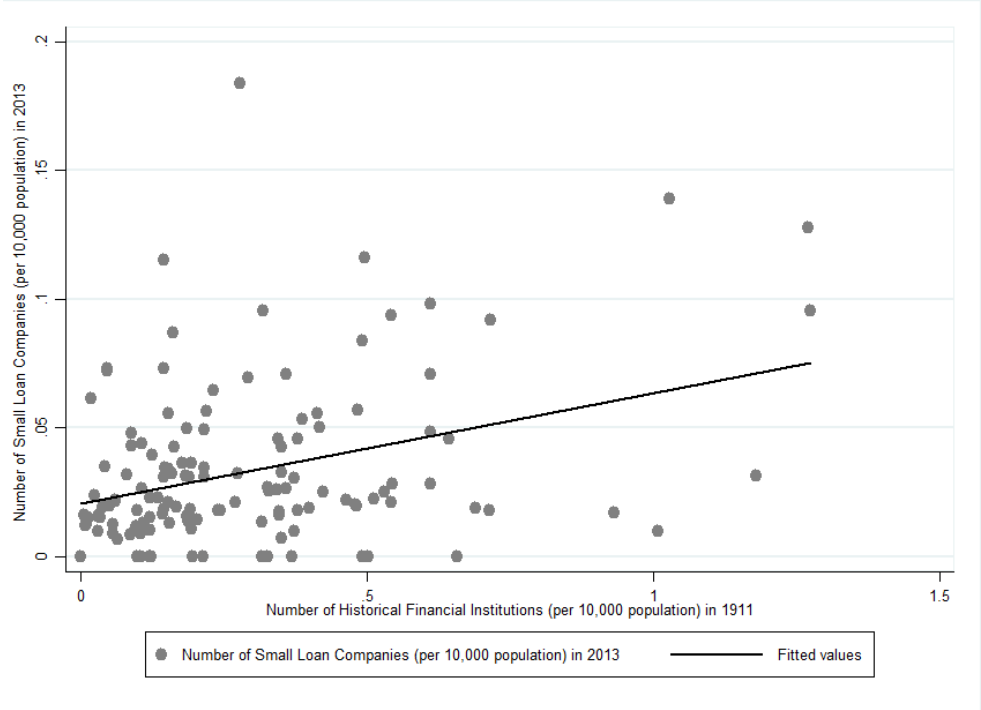

Figure 2. The Distribution of Small Loan Companies in Shandong Province in 2013

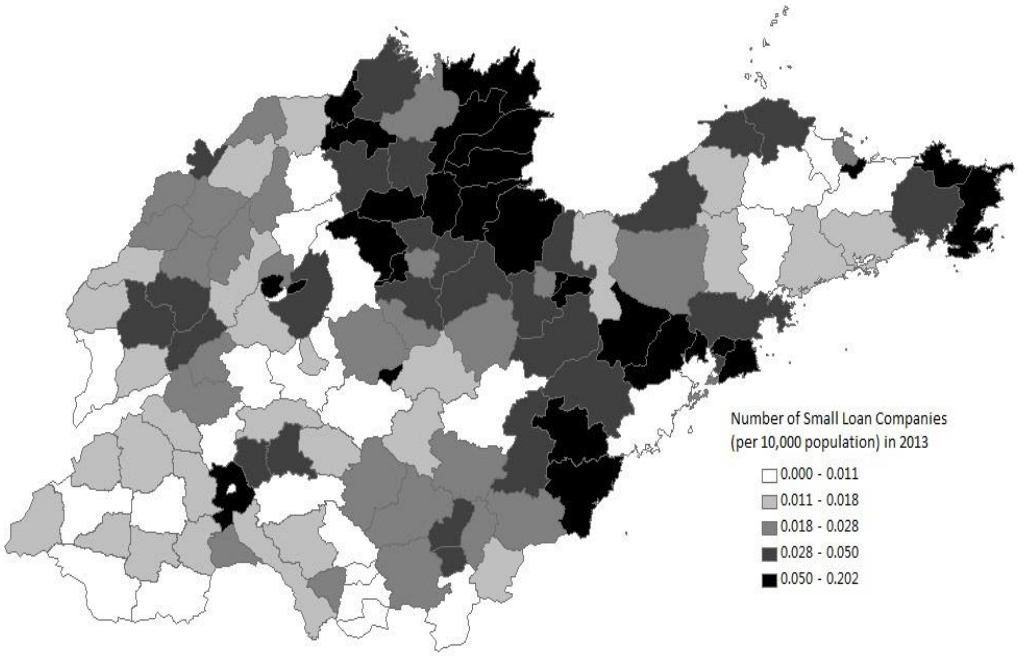

Figure 3. The Distribution of Historical Financial Institutions (*qianzhuang* and *diandang*) in Shandong Province in 1911

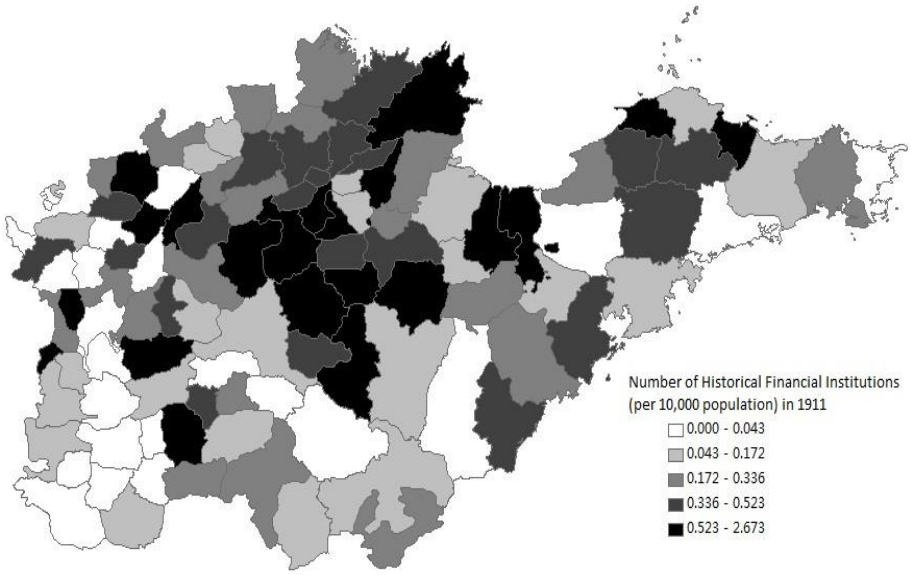

Table 1. Descriptive Statistics and Data Sources

Variable	Mean	S.D.	Min	Max	Source
Number of Small Loan Companies (per 10,000 people)	0.024	0.031	0	0.202	A
Total assets of Small Loan Companies (per 10,000 people)	0.026	0.042	0	0.434	A
Number of historical financial institutions (per 10,000 people)	0.379	0.451	0	2.577	B
Number of Confucian temples (per 10,000 people)	0.449	0.217	0.018	1.352	C
Crop failures	63.734	35.411	4	124	D
GDP per capita	10.525	0.671	8.799	12.678	E
% second and third industries in GDP	0.884	0.089	0.166	1	E
Ratio of fiscal revenue to expenditure	0.662	0.324	0.170	2.856	E
Total loans of banks	0.561	0.551	0.143	5.497	E
Savings deposits per capita	1.913	1.381	0.072	8.648	E
% private employments	0.206	0.069	0.076	0.371	E
Blue-Yellow region	0.423	0.496	0	1	F
Urbanisation rate 1920s	0.071	0.104	0	0.478	G
Population density 1920s	0.021	0.007	0.003	0.043	G
Treaty ports	0.153	0.362	0	1	H
Taoist and Buddhist temples	5.837	2.959	0.242	19.082	C
Distance to coast	1.017	0.975	0	3.387	I
Terrain ruggedness	0.410	0.334	0.007	1.907	I

Notes on the sources: A. Association of Small Loan Companies of Shandong Province. B. *Statistics of Agriculture and Commerce*. C. *Shandong tongzhi* (Provincial Gazetteer of Shandong). D. *Qing shilu* (Veritable Records of the Qing Emperors). E. Provincial and prefectural statistical yearbooks in Shandong. F. *Project on the Development of the Yellow River Delta*, *Project on the Development of the Blue Economic Zone in Shandong Peninsula*. G. Stauffer (1922). H. Yan (1955). I. CHGIS 2007.

Table 2. The Impact of Historical Financial Institutions on Contemporary Small Loan Companies: Baseline Results

	Number of Small Loan Companies 2013 (log)			Total assets of Small Loan Companies 2013 (log)		
	1	2	3	4	5	6
	OLS	OLS	Tobit	OLS	OLS	Tobit
Number of historical financial institutions (log)	0.054***	0.026*	0.026**	0.073***	0.040*	0.040*
	(0.016)	(0.013)	(0.013)	(0.021)	(0.022)	(0.022)
GDP per capita (log)		-0.003	-0.005		0.005	0.001
		(0.014)	(0.013)		(0.027)	(0.026)
% second and third industries		0.041	0.084*		0.050	0.120
		(0.036)	(0.047)		(0.053)	(0.074)
Ratio of fiscal revenue to expenditure		0.045**	0.046**		0.044	0.046*
		(0.021)	(0.021)		(0.027)	(0.026)
Total loans of banks		0.002	-0.000		0.013	0.009
		(0.014)	(0.014)		(0.026)	(0.024)
Savings deposits per capita		0.029	0.033*		0.028	0.034
		(0.020)	(0.020)		(0.036)	(0.034)
% private employments		-0.199***	-0.240***		-0.254***	-0.321***
		(0.056)	(0.059)		(0.072)	(0.080)
Blue-Yellow region		0.022***	0.027***		0.022**	0.030***
		(0.007)	(0.007)		(0.010)	(0.011)
Urbanisation rate 1920s		-0.020	-0.023		-0.029	-0.033
		(0.051)	(0.049)		(0.065)	(0.063)
Population density 1920s		-0.919**	-0.820**		-1.193**	-1.023*
		(0.390)	(0.386)		(0.577)	(0.568)
Treaty ports		0.003	0.004		-0.008	-0.008
		(0.016)	(0.015)		(0.020)	(0.019)
Taoist and Buddhist temples		-0.015**	-0.016**		-0.016	-0.017
		(0.007)	(0.007)		(0.013)	(0.013)
Terrain ruggedness		-0.020**	-0.017**		-0.029***	-0.025**
		(0.008)	(0.008)		(0.011)	(0.011)
Distance to coast		-0.001	-0.000		-0.009	-0.007
		(0.007)	(0.008)		(0.010)	(0.010)
# of observations	135	120	120	135	120	120
Adjusted R^2	0.121	0.523		0.113	0.417	

Notes: Robust standard errors are reported in parentheses. * Significant at 10%; ** significant at 5%; *** significant at 1%.

Table 3. The Impact of Historical Financial Institutions on Contemporary Small Loan Companies: Instrumented Results

	Number of Small Loan Companies 2013 (log)		Total assets of Small Loan Companies 2013 (log)	
	1	2	3	4
	2SLS	IV-Tobit	2SLS	IV-Tobit
Number of historical financial institutions (log)	0.096***	0.096***	0.158***	0.158***
	(0.030)	(0.028)	(0.048)	(0.046)
Controls	Yes	Yes	Yes	Yes
# of observations	120	120	120	120
Adjusted R^2	0.311		0.130	
First-stage				
Crop failures	0.005***	0.005***	0.005***	0.005***
	(0.001)	(0.001)	(0.001)	(0.001)
Controls	Yes	Yes	Yes	Yes

Notes: Controls are same with those of Table 2. Robust standard errors are reported in parentheses. * Significant at 10%; ** significant at 5%; *** significant at 1%.

Table 4. The Impact of Historical Financial Institutions on Contemporary Small Loan Companies: Panel Data Results

	Number of Small Loan Companies 2009-2013 (log)				Total assets of Small Loan Companies 2009-2013 (log)			
	1	2	3	4	5	6	7	8
	OLS	OLS	Tobit	2SLS	OLS	OLS	Tobit	2SLS
Number of historical financial institutions (log)×2010	0.020***	0.014***	0.014*	0.027*	0.024***	0.018***	0.017	0.035
	(0.005)	(0.005)	(0.008)	(0.016)	(0.006)	(0.005)	(0.011)	(0.025)
Number of historical financial institutions (log)×2011	0.034***	0.024***	0.022*	0.054***	0.045***	0.034***	0.030*	0.082***
	(0.011)	(0.009)	(0.013)	(0.016)	(0.013)	(0.010)	(0.016)	(0.025)
Number of historical financial institutions (log)×2012	0.044***	0.033***	0.030**	0.082***	0.059***	0.047***	0.043**	0.129***
	(0.013)	(0.011)	(0.015)	(0.017)	(0.017)	(0.014)	(0.019)	(0.026)
Number of historical financial institutions (log)×2013	0.050***	0.036***	0.033*	0.091***	0.070***	0.056***	0.051**	0.156***
	(0.016)	(0.013)	(0.017)	(0.017)	(0.021)	(0.018)	(0.024)	(0.026)
Controls	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Year fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
County fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
# of observations	683	621	621	621	683	621	621	621
# of counties	137	130	130	130	137	130	130	130
Adjusted R^2	0.490	0.586		0.466	0.433	0.515		0.396

Notes: All regressions treat 2009 as the reference year. Controls are same with those in Table 2. Robust standard errors clustered at the county level are reported in parentheses. * Significant at 10%; ** significant at 5%; *** significant at 1%.

Table 5. Confucian Culture and Historical Financial Institutions

	Number of Historical Financial Institutions (log)		
	OLS	OLS	Tobit
	1	2	3
Confucian temples (log)	0.287*	0.414***	0.442***
	(1.966)	(2.942)	(3.160)
Controls	No	Yes	Yes
# of observations	107	107	107
Adjusted R^2	0.084	0.181	

Notes: Controls are same with those in Table 2. The sample is based on the 107 counties of Shandong in the Qing dynasty. Robust standard errors are reported in parentheses. * Significant at 10%; ** significant at 5%; *** significant at 1%.

Table 6. Historical Financial Institutions, Confucian Culture and Small Loan Companies

	Number of Small Loan Companies 2013 (log)			Total assets of Small Loan Companies 2013 (log)		
	OLS	OLS	Tobit	OLS	OLS	Tobit
	1	2	3	4	5	6
Confucian temples (log)	0.024	-0.043**	-0.043**	0.024	-0.068*	-0.067*
	(0.018)	(0.020)	(0.021)	(0.031)	(0.036)	(0.036)
Number of historical financial institutions (log)	0.023*	0.013	0.012	0.037*	0.024	0.023
	(0.013)	(0.011)	(0.010)	(0.021)	(0.018)	(0.017)
Number of historical financial institutions (log) ×		0.253***	0.263***		0.348***	0.365***
Confucian temples (log)		(0.070)	(0.067)		(0.120)	(0.113)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
# of observations	120	120	120	120	120	120
Adjusted R^2	0.524	0.557		0.414	0.442	

Notes: Controls are same with those in Table 2. Robust standard errors are reported in parentheses. * Significant at 10%; ** significant at 5%; *** significant at 1%.

Table 7. Historical Financial Institutions, Confucian Culture, and Small Loan Companies: Panel Data Results

	Number of Small Loan Companies 2009-2013 (log)			Total assets of Small Loan Companies 2009-2013 (log)		
	OLS	OLS	Tobit	OLS	OLS	Tobit
	1	2	3	4	5	6
Confucian temples (log)×2010	0.010	0.005	-0.015	0.006	-0.007	-0.033
	(0.009)	(0.011)	(0.026)	(0.010)	(0.010)	(0.037)
Confucian temples (log)×2011	0.017	-0.002	-0.012	0.023*	-0.016	-0.035
	(0.011)	(0.013)	(0.022)	(0.012)	(0.016)	(0.031)
Confucian temples (log)×2012	0.037***	-0.007	-0.015	0.037**	-0.033	-0.046
	(0.013)	(0.017)	(0.024)	(0.016)	(0.027)	(0.036)
Confucian temples (log)×2013	0.042**	-0.016	-0.016	0.053**	-0.030	-0.032
	(0.016)	(0.022)	(0.027)	(0.022)	(0.036)	(0.045)
Number of historical financial institutions (log)×2010	0.012**	0.011*	0.012	0.017***	0.015**	0.014
	(0.006)	(0.006)	(0.011)	(0.006)	(0.007)	(0.013)
Number of historical financial institutions (log)×2011	0.020**	0.018*	0.017	0.029***	0.024**	0.021
	(0.009)	(0.009)	(0.015)	(0.010)	(0.009)	(0.016)
Number of historical financial institutions (log)×2012	0.025**	0.019*	0.018	0.040***	0.030**	0.026
	(0.011)	(0.010)	(0.015)	(0.014)	(0.012)	(0.018)
Number of historical financial institutions (log)×2013	0.028**	0.019	0.017	0.045**	0.033**	0.029
	(0.013)	(0.012)	(0.017)	(0.018)	(0.016)	(0.023)
Number of historical financial institutions (log)×Confucian temples (log)×2010		0.017	0.058		0.049	0.106
		(0.045)	(0.078)		(0.046)	(0.093)
Number of historical financial institutions (log)×Confucian temples (log)×2011		0.068	0.083		0.146**	0.177
		(0.051)	(0.093)		(0.059)	(0.112)
Number of historical financial institutions (log)×Confucian temples (log)×2012		0.166***	0.174*		0.263***	0.279**
		(0.059)	(0.098)		(0.091)	(0.136)
Number of historical financial institutions (log)×Confucian temples (log)×2013		0.219***	0.211**		0.313**	0.304*
		(0.078)	(0.122)		(0.122)	(0.179)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes
County fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes
# of observations	621	621	621	621	621	621
# of counties	130	130	130	130	130	130
Adjusted R^2	0.595	0.610		0.522	0.539	

Notes: All regressions treat 2009 as the reference year. Controls are same with those in Table 2. Robust standard errors clustered at the county level are reported in parentheses. * Significant at 10%; ** significant at 5%; *** significant at 1%.