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**Financial development and the  
lingering effect of the Cultural Revolution:  
trust or risk preference?**

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## **1. Abstract**

This paper discusses the casual effect and mechanisms that how the Chinese Cultural Revolution (1966-1976) shapes the modern financial development of China at the household level, with a specific focus on two channels: trust and risk preference. We first show this historical political campaign still has strong explanatory power to the mistrust and risk-loving amongst modern Chinese population. We then show: (i) the mistrust led by the Cultural Revolution accounted for the obstacles when households access to informal finance, which means a decrease in supply side of finance, (ii) the risk-loving generated by the Cultural Revolution increased households' willing to use leverage and to invest risky financial products, which means an increase in demand side of finance. This paper contributes to the literature by providing this competing theory with the Cultural Revolution as a background. The multiple databases we explored and the consistent evidence we found also provide a reference for further research.

Keywords: Trust, risk preference, the Cultural Revolution, financial development

## 2. Introduction

The idea that historical events can affect people's trust as well as risk preference and hence influence the development of modern financial institutions has attracted increasing attention in the literature recently (e.g. Levine, Chen & Xie, 2017; Pierce & Snyder, 2017). While these mechanisms have not yet received much attention in China, the lingering impact of the Cultural Revolution, with its whole "Chinese lost generation" (Gerard & Yang, 2017), suggests an interesting example of this phenomenon. The Cultural Revolution (1966-1976), a decade-long period of social turmoil that recorded millions of unnatural deaths, massively changed the development of institutions in China (e.g. MacFarquhar, 1974; Walder & Su, 2003). Indeed, this event persists in affecting modern Chinese society (MacFarquhar, 2016). There is clear evidence that this event profoundly changed the belief system of the Chinese population (Gerard & Yang, 2017) as well as their risk tolerance (Zhang, Liu & Yung, 2007).

In more general terms, looking beyond the Cultural Revolution, this paper will develop the theory that through a specific channel a historical event is capable of determining variations in social trust and population's risk attitudes in modern time, and thus shape modern financial development. (e.g. Guiso, Sapienza & Zingales, 2004; Karlan, 2005; Levine, Chen & Xie, 2017; Pierce & Snyder, 2017; Callen et al., 2014; Bernile, Bhagwat and Rau, 2017).

This paper will first contribute an investigation regarding the relationship between the trust and risk preference that arose from China's Cultural Revolution and its effects on financial development. Second, the mechanisms that will be discussed in this paper will test a variety of theories. Mechanism one: the causal effect between the Cultural Revolution and trust, an investigation between the relationship between the Cultural Revolution and household access to finance. This method will apply the theory of trust in the context of historical events and modern financial development (e.g. Karpoff, Lee & Vondracik, 1999; Nunn, 2008; Nunn & Wantchekon, 2011, Pierce & Snyder, 2017; Levine, Chen & Xie, 2017). Moreover, this research will supplement the theory of historical events' impact on trust as well as trust and finance. Through this mechanism, the historical event influences modern finance. Mechanism two: the causal effect between the Cultural Revolution and risk preference, this paper will investigate the relationship between the Cultural Revolution and household financial behaviours; especially the willingness of debt and investment decision. This method with the theory of risk preference and violence will be placed in the context of individual's early life experience (e.g. Voors et al., 2012; Gilligan, Pasquale & Samii 2014; Callen et al., 2014;

Bernile, Bhagwat & Rau, 2017; D' Acunto, Prokopczuk & Weber, 2018). Evidence from this paper's research will help distinguish among a variety of views on how historical events influence modern finance.

### **3. Theoretical background**

#### **3.1 Trust and finance**

##### **3.1.1 The theory of trust and finance**

"Trust plays a central role in economic transactions, and thus the concept of trust plays a central role in economic theories" (Dupont & Karpoff, 2017). Scholars have long realised the importance of trust for a market to operate. Arguably, Arrow (1972) was one of the pioneers who argued "virtually every commercial transaction has within itself an element of trust" and the lack of mutual confidence could be the explanation for much of the economic backwardness. Based upon the work of Banfield (1958), Arrow (1972) proposes that the lack of general social trust led to the underdevelopment of Southern Italy. However, it was hard to reconcile this thesis with convincing economic models until James (1990), Putnam et al. (1994), Fukuyama (1995) and La Porta et al. (1997) provide underpinning empirical research with the worldwide database. These economists believe that trust or social capital determines the institutions' performance in society. They also argue that the trust or social capital is a propensity that reveals people's efficiency when cooperating to produce social outcomes. Since then, an active body of literature has examined the importance of trust and social economic development.

However, what is the definition of trust, and what is the relationship between the term of trust and social capital? Bottazzi, Da Rin & Hellmann (2016) define trust as "a subjective belief about the likelihood that a potential trading partner will act honestly". Similarly, Dupont & Karpoff (2017) classify trust as "the ex-ante belief that one's counterparty will perform as promised in the implicit or explicit agreement". Karlan et al. (2009) believe trust plays a role of informal contract enforcement in social networks. A well-accepted notion of trust and social capital in economics study comes from Guiso, Sapienza & Zingales (2004), who note trust is an easily-understood or captured the dimension of social capital, which reveals the level of economic cooperation for a specific society; thus determining the development and performance of institutions among different economic entities. This definition summarizes the

previous literature and is widely adopted by the following researchers (e.g Putnam et al., 1994; La Porta et al, 1997; Karlan, 2005; Bottazzi, Da Rin & Hellmann, 2016; Bigoni et al.,2016).

Substantial literature, based on different countries or cultural settings, has highlighted the role of trust in financial behaviours and economic consequences. La Porta et al. (1997) examine the effect of trust on the large organizations' performance on a bias of cross-section of countries, and they argue the hierarchical religions that dominated countries reveal lower self-reported trust and worse performance for both large organizations and social efficiency. Guiso, Sapienza & Zingales (2003, 2006, 2009) further argue that religious beliefs attribute to economic attitudes within a country and between countries (2003). They argue that religions play a key role in attributing the different trust levels for specific groups of people toward others, and thus this cultural bias will affect economic outcomes (2006). More specifically, this culturally-based explanation proposes the mechanism that the bilateral trust would affect individuals' or companies' access to economic exchanges like trading frequency, portfolio investment and direct investment (2009). Through this mechanism, trust, which is driven by culture, is significantly associated with financial and economic development for different regions. However, their findings suggest that Christian religions increase trust more than other denominations, with evidence corroborating this viewpoint among the U.S and European countries.

The country-specific studies confirm the robustness of this mechanism. Previous literature that can be traced back to Putnam (1993), who argues that the prevailing lack of trust in south Italy could be due to the strong Catholic tradition, which stresses the vertical relationship with the Church and depresses the horizontal relationship between citizens. Guiso, Sapienza & Zingales (2004) identify the differences of social capital between north and south Italy which contributes to the differences in their financial development. The households in high-social-capital areas are revealed to have a higher level of trust, and better access to financial instruments. Meanwhile, they have better access to institutional finance and relatively less use of informal credits. Collecting trust data through the "Trust Game" in Peru, Karlan (2005) finds strong support that trustworthiness is a great measure of individual-level social capital and significantly correlated with the success of group-lending programs in a Peruvian microcredit program. Guiso, Sapienza & Zingales (2008) note that the lack of trust, both the general trust and specific trust regarding financial institutions, plays an important role in explaining the limited participation puzzle in the stock market. Their findings are consistent with household data from the Netherlands, individual data from Italy, and stock market participation data

across countries. In a firm-level study, Bottazzi, Da Rin & Hellmann (2016) provide consistent evidence across countries that bilateral trust between countries is positively related to the investment decisions of sophisticated venture capital firms.

### **3.1.2 The lingering effect of historical events on trust**

Given the importance of trust for finance and economic development, a question has been proposed: how is the trust shaped? As a form of social capital or cultural, the trust would essentially be formed by the history of one specific region. Thus, some vital historical events may play a watershed role and have lingering effects on society, and scholars have found empirical evidence in different regions.

The African slave trade, from the 15th through to the 19th centuries, has drawn attention from economists. Acemoglu, Johnson & Robinson (2001) note the effect of African countries' colonial experiences on their current economic development; whilst also noting a persistence of the extractive institutions even currently. Along with the long-term effect of colonial rule to African countries' modern institution, Nunn (2008) found a robust negative relationship between the magnitude of slave extraction across regions of Africa and their current economic performances. Nunn & Wantchekon (2011) further argues of a causal link between the historical slave trade and current trust levels within Africa, and they reveal the mechanism is personal to the individuals. Arguing another channel, Whatley & Gillezeau (2011) attribute the slave trade to the increased ethnic group numbers within Africa, which has heightened the motivation of wanting a more insider identity e.g. from one ethnic group compared to any other; thus the higher ethnic fractionalization also explains the underdevelopment of Africa. More recently, authors have provided evidence to show the ramifications of the historical slave trade persist to influence modern finance and economic behaviour in Africa.

Pierce & Snyder (2017) examined the link between "Access to finance" available to firms in each region and the extent of the historical slave trade's aftermath in those same African regions. Their results suggest that the slave trade continues to exert lingering effects on the trust in modern Africa, and underpins the idea of this historical event as a plausible channel of mistrust, ethnic fractionalization, and weakened institutions in modern-day Africa. Based on a similar setting, Levine, Chen & Xie (2017) conducted a series of investigations regarding three potential mechanisms that describe how modern finance is affected by the historical slave trade: information sharing institutions; the quality of legal systems; and trust in financial institutions.

Their findings suggest that the slave trade is strongly and negatively related to information sharing and trust mechanisms, but not to legal institutions (Levine, Chen & Xie, 2017).

There is also well-developed literature that discusses the historical experience's relationship with modern finance through the channel of trust which is based on different regional settings. In a study of Vietnam, McMillan & Woodruff (1999) they suggested a positive relationship between the business trust and firms' access to informal finance; an idea that is gaining prominence today. Their empirical results show that relational mechanisms work as an enduring mainstay role to materialize contracting without laws in Vietnam. Karlan et al. (2009) contribute a theory that identifies the role of trust on informal enforcement of contract in social networks, with data from Peru. They argue that dense networks help to increase social capital thus enabling the transaction of high-value assets; while loose networks generate a bridging social capital which enables cheap favours in getting access e.g. information. Meanwhile, the authors show the strong connections between trusted recommenders and employers benefit in reducing information asymmetric to the job market.

The question is, of course, whether the theory of trust and finance applies to China? More specifically, does the historical experience still impact the modern finances of China, through the mechanism of trust?

Wu, Firth & Rui (2014) provide a micro-perspective study that links the informal finance of private firms and social trust in China. They argue that private firms have higher access to bilateral trade credit if located in a higher level of social trust regions, and the results are robust to endogeneity, legal environment and different measurements of social trust. Li, Wang & Wang (2017) examine the stock price crash risk under the impact of social trust in China using a sample of Chinese listed firms. In their sample period from 2001 to 2015, the authors found evidence that firms would have less risk of stock price crash if they had headquarters in high social trust regions. This finding is more prominent for firms which are state-owned, weak monitoring, and higher risk-taking. Additionally, Li, Wang & Wang (2017) observe that high social trust in a region is associated with fewer financial restatements and higher accounting conservatism for the firms located in certain prefectures. The empirical research conducted and based upon cross-provincial data of China by Cui (2017) suggests a strong positive relationship between social trust and economic growth as well as formal institutional development. The author demonstrates the consistency of the case of China to the literature of trust and economic growth worldwide.

### **3.2 Social trauma on individuals' risk preference**

Examining the existing studies of historical events' effect on trust, the research on risk preference focus on relatively more recent events and predominantly on social trauma like wars, racial persecution as well as natural catastrophe. Also, the study of risk preference often intertwines with the study of trust in recent literature (Voors et al., 2012; Gilligan, Pasquale & Samii 2014; Callen et al., 2014; Bernile, Bhagwat & Rau, 2017; D'Acunto, Prokopczuk & Weber, 2018).

Using a lab-in-the-field approach, Voors et al. (2012) examine the role of exposure to conflict on an individual's social and financial attitudes based on Burundi, where civil war occurred between 1993 and 2003. They argue that greater levels of violence increase the individual's altruistic behaviour and therefore increase their risk preference on financial transactions, and this impact of adverse shock, although temporary, has long-term consequences. In the micro-level version as household or individual financial behaviours, large social calamity can alter their saving decisions and investment options. More importantly, they propose that civil wars typically lead to a destruction of physical capital, thus it can be deemed as "development in reverse", although it can be a temporary drop in economic levels.

Similarly, Gilligan, Pasquale & Samii (2014) provide a post-conflict societies study in the case of Nepal's 10-year civil war and found the communities affected by war-violence exhibit higher levels of prosocial concept. These concepts include altruistic giving, trust-based financial transactions and willingness to reciprocate trust-based investing. The authors propose two channels that inhibit this social transformation: purging mechanism and collective coping mechanism. These channels indicate the role that wartime violence plays for removing less social persons from communities and banding individuals together in order to cope with hard times. In another laboratory-in-the field study on Italy, Bigoni et al. (2016) found the differences in social norms contribute to the disparities between North and South Italy. This divergence has lasted persistently and has brought about the cooperative behaviours gap; thus contributing to the underdevelopment of South Italy. Moreover, they argue that this behaviour gap is not able to be explained by risk tolerance, proxies of social capital as well as the "amoral familism" which has been well discussed by previous scholars.

With a specific focus of violence and economic risk preference, Callen et al. (2014) found experimental evidence from Afghanistan. They conducted an experimental procedure to identify risk preferences, specific preferences for certainty and violations of Expected Utility.



The administrative violence data of this study is from “precisely geocoded military records”. Their study suggests that the higher the intensity and more recent the exposure to violence, the more likely a person is to have a higher preference of risk. The neighbourhood level records of violence measurement they adopt do not identify specific personal experience during the violence. However, the authors argue that their experiment suggests the individual's personal experience does not reveal a larger effect than the administrative measurement of violence in a neighbourhood level.

Another influential study of early experience and individual's risk preference comes from Bernile, Bhagwat and Rau (2017). They propose a non-monotonic relationship between the CEOs' early life experiences, here the fatal natural disasters, and firms' risk behaviours. In more detail, they argue that the CEOs without experiencing fatal disasters with extremely negative consequences would behave more aggressively, which means they would conduct riskier corporate policies such as cash holding, leverage and acquisition. Meanwhile, CEOs who experienced fatal disasters in their early life would behave more risk averse and thus lead firms which operate with more conservative policies.

More recently, D'Acunto, Prokopczuk & Weber (2018) find that the historical antisemitism in Germany in the 1920s and 1930s is negatively related to the access to finance for modern German households. Their study suggests a distrust in finance that is generated by the historical antisemitism, has transmitted across generations and has brought about lower demand for finance in the present-day. Furthermore, they find that this lack of access to finance results in reducing wealth accumulation in the long-term for households at the county-level.

### **3.3 Study of Cultural Revolution**

#### **3.3.1 Why the Cultural Revolution was important**

Regarding the previous researches, we may argue that the theory of trust and finance may also apply in the case of China, and there is a strong connection between individual's early experience and their risk preference. Hence, we shall keep asking: do the historical experiences play a significant role of shaping the individual's trust and risk preference around China, and how does this affect the modern financial behaviours of Chinese population?

There is a well-known but rarely discussed the national event which draws our attention: the Cultural Revolution. This occurred from 1966 for a decade until 1976. The "Great Proletarian Cultural Revolution" is widely believed to have left indelible marks and catastrophic consequences on Chinese society (e.g. Esherick et al., 2006; Su, 2011; Bai, 2014)

For the quantitative data regarding the Cultural Revolution, Walder & Su (2003) provide the most detailed data regarding the scope and timing of this social turmoil and discuss the human impact it has left. The authors extract the information concerning the magnitude and timing of the Cultural Revolution from “County Annals”, or more accurately “Regional Gazetteers” (*Xianzhi*). After adjustment for the tendency of under-reporting the casualties and analysing detailed accounts, they estimate that the number of dead and permanently injured from this Revolution are similar and range from 0.75 to 1.5 million, along with 36 million people who suffered political persecution. In addition, they found that the vast majority of deaths from persecution transpired between 1968 and 1971, after the establishment of provincial revolutionary committees.

The economic impacts of the Cultural Revolution have been well-discussed (government-admitted in certain official Chinese textbooks). Chow (1993) investigates the economic consequences of the Cultural Revolution, with an emphasis on China's aggregate economy. The author argues that there was a universal loss on capital stock in production sectors during this social turmoil, and no technological progress occurred before 1980. In a more recent study, Bai (2014) provides findings regarding the economic legacies of the Cultural Revolution, with particular attention to rural China. The empirical results of this paper argue a negative relationship between the revolutionary magnitude for a region and its afterwards industrialisation speed, general education level and per-capita output. Not only revealing a large magnitude, but these effects are also still detectable more than three decades later, although some cases start to fade as time goes on. Notably, the author argues of a lingering adverse effect on the trust-based informal lending: where the trust and household financial data were collected from a self-reported questionnaire survey data from 2002. Bai (2014) also highlights the importance of "Regional Gazetteers", as it has often been a resource which social science scholars rely on for different research subjects based on China (e.g. Walder & Su, 2003; Su, 2011; Chen et al., 2013; Bai, 2014).

### **3.3.2 The long-run effect of the Cultural Revolution on individuals**

Besides the impact on social economics, the decade-long social unrest has left great impact on citizens, which have been observed by scholars. “From 1967 to 1978, the state "send-down" policy in the People's Republic of China forced 17 million urban youth to live and work in rural areas (Zhou & Hou, 1999)”. Zhou & Hou (1999) believe this historical episode provides a “natural experiment” for researching: (1) how the effects of adverse state policies were mediated by the structure of social stratification, and (2) how the “send-down” experience

affected individuals' later life and economic well-being. Their research shows that adverse state policies negatively affected all social groups, but this negative effect was mitigated amongst the bureaucratic class. More importantly, they propose a lasting effect of the “send-down” experience on individuals, which impacted their later life patterns and personal incomes.

Chen (1999) labels the Red Guards' generation (those who grew up during the Cultural Revolution) “China's lost generation” and examines the socioeconomic pains they suffered. The author shows that they endured the Great Famine (1959-1961) in childhood; experienced the Cultural Revolution (1966-1976) which suspended their education and sent them to rural areas in their adolescent years; then the family-planning policy (1978-2018) which pushed them to defer marriage and allowed them to have only one child. Moreover, the "reform and opening-up" stage (1978-) withdrew their long-implemented job security and free health care. In facing the coming economic liberty in the 1980s, this revolutionary generation was ill-prepared and suffered great tribulations in the economic transition due to lack of education, degrees and skills. Hence, Chen (1999) argues that the Cultural Revolution made this age group lose from both revolution and reform. In another respect, the author also argues the socioeconomic pains of this generation produced the social atmosphere of reform and democracy amongst this cohort and that they were the main supporters of the April Fifth Movement and the Democracy Wall Movement. Moreover, Chen(1999) states: "Their sufferings prepared them to realize that China must change and can never go back to the Maoist society; idealism is still alive in many who are willing to support reform even though they themselves might be disadvantaged by it. This kind of determination and idealism makes them perhaps the most important generation for China's present and future."

With consideration to the interrupted education for the Cultural Revolutionary cohort, Meng & Gregory (2002) study their subsequent educational attainment; to what extent they were able to overcome this educational interruption. The authors conceptualize three distinct effects for this generation: missed school years, being without the normal curriculum during school years, and delayed access to university when older. Specifically, they propose a definition of the generation: those between the ages of 3 and 19 when the Cultural Revolution began (1966) and that the cohort who missed the most schooling were those aged 11 and 12 in 1966 when they were in Year 4-5 of school. The empirical results for this paper indicate this social turmoil decreased the probability for an individual who missed high school to obtain a university degree by 55%. Finally, they argue all socioeconomic groups were negatively

affected, especially children whose parents achieved lower occupational and lower educational achievement.

In a more recent study, similar to Bai's (2014), with the argument of the Cultural Revolution's effect on social capital, Gerard & Yang (2017) argue that the Cultural Revolution significantly decreased the beliefs of "China's lost generation" in the idea that "effort pays off in life outcomes" and also their trust in local government. Authors argue that this is due to the depriving or suspending of college education that they experienced. However, unlike the mainstream research on trust, this mistrust does not transmit to the next generation. Meanwhile, this "lost generation" invest more in the education of their children, suggesting they attempt to improve the fortunes of the next generation.

However, other scholars' research did not find significant adverse impacts from the Cultural Revolution to individual wellbeing with a longer perspective. Using Chinese twins data, Zhang, Liu & Yung (2007) investigate the features of economic returns to schooling between the CR cohort and non-CR cohort. Their paper states: "although a small scale of send-down movements started in the 1950s before the Cultural Revolution, the large scale send-down movement started in 1967, and was made official in December 1968". When Chairman Mao stated in a speech that "it is very necessary for the urban 'educated youth' to go to the countryside to be re-educated by the poor farmers!" alongside the slogan "go up to the mountains and down to the villages", the key Party and government organisations started to mobilize the youth to go to the countryside. Each city had a quota of transferred youth in any given year, and it adjusted the send-down policy according to the quota. Some localities required at least one child from a family to go down, while other localities required that each family keep one child in the city. The scholars' results indicate larger economic returns to schooling for the Cultural Revolution cohort. Overall, they argue that there is no evidence to support the idea that the Cultural Revolution had an adverse effect on the economic returns to schooling in China. Moreover, they believe the potentially positive aspects of these activities during the Cultural Revolution have so far been overlooked. The interpersonal skills and mental toughness that the students acquired in the field and factory work may have proved precious in their later career. Moreover, they argue "it may well be that the Cultural Revolution made individuals work harder and become more disciplined and more responsible, which offset the decline in teaching and learning quality". (Zhang, Liu & Yung, 2007).

## **4. Data and variables**

In Table 1 the construction of our data resources is shown. In this section, a detailed discussion of each database is provided. From Table 2 to Table 6 the statistical summary of the variables obtained from each database is presented.

### **China Family Panel Study (CFPS)**

CFPS is a nationally representative survey that is organized by the Institute of Social Science Survey (ISSS) at Peking University, which provides panel data every other year (2010, 2012, 2014, 2016). This database contains individual, family, and community-level information of the economic and non-economic wellbeing of the Chinese population. According to individual ID serial numbers and questions, we are able to merge four waves together and obtain the data of individuals' self-report trust level regarding different social groups, as well as their answer of risk preference and financial status. After data merging and cleaning, we have 151584 individual observations summing 4 waves in 6 years from about 15000 families in 29 provinces.

We adopt CFPS as our main database as, by the best of our knowledge, this is the only database that provides individual-level panel data of trust and risk preference as well as financial behaviour, with its sufficient nationally representative observations and consistent variables across waves.

### **Chinese General Social Survey (CGSS)**

Launched by the National Survey Research Centre (NSRC) at the Renmin University of China in 2003, the CGSS claims the earliest national representative continuous survey project. We focus on the waves in the year 2015, the most recent wave that contains questions of trust and financial status at the household level with 10927 observations across 28 provinces. With a similar question design as CFPS (e.g. self-report trust levels), the CGSS provides a great consistency check for the trust level and financial status as a database that is organised by another authoritative academic institution within China.

### **World Value Survey (WVS)**

WVS provides consistent cross-country survey investigation regarding beliefs of humans and their values. A great merit of this database is the almost 100 countries it includes and the fact it is a continuous study (5 waves every 5 years since 1995). Compared with CFPS and CGSS, WVS has fewer observations within China (1991 and 2014 had Chinese observations in each wave) and different observations in each wave thus render it difficult to capture the features

for individuals. However, it enables us to conduct cross-country comparisons regarding the self-report trust level and WVS identifies these observations at the provincial-level. Thus, as an external database, it provides a great and robust check for the consistency of surveys organized by the national organizations of China.

### **China Household Finance Survey (CHFS)**

For the consistency check and more detailed information on the financial status of Chinese households, we adopt CHFS as a source. CHFS is conducted by the China Family Financial Investigation and Research Centre, which belongs to the South-Western University of Finance and Economics (SWUFE) of China. This survey focusses on the detailed financial information of individuals and households across China. Collecting from the public data in the 2011 wave, we have 23964 individual observations across 28 provinces with specific financial data such as their access to finance, risk preference, assets composition etc.

### **The Cultural Revolution (CR) Measure**

We obtain the measurements of the revolutionary magnitude from published data from Walder & Su (2003), whose data has been adopted in other research related with to Cultural Revolution (e.g. Su, 2011; Bai, 2014). Through a years-long project of photocopy and coding information in county gazetteers, Walder & Su (2003) argue the magnitude of the Cultural Revolution on the number of deaths, or injuries, of persecutions and the length of the account for each gazetteer that records the Cultural Revolution. The gazetteers are the official compiled book by each level of local government which chronicles the historical and geographical information for each specific region.

Our measurement of the Cultural Revolution (as an abbreviation, we will use "CR" for "Cultural Revolution") is "death rate in the CR", which indicates the total number of the reported unnatural deaths in one province during the CR divided by the local population. Due to the availability of published data from Walder & Su (2003), we adopt the provincial-level data for this stage of research and focus on data of the recorded unnatural deaths in each province during the Cultural Revolution. We collect the provincial population data in 1964, which is most close to the year when the Cultural Revolution began (1966), and the national census data available. Compared with the Slave Trade Measure of Levine, Chen & Xie (2017) who use a natural logarithm of the total number of slaves taken from each country, we believe our death rate method which considers the local population at the time, expresses the density dimensions, thus revealing the magnitude of the Cultural Revolution in a proposal way.

## Provincial compilation data

We collect our provincial level controlling data from the official website of the National Bureau of Statistics of China and their published book “Compilation of Statistical data for 50 years of New China”. We obtain the provincial population data in 1964, the average GDP growth rate for each province between 1993 and 2016, along with the provincial GDP per capita in 2016 that is measured by RMB per person.

## 5. Methodology construction

In this section, we discuss the causal effect between the Cultural Revolution and modern financial development, with the perspective of household financial behaviours. We examine two potential channels in which the historical Cultural Revolution may affect modern finance: trust and risk preference, from which channel they will affect the access to finance, and investment/leverage decision for the households respectively.

Building the models upon the literature of Nunn & Wantchekon (2011), Levine, Chen & Xie (2017), and Pierce & Snyder (2017), we start by evaluating the relationship between the Cultural Revolution and trust.

$$trust_{i,p} = \alpha + \beta CR_p + X_i' \Gamma + X_p' Z + \varepsilon_{i,p} \quad (1)$$

Here the *trust* indicates the self-report trust levels regarding different social groups, from individual *i* in province *p*, with observations collected from the databases of CFPS, CGSS and WVS. The *CR* used here is an abbreviation for “Cultural Revolution Death Rate”: which indicates the magnitude of the Cultural Revolution on each province, with percentile expression. Vector  $X_i'$  denotes a set of individual-level covariates and controlling variables such as age, age-squared, gender, marital status, as well as education level control, occupation control and religion control. The  $\Gamma$  indicates the coefficients for each individual controlling variable. Vector  $X_p'$  denotes a set of provincial level covariates such as GDP per capita and average GDP growth rate. The  $Z$  indicates the coefficients for each provincial controlling variable. Residual term  $\varepsilon_{p,i}$  is generated from each individual and standard errors are clustered into provinces. We replicate this model using different measurements of trust from each database and across the three databases as discussed above. The information of individuals' identifiable characteristics varies among these three databases. Thus, we conduct the regression by adopting comparable covariates according to the literature previously discussed.

As we can find consistent questions of trust across four waves of CFPS that were revealed in each other year (2010, 2012, 2014, 2016), we merge the four waves by the individual IDs to obtain panel data. This enables us to conduct a robust check of the causal effect between the Cultural Revolution and trust at an individual level.

Table 8 reports the results of the Breusch and Pagan Lagrangian multiplier test for random effects. The strong evidence of individual-specific effects and time variance impels us to replicate the equation (1) using a random effect model as shown below:

$$trust_{i,t} = \alpha + \beta CR_p + X'_{i,p} \varphi + \varepsilon_{i,t} \quad (2)$$

Here  $i$  identifies each individual and  $t$  identifies the answer in the corresponding wave of the survey. The vector  $X'_{i,p}$  denotes all of the controlling variables for both the individual level and provincial level. The  $\varepsilon_{i,t}$  identifies the error terms into individual and allows for time variance. Here, all of the standard errors are clustered into the individual level to specify the individual-specific effects. Moreover, there we conduct the robustness check for equation (1) using the Between Effect model. This model generates an average value for answers from each individual, which keeps the individual-specific effects and does not identify time effect.

Next, we follow Levine, Chen & Xie (2017) and Pierce & Snyder (2017) to conduct reduced form regression to examine the causal effect between the Cultural Revolution and household access to finance in China.

$$HAF_{i,p} = \alpha + \beta CR_p + X'_i \Gamma + X'_p Z + \varepsilon_{i,p} \quad (3)$$

Here  $HAF_{i,p}$  is “household access to finance”, as there would be one individual answering the question on behalf of their household in the surveys. We still apply the individual controls as equation (1) where the information is available. The observations of the first four dependent variables of  $HAF$  are collected from CFPS in a consistent structure: "whether you been rejected when seeing for a loan"; "score your feeling of difficulty when raising money"; "the amount of lent-out money from your family"; and "the amount of borrowed-in money your family have from non-bank channels" Then we obtain the related question form from CHFS, "Whether your family has lent to outside family members" to check the consistency across databases.

To test the channel of risk preference, we found consistent variables in CFPS, CGSS and CHFS. All three questionnaires ask the individuals taken part to self-mark their risk preference,



from 1 for deep risk averse to 5 for deep risk taking (in CFPS it ranges from 1 to 4). Hence, we establish the following equation:

$$risk\_pre_{i,p} = \alpha + \beta CR_p + X_i' \Gamma + X_p' Z + \varepsilon_{i,p} \quad (4)$$

Here, the *Risk\_pre*<sub>*i,p*</sub> denotes the question of “risk preference” collected from three databases and we are able to identify the respondent’s ID and which province they belong to. What we should highlight here is that the CFPS only asked the risk preference in the 2014 wave, thus we are not able to conduct a panel study in this case.

$$invest/leverage_{i,p} = \alpha + \beta CR_p + X_i' \Gamma + X_p' Z + \varepsilon_{i,p} \quad (5)$$

Following the equation to evaluate the relationship between the Cultural Revolution and risk preference, we go one step forward in examining the investment decision and leverage preference. This test could be recognized as a robust check of the risk preference level that is self-reported by observations and can also be seen as the financial decision consequences that affect the risk preference level for households. Here the *invest/leverage*<sub>*i,p*</sub> denotes the investment decision and leverage preference. The controlling conditions hold the same as equation (4).

## 6. Results discussion

First, we may refer to the statistic of our key variable: the recorded unnatural death rate during the Cultural Revolution for each province. As we can see in Table 2, the average value of this variable is 0.032 percentile, with a minimum value of 0.002 percentile and maximum of 0.252. This indicates a large fluctuation of the Cultural Revolution magnitude across provinces, which corresponds with the value of the number of deaths in the Cultural Revolution, where the minimum is 10, the maximum is 52529 and the median at 7310. Then we can look at Table 7 to see the results of regressions.

Table 7 illustrates the pooling-OLS results of the CR death rate on individual's self-report trust from our panel data, CFPS. The key variable, the "CR death rate" reveals a large negative value through three different dimensions of trust level, which indicates the Cultural Revolution plays a negative role in the term of the trust. However, we may notice that the cluster-level of standard errors change the coefficient's significance of our key variable when comparing their trust regarding individual's parents, neighbours, and their general view of trust regarding the society. This is plausible as parents and neighbours are very close social groups for observing

individuals, while "trust most people" is a general term of the social trust. Counties are relatively small area compared with provinces, individuals in this area are more likely to know each other, thus the significance of trusting most of the people and closer social groups would be different compared with considering the provincial area. Hence, for bettering solving endogeneity issues for our observing individuals/households level data, we cluster the standard errors into the province in the following study in this paper.

What should we highlight here is the significance of key-coefficient will change when we considering different cluster level, but this does not apply for almost all of covariates, which are personal characteristics. This phenomenon indicates the individual-specific features like age, gender, lives in the urban or rural area plays a significant role in determining an individual's trust level regarding different social groups. This finding brings the necessity of conducting models which capture the individual-specific characteristics more properly.

Table 8 represents the results of "Breusch and Pagan Lagrangian multiplier test for random effects". This model identifies the significance of personal-specific effects for the whole sample. The results strongly reject the non-hypothesis of no individual-specific effects, which consistent with our discussion of results in table 7. Hence, with our panel data of CFPS, we examine the equation (2) with Random Effect model (RE model) and Between Effect model (BE model). RE model identifies the standard error within person-level and captures the change of error term with time. In compare, the BE model does not identify the change of error term over time, but still considering individual-specific effects. The results confirm our hypothesis. Statistically talking about the magnitude, from the column (1) in table 9 we may find, with 1 percentage higher figure of the death rate in the Cultural Revolution, the possibility of the residents report "most people are trustworthy" decrease 1.7, with an average value of 0.543 in this Probit model. We may statistically discuss that if the death rate drops from the maximum value of 0.252 % to 0.002%, it will increase the individuals' trust regarding most people for 42.5%. Similarly, the column (2) argues that such change in CR death rate may increase the population's self-report trust value in regarding their parents for 0.35 points with the mean of 9.3 out of marking range from 0 to 10. Moreover, the column (3) indicates a similar increase in the trust value regarding neighbours for 0.47 points with the mean of 6.5. The table 10 and 11 report the robustness check of the relationship between the Cultural Revolution and trust level regarding different social groups. We may argue that the finding of a negative causal effect between the Cultural Revolution and trust is consistently supported by the empirical results across different source of databases, from the individual level to household level, from

domestic database to international database. Moreover, these different databases reveal very similar magnitude of effect, and statistically significant.

As we find strong evidence to support the efficiency of equation (1), consistent with previous literature (e.g. Levine, Chen & Xie, 2017; Pierce & Snyder, 2017), we conduct the equation (3) to test the causal effect between the CR and access to finance, where results reported in table 12. From the column (1) to column (5), we interpret that for the regions experienced the higher magnitude of the Cultural Revolution, the households would find harder to borrow money from the informal channel and also they are less willing to provide finance to others. This result is consistent in both the database of CFPS and CHFS where household financial information available.

Table 13 reports the results of our test of the second mechanism: the Cultural Revolution - risk preference - leverage/investment decision. First, we may argue that consistent with the literature of individual's past experience and their risk preference (e.g. Bernile, Bhagwat & Rau, 2017; D'Acunto, Prokopczuk & Weber, 2018), we find a positive relationship between the magnitude of the Cultural Revolution and local individuals' risk preference. This result is robust across different databases, see the column (1), (3) and (5), and refers to our equation (4). Finally, the column (2), (4) and (6) report the result of equation (5). From the results we may argue that, consistent with literature and the economic principle, those households or individuals who living in the area that experienced higher degree of social turmoil of the Cultural Revolution, have higher intention of risk-seeking, and this is reflected in their willingness of using leverage as well as investment in the stock market.

## **7. Conclusions and further research proposal**

From the results discussed in section 5, we may first argue a robust relationship between the historical Cultural Revolution and population's trust level in modern China, in both general trust term regarding the society and specific trust regarding different social groups. Second, this mistrust generated by the Cultural Revolution lead a difficulty for households to raise money, and they are less willing to provide finance to others. The results support the first channel we propose. For the second mechanism, we find consistent results that indicate the Cultural Revolution as a social turmoil along with massive persecution for ten years, increase the population's risk preference. This intention regarding the risk is reflected by the household's choice of leverage and investment.

However, here we propose our further research plan in regarding the current results. First, we may introduce instrument variable to provide further robustness check for the channels we examined. Second, based on the provincial level data of the magnitude of the Cultural Revolution, we would conduct further research on the city or county level when proper data available. Third, although we confirm the robustness for both channels, we can not identify which channel plays a more efficient role in regarding the modern financial development at this stage. We would keep investigating these two channels and discuss their impact on modern finance in the following research.

**Table 1: Data resources construction**

<b>Key variables</b>	<b>Source of data</b>	<b>Details of data</b>
The magnitude of the Culture Revolution	County/Provincial Gazetteers	County level, 2815 observations, recording how many people were persecuted, physically injured, exiled, killed in their county/city.
	Walder & Su (2003)	Provincial level, 25 observations.
Level of trust	Chinese Family Panel Study (CFPS)	Panel data, 151584 observations, individual/household level.
	Chinese General Social Survey (CGSS)	Cross-section data, 10927 observations, household level.
	World Value Survey (WVS)	Two waves cross-section data, 1971 and 1799 observations respectively, individual level.
Risk preference and Financial decisions	China Household Finance Survey (CHFS)	Cross-section data, 23964 observations, household level.
	Chinese General Social Survey (CGSS)	Cross-section data, 10927 observations, household level.
	Chinese Family Panel Study (CFPS)	Panel data, 151584 observations, individual/household level.
Provincial controls	Average GDP growth rate (1993-2016)	The website of National Bureau of Statistics of China. <a href="http://data.stats.gov.cn">http://data.stats.gov.cn</a>
	GDP per capita 2016 (RMB/person)	“Compilation of Statistical data for 50 years of New China”
	Population in 1964	

**Table 2: Data Summary of Provincial variables**

<b>Variables</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>Median</b>	<b>Min</b>	<b>Max</b>
Death in CR	27	7310	11155	4130	10	52529
Death in CR/population 1964(per/10k)	25	0.032	0.039	0.025	0.002	0.252
Average GDP growth rate (1993-2016)	29	11.20	0.970	11.06	9.570	13.30
GDP per capita 2016(RMB/person)	29	57797	26103	46942	27588	118128

**Table 3: Data Summary of Chinese Family Panel Study (CFPS)**

<b>Variable</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>P25</b>	<b>Median</b>	<b>P75</b>	<b>Min</b>	<b>Max</b>
birth year	151584	1967	16.63	1955	1968	1982	1911	1997
age	151584	45.49	16.59	31	45	58	19	99
age square	151584	2345	1620	961	2025	3364	361	9801
gender	140763	0.495	0.500	0	0	1	0	1
urban	140083	0.427	0.495	0	0	1	0	1
marriage	142848	0.762	0.426	1	1	1	0	1
education	148265	2.478	1.447	1	2	3	0	9
Most people are trustworthy	92356	0.543	0.498	0	1	1	0	1
How much do you trust parents	92172	9.298	1.504	9	10	10	0	10
How much do you trust neighbours	92418	6.532	2.205	5	7	8	0	10
Risk preference (self-report, 1 low - 4 high)	10639	1.931	0.947	1	2	3	1	4
Willing to take more debts	10697	1.770	0.782	1	2	2	1	5

Feel easy to raise money	10693	2.864	1.237	2	3	4	1	5
Been jected when seeking for loan	53314	0.328	0.470	0	0	1	0	1
The amount of lent-out money (log,RMB)	17235	9.250	2.215	8.517	9.393	10.31	-2.303	16.12
The total value of informal-loan (borrowed in money) your family have from relatives/friends (log,RMB)	10657	9.797	2.079	9.210	9.999	10.82	-2.303	14.91

**Table 4: Data Summary of Chinese General Social Survey (CGSS)**

<b>Variables</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>Min</b>	<b>P25</b>	<b>Median</b>	<b>P75</b>	<b>Max</b>
Most people are trustworthy	10927	3.471	0.959	1	3	4	4	5
How much do you trust neighbours	10859	3.909	0.890	1	3	4	5	5
How much do you trust friends	10658	2.924	0.941	1	2	3	4	5
How much do you trust strangers	10754	1.950	0.984	1	1	2	3	5
How much do you trust colleagues	9406	3.704	0.878	1	3	4	4	5
How much do you trust previous classmates	9587	3.705	0.863	1	3	4	4	5
How much do you trust fellow townmen	10320	3.156	0.943	1	3	3	4	5
Do you or your couple have share or fund	1712	0.068	0.251	0	0	0	0	1
Risk preference: Will you invest risky but high profit project	1677	2.420	1.056	1	2	2	3	5
age	10968	50.40	16.90	38	50	63	18	95
square	10968	2825	1742	1444	2500	3969	324	9025
gender	10968	1.064	0.998	0	2	2	0	2
urban	10968	0.435	0.496	0	0	1	0	1

race	10968	0.921	0.270	1	1	1	0	1
religion	10822	1.307	1.087	1	1	1	0	10
education	10949	4.880	3.124	3	4	6	1	14
political	10921	1.364	0.926	1	1	1	1	4
occupation	4030	3.458	1.735	2	3	5	1	8

**Table 5: Data Summary of China Household Finance Survey (CHFS)**

<b>Variable</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>P25</b>	<b>Median</b>	<b>P75</b>	<b>Min</b>	<b>Max</b>
age	23964	44.75	16.68	31	43	57	18	95
age square	23964	2281	1621	961	1849	3249	324	9025
gender	23964	0.499	0.500	0	0	1	0	1
urban	23831	0.571	0.495	0	1	1	0	1
education	23775	3.421	1.730	2	3	4	1	9
occupation	15594	2.009	1.157	1	2	3	1	6
political	15301	3.614	0.862	4	4	4	1	4
Risk preference: will you invest high risk- high profit project	23541	2.159	1.235	1	2	3	1	5
Whether your family has credit card	22095	0.059	0.236	0	0	0	0	1
Whether your family has lending to outside family members	23948	0.117	0.321	0	0	0	0	1

**Table 6: Data Summary of World Value Survey (WVS)**

<b>Variable</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>P25</b>	<b>Median</b>	<b>P75</b>	<b>Min</b>	<b>Max</b>
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<b>Wave 5</b>								
Most people are trustworthy	1849	0.524	0.500	0	1	1	0	1
How much do you trust family	1971	3.867	0.382	4	4	4	1	4
How much do you trust neighbours	1947	3.119	0.649	3	3	4	1	4
age in 2007	1991	44.72	13.31	35	44	55	18	70
age square	1991	2177	1198	1225	1936	3025	324	4900
gender	1991	0.456	0.498	0	0	1	0	1
education level	1991	2.951	1.382	1	3	4	1	6
occupation catalogue	1961	9.283	3.212	8	11	11	1	14
income level	1577	3.959	1.863	3	4	5	1	10
size of town	1991	5.240	0.887	5	5	6	3	7
<b>Wave 6</b>								
How much do you trust friends	1799	2.068	0.644	2	2	2	1	4
How much do you trust press	1688	2.807	0.695	2	3	3	1	4
How much do you trust police	1795	2.882	0.754	2	3	3	1	4
How much do you trust court	1750	3.004	0.730	3	3	3	1	4
How much do you trust bank	1708	3.066	0.625	3	3	3	1	4
age in 2012	2014	43.38	15.02	31	43	56	18	75
age square	2014	2107	1358	961	1849	3136	324	5625
gender	2014	0.490	0.500	0	0	1	0	1
education level	2014	5.410	2.375	3	5	7	1	9

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occupation catalogue	2014	43.67	14.98	31	43	56	18	75
income level	1797	4.402	1.854	3	4	6	1	10
size of town	2014	7.787	0.410	8	8	8	7	8

**Table 7: The Cultural Revolution and trust, data from the China Family Panel Study (CFPS)**

This table reports the causal effect between the CR and trust level based on the database of (CFPS). The column (1) represents the results of the OLS model with a dummy independent variable "whether most people are trustworthy", which equals to 1 if the observation answers Yes and 0 for No. The column (2) and (3) report the OLS regression results with independent variables of self-report trust levels regarding different social groups. All of the observations score from 0 for "not trust at all" to 10 for "completely trust" and all of the standard errors are robust and clustered into counties. The column (4) to (6) replicate the regressions from column (1) to (3), with difference of robust standard errors clustered into provincial level. Our key variable is *CR death rate*, which is the recorded unnatural death during the Cultural Revolution divided by the temporal population and represented by a percentage. Individual characteristic controls, *age* and *age-squared* are listed in the following rows. *Gender*, *Urban* and *Marriage* are dummy variables that equal to 1 for male, 0 for female; 1 for living in urban, 0 for lives in the countryside; 1 for marriage, 0 for otherwise. *GDP per capita* and *GDP growth rate* are provincial characteristics controls, represents the GDP per capita (CNY/person) in 2016 and average GDP growth rate (percentage) for each province between 1993 and 2016. *Years* and *Education* represents the year's fixed effect and education level fixed effect respectively.

	S.E clustered into counties			S.E clustered into provinces		
	(1) Most people are trustworthy (0-1) Mean: 0.543	(2) How much do you trust parents (0-10) Mean: 9.298	(3) How much do you trust neighbours (0- 10) Mean: 6.532	(4) Most people are trustworthy (0-1) Mean: 0.543	(5) How much do you trust parents (0-10) Mean: 9.298	(6) How much do you trust neighbours (0- 10) Mean: 6.532
CR death rate	-1.733 [0.329]	-1.454*** [0.000]	-1.983*** [0.002]	-1.733* [0.098]	-1.454** [0.013]	-1.983** [0.031]
Age	-0.097*** [0.000]	-0.007** [0.018]	0.004 [0.361]	-0.097*** [0.000]	-0.007** [0.045]	0.004 [0.519]
Age <sup>2</sup>	0.001*** [0.000]	-0.000 [0.762]	0.000 [0.363]	0.001*** [0.000]	-0.000 [0.798]	0.000 [0.504]
Gender	0.256*** [0.000]	0.013 [0.290]	0.208*** [0.000]	0.256*** [0.000]	0.013 [0.344]	0.208*** [0.000]
Urban	0.132* [0.061]	0.091*** [0.000]	-0.161*** [0.000]	0.132*** [0.007]	0.091*** [0.004]	-0.161*** [0.007]
Marriage	0.040 [0.488]	0.004 [0.832]	-0.029 [0.321]	0.040 [0.582]	0.004 [0.801]	-0.029 [0.332]

<b>Controls</b>							
GDP per capita	Yes	Yes	Yes	Yes	Yes	Yes	Yes
GDP growth rate	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Fixed effects</b>							
Years	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Education	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	86168	85968	86211	86168	85968	86211	86211
Adjusted $R^2$	0.020 #	0.042	0.012	0.020 #	0.042	0.012	0.012

p-values in brackets, \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ , #Pseudo  $R^2$

**Table 8: Breusch and Pagan Lagrangian multiplier test for random effects**

This table reports the robustness check results of random effect in the regressions of table 7. The purpose of this test is to identify the significance of individual-specific effects within observations, with hypothesis of no individual-specific effects.

	chibar2	Prob > chibar2
$\text{trustmost}[\text{pid},t] = Xb + u[\text{pid}] + e[\text{pid},t]$	3254.02	0.0000
$\text{trustparents}[\text{pid},t] = Xb + u[\text{pid}] + e[\text{pid},t]$	2865.27	0.0000
$\text{trustneighbour}[\text{pid},t] = Xb + u[\text{pid}] + e[\text{pid},t]$	6262.43	0.0000

**Table 9: Robustness check of CR and trust using CFPS, Random Effect and Between Effect**

We replicate the regressions in table 7, with the results of the Random Effect model reported in column (1)-(3) and Between Effect model in column (4)-(6). All of the controlling variables hold the same as table 7 and use the same data source from the China Family Panel Study (CFPS).

	Random Effect			Between Effect		
	(1) Most people are trustworthy (0-1) Mean: 0.543	(2) How much do you trust parents (0-10) Mean: 9.298	(3) How much do you trust neighbours (0-10) Mean: 6.532	(4) Most people are trustworthy (0-1) Mean: 0.543	(5) How much do you trust parents (0-10) Mean: 9.298	(6) How much do you trust neighbours (0-10) Mean: 6.532
CR death rate	-1.711*** [0.001]	-1.416*** [0.000]	-1.871*** [0.000]	-1.766*** [0.001]	-1.326*** [0.000]	-1.785*** [0.000]
Age	-0.101*** [0.000]	-0.008*** [0.002]	-0.000 [0.982]	-0.100*** [0.000]	-0.006*** [0.007]	0.003 [0.437]
Age <sup>2</sup>	0.001*** [0.000]	-0.000 [0.876]	0.000** [0.042]	0.001*** [0.000]	-0.000 [0.486]	0.000* [0.083]
Gender	0.259*** [0.000]	0.018 [0.116]	0.219*** [0.000]	0.218*** [0.000]	0.021* [0.084]	0.217*** [0.000]
Urban	0.161*** [0.000]	0.093*** [0.000]	-0.127*** [0.000]	0.115** [0.020]	0.099*** [0.000]	-0.228*** [0.000]
Marriage	0.021 [0.684]	0.002 [0.912]	-0.025 [0.305]	-0.005 [0.924]	0.006 [0.699]	-0.010 [0.708]
<b>Controls</b>						
GDP per capita	Yes	Yes	Yes	Yes	Yes	Yes
GDP growth rate	Yes	Yes	Yes	Yes	Yes	Yes
<b>Fixed effects</b>						
Years	Yes	Yes	Yes	Yes	Yes	Yes
Education	Yes	Yes	Yes	Yes	Yes	Yes
Observations	86168	85968	86211	86168	85968	86211
Adjusted R <sup>2</sup>	0.020 #	0.042	0.012	0.034	0.062	0.018
Chi <sup>2</sup>	5.8e+04	1.2e+04	2457.024			
F				73.156	134.782	38.880

p-values in brackets, \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ , #Pseudo R<sup>2</sup>

**Table 10: The Cultural Revolution and trust, data from Chinese General Social Survey (CGSS)**

This table reports the causal effect between the CR and trust level based on the database of CGSS. The column (1) - (8) report the OLS regression results with independent variables of self-report trust levels regarding different social groups. The questions are "How much do you trust -" and all score from 1 for "not trust at all" to 5 for "completely trust". Our key variable is *CR death rate*, which is the recorded unnatural death during the Cultural Revolution divided by the temporal population and represented by a percentage. Individual characteristic controls, *age* and *age-squared* are listed in the following rows. *Gender* and *Urban* are dummy variables that equal to 1 for male, 0 for female and 1 for lives in urban, 0 for lives in the countryside. Provincial characteristics controls and fixed effects are controlled and reported in the lower section of the table.

	How much do you trust (score 1-5):						
	(1) Most people Mean: 3.471	(2) Neighbours Mean: 3.909	(3) Friends Mean: 2.924	(4) Strangers Mean: 1.950	(5) Colleagues Mean: 3.704	(6) Previous classmates Mean: 3.705	(7) Fellow townsmen Mean: 3.156
CR death rate	-0.997*** [0.000]	-1.451*** [0.008]	-0.877*** [0.003]	-1.067* [0.054]	-1.246*** [0.001]	-1.212*** [0.000]	-0.953*** [0.001]
Age	0.009 [0.257]	0.016** [0.018]	-0.006 [0.350]	-0.003 [0.706]	0.006 [0.385]	-0.009 [0.219]	-0.000 [0.989]
Age <sup>2</sup>	0.000 [0.896]	-0.000* [0.074]	0.000 [0.163]	0.000 [0.727]	-0.000 [0.470]	0.000 [0.200]	0.000 [0.596]
Gender	-0.009 [0.463]	-0.014 [0.402]	-0.010 [0.566]	-0.018 [0.290]	-0.028** [0.023]	-0.033** [0.017]	-0.023 [0.177]
Urban	-0.106*** [0.008]	-0.164*** [0.000]	-0.064* [0.086]	0.023 [0.592]	0.001 [0.974]	-0.054 [0.128]	-0.137*** [0.001]
<b>Controls</b>							
GDP per capita	Yes	Yes	Yes	Yes	Yes	Yes	Yes
GDP growth rate	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Fixed effects</b>							
Religion	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Race	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Education	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Occupation	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Political status	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3738	3708	3689	3669	3579	3548	3589
Adjusted R <sup>2</sup>	0.015	0.021	0.018	0.031	0.028	0.041	0.021

p-values in brackets, \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ , #Pseudo R<sup>2</sup>

**Table 11: The Cultural Revolution and trust, data from the World Value Survey (WVS)**

This table reports the causal effect between the CR and trust level based on the database of WVS, the wave 5 launched in the year 2007 and wave 6 in the year 2012. The column (1) represents the results of the Probit model with a dummy independent variable "whether most people are trustworthy", which equals to 1 if the observation answers Yes and 0 for No. The column (2) - (8) report the OLS regression results with independent variables of self-report trust levels regarding different social groups. The questions are "How much do you trust -?" and all score from 1 for "not trust at all" to 4 for "completely trust".

	Wave 5				Wave 6			
	(1) Most people Mean: 0.524	(2) Family Mean: 3.867	(3) Neighbour Mean: 3.119	(4) Friends Mean: 2.068	(5) Press Mean: 2.807	(6) Police Mean: 2.882	(7) Court Mean: 3.004	(8) Bank Mean: 3.066
CR death rate	-0.179 [0.680]	-0.756*** [0.000]	-1.227*** [0.000]	-0.451* [0.063]	-0.923*** [0.002]	-1.673*** [0.000]	-0.924*** [0.006]	-0.756** [0.022]
Age	-0.022 [0.223]	-0.009** [0.046]	0.015 [0.155]	-0.021 [0.813]	-0.026 [0.857]	0.162 [0.279]	0.073 [0.640]	-0.041 [0.764]
Age <sup>2</sup>	0.000 [0.122]	0.000* [0.083]	-0.000 [0.247]	0.007 [0.666]	-0.005 [0.863]	-0.052* [0.074]	-0.027 [0.420]	0.003 [0.911]
Gender	0.044 [0.465]	0.009 [0.710]	0.042 [0.340]	-0.042 [0.317]	-0.008 [0.856]	-0.001 [0.981]	0.012 [0.813]	-0.032 [0.472]
<b>Fixed effects</b>								
Education	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Occupation	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Town size	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Income Level	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1420	1495	1479	1680	1581	1680	1640	1603
Adjusted R <sup>2</sup>	0.029#	0.022	0.027	0.022	0.054	0.064	0.027	0.032

p-values in brackets, \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ , #Pseudo R<sup>2</sup>

**Table12: The Cultural Revolution and household access to finance**

This table reports the casual effect between CR and household access to finance. The data for column (1) - (4) come from CFPS and column (5) from CHFS. The column (1) represents a dummy question "Whether you have the experience that been rejected when you seeking for a loan", 1 for Yes and 0 for No. The question in column (2) ask subjects that "How difficult do you feel when you try to raise money" score from 1 for feeling very difficult to 5 for feeling very easy. The dependent variable for column (3) and (4) are log values for the amount of lent-out money and log values for the amount of borrowed-in money answered by each household. The column (5) is a dummy regression with dependent variable "Whether your family has lent to outside family members", with 1 for Yes and 0 for No.

	(1)	(2)	(3)	(4)	(5)
	Rejected when seeking for loan Mean: 0.328	Feel easy to raise money Mean: 2.864	The amount of lent-out money (log) Mean: 9.250	The amount of borrowed-in money (log) Mean: 9.797	Has lending to outside family members Mean: 0.117
CR death rate	0.517*** [0.002]	-2.142* [0.092]	-3.132*** [0.002]	-1.667** [0.010]	-1.015** [0.038]
Age	0.002* [0.057]	-0.014*** [0.000]	0.014 [0.191]	-0.004 [0.552]	0.003 [0.810]
Age <sup>2</sup>	-0.000*** [0.001]	0.000*** [0.000]	-0.000 [0.318]	0.000 [0.675]	-0.000* [0.085]
Gender	0.008*** [0.004]	-0.019 [0.321]	-0.093*** [0.000]	-0.042 [0.164]	0.001 [0.972]
Urban	0.028** [0.024]	0.040 [0.651]	0.271*** [0.001]	0.135** [0.050]	0.143** [0.033]
<b>Controls</b>					
Marriage	Yes	Yes	Yes	Yes	
GDP per capita 2016	Yes	Yes	Yes	Yes	Yes
GDP growth rate	Yes	Yes	Yes	Yes	Yes
<b>Fixed effects</b>					
Years	Yes	Yes	Yes	Yes	
Education	Yes	Yes	Yes	Yes	Yes
Occupation					Yes
Political status					Yes
Observations	44956	8238	15084	8844	9918
Adjusted R <sup>2</sup>	0.017#	0.083	0.100	0.018	0.058#

p-values in brackets, \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ , #Pseudo R<sup>2</sup>

**Table13: The Cultural Revolution and self-report risk preference**

This table reports the casual effect between CR and risk preference. The column (1) and (2) report the results based on data from CFPS. The first column represents the question of self-report risk preference, scores from 1 for low intention to 4 for high intention. The column (2) represents the question of "Whether you willing to take more debts under your current financial status", scores from 1 for not willing to 5 for very willing. The column (3) and (4) report the results based on data from CGSS. The question in column (3) is "Risk preference: will you invest high risk- high profit project", with a score from 1 for very unwilling to 5 for very willing. Column (4) represents a dummy question "Whether your family have an investment in stock or fund", with 1 for Yes and 0 for No. The column (5) and (6) report the results based on data from CHFS. The question in column (5) asks exactly the same question as column (1) from CFPS, with the difference of score from 1 to 5. The column (6) represents a dummy regression with dependent variable "Whether your family has a credit card", 1 for Yes and 0 for No. As each database contains different controlling information, we try our best to sort comparable control variables together and list them below.

	CFPS		CGSS		CHFS	
	(1) Risk preference Mean: 1.931	(2) Willing more debts Mean: 1.770	(3) Risk preference Mean: 2.420	(4) Have stock or fund Mean: 0.068	(5) Risk preference Mean: 2.159	(6) Have credit card Mean: 0.059
CR death rate	2.328*** [0.001]	1.304** [0.016]	1.482** [0.048]	0.420** [0.014]	2.361*** [0.001]	1.938*** [0.000]
Gender	0.003 [0.880]	0.019* [0.096]	-0.070 [0.118]	-0.021 [0.102]	-0.006 [0.747]	-0.038 [0.110]
Urban	-0.004 [0.956]	0.007 [0.935]	-0.081 [0.400]	0.052* [0.095]	-0.041 [0.477]	-0.212*** [0.000]
<b>Controls</b>						
Marriage	Yes	Yes				
Age & Age <sup>2</sup>	Yes	Yes	Yes	Yes	Yes	Yes
GDP per capita 2016	Yes	Yes	Yes	Yes	Yes	Yes
GDP growth rate	Yes	Yes	Yes	Yes	Yes	Yes
<b>Fixed effects</b>						
Years	Yes	Yes				
Education	Yes	Yes	Yes	Yes	Yes	Yes
Occupation			Yes	Yes	Yes	Yes
Political status			Yes	Yes		
Religion			Yes	Yes		
Race			Yes	Yes		
Observations	8203	8244	602	604	14434	13508
Adjusted R <sup>2</sup>	0.075	0.028#	0.046	0.152#	0.055	0.126#

p-values in brackets, \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ , #Pseudo R<sup>2</sup>



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