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## ***Capitalism and Confucianism: Was Weber Right?***

***Baomin Dong***

**Abstract:** Max Weber claimed that capitalism failed to develop in imperial China due to the incompatibility between Confucianism and modern capitalism. To examine Weber's China thesis, I investigate the causal relationship between capital and the degree of Confucian influence in Chinese localities. Since formal banking sector and civil law were both absent in imperial China, I use county level data on money business and historical keju statistics to represent capital formation and local Confucian influence respectively. In particular, I use 1914 county level numbers of money business (Qianye) as historical local intensity of informal finance, to regress contemporary county level amount of capital of micro-credit companies to examine the persistence of informal finance. Using the number of issues discussed by local commercial chambers to instrument historical finance, I find that the persistence is significant and strong. I also investigate if Confucianism determined informal institution. To implement, I use the numbers of Jinshi as a proxy of Confucian tradition to instrument dispute resolution institution, and find Confucian influence is conducive to the development of informal institution, which in turn, facilitated the development of informal finance.

**Keywords:** informal finance, informal institutions, Confucianism, native bank

**JEL Classification Codes:** G21, G30, O16, O17

In his monumental work, *The Protestant Ethics and the Spirit of Capitalism*, Max Weber ([1904–1905] 2001) offers a cultural and ethical theory of the interplay between capitalism and formal institutions. In his second book, *Religion of China: Confucianism and Daoism*, Weber (1951) elaborates some important insights on the role of Confucianism in China: the lack of external transcendence in Confucianism relative to Puritanism of the West determined the fate of capitalism in China as Confucianism is adaptive while Protestantism is dominative. In Weber's opinion, transcendence of Puritanism provides pre-destinarianism and the calling of God, which lifted believers from anxiety and vanity in mundane life, consequently led them to dedicate on working. By contrast, the defects of Chinese religions such as the relegation of business to a subordinate societal position in Confucianism created indigenous elements like the lack of rational capital accounting and calculable laws that hindered the development of modern capitalism in China.

Weber summarizes the items missing in China from his checklist for the development of capitalism, on various occasions. For instance, Weber sees “only beginnings of legal institutions” in China, that was unable to protect and ensure contracts, and hence claims the lack of “calculable” law in China. Concerning the commercial sector, Weber argues that the fact that “there was no genuine, technically valuable system of commercial correspondence,

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accounting of bookkeeping” (Weber 1951) prohibited China from developing capitalism since “rational capital accounting as the norm for all large industrial undertakings” is the “most general presupposition for the existence of present-day capitalism” (Weber 1981). In addition, in Weber’s eyes, the subordinate position of merchants stipulated in Confucian doctrines provided little incentive to develop modern capitalism in China.

However, Weber’s stereotype rhetoric rendering of the European capitalist as a Puritan innovator and the Chinese shopkeeper as a Confucian literati oversimplifies and, to some extent, mistakes the genuine relationship between religion and capitalism. For example, rich details exploited by the scholars in history and law in recent decades have demonstrated that business affairs were governed by a culture of contract that was fully established since medieval times and local officials or gentry class who acted as *de facto* mediators or arbiters of contractual disputes pursued the highest possible precision in honoring contract and restoring justice (Zelin, Ocko, and Gardella 2004). Recent archival works show that Chinese merchants and native banks had developed various forms of double-entry bookkeeping at least since late imperial time (e.g., Yuan, Macve, and Ma 2017), negating the claim of the absence of commercial bookkeeping in China. Indeed, the integrated nationwide market that was unhindered by geographic barriers and flourishing exports of sophisticated and high quality products to Europe until the end of the nineteenth century, were evidence of China’s early development of capitalism.

Unlike other religions such as Protestantism, there is a lack of transcendence in Confucianism which Weber sees as a major scapegoat in the failure of generating a substantive rationality to change the world. Although classical Confucians argue that the “Way” (mandate of Heaven) as an ultimate and supernatural ruling represents the scaredness of Confucianism, its equivalence to the ecclesiastical holiness is in question since the fact that Confucian “Way” is always in support of filial piety orders implies that the heavenly sacredness is merely a reflection of human virtue. By the late Qing dynasty or the nineteenth century, most upper-level Confucian scholars began to pursue western science and technology knowledge and maintain the Confucian classics only at ideological level, or *zhongti xiyong* (adopting Western knowledge for its practical uses while keeping Chinese values as the core). Although I do not claim that Confucianism was “downgraded” from a religion to a working ideology or cultural attitude in pre-modern period, its dynamic nature in the sense that it constantly adapts to a changing political environment entails its institutional vigor. Toward the second half of the nineteenth century, Confucian scholars actively incepted and participated the westernization movement through a long series of struggles with the monarchy in learning from West Europe, and their continued efforts in pursuing modernization in China carried over to the Republican period.

Weber is, nevertheless, not negative on the fate of the development of modern capitalism in China. In fact, Weber explicitly pointed out that “The Chinese in all probability would be quite capable, probably more capable than the Japanese, of assimilating capitalism which has technically and economically been fully developed in the modern culture area. It is obviously not a question of deeming the Chinese ‘naturally ungifted’ for the demands of capitalism” (Weber 1951, 248). This argument is similar to the “iron cage” theory whereas when capitalism is matured, its conquest to the entire world is unstoppable. Weber’s Chinese thesis lies in the negation of the role of Confucianism in both the onset and development of modern capitalism. There are two reasons Weber views Confucianism functions as an impediment. The first is the dominance of state over religion and henceforth the passive

role of Confucianism. In Weber's summarization, in ancient China before the emergence of Confucianism, "the cult of the great deities of heaven and earth . . . was an affair of the state. These cults were not managed by priests but by the holders of political power" (Weber 1951, 143). Weber also sees the ascendancy of Confucian orthodoxy as the consequence of the unification of China and its independence from the mundane world was never achieved (e.g., "the rule of orthodoxy followed the unity of the theocratic world empire and its authoritative regulation of doctrine": Weber 1951, 152). The second, somewhat related to the first, is the "reduced tension with the world to an absolute minimum" (Weber 1951, 227), leading to an "adjustment to the world, to its order and conventions" (Weber 1951, 152).

In this article, I examine Weber's China thesis (i.e., whether Confucianism as the ruling religion or culture of China, hindered the development of capitalism, using the best available data). In so doing, notice that there are at least three caveats (i.e., first, Weber does not deny the development of petty commodity or shopkeeping as other forms of pre-modern capitalism in China; second, Weber does not reject the possibility that a successful modern capitalism can be transplanted from Europe; third, as Weber lived most of his life during pre-Republican China, the China thesis should not be straightforwardly carried over to later historical phases as a whole). Specifically, I use county level statistics of money business such as native banks to represent capital formation, historical *keju*<sup>1</sup> performance to represent Confucian influence, and number of issues discussed by local commercial chambers to represent legal institutions on civil (particularly contractual) affairs. I then examine the causal relationship between Confucianism and informal legal institutions, as well as contractual institutions and finance. In addition, the persistence of informal finance from 1914 to present day is examined to reflect how vibrant market had been in substituting the state sector.

Since the finance data I exploited in this article belongs to a broadly defined informal finance, a review of relevant literature is necessary, especially when the current article also explores the long term persistence of informal finance. When the Nobel Peace Prize was granted to Mohammed Yunus in the year 2006 in recognition of the success of the Grameen Bank, the world began to reevaluate the potential role that informal institutions can play in facilitating finance. The success of Grameen Bank delivers a convincing story of how informal arrangements through social pressure among the poor can work well in the banking business with little or essentially no collateral. However, there are numerous examples showing that informal institutions do not work as well as the formal ones do. The relationship between informal institutions and finance has been a controversial topic. On the one hand, informal institutions, such as traditions, customs, and social norms, seem to complement formal institutions which are often rigid and incomplete. On the other hand, informal institutions are, by nature, in contrast to rule-of-law, often inducing parties to take advantage of the loopholes of the formal rules, and can even lead to corruption.

It is widely accepted that finance is sensitive to its institutional environment, supported by numerous studies such as those by Robert J. Barro (1991), Paolo Mauro (1995), and Pierre-Guillaume Méon and Khalid Sekkat (2005). The underlying simple economics is that better institutional quality such as property rights protection and contract enforcement thrust investors to invest and reinvest (e.g., North and Weingast 1989; North 1990). Institutions are generally defined as the "rules of the game," or "humanly-devised constraints that shape

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<sup>1</sup> *Keju* is the imperial examination system.

human interaction” (North 1990). Informal institutions are largely self-enforcing through mechanisms of obligation, such as in patron-client relationships or clan networks, or simply because following the rules is in the best interests of individuals who may find themselves in a situation in which everyone is better off through cooperation. While informal institutions are generally not codified, they are widely accepted as legitimate and are, therefore, rules in use rather than just rules on the books, or what Elinor Ostrom terms “rules in force” (Ostrom 2005). Historical evidence suggests that informal institutions such as trust and law merchant that ensured a functioning market have been important for economic development (Putnam 1993; Knack and Keefer 1997; Greif 1994 and 2006). Peter Boettke, Christopher Coyne, and Peter Leeson (2008) suggest that formal institutions must map onto the informal rules in order to promote economic development.

The literature on informal institutions that has focused on the empirical relationship between informal and formal institutions (e.g., Ahlerup, Olsson, and Yanagizawa 2009; Méon and Sekkat 2015; and S. Yu, Beugelsdijk and de Haan 2015) find they are substitutes but Ariane Lambert-Mogiliansky, Sonin, and Zhuravskaya (2007), Claudia Williamson (2009), and Christian Bjørnskov (2011) find the opposite. The bulk of the studies use trust as informal institutions or the proxy for them. It is understood that trust or social trust is affected by the culture of the society where it is embedded as a society that closes the eyes to lying and hypocrisy would limit the efficiency of contracts, but the mechanism through which social trust is determined is largely understudied.

The current article investigates the relationship between informal finance and informal institutions in a Chinese context. The importance of this research topic is almost self-explanatory. First, in pre-modern and modern times China, informal finance, carried through native banks, pawnshops, and exchange shops (*piaohao*) were the only source of finance apart from personal network finance, prior to the proliferation of modern banks in the 1920s. Second, the lack of civil and commercial law (and consequent law enforcement) throughout imperial China left contract and property disputes almost entirely to the gentry class or guilds who relied on Confucian principles and values, and in case of conflict of principles, succumbing to the despotism represented by monarchical and imperial authorities. Indeed, in the late Qing dynasty and pre-war Republican period, the commercial disputes in China were mainly mediated by the local commercial chambers and cases seldom escalated to the governments as the law made clear that prefecture and county magistrates should refrain themselves from undertaking civil and commercial disputes. Commercial chambers continued to act as the main adjudicative apparatus in the early Republican period thus the performance of finance carried by the native banks of a locality must have been correlated with its executive power and efficiency of the commercial chambers, in theory.

The most influential and classical contribution is perhaps due to Weber in a series of writings concerning Chinese religion and the lack of modern capitalism in China. It is not surprising that Weber's thesis attracts a lot of criticisms, particularly because of the multi-facet nature and thorny endogeneity problem of religion. The main defect of Weberian categorization of Chinese religions is the misunderstanding of Confucianism as an institutionalized religion. In his seminal and influential work on Chinese religion in response to Weber, C. K. Yang (1962) coined the term “diffusive” religion for Confucianism as the cornerstone to understand the development of religion and ideology in China. One important implication is that as a diffusive religion lacking supernatural or transcendence claims in Confucianism combined with its core values consist of social hierarchical ordering,

honesty, trust, austerity of life, hard work, pursuit of fairness and justice, and so forth, made it an ideal ideology for the governance of the society and instrument for the functioning of the meritocracy based bureaucracy. The lack of supernatural power (divine) and pragmatic mundane values placed no threat to the imperial power. Thus the fact that capitalism arose in the West, which coincided with the rise of Puritanism, does not imply that Confucian values are inconsistent with the spirit of capitalism. In fact, there existed a supernatural element embedded in Confucianism, the Heaven, but it is starkly different from anthropomorphized divines in other institutionalized religions. The notion of Heaven indeed supported the entrenchment of imperial power against civil rights as the Confucian principle endorses any legitimate succession or conferral of imperial power to the new ruler to be based on his virtues such as benevolence which can help him to practice the mandate of Heaven. Thus, although Confucianism was exploited to maintain and reinforce imperial power, it nevertheless facilitated the proliferation of informal institutions to substitute the formal ones, and this should be observed from a cross section of localities once data allows.

Confucianism was given a superior position in religious ordering since institutionalized religions may use their divine right to confront and threaten the legitimacy of the imperial authority. However, the exclusion of civil law from codified laws and henceforth the enforcement is again intimately related to Confucianism. The gentry class is used to maintain social order and functioning of society in exchange for their privileges such as tax exemptions. The imperial examination scheme, as a pyramid method of selecting officials through a series of exams, inevitably resulted in the vast majority of those who wrote the exams failed to enter the officialdom. Privileges must be granted to this class in order to restore their ex ante incentive to write the imperial examinations. The second reason, which is closely related to the aforementioned pyramid imperial examination system, is that imperial China was a low tax state. As pointed out by Debin Ma (2012), “low tax and light corveé had become the hallmark of rule of benevolence in China. In fact, historically, any deviation from the policy of fixed revenue signaled the bad omen of a dynasty in decline or crisis.” In addition, if one argues that there were ups and downs of the consolidated tax rate in medieval time China, the determination and actions to keep a fixed and low tax rate taken by the Qing rulers in the beginning of eighteenth century was a clear step towards the regime of low fixed fiscal revenue. The state was unable to finance a ubiquitous justice system in all localities within the formal government hierarchy but just left it to the private sector which was proven to be much more efficient than the government.

The current article, then, examines the role of informal institutions on informal finance through testing a series of hypotheses. In particular, I test the statistical association and causality between informal institution in modern China proxied by total issues discussed by the commercial chambers, and the amount of capital of *Qianye* (money business) which included mainly native banks, both of which are measured at county level in 1914. In other words, I implore the introversive interpretation of the neo-Weberian approach using cross sectional data with a country to examine the influence of cultural attitude difference on economic outcomes. To deal with potential endogeneity problems, I use an instrumental variable approach where county level total numbers of known *Jinshi* (as the highest-level awardees in the imperial examination system pyramid) in Ming (1368–1644 CE) and Qing (1644–1911 CE) dynasties collected from China Biographical Database Project (CBDB). The reason why *Jinshi* is chosen as an instrumental variable (IV) is that the distribution of a handful of very successful Confucian scholars in the past dynasties is exogenous to the

distribution of the prosperity of informal finance in 1914, and the spirit and doctrines of justice practiced by the gentry class and commercial chambers in handling local civil disputes were governed by Confucian values. I also test the persistence of business practice in the aspect of financing through informal means, or the long shadow. In particular, I use today's micro-credit firms to regress the variations of Qianye with proper controls.

Our first set of empirical results show that there is a strong persistence of informal finance, and the effect is both statistically and economically strong after controlling omitted variables. Our second set of results confirm that Confucianism had been conducive to the proliferation of informal institutions and henceforth the informal finance in modern China. By contrast, institutionalized religions such as Buddhism or Taoism, had either a negative or insignificant impact on informal institutions. In fact, the adaptive and pragmatic nature of the neo-Confucianism in the nineteenth century made it gradually consistent with modern capitalism. Our results add interesting ingredients to the debate over Weber's China thesis in which Confucianism was responsible for the failure of capitalism in its embryo form.

### ***Literature Review and Testable Hypotheses***

Weber makes an eminent comeback along with the advent economists' renowned interest in religion and culture in interpreting economic outcomes.<sup>2</sup> This renaissance gave rise to the so-called neo-Weberian approach which emphasizes the inclusion of all dimensions of cultural attitudes into theoretical and empirical modelling (see, e.g., Billig 2000). This is in contrast to the classical Weberian approach in the economic analysis in which only the role of religion, more specifically Protestantism, is examined. However, this is not to say that neo-Weberian deviates from the original implications of Weber even in his pioneering work, *The Protestant Ethic*. Indeed, Weber recognizes that profit motives are universal and the pursuit of wealth is not unique in Calvinism; and when modern capitalism gets fully developed, it will become an "iron cage" where the proliferation of capitalism will depart from Protestant values. Weber agrees that, historically, societies were at times profit-oriented, at times value-oriented, at times culture-oriented, and more precisely speaking, a combination of all three. The rigor of the neo-Weberian approach is demonstrated by some recent studies such as that by Annie Tubadji (2014) in which the effect of religion may be carried through a set of cultural attitudes, implying the peril of focusing on religious factors alone.

The literature related to the current article consists of three separate strands (i.e., informal finance, informal institutions, and culture). Informal finance plays an important role in alleviating financing constraints of private enterprises and promoting economic growth in China (see e.g., Allen, Qian, and Xie. 2005; Tsai 2004). Private firms were given legal status in 1978 and it grew from a negligible number to over 30 million entities, employing over 200 million people and accounting for almost 50% of GDP despite its weak property rights, weak intellectual property rights (IPR), and weak contract enforcement. The formal finance provides disproportionately larger share of funds to the public sector (i.e., 30% of total finance of China's SOEs comes from bank loans, whereas only less than 10% for private firms [Song, Stroetten, Zilibotti 2011]). Xuechun Zhang (2012) reports that

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<sup>2</sup> For instance, in a well-known paper, Becker and Wößmann (2009) study the classical Weber thesis using historical data from Prussia and find that the human capital difference between Protestant and Catholic cities can explain almost all the differences in economic prosperity. The mechanism is through literacy rate due to Protestant's motives in reading Bible, which is an "unintended" mechanism of the "unintended" religious consequence.

China's SMEs account for 60% of GDP, 50% of corporate tax, 70% of total exports, 75% of total work force, and 90% of newly increased jobs. Yet, they take less than half of bank loans.

Using World Bank Investment Climate Survey data consisting of 2,400 firms in eighteen Chinese cities, Meghana Ayyagari, Asli Demirgüç-Kunt, and Vojislav Maksimovic (2010) show that firms using bank financing perform better than those who do not and the authors question the claim that informal finance is responsible for the performance of the fastest growing firms. Using the same dataset, Franklin Allen, Qian Meijun, and Xie Jing (2019) offer a framework to understand informal financing based on the ways that asymmetric information and enforcement are dealt. In particular, they find that informal finance with information advantages or altruistic nature such as trade credits and family borrowing are associated with good firm performance. Those that use violence for enforcement are not. In addition, informal finance appears to be complementary to formal finance.

The informal finance in modern China including the late Qing period and early Republican period, was dominated by native banks who were the majority of the money business. There were two types of traditional Chinese financial institutions, namely, *piaohao* and native banks, where the former was originated in Shanxi province who specialized in inter-provincial or long distance remittance and some government services, and the latter mainly functioned as local commercial banks concentrated on money exchange, issuance of bank notes, and making short-term loans (Cheng 2003). Native banks started as the exchange shops for silver and copper cash in Ming dynasty and transformed into full-fledged credit providers in the mid-eighteenth century (Kong 2010). During the Westernization Movement (1861–1895), *Qianzhuang* (native banks) was nearly the sole credit provider in the capital market and maintained its dominant position even after the emergence of the modern commercial banks (Zhu 2011). It is then legitimate to use the amount of capital of *Qianye* as a proxy for the degree of development of traditional banking sectors in a locality.

Given the fact that informal finance is not carried out through banking systems or stock markets that are governed by jurisdictions, it may rely on informal institutions to function. Informal institutions refer to some socially sanctioned norms of behavior such as attitudes, customs, taboos, conventions, and traditions, as well as extensions, elaborations, and modifications of formal rules. Since, by definition, they are informal, they are not enforced by laws, rather, by private parties in forms of obligation, expectations of reciprocity, internalized norm adherence (standard operating procedures), gossip, shunning, ostracism, boycotting, shaming, threats, and the use of some degree of violence. In a well-recognized study, Gretchen Helmke and Steven Levitsky (2006) classify informal institutions in four categories, based on the effectiveness/ineffectiveness of the corresponding formal institutions, and on the compatibility/incompatibility of their respective goals. The existing literature focuses on the substitutability between formal and informal institutions, in which the goals by the two are compatible.

The scholarly literature studies the economic consequences of trust and culture mainly through which informal institutions that take the effect. Trust can be defined as the willingness to make oneself vulnerable to other people's actions, based on beliefs about their trustworthiness (Bohnet 2008). Trust helps to solve problems of opportunism and moral hazard, it mitigates the holdup problem, and it changes the equilibrium outcome of Prisoners' Dilemma type of games into Pareto efficient ones (Tabellini 2010; Mèon and Sekkat 2015). Naturally, the level of trust is determined by its cultural and societal background, and may be persistent (Putnam 1993). Overall, trust promotes market exchange and reduces the need

for formal institutions for enforcement. Empirical evidence shows that trust is positively associated with more labor division and trade (Knack and Keefer 1997), or judicial efficiency, bureaucratic quality, tax compliance, and decreases corruption (La Porta et al. 1997).

Another factor identified by the literature is “limited and generalized morality” since high morality within the group implies mistrust beyond the group. As Guido Tabellini (2008) points out, “in Western Europe impersonal exchange took place in anonymous markets supported by specialized institutions obeying formal procedures. In East Asia markets were organized through a web of kin-based social structures linked by personal relations ([attributed to] Greif 2005).” Societies with high morality within group are then trapped in cultural, institutional, and economic backwardness, according to Tabellini (2008). In the current article, however, I must stress that such a Weberian view misses an important philosophy of Confucianism and the endogenous formation and evolution of Confucianism embedded in Chinese history. Indeed, the emphasis on filial piety in Confucianism, since its inception was to extend it to the relationship between individuals and the state, where the latter is anthropomorphized by the emperor who was the chosen one to implement the mandate of Heaven. The purpose of such forced kin-based theory was to bow down to the imperial power. In fact, Confucianism also emphasizes righteousness, benevolence, justice, and tolerance, which are entirely pro-market.

In the Chinese context, both lineage trust and contract culture constituted important parts of informal institutions for businesses in modern times and formal institutions such as Imperial Code in the late Qing dynasty and the first company law promulgated in 1904 were only secondary to the informal ones. For industries in modern times, the main governing institution is the private ordering backed up by industry-based codes of conduct and enforced by the arbitration bureau of local Commercial Chambers (see, e.g., recent literature by Sherman Gilbert Cochran 2000; Kwan Man Bun 2001; Daniel J. Meissner 2005; Kai Yiu Chan 2006; and David Faure 2006). The Qing state, like her predecessors, who was able to conquer and maintain a vast empire under one rule, provided surprisingly weak business regulatory environment. The Imperial Code on commerce only included bans on a few business practices such as deceptive trade, exclusive dealing, and excessive interest. Not surprisingly, the imperial court’s primary focus on merchant class is to extract levies under various names other than providing an efficient justice system for civil and commercial matters. It is observed that the millennium long tradition of contract culture that permeated the business life of Chinese in Qing dynasty, facilitated the retreat of the state from legislating commercial laws, but did not encourage the state from vetoing or counteracting the private orderings. Indeed, the state endorsed most private practices and from time to time, even included customary laws into the local government regulatory rules. In fact, this hybrid patten was coined as informal or unlegislated law by Madeleine Zelin (2009), in which custom was neither overridden nor integrated into the formal legal system. There are a few exceptions such as the state-observed land-rights transfers in which the local governments levied a heavy tax rate in exchange for a government issued contract (for better recognition by the courts in case of future disputes) but such anomalies do not alter the main theme. Thus, customary laws in China constituted the repertoire of (informal) institutions characterized by lineage property rights arrangement and mature contract norms based on centuries of experience and practice, enforced by the gentry class in the rural areas and local chambers of commerce in the urban areas and industrial sectors.

Based on the above discussions and literature review, the following testable hypothesis can be established:

*Hypothesis 1: In modern China, informal institutions shaped the pattern of informal finance.*

Religion is often treated as an exogenous determinant of informal institutions, as a quantifiable cultural factor (e.g., Barro and McCleary 2003). The Weber thesis gives rise to a number of studies investigating the association between religion and economic outcomes such as entrepreneurship (Audretsch, Bönte, and Tamvada 2007; Carswell and Rolland 2007; Wiseman and Young 2014; Nunziata and Rocco 2016), productivity (Islam 2008; Grafton, Kompas, and Owen 2002; Gorodnichenko and Roland 2010), income (Iannaccone 1998; Barro and McCleary 2003; Bettendorf and Dijkgraaf 2010; Kortt and Dollery 2012; Sinnewe, Kortt, and Steen 2016), and economic attitudes (Lal 2001; Minarik 2014). In a closely related paper, Chunfang Cao et al. (2019) show that religion has a significant positive effect on informal finance proxied by trade credits provided by the listed firms in China. They use the number of national religious shrines in a firm's vicinity (a 200 kilometer radius around the firm's registered address) to proxy the impact of religion. Although our empirical results show a different pattern, I agree with Cao et al. (2019) in that religion has a profound impact on informal finance through informal institutions. Our premise is that institutionalized religions with supernatural elements in China such as Buddhism, Taoism, and Christianity, etc., are disfavored by the secular authorities and some of their sects were forced to downgrade to popular superstitious religions serving the grassroots. The reason why institutionalized religions with supernatural nature were depressed by the imperial authorities is the fear of challenges over the secular power in the names of divine power. This made Confucianism an ideal candidate as the working ideology in which the ruled ought to conform a set of values to climb the ladders into the officialdom. Confucianism then became a diffusive religion for the elite intellectuals, governing both the formal and informal institutions. I, therefore, expect to observe a positive association between Confucianism and institutional quality. However, if the convergence of three religions (*sanjiao heliu*) (i.e., convergence of Confucianism, Buddhism, and Taoism over the course of history) was true by a large degree, then I might observe a positive but spurious relationship between institutional quality and other religions which took part in the convergence.

In recent research using data similar to ours, Bo Zhang, Jinyan Hu, and Chicheng Ma (2018) find that the density of native banks and pawnshops in the late Qing period has a significant positive effect on the number and assets of micro-credit companies, a dominant institution of informal finance today. They argue that the primary function of native banks was to provide a financial cushion and risk alleviation in times of poor harvest, and they use the frequency of crop failure to instrument the establishments of native banks. Zhang, Hu, and Ma (2018) also find a positive effect of Confucianism in modern times and contemporary informal finance, using the spatial distribution of Confucian temples in the province of Shandong as a proxy of the degree of Confucian influence. In terms of methodology and data use, the work of Zhang, Hu, and Ma (2018) is most closely related to the current article. However, there are important differences. First, the sample sizes differ, that is, Zhang, Hu, and Ma (2018) explore data over 137 counties in Shandong province whereas ours covers the entirety of China with more than 1,500 counties with data available. Second, I do not find strong evidence showing that the primary task of native banks was to provide finance to farmers to overcome hardships in case of crop failure, instead, archival

and textual records indicate that the main business of native banks was financing firms in the urban areas. As manufacturing and commerce were administered by commercial chambers during modern times, I instead use statistics of commercial chambers as candidates of instrumental variables. Third, since Confucian temples are too sparsely distributed across China with strong spatial bias—in provinces outside Shandong where Confucius' hometown is situated, Confucian temples are very rare, leading to too few variations at the county level. Instead, I use the accumulative numbers of Jinshi between 1368 and 1911 CE as a proxy of influence of Confucian value. This is because the imperial examination system adhered to all core Confucian values as part of the examination was to examine the candidates' mastery of classic Confucian literature. More importantly, Jinshi, as the highest rank in the imperial examinations leading to positions in officialdom, had to adhere to Confucian values and principles and practice in both everyday life and work. In addition, to examine the persistence of informal finance, Zhang, Hu, and Ma (2018) use the number of native banks at the county level to regress micro-credit companies in Shandong province. As informal finance relies more on private enforcement based on trust and/or local tradition of contract culture and customary laws, it is then postulated that such behavior is persistent over time since traditions and culture do not change quickly over time. Thus, the critical review of the literature above leads to the following testable hypotheses:

*Hypothesis 2: Confucianism determines the quality of informal institutions.*

*Hypothesis 3: Informal institution is persistent, so is the informal finance.*

## **Research Design**

### *Data and Variable Definition*

Our sample of the proxy variable for contemporary informal finance consists of all available micro-credit companies in China. Micro-credit companies started to emerge in 2008 and gradually became the dominant player in informal financial market and the only legal credit firms outside the regulated banking, equity, and insurance industry (Tsai 2015). The central bank required that funds sourced from formal financial institutions should be no more than 50% for micro-credit companies. Most clients of micro-credit companies are households and small firms who do not have sufficient amount of collateral. The statistics of micro-credit companies in this article is collected from tianyancha.com,<sup>3</sup> China's top search engine for social entities. The firm level data available from tianyancha.com includes over 300 dimensions such as business registration, address, litigation, patent, misconducts, annual reports, registered capital, etc. I use the date of establishment and status of operation to select those still in business. I use XGeoCoding to convert firm location (textual address information) into geographic coordinates and load into ArcGIS (a cloud-based mapping and analysis solution). All variables are aggregated to county level.

The Ministry of Agriculture and Commerce of the Republic of China publishes *Agriculture and Industry Tables* (Nongshangbiao) annually since 1911. I use county level aggregates of the capital of Qianye in 1914 as the proxy variable as the degree of a locality's financial prosperity, and the number of Qianye establishments in the robustness check. There were 4,506 Qianye establishments across China in 1914, with a total amount of capital of 62,831,773 yuan. Due to the lack of county level demographic information in the 1910s, I use the 1953 population calculated by Shuji Cao (2005) to obtain per capita terms.

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<sup>3</sup> This is a website offering members access to the statistics of all firms in China. According to relevant laws and regulations, this website is not available for use outside mainland China.

In 1904, the Qing state promulgated the *Concise Charter of the Chamber of Commerce with 26 Articles*, encouraging local governments to establish chambers of commerce, and entrusting in them the rights of mediation and arbitration on business disputes. Statistics regarding commercial chambers in 1914 was also obtained from the *Agriculture and Industry Table* (Ministry of Agriculture and Commerce 1917). The *Table* recorded the names, date of establishment, number of members, and number of issues discussed of each commercial chamber. By 1914, a total of 794 chambers of commerce were established nationwide and the total number of members reached 19,700; a total of 27,512 meetings were held; and 39,912 issues and disputes were discussed and arbitrated. In the current article, I mainly use the issues discussed/mediated as the proxy variable for the quality of informal institution. Correlation between the size of Qianye and the number of mediations is positive without controlling other covariates. To illustrate the spatial distributions of the key variables of interest, I generate county level number of micro-credit companies, total number of Jinshi in Ming and Qing dynasties, and total capital of Qianye of 1914, respectively in figures 1 to 3.

Figure 1. County Level Number of Micro-Credit Companies

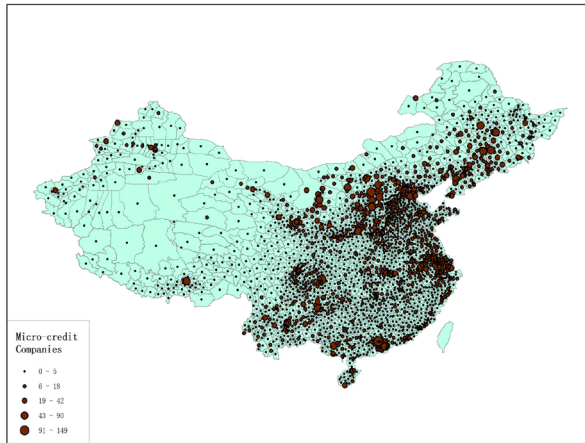


Figure 2. County Level Number of Jinshi

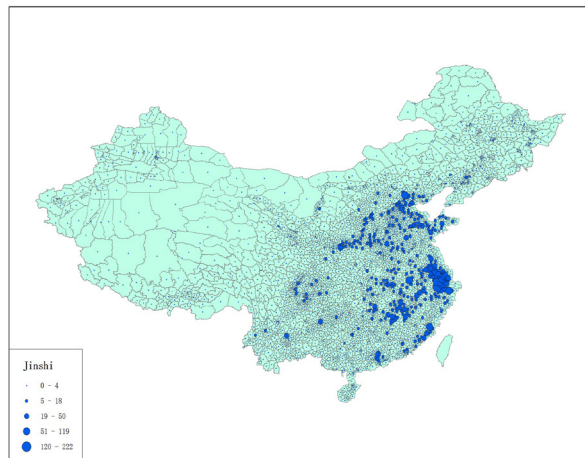
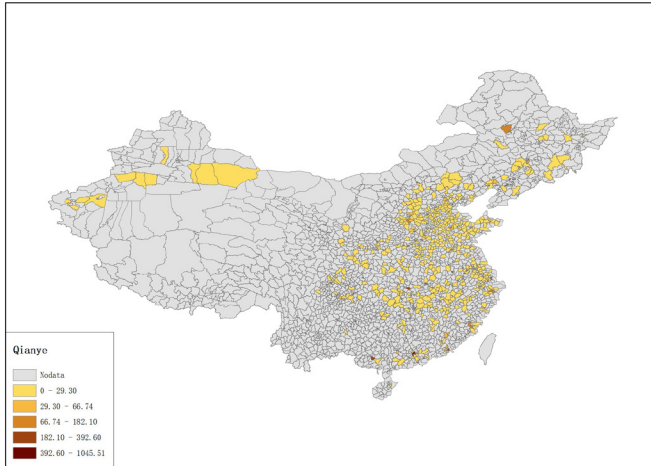


Figure 3. County Level Capital of Qianye



The control variables I use include some geographic variables as well as institutionalized religions such as Buddhism and Daoism. To control the geographic conditions on development, I find that terrain ruggedness highly relevant as found in other studies, thus, I include terrain ruggedness in the list of control variables. The data source for terrain ruggedness is Shaver, Carter, and Shawa (2016). The contemporary development in China, particularly the recent four decades, is driven by export of manufacturing products and materials. Thus, to control such a change of much wider openness relative to pre-modern and modern times, I control the shortest distance to the coast which is calculated by ArcGIS.

Table 1. Summary Statistics of the Variables

Variable	Mean	Min	Max	Standard deviation
Number_Micro	1.238	0.000	5.011	0.995
Capital_Micro	5.843	0.309	9.938	1.210
Capital_qy	1.668	0.000	16.160	3.823
Issues	1.096	0.000	6.229	1.716
Buddhism	0.625	0.000	4.419	0.719
Confucianism	0.545	0.000	5.407	0.878
Taoism	0.621	0.000	3.091	0.725
Coastline	1.560	0.00086	3.579	0.828
Popdensity	0.024	0.000	2.184	0.084
Temperature	4.801	-1.545	5.487	0.668
Precipitation	4.440	1.847	5.612	0.564
Latitude	4.025	3.512	4.268	0.144
Ruggedness	4.601	0.471	6.975	1.253

German sociologist, philosopher, jurist, and political economist Max Weber gave a profound view on the influence of religion and economy in his landmark book *The Protestant Ethic and the Spirit of Capitalism*. According to Weber ([1904–1905] 2001), the Puritanism religious beliefs shaped characteristics regarding professional ethics, trust, thrift, charity, hospitality, etc. to the development of capitalism. In a similar vein, McCleary (2007) argued that religion promoted economic development by cultivating people's characters

and morality. In particular, Christianity promotes economic development by strengthening education (Nunn 2010). To measure China's institutionalized religion, I use the spatial densities (number of establishments against the area of the administrative body such as prefecture or county) of Buddhist monasteries and Taoist temples to proxy local influence of Buddhism and Taoism respectively. The Buddhist monasteries were gathered from three different sources (i.e., China Data Center,<sup>4</sup> Chinese Buddhist Association,<sup>5</sup> and Gaode Map). After manual exclusion of repetitive observations, I checked each monastery from Baidubaiké<sup>6</sup> and Wikipedia to find the time of initial construction and keep those initially built before 1840. The Taoist temples were pythoned from Gaode map and selected using a similar approach. The Confucian influence is measured by the total number of Jinshi a county produced over the entire period of Ming and Qing dynasties. The data source is CBDB which is maintained by Prof. Peter Bol's team of Harvard University.<sup>7</sup> The summary statistics of the variables used in this research is listed in table 1.

### Model

I first examine the persistence of informal finance. Using the registered capital of micro-credit companies as the proxy of contemporary informal financial development as the main explanatory variable and a series of controls to fit the following regression which is a test of the second half of *hypothesis 3*:

$$Y_i = \beta_0 + \beta_1 \text{capital\_qy}_i + \gamma_1 Z_i + \varepsilon_i \quad (1)$$

where  $Y_i$  is the natural logarithm of either the number or the amount of registered capital of micro-credit companies in county  $i$  in 2019, represented by *Num\_Micro* and *Capital\_Micro* respectively;  $\text{capital\_qy}_i$  is the natural logarithm of the amount of capital of Qianye per 10,000 people in 1914;  $Z_i$  is a vector of control variables; and  $\varepsilon_i$  is the error term. In the robustness check, I use the number of micro-credit companies as the alternative dependent variable.

To clear concerns on possible endogeneities due to omitted variables, I run a 2SLS (two-stage least squares) model of equation (1). The first stage of the regression is to test *hypothesis 1* (i.e., better quality of informal institution is conducive to financial contracting if no de facto formal institutions are at work in the modern time). Specifically, since local commercial chambers were the arbitration body in dealing with commercial and contractual disputes, I consider the number of issues discussed by the commercial chambers as the proxy variable for the informal institution, which works as an instrumental variable for capital of Qianye in 1914. I then have the following 2SLS:

$$\begin{cases} \text{Second Stage: } Y_i = \beta_0 + \gamma_2 Z_i + \beta_1 \text{capital\_qy}_i + \mu_i \\ \text{First Stage: } \text{capital\_qy}_i = \gamma_1 Z_i + \delta IV_i + v_i \end{cases} \quad (2)$$

where  $IV_i$  can be the natural log of the number of issues (*Issues*) addressed by the local commercial Chambers; and are error terms. The estimation results for equations (1) and (2) are both reported in table 2.

<sup>4</sup> China Data Center (n.d.) (<https://www.chinadatacenter.net/Default.aspx>)

<sup>5</sup> Chinese Buddhist Association (n.d.) (<http://www.chinabuddhism.com>)

<sup>6</sup> A Chinese counterpart of Wikipedia.

<sup>7</sup> Harvard University, Academia Sinica, and Peking University, China Biographical Database (n.d.) (<https://projects.iq.harvard.edu/cbdb>)

To test *hypothesis 2*, I use the number of Jinshi to denote Confucianism’s influence along with a set of control variables representing other religion (and ideology) to regress the informal institution. The dependent variable is then *issues*, and the explanatory variables include the number of Jinshi in the Ming and Qing Dynasties, Buddhist temples, and Taoist temples, etc. The regressed equation is equation (3) and its results are reported in table 3.

$$Issues_i = \beta_0 + \beta_1 Confucianism_i + \gamma_1 Z_i + \varepsilon_i \tag{3}$$

Finally, I run a different set of regressions to examine if informal institutions in the past had an impact on informal finance and whether this can be instrumented by Confucianism. The second stage of the model is also an examination of *hypothesis 1*. Specifically, I run the following 2SLS,

$$\begin{cases} \text{Second Stage: } capital\_qy_i = \beta_0 + \gamma_2 Z_i + \beta_1 issues_i + \mu_i \\ \text{First Stage: } issues_i = \gamma_1 Z_i + \delta Confucianism_i + v_i \end{cases} \tag{4}$$

where *Confucianism<sub>i</sub>* is the number of Jinshi and used as an instrumental variable, and  $\mu_i$  and  $v_i$  are error terms. The estimation results are reported in table 4.

### Empirical Results

The results on the persistence of the practice of informal finance is presented in table 2 where columns (1)–(3) and (4)–(6) correspond to the aggregate amount of capital and aggregate number of micro-credit companies, respectively. The OLS estimates of  $\beta_1$  without control variables are reported in columns (1) and (4). The results show that regardless of the addition control variables or change of alternative measures of contemporary informal finance, the size of contemporary informal finance is always positively correlated with the size of informal finance a century ago. Results with inclusion of a set of control variables including luminosity, other religions, population density, and geophysical factors are reported in columns (2) and (5). The 2SLS results reported in columns (3) and (6) indicate that the statistical significance of model prediction on the persistence of informal finance is enhanced if endogeneity is taken care of, as the statistical significance of the estimated coefficient of *capital\_qy<sub>i</sub>* increases to 1%. This validates the proposed hypothesis 1.

**Table 2. The Long-Term Impact of Traditional Informal Finance on Contemporary Microfinance Companies (contiued)**

	Dependent: Number_Micro			Dependent: Capital_Micro				
	(1)	(2)	(3)	First-stage	(4)	(5)	(6)	First-stage
	OLS	OLS	2SLS		OLS	OLS	2SLS	
Capital_qy	0.0114** (0.00463)	0.0738** (0.00509)	0.0424*** (0.0196)		0.0183*** (0.00664)	0.0164** (0.00750)	0.179*** (0.0386)	
Buddhism		-0.164* (0.0913)	-0.141 (0.0934)	-0.6411** (.3222)		0.533* (0.320)	0.809** (0.347)	-1.8345** (0.8155)
Confucianism		0.379** (0.147)	0.203 (0.167)	2.5625*** (.8882)		1.021*** (0.219)	0.329 (0.311)	2.8526*** (1.1027)
Taoism		-0.221 (0.172)	-0.242 (0.174)	-0.0114 (0.6550)		1.672*** (0.420)	1.652*** (0.425)	-0.1176 (1.0317)
Coastline		-0.172*** (0.0367)	-0.156*** (0.0387)	-0.4572** (0.1895)		-0.310*** (0.0576)	-0.201*** (0.0759)	-0.6861*** (0.2216)
Popdensity_1953		0.131 (0.379)	0.150 (0.374)	-0.5512 (0.8001)		1.505 (0.946)	1.528* (0.838)	-0.6104 (1.3230)
Temperature		0.159** (0.0668)	0.151** (0.0677)	-0.0415 (0.2559)		0.270* (0.140)	0.224 (0.146)	0.1999 (0.3445)

	Dependent: Number_Micro				Dependent: Capital_Micro			
	(1)	(2)	(3)	First-stage	(4)	(5)	(6)	First-stage
	OLS	OLS	2SLS		OLS	OLS	2SLS	
Precipitation		-0.274*** (0.0692)	-0.263*** (0.0710)	-0.7072** (0.3181)		0.0500 (0.114)	0.0913 (0.133)	-0.7685** (0.3811)
Latitude		0.430*** (0.159)	0.416** (0.162)	0.0239 (0.7206)		0.460* (0.252)	0.444 (0.280)	-0.0238 (0.8617)
Ruggedness		-0.0789*** (0.0224)	-0.0410 (0.0294)	-0.6762*** (0.1153)		-0.179*** (0.0358)	-0.0413 (0.0527)	-0.6262*** (0.1318)
Issues				0.6620*** (0.0669)				0.6171*** (0.0780)
Constant	1.219*** (0.0206)	0.447 (0.705)	0.197 (0.728)	8.5910 (3.3021)	9.871*** (0.0326)	7.201*** (1.126)	6.102*** (1.272)	8.0781** (3.9287)
Weak IV-test			123.219				73.872	
Hausman-test			0.0175				0.0000	
Observations	1,517	1,517	1,517	1,517	1,517	1,517	1,517	1,517
R-squared	0.002	0.096	0.054		0.003	0.172	-0.147	

Robust standard errors in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

In the first-stage regression of the 2SLS method, the coefficients on *Issues* are significant at the 1% level. The *F*-statistics for weak instrumental variable tests are 123.2 and 73.9 respectively, which are greater than 10, satisfying the criterion proposed by Douglas Staiger and James Stock (1997). Hausmann tests show that the original hypothesis that “all explanatory variables are exogenous” can be rejected at the level of 1% and 5% significance respectively, conforming the validity of the instrumental variable approach.

**Table 3. Confucian Value on Informal Institutions**

	(1)	(2)		(1)	(2)
	Issues	Issues		Issues	Issues
Confucianism	0.460*** (0.0436)	0.590*** (0.0558)	Temperature		0.121 (0.0996)
Buddhism	0.147*** (0.0469)	0.256*** (0.0662)	Precipitation		0.645*** (0.120)
Taoism	0.409*** (0.0487)	0.254*** (0.0646)	Latitude		0.413 (0.289)
Coastline		0.0949 (0.0775)	Ruggedness		-0.260*** (0.0441)
Popdensity		0.233 (0.450)	Constant	0.500*** (0.0396)	-3.311** (1.360)
Observations	1583	1,583			
R-squared	0.120	0.201			

Robust standard errors in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

The regression results of equation (3) in testing hypothesis 1 are reported in table 3. It is observed that in column 1 of table 3, the coefficient of Confucianism is significant positive at 1% level, regardless of the addition of control variables. This shows that the deeper the influence of Confucianism in a region, the better its informal institution. The results imply that Confucianism outperformed institutionalized religions in China in terms of helping develop better institutional quality.

Having obtained a clearer picture of cultural influence on institutional quality, I estimate equation (4). Table 4 reports the estimated results where columns (1)–(2) list the OLS (ordinary least squares) regressions results without the use of IV. It is observed that

the coefficient of informal institution on the size of Qianye is significantly positive. This coefficient decreases after adding a series of control variables. Column (3) reports the 2SLS results where Confucianism is used as the IV. The results of the first stage of regression show that the coefficient of Confucianism is 0.5899, which means that for every 1% increase in the number of Jinshi, the number of mediations processed by the local commercial chamber (issues) increased by 0.5899%. The results imply that in areas with strong Confucian influence, customary laws are more prevalent, consequently local finance is more prosperous due to lowered transaction costs. The weak-instruments test and the Hausman test results confirm that our IV is effective. All these estimations give us clear-cut results in which all three hypotheses are validated.

**Table 4. The Impact of the Pre-modern Informal Institution on Informal Finance**

	OLS	OLS	2SLS	
	(1)	(2)	(3)	First-stage
	Capital_qy	Capital_qy	Capital_qy	
Issues	0.899*** (0.0500)	0.699*** (0.0653)	1.969*** (0.256)	
Buddhism		0.0588 (0.148)	-0.434** (0.188)	0.2562*** (0.0662)
Taoism		0.326** (0.149)	-0.0702 (0.187)	0.2536*** (0.0646)
Coastline		-0.570*** (0.185)	-0.539*** (0.209)	0.0948 (0.0774)
Popdensity		-0.282 (0.902)	-0.607 (1.152)	0.2334 (0.4504)
Temperature		0.0323 (0.185)	-0.269 (0.228)	0.1214 (0.0995)
Precipitation		-0.765*** (0.298)	-1.521*** (0.371)	0.6453*** (0.1198)
Latitude		-0.175 (0.700)	-0.527 (0.805)	0.4134 (0.2890)
Ruggedness		-0.660*** (0.111)	-0.198 (0.151)	-0.2601*** (0.0441)
Confucianism				0.5899*** (0.0558)
Constant	0.682*** (0.0583)	9.080*** (3.174)	11.86*** (3.784)	-3.3112** (1.3599)
Weak IV-test			127.742	
Hausman-test			0.000	
Observations	1583	1,583	1,583	1583
R-squared	0.163	0.189	-0.058	

Robust standard errors in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

### Conclusion

Weber is the first scholar who studied the impact of culture (inclusive of religion) on economic institutions in China in comparison to the West, with profound insights. Following Weber, scholars such as John King Fairbank attribute China's stagnation in modernization to the static nature of Confucianism that inhibited reform. In contrast, studies explaining the success of East Asian economies in the 1980s and 1990s attribute the core Confucian values of hard work and thrift, or the so-called "Confucian ethic." Scholars such as Yingshi Yu

(1987) even argue that the Confucian ethic has nurtured the triumph of successful business enterprise since the Ming dynasty (1368–1644). This debate on the role Confucianism has played historically in promoting modern capitalism is a complicated one. However, I would argue that neither Weber nor anti-Weberians are entirely mistaken in the following sense, that is to say, while Weber is right on Confucianism's lack of tension as in the Puritanism which was essential to the onset of capitalism, Weber is too stereotyped in viewing Confucianism as a static doctrine that failed to adjust itself to accommodate or even foster capitalism. The key to the debate lies in the understanding of Confucianism as an institutionalized religion or as a culture. In this regard, a neo-Weberian approach, which encompasses many dimensions of culture, appears to be more inclusive. While Confucianism as a religion, failed to ignite the birth of modern capitalism as Protestantism did, our neo-Weberian findings show that as a culture, Confucianism facilitated the proliferation of modern capitalism once it was introduced to China.

Weber's China thesis which refers to the inability of the Chinese bureaucracy obsessed by Confucianism was inherently unable to provide *sachliche* (meaning "rational" and "objective") decisions and nurture modern capitalism. I show in this article, however, a stylish relationship that runs in contrast to Weber's China thesis. Indeed, casual observations in pre-modern and modern China show distinctive counterexamples. For instance, the gentry class who were responsible to civil affairs and local commercial chambers, who were largely accounted for contractual disputes, who in no question followed core Confucian values such as possession of righteousness, exerted surprisingly substantial amounts of effort in the pursuit of ultimate justice in most cases. Thus, as we have observed, after controlling for a number of covariates, the business activities, measured by the amount of capital, was more flourishing in places where Confucian influence was more pronounced. On another account, the core values of Confucianism such as loyalty to the king or lord as professional ethics, trust as a primary character of a gentleman, thrift as a virtue, benevolence as the ultimate human character, and diligence in contrast to indolence, seem to perfectly match the core Puritanism religious beliefs such as professional ethics, trust, thrift, charity, diligence, etc. and hence there could hardly be a justification that Puritanism facilitated the development of modern capitalism, but Confucianism did the opposite.

Overall, despite the importance of informal institutions and finance in modern China as either separate or combined subjects, existing studies are strikingly scarce, particularly in the English language literature. There is a small body of literature on contemporary informal finance in China notably by Allen, Qian, and Xie (2005), Ayyagari Demirgüç-Kunt, and Maksimovic (2010), and Cao et al. (2019) and they deliver mixed messages. The current article first investigated the persistence of informal finance using micro-credit companies and Qianye in 1914, which was primarily composed of native banks, as dependent and independent variables, respectively. Our benchmark regressions show that historical and contemporary informal finance are positively related with statistical significance; and our 2SLS regressions using mediations of commercial chambers to instrument the size of informal finance indicates that once omitted variables are controlled for, such a persistence effect is much more pronounced than that in the uncontrolled OLS regressions. To examine the impact of culture on informal institutions, drawing particular attention to Weber's China thesis, I run 2SLS regressions using the size of informal finance in 1914 as the dependent variable, the quality of informal institutions proxied by the mediations by the commercial chambers as the (endogenous) explanatory variable, and Confucian influence represented by

the aggregate number of Jinshi during Ming and Qing dynasties as the instrumental variable. Our empirical results indicate that Confucian values are conducive to the development of better informal institutions, and informal institutions positively impacted informal finance. Our cross sectional results offer support to the argument that Confucianism was pro-capitalism, which is in contrast with Weberian theory. This points to a possible logical flaw of Weber's China thesis which claims that the adaptiveness and lack of transcendence in Confucianism as a dominant religion in Chinese society dragged China to a backward and adaptive economy whereas the Puritanism fostered the spirit of Capitalism which took a proactive attitude to market and finance. Indeed, I argue that this is a grand endogeneity problem as Confucianism was chosen by the imperial authority in Western Han dynasty in 134 CE as the state ideology after a series of unsuccessful attempts to restore feudalism, a time more than 600 years after the death of Confucius. Hence, it was the despotism embedded in the imperial system itself, rather than Confucian values, that contributed to the political and economic stagnation of the Chinese empire.

### References

- Ahlerup, Pelle, Ola Olsson, and David Yanagizawa. 2009. "Social Capital vs. Institutions in the Growth Process." *European Journal of Political Economy* 25 (1): 1–14.
- Allen, Franklin, Jun Qian, and Meijun Qian. 2005. "Law, Finance and Economic Growth in China." *Journal of Financial Economics* 77 (1): 57–116.
- Allen, Franklin, Meijun Qian, and Jing Xie. 2019. "Understanding Informal Financing." *Journal of Financial Intermediation* 39 (July): 19–33. doi:10.1016/j.jfi.2018.06.004
- Audretsch, David B., Werner Bönte, and Jagannadha Pawan Tamvada. 2007. "Religion and Entrepreneurship." Centre for Economic Policy Research (CEPR), Discussion Paper No. DP6378.
- Ayyagari, Meghana, Asli Demirgüç-Kunt, and Vojislav Maksimovic. 2010. "Formal versus Informal Finance: Evidence from China." *Review of Financial Studies* 23 (8): 3048–3097.
- Barro, Robert J. 1991. "Economic Growth in a Cross Section of Countries." *Quarterly Journal of Economics* 106 (2): 407–443.
- Barro, Robert J. and Rachel M. McCleary. 2003. "Religion and Economic Growth Across Countries." *American Sociological Review* 68 (5): 760–781.
- Becker, Sascha O. and Ludger Wößmann. 2009. "Was Weber Wrong? A Human Capital Theory of Protestant Economic History." *The Quarterly Journal of Economics* 124 (2): 531–596.
- Bettendorf, Leon and Elbert Dijkgraaf. 2010. "Religion and Income: Heterogeneity Between Countries." *Journal of Economic Behavior and Organization* 74: 12–29.
- Billig, Michael. 2000. "Institutions and Culture: Neo-Weberian Economic Anthropology." *Journal of Economic Issues* 34 (4): 771–788.
- Bjørnskov, Christian. 2011. "Combating Corruption: On the Interplay Between Institutional Quality and Social Trust." *Journal of Law and Economics* 54 (1): 135–159.
- Boettke, Peter J., Christopher J. Coyne, and Peter T. Leeson. 2008. "Institutional Stickiness and the New Development Economics." *American Journal of Economics and Sociology* 67 (2): 331–358.
- Bohnet, Iris. 2008. "Trust in Experiments." In *The New Palgrave Dictionary of Economics*, edited by S. N. Durlauf, and L. E. Blume. London: Palgrave Macmillan.
- Bun, Kwan Man. 2001. *The Salt Merchants of Tianjin, State Making and Civil Society in Imperial China*. Honolulu: University of Hawaii Press.
- Cao, Chunfang, Kam C. Chan, Wenxuan Hou, and Fansheng Jia. 2019. "Does Religion Matter to Informal Finance? Evidence From Trade Credit in China." *Regional Studies* 53 (10): 1410–1420.
- Cao, Shuji. 2005. "Dajihuang—1959–1961 Nian De Zhongguo Renkou." (The Great Famine—the Population of China From 1959 to 1961). Hong Kong: Dangdai guoji chubanshe gongsi.
- Carswell, Peter and Deborah Rolland. 2007. "Religion and Entrepreneurship in New Zealand." *Journal of Enterprising Communities: People and Places in the Global Economy* 1 (2): 162–174.
- Chan, Kai Yiu. 2006. "Business Expansion and Structural Change in Pre-War China: Liu Hongsheng and His Enterprises, 1920–1937." Hong Kong: Hong Kong University Press.
- Cheng, Linsun. 2003. "Banking in Modern China." New York: Cambridge University Press.
- China Data Center. n.d. "China Data Institute." Available at <https://www.chinadatacenter.net/Default.aspx>. Accessed May 20, 2019.

- Chinese Buddhist Association. n.d. Available at <http://www.chinabuddhism.com> (Chinese language only). Accessed May 30, 2019.
- Cochran, Sherman. 2000. "Encountering Chinese Networks: Western, Japanese, and Chinese Corporations in China, 1880–1937." Berkeley, CA: University of California Press.
- Faure, David. 2006. "China and Capitalism: A History of Business Enterprises in Modern China." Hong Kong: Hong Kong University Press.
- Gorodnichenko, Yuriy and Gerard Roland. 2010. "Culture, Institutions and the Wealth of Nations." NBER Working Paper Series 16368.
- Grafton, R. Quentin, Stephen Knowles, and Dorian P. Owen. 2002. "Social Divergence and Productivity: Making a Connection." In *The Review of Economic Performance and Social Progress 2002: Towards a Social Understanding of Productivity*, Volume 2, 203–223. Centre for the Study of Living Standards; The Institute for Research on Public Policy.
- Greif, Avner. 1994. "Cultural Beliefs and the Organization of Society: A Historical and Theoretical Reflection on Collectivist and Individualist Societies." *Journal of Political Economy* 102 (5): 912–950.
- Greif, Avner. 2005. "Commitment, Coercion, and Markets: The Nature and Dynamics of Institutions Supporting Exchange." In *Handbook of New Institutional Economics*, edited by C. Ménard and M. Shirley, 727–786. Dordrecht: Springer.
- Greif, Avner. 2006. "Institutions and the Path to the Modern Economy: Lessons From Medieval Trade." Cambridge: Cambridge University Press.
- Harvard University, Academia Sinica, and Peking University, China Biographical Database (CBDB). "China Biographical Database Project (CBDB)." n.d. Available at <https://projects.iq.harvard.edu/cbdb>. Accessed June 10, 2019.
- Helmke, Gretchen, and Steven Levitsky. 2004. "Informal Institutions and Comparative Politics: A Research Agenda." *Perspectives on Politics* 2(4): 725–740.
- Iannaccone, Laurence R. 1998. "Introduction to the Economics of Religion." *Journal of Economic Literature* 36 (3): 1465–1495
- Islam, Nazrul. 2008. "Determinants of Productivity Across Countries: An Exploratory Analysis." *Journal of Developing Areas* 42 (1): 201–242.
- Knack, Stephen, and Philip Keefer. 1997. "Does Social Capital Have an Economic Payoff? A Cross-Country Investigation." *Quarterly Journal of Economics* 112 (4): 1251–1288.
- Kong, Xiangyi. 2010. "The Pioneers of Chinese Banking: Qianpu, Qianzhuang, Yinbao." *China Finance* (in Chinese) 12: 92–93.
- Kortt, Michael A., and Brian Dollery. 2012. "Religion and the Rate of Return to Human Capital: Evidence From Australia." *Applied Economics Letters* 19 (10): 943–946.
- La Porta, Rafael, Florencio Lopez-De-Silanes, Andrei Shleifer, and Robert W. Vishny. 1997. "Trust in Large Organizations." *American Economic Review* 87 (2): 333–338.
- Lal, Deepak. 2001. "Unintended Consequences: The Impact of Factor Endowments, Culture, and Politics on Long-Run Economic Performance." Cambridge, MA: MIT Press.
- Lambert-Mogiliansky, Adriane, Konstantin Sonin, and Ekaterina Zhuravskaya. 2007. "Are Russian Commercial Courts Biased? Evidence From a Bankruptcy Law Transplant." *Journal of Comparative Economics* 35 (2): 254–277.
- Ma, Debin. 2012. "Political Institution and Long Run Economic Trajectory: Some Lessons From Two Millennia of Chinese Civilization," Chapter 4. In *Institutions and Comparative Economic Development*, edited by Masahiko Aoki, Timur Kuran, and Gerard Roland, 78–98. Basingstoke: Palgrave Macmillan.
- Mauro, Paolo. 1995. "Corruption and Growth." *Quarterly Journal of Economics* 110 (3): 681–712.
- McCleary, Rachel. 2007. "The Economics of Religion and Secularization." *The Review of Faith & International Affairs* 5 (1): 43–47.
- Méon, Pierre-Guillaume, and Khalid Sekkat. 2005. "Does Corruption Grease or Sand the Wheels of Growth?" *Public Choice* 122: 69–97.
- Méon, Pierre-Guillaume, and Khalid Sekkat. 2015. "The Formal and Informal Institutional Framework of Capital Accumulation." *Journal of Comparative Economics* 43 (3): 754–771
- Meissner, Daniel J. 2005. *Chinese Capitalists Against the American Flour Industry, 1890–1910: Profit and Patriotism in International Trade*. Lewiston, NY: Edwin Mellon Press.
- Minarik, Pavol. 2014. "Religion and Economic Attitudes in Post-communist Transition." *Post-Communist Economies* 26 (1): 67–88.
- Ministry of Agriculture and Commerce (ed.), 1917. *The Fourth Statistical Tables of Agriculture and Commerce in the 4th Year of the Republic of China*. (Zhonghuaminguo Si Nian Di Si Ci Nongshang Tongjibiao.)
- North, Douglass C. 1990. "Institutions, Institutional Change and Economic Performance." Cambridge: Cambridge University Press.
- North, Douglass C., and Barry R. Weingast. 1989. "Constitutions and Commitment: The Evolution of Institutions Governing Public Choice in Seventeenth-century England." *Journal of Economic History* 49 (4): 803–832.

- Nunn, Nathan. 2010. "Religious Conversion in Colonial Africa." *American Economic Review Papers and Proceedings* 100 (2): 147-152.
- Nunziata, Luca, and Rocco Lorenzo. 2016. "A Tale of Minorities: Evidence on Religious Ethics and Entrepreneurship." *Journal of Economic Growth* 21 (2): 189-224.
- Ostrom, Elinor. 2005. *Understanding Institutional Diversity*. Princeton: Princeton University Press.
- Putnam, Robert D. 1993. *Making Democracy Work: Civic Traditions in Modern Italy*. Princeton: Princeton University Press.
- Shaver, Andrew, David B. Carter, and Tsering Wangyal Shawa. 2016. "Terrain Ruggedness and Land Cover: Improved Data for Most Research Designs." *Conflict Management and Peace Science* 36 (2): 191-218.
- Sinnewe, Elisabeth, Kortt Michael, and Steen Todd. 2016. "Religion and Earnings: Evidence From Germany." *International Journal of Social Economics* 43 (8): 841-855.
- Song, Zheng, Kjetil Storesletten, and Fabrizio Zilibotti. 2011. "Growing Like China." *American Economic Review* 101 (1): 202-241.
- Staiger, Douglas, and James H. Stock. 1997. "Instrumental Variables Regression With Weak Instruments." *Econometrica* 65 (3): 557-586.
- Tabellini, Guido. 2008. "The Scope of Cooperation: Values and Incentives." *Quarterly Journal of Economics* 123 (3): 905-950.
- Tabellini, Guido. 2010. "Culture and Institutions: Economic Development in the Regions of Europe." *Journal of the European Economic Association* 8 (4): 677-716.
- Tsai, Kellee S. 2004. "Imperfect Substitutes: The Local Political Economy of Informal Finance and Microfinance in Rural China and India." *World Development* 32 (9): 1487-1507.
- Tsai, Kellee S. 2015. "The Political Economy of State Capitalism and Shadow Banking in China." HKUST IEMS Working Paper No. 2015-25.
- Tubadji, Annie. 2014. "Was Weber Right? The Cultural Capital Root of Socio-economic Growth Examined in Five European Countries." *International Journal of Manpower* 35 (1/2): 56-88.
- Weber, Max. (1904-1905) 2001. *The Protestant Ethic and the Spirit of Capitalism*. New York and London: Routledge (originally published as two separate essays, 1904-1905).
- Weber, Max. 1951. *The Religion of China: Confucianism and Taoism*. Glencoe, IL: The Free Press.
- Weber, Max. 1981. *General Economic History*. Translated by Frank Knight with a new Introduction by Ira J. Cohen. New Brunswick, NJ: Transaction Books.
- Williamson, Claudia R. 2009. "Informal Institutions Rule: Institutional Arrangements and Economic Performance." *Public Choice* 139 (3-4), 371-387.
- Wiseman, Travis, and Andrew Young. 2014. "Religion: Productive or Unproductive?" *Journal of Institutional Economics* 10 (1): 21-45.
- Yang, Ken C. K. 1962. *Religion in Chinese Society*. Berkeley: University of California Press.
- Yu, Shu, Sjoerd Beugelsdijk, and Jakob de Haan. 2015. "Trade, Trust and the Rule of Law." *European Journal of Political Economy* 37: 102-115.
- Yu, Yingshi. 1987. *Zhongguo Jinshi Zongjiao Lunli Yu Shangren Jingshen*. (The Modern Chinese Religious Ethic and the Spirit of Merchants) Taipei: Lianjing chuban gongsi.
- Yuan, Weipeng, Macve Richard, and Debin Ma. 2017. "The Development of Chinese Accounting and Bookkeeping Before 1850: Insights From the Tōng Tǎi Shēng Business Account Books (1798-1850)." *Accounting and Business Research* 47 (4): 401-430.
- Zelin, Madeleine, Jonathan K. Ocko, and Robert C. Gardella. 2004. *Contract and Property in Early Modern China*. Stanford, CA: Stanford University Press.
- Zelin, Madeleine. 2009. "The Firm in Early Modern China." *Journal of Economic Behavior and Organization* 71 (3): 623-637.
- Zhang, Bo, Jinyan Hu, and Chicheng Ma. 2018. "Where Traditional Banks Meet Modern Micro-credit: The Long Term Persistence of Informal Finance in China." *Economics Quarterly* (in Chinese) 17 (4): 1383-1408.
- Zhang, Xuechun. 2012. "Informal Finance in China, People's Bank of China, Presentation." OECD financial Market. Available at <http://www.oecd.org/finance/financial-markets/49703155.pdf>.
- Zhu, Yingui. 2011. "The Status and Functions of Qianzhuangs in the Capital Market of Modern China." *Social Sciences* (in Chinese) 8: 132-143.