Historical Traumas and the Roots of Political Distrust: Political Inference from the Great Chinese Famine

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Abstract

What shapes a citizen's trust and attitudes towards the government, and what makes them persist over time? We study the causal effect of the Great Chinese Famine (1959-1962) on the level of political trust and attitudes among its survivors. Using a novel nationally representative survey, we employ a difference-in-differences framework to compare citizens who experienced the Famine versus those who did not, across regions with differential levels of drought during the Famine. Famine survivors inferred the government's liability from personal hunger experiences, and they were more likely to blame the government for their starvation in regions with usual rainfall during the Famine. As a result, these citizens trusted the local government significantly less, and held less favorable attitudes toward the government's performances on key issues in contemporary China. These effects on political trust and attitudes persist even half a century after the Famine, and we provide suggestive evidence on the mechanisms that foster such persistence.

Keywords: Trust, Political Attitudes, Beliefs, China, Authoritarian Regime, Persistence
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Which is more important for an orderly state: food, weapons, or a government that one can trust?

By three methods we may learn wisdom: First, by reflection, which is noblest; second, by imitation, which is easiest; and third, by experience, which is the bitterest.

Confucius, 551 - 480 BC

1 Introduction

Citizens make important inferences on the quality and performance of the government, especially during critical junctures in citizen-government interactions. These inferences (re)shape citizens' attitudes towards the government. As these attitudes stabilize and endure through time, they become political beliefs and ideology. While political beliefs and ideology are the foundation of political support and regime legitimacy, we have little evidence about how they are formed and how they persist over time.

In this paper, we use the context of the Great Chinese Famine (1958-1961, "the Famine" henceforward) to study both the formation process and persistence mechanisms of citizens' political beliefs and ideology – in particular, trust towards the government. The Famine was arguably one of the most traumatic peacetime tragedies of the 20th century, attributed with approximately 30 million deaths. While scholars are still debating the precise causes of the Famine, few disagrees that government policy failures were directly responsible for the Famine. This made the Famine an important opportunity for citizens to update their beliefs, trust and attitudes towards the government. We use evidence from a nationally representative survey to investigate how did citizens conceive different trust and attitudes toward the Chinese government depending on their distinctive experiences during the Famine, and how did the initial impact of the Famine persist for half a century.

At its core, political trust manifests itself in a citizen's belief that the government will not deliberately do them harm (e.g. Newton (2007)). Accordingly, political distrust would arise if citizens realized that the government was highly responsible for their sufferings during the Famine. Such distrust could lead to dissatisfaction with the current government's performance. In addition, it may result in lower tolerance of the government's incompetence in subsequent periods, because citizens would consider incompetence as warnings of imminent sufferings that the government has no capacity and no interest in preventing. In fact, scholars conjecture that personal experiences during the Famine persistently shaped Famine survivors' political trust and attitudes. Thaxton (2008) illustrates the significant role played by the Famine experience: "Rural China's survivors of

the [Great Chinese] Famine hold obstinate memories of pain and loss inflicted on them by agents of the Communist Party and that they use these memories to question the legitimacy of the post-Mao political order."

Following this logic, we apply a difference-in-differences framework to examine the long-term impact of personal experiences during the Famine on survivors' political trust and attitudes. We compare individuals who have experienced sustained hunger during the Famine versus those who haven't, across regions with various degrees of drought during the Famine period. While regional drought level did not directly impact the actual Famine severity (due to the strict enforcement of crop procurement and food reallocation policies), it constituted a critical part of the context in which citizens experienced and interpreted the Famine. In essence, we exploit the variation in both the exposure to the Famine, and the context of such exposure due to weather shocks: personal experience of hunger (*exposure*) combined with regional drought severity (*context*) led to survivors' divergent interpretations of the Famine (*i.e.* political inferences).

The difference-in-differences strategy enables us to plausibly identify the causal effect of historical experiences on political trust and attitudes (we discuss our identification strategy and the threats to identification in greater details in Section 4). More importantly, the interaction between individual's exposure to the Famine and the context of such exposure informs us about the process of citizen's political inference. In particular, it allows us to examine the manner in which citizens draw non-naive conclusions about the trustworthiness about their government from their personal experiences, while recognizing that parts of the experiences are due to exogenous factors beyond the government's control.

We find that upon having experienced hunger, citizens from regions where they witnessed lower levels of drought during the Famine became: *(i)* less trusting of contemporary local government officials; and *(ii)* less satisfied with a range of socioeconomic issues in contemporary China. These adverse effects on political trust and attitudes were less prominent among those who experienced hunger in regions with higher levels of drought during the Famine, since they were more likely to attribute the Famine to natural disaster rather than systematic government failures.[1] However, the varying degrees to which citizens blamed the Famine on nature vs. government did not eliminate the overall adverse impact of hunger experiences themselves: personal hunger experiences dampened political trust and attitudes even if the survivors tended to ascribe their sufferings to a natural disaster. Moreover, we show that access to information plays a key role in this process – the results are almost entirely driven by individuals who lack access to information and/or display no desire to consume information. In addition, we demonstrate that these results are unlikely to be driven by: *(i)* drought's impact on the Famine severity and the resulting selection biases; *(ii)* distinct selection mechanisms of the Famine exposure based on drought level;

[1] This effect could be driven by a combination of informational and emotional mechanisms: citizens in low drought regions processed additional information; at the same time they may also come to realization that the government deliberately lied about the true causes of the Famine.

(iii) systematic selection based on surviving the Famine; *(iv)* the Famine's impact on health, labor market outcomes and educational attainments; *(v)* persistent differences in the local government.

Perhaps more strikingly, we find that the Famine's impact is highly persistent: the political trust and attitudes were measured in 2012, more than 50 years after the actual Famine. Suggestive evidence points to several potential mechanisms of such persistence. First, the Famine experience served as a catalyst that drew together people with similar political trust and attitudes. Such assortative mating formed homogeneous households that reinforced each member's own political trust and attitudes. Second, the Famine experience and the resulting political distrust led survivors to avoid marrying spouses who were employed by the state sector, hence foregoing important opportunities to update their beliefs on government's trustworthiness after the Famine. Third, political trust and attitudes were important traits that parents transmitted to their children, which indirectly incentivized parents to preserve their own political trust and attitudes. Last but not least, due to China's authoritarian regime, citizens' political distrust could not be reset by democratic political transitions. This institutional context fostered the perpetuation of the initial distrust generated during the Famine.[2]

These findings contribute to a growing empirical literature on the experience-based formation of beliefs, attitudes and preferences. Nunn and Wantchekon (2011) identifies a persistent impact of the African slave trade on social trust; Alesina and Fuchs-Schündeln (2007) demonstrates that preference for redistribution was shaped by the political regime one grew up in; Giuliano and Spilimbergo (2014) identifies that the experiences of economic recession during formative years (16-25 years old) left individuals more favorable towards state redistribution; Di Tella, Galiant and Schargrodsky (2007) shows that property rights allocation outcomes influenced a wide set of market-related beliefs; Malmendier and Nagel (2013) uses rich belief data in finance to show that individuals form inflation expectations based on personal experiences in the past. Nunn (2012) provides a fascinating survey on how cultural and political beliefs are shaped by history.

Using the unique context of the Great Chinese Famine, we demonstrate that a massive shock in citizens' information about the government from their traumatic experiences can fundamentally change citizens' political trust and attitudes. Specifically, we exploit both individual variation in exposure to the Famine *and* variation in what might be seen as an "exogenous" (from citizen's perspective) component of the Famine outcome to show that citizens are able to make non-naive inference on the trustworthiness of the government. In addition, the Famine context allows us to observe persistence within the Famine victims, where the initial impact endures over time and forms stable "political ideology" that transcends the government turnovers. Finally, we contribute to the literature by suggesting potential mechanisms of such persistence in political trust and attitudes.

[2]However, the Chinese Communist Party at the time of the survey (2012) was radically different from the one during the Famine period. The Party itself went through considerable internal transformations and led the unprecedented economic growth since 1978. In this regards, political distrust and attitudes arose during the Famine were so persistent that they were not washed away by China's economic reform after the Mao era.

Our findings on the formation of political trust also contributes to the large literature on trust. Economists have recognized trust as a critical component of social capital, directly affecting the economic outcomes at the micro level (Arrow (1972)), as well as institutional performances at the macro level (Putnam, Leonardi and Nanetti (1994)). Political trust, in particular, is the foundation of political support and regime legitimacy, and has widely been considered as a key factor that governs political interactions and activities (among others, see Easton (1965), Muller, Jukam and Seligson (1982), Nye, Zelikow and King (1997), and Warren (1999)). Recently, a small economic literature turns to the subject of political trust and its consequences on public policy implementation. Sapienza and Zingales (2013) show that an average US citizen would not support gasoline tax-and-rebate scheme simply because he does not trust the government to actually rebate the money. Kuziemko et al. (2013) show that political trust plays a critical role in shaping Americans' support for redistribution – mistrust of the government limits the public's enthusiasm for policies they would otherwise appear to support. We add to this literature by providing evidence on the source of political trust, how it is formed, and how it persists over time.

Our finding that personal experiences during the Famine persistently affected political trust and attitudes also contributes to the literature in both behavioral economics and psychology on the impact of traumatic events. Much of the existing literature focuses on the domain of risk preference, time preference, and investment decisions. For example, Malmendier and Nagel (2011) on macroeconomic turmoils; Callen et al. (2014) and Voors et al. (2012) on violence conflicts; Lerner et al. (2003) on terrorist attacks; Callen (2011) and Cameron and Shah (2013) on natural disasters. By focusing on the Great Chinese Famine, we extend this literature by investigating how traumatic events impact political attitudes.

Furthermore, our findings add to the recent empirical literature on retrospective voting. This literature primarily focuses on how citizens evaluate and act on their perceptions of government performance. On one hand, Healy and Malhotra (2010) shows that when citizens evaluated the government's performance during a natural disaster, they were sophisticated enough to distinguish aspects that were beyond the government's control (e.g. tornado-caused death) and those that were directly commanded by the government (e.g. disaster relief policies). Our finding confirms this general pattern, since Famine survivors were deciding whether to attribute the Famine to natural disaster or government failure. On the other hand, Healy and Malhotra (2009) and Huber, Hill and Lenz (2012) use field and experimental evidence to show that citizens exhibited systematic biases. They tended to overweight more "noticeable" government actions and more recent performances during elections. Our result showing the Famine's persistent adverse effect on political trust and attitudes provides contrasting evidence in this regard: citizens could be salient towards major events that occurred in the distant past, and recent positive signals of the government may not be sufficient to substantially alter perceptions formed in the past.

The rest of the paper is organized as follows. Section 2 briefly describes the historical background and important features of the Great Chinese Famine. Section 3 describes various data

sources used in this study, where we also introduce our measurement of the Famine experience and outcome variables. Section 4 introduces our empirical model, discussing the identification assumptions and potential threats to identification. Section 5 presents main results, including a discussion of the scale of the Famine's impact, as well as the heterogeneity of the effects. Section 6 provides suggestive evidence on the potential mechanisms that led to the persistence of identified Famine effects. Section 7 presents evidence against alternative hypotheses and a variety of robustness exercises that support causal interpretation of our findings. Finally, Section 8 concludes.

2 The Great Chinese Famine

2.1 "The Worst Famine in Human History"

The Great Chinese Famine occurred from 1958 to 1961 and is widely considered as "the worst famine in human history."[3] Although historians and demographic scholars have yet to reach a definitive conclusion on the actual number of deaths, few doubt the Famine's unprecedented intensity, as measured by excessive deaths and the plummet in fertility.[4] Approximately 30 million people (5% of China's total population in 1957) perished unnaturally.[5] Fertility (including both unborn babies and infant mortality) dropped by an estimated size of another 30 million.[6] In addition, the short duration amplified the severity of the Famine and the traumatic experiences among the survivors. Despite its immense scale, the Famine took place within an incredibly short period of time – the majority of the deaths were concentrated in 1959 and 1960.

2.2 Mao's Great Leap Forward

It has been widely established among scholars that the Great Chinese Famine was a direct consequence of Mao's Great Leap Forward, an economic and social campaign led by the Communist Party of China from 1958 to 1961 (for example, Kung and Chen (2011) and Meng, Qian and Yared (2013).[7] The Great Leap Forward was initiated by Mao Zedong, aiming to rapidly transform the country from an agrarian economy into a communist society through swift industrialization and

[3]Historians officially define the Great Famine to be three years, 1959-1961, when mortality rates were the highest. Famine became widespread when local storage of the 1959 harvest ran out during the early part of 1960 (Becker (1996); Thaxton (2008)). For the purpose of this study, we include 1958 as an early starting year of the Famine, since hunger experience was prevalent as early as 1958.

[4]Typically, demographers define excessive deaths as the difference between actual death rates and what would have occurred based on the linear trend calculated using intervals both prior and after the Famine period.

[5]This figure is based on the average estimates of Ashton et al. (1984), Banister (1984), Cao (2005), Coale (1981), Jin (1993), and Peng (1987), among others. More recently, Dikötter (2010) uses classified archival documents to reach the estimation that there were at least 45 million premature deaths during the Famine.

[6]This figure is based on authors' calculation using the *cohort loss* metrics. Please see Appendix A.1 for details on the construction of the *cohort loss* measurement.

[7]Hence the Famine is also often referred to as "the Great Leap Famine of China." However, scholars have yet to reach an agreement on what were the exact mechanisms through which the Great Leap Forward caused the Famine.

collectivization. In particular, the campaign introduced a mandatory process of agricultural collectivization that prohibited any private farming practices. The Great Leap Forward also introduced *People's Communes*, which exercised management and control of all rural resources such as labor, land, and food.[8] The distorted incentive structure in agricultural production, agricultural labor diversion, and the grain procurement system during the Great Leap Forward are considered as some of the main contributors to the Great Chinese Famine.

2.3 Key Features of the Famine

Large variation in Famine severity across regions One of the most striking features of the Famine is its sharp variation in severity across regions. For example, the death rates in 1960 of two adjacent provinces differed by more than sixfold: Anhui province suffered from a death rate of 1.837% in 1960, while the adjacent Jiangsu province incurred 0.288% population loss.[9] Figure 1 demonstrates the high cross-county variation in Famine severity, measured by *cohort loss*, where red shaded areas indicate higher degree of Famine severity in the corresponding counties (Appendix A.1 provides details on the construction of the *cohort loss* measurement).[10]

This poses one of the biggest puzzles on the cause of the Famine. Many scholars attempt to explain the root causes of this regional variation in Famine severity, and their works greatly enrich our understanding of the Famine. For example, Kung and Lin (2003) show that the varying severity closely traced the rate of state-procured grain intended to fuel industrialization. Kung and Chen (2011) argue that political incentives and cadre radicalism were key factors contributing to high Famine severity in certain regions. Meng, Qian and Yared (2013) provide evidence demonstrating that such regional variation was generated by an inflexible and progressive government procurement policy.

Particularly relevant to our current study, this cross-county variation in Famine severity was only weakly correlated with the agricultural production drop due to heavy drought during the Famine period (Li and Yang (2005) and Meng, Qian and Yared (2013), among others). While drought *did* occur in several regions during the Famine, drought alone was able to account for neither the full scale of the Famine severity, nor the patterns of regional variation in severity that we observe. This offers direct evidence that factors beyond the drought played an important role in the Famine. The complex coexistence of drought and government policy failures (e.g. systematic misallocation of food) indicated that when Famine survivors sought explanations of

[8] Some have argued that mortality rates were exacerbated by food wastage in communal kitchens (Chang and Wen (1997)).

[9] These figures are estimated based on Cao (2005). The contrast in Famine severity between Anhui and Jiangsu has been noted by several scholars. For example, Chen (2011) documents this difference. He attributes it to the polarized needs of irrigation across these two provinces due to geographic and climate reasons. Different scales of these irrigation projects undertaken during the Great Leap Forward then led to differential degrees of agricultural labor diversion.

[10] While the figure focuses on cross-county variation in Famine severity, such high variation occurred at almost all administrative levels: across provinces, across counties within a particular province, across villages within a particular county, and ultimately, across individuals within a particular village.

their sufferings, it was not immediately obvious how to weight nature versus government-related factors.

Famine concentrated in rural areas The Famine's impact was largely restricted to rural areas. Approximately 95% of all Famine-related deaths occurred among rural *hukou* status holders. This arose partly because the Chinese Communist Party provided large amounts of food to urban areas during the Great Leap Forward in order to support rapid industrialization (Lin and Yang (2000)). Millions of Chinese became new employees of the state sector due to the heavy industrial investment.[11] These new urban workers placed substantial pressure on China's food-rationing system, which led to a rapidly increasing and unsustainable demand on rural food production and procurement (Lardy (1987)). In addition, the urban population (under the dictates of Maoism) had protected legal rights for certain amounts of grain consumption, whereas the rural peasantry were given no such rights; instead, they were subject to non-negotiable production quotas and forced to survive on residuals from the procurement. With the suppression of news internally, many city residents were unaware of the mass deaths were occurring in the countryside, and this was essential in order to prevent organized opposition in the cities (Becker (1996)). For these reasons, we focus our attention on the rural population in our empirical analysis.[12]

Strict migration control Migration (and hence endogenous sorting) based on famine severity can be a serious concern to the identification of persistent effect of famines.[13] Here, we demonstrate this concern was less severe in the case of the Great Chinese Famine. Migration was strictly prohibited at two levels: *(i)* migration from rural to urban areas; *(ii)* migration within rural sectors.

During the Famine, living in an urban versus a rural area could mean the difference between life and death (Becker (1996)). As discussed previously, the Famine's impact lay primarily within the rural sector, while urban areas were largely immune from the excessive mortality. Despite the high incentive for hungry peasants to temporarily migrate to cities as Famine refugees, such migration was primarily prohibited due to the Household Registration System (namely, *hukou* system). In 1958, the Chinese government officially promulgated the *hukou* system to control the movement of people between urban and rural areas. Internal passports were introduced, forbidding travel without appropriate authorization.[14] Rural residents could not leverage the

[11] In 1958, 21 million people were added to non-agricultural state payrolls, and total state employment reached a peak of 50.44 million in 1960, more than doubling the 1957 level; the urban population swelled by 31.24 million people (Lardy (1987)).

[12] Urban dwellers, in spite of the fact that many of them did not experience the Famine, did not serve as an ideal "comparison group" for the Famine-affected individuals in the rural areas. The urban population had drastically different experiences during the Famine compared to rural dwellers. In addition, they encountered different development trajectories and circumstances due to the rural-urban divide throughout China's development path. Finally, the urban population was impacted by the Cultural Revolution from 1966 to 1976, while rural households largely remained unaffected.

[13] Meng and Qian (2009) provides a detailed discussion on this concern.

[14] Individuals were broadly categorized as either "rural" or "urban" status based on location of residency. A worker

high cross-county variation in Famine severity to smooth the Famine consequences. Village local leaders employed security controls to prevent villagers from leaving, or hungry outsiders from entering (Thaxton (2008)). In fact, many of the starving peasants tried to flee to the cities to beg for food, but tight security at entry points and regular inspections of residential documents on the streets led to deportation and subsequent death for many.[15]

Starvation as the main cause of death Previous work has observed that the actual experience of starvation was at the center of excessive mortality during the Great Chinese Famine, unlike most other famines (e.g. Becker (1996), Dikötter (2010), Fairbank (1987), and Meng, Qian and Yared (2013), among others). In particular, Meng, Qian and Yared (2013) note that rural China suffered from relatively low levels of infectious diseases even at the peak of the Famine's damage, primarily due to migration controls within rural sector, the prevalent adoption of DDT prior to the Famine, as well as the public health campaigns undertaken by the government immediately after the Communist Revolution. As Dikötter (2010) emphasizes, "People really did die of starvation – in contrast to many other famines where disease loomed large on the horizon of death." From the perspective of Famine survivors, this implied that hunger would be a common experience (or, syndrome) for those who were actually affected by the Famine. In other words, survivors of other famines may be able to avoid starvation experiences all together, as long as they survived the infectious diseases. Given the fact individuals are particularly sensitive to the physical and emotional pain associated with hunger experience, the Famine potentially affected its survivors beyond the biological domain, which is the main focus of our study.[16]

Media censorship and propaganda In reaction to the disastrous consequences of the Famine, the Chinese Communist Party almost immediately engaged in media censorship and propaganda. Discussions on topics related to the Famine has been strictly censored throughout public media and schooling in China.[17] Hence, personal experiences during the Famine mattered not only due to the private memory and direct emotion they inflicted, but also because the experiences themselves provided important information on the very existence of the Famine event.[18]

seeking to move from the countryside to urban areas to take up non-agricultural work would have to apply for permission through the relevant bureaucracies. The number of workers allowed to make such moves was tightly controlled. Migrant workers were required up to six bureaucratic "passes" in order to work in provinces other than their own.

[15] Anecdotal accounts indicate that a small number of rural residents succeeded in getting into the urban sector during the Famine, mainly due to help received from their relatives residing in the cities.

[16] For example, Squire (1987) notes that long-term memory of certain past traumas and pains may be systematically intensified over time.

[17] Many have documented the lack of knowledge on the existence of the Great Chinese Famine among Chinese citizens, as a result of strict media censorship. For example, Frank Dikotter depicts this phenomenon in a 2013 piece on *Foreign Policy*: "The Disappeared" (`http://www.foreignpolicy.com/articles/2013/01/02/the_disappeared`).

[18] Unlike many other important events, the censorship of the Famine allows us to empirically distinguish *personal experiences* from history at large. Almost inevitably, important historical events become public knowledge through media and education. For example, people did not have to personally experience the Great Depression to realize the pain of those suffered during that period. In fact, personal experiences *per se* may not be of first order importance in

In practice, censorship and propaganda were often intertwined. Until the early 1980s, the Chinese government's official position was that the Famine was primarily a result of severe natural disasters compounded by minor planning errors. The term "Three Years of Natural Disasters" was coined in order to refer to the Famine. In Appendix B, we provide a translated excerpt of an official propaganda poem, published on state media in 1960 during the peak of the Famine. The poem emphasized that the Famine was caused by natural disasters.[19]

Furthermore, the central government launched public campaigns to preserve political support in the aftermath of the Famine. This was necessary since the primary victims of Famine (i.e. the rural population) represented the base of the communist regime. The government limited reports of the Famine and minimized the mortality numbers in public media. At the same time, it initiated large-scale propaganda campaigns such as *yiku sitan* (which literally translates into "recalling past bitterness, recognizing today's sweetness") to convince the public that bad weather was to blame for low production and over-procurement during the originally well-intended Great Leap Forward (Thaxton (2008)). While the Famine could be attributed to a combination of natural and political causes, the government's propaganda efforts placed a substantial emphasis on the natural ones. Citizens would therefore be more likely to blame the Famine on natural disasters, unless they had private and contradicting information.

3 Data & Measurement

Our difference-in-differences empirical strategy compares the political trust and attitudes of individuals who have personally experienced sustained hunger during the Famine versus those who haven't, across regions with various degrees of drought during the Famine period. While we employ a variety of data sources for this paper, many of the key variables are measured by the China Family Panel Study (CFPS). We briefly describes the CFPS in Section 3.1. In Section 3.2, we introduce our key measurement of personal hunger experience during the Great Chinese Famine, and we validate this measurement in Section 3.3. Next, we describe the main outcome variables: *(i)* political trust (Section 3.4) and its interpretations (Section 3.5); *(ii)* political attitudes and the interpretations (Section 3.6). Lastly, in Section 3.7, we describe the measurement of drought that affected agricultural production during the Famine. In Appendix A, we describe additional data sources and variables that we use in this paper.

the formation of beliefs and attitudes, since people could rely on media and education to obtain vivid depictions of the Great Depression and to learn about the causes and consequences of the event.

[19]Since the late 1980s, the government has gradually acknowledged the role of policy mistakes in causing the Famine, suggesting that the disaster was 30% due to natural causes and 70% by government mismanagement (Yang (2008)).

3.1 China Family Panel Study (CFPS)

Our empirical analysis hinges on individual level variation in hunger experience during the Famine. We use the CFPS baseline wave conducted in year 2010 (hereafter CFPS-2010) for this measurement.[20] We use the 2nd wave of CPFS in 2012 (hereafter CFPS-2012) for outcome measurements of individual's political trust and attitudes.

CFPS is a large-scale, almost nationally representative panel survey project conducted by the Institute of Social Science Survey at Peking University.[21] Through a multistage probability sampling procedure, CFPS completes interviews with a total of 14,798 sampled households and all individuals living in these households, amounting to 36,000 completed adult observations. The 25 provinces of China covered by CFPS (excluding Inner Mongolia, Xinjiang, Tibet, Hainan, Ningxia, and Qinghai) represent about 95% of the Chinese population in mainland China.

For our baseline estimation, we limit our sample to individuals who completed both CFPS-2010 and CFPS-2012 survey. We further limit our sample based on two criteria: *(i)* individuals from rural households; and *(ii)* individuals born before 1963. As discussed previously, criterion *(i)* is based on the fact that the impact of the Famine concentrated in rural area, as discussed in Section 2. Due to the migration restriction between rural and urban sectors, conditional on living in the rural area in the year of 2010, 95% of the individuals in our CFPS rural sample lived in the same county since their birth.[22] Criterion *(ii)* guarantees that individuals were born before then end of the Famine, allowing us to focus on those who were subject to *direct* and *personal* hunger experience during the Famine. We present summary statistics describing the observable demographic characteristics of this subsample of citizens in Table 1, columns 1 and 2.

3.2 Measurement of Hunger Experience

In CFPS-2010, we asked the following question: "Have you experienced starvation for more than one week? If so, when did it start, when did it end, and where did it happen?" For individuals who reported starvation experiences between 1958 and 1963, we treat them as having experienced hunger during the Great Chinese Famine.

Here we emphasize two important aspects of our hunger experience measurement. First, the question itself did not explicitly mention the Great Chinese Famine; in fact, the question only asked when hunger experiences occurred. Second, the questions of their political trust and attitudes were asked in CFPS-2012, two years after the hunger experience elicitation. Hence, we are less concerned that the hunger question itself primed the respondents to answer differently regarding political trust and attitudes.

[20] We use a non-public version of CFPS-2010, which allows us to access many politically sensitive variables including the historical trauma memory and various regional identifiers.

[21] Extensive information about the CFPS project can be found at `www.isss.edu.cn/cfps`.

[22] We do not observe the individuals who leave the rural area to work in urban sections (so-called *migrant workers*), however.

3.3 Validation of Famine Memory

We use novel measurement of individual's memory on hunger experience during the Great Chinese Famine, which allows us to exploit rich individual level variation in Famine exposure. To the best of our knowledge, this is the first paper that uses personal memory as a key measurement of Famine impact.[23] Here, we verify the validity of the memory measurement. We show that the self-reported hunger memory during the Famine closely maps to objective Famine experiences at the aggregate level.[24]

Memory of the Famine is persistent Individuals can have extraordinarily long lasting memory of traumatic experiences from the past. Evidence from oral history and anthropology confirms that half a century after the actual event, many survivors still hold vivid memory of the Famine period (e.g. who and how many people perished in the village, who stole food and broke the rule in order to obtain additional crops, etc).[25] For example, one particular Famine survivor said in a home interview in January 2014, "Even when I eat meals today, I would not allow any left-over food in my bowls. I always always finish up all the food, and I would never waste any food. Young people would say we are too frugal. But I do so because I always think back on the feelings of starvation and desperation during the Famine – those feelings I will never be able to forget."

Nevertheless, we *do* expect strong birth cohort trends in the self-reported hunger experience during the Famine, because the stickiness of core memory entries is not biologically developed until children reach beyond a certain age. Hence, younger cohorts during the Famine should exhibit lower chances of remembering the Famine, even if they actually were starving. This upward cohort trend is confirmed in Figure 2. The graph plots birth cohort against the proportion of individuals in our sample who reported hunger experience. The proportion reporting hunger experience during the Famine steadily increases as we move from younger to older cohorts during the Famine, and it eventually stabilizes at around 30% after birth cohort of 1952 (namely, age 10 at the end of the Famine in 1962). This pattern confirms our *a-priori* expectation of biological and cognitive capacities of memory during very young age, and it demonstrates that our hunger measurement does not merely capture noise. We take into account of these cross-cohort differences in hunger experiences by including a full set of birth cohort fixed effects in all our specifications.

High concentration in reported hunger years As mentioned previously, our question about hunger experience did not explicitly mention the Great Chinese Famine. Respondents were required to report the exact years they experienced starvation if they reported hunger experience.

[23] Previous studies typically use county level variation in Famine severity to proxy for Famine exposure.

[24] Our verification can only be conducted at the aggregate level, as there is no feasible way to individually verify the validity of each hunger report.

[25] Caochangdi Work Station (located in Beijing, China) and its "Private Memory Project" contribute significantly to the systematic collection of oral history records on the Famine survivors. More details on Caochangdi can be found at `http://blog.sina.com.cn/u/2181292250`, last accessed on November 14th, 2014.

Conditional on having reported hunger experience, approximately 95% of the respondents indicated that their hunger experiences took place in 1958, 1959 or 1960, exactly coinciding with the timeframe of the Great Chinese Famine. This high concentration suggests that the Famine was a salient event to those who suffered from it. The precise association between reported hunger years and the actual years of the Famine also demonstrates the reliability of our measurement of Famine experience.

Aggregated memory coincides with objective measurement of Famine severity If our individual level Famine experience measurement is reliable, one expects its corresponding cross-county distribution to resemble alternative (and more conventional) regional Famine severity measurements. Therefore, we estimate the following Logit model: we predict individual Famine experience using the county level *cohort loss* index introduced in Appendix A.1, controlling for a full set of birth cohort and province fixed effects. The marginal effect (evaluated at the means) indicates that a 5 percentage point increase in *cohort loss* in a particular county is associated with an 18.4 percentage point increase in the likelihood of reporting individual Famine experience. The scale of this marginal effect explains almost the entire variation of individual Famine experiences across counties.

3.4 Outcome Variables: Political Trust

The first outcome measurement is citizen's trust towards local government officials. This question was included in CFPS-2012, translated as follows:

Please rate to what degree do you trust local government officials? (0 = extremely low trust; 10 = extremely high trust)

Note: for ease of interpretation, we recode the trust outcome so that 0 indicates extremely high trust and 10 extremely low trust.

As discussed above, if citizens realized the government was responsible for deliberately harming its citizens, this could fundamentally and persistently alter their trust in the government. The hunger experience (or lack thereof) provided valuable information to citizens about whether government was guilty of causing the excessive mortality and starvation. Note that in all of our empirical specifications, we control for province of residence fixed effects. We also show that the results are robust to the alternative specification that controls for county fixed effects. These specifications absorb the variation in actual quality and performance of local governments. In other words, one should interpret our distrust outcome as the citizen's differential distrust towards the local government after taking into account the actual differences across local governments.

3.5 Interpreting Self-reported Political Trust

Given the authoritarian regime in China, one worries that the self-reported political distrust towards local government in a face-to-face survey contains significant reporting biases – respondents fail to report distrust truthfully due to fear of the regime. We take several approaches to address this concern and to aid our interpretation of self-reported political trust.

Internal validity We first show that the self-reported distrust towards local government carries high internal validity. If respondents have encountered negative interactions with local government during the year before CFPS survey (e.g. being treated unfairly by the government, having conflict with government, etc.), such experiences are strongly correlated with high levels of reported distrust.[26] One such encounter moves the distrust measurement by 1 on average (out of 10). The t-statistics of the correlations across these negative experiences exceeds 10. In addition, major life disturbances that involve the government (e.g. forced move from original residence; under-compensated government land acquisition) are on average associated with 0.4 unit of increase in political distrust.[27] This indicates that self-reported political distrust in CFPS exhibits meaningful variation – political distrust is high among individuals whom we expect to hold unfavorable attitudes towards the government.

Benchmark political distrust Next, we present suggestive evidence that respondents in our CFPS survey did not exhibit substantial self-censorship when they answered questions regarding distrust towards local government. In Appendix C.1, we show that within the CFPS survey, political distrust does not stand out and exhibit particular patterns of self-censorship as comparing to other types of distrust (e.g. towards strangers, Americans, etc.). One may still worry that self-reported trust measurements are biased because of the following reasons: *(i)* face-to-face interview; and *(ii)* political sensitivity due to China's authoritarian regime. In Appendix C.2, we address these concerns by comparing CFPS trust measurement with two additional surveys. We again show that the political distrust measured in CFPS does not exhibit self-censorship patterns, when we compare it with similar measurement via anonymous online surveys in China, and face-to-face survey in other developing countries.

Attitudes towards central vs. local governments Recent studies have argued that the authoritarian regime in China exhibits a much higher tolerance towards citizen's criticisms against local government cadres than central officials (for example, Lorentzen (2013), King, Pan and Roberts

[26] Survey respondents self-reported negative experiences with the local government (based on the categories that we provided) after the elicitation of trust and political attitudes. One needs to be aware of the potential biases related to this self-reported measurement of experience. For instance, those who did not trust the government in the first place may be more likely to recall and report negative experiences with the government.

[27] Reports of these events are less vulnerable to the subjective reporting biases due to prior trust. The smaller magnitudes of these events are likely due to the fact that they typically occurred 10 to 15 years prior to the survey.

(2013), among others). As long as citizens demonstrate a clear distinction in their attitudes towards central versus local government, they face much lower pressure to self-censor high level of distrust towards local government officials. This is perhaps the reason why we were not allowed to directly ask respondents to rate their trust towards central government in the CFPS survey, and that we need to rely on policy preferences concerning entire China as an indirect measurement of respondents' attitudes towards the central government.

Behavioral and experimental validation of survey measurements of trust One can still be worried that self-censorship does not apply to political trust *per se*, but respondents self-censor when they report any type of trust in a survey. Although we do not have direct behavioral validation on trust within sample, other studies have demonstrated the external validity of the self-reported trust measurement used in CFPS. Glaeser et al. (2000) show that attitudinal measures of trust in surveys are highly predictive of an individual's "trustworthiness." Among various survey questions, "trust towards strangers" has the highest predictive power for trusting behaviors in the incentivized games. Using a representative German adult sample, Dohmen et al. (2012) show that self-reported trust measures in a survey strongly predict trust behaviors in a paid trust game.

3.6 Outcome Variables: Political Attitudes

The second set of outcome variables measures citizens' *attitudes* towards a range of key socioeconomic issues in current day China. In particular, we use the following module administrated in CFPS-2012:

	For the following questions, answer based on 0-10 scale. 0 = "not severe at all"; 10 = "extremely severe"
1	In your opinion, how severe an issue is government corruption to China today?
2	In your opinion, how severe an issue is environmental pollution to China today?
3	In your opinion, how severe an issue is wealth inequality to China today?
4	In your opinion, how severe an issue is unemployment to China today?
5	In your opinion, how severe an issue is medical care to China today?
6	In your opinion, how severe an issue is housing and real estate to China today?
7	In your opinion, how severe an issue is social welfare to China today?

All the seven questions listed above represent real and ongoing socioeconomic problems faced by China today. Public dissatisfaction regarding those issues are prevalent, and it is generally considered to be government's responsibility to address these various problems. Citizens' hunger experience and associated inference on the past guilt of the government could change their political attitudes towards these socioeconomic issues. This may work through two intertwined channels.

First, Famine's impact on political distrust can directly lead to changes in political attitudes.

Political trust gives a political regime extra room to maneuver when it encounters difficulties in performing its more immediate political tasks (Patterson, Wahlke, and Boynton, 1970). A regime that enjoys a high level of popular trust is therefore more resilient in the aftermath of policy mistakes and administrative blunders (Li (2004)). If citizens are convinced that the government is guilty of policy failures and social catastrophe in the past, they become less tolerant towards contemporary policy inadequacy, and hold high expectations on government in order to prevent historical catastrophe from reoccurrence.[28] In particular, these attitude questions on the severity of socioeconomic issues closely correspond to the type of political sentiments outlined by Thaxton (2008) – citizens hold lasting resentment towards contemporary government and its performance because of their negative experiences during the Famine, irrespective of how well the government might have actually performed. In this regard, this set of questions on policy attitudes are complementary to the political distrust measurement. They confirm the effect on political distrust and demonstrate subsequent consequences of distrust.

Second, Famine experiences can potentially shift citizens' policy preferences and perceived priorities (for example, Famine experiences may lead survivors to prioritize social welfare as an urgent policy goal, since they hold latent fear on lack of food provision). Accordingly, our policy attitude questions allow us to capture changes in this dimension of political attitudes that is detached from political distrust. Holding fix the differences in government's actual policies and performances, these questions measure people's intolerance and level of dissatisfaction towards specific policy outcomes.[29]

Therefore, one can interpret the severity measurement here as a combination of: *(i)* policy attitudes as government performance evaluation, and *(ii)* policy attitudes as specific policy preferences. It is beyond the scope of our study to disentangle between these two aspects. However, we do think that the lump-sum of these two aspects carry high economic and political significance.

It is worth emphasizing that these questions ask survey respondents to assess their opinion on *entire* China, as opposed to local conditions. This addresses the issue of endogenous geographic sorting due to individual's policy preference, as one would face the same assessment problem no matter where they currently reside. Moreover, questions on socioeconomic conditions of *all of* China provide us with an objective benchmark since all survey respondents share the same "reality" state of China to judge upon. Respondents form subjective beliefs about such state, and then form subjective attitudes based on these beliefs. Our questions capture a lump sum of these two stages (*(i)* belief formation; *(ii)* attitude formation), and we conjecture that the effects of the hunger memory will work through both stages.[30]

[28]This can arise from the beliefs that the government lacks ability and/or desire to resolve these issues if they indeed become dangerously severe.

[29]These political attitude questions emphasize more on policy rather than government's role in impacting these policies. Hence, the intolerance and dissatisfaction captured by this set of questions are not necessarily directly associated with a particular government body or its mandated duties.

[30]Recent studies have identified overconfidence and correlation neglect as inherent traits that bias citizen's belief about the objective state of the world (e.g. Ortoleva and Snowberg (2014)). Here, we go one step further and show

3.7 Drought and Its Impact on Agricultural Production

In order to measure drought level during the Famine, we make use of two contemporary official archives from the People's Republic of China. First, we use *Comprehensive Statistical Data and materials on 50 Years of New China (1999)* compiled by China's National Bureau of Statistics, Department of National Economic Statistics, to obtain annual data on total agricultural sown area for each province. Second, we use *Report of the Damage Caused by Disaster in China (1996)* compiled by China's National Bureau of Statistics, Department of Domestic Affairs, to obtain information on total areas affected by drought for each province for a given year. As a reporting convention, the heavy drought-affected area (*shouzai mianji*) is defined as the total agricultural plotting area in a region where drought causes more than 10% reduction in crop yields compared to normal years.[31] Compared to using raw precipitation data to measure drought, the key advantage of this drought measurement is to explicitly capture the drought that affected agricultural production, which is more relevant when citizens assessed to what degree natural disaster of drought had led to a drop in agricultural production (thus subsequent food shortage) during the Famine.

For each province, we calculate the annual ratio of heavy drought-affected area to the total agricultural sown area. This ratio measures the relative scale of annual drought severity in each province. We use the maximum ratio during the Famine period (1960-1961) as the drought affecting agricultural production *during* the Famine. We calculate the mean of the ratios from 1950 to 1959 as the level of drought affecting agricultural production *prior* to the Famine.

We next divide drought level *during* Famine by the drought level *prior* to the Famine. This is intended to capture the fact that a high level of drought affecting agricultural production *during* the Famine was not informative to the citizens, unless such shocks were exceptionally high compared to those occurred during non-Famine years. For ease of interpretation, we normalize this ratio by first substracting its global minimum value, and then dividing by its standard deviation. We denote this normalized ratio as the index of drought level during the Famine.[32] All values of this index are positive, and the magnitude measures the distance away from global minimum in term of the size of one standard deviation.[33]

Data Availability Constraints We rely on the total agricultural sown area and heavy drought-affected area to construct the drought level index because alternative historical data documenting

that even conditional on the biased beliefs, citizens could still diverge in their attitudes, although we remain agnostic regarding which channel dominates. However, we do acknowledge that these questions are fundamentally subjective, in the sense that they do not depend on the absolute scale of individual's beliefs.

[31] China's National Bureau of Statistics, Department of Domestic Affairs does not report drought's effect on production at continuous scales.

[32] In Appendix, we show results from alternative specifications using different measurement of drought level, including the index constructed only using the drought level *during* the Famine (rather than the ratio over drought level *prior* to the Famine).

[33] Several provinces (such as Shanghai, Hainan, and Chongqing) are excluded in the index construction, since they were not independent provincial level administrative unit during the period of interest.

the adverse effect of natural disaster on agricultural production is extremely limited in China, especially during the periods from 1949 to 1976. Moreover, we are constrained by the fact that no disaggregated data is reported below province level prior to 2000.

Data Reliability Constraints Data during the Mao-era were considered unreliable, since they were subject to systematic mis-reporting by the Maoist government. Data such as agricultural production and mortality rates during the Famine period could be particularly problematic, because the central government had strong incentive to forge these data in order to cover up the severity and political roots of the Famine.

We take several approaches to address the concerns regarding data reliability. First, we do not use the direct reporting on agricultural production and mortality rates during the Famine for any of our analysis. These data were exceptionally vulnerable to systematic mis-reporting, and even retrospective corrections by the post-Mao Statistics Bureau may be problematic. Instead, we use total agricultural sown area and natural disaster reportings from separate sources. These are considered to be less sensitive information as they do not directly reveal Famine severity. Second, we use contemporary statistical compilations from the post-Mao government for both total agricultural sown area data (retrospectively published in 1999) and natural disaster reportings (retrospectively published in 1996). These two data sources have been carefully corrected retrospectively by China's National Bureau of Statistics, in particular to address systematic mis-reportings from the Mao-era.[34]

4 Empirical Strategy

4.1 Empirical Models

Combining data from various sources introduced in Section 3, we estimate a generalized difference-in-differences model, which controls for birth cohort and province of province fixed effects, and examines the effects of hunger experiences during the Great Chinese Famine. Our baseline specification is the following:

$$y_{icp} = \alpha_c + \delta_p + \beta\, Famine_i + \gamma\, Famine_i \times Drought_p + \epsilon_{icp} \tag{1}$$

where y_{icp} is an outcome measure from the CFPS survey (i indexes individual, c the birth cohort, and p the province of current residence); α_c and δ_p are full sets of birth cohort and province of residence fixed effects; $Famine_i$ is the indicator for hunger experience during the Great Chinese Famine; and $Drought_p$ is the index of drought affecting agricultural production during the Famine period. The main effect of $Drought_p$ is absorbed by the province fixed effect. In our main estimates,

[34]Meng, Qian and Yared (2013) compare these post-Mao data compilations to historical data sources, and confirm that the retrospective compilations revised many statistics reported during the Mao-era.

we allow idiosyncratic differences, ϵ_{icp}, to be correlated across individuals within a corresponding province unit (the level at which drought degree varies).

β is the coefficient that captures the main effect of hunger experience during the Great Chinese Famine, conditional on fixed differences across cohorts and fixed differences across provinces. Note that β may also capture the systematic selection between individuals who experienced hunger and those who didn't. γ is the main coefficient of interest, capturing the differential effect of Famine experience across regions with various levels of drought. In other words, γ indicates whether (and to which direction) Famine victims tried to infer the government's role in their personal sufferings.

In addition to this baseline specification, we will estimate additional specifications that: *(i)* use alternative clustering choices; *(ii)* include county level fixed effects; and *(iii)* include various individual-level and county-level controls. These results are shown in Section 7.2 and 7.1, and our inferences remain very similar.

4.2 Identification Assumption

Our difference-in-differences framework relies on the identification assumption that the following two are *not* jointly determined: *(i) ex-ante* characteristics that make individuals vulnerable to the Famine; and *(ii)* contemporaneous drought level affecting agricultural production during the Famine. Individual's exposure to the Famine experience within a region was certainly not random, since many pre-determined characteristics would make an individual relatively more vulnerable to experiencing hunger during the Famine. However, conditional on having experienced hunger, whether the Famine victim was exposed to the Famine in a high-drought region or low-drought region can be credibly exogenous. Our identification assumption essentially states that individual's non-random exposure to the Famine was *not* differentially non-random across regions that were hit by the drought differently during the Famine.

We present evidence in the following three sections to support our identification assumption. In Section 4.3, we discuss how our empirical specifications absorb average differences across regions that may simultaneously affect an individual's likelihood of the Famine exposure and the trustworthiness of the local government. In Section 4.4, we show that while individual characteristics may determine the actual Famine experiences, our difference-in-differences framework rules out many potential determinants to be driving our results. In addition, we show that in fact, there was no observable differences between the individuals who experienced the Famine and those who didn't. Lastly, in Section 4.5, we discuss threats to identification that may occur through the interaction of drought level and the individual Famine exposure: *(i)* drought affected the Famine severity, which might then induced selection biases; and *(ii)* selection mechanism of individual's exposure to the Famine might differed depending on regional drought levels. We present evidence that these concerns are unlikely to threaten our identification strategy.

4.3 Regional Differences

One may be concerned that the regional Famine severity is correlated with regional characteristics, in particular the institutional quality of a given region either at the time of the Famine or persistent through the entire period until survey elicitation. By including a full set of province of residence fixed effects in our baseline specification, fixed regional differences that affected political trust and attitudes of all residents cannot drive our estimated effects of the Famine experience (and its interaction with the drought level). Aggregated differences across regions that apply to all individuals within the region are effectively differenced out, when we exploit individual level variation in the Famine exposure *within* the region. In addition to the baseline specification, we also estimate additional specifications that include a full sets of *county* of residence fixed effects. County ranks the third lowest along the hierarchical order of China's administrative divisions, just above township and administrative village. These results are shown in Section 7.1.

One may also be worried that differences in regional characteristics were working through the regional Famine severity and drought level simultaneously. To the extent that the actual Famine severity conditional on a certain level of drought during the Famine may signal local government quality and competency, the interaction of the Famine experience and drought level merely capture regional differences in governance. In Section 7.2.4, we present evidence from younger cohorts who were not directly susceptible to the Famine to rule out this alternative hypothesis.

Lastly, one may be concerned that the regional differences (in particular the quality of the local government) differentially affected individuals within the corresponding region in a systematic manner. Our identification strategy is not threatened as long as the differential impacts of the local institutional quality across individuals within a region are orthogonal with their hunger experiences during the Famine. Additionally, we estimate alternative specifications that include various measures of county-level policies that are targeted only at a subgroup of the population (e.g. welfare spendings; cultural spendings). We discuss this in greater details in Section 7.2.4.

4.4 Individual Exposure to the Famine

4.4.1 Various Determinants of the Famine Exposure

Our difference-in-differences framework rules out several determinants of individuals' likelihood to experience the Famine, that may drive the estimated effects of the Famine experience. First, region-invariant individual characteristics such as political connections that determined the likelihood of the Famine exposure cannot drive our results, since differences along these dimensions are differenced out when we compare Famine versus non-Famine individuals across various regions. Second, time-invariant regional or cohort factors that determined the likelihood of the Famine exposure across individuals cannot drive our results, because any time-invariant factors are by definition orthogonal to the contemporaneous shock in drought during the Famine period. Third, time-variant regional or cohort factors that determined the likelihood of the Famine expo-

sure across individuals cannot drive our estimated effects, as long as these factors are independent from the contemporaneous drought levels during the Famine. In particular, this is a weaker identification assumption than the one requiring the determinants of the Famine exposure likelihood to be uncorrelated with time-invariant regional characteristics. For instance, if political connectedness prior to the Famine is the main factor that determines individual's likelihood of experiencing the Famine, our identification strategy allows for such political connectedness to change across time. As long as such dichotomy by political connection across individuals is unaffected by the contemporaneous drought level, then our identification strategy remains valid.

4.4.2 Balance of Characteristics Between the Famine and Non-Famine Affected Individuals

As we have discussed previously, we know that within each county and birth cohort, who had additional access to food sources during the Famine and hence did not experience hunger was *not* exogenously determined.[35] There could be many reasons that one particular individual (or household) avoided the Famine while the others did not. For example, individual's political connection, his physical proximity to food storage location, his willingness to take risks and engage of food theft, his connection and access to refuge from urban relatives, etc. If any of these factors indeed contributed to the difference in Famine experiences, the simple comparison across Famine and non-Famine groups (*1st difference*, even after controlling for residence province and birth cohort fixed effects) should not be interpreted as causal effect of the Famine experience itself.

Despite the fact that our difference-in-differences strategy does not rely on the "random assignment" of Famine experiences across individuals, we check (and show) the conditional balance of observable characteristics between the Famine affected and non-Famine affected individuals for two purposes. First, such balance would help ease some concerns over selection mechanisms of individual's exposure to the Famine. In particular, if we do not observe major differences across these two groups of people, it makes it less likely that the contemporaneous drought level during the Famine may interact with these characteristics and induce differential selection. Second, although the evidence that we present here does not suggest that one shall interpret the estimation of main effect (β) of the Famine experience itself as *causal*, we show that this estimated main effect is unlikely to merely capture the differences in observable characteristics across these individuals.

Table 1, columns 3 and 4 show the mean characteristics of citizens by hunger experience during the Famine (first *no Famine experience*, then *Famine experience*). We next check for balance of observable characteristics among surveyed citizens who experienced hunger and those who didn't. In Table 1, columns 5 and 6, we present the raw differences, and the p-values testing for the statistical significance of these differences in characteristics of citizens with hunger experience during the Famine and those without in our sample. The table indicates that there are significant differences across the two groups. However, it is worth emphasizing that this *unconditional* imbalance is

[35] Many oral history interviews of Famine survivors suggest luck to be a key factor. However, one still suspects that such luck operated in a way that it interacted with a range of factors to determine individual's Famine experiences.

to be expected. A lack of imbalance could arise from different distribution of hunger experiences both across birth cohorts and across provinces. As discussed previously, individuals who reported hunger experiences were on average older (e.g. memory capacity is limited before age 10), and were more likely to reside in regions where the Famine damage was severer.

In Table 1, columns 7 and 8, we show differences between Famine and non-Famine individuals, conditional on residence province and birth cohort fixed effects (same as our baseline specifications), and the p-values testing for the statistical significance of these *conditional* differences. As can be seen, along many observable dimensions (for example, gender, family socioeconomic background, political connections, proxy for economic and social connections) that were predetermined before the Famine period, the Famine-affected individuals and non-Famine-affected ones are conditionally identical, after accounting for average characteristics in the province of current residency, and accounting for average characteristics of a birth cohort.[36] We provide a detailed discussion of the balance of these observable dimensions in Appendix E.

We want to emphasize that the list is by no means comprehensive, nor can we exhaustively test all the observable and unobservable characteristics across the Famine and non-Famine individuals. Hence, we cannot rule out the possibility that many unobserved yet important factors determined individuals having different experiences during the Famine. Accordingly, one should still be cautious at interpreting the main effect (β) of Famine experience estimated in our baseline specification.

4.5 The Famine Exposure $\times$ Drought Level

4.5.1 Drought Induces Selection Bias Through More Severe Famine

If drought affected the Famine severity, *and* the likelihood of exposure to the Famine is colinear with individual's trust of the government, then our estimation of the interaction effect can be biased due to selection. In particular, one may worry that if severer drought made vulnerable people more likely to experience hunger, *and* if vulnerable people had higher than average trust of the government than those who were not vulnerable, then such positive selection bias threats the identification.[37]

It turns out that drought during the Famine is only weakly correlated with various measures of Famine severity in the corresponding regions. For instance, the correlation coefficient between

[36] In addition, we conduct more conservative versions of this balance check, conditional on residence *county* or *village* fixed effects, instead of the baseline residence *province* fixed effects. Our balance on observable characteristics between the Famine affected and non-Famine affected samples remain unchanged. These results are available upon request.

[37] One can consider the vulnerable people as those individuals who did not have the absolute insurance against the Famine. Depending on the Famine severity of the region they resided in, they would either experience hunger or avoid it. Correspondingly, there can be a group of people who possessed certain characteristics (for example, political connection) that would allow them to gain private access to additional food sources, such that they could always avoid hunger even if the Famine was extremely severe. This is likely because within our nationally representative sample, more than 30% of residents successfully avoided the Famine experiences even in the the severest Famine-affected counties.

cohort loss and the index of drought level during the Famine is 0.018 (t-statistic = 0.93), indicating that an one standard deviation increase in drought level of a given province only raised its Famine severity by 0.018 of a standard deviation.[38] While drought level *did* increase Famine severity, the link between actual food availability and the weather conditions was not particularly strong, due to the procurement system and reallocation of food across regions.[39] In other words, although drought may induce selection bias by turning vulnerable people to experience hunger who otherwise wouldn't, the scope of such selection seemed to be fairly limited.

Furthermore, in Section 7.2.1, we exploit the specific feature of government procurement policy during the Great Leap Forward to directly test whether drought influenced Famine victims' political trust and attitudes through the (mechanical) channel of Famine severity: we show that while the drought levels *prior to* the Famine also affected the Famine severity, they had no impact on the political trust and attitudes among the Famine victims.[40]

4.5.2 Distinct Selection Mechanisms of Exposure Depending on Drought Level

As discussed previously, our identification strategy requires the assumption that individual's non-random exposure to the Famine experience was *not* differentially non-random across places with different levels of drought. In the previous section, we show that the drought level only weakly correlates with the actual Famine severity due to the enforcement of procurement and food reallocation system during the Famine. However, one may be worried that different levels of drought during the Famine could induce distinct types of people to become vulnerable in that region, even though at the aggregate level same proportion of people ended up suffering from the Famine. While the processes that generated the Famine were very much political among all regions, the Famine occurred places that was hit by severer drought because it lacked local food production and food supply through the reallocation system. In contrary, the Famine occurred regions that avoided drought mainly due to strict enforcement of procurement that took food away from the region. One could imagine that different types of people were vulnerable in these two environment – although both were man-made Famine.

To demonstrate that regions hit by various level of drought during the Famine did not induce different types of people to become vulnerable to experiencing hunger, we check whether individuals with the Famine experiences in high drought region have the identical observable characteristics as those in the low drought region.[41] In Table 2, column 1 and 2, we show the mean

[38] Both the cohort loss and index of drought level measures are standardized. Please see Appendix A.1 for details of the cohort loss measures; see Section 3.7 for details of the construction of drought index.

[39] A perfect procurement and food allocation system would smooth idiosyncratic productivity shocks across the regions. However, the institutional capacity of Maoist China during the late 1950s was far from ideal.

[40] It is plausible that drought level during the Famine influenced the likelihood of whether an individual experienced hunger or not. One such channel is through the gap between actual crop production and the pre-set agricultural procurement target. For more details, please see Meng, Qian and Yared (2013). In Section 7.2.1, we show that our results are unlikely to be driven by procurement targets.

[41] We define a region to be "high drought" if its drought level during the Famine was above the median level among

characteristics of individuals who have experienced hunger, first for those in the high drought region, then for the low drought region. Column 3 reports the p-value for a t-test of conditional differences in the means of these observable characteristics, conditional on birth cohort fixed effects, and standard errors clustered at the province of residence level. Symmetrically, column 4 and 5 show the mean characteristics of individuals who avoided the hunger experience during the Famine, in high drought region and low drought region, respectively. Column 6 reports the corresponding p-value for the t-test of conditional differences in the means.

It can be seen that those who experienced the Famine in high drought regions and those in low drought region do *not* exhibit different levels of observable characteristics that we have examined previously. Same is true for those who did not experienced the Famine personally. Overall, we do not find evidence that due to various degrees of drought, systematically different types of people became vulnerable to the Famine exposure in the corresponding regions.

5 Results

5.1 Baseline Estimation

We now present baseline estimates of the difference-in-differences specification (discussed in Section 4.1) on our full set of outcomes. In Section 7.1, we show results from a broad range of alternative specifications. We present our findings one outcome (that is, one survey question) at a time.

5.1.1 Political Trust

In Table 3, column 1, we examine the impact of hunger experience during the Famine on citizen's distrust towards local government officials, conditional on residence province and birth cohort fixed effects. Positive coefficient estimation corresponds to an increase in citizen's political distrust. It is worth emphasizing that by conditioning on residence province fixed effects, our baseline empirical specification absorbs all the province-level variations regarding actual qualities, policies and performances across different provincial governments. By conditioning on birth cohort fixed effects, our specification also absorb all variations across age groups who might hold inherently different trust towards government in spite of same policy outcomes (e.g. older cohorts might distrust local Communist government more because they spent longer years under the Nationalist government, etc.) In other words, identification in our specifications is based on individual level variations within a given province cell and a given cohort cell: citizens held different degrees of distrust towards local government bodies, even though they were subject under

all regions. Alternative cutoffs for the definition of high drought and low drought regions do not change the balance across the Famine and non-Famine affected individuals in these regions.

the same local government bodies, and have undergone same local policy outcomes over their life time along with their cohorts.[42]

Having personally experienced hunger during the Famine was associated with an increase in political distrust towards local government officials.[43] As we have discussed previously, one should interpret this main effect of the Famine experience with caution. Although we have shown that Famine and non-Famine individuals exhibited few differences in observable characteristics, estimate of Famine experience's main effect still embodies both the effect due to the experience itself, and the differences in unobservable characteristics across Famine and non-Famine individuals.

The negative coefficient estimate on *Famine Experience* $\times$ *Drought Level* suggests that when a citizen experienced hunger in a region where he witnessed very little drought during the Famine, he was significantly more likely to hold government (instead of nature) liable for the Famine. Accordingly, the Famine experience and the associated political inference led to an increase in political distrust. Conversely, having experienced hunger in a region with a exceptionally high level of drought during the Famine made the citizen more likely to attribute the Famine to nature. As a result, he became distrusting towards the local government officials to a milder degree. Note that the net effect of Famine experience and drought level on political distrust remained positive, as long as the citizens experienced the hunger in region where the drought level was less than 3.3 standard deviations away from minimum. In other words, in spite of the fact that high drought level affecting agricultural production during the Famine led citizens to weigh nature relatively more than the government, in majority of the regions this relative weighting and political inference did not overturn the overall adverse impact of the Famine on political trust.[44]

No shift in general trust One may be concerned whether the political distrust we measured is highly correlated with general distrust in the society, such that our results here simply reflect a general new social equilibrium in distrust formed after the Famine. General increase in social distrust can arise due a variety of reasons, rather than reflecting something unique to the realm of politics *per se*. In Table 3, column 2, we address this concern by showing that that while the political inference from the Famine experience had a significant impact on political distrust, the degree of distrust towards strangers and other social members were left unchanged. In other words,

[42] We also run an alternative specification that controls for province$\times$cohort fixed effects, so that we explore individual level variations only within a given province$\times$cohort cell. The results remain very similar to our baseline specification, and it is presented in Section 7.1.

[43] One may argue that knowledge at local level serves as substitutes of personal direct experience of the Famine. This is definitely plausible and we cannot further disentangle personal direct experience versus indirect local knowledge such as Famine experiences of household members and neighbors. However, our evidence *does* show that personally experiencing hunger during the Famine led to very different consequences in political distrust and attitudes, comparing to those individuals who personally avoided hunger during Famine, but having spouses with Famine experiences.

[44] One can think that as long as citizens who experienced Famine attributed non-negative weights to the government when they evaluated the cause of Famine, then having experienced Famine would leave these citizens less trusting towards the government.

the diminishing political trust captured a very specific dimension of distrust occurred between citizens and the government, rather than a general societal shift in cultural and norm regarding trust.

5.1.2 Political Attitudes

Next, we present the baseline estimation on the outcomes of political attitudes. Table 3, column 3-9, presents the effect of Famine experience on citizen's assessment of severity on a range of socioeconomic issues in contemporary China. The same pattern as that on political trust emerges here. Overall, having experienced the Famine was associated with citizens considering these socioeconomic issues as more pressing, despite the fact that citizens all faced the same objective state of these issues in contemporary China. When a citizen experienced hunger in regions where he saw little evidence of drought affecting agricultural production, he became more likely to blame government failures for the Famine. Consequently, this political inference left him more unfavorable towards government's policies and performances today. This holds true across attitudes towards all seven of the socioeconomic issues. Since we do not have *a priori* hypothesis regarding which of these socioeconomic issues would be more prone to Famine's adverse effects, in column 10, we summarize the outcomes from these seven dimensions by constructing a z-score index (weighted by the inverse covariance of the standardizes outcomes), following Anderson (2008).

As we have discussed extensively in Section 3.6, one shall interpret these outcomes as a combination of changed political attitudes as specific policy preferences, and changed political attitudes as government performance evaluation. For instance, we find that the Famine experience turned an individual to consider inequality to be a much severer problem in China today. Part of this effect could be stemmed from the channel that sufferings during the Famine made citizens to become less tolerant towards social inequality, such that they regarded social inequality as a more urgent issue to be addressed by the government. At the same time, this effect could be triggered by the fact that Famine-affected citizens became increasingly dissatisfied with the government's performance in combating social inequality (conditional on government's actual performances).

Not merely performance evaluation of the current government Citizens' evaluation of the local government's performance during the past year is highly correlated with our measures of political distrust and unfavorable political attitudes ($\beta_{distrsut} = 0.39, t_{distrust} = 12.93$; $\beta_{attitudes} = 0.074, t_{attitudes} = 5.73$).[45] In Table 4, we show that the results that we present thus far are not merely driven by the performance evaluation of the current government. Conditioning on the performance evaluation not change neither the magnitude nor the inference of our baseline estimates. In other words, political inference during the Famine shifted survivors' political trust and attitudes, *despite* that they may consider the local government currently doing a fairly satisfying

[45]Citizen's evaluation of the local government's performance during the past year is reported on a 1-5 scale, where 1 = achieved a lot during the past year; 5 = performed worse than before.

job. While beliefs about a particular government's competency and performance can be much easier to update and hence more transient, the Famine-induced political distrust and attitudes seem to be persistent and transcend across government bodies. This is informative about the process of ideology formation and its persistence mechanisms. We discuss the persistence mechanisms of the Famine impact in greater details in Section 6.

5.2 Scale of the Effects

While we have shown that political inference from the Famine experience led to statistically significant impact on political trust and attitudes (and in Section 7.1, we show that these results are also statistically robust), is the Famine impact substantively important?

The Famine's impact is significant to an individual To benchmark the effect size of political inference from the Famine experiences, we first use two methods to calculate the baseline effect scales of political inference. *(i)* If an individual experienced hunger in a region with the *lowest* level of drought in sample, his political distrust increased by an additional 0.628, comparing to the case if he were to experience hunger in a region with the *highest* level of drought; *(ii)* if two individuals experienced hunger in regions that were 2 standard deviations apart in terms of drought level during the Famine, then their political distrust would differ by 0.372. Note that both *(i)* and *(ii)* estimate the size of political inference exclusively, dropping the main effects due to Famine experience itself. These sizes are listed in Table 5, Panel A.

Next, we compare these two benchmark effect scales to five other important factors and experiences that may affect political distrust, after we have controlled for province of residence fixed effects and birth cohort fixed effect. *(I)* More educated people tend to place less trust toward the government – in the context of our rural Chinese sample, attaining education of senior high school or above is associated with 0.065 unit of increase in political distrust.[46] This is roughly 1/5 to 1/10 of the Famine's impact. *(II)* Not being a member of the Chinese Communist Party is associated with an increase in political distrust by 0.208. Comparing to the Party membership, Famine experiences led to a larger effect on distrust. In addition, one should be aware that the Party membership typically suggests repeated interactions between citizen and government, while political inference during the Famine was a one-shot experience. These comparisons are listed in Table 5, Panel B, respectively. *(III)* In Table 5, Panel C, we list the correlations between three additional negative interactions between citizens and the government, and the corresponding increases in political distrust. We also list the average years during which these experiences affected the individuals. In spite of the fact that Famine experience occurred more than 50 years ago, its effect remains comparable in magnitude with these much more recent experiences. This suggests the significance of the Famine impact.

[46] Among the cohorts of interest (those born before the Famine), only 9.86% have completed senior high school (10th to 12th grade) or above. Hence, these people can be considered as elites in terms of educational attainment.

The scale of shared Famine experiences across China is immense Given the fact that the CFPS is nearly nationally representative of China, we extrapolate from our sample and estimate that approximately 97 million individuals alive in China today can recall a personal memory of hunger during the Great Chinese Famine. This scale is immense. In particular, in light our findings that the Famine persistently affected political distrust and attitudes, the shared experiences of politically induced trauma among such a tremendous size of population could be undercurrents of political momentum. This would impose challenges on the Chinese Communist Party, which traces its legacy back to the same political party responsible for the Famine 50 years ago. Since the legacy of political predecessors persists through direct experience and memory of individual citizens, it becomes increasingly costly for incumbents with shared political lineage to reconcile traumas that occurred in the past, and to restore political trust and favorable relationships between government and citizens. Although it is not immediately clear whether such shared experiences of the Famine would actually lead to systematic collective actions that directly challenge the authority of the Communist Party in China today,[47] the immense scale of Famine-affected individuals who are still alive in China today potentially explains the extremely cautious approaches regarding the Famine that the Communist Party has been undertaking in the past decades.[48]

5.3 Information Access Played a Key Role

Our baseline difference-in-differences framework estimates the differential effect of the Famine experiences across regions with various degrees of drought during the Famine. In order to support our interpretation that the estimated effects in Section 5.1 were due to citizens' political inference, we present evidence suggesting that (lack of) access to information indeed played a critical role.

In Table 6, we re-estimate our baseline specification separately on subsamples with distinct information access. We divide the subsamples using three criteria: *(i)* whether the village of residence had access to electricity prior to the economic reform (1978);[49] *(ii)* whether the individual consumed news on social issues in 2010; and *(iii)* whether the individual had access to cell phone service in 2010.[50]

Although we don't have a direct measure of information access during and immediate after

[47] Bai and Kung (2014) identify that the shared experiences of the Famine, interacting with weather shocks and agricultural yields, could lead to different collective decisions regarding agricultural decollectivization during the early 1980s.

[48] Recent scholars notice that Chinese citizens exhibit a discrepancy in their attitudes towards central versus local government. For example, Li (2012) shows that rural Chinese blamed the local government when they were treated unfairly, but retain their trust of the central government through self-justifications and re-definition of what constitutes the "central" government.

[49] This is reported at the village level, the lowest administrative unit in China. However, we do not have this measure for all the villages in our sample.

[50] We choose cell phone as a division criterion because among various media and information technology, cell phone access provides the most meaningful degree of variation across the population of interest (rural residents born before the end of the Famine). Almost all individuals had access to TV by 2010, and almost no individuals had access to internet.

the Famine, these four criteria listed above capture important dimensions that be used as proxy. *(i)* captures the degree of infrastructural modernization in the villages of residence of our sample, and electricity is necessary for residence to get access to modern communication technology such as radio and TV. While *(i)* aims to proxy for historical access of information sources, *(ii)* captures individual's willingness to consume social and political information (in 2010), conditional on having access to at least one of the information sources.[51] Citizen's political inference might be affected by (lack of) of information access due to a combination of external constraints (e.g. lack of infrastructure) and endogenous choices of consumption. Lastly, *(iii)* captures whether the individual have access to modern communication technology, as it may give the individual a different set of information and opinions comparing to traditional news outlets (newspaper, radio, and TV).

In Table 6, we present the result our main outcome of political distrust, and we report separate estimation results, first for the subsamples with *no* information access (based on various proxies), and then for those with information access.[52] Our baseline results include province of residence and birth cohort fixed effects, and the reported standard errors are clustered at province level.

As shown in Table 6, effects from the Famine experiences prevailed almost exclusively among individuals who did not have access to information (lived in villages with no electricity coverage prior to the 1978 reform, or did not have access to cell phone service in 2010), and those who chose not to consume social and political information even they have such access (did not consume news on social issues in 2010). In addition, comparing to the baseline estimates, the effect size becomes larger among these individuals who lacked information access and/or chose not to consume.

This is likely due to two reasons. First, access to additional sources of information such as news outlets and cell phone may entail that personal experiences during the Famine no longer mattered – one can learn about the Famine, its consequences and causes from information sources other than direct personal experiences. Second, access to information may suggest that political inference is no longer relevant. With additional information, individuals became less likely to believe in government propaganda and (wrongly) ascribe the Famine to natural disasters, even if he experienced the Famine in regions with high levels of drought.[53] Overall, this sharp heterogeneity in effects along the dimension of information access provides support for our proposed mechanism of political inference.

5.4 Heterogeneous Effects Between Genders

We now turn to examine the gender heterogeneity in effects. In Section 5.1, we present the overall effect of how political inference from Famine experience affected citizens' political trust and attitudes. However, the empirical estimation using the overall sample masks considerable het-

[51] 97.11% of our sample reported owning at least one TV at home in 2010.

[52] For the interest of space, we do not present here results on political attitudes. The pattern looks very similar to that of political distrust – these results are available upon request.

[53] In Appendix D, we briefly discuss the role played by propaganda during and after the Famine, in light of the results that we show in this paper.

erogeneity in the effects of hunger, especially across the two gender groups. In this section, we specifically investigate how male and female citizens responded differently to the hunger experiences during the Famine.

In Table 7, we re-estimate our baseline specification separately on male and female subsamples. Same as previously, we present the result one outcome at a time (first political distrust, then Anderson z-score of the policy attitudes), reporting separate estimates first for male and then for female. Our baseline results include province and birth cohort fixed effects, and the reported standard errors are clustered at province level.

As shown in Table 7, for the outcome of *distrust towards local government*, male and female exhibit qualitatively the same impacts due to political inference from the Famine experiences. Quantitatively, effect sizes (both main effect and the interaction effect) are larger for the female group, indicating that Famine has influenced females' political distrust by a stronger degree.

Nonetheless, the overall effects on outcomes concerning severity assessment of socioeconomic issues that we show in Section 5.1 are almost entirely driven by male alone. Coefficient estimates using the female subsample are qualitatively similar to that of the male subsample, but the estimates are not statistically significantly different from zero (at 10% level). This suggests that while Famine experiences influenced females in terms of their political distrust, unlike males, females' political distrust did not carry over to the domain where they evaluated policies and various socioeconomic issues. Although we don't have definitive evidence on why this would be the case, we can rule out several possibilities: *(i)* the observed gender heterogeneity was unlikely to be caused by differential exposure to the Famine across genders – in fact, hunger experiences did not distribute across males and females differently. *(ii)* The observed gender heterogeneity did not seem to be driven by the fact that females failed to make the implicit association between Famine experiences, lack of drought during the Famine, and the government failures. Actually, as the political distrust outcome shows, not only did females attribute the Famine's cause to government's responsibility, females also did so to a greater extent than males. *(iii)* It is also unlikely that the gender heterogeneity arose due to females not thinking about the listed socioeconomic issues. Females on average assigned comparable, if not higher, levels of severity to these issues than males. Further research is needed to uncover gender differences in political attitudes, and the differential impacts across gender groups in the aftermath of historical traumas.

6 Persistence and its Mechanisms

One of the striking aspects of the results that we present in previous section is that the Famine's impact persisted through more than five decades. The persistence results are unlikely to be driven by persistent differences in *local* government quality and performances, given our baseline spec-

ification where we only exploit individual-level variation *within* a region.[54] Hence, in order to explain the persistence that we observe, we need to look for mechanisms that are not directly related to the *local* government.

In Section 6.1, we investigate to what extent can assortative mating and resulted *homogeneous households* operate as a mechanism for the Famine's impact to persist. If the husband and wife share very similar attitudes towards the government, their repeated interactions would reinforce their individual political trust and attitudes and contribute to the perpetuation.[55] We show that individuals with Famine experiences were more likely to marry others who shared such experiences, and less likely to marry people employed by government-related entities. Additionally, in Appendix F, we show evidence that political distrust and attitudes were transmitted intergenerationally. Vertical transmissions provided parents with incentives to retain their political distrust and attitudes, so that these traits successfully pass them down to the next generation.

In Section 6.2, we zoom out and look at the *political institution* of China as a whole. We discuss how the institutional context of authoritarian regime in China may contribute to a sustained distrust and unfavorable attitudes toward the government decades after the Famine.

6.1 Assortative Mating

Individual's Famine experience may serve as a catalyst that draws together people with similar political attitudes, who in turn form a homogeneous micro-environment where intra-household learning on political trust and attitudes are both strong and self-enhancing. In order to examine the effect of the Famine experience on survivors' subsequent marriage decisions, we focus our attention on two key outcome variables: *(i)* whether one's spouse had experienced the Famine; and *(ii)* whether one's spouse was employed by government-related entities, which consisted of government and its agencies, army, state owned enterprises, collective firms and organizations, and village administrative bodies. The former measures a *direct* assortative mating based on shared Famine experience, where the shared Famine experiences among the couples may strengthen solitary memory.[56] The latter captures an *indirect* sorting mechanism through career types. The employment type of one's spouse may impact the frequency of his/her interaction with the government and its agents, affecting the opportunity for further learning and belief updating on the government's trustworthiness.[57]

[54] In Section 7.2, we provide evidence suggesting that the results are unlikely to be driven by persistent differences in government policies differentially targeted at the Famine survivors.

[55] The social dimensions of an individual's political trust and attitudes would be the strongest among intra-household members, due to their high frequency of interaction and mutual convergence over time.

[56] It is unclear whether the Famine experience was a salient or non-salient screening mechanism on the marriage market. Nevertheless, several anecdotal evidences suggest that shared starvation experiences during the Famine form a specific bond between the husband and wife.

[57] One can also consider this as a revealed preference consequence of the Famine in the marriage market due to the increased political distrust among the Famine victims – if one does not trust local government officials, it is also less likely for him/her to marry a government-related employee, *ceteris paribus*.

In order to identify inter-spousal effects, we restrict the sample according to the following criteria: *(i)* conditional on being married, current marriage was initial marriage (which amounts to 96.49% of the couples); *(ii)* current marriage took place after the Great Chinese Famine (so that marriage decisions were made after the Famine exposure); *(iii)* both spouses were surveyed in the CFPS-2010.[58] For employment-related outcomes, we further require both spouses to be currently employed since we do not observe the employer information if an individual is reported as retired.[59]

6.1.1 Famine Experience of One's Spouse

We first estimate the effect of an individual's own Famine experiences on the likelihood that his/her spouse has also experienced the Famine. In Table 8, we present estimated effects, where for the specifications across all the columns, we include a full set of *village* of residence fixed effects and birth cohort fixed effects, and we allow standard errors to be correlated within the province of birth cells. In other words, we exploit the individual level variation in Famine experiences within village and within the corresponding birth cohorts. This specification absorbs (conservatively) the average differences of factors such as employment trend, economic development, gender ratio across villages and across birth cohorts that are likely to influence individuals' marriage market decisions.

More notably, the *village* of residence fixed effects absorbs the variation in interpretation of the Famine experiences, depending on survivors' observation of drought during the Famine. Nearly 100% of the married couples among the sample of interest (those *directly* susceptible to the Famine) were born in the same county of residence. In other words, vast majority of the married couples shared the similar interpretation of the Famine, conditional on having personally experienced it.

In order to avoid double-counting, we run separate regressions for both genders, first for male, then for female. Column 1 and 3 shows for both genders, if an individual have experienced the Famine himself/herself, he/she became significantly more likely to marry a person who shared his/her Famine experience. In particular, females did so to a greater degree than male. In column 2 and 4, we use alternative specifications that include controls for the literacy status of the individual's father and mother, as well as the political label assigned to the household (which indicates the asset level owned by the ancestors). These controls aim to capture the fact that people used the Famine experience merely as a marriage market signal for parental characteristics and family background. We find that adding these controls has little effect on the estimated effect of assortative mating based on the Famine experiences. This suggests that rather than serving as a proxy

[58] To maintain a balanced sample, we restrict sample to individuals who have non-missing value in all the control variables that we use for this exercise (parents' literacy status and ancestry's political label) even in the specification that we do not include control variables. Results remain almost unchanged when we include these individuals with missing control variables – the results are available upon request.

[59] The average age among the restricted sample is 61.6. Thus, we are essentially identify the effects out of a younger subsample from the restricted sample.

for other considerations in the marriage market, the Famine experience bears significance in itself.

Nevertheless, the effect identified thus far could be generated mechanically. By definition, an individual with the Famine experience is more likely to reside in a village that was more severely hit by the Famine. Hence, a Famine-affected individual would have a higher probability on average to be matched with a fellow Famine-affected individual on the marriage market from the same village, even if it was a purely random match. To address this concern, we estimate an alternative specification that takes into account of the Famine severity (at the village$\times$cohort level) that may mechanically generate higher match rates of the Famine-affected couples. The Famine severity index is constructed as the following in order to capture the relevant sub-population in the marriage pool: for each individual, we assign her with an index of the proportion of individuals with Famine experiences within her corresponding residence village, *and* within the 5 consecutive cohorts around her birth year.[60]

We re-run our baseline specification, interacting individual's actual Famine experience with his/her corresponding Famine severity index. Same as previously, we include a full set of *village* of residence fixed effects and birth cohort fixed effects, and we allow standard errors to be correlated within the province of birth cells. We again run separate regressions for both genders to avoid double-counting, presenting results first for male, then for female. Column 5 and 7 show that for both genders, coefficient estimate of $(FamineExperience = 1) \times FamineSeverity$ almost doubles the size of $(FamineExperience = 0) \times FamineSeverity$. As we described previously, one may consider the term $(FamineExperience = 0) \times FamineSeverity$ to capture the "mechanical" effect arose from the different densities of the Famine-affected individuals within the available marriage pool: places hit by severer Famine would lead an individual to be matched with a Famine-affected spouse with a greater probability, even if he/she had no intention to do so. However, the much larger coefficient estimate on $(FamineExperience = 1) \times FamineSeverity$ suggests that individuals who have experienced the Famine themselves were more likely to be matched with other individuals who shared similar experiences, and such increase in matching likelihood could not be accounted for by the baseline mechanical rates alone. In column 6 and 8, we present results from an alternative specification where we in addition control for the literacy status of the individual's father and mother, as well as the political label assigned to the household – the results are very similar across the two specifications.

6.1.2 Employment of One's Spouse

We now proceed to examine whether Famine experiences influenced one's decision to marry someone employed by government-related entities. Using the employment type of one's spouse (rather than one's own employment) to capture the behavioral consequences of political distrust merits two advantages. First, individuals and their families in pre-reformed China had much

[60] Our results are robust to alternative definitions of village Famine severity index, such as the one based on proportion of individuals with Famine experience within a corresponding gender group in the residence village.

more direct control over one's own marriage market choices, compared to one's own labor market decisions.[61] In particular, an important dimension of an individual's *marriage* market decisions was based on the employment types of his or her potential spouses.[62] Second, even among those who actually made labor market decisions themselves, the relationship between political distrust and their preference over government-related employers was ambiguous. On one hand, political distrust may push an individual away from the government-related jobs precisely due to distrust. On the other hand, political distrust may motivated an individual to "get into the regime" in order to receive political protection and insurance. Such ambiguity became milder when one made marriage market decisions based on the employment type of his/her spouse, since distrust and the associated social stigma were likely to dominate desires to hedge political risks.

We estimate the effect of an individual's own Famine experiences on the likelihood that his/her spouse was employed by government-related entities. We use the same baseline specification as in Section 6.1.1, where we include a full set of *village* of residence fixed effects and birth cohort fixed effects, and we allow standard errors to be correlated within the province of birth cells. In particular, the *village* fixed effects absorb the average regional differences in job availability across various sectors.

Table 9, Column 1, shows that having experienced Famine made an individual less likely to marry a person employed by government-related entities. It suggests that as Famine experience left an individual more distrusting towards the local government, such distrust extended to the actual personal agents employed by entities related to government. Note that only approximately 1% of the married couples in our sample were both employed by the government-related entities. Hence, double-counting is not a huge concern in this case. In Column 2, we confirm that Famine experiences indeed had no significant impact on individual's self employment, due to the opposing forces that affected one's decisions on own employment that we have outlined above. In addition, this suggests that the assortative mating based on the career type of one's spouse was a rather separate mechanism from that based on the Famine experience itself, since the latter alone would not be able to generate this pattern that we observe here.

In Table 9, Column 3 and 4, we break down the sample by own gender, presenting the coefficient estimates first for female subsample, then for male subsample. It is evident that the previously identified relationship between Famine experiences and the choice of spouse's employment type only existed among females (and their male spouses, correspondingly). During the period of the Great Chinese Famine and the Great Leap Forward, majority of local government officials and

[61] Occupational choices themselves were largely beyond an individual's control, until the state government gradually abolished centralized job allocations starting in late 1980s.

[62] In pre-reformed China, it was unlikely that an individual could actively influence the career decisions of his or her spouse. However, one had much higher degree of freedom to choose wife or husband, taking the potential spouse's employment types as given. In addition, China's marriage law specifies that legal "marriageable age" to be 22 years old for males and 20 years old for females. Hence, most marriages took place after the couples already made their initial employment decisions. As a robustness check, we restrict our sample to individuals who married after 20 years old, and the results remain very similar.

agents were males. Thus, at the marriage market, females were more likely to associate prospective males employed by government-related entities with the male government officials who inflicted political distrust during the Famine period. And as we see, such association left females less likely to marry spouses employed by the government-related entities. Therefore, this gender heterogeneity further implies that political distrust induced by Famine experience was indeed the crucial driver for the assortative sorting based on employment type.

6.2 Authoritarian Regime

Lastly, the unique context of the authoritarian regime in China was one of the important factors that contributed to the persistence of Famine's political impact on its survivors. The Communist Party of China and its leaders initiated the Great Leap Forward campaign that directly led to the Great Chinese Famine, and (technically) the same party has remained as the *only* legitimized ruling party in China ever since. In such an authoritarian regime, there was no regular and institutionalized channel to aggregate citizens' political distrust and unfavorable attitudes, and to ultimately affect government policies and incumbent turnover. Hence, the resultant political distrust and unfavorable attitudes due to the Famine were more likely to perpetuate through time, transcending the turnover within the ruling government.

We believe that the trauma of the Great Chinese Famine and its impact on citizens' political distrust and attitudes could be of vital relevance to other contexts of authoritarian regimes. Nonetheless, several complications need to be taken into account of when one assesses the broader external validity of our results, particularly if one attempts to extrapolate the results to more democratic regimes. On one hand, as discussed above, lack of political turn-overs in authoritarian regime contributes to the persistence of political distrust and unfavorable attitudes. Accordingly, the high degree of persistence identified in this paper likely *over-estimates* what would have happened if such trauma was to occur in a more democratic regime. On the other hand, political distrust and attitudes can be much more salient and elastic among citizens in democratic regimes as compared to those in authoritarian regimes, precisely because citizens with extensive political rights understand the importance of their political distrust and attitudes. Along with other citizens, they can react to their distrust and attitudes with immediate actions such as political participation and organized protests. Hence, if high salience generates a high degree of persistence (for example, psychologically salient sentiments from the past are more likely to be recalled when one makes present decisions)[63], then our estimated results on persistence may actually *under-estimate* those in the context of more democratic regimes. It is beyond the scope of this paper to discern which aspect dominates.

[63]For instance, Mullainathan (2002) provides a theoretical model of bounded rationally that features selective recollection based on salience.

7 Discussion

7.1 Robustness Checks

Different clustering We first reproduce our baseline specification introduced in Section 4.1 in Table 10, Panel A. In our baseline specifications, we estimate the empirical model and cluster the standard errors at the province level, the level at which our measurement of drought levels varies. One may be concerned that our baseline specification only allows error terms to be correlated across individuals belonging to the same residence province across birth cohorts, but not correlated across individuals within same birth cohorts across provinces. We hence re-estimate our baseline specifications, now with standard errors clustered at the birth cohort level. See Table 10, Panel B. In addition, we re-estimate our baseline specifications, now allowing for two-way clustering by residence province and by birth cohort. We show these results in Panel C of Table 10. We find that our statistical inferences are not greatly affected by these alternative clustering choices.

County-level fixed effects In addition, we also re-estimate our baseline specification by including a full set of county fixed effects, birth cohort fixed effects, and we allow standard errors to be correlated at the province level. Results are shown in Table 10, Panel D. Estimated effects from our baseline specification remain qualitatively unchanged comparing to this more conservative specification. County-level fixed effects absorb all differences across counties, such as county government's quality, reputation, and policies.

Reassign hunger experience (pseudo-treatment as falsification test) We next demonstrate the statistical power of the inferences using our baseline specification by conducting falsification tests using pseudo-treatment. We compare the effect of Famine experience on all 8 of the outcome variables against the distribution of pseudo-treatment effects that we estimate with our baseline specification when we *randomly* assign both the Famine experience to individuals, and the drought level to provinces, simultaneously. More precisely, we maintain the empirical fact that approximately 24.3% individuals among the rural dwellers who are susceptible to direct Famine experience actually experienced hunger during the Famine. We hence randomly assign the Famine experience to consistently 24.3% of the subsample of interest. We keep the true values of the drought level during the Famine, and we draw a random number *with* replacement from these values to be assigned to a province. We randomly draw 5,000 sets of pseudo treatment assignments, and re-estimate our baseline specification, with the full set of political distrust and attitude outcome variables. For all the pseudo-treatment effect estimates, we again control for the province of residence and birth cohort fixed effects, and cluster standard errors at the province level.

In Figure 3, we plot the distribution of t-statistics from the 5,000 estimated pseudo-treatment effects for each outcome, and mark in the figure the location of the t-statistic of treatment effect using the *actual* Famine experience and regional drought level during the Famine within the

pseudo-treatment effect distribution. We also report the share of the pseudo-treatment t-statistics that is larger than the actual t-statistics, in absolute value. One can consider this measure as analogous to a p-value in this placebo exercise. Across all outcomes considered, one can see that the inferences drawn are similar to the standard regressions: under the null of no effect of the Famine experience interacting with regional drought level during the Famine, random variation in distrust and attitudes across individuals would very rarely produce t-statistics as large as the ones we find resulting from the actual Famine experiences and regional drought levels.

7.2 Ruling Out Alternative Hypotheses

7.2.1 Drought Operated Through Confounding Factor of Famine Severity

As we discussed in Section 4.5.1, one may be concerned that drought affected the political trust and attitudes of individuals with Famine experiences through a complex channel of its impact on Famine severity, rather than through the political inference that we propose. In fact, this is empirically testable using drought affecting agricultural production *prior* to the Famine.

Meng, Qian and Yared (2013) proposes that an "inflexible and progressive" government procurement policy was responsible for causing the Famine. In particular, it explains the high regional variation in Famine severity. Due to communication hindrances and delays, the central government set annual regional procurement targets based on *lagged* production capacity. The target thus failed to adjust for any contemporaneous productivity shocks that occurred during the Famine period. Since historically more productive regions encountered a higher magnitude drop in production in absolute terms, the "production gap" was larger in those regions. Hence, this created the peculiar pattern of positive correlation between historical production and Famine severity, as identified in Meng, Qian and Yared (2013). In line with this argument, drought shocks affecting agricultural production several years *prior* to the Famine should be *negatively* correlated with Famine severity, since those shocks led to lower levels of base year production that central government observed, which in turn resulted in slightly lower procurement targets in those regions during subsequent years. Conversely, drought level affecting agricultural production *during* the Famine should be *positively* correlated with Famine severity, because conditional on the procurement targets that had already been set, lower production during the Famine period widened the "production gap," leading to lower per capita food retention and food consumption.

The fact that drought level influenced Famine severity in opposite directions provides us with an opportunity to test the validity of our identification strategy. If drought that affected agricultural production was correlated with regional Famine severity, which then differentially altered the division mechanisms that determined which groups of individuals were more vulnerable to the Famine, then our estimation of the interaction effects should have opposite signs for drought levels *prior* to the Famine, comparing to those *during* the Famine. Nonetheless, our identification strategy assumes that such division mechanisms were not correlated with contemporaneous

drought levels *and* Famine severity. Thus, the interaction effects should not necessarily carry opposite signs. Indeed, as shown in Table 11, we find that the interaction effects of Famine experience with the drought levels *prior* to the Famine are not statistically significantly different from zero, in accordance with our identification assumption.

Moreover, this result indirectly affirms our preferred interpretation that the identified outcomes reflect Bayesian political inference in a noisy environment. The degree of divergence in political distrust and attitudes between Famine and non-Famine affected individuals only responded to the drought levels *during* the Famine, and it was not responsive to the drought levels *prior* to the Famine. From the perspective of Famine survivors, drought affecting agricultural production *during* the Famine was a much more salient information, since they could readily attribute those observed shocks to the cause of Famine. Although historical drought levels *prior* to the Famine were also useful information for political inference, they were much less salient and hence should play a less important role in shaping political distrust and attitudes.

7.2.2 Selection into Survival

Our study focuses on Famine survivors, since we could not observe the individuals who perished during the Famine. This introduces potential biases caused by selection into survival. Such selection may occur along multiple dimensions. For example, Gorgens, Meng and Vaithianathan (2012) argues that biological traits embodied an important mechanism of selection into survival, where individuals with high stature were more likely to survive the Famine. Meng and Qian (2009) confirms that selection into survival considerably affected the magnitude of Famine effect estimation. In particular, when estimating Famine's impact on health outcomes, selection into survival generates attenuation biases. Moreover, selection into survival may operate in non-biological channels that are directly related to our study – individuals with different levels of political trust *a priori* may have different probabilities of survival during the Famine.

We address the survival selection by employing a similar method introduced in Meng and Qian (2009). We re-estimate our difference-in-differences model after dropping individuals at the lowest quantiles of the distribution of a range of variables, through which selection into survival may be operating: *(i)* direct outcome of political distrust that we primarily focus on in this study; *(ii)* individual's height; and *(iii)* regional availability of alternative food sources. Across these dimensions, selection into survival was most prevalent in the lowest quantiles – if individuals in this range of the distribution were more likely to perish conditional on having experienced the Famine, then we observed disproportionally more individuals who did not experience Famine in this region of the distribution.

The survival selection correction results are shown in Table 12, Panel B, C, and D for the three correction methods outlined previously. They remain quantitatively similar to our baseline estimation (Panel A). In particular, when we use height and regional availability of alternative food sources to correct for survival selection, the estimation of both main effects and interaction effects

increase, suggesting that survival selection may actually cause *attenuation* biases. We provide an extensive discussion of the correction procedure and results in Appendix G.

7.2.3 Confounding Factors of Health, Education, and Labor Market Outcomes

One may be concerned that the identified effect of the Famine on political attitudes merely reflect effects due to different health conditions, educational attainment, or income levels between Famine and non-Famine affected individuals. We present evidence that health, education, and income are unlikely to be confounders in our case.

First, while previous studies have identified that the Famine adversely affected its survivors in terms of their health conditions, biological traits, educational attainment, labor market outcomes and income level (e.g. Chen and Zhou (2007), Meng and Qian (2009), among others). However, all these studies also agree that Famine's impact along these dimensions (in particular, health conditions) was the strongest for individuals who went through the Famine at extremely young or old age. In fact, nearly all previous studies show that the Famine's adverse effect was mainly concentrated on fetus in-utero, infants, or individuals in their early childhood during the Famine. Using individual level Famine exposure measurement, our CFPS sample confirms this trend – Famine's impact on health, biological traits, and educational attainment existed for individuals younger than 5 years old during the Famine, and the effects diminished for older cohorts. This could arise due to a range of reasons: for example, while the adverse effect of malnutrition during infancy was long lasting, effects of food deprivation during adulthood could be transitory and easy to make up.

In contrast, our proposed mechanism of political inference was most prevalent among adult cohorts. Political inference depended on the cognitive ability to process political information during the Famine. Therefore, information was more salient to older individuals at the time they experienced hunger.[64] Accordingly, they were more likely to make political inference based on the Famine. Thus, the Famine's adverse effects in the domains of health, education, and income were less likely to confound the political outcomes for the subsample of population that we focus on in this study. In addition, we re-estimate our baseline specification by restricting our sample to individuals older than 5 years old by the end of the Famine to eliminate the group that was most susceptible to adverse effects on other dimensions. In Table 13, Panel A, we replicate the estimation from our baseline specification. In Panel B, we show that our results are robust to this additional restriction.

Second, to further rule out the confounding factors due to the Famine's adverse effects along other dimensions, we re-estimate our baseline difference-in-differences specification adding a range of individual controls: biological traits of weight and height, non-biological characteristics of high school education attainment and total personal annual net income. In Table 13, we present

[64] We mechanically exclude individuals who are very old during the Famine, since it is unlikely for them to be still alive in 2010 for the CFPS survey.

separate estimations only including biological (Panel C) and non-biological controls (Panel D), respectively. Then we include both biological and non-biological controls simultaneously and present the results in Table 13, Panel E. These estimations are not quantitatively significantly different from our baseline estimation, indicating that Famine's adverse impacts on biological traits, education, and income were unlikely to be the main driving force of our results.

7.2.4 Persistent Differences in the Local Government

One may be concerned that our estimation is upwardly biased for the true effect of Famine on political trust if regions with high Famine severity had different paths of local polices during post-Famine periods. Specifically, if local government officials were willing to sacrifice local residents' well being in order to ruthlessly adhere to the procurement policies (Kung and Chen (2011)), these same government officials may have been more likely to impose further policies that impair local residents' political trust. This may be particularly concerning given our earlier discussion that drought affecting agricultural production may be correlated with realized Famine severity.

By including a full set of province fixed effects in our baseline difference-in-differences specification, we take into account of the average differences across provinces – in particular, the differences in actual quality of province-level local governments. In Table 10, Panel D, we also show that the same patterns of results hold when we instead include a full set of *county* fixed effects. County level government represents the 3rd lowest administrative divisions in China, only above township and villages.[65]

As we discussed in Section 4.3, the interaction of the Famine experience and regional drought level may merely capture regional differences in the quality and competency of the local government. This imposes two challenges to our interpretation of the results we present: *(i)* the Famine survivors responded to drought not through political inference, but rather as a result of differences in the local governments quality during the Famine; and *(ii)* the Famine's impact on political distrust and attitudes persist through five decades not because the Famine victims hold onto their grudges, but rather due to the fact that systematic differences in local governance endure for decades.

In order to address this concern, we use younger cohorts living in rural area who were not *directly* susceptible to experiencing the Famine themselves, and examine whether the local Famine severity interacting with the regional drought level has an impact on their political trust and attitudes. We run a modified version of our baseline specification on the outcome variable of political distrust: we restrict our sample to rural residents born after 1962; we include a full sets of cohort and province of residence fixed effects, and we cluster standard errors at the province of residence level. Since none of these respondents have direct experiences of hunger during the Famine themselves, we assign them a corresponding *Village Famine Severity* index that is village$\times$gender

[65] Village mainly serves as an organizational division (census, mail system, etc.), and does not have much importance in political representative power.

specific.[66] In Table 14, column 1, we present the benchmark results using our original sample of cohorts born before 1962.[67] Column 2 and 3 shows the coefficient estimates, first for the sample born between 1962 and 1978 (prior to the reform era), and then for the sample born after 1978 (post-reform era). For both of these samples of younger cohorts, point estimates on the coefficients shrink considerably comparing to those of the benchmark sample, and the coefficients switch signs for the post-1978 cohorts. This indicates that to the extent that systematic differences in the local government captured by the *Famine Severity* $\times$ *Drought Level* may matter, personal experiences of the Famine are necessary for the political inferences related to the Famine.

Lastly, one may worry that the local government policies persistently discriminated against individuals who had hunger experiences during the Famine. Given that hunger experiences themselves may not be particularly salient from the local government's perspective, policies are unlikely to be designed and/or implemented by tagging specifically on the hunger experiences. However, one may still be concerned that if the Famine experiences are correlated with particular socioeconomic characteristics, then polices targeted at those sub-population may indirectly create policy discrimination against the Famine victims. To address this concern, we estimate alternative specifications that include various measures of county-level policies that are targeted only at a subgroup of the population (e.g. welfare spendings on low socioeconomic class; cultural spendings on medium to high socioeconomic class). Controlling for these county-level policy measurements has little impact on the estimated effects of the Famine on political trust and attitudes.[68]

8 Conclusion

Citizens learn about the trustworthiness of their government from a variety of sources, particularly during the critical junctures when citizens directly interact with the government. Learning from personal experiences in these historical events can persistently shape citizens' political beliefs and attitudes. One of such critical juncture is the Great Chinese Famine: between 1958 and 1962, approximately 30 million citizens perished as a result of severe food shortage and systematic misallocation of food, in the aftermath of the Great Leap Forward campaign led by the Communist Party of China. Using a novel dataset that reports individual hunger experience during the Famine, we show that five decades past the Famine trauma, citizens who experienced the Famine still exhibited significantly higher levels of political distrust, and held unfavorable political attitudes regarding a range of socioeconomic issues in contemporary China. In particular, if citizens

[66] The *Village Famine Severity* index is constructed as the proportion of individuals reported the Famine experience among those *directly* susceptible, within the corresponding village of residence *and* gender cell. We standardize the raw proportions to form the final index, in order to make coefficient interpretation easier. The results presented here are robust to alternative constructions of the Village Famine Severity index.

[67] Notice the coefficient estimates in column 1 differ slightly from those shown in Table 3, because here instead of using individual's self-reported experience during the Famine, we substitute that with the constructed *Village Famine Severity*.

[68] We do not present the results of these specifications for the interest of space. Results are available upon request.

experienced hunger in regions with very little drought during the Famine, they were much more likely to attribute the Famine to government failures rather than natural disaster, hence exhibiting even more political distrust and unfavorable political attitudes. We rule out many alternative hypotheses that may explain this results. These results are also robust to a variety of alternative specifications. We also suggest that homogeneous household plays a key role in the persistence of the Famine's impact. The Famine experiences drew together people with similar political trust and attitudes, which in turn reinforced individual's own political trust and attitudes over time.

Our findings provide empirical evidence on how do citizens form beliefs and attitudes about the government by extracting informative components from their personal experiences. Moreover, we demonstrate how persistently do citizens hold onto these political trust and attitudes formed during a historical trauma, and what might explain such persistence. These findings also provide support for the broad theory of path-dependent preference formation. Specifically, we document that the impact of the Famine experiences extends to domains not directly related to the event itself. The Famine victims viewed a range of socioeconomic issues in China today as relatively more severe, suggesting a persistent shift in their policy preferences as well as expectations towards government performances. In other words, the Famine-induced political distrust has gradually developed into stable political ideology. Lastly, our suggestive evidence on the behavioral consequences of political distrust (for example, decisions in the marriage market) indicates that citizens' political preferences, trust and attitudes should be analyzed dynamically. Divergent political preferences, trust and attitudes lead citizens to engage in different types of interactions with the government. These heterogeneous experiences then feedback to further reshape citizen's political preferences, trust and attitudes. This dynamic process of political preferences and attitudes formation deserves further study.

Politically-induced traumas shape citizens' political inference and political attitudes, to the extent that propaganda efforts led by a powerful and authoritarian state such as China were unable to completely undo such effect, despite the state's strong intention to do so. Our findings suggest that the capacity constraints of state propaganda may arise from conflicts among various information sources: *(i)* official propaganda claims; *(ii)* citizen's personal experiences; and *(iii)* citizen's interpretation of their experiences. This complicates the political economy of the state's ability to influence citizens' political beliefs and attitudes. While Cantoni et al. (2014) find that the state can effectively indoctrinate students with its desired political ideology and attitudes via schooling, the achieved ideological outcomes through schooling may face pushbacks or even backlashes, when indoctrinated students accumulate personal experiences through future interaction with the state. The relationship between citizen's personal experiences with the state, the manner in which citizen interprets these experiences, the state's explicit effort to (re)shape political beliefs and attitudes, and the state's capacity to do so, would be a fascinating area of future research.

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Figures and Tables

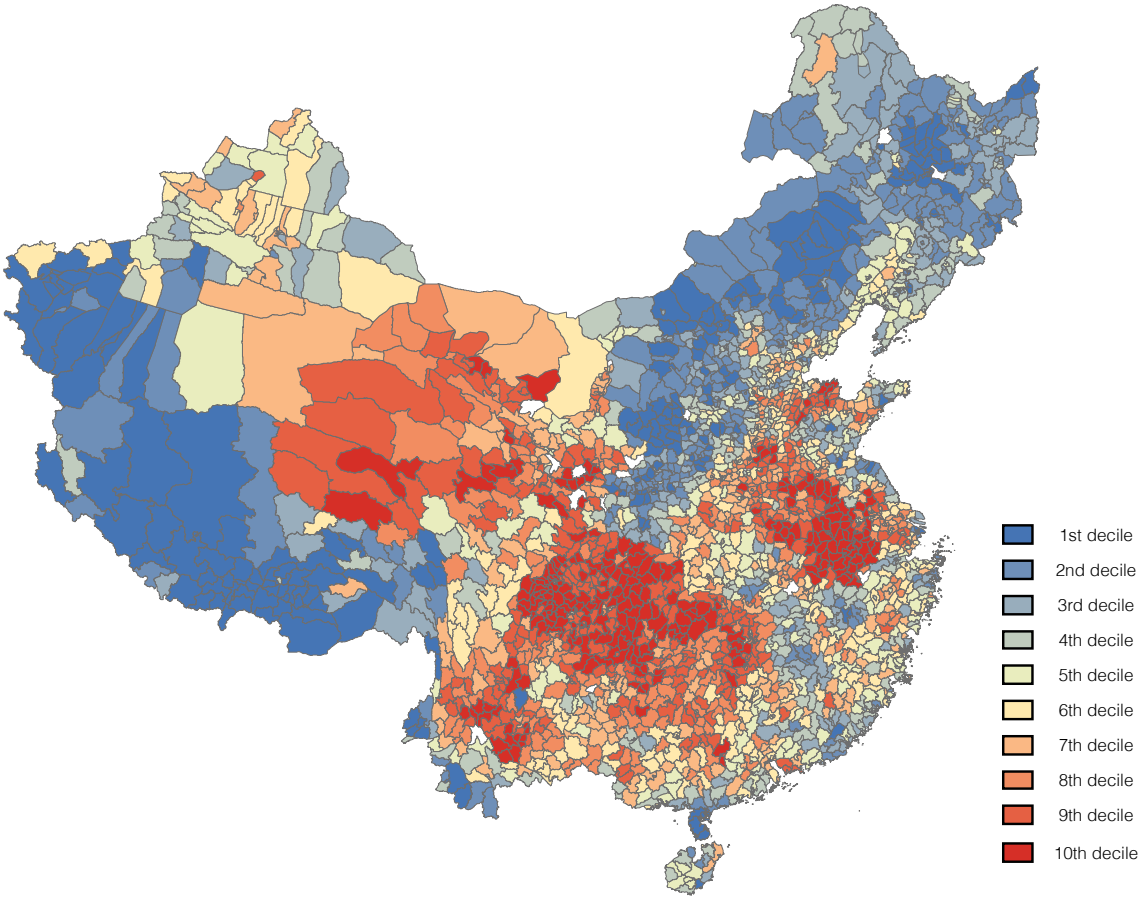

Figure 1: Cohort Loss Caused by the Great Chinese Famine

Figure 2: Proportion of Individuals With Famine Experience, by Age

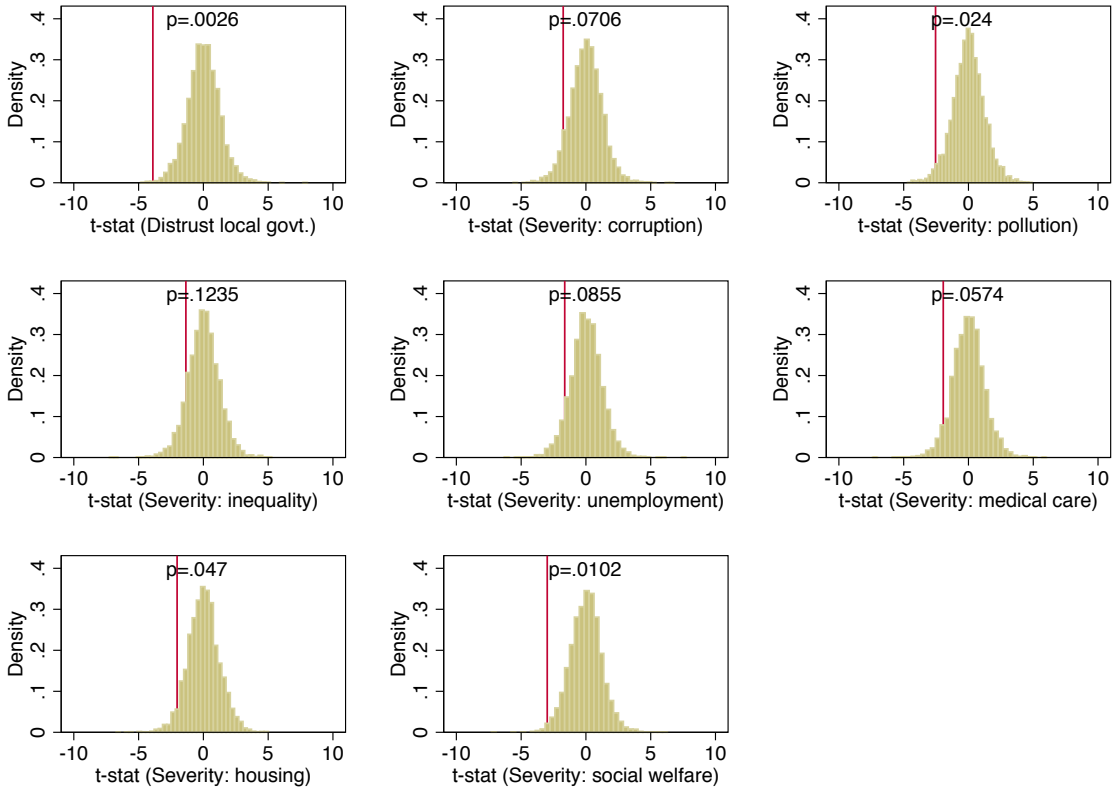

Figure 3: Pseudo-treatment vs. Actual Famine Experiences

Table 1: Summary Statistics & Balance Checks

	All		Non-Famine	Famine	Unconditional		Conditional	
	Mean	Std.Dev.	Mean	Mean	Diff.	p-value	Diff.	p-value
Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Individual-level characteristics								
Age	62.4	8.6	61.4	65.3	3.8	0.000	-	-
Male	0.499	0.500	0.497	0.504	0.007	0.543	-0.216	0.831
Han	0.924	0.265	0.928	0.913	-0.015	0.014	0.664	0.513
# of siblings	3.562	1.984	3.552	3.595	0.043	0.359	0.204	0.001
Migration at Age 3	0.005	0.072	0.006	0.004	-0.002	0.238	-0.001	0.524
Height	162.3	8.1	162.4	162.0	-0.309	0.112	-0.2	0.345
Weight	117.5	21.4	117.9	116.2	-1.727	0.001	0.1	0.812
BMI	22.31	3.41	22.38	21.11	-0.271	0.001	0.03	0.770
Father Illiterate	0.805	0.397	0.801	0.811	0.017	0.551	-0.003	0.818
Father CCP Member	0.051	0.221	0.050	0.054	0.004	0.662	0.000	0.943
Mother Illiterate	0.978	0.146	0.973	0.987	0.014	0.021	0.011	0.090
Mother CCP Member	0.006	0.077	0.006	0.007	0.001	0.688	0.001	0.807
Parent Poli. Label	0.058	0.234	0.054	0.070	0.016	0.004	0.005	0.475
Distance to Hospital	1.698	4.303	1.646	1.862	0.217	0.032	0.014	0.900
Distance to School	13.77	17.37	13.91	13.35	-0.56	0.178	-1.04	0.230
Distance to Downtown	32.37	64.61	31.73	34.38	2.66	0.081	-0.07	0.688
Panel B: Village-level characteristics								
Village Area	34.38	321.1	36.36	27.68	-8.68	0.230	-8.01	0.458
Village Household #	952.4	1147.5	966.8	905.9	-60.9	0.013	-34.1	0.504
Village Labor Parti.	0.461	0.245	0.458	0.470	1.171	0.043	-0.467	0.736
Village Agri. Prod.	729.8	1510.0	728.4	734.2	5.7	0.885	41.6	0.442
Village Non-Agri. Prod.	699.4	2004.3	721.5	630.1	-91.4	0.084	6.6	0.974
Village Avg. Income	3839	3315	3917	3570	-356.3	0.000	89.58	0.541
Natural Disaster Zone	0.268	0.443	0.252	0.316	0.064	0.000	0.039	0.170
Natural Resource Zone	0.080	0.272	0.088	0.058	-.030	0.000	-0.013	0.327
Famine Experience	0.243	0.429	0	1	–	–	–	–

Columns 5 and 6 report raw (unconditional) differences in means across *hunger* and *no-hunger* groups, and the p-value for a t-test of differences in means. Columns 7 and 8 report conditional differences: for Panel A, individual-level characteristics are conditional on birth cohort and province of residence fixed effects, and standard errors clustered at province level; for Panel B, village-level characteristics are conditional on birth cohort and residence province fixed effects, and standard errors clustered at province level. "Migration at 3yo" are dummy variables equal to 1 if individuals migrate to different cities or beyond at age 3, comparing to places of birth. "Father Illiterate" "Father CCP Member" "Mother Illiterate" and "Mother CCP Member" are all dummy variables indicating the parents' characteristics when the individual was 14 years old. For these variables, we restrict sample to those who are at least 14 years old at the beginning of the Famine, to make these parental characteristics pre-determined with respect to the Famine. "Parent Pol. Label" are dummy variables equal to 1 if individuals belong to families that are labeled as landlord or rich peasants during the Land Reform in 1950s. Number of observations: 9,993 (7,564 no hunger; 2,429 hunger).

Table 2: Balance Checks of Famine Experience by Drought-Level

	Famine			Non-Famine		
	High Drought	Low Drought	p-value	High Drought	Low Drought	p-value
Variable	(1)	(2)	(3)	(4)	(5)	(6)
Age	65.4	65.1	-	61.1	61.2	-
Male	0.511	0.504	0.447	0.503	0.493	0.503
Han	0.965	0.745	0.192	0.962	0.838	0.114
# of siblings	3.599	3.665	0.810	3.577	3.804	0.079
Migration at Age 3	0.003	0.005	0.232	0.003	0.013	0.118
Height	162.7	160.6	0.212	163.0	162.0	0.307
Weight	117.0	112.3	0.292	118.7	116.5	0.561
BMI	22.08	22.67	0.417	22.36	22.18	0.724
Father Illiterate	0.814	0.821	0.792	0.806	0.777	0.355
Father CCP Member	0.059	0.043	0.174	0.059	0.050	0.545
Mother Illiterate	0.988	0.991	0.634	0.978	0.962	0.473
Mother CCP Member	0.009	0.005	0.343	0.005	0.007	0.529
Parent Poli. Label	0.070	0.073	0.822	0.050	0.062	0.117
Distance to Hospital	1.687	2.208	0.474	1.486	1.832	0.548
Distance to School	12.31	17.02	0.071	13.68	15.72	0.395
Distance to Downtown	33.70	39.03	0.617	32.50	32.56	0.992

Columns 1 and 2 report means for *high drought* and *low drought* regions, respectively, conditional on having experienced the Famine. Columns 4 and 5 report means for high drought and low drought regions, respectively, conditional on having not experienced the Famine. High drought regions are provinces with drought level above median, low drought regions below the median. Columns 3 and 6 report p-value for a t-test of conditional differences in means across the *high drought* and *low drought* regions, conditional on birth cohort fixed effects, and standard errors clustered at province level. "Migration at 3yo" are dummy variables equal to 1 if individuals migrate to different cities or beyond at age 3, comparing to places of birth. "Father Illiterate" "Father CCP Member" "Mother Illiterate" and "Mother CCP Member" are all dummy variables indicating the parents' characteristics when the individual was 14 years old. For these variables, we restrict sample to those who are at least 14 years old at the beginning of the Famine, to make these parental characteristics pre-determined with respect to the Famine. "Parent Pol. Label" are dummy variables equal to 1 if individuals belong to families that are labeled as landlord or rich peasants during the Land Reform in 1950s. Number of observations: 9,993 (1,522 hunger in high drought regions; 593 hunger in low drought regions; 4442 no-hunger in high drought regions; 1,873 hunger in low drought regions).

Table 3: Political Inference From the Famine

	Trust		Policy Attitudes							
Dependent variable:	Distrust towards local government	*(Placebo)* Distrust towards strangers	Severity: corruption	Severity: pollution	Severity: inequality	Severity: unemployment	Severity: medical care	Severity housing	Severity social welfare	Anderson z-score (policy attitudes)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Famine Experience	0.608***	0.159	0.952*	1.070**	0.543**	0.761*	0.892**	0.887*	0.955**	0.402*
	[0.121]	[0.281]	[0.514]	[0.386]	[0.228]	[0.421]	[0.386]	[0.444]	[0.371]	[0.199]
Famine Experience ×	-0.186***	-0.065	-0.278*	-0.306**	-0.109	-0.202*	-0.245*	-0.275*	-0.339***	-0.112*
Drought Level	[0.048]	[0.081]	[0.158]	[0.121]	[0.080]	[0.124]	[0.126]	[0.136]	[0.113]	[0.059]
p-value	(0.001)	(0.426)	(0.092)	(0.018)	(0.190)	(0.100)	(0.064)	(0.054)	(0.006)	(0.071)
Observations	8137	8123	7411	7735	7780	7585	7849	7773	7677	7005
Mean DV	4.649	7.898	5.471	4.989	6.306	5.299	5.077	4.826	4.739	0
Std.Dev. DV	2.506	2.186	3.125	2.751	2.746	2.684	2.847	2.846	2.787	1

*: Significant at 10%; **: 5%; ***: 1%. All regressions include a full set of residence province and birth cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province level. Number of clusters: 25. P-values are reported for the coefficient estimates of *Famine Experience* × *Drought Level*.

Table 4: Political Trust, Political Attitudes, and Performance Evaluation

Dependent variable:	Distrust towards local government	Distrust towards stranger *(Placebo)*	Anderson z-score (policy attitudes)
	(1)	(2)	(3)
Performance Evaluation	0.404***	0.020	0.064***
	[0.056]	[0.023]	[0.016]
Famine Experience	0.592***	0.245	0.450**
	[0.141]	[0.266]	[0.208]
Famine Experience ×	-0.190***	-0.081	-0.126*
Drought Level	[0.050]	[0.076]	[0.062]
p-value	(0.001)	(0.296)	(0.051)
Observations	7283	7265	6399
Mean DV	4.649	7.898	0
Std.Dev. DV	2.506	2.186	1

*: Significant at 10%; **: 5%; ***: 1%. All regressions include a full set of residence province and birth cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province level. Number of clusters: 25. *Performance Evaluation* is citizen's rating of government's performance during previous year (1 = a lot of achievement; 5 = worse than before). P-values are reported for the coefficient estimates of *Famine Experience* × *Drought Level*.

Table 5: Scale of the Political Inference Effect on Politial Distrust

Experiences & Factors	Effect Size on Political Distrust	Avg. Year of Occurrence
Panel A: Famine Experiences		
Famine *(maximum political inference)*	0.628	1960
Famine *(political inference with 2 s.d. drought difference)*	0.372	1960
Panel B: Important Factors		
Senior High School Education or Above	0.065	-
Not a Member of CCP	0.208	-
Panel C: Non-Famine Related Experiences		
Negative Experiences with Local Government	0.650 - 0.850	2010
Forced Move from Original Residence	0.343	1997
Under-compensated Govt. Land Acquisition	0.396	2003

Negative experiences with local government include the experience of unfair policies, conflict with local government, unfair fees collected by local government, etc.

Table 6: Heterogeneous Effect by Information Consumption

Dependent variable:	Distrust towards local government					
	Electricity Coverage Prior to 1978		Consume News on Social Issues		Access to Cell Phone	
	No	Yes	No	Yes	No	Yes
	(1)	(2)	(3)	(4)	(5)	(6)
Famine Experience	1.018***	0.106	0.741***	0.262	0.843***	0.421*
	[0.244]	[0.452]	[0.151]	[0.227]	[0.652]	[0.228]
Famine Experience ×	-0.295***	-0.040	-0.241***	-0.057	-0.265***	-0.105
Drought Level	[0.087]	[0.123]	[0.056]	[0.076]	[0.052]	[0.079]
p-value	(0.003)	(0.747)	(0.000)	(0.461)	(0.000)	(0.196)
Observations	4545	2742	5584	2553	4555	3582
Mean DV	4.658	4.564	4.639	4.672	4.535	4.792
Std.Dev. DV	2.505	2.517	2.547	2.418	2.526	2.474

*: Significant at 10%; **: 5%; ***: 1%. All regressions include a full set of residence province and birth cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province level. Number of clusters: 25. P-values are reported for the coefficient estimates of *Famine Experience* × *Drought Level*.

Table 7: Heterogeneous Effect by Gender

Dependent variable:	Distrust towards local government		Anderson z-score (policy attitudes)	
	Male	Female	Male	Female
	(1)	(2)	(3)	(4)
Famine Experience	0.548***	0.709***	0.564***	0.247
	[0.168]	[0.252]	[0.192]	[0.250]
Famine Experience ×	-0.144**	-0.241**	-0.151**	-0.077
Drought Level	[0.052]	[0.096]	[0.055]	[0.077]
p-value	(0.011)	(0.019)	(0.012)	(0.328)
Observations	4109	4028	3688	3317
Mean DV	4.653	4.646	0	0
Std.Dev. DV	2.471	2.542	1	1

*: Significant at 10%; **: 5%; ***: 1%. All regressions include a full set of residence province and birth cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province level. Number of clusters: 25. P-values are reported for the coefficient estimates of *Famine Experience* × *Drought Level*.

Table 8: Assortative Mating: Spouse's Famine Experience

Dependent variable:	Spouse with Famine experience							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Self Gender:	Male	Male	Female	Female	Male	Male	Female	Female
Famine Experience	0.310***	0.309***	0.410***	0.410***				
	[0.033]	[0.033]	[0.034]	[0.034]				
(Famine Experience $= 0$)$\times$Famine Severity					0.082***	0.081***	0.138**	0.138**
					[0.020]	[0.020]	[0.040]	[0.039]
(Famine Experience $= 1$)$\times$Famine Severity					0.227***	0.226***	0.302***	0.303***
					[0.018]	[0.018]	[0.035]	[0.035]
Parent Characteristics Controls	No	Yes	No	Yes	No	Yes	No	Yes
Observations	2683	2683	2550	2550	2683	2683	2550	2550
Mean DV	0.218	0.218	0.262	0.262	0.218	0.218	0.262	0.262
Std.Dev. DV	0.413	0.413	0.440	0.440	0.413	0.413	0.440	0.440

*: Significant at 10%; **: 5%; ***: 1%. Sample restricted to individuals who have non-missing values on parental education and ancestry asset status. Results in column (1) and (3) are robust to the inclusion of those individuals with missing variables. All regressions include a full set of residence village and birth cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province level. The *Famine Severity* index is constructed as the proportion of individuals with Famine experience within a corresponding residence village *and* within the 5-year interval of birth cohorts. We standardize the raw proportions to form the index. Parent characteristics controls include: father's education attainment, mother's education attainment, and parent's political label (dummy variables equal to 1 if individuals belong to families that are labeled as landlord or rich peasants during the Land Reform in 1950s). Number of clusters: 25.

Table 9: Assortative Mating: Spouse's Employment

Dependent variable:	Spouse employed by govt-related entity	Self employed by govt-related entity	Spouse employed by govt-related entity	Spouse employed by govt-related entity
	(1)	(2)	(3)	(4)
Self Gender:	Both	Both	Female	Male
Famine Experience	-0.026**	-0.007	-0.040**	-0.023
	[0.011]	[0.014]	[0.014]	[0.015]
Observations	2792	4137	1577	1215
Mean DV	0.088	0.091	0.119	0.049
Std.Dev. DV	0.284	0.288	0.324	0.215

*: Significant at 10%; **: 5%; ***: 1%. All regressions include a full set of residence village and birth cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province level. Number of clusters: 25.

Table 10: Robustness: Alternative Specifications

Dependent Variables:	Distrust Towards Local Govt.	Anderson z-score (Policy Attitudes)
	(1)	(2)
Panel A: Baseline		
Famine Experience	0.608***	0.402*
	[0.121]	[0.199]
Famine Experience ×	-0.186***	-0.112*
Drought Level	[0.048]	[0.059]
Panel B: Birth Cohort Level Clustering		
Famine Experience	0.608**	0.402***
	[0.225]	[0.097]
Famine Experience ×	-0.186***	-0.112***
Drought Level	[0.067]	[0.031]
Panel C: Two-Way Clustering (Province & Birth Cohort)		
Famine Experience	0.608***	0.402*
	[0.196]	[0.225]
Famine Experience ×	-0.186***	-0.112*
Drought Level	[0.068]	[0.068]
Panel D: County Fixed Effect		
Famine Experience	0.400***	0.296**
	[0.142]	[0.131]
Famine Experience ×	-0.083*	-0.076*
Drought Level	[0.045]	[0.042]
Observations	8137	7005
Mean DV	4.639	0
Std.Dev. DV	2.546	1

*: Significant at 10%; **: 5%; ***: 1%. All regressions include a full set of residence province fixed effect and birth cohort fixed effect, and standard errors are clustered at province level. Column (2) uses standardized z-score index with optimal weighting of all 7 survey questions concerning political attitudes on severity of socioeconomic issues, following Anderson (2008). For Panel A, number of clusters: 25. For Panel B, number of clusters: 44. For Panel C: number of clusters: 25 x 44. Panel D includes a full set of county-level fixed effects and birth cohort fixed effects, and standard error is clustered at province level (number of clusters: 25).

Table 11: Placebo Test: Drought Levels Prior to Famine

Dependent variable:	Distrust towards local government	Severity: corruption	Severity: pollution	Severity: inequality	Severity: unemployment	Severity: medical care	Severity housing	Severity social welfare
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Famine Experience	0.117	0.185	-0.049	0.313	0.898***	0.578	0.413	0.287
	[0.294]	[0.415]	[0.414]	[0.258]	[0.297]	[0.345]	[0.319]	[0.365]
Famine Experience ×	-0.415	-0.580	1.504	-0.814	-5.891**	-3.287	-2.666	-2.542
Pre-Famine Drought Level	[2.181]	[2.984]	[3.165]	[1.982]	[2.622]	[2.528]	[2.764]	[2.883]
p-value	(0.850)	(0.848)	(0.639)	(0.685)	(0.034)	(0.206)	(0.344)	(0.387)
Observations	8822	8053	8395	8447	8233	8518	8439	8339
Mean DV	4.649	5.471	4.989	6.306	5.299	5.077	4.826	4.739
Std.Dev. DV	2.506	3.125	2.751	2.746	2.684	2.847	2.846	2.787

*: Significant at 10%; **: 5%; ***: 1%. All regressions include a full set of residence province and birth cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province level. Number of clusters: 25. P-values are reported for the coefficient estimates of *Famine Experience* × *Pre-Famine Drought Level*.

Table 12: Correction for Survival Selection

Dependent Variables:	Distrust Towards Local Govt.	Anderson z-score (Policy Attitudes)
	(1)	(2)
Panel A: Baseline (Full Sample)		
Famine Experience	0.608***	0.402*
	[0.121]	[0.199]
Famine Experience ×	-0.186***	-0.112*
Drought Level	[0.048]	[0.059]
Panel B: Selection Based On Political Distrust		
Famine Experience	0.395***	0.363
	[0.115]	[0.215]
Famine Experience ×	-0.114**	-0.090
Drought Level	[0.043]	[0.062]
Panel C: Selection Based On Height		
Famine Experience	0.619***	0.423**
	[0.174]	[0.173]
Famine Experience ×	-0.200***	-0.106**
Drought Level	[0.050]	[0.049]
Panel D: Selection Based On Alternative Food Sources		
Famine Experience	0.623***	0.435**
	[0.148]	[0.208]
Famine Experience ×	-0.190***	-0.123*
Drought Level	[0.054]	[0.060]

*: Significant at 10%; **: 5%; ***: 1%. All regressions include a full set of residence province fixed effect and birth cohort fixed effect, and standard errors are clustered at province level. Column (2) uses standardized z-score index with optimal weighting of all 7 survey questions concerning political attitudes on severity of socioeconomic issues, following Anderson (2008). Panel A uses the full sample of Famine susceptible individuals (total number of observations: 8137). Panel B drops individuals at the bottom 10th percentile of the distribution of political distrust from each province (total number of observations: 7014). Panel C drops individuals at the bottom 10th percentile of the distribution of height (total number of observations: 7384). Panel D drops individuals from counties with pasture grass suitability index more than 1.5 times of a standard deviation lower than corresponding provincial average level (total number of observations: 7945).

Table 13: Rule Out Confoudning Effects of Health, Education, and Income

Dependent Variables:	Distrust Towards Local Govt.	Anderson z-score (Policy Attitudes)
	(1)	(2)
Panel A: Baseline		
Famine Experience	0.608***	0.402*
	[0.121]	[0.199]
Famine Experience ×	-0.186***	-0.112*
Drought Level	[0.048]	[0.059]
Panel B: Drop Survivors Younger than 5 at Famine		
Famine Experience	0.593***	0.359*
	[0.149]	[0.093]
Famine Experience ×	-0.180***	-0.096
Drought Level	[0.053]	[0.062]
Panel C: Individual Biological Controls		
Famine Experience	0.359***	0.434*
	[0.141]	[0.211]
Famine Experience ×	-0.172***	-0.123*
Drought Level	[0.051]	[0.063]
Panel D: Individual Non-biological Controls		
Famine Experience	0.581***	0.394*
	[0.116]	[0.207]
Famine Experience ×	-0.183***	-0.108*
Drought Level	[0.048]	[0.061]
Panel E: Individual Biological & Non-Biological Controls		
Famine Experience	0.537***	0.414*
	[0.137]	[0.222]
Famine Experience ×	-0.163***	-0.115*
Drought Level	[0.050]	[0.065]
Mean DV	4.639	0
Std.Dev. DV	2.546	1

*: Significant at 10%; **: 5%; ***: 1%. All regressions include a full set of residence province fixed effect and birth cohort fixed effect, and standard errors are clustered at province level. Column (2) uses standardized z-score index with optimal weighting of all 7 survey questions concerning political attitudes on severity of socioeconomic issues, following Anderson (2008). Panel B drops individuals younger than 5 years old at the end of Famine period (total number of observations: 6558). Panel C includes individual controls of height and weight. Panel D includes individual controls of high school completion and net personal income. Panel E includes individual controls of height, weight, high school completion and net personal income.

Table 14: Placebo Test: Persistent Differences in Local Government Qualities

Dependent Variables:	Distrust towards local government		
	Cohorts Born *Before* 1962	Cohorts Born *Btw* 1962 *and* 1978	Cohorts Born *After* 1978
	(1)	(2)	(3)
Village Famine Severity	0.320***	0.183	-0.069
	[0.079]	[0.122]	[0.160]
Village Famine Severity ×	-0.115***	-0.070*	0.017
Drought Level	[0.029]	[0.035]	[0.050]
p-value	(0.000)	(0.057)	(0.731)
Observations	8137	6484	3683
Mean DV	4.649	5.170	5.373
Std.Dev. DV	2.506	2.467	2.401

*: Significant at 10%; **: 5%; ***: 1%. Column (1) uses sample from rural residents born before 1962 (end of the Famine); column (2) uses sample from rural residents born between 1962 and 1978 (before the reform era started); column (3) uses sample from rural residents born after 1978 (after the reform era began). All regressions include a full set of residence province fixed effect and birth cohort fixed effect, and standard errors are clustered at province level. Robust standard errors in brackets, clustered at the province level. Number of clusters: 25. "Village Famine Severity" index is constructed as the proportion of individuals with Famine experience among those were *directly* susceptible, within the corresponding village of residence village *and* gender cell. We standardize the raw proportions to form the index.

Appendix A Additional Data Sources and Variables

A.1 Cohort Loss

In order to obtain an objective measurement on Famine severity for each county, we estimate the relative size of "cohort loss" for cohorts born during the Great Chinese Famine (1958, 1959, 1960, 1961) using 2000 Census. Similar method has been employed by previous studies on the Famine, such as Meng, Qian and Yared (2013) and Garnaut (2014) among others. Conceptually, the Famine severity is comprised of three elements: *(i)* direct death toll (rise in mortality); *(ii)* unborn population (drop in fertility) and infant mortality; *(iii)* survivors who suffered. While our main measurement of hunger experience captures *(iii)*, component *(iii)* inherently relies on retrospective recollection, and there is no corresponding that is absolutely objective. Thus, we choose to estimate the objective size of *(ii)* for each county. This is due to two reasons. First, estimation based on death toll reports are extremely vulnerable to data manipulation by the Chinese government. Retrospective estimation using contemporary Census data is a much more reliable strategy. Second, the scale of unborn population and infant mortality directly reflects changes in food consumption patterns such as maternal nutrition and endogenous fertility decisions, and these are arguably more sensitive to changes in food availability and Famine severity degrees.

We now outline our *cohort loss* estimation procedure. *(i)* At county level, we use 1952-1954 and 1963-1965 cohort sizes to estimate non-Famine-period county-specific population linear time trend. We exclude the years immediately before and after the Great Chinese Famine period from constructing this non-Famine counterfactural cohort size trend, because the Famine was preceded by two years of below-average fertility, and followed by a short period of above-trend fertility likely due to post-Famine catching up.[1] *(ii)* We use the estimated trend to project "counter-factual" cohort sizes for Famine-affected cohorts (1959-1962). *(iii)* We construct the measurement of *cohort loss* for 1959 to 1962 cohorts as 1 minus the ratio between actual and projected cohort sizes. The *cohort loss* index indicates the scale of lost cohort in percentage terms: for example, a national average of 0.23 suggests that due to drop in fertility and rise in infant mortality, Famine-affected cohorts are on average 23% smaller in size than what they would have been if following the previous population trend. Figure 1 shows the distribution of cohort loss sizes across the nation, where darker shades indicate a higher degree of cohort loss in the corresponding counties. This map confirms the previous discussion that the Great Chinese Famine exhibits high level of regional variation in severity.

[1] The famine is conventionally seen as having commenced in 1958 or 1959, but fertility levels in several provinces that were the focus of state grain collection efforts fell steadily from mid-1955 (e.g. Sichuan, Anhui, and Henan).

A.2 Alternative Food Sources: County-level Famine Buffer Capacity

In order to measure buffer capacity of alternative food sources in each county, we use *Global Agro-Ecological Zones (GAEZ)* data constructed by the Food and Agriculture Organization of the United Nations. GAEZ's crop and plantation suitability index is constructed via a two-stage procedure: *(i)* collect the characteristics of 154 different crops in order to determine environmental conditions for cultivation for each crop type; *(ii)* collect data on the conditions on physical environment for each of the 2.2 million grid cells across the globe. These conditions include: *(a)* 9 variables from global climatic database; *(b)* land and soil characteristics; *(c)* slope of soils by USGS.[2]

For the purpose of this project, we use the suitability index of pasture grass in low input level and rain-fed condition, with baseline measurement from 1961-1990. For each county, I obtain its corresponding index through geo-location. This is chosen for two reasons. First, these conditions mimic the relevant suitability environment during the Great Chinese Famine, when no additional irrigation and input beyond designated collective agricultural production were available. Second, suitability of pasture grass under such condition has little correlation with the suitability of agricultural crops under high input level and irrigation-fed conditions. Our specific suitability measurement addresses this issue. Hence, any suitability measurement correlated with agricultural output would create endogeneity concerns for subsequent analysis. Our measurement addresses this concern, since it is uncorrelated with modern agricultural production, output capacity, and potential economic growth conditions.

[2]More detailed information about GAEZ can be found at `www.fao.org/nr/gaez/en/`.

Appendix B Propaganda Poem During the Great Chinese Famine

Below is a translated excerpt of a propaganda poem published in *People's Daily* editorial special column on Nov.15th, 1960. This poem, along with many others, demonstrates Chinese Communist Party's official stance that the Great Chinese Famine was caused by severe natural disaster, rather than policy failures and systematic misallocation of food.

Even the dearest person cannot match our lovely Party!
Chairman Mao is our intimate friend,
caring for us when we in need!
...

Even among hundred years,
It is rare to find a disastrous year like this.
Drought: the road is so dry that dust covers up our ankles;
Flood: the road is so flooded that boat can run through!
...

We are going to fight through this difficulty and kill the enemies!
Open the south gate of the heaven,
Rush into the heaven's palace,
Ask the gods to bow their heads,
So that they will obey to our demands...
...

All people under the heaven is one family,
Our Chairman Mao is so forward-looking ...
The members of our Communes,
Their hearts are as ambitious as the sky,
So we will definitely declare victory over this disastrous year!
The gods are intentionally creating troubles for us,
they set so many road blocks in front of us!
But we are not afraid!
Because we have the Party, we have Chairman Mao!

Appendix C Benchmarking CFPS Measurement of Political Distrust

C.1 Benchmarking political distrust within CFPS survey

We present suggestive evidence that respondents in our CFPS survey did not exhibit substantial self-censorship when they answered questions regarding distrust towards local government. Along with the question on trust towards local government, we also asked respondents to indicate their trust towards their parent, neighbors, Americans, strangers, and doctors. All of these were measured on a 0-10 scale, with 0 indicating extreme trust, and 10 indicating extreme distrust.

Table A.1 presents the mean and variance of each of these self-reported trust measurement for 3 types of subsamples. Panel A shows the entire adult population in CFPS sample (nearly nationally representative, both rural and urban above 18 years old). Panel B restrict the sample to rural population only. Panel C restrict the sample to Famine susceptible individuals, the same subsample used across the specification in our study.

Across these subsamples, there exists a wide range in how people report their trust towards various agents and entities. In particular, respondents reported local government officials as the third least trustworthy, just after strangers and Americans. The tendency to avoid revealing distrust towards local government officials does not seem to be a major concern here. In particular, reported distrust towards local government has the highest level of variation among all trust measurements. There is no lumping in density at extremely high trust levels. Although there is a mass accumulated at the center value of scale 5 (about 25% of population), a considerable number reported political trust at either tails.

In addition, we plot the distribution of self-reported distrust towards local government first for CCP members in Figure A.1 left panel, and then for employees of government-related entities (civil servants, state-own-enterprise employees, collective firm employees, etc.) in the right panel. These two groups of individuals have strong incentives to report high political trust because failing to do so may impose threats to their political status and job security.[3] Again, we do not see respondents lumping at the left tail of the distribution (high political trust). Rather, both subsamples show slightly higher means of political distrust, and comparable magnitudes of variation in the reportings.

C.2 Comparing political distrusts in other surveys

One may still worry that self-reported trust measurements are biased because of the following reasons: *(i)* face-to-face interview; and *(ii)* political sensitivity due to China's authoritarian regime. We address these concerns by comparing CFPS trust measurement with two additional surveys.

[3]Individuals with high political trust may self-select into party memberships or employees of the state sectors. Hence, high political trust among these subsamples may reflect their truthful reporting.

First, we compare the trust measures in CFPS with a similar survey on trust among elite college students in Peking University that we conducted in 2013.[4] We used an online survey to ask students' level of trust towards a range of political entities. The original questions were on a 1-5 scale. Hence, we convert the CFPS questions to a 1-5 scale in order to make the results comparable across surveys. From now on, we report trust measurement using the following scale: 1 indicates extreme trust, and 5 indicates extreme distrust.

The reported distrust level towards various government bodies among Peking University students were higher than the rural adult subsample in CFPS that we focus on here. In CFPS, rural residents directly susceptible to the Famine reported an average distrust level of 3.57 towards the local government. Students from Peking University, in contrast, report distrust levels of on average 2.02 towards central government, 2.38 towards provincial government, and 2.83 towards local government. Although we cannot differentiate to what degree are these differences driven by face-to-face interview or elite college education, the comparison shows that CFPS sample does not seem to systematically report low levels of distrust towards the local government.

Second, we compare self-reported political distrust between China and other developing countries using Life In Transition Survey (LITS). LITS employs the same face-to-face interview method as CFPS. The countries covered by LITS are comparable to China in the sense that they are all developing countries, many formerly communist regimes, that underwent significant social, economic and political transitions in the recent decades.[5] Table A.2 compares the reported distrust towards local government in CFPS with similar distrust measurements in LITS, where we restrict the sample to the same birth cohorts that we focus on in this study. Again, all the distrust measurements are converted to a uniform 1-5 scale, where 5 indicates extreme distrust. The political distrust measured in the CFPS has comparable mean and variance with that of the LITS.

[4]This survey was designed for a separate project. Please see Cantoni et al. (2014) for more details on the survey and the related results.

[5]The following countries are covered in LITS: Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Former Yugoslav Republic of Macedonia (FYROM), Georgia, Hungary, Kazakhstan, Kyrgyz Republic, Latvia, Lithuania, Moldova, Mongolia, Poland, Romania, Russia, Serbia and Montenegro, Slovak Republic, Slovenia, Tajikistan, Turkey, Turkmenistan, Ukraine and Uzbekistan.

Appendix D The Role of Propaganda

Our findings also provide some suggestive evidence on the capacity and constraints at which political propaganda was able to manipulate citizens' beliefs. Note that the discussion here regarding propaganda is far from conclusive, mainly because in the context of the Great Chinese Famine, we do not observe a counter-factual world where the Communist Party chose not to engage in the Famine-related propaganda campaigns.

As discussed previously, the Communist Party of China actively engaged in propaganda efforts to divert citizens' attention from blaming the government for their sufferings during the Great Leap Forward. In particular, the propaganda aimed to convince citizens that the Famine rooted in causes related to natural disaster, rather than political mistakes and policy failures. Our results suggest that this propaganda seemed to work well for citizens who actually did experience noticeably negative agricultural productivity shocks caused by droughts. Their inference and subsequent attitudes were more likely to coincide with the propaganda messages, attributing the Famine cause to natural disasters. Nevertheless, the Famine propaganda may induced backlashes on those citizens who experienced the Famine yet failed to observe drought affecting local agricultural production. To them, their private knowledge contradicted the (false) propaganda claims. As a result, this may further aggravated their political distrust and unfavorable attitudes towards the government, beyond the level caused by the Famine experience alone.

In retrospect, it is not immediately obvious whether the Famine related propaganda regarding its root causes was an optimal strategy undertaken by the Communist Party.[6] There were clear tradeoffs: on one hand, propaganda may enhance the political trust among citizens who observed natural disaster, and establish the trust among those who were ambivalent about the weight of responsibility between government and nature. On the other hand, propaganda may lead to backlashes among citizens who did not observe abnormal level of nature disaster during the years of the Famine. Whether the "benefit" of propaganda outweighs its "cost" and "damage" (from the perspective of the Communist Party of China) depends on the distribution of natural disaster across regions as well as the corresponding regional population density.

[6]This is by no means an attempt of making normative statement of state propaganda in general. To do so, one would need to take into account of the value of freedom of speech, citizens' rights to be informed of truth, etc – these are beyond of the scope of the current paper.

Appendix E Balance of Characteristics Between Famine and Non-Famine Individuals

In Table 1, columns 7 and 8, we show differences between Famine and non-Famine individuals, conditional on residence province and birth cohort fixed effects (same as our baseline specifications), and the p-values testing for the statistical significance of these *conditional* differences.

Despite the fact that our difference-in-differences strategy does not rely on the "random assignment" of Famine experiences across individuals, we show that along many observable dimensions (for example, gender, family socioeconomic background, political connections, proxy for economic and social connections) that were pre-determined before the Famine period, the Famine-affected individuals and non-Famine-affected ones are conditionally identical, after accounting for average characteristics in the province of current residency, and accounting for average characteristics of a birth cohort.

Again, we want to emphasize that the list is by no means comprehensive, nor can we exhaustively test all the observable and unobservable characteristics across the Famine and non-Famine individuals. Hence, we cannot rule out the possibility that many unobserved yet important factors determined individuals having different experiences during the Famine.

Gender and household composition Strong son-preference in Chinese traditional norms (particularly in rural areas) may induce parents to disproportionally allocate additional food to sons than to daughters in the crisis of food shortage, in order to preserve the male descendants' health and well-being. We show that gender did not drive the variation in Famine experience within a province and within a birth cohort. Nonetheless, since food allowance from the village communes was typically calculated at the household level, households with bigger sizes faced stronger pressure of food shortage. This shows up as one of the *only* observable differences between Famine and non-Famine affected individuals – those who experienced Famine came from households with more children (measured by number of siblings).

Family background We do not directly observe the income and assets of an adult individual's parents.[7] However, for each individual, we know the literacy status of both parents, which we use as a proxy for family background during the time of the Famine.[8] No significant differences in both parents' literacy status were observed. In addition, for each individual we know the "political label" of his parents or (more likely) grandparents. These "political labels" were assigned during

[7] Unless the parents are surveyed by the CFPS-2010 or 2012 waves. However, given that we are focusing on individuals who are born before the end of the Famine (1963), it is very rare for these individuals' parents to be still alive and hence included in the CFPS survey.

[8] Literacy status is a more relevant proxy for educational attainment than actual years of schooling completed, given the extremely low access to formal and modern education in rural China prior to 1949 (our sample of interest is rural Chinese population born before 1962).

the Communist Revolution in 1945-1950, based on household land holdings prior to the Revolution. The label mainly consisted of categories such as landlord, rich peasants, middle peasants, poor peasants, deprived peasants, etc. Once they were assigned, the labels apply to all members of the family and its descendants, and it typically cannot be revoked or revised. We show that there was no significant difference across the Famine and non-Famine individuals in terms of the political labels assigned to their parents or grandparents.

Political connections In terms of political connections, we use three proxies: father's membership in the Chinese Communist Party (CCP), mother's membership, and the CCP membership of the individual of interest if he joined the Party prior to the Famine. The CCP membership demonstrates social connections and political eliteness: only less than 10% of the entire population are Party members. If political connection allowed individuals to have easier access to additional food during food shortage, one would suspect that CCP members were more likely to be immune from hunger experiences during the Famine. However, we show that individuals whose parents were CCP members or became Party members themselves prior to the Famine were no less likely to avoid the Famine experience within the province (or even within the county and village).[9]

Proxy for economic and social connections Lastly, we use various proxies to measure individuals' social and economic connectedness locally. One may suspect that if individuals were more connected socially and economically with the rest of the village, he was also more likely to gain access to additional food during the Famine. We use individual's residence distance and/or travel time to the nearest high school, medical facility, and village business center to proxy for such connectedness. We show that no significant differences were found across the Famine and non-Famine individuals along these dimensions either.

Balance in contrast with other Maoist traumas In contrast with other traumatic events during the Maoist era, the Great Chinese Famine was particularly unique in its conditional balance on observable characteristics across the impacted and non-impacted groups. In Table A.3, we report p-values testing for the statistical significance of *conditional* differences for 4 additional traumatic experiences: *(i)* forced migration during Down-to-Countryside movement; *(ii)* cadre school participation; *(iii)* persecution of any sort, and *(iv)* being recruited into military service during the Maoist period. Column 1 replicates the p-values from Table 1, showing the Famine benchmarks. These conditional differences account for average characteristics of province of residence, birth cohort, as well as the dichotomy between rural and urban. These experiences were reported in

[9]We acknowledge that with self-reported Famine experience as our only individual-level measure, we cannot distinguish between the baseline true experiences of the CCP member households during the Famine, *and* conditional on having experienced it, their likelihood of reporting such experiences. The above balance check analysis makes the implicit assumption that conditional on having experienced hunger during the Famine, there is no difference in the likelihood of reporting between individuals from CCP and non-CCP households.

the same manner as the hunger experience in the CFPS-2010. In order to focus our attention on individuals susceptible to personally experiencing the Maoist traumas listed above, we restrict the sample to individuals born before 1978 (the year when economic and political reform started, and two years after the death of Mao, commonly considered as the end of Mao-era).

As can be seen, for each of these Maoist traumatic events, individuals who encountered such experiences differed from those who didn't along a number of key dimensions of their observable characteristics. Several factors likely contributed to the contrast between the Great Chinese Famine and these Maoist traumatic events. First, the Famine impacted the entirety of China, covering a much larger scale than many of these other events. Second, unlike other traumas and campaigns during the Maoist era, the intensity of the Famine left little leverage for individuals to actively escape its impact. Third, beyond the rural-urban polarity, the Famine was not targeted toward particular demographic and socioeconomic groups at the policy level, while this was certainly not the case for these other traumatic events.

Appendix F Intergenerational Transmission of the Famine Impact

In Section 6.1, we show that the Famine impacted individuals who were directly susceptible to the hunger experiences. One naturally wonders if comparable effects can occur *indirectly* to citizens who did not experience hunger during the Famine themselves. Here, we present evidence showing the intergenerational transmission of the Famine's impact on political distrust and attitudes, from individuals who personally experienced the Famine to their descendants. Intergenerational transmission demonstrates a complementary aspect of how Famine impact persisted via the family. As parents passed down their Famine-affected political distrust and attitudes to the next generation, the transmission process helped parents preserve these traits within themselves. Although we cannot distinguish whether such intergenerational transmission of political distrust and attitudes was achieved through conscious parental nurturing effort or unintentional parental influences, in either case the transmission created a microenvironment within the household where members shared similar level of political distrust and attitudes, which could be important to sustain these political distrust and attitudes.

We focus on the rural population who were born after year 1963 – these individuals are excluded from our previous analyses. These post-1963 cohorts were not directly susceptible to experience hunger themselves during the Great Chinese Famine. However, they were potentially the descendants of men and women who personally went through the Great Chinese Famine. To investigate the integenerational transmission of the Famine's impact, we estimate the following simple model on integenerational elasticity of political distrust and attitudes:

$$y_{icp} = \alpha_c^P + \delta_p^P + \beta^P\, y_{icp}^P + \gamma^P\, y_{icp}^P \cdot Famine_i^P + \zeta^P\, Famine_i^P + \epsilon_{icp}^P \tag{2}$$

where for individual i in birth cohort c and province of residence p, y_{icp} denotes the same set of outcome measures that we examine in previous sections; y_{icp}^P are the corresponding outcome measure of individual icp's parents, $P \in \{F, M\}$ indicating *father* and *mother*, respectively; $Famine_i^P$ ($P \in \{F, M\}$) indicates whether individual icp's parent experienced hunger during the Famine; α_c^P and δ_p^P are full sets of parent-specific cohort and province fixed effects. In our main estimates, we allow idiosyncratic differences, ϵ_{icp}^P, to be correlated across individuals within a corresponding province unit.

In Table A.4, we present our baseline estimation results using specification (2), for $P \in \{F, M\}$ separately. We show the results one outcome variable at a time, first for intergenerational transmission through father, then for that through mother. The estimates on β^P ($P \in \{F, M\}$) across the outcome variables indicate that both father and mother's political distrust and severity assessments are highly correlated with those of their children. In columns 3-4, we show that $\gamma^P > 0$ ($P \in \{F, M\}$), suggesting that parents' Famine experiences are associated with an amplified degree of intergenerational elasticity in political attitudes. On average, the net correlation size is

estimated to be around 0.18. This implies that if the direct hunger experiences during the Famine moved a parent's outcome by 10% of a standard deviation (as shown in Section 5), 18% of such impact was transmitted intergenerationally to the children who did not have personal experience of the Famine. Specifically, this vertical transmission generated spillovers, as it brought the Famine's impact to citizens who were not directly susceptible. If the parent has experienced hunger during the Famine, as large as 30% of the Famine's impact on parent's political attitudes could be transmitted to the next generation.[10]

Combining the results shown in Table A.4 with that from Section 6.1, we identify two dimensions related to household through which the Famine's impact may be persisting over the years. First, assortative mating based on shared Famine experiences and employment types helped an individual retain a sustained distrust and unfavorable attitudes towards government long after the Famine. Second, vertical transmission intensified the homogeneous household environment created by the assortative mating. Through vertical transmission, household members across generations shared a high degree of similarity in their political distrust and attitudes.[11] We conjecture that the Famine-induced similarity within each household unit bred the persistence of the Famine's impact on political distrust and attitudes.

[10] In order to put this intergenerational elasticity estimate into perspective, if we assume the generation gap to be 25 years, then such rate of intergenerational transmission (30%) is equivalent to an annual diminishing rate of approximately 5% in effect sizes.

[11] The political distrust is more strongly correlated between spousal pairs than between parent-child pairs. However, this difference might be due to average differences across various birth cohorts.

Appendix G Correction for Survival Selection

We address the survival selection by employing a similar method introduced in Meng and Qian (2009). We re-estimate our difference-in-differences model after dropping individuals at the lowest quantiles of the distribution of a range of variables, through which selection into survival may be operating: *(i)* direct outcome of political distrust that we primarily focus on in this study; *(ii)* individual's height; and *(iii)* regional availability of alternative food sources. Across these dimensions, selection into survival was most prevalent in the lowest quantiles – if individuals in this range of the distribution were more likely to perish conditional on having experienced the Famine, then we observed disproportionally more individuals who did not experience Famine in this region of the distribution.

The survival selection correction results are shown in Table 12, Panel B, C, and D for the three correction methods outlined previously. They remain quantitatively similar to our baseline estimation (Panel A). In particular, when we use biological traits and regional availability of alternative food sources to correct for survival selection, the estimation of both main effects and interaction effects increase, suggesting that survival selection may actually cause *attenuation* biases.

First, we focus on selection into survival directly through political distrust. Those who were more distrusting towards the government may be disproportionally more likely to survive. Contrast with those who blindly trusted the government provision of food, more distrusting individuals may invest in private food storage. This created a selection mechanism that exhibited the pattern that we have identified. Specifically, among individuals who avoided Famine experience altogether, they did not face Famine mortality and selection into survival. Nonetheless, among those who experienced hunger, selection into survival became a problem: the more trusting individuals among them perished during the Famine, while the more distrusting ones survived. Since selection into survival was particularly prevalent in the lowest quantiles of political distrust (i.e. the most trusting individuals), we re-estimate our model dropping the bottom 10% percentile of political distrust within each province.[12] The results are presented in Table 12, Panel B. The estimations stay relatively unchanged comparing to the baseline estimation using the full sample, which is shown in Panel A. Note that when we drop the lowest quantiles of the distribution of political distrust variable, we simultaneously alter the distribution of treatment variable of Famine experience. However, the historical drought levels were measured at the province level, which remain unchanged after the survival selection correction. In other words, while the correction method affects the composition of Famine and non-Famine individuals within a given province, the second difference that compares cross-individual differences across regions is not affected.

It is also worth noting that the selection into survival based on political distrust may operate in the opposite direction as well. If the Famine survivors were politically more connected, then they

[12]Note that given the political distrust variable is measured on 0-10 scale, dropping the lowest 10th percentile is effectively dropping the individuals who report lowest level of distrust towards the local government.

would trust government more. In other words, conditioning on having experienced the Famine, we may observe disproportionally more individuals with high level of trust towards the government among survivors. Such selection into survival attenuated our results. Correspondingly, we might consider our estimation as a lower bound of the Famine impact.

While informative, dropping the lowest quantiles of the direct outcome of political distrust can be problematic, because one needs to assume that there is no heterogeneity in effect sizes along the spectrum of prior political distrust. This assumption is difficult to test since we do not observe pre-Famine political distrust. This problem can be partially mitigated by using alternative variables such as biological traits to correct for survival selection, so long as the biological trait of height is not perfectly collinear with the individual's political distrust and attitudes. As demonstrated by Meng and Qian (2009), higher stature was an important (and direct) factor that increased survival likelihood. Thus, we re-estimate the difference-in-differences model after dropping observations at the bottom 10th percentile of the distribution of height.[13] The estimation results are shown in Table 12, Panel C. Comparing to our baseline estimation using full sample (Panel A), results become larger for political distrust, and remain unchanged for policy attitudes.

Lastly, we use county level availability of alternative food sources to address the survival selection biases. Anthropologists recorded the widespread practice of villagers eating wild vegetation during the Famine to combat food shortage (e.g. Thaxton (2008)). Thus, counties with high suitability to grow edible wild vegetation provided natural alternative food sources as an additional buffer against food shortage. As a result, selection into survival based on political trust and political connections became less severe in those regions: the access to wild vegetation allowed even the politically less connected individuals or those who failed to invest in private food storage to eventually survive the Famine. Following this logic, we re-estimate the difference-in-differences specification after dropping the counties where wild pasture grass suitability index lies more than 1.5 times the size of a standard deviation below corresponding *provincial* mean level.[14][15] In other words, we drop the counties altogether where survival selection on political connection and distrust was the most prevailing. As shown in Table 12, Panel D, the estimates are similar as compared to our baseline estimation using the full sample. This correction for survival selection is also more preferred methodologically, because we drop observations at the county-level, which preserves both the distribution of individual level variation in Famine exposure within the remaining counties, and the provincial level agricultural productivity shocks measurement. Hence, both levels of variation in the difference-in-differences model remain intact.

[13] Similar conclusion holds if we use alternative cutoffs, such as bottom 20th percentile.

[14] We introduce the details of this suitability index in Appendix. Similar conclusion holds if we use alternative cutoffs, such as 2 times the size of a standard deviation.

[15] Using *provincial* mean level as a threshold (rather than that of the *entire* country) alleviates the problem that certain provinces would have more dropped counties than others.

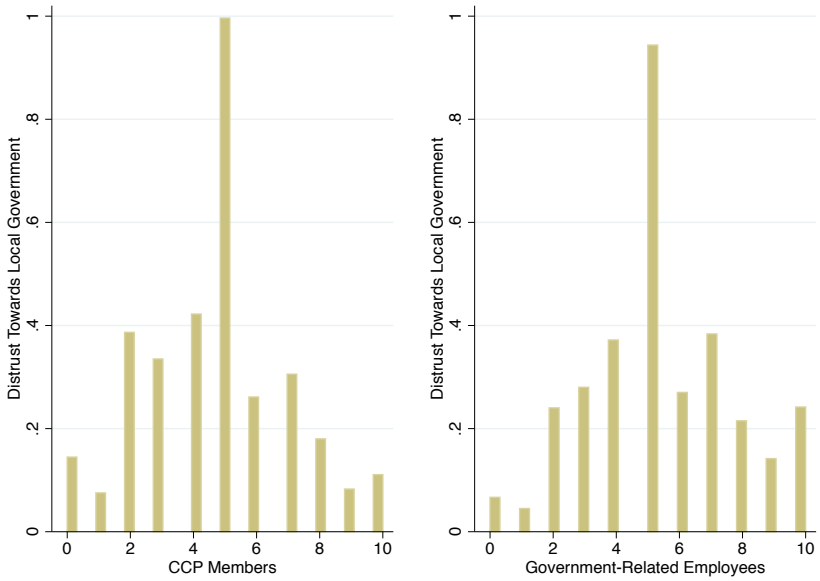

Figure A.1: Distribution of Reported Political Distrust

Table A.1: Self-Reported Distrusts in CFPS

Distrust Towards:	Local Govt.	Parents	Neighbors	Americans	Strangers	Doctors
Panel A: All Adults						
Mean	5.09	0.95	3.64	7.54	7.87	3.40
Std. Dev.	2.49	1.73	2.42	2.49	2.13	2.28
Panel B: Rural Adults						
Mean	4.98	1.01	3.62	7.61	7.89	3.32
Std. Dev.	2.49	1.77	2.25	2.46	2.13	2.28
Panel C: Famine Susceptible Individuals						
Mean	4.65	1.24	3.58	7.75	7.90	3.33
Std. Dev.	2.51	1.94	2.28	2.43	2.19	2.31

For all self-reported distrust measures, respondents report a rating from 0 to 10, where 0 indicates extreme trust, and 10 extreme distrust. Panel A uses the sample of all adults older than 18 years old in CFPS (total number of observations: 24797). Panel B uses all adults older than 18 years old who lived in rural sector at age 3 (total number of observations: 21309). Panel C uses adults living in rural sector at age 3, and born before 1962 (total number of observations: 9646).

Table A.2: Political Distrust Measured in Various Surveys

Distrust Towards:	Avg. Reported Distrust
Panel A: CFPS	
Local government	3.57
Panel B: LITS	
Presidency/monarchy	2.90
Government/cabinet of ministers	3.34
Regional government	3.15
Local government	3.06
The parliament	3.43

For all self-reported distrust measures, respondents report a rating from 1 to 5, where 1 indicates extreme trust, and 5 extreme distrust. The original survey questions in CFPS questions are based on 0-10 scale. The original survey questions in LITS are absed on 1-5 scale, with 1 indicating extreme distrust, and 5 extreme trust. For CFPS, we restrict the sample to Famine susceptible individuals (rural residence at age 3 and born before 1962). For LITS, we restrict the sample to cohorts born before 1962.

Table A.3: Balance Checks of Other Maoist Traumas

	FAMINE	Down-to-Countryside	Cadre School	Persecution	Military
Variable	(1)	(2)	(3)	(4)	(5)
Male	0.831	0.393	0.002	0.000	0.000
Han	0.513	0.495	0.021	0.170	0.199
# of siblings	0.001	0.000	0.041	0.142	0.000
Migration at Age 3	0.524	0.035	0.001	0.554	0.166
Height	0.345	0.487	0.004	0.000	0.000
Weight	0.812	0.034	0.011	0.000	0.000
BMI	0.770	0.018	0.156	0.176	0.000
Father Illiterate	0.818	0.070	0.118	0.892	0.013
Father CCP Member	0.943	0.770	0.682	0.325	0.004
Mother Illiterate	0.090	0.044	0.108	0.760	0.014
Mother CCP Member	0.807	0.670	0.691	0.272	0.000
Parent Poli. Label	0.475	0.310	0.580	0.000	0.000
Distance to Hospital	0.900	0.552	0.383	0.817	0.820
Distance to School	0.230	0.008	0.140	0.108	0.000
Distance to Downtown	0.688	0.600	0.002	0.034	0.103

Columns 1-5 report the p-value for a t-test of differences in means across group with corresponding experiences and without, conditional on birth cohort and province of residence fixed effects, standard error clustered at the province level. "Migration at 3yo" are dummy variables equal to 1 if individuals migrate to different cities or beyond at age 3, comparing to places of birth. "Father Illiterate" "Father CCP Member" "Mother Illiterate" and "Mother CCP Member" are all dummy variables indicating the parents' characteristics when the individual was 14 years old. For these variables, we restrict sample to those who are at least 14 years old at the beginning of the Famine, to make these parental characteristics pre-determined with respect to the Famine. "Parent Pol. Label" are dummy variables equal to 1 if individuals belong to families that are labeled as landlord or rich peasants during the Land Reform in 1950s. For column 1, number of observations: 9,993. For columns 2-5, number of observations: 23,400.

Table A.4: Integenerational Transmission of Famine Impact

Dependent variable:	Distrust towards local government		Anderson z-score (Policy Attitudes)	
	Father (1)	Mother (2)	Father (3)	Mother (4)
y^P_{icp}	0.175***	0.187***	0.190***	0.172***
	[0.027]	[0.023]	[0.022]	[0.029]
$y^P_{icp} \times$ Famine Experience ^P_i	0.058	0.015*	0.109*	0.114**
	[0.041]	[0.074]	[0.068]	[0.048]
Observations	2308	2679	2121	2314
Mean DV	5.245	5.245	0.081	0.081
Std.Dev. DV	2.445	2.445	0.967	0.967

*: Significant at 10%; **: 5%; ***: 1%. All regressions include a full set of province and birth cohort fixed effects (not reported). Robust standard errors in brackets, clustered at the province level. Number of clusters: 25.