

AUTOCRATIC RULE AND SOCIAL CAPITAL: EVIDENCE FROM IMPERIAL CHINA*

Melanie Meng Xue
Brown University

Mark Koyama
George Mason University

July 19, 2017

Abstract: This paper studies the impact of autocratic rule on social capital. Between 1660–1788, individuals in imperial China were persecuted if they were suspected of holding subversive attitudes towards the state. A difference-in-differences approach suggests that these persecutions led to a decline of 38% in social capital, as measured by the number of local charities, in each subsequent decade. Investigating the long-run effect of autocratic rule, we show that persecutions are associated with lower levels of trust, political engagement, and the under provision of local public goods. These results indicate a possible vicious cycle in which autocratic rule becomes self-reinforcing through a permanent decline in social capital.

Keywords: Institutions, Autocratic Rule, Political Persecutions, Social Capital, China

JEL Codes: N45, K42, I2

*Corresponding author: Melanie Meng Xue. Email: melanie.xue@brown.edu. Department of Economics, Brown University, 64 Waterman Street, Box B, Providence, RI 02912. We thank Scott Abramson, Daron Acemoglu, Quamrul Ashraf, Ying Bai, Dan Bogart, Leah Boustan, Arthur Blouin, Peter Bol, Patrick O'Brien, Filipe Campante, Jean-Paul Carvalho, Klaus Desmet, Mark Dincecco, Christian Dippel, Fran Flanagan, Jesus Fernandez-Villaverde, James Fenske, Price Fishback, Oded Galor, John Gardner, Paula Giuliano, Joshua Hendrickson, Rick Hornbeck, Saumitra Jha, Noel Johnson, Dan Klein, James Kung, Naomi Lamoreaux, Debin Ma, Stelios Michalopoulos, Joel Mokyr, Steven Nafziger, Nathan Nunn, Jack Paine, Barbara Piotrowska, Louis Puterman, Gary Richardson, James Robinson, Gerard Roland, Jared Rubin, Jesse Shapiro, Carol Shiue, Tuan-Hwee Sng, Carlos Velasco, Nico Voigtlander, John Wallis, Noam Yuchtman, Yang Zhang, and audiences at the Adam Smith Workshop (GMU), All-UC Economic History (UC Davis), American University, ASREC, Brown Applied Microeconomics Lunch, Brown Growth Breakfast, EHS (Cambridge), Florence Law & Economics Workshop, HEDG workshop, Hong Kong University of Science and Technology, National University of Singapore, NUS Business School, NBER Summer Institute (DAE), Northwestern University, the Quantitative History Workshop (Beijing), PacDev (Stanford), SSHA Conference (Baltimore), SEA Meetings (Washington DC), the Washington Area Economic History and Development Workshop (GMU), the World Economic History Congress Meeting (Kyoto), University of Bonn, UC Irvine, UCLA Economic History Proseminar, UCLA Anderson Brownbag, University of Mississippi, University of Rochester, Wake Forest University, and Williams College. We thank Yu Hao for sharing county-level data on conflict and data on academies with us and Tuan-Hwee Sng and Se Yan for sharing their data on warfare with us. We are grateful to Andrew Walder and National Science Foundation Grant SBS-1021134, “Political Movements in an Authoritarian Hierarchy,” for data on persecutions during the Cultural Revolution. We thank Zhilong Ge for excellence research assistance and Jane Perry for proof-reading.

Terror can rule absolutely only over men who are isolated against each other and that, therefore, one of the primary concerns of all tyrannical government is to bring this isolation about.

Hannah Arendt (1951, p. 474)

I INTRODUCTION

Social capital refers to the ability of individuals to organize and cooperate on a voluntary basis. In *Democracy in America*, Alexis de Tocqueville (1835) argued that social capital was crucial for the success of democracy, an insight that has been developed by social scientists in recent years (Fukuyama, 1995; Putnam, 1994; Tabellini, 2008; Gorodnichenko and Roland, 2015; Padro-i-Miquel et al., 2015).¹ Tocqueville further observed in *The Old Regime and the Revolution* (1856) that autocratic rule undermines social capital.² Subsequent writers have discussed how autocratic governments isolate and alienate individuals, leading to a decline in cooperation and trust (Orwell, 1948; Arendt, 1951). This raises an important question: how do autocratic political institutions affect social capital and civil society?

The political economy literature has established that autocracies systematically differ from non-autocracies in both their policies and relationship with civil society. But the mechanisms responsible for these differences remain somewhat opaque and causality is often hard to establish. Imperial China provides a useful historical setting for answering this question. In particular, we exploit variation in exposure to autocratic rule within a long-standing autocracy, during a phase of the intensification of autocratic rule that followed the Manchu conquest of China (1644-1911).

The Manchu rulers relied on political persecutions—known as literary inquisitions—to suppress dissent and potential opposition. These persecutions targeted speech and thought crimes. They were indiscriminate and wide-ranging in scope (Wang, 2002). Historians note that they represented an injection of “autocratic, unpredictable power” and created an atmosphere of oppression and distrust (Kuhn, 1990, p. 225).

The persecutions enacted by the Manchus made visible and apparent the state’s determination to root out potential dissent. They represented a visceral shock to individual’s perception of the power of the state to crush any individuals, families or entire communities if it chose to do so. Narrative accounts suggest that fear of persecution led individuals to become more wary about congregating, conversing, and self-organizing. This “expansive cultural repression involved the entire population” and the “fear of persecution left a deep negative impact on cultural and intellectual life” (Wang, 2002, p. 647). The effects of literary inquisitions were magnified because they often involved prominent members of local society. Due to their high visibility, the persecution of prominent members of local society could have

¹Recent research by Satyanath, Voigtländer, and Voth (2016) however, suggests, that this relationship may be more complex as social capital was also important for the rise of the Nazi dictatorship in Germany.

²Tocqueville (1856 (1998)) argued that autocratic rule prior to the French Revolution made each Frenchman indifferent to his neighbors’ conditions and undermined the autonomy of the provinces and cities for the benefit of the capital. It weakened the provincial nobility and made them increasingly dependent on the crown. Arendt (1951, p. 475) observed that “Totalitarian government, like all tyrannies, certainly could not exist without destroying, by isolating men, their political capacities”.

a chilling effect on many individuals beyond those punished. The early nineteenth century poet, Gong Zizhen, noted that intellectuals no longer form societies and attend public gatherings in fear of literacy inquisition. He regretfully observed that when intellectuals in his time wrote books, they only did so for a living rather than because they were interested in developing and spreading new ideas (Gong, 1991).

In sum, the narrative and qualitative evidence suggest that literary inquisitions generated apathy and led to individuals withdrawing from society and becoming reclusive. But these claims have not been systematically investigated. Using a difference-in-differences approach that exploits spatial and temporal variation in exposure to political persecutions, we are the first to provide evidence that literary inquisitions affected the behavior of individuals. Employing a novel dataset of well known individuals in imperial China, we find that once there was a persecution, 33% fewer individuals became prominent in that prefecture compared to prefectures that never had a persecution or prefectures that had not yet experienced a persecution. One likely cause is that individuals were deterred from taking actions that would lead them to being classified as famous or notable.

After an initial examination of the impact of literary inquisitions, our analysis turn to its impact on social capital. Following Putnam (1994) and Guiso, Sapienza, and Zingales (2011), we define social capital as those beliefs, attitudes, norms and perceptions that support cooperation and participation. We use the number of local charities as a proxy for social capital. China had a rich tradition of voluntary organizations that historians alternatively call benevolent associations, voluntary societies, or charity halls (Tsu, 1912; Smith, 1987; Rankin, 1990; Wong, 2000). These were small-scale, nonpartisan, local institutions that aided widows, looked after orphans, ran soup kitchens, and helped the poor. We refer to them as “local charities” in this paper.³ In reference to the importance of these charities to local social and communal life and to the role played by intellectuals and gentry in forming them, historians note that this philanthropic activity reflected a “clearly articulated the concept of a ‘public’ or ‘communal’ sphere, as opposed to a ‘state’ or ‘private’ sphere, as both the agent and the beneficiary of philanthropic activism” (Rowe, 2009, p. 119).⁴

Examining the change in the number of local charities following a persecution, we find that an episode of political repression brought about a rapid, and likely permanent, decline in the number of charities. After the first persecution, the number of local charities in a prefecture fell by an average of 38%, compared to prefectures that never had a persecution, or prefectures that had not yet experienced a persecution. We interpret this as reflecting changes in the attitudes of individuals to organizing and investing effort and resources in helping their neighbors in an environment of greater mistrust. Our

³An additional benefit of studying local charities is that they were apolitical. This is similar to Satyanath, Voigtländer, and Voth (2016) who explicitly exclude political organizations from their analysis.

⁴The desire to establish local charities was influenced by neo-Confucian ideology and by Buddhism among the gentry. We explain the connections between these intellectual movements and the provision of social capital in more detail in Appendix 6. Charities played an important role in premodern China providing orphanages, disaster relief and other local public goods (Simon, 2013) For more details about the role gentry played in the provision of disaster relief see Ch'ü (1962). Simon notes that “[i]n many cases, these private efforts were combined with the ones provided by local government officials or by emperors and kings” (Simon, 2013, p. 60). They were non-governmental organizations and played an important role alongside the government provision of disaster relief studied by Shiue (2004).

results are also consistent with the interpretation that individuals withdrew from the provision of charity for similar reasons for which the number of well known individuals declined: they felt that no activities were entirely safe as even those who were both obedient and scrupulous risked persecution. Employing a dynamic specification, we find that the number of charities in treated prefectures kept falling for the first two decades, relative to untreated prefectures and stayed at a lower level thereafter. The fact that the number of local charities was unable to recover long after the persecutions were carried out is consistent with our hypothesis that the literary inquisitions permanently changed beliefs and attitudes that are supportive of cooperation and participation.

Our identification strategy exploits variation in the timing of a persecution within a prefecture and takes advantage of idiosyncrasies in the process that generated inquisitions cases. Similar cases could have very different outcomes. Although cases could occur locally, decisions were made by the bureaucracy. Inside the bureaucracy, it is possible for those cases to be dropped at any time by the magistrate or by the provincial governor or due to reprieves issued by the emperor. The sheer scale of Qing China and the institutional complexity of the Chinese bureaucracy introduced uncertainty and subjectivity into the process. Importantly, officials within the bureaucracy were routinely rotated so that they could not maintain local ties and affiliations. While at every level of the bureaucracy, there was room for discretion, the only individual with complete discretion was the emperor who was the final arbitrator of all inquisition cases (Huang, 1974, p. 208). Moreover, the emperor was often inconsistent in adhering to his own standards for ascertaining guilt or innocence (see Gu, 2003). Literary inquisitions thus represented “the institutionalization of Imperial subjectivity” (Wakeman, 1998, p. 168).

For these reasons the incidence of persecutions was highly unlikely to be predominantly driven by local characteristics. As additional evidence, we show that persecutions were not correlated with time-varying shocks such as conflicts or natural disasters, which distinguishes literary inquisitions in Qing China from the decentralized persecutions of Jews, heretics, and witches in premodern Europe or sub-Saharan Africa.⁵ To provide further assurance, we control for factors that might have affected the likelihood of an inquisition taking place, such as differences in the level of resistance to the Qing state, intellectual traditions favoring greater public engagement in decision-making, and the alternative means that the Qing empire had at its disposal to control its subjects.

Results from the historical panel indicate that literary inquisitions reduced the number of notable figures and local charities and that the latter effect did not go away even in the long run. The historical panel alone is not sufficient for us to identify what is responsible for the long-lasting impacts that we observe. By extending our analysis to the modern period, we are able to observe attitudes and beliefs related to cooperation and participation in survey data, as well as to examine the impact of literary inquisition under different political and economic institutions. This allows us to provide additional

⁵The persecution of Jews, witches, and heretics in medieval and early modern Europe was usually carried out by local courts rather than by the central government (see Johnson and Koyama (2014) and Leeson and Russ (2017)) and often driven by local economic shocks, bad weather or local political conditions. Miguel (2005) documents the importance of weather shocks in explaining the killing of witches in sub-Saharan Africa.

evidence that low social capital is a key factor underlying the persistent effects of political repression.

First we show that individuals in prefectures affected by the literary inquisition still report lower levels of generalized trust in the 21st century, controlling for factors that are known to affect trust such as per capita income, urbanization, ethnic fractionalization, and education.

Second, we make use of the institutional transformations that China undertook in the 20th century. In Qing and early Republican China, in the absence of state provision of schooling, primary schools were locally provided. At a local level, formal institutions were often nonexistent. Basic education was thus a key local public good that relied on cooperation between community members. We find that for individuals born in the early 20th century, they were 4 percentage points less likely to be literate in prefectures that experienced persecutions. These results are not driven by differential survivor rates between the literate and illiterate, or selective migration to Taiwan in the wake of the Communist takeover, and do not change when we control for the number of deaths during the Cultural Revolution. Employing two instrumental variables—distance to the pre-1644 Manchu capital and distance to Qing army bases—we find comparable effects of inquisitions on basic education.

The effects of literary inquisitions on basic education were strongest where and when institutions were more decentralized. During the period of analysis, schools in rural China were more localized and reliant on the voluntary efforts of community members; they were less affected by policies of both Republican or Communist governments. Indeed, we find that the effect of inquisitions on literacy is concentrated among rural individuals. Looking across different cohorts, we find that the negative effects of persecution are evident for all cohorts who reached schooling age before the Republican government began to centralize education. Centralization of the school system in the 1930s, temporarily shut down the channel linking social capital to local educational outcomes. During this period, and during the first few decades of Communist rule, we find no effect of inquisitions on basic education. But this effect is again apparent for the cohorts educated during the Cultural Revolution, when educational institutions became more dependent on local initiative and centralized educational institutions were disrupted.

More speculatively, modern survey data also suggests that individuals in affected prefectures are also less likely to engage in public affairs despite having more progressive political attitudes. Political repression created a culture of political apathy and disengagement. Our findings point to a potential, and hitherto understudied, vicious cycle: autocratic rule impoverishes the public sphere and discourage individuals from political engagement. It produces apathy and disengagement leaving a legacy of low social capital. This in turn has negative consequences for the possibility of democratic self-governance. Greater political apathy makes organizing collective action more challenging, leading to the further entrenchment of autocratic rule. Thus our study has implications for understanding China's civil society and institutions today.

Alesina and Giuliano (2015) note that interest in social capital research was initiated by the positive effects of social capital on economic and political outcomes.⁶ More recent research has turned to the

⁶For example, Putnam (1994), Putnam (2001), Glaeser, Laibson, and Sacerdote (2002), and Guiso, Sapienza, and Zingales (2004).

historical determinants of social capital to establish causality. Nunn and Wantchekon (2011) study the negative effects of the slave trade on trust. Tabellini (2010) analyzes the impact of institutions on cultural traits such as trust and the degree of control individuals feel they have over their lives. Guiso, Sapienza, and Zingales (2016) find that cities in northern Italy with a history of political independence in the middle ages have higher levels of civic capital today. Karaja and Rubin (2017) conduct experiments and find a legacy of extractive institutions in lands occupied by the Russian and Ottoman empires are less likely to trust outsiders.

The relationship between state institutions and social capital is not a one-way street. On the one hand, Guiso, Sapienza, and Zingales (2011) find that years of democracy since independence is positively correlated with trust. On the other hand, Acemoglu, Reed, and Robinson (2014) and Satyanath, Voigtländer, and Voth (2016) find that in the presence of political instability and extractive institutions, social capital can facilitate authoritarianism.

When we concentrate on the impact of the state on social capital, evidence is mixed. A body of research suggests that the presence of strong states can increase trust and help build a sense of common national purpose (Becker et al., 2016; Johnson, 2015) and that more bureaucratic states are associated with a legacy of greater social capital and public goods provision (Dell, Lane, and Querubin, 2017). In contrast, a pioneering study, using field experiments together with a historical case study in the context of Kuba Kingdom, suggests that the establishment of a powerful state can undermine trust and pro-social values (Lowes, Nunn, Robinson, and Weigel, 2017).

One way to reconcile these findings is to recognize that states provide a *bundle* of policies. On the one hand, the literature on state capacity suggests that there are tangible benefits from the formation of a stable and centralized state (Besley and Persson, 2011). The centralized institutions of a state like Qing China may have been preferable to more patrimonial institutions: they guaranteed internal peace and provided a stable environment in which commerce and markets could flourish (Pomeranz, 2000; Shiue and Keller, 2007). On the other hand, the process through which political order is created and maintained can be extremely costly and violent, particularly in autocratic states that lack political legitimacy as was the case in Qing China. Looking within Qing China, and focusing on the consequences of political repression, we are able to disentangle the effects of the repressive policies that the Qing state pursued from the general effects associated with the imposition of political order and the provision of the public good of security. Our findings indicate that these policies left a long-lasting legacy of disengagement, political, and social apathy.

In addition to offering key insights to the literature on social capital, our study makes a separate contribution to the literature on autocracy and democracy. For most of recorded history, autocracy has been the most prevalent form of government. Recent years have seen democratic reversals and the strengthening of autocratic rule across many parts of the world. These developments have renewed scholarly interest in autocracy.⁷ In this context, using imperial China as a setting has several advantages in comparison to studying modern autocracies which are predominantly located in Africa or the

⁷See Guriev and Sonin (2009), Svolik (2012), Galor and Klemp (2017), and Bentzen, Kaarsen, and Wingender (2017).

Middle East, fairly recent in origin, and highly unstable. During the period we study, Qing China was unthreatened by either external enemies or internal rebellions. Empirically, this stability helps to identify the impact of persecutions on social capital for a study with a relatively small sample.⁸ Furthermore, autocracies in different countries tend to be very different from each other (Besley and Kudamatsu, 2009) and, as a consequence, cross-country studies may be misleading. By focusing on variation in exposure to autocratic rule within the same political regime, and using only within-region and within-province variation, our analysis is not confounded by economic and social differences across countries or differences between autocracies.

In comparison to existing studies, we propose a vicious cycle whereby autocratic rule can be self-reinforcing. This sheds light on the phenomenon of “authoritarian resilience” in countries like China (Nathan, 2003). We find that Qing-era cultural beliefs shaped by political repression reduce the possibility of democratic reform even though the institutions that initially shaped those beliefs are long gone. A legacy of autocratic rule has helped to produce a culture of political disengagement and apathy that in turn perpetuates autocracy.

Our setting differs in an important respect from that studied by Acemoglu, Hassan, and Robinson (2011) who examine the legacy of the Holocaust in Russia, or Waldinger (2010, 2012) who finds negative effects of the expulsion of predominantly Jewish scientists in Germany. It is also very different to the Cultural Revolution which saw tremendous political and social turmoil and large numbers of deaths (Walder, 2014; Bai, 2014).⁹

The historical shock we explore suggests that even in the absence of large-scale violence, autocratic rule can have powerful and long lasting negative effects on the moral fabric of society. Literary inquisitions in Qing China did not lead to large-scale expulsions or massacres, but involved a sustained policy of fear and intimidation over the course of more than a hundred years, representing a pure shock to the “collective conscience” of the intellectual class. These features of Qing China enable us to study the deep and long-lasting, but often difficult to discern, consequences of autocratic rule on society. Our historical panel data allow us to both identify the immediate effects of state persecutions and to characterize their negative effect on participation and community involvement over time. By combining our historical panel with data from the twentieth and twenty-first centuries, we provide evidence that this effect reflects the impact of persecutions on cultural beliefs.¹⁰

⁸China has been governed by an autocratic state for most of its history. And while there have been other episodes of persecution in Chinese history, particularly during the 20th century which have no doubt left a legacy on Chinese society, we focus on the Qing-era literary inquisitions to study the consequences of autocratic rule because the effects of these other episodes are more difficult to discern as these events typically took place in the midst of many other political and economic shocks. The major rebellions in the Qing period such as the Taiping Rebellion took place many decades later. We address further concerns about the potential endogeneity of the literary inquisitions in Appendix 1.

⁹Giles, Park, and Wang (2015) use the the “send-down” movement that took place during the Cultural Revolution to estimate the returns to schooling. They find that the Cultural Revolution reduced high school and college completion rates. Li, Rosenzweig, and Zhang (2010) find that individuals who were “rusticated” or sent into the countryside did not in general experience worse life outcomes; in fact in some dimensions they did better than individuals who were not sent down.

¹⁰Two other relevant papers are Lichter, Loeffler, and Siegloch (2015) and Vidal-Robert (2014). Lichter, Loeffler, and Siegloch (2015) examine the impact of the Stasi during Communist rule on social capital. Employing data on the the total number of Stasi agents at the demise of East Germany, they study the effect of state surveillance. Vidal-Robert

Finally, we shed new light on civil society and the prospects of democracy in modern China. Our study is related to Padro-i-Miquel, Qian, Xu, and Yao (2015) examine the relationship between social capital, the provision of local public goods, and the introduction of local elections in modern China. Measuring social capital using the presence of Buddhist temples, they find that social capital complements formal democratic institutions. We also provide new evidence on the historical factors that have shaped political attitudes in modern China, a topic related to recent work by Cantoni et al. (2017) on how the Chinese Communist Party has been able to manipulate political attitudes by changing the content of textbooks.

II HISTORICAL SETTING & CONCEPTUAL FRAMEWORK

China is a uniquely long-lasting autocracy. Though Chinese political institutions have always been autocratic, the period we study saw the *intensification* of imperial autocracy under the Qing dynasty. For most of its history China was ruled by native dynasties. According to the widely used measure of state antiquity developed by Bockstette, Chanda, and Puttermann (2002) which accounts (among other factor) for whether a territory was ruled by foreigners or native rulers, China has a score of 0.92/1. The Qing dynasty, however, was founded by outsiders—Manchus who conquered China following the collapse of the Ming dynasty in 1644.¹¹ After a period of upheaval spent subduing Ming loyalists, the Kangxi emperor (r. 1661–1722), the Yongzheng emperor (r. 1722–1735), and the Qianlong emperor (r. 1735–1796) succeeded in building a stable and long-lasting imperial dynasty. This period is viewed by economic historians as one of economic and demographic expansion; taxes were low and there were no major rebellions.¹²

As a conquest regime, however, the Qing ruler lacked political legitimacy.¹³ As one historian observes ‘[a]ll conquest regimes [are], by their nature, military impositions upon the nation (Kuhn, 1990, p. 53). This was exacerbated by the fact that the Manchus were a very small minority (at most 0.4% of the Han Chinese population). The Qing rulers thus resembled modern dictatorships based on a small ethnic minority, such as the Alawites in Syria or the Sunni Muslims in Ba’athist Iraq, in their sensitivity to possible opposition from the Han majority.¹⁴ Unlike states in Europe or the Middle East that could rely on religious legitimization (see Rubin, 2017), the Qing state sought legitimization in existing Han Chinese culture. Han culture was highly ethnocentric. This created a problem for the Qing emperors who sought to patronize traditional Confucian values and scholarship, but also feared

(2014) studies the long-run impact of the Spanish Inquisition in premodern Spain. He finds that the Spanish Inquisition reduced population growth in early modern Spain, though this effect disappeared after 1860. In contrast to our study, he finds only mixed evidence that the Inquisition has left a lasting impact on the Spanish mind.

¹¹Manchu was the name given to the state formed by Nurgaci, who declared war on China, and unified a variety of peoples who lived in the region north-east of China, notably many individuals who had previously identified as Jurchen (Crossley, 1990; Elliott, 2001).

¹²See Naquin and Rawski (1987), Wong (1997), Pomeranz (2000), and Brandt, Ma, and Rawski (2014).

¹³Political legitimacy is the “common knowledge probability that each member of a society holds that others will obey” the political authority (Greif and Rubin, 2015, p. 5).

¹⁴Research suggests that political conflicts are particularly intense when the losing ethnicity resents the fact that the victors have captured control of the state while the minority ruling group fear this resentment (Fearon and Laitin, 2003; Esteban and Ray, 2011; Esteban and Ray, 2011).

being seen as outsiders and hence showed zero tolerance to anyone who appeared to challenge the “naturalness” of Qing rule. In the words of Fairbank and Goldman (1992, p. 159): “Truly the price of alien despotism was external vigilance”.

The intensification of state power in the Qing period is evident in “a secular change in the legal posture toward literary crimes” which distinguishes it from early periods in Chinese history (Crossley, 1999, p. 298). From 1652, individuals were prohibited from meeting to discuss ideas and a policy of severe censorship was implemented banning individuals from owning suspect literature, a category which even included “frivolous” fiction.¹⁵ Private academies, which in the late Ming period had become places where intellectuals could engage in policy discussions and debate, were shut down (see Dardess, 2002) and the imperial academies were purged on the grounds that they were suspected of encouraging factionalism (see Chen and Jiang, 1725; Huang, 1974; Guy, 1987; Wakeman, 1998).¹⁶ Perhaps the most important of these policies were the investigations into individuals suspected of harboring subversive attitudes towards the Qing regime known as literary inquisitions.

A LITERARY INQUISITIONS

Literary inquisitions are defined as “legal punishment for criminal acts committed through speech and written words expressed in various forms, including conversations, letters, essays, poems, pamphlets, books, drams, novels, and diaries” (Fu, 1994, p. 131). The Qing-era literary inquisitions “reached a level of perfection” that was not present previously (Fu, 1994, p. 138).¹⁷ These investigations were highly centralized—all cases were reviewed by the emperor—and highly arbitrary: no offense had to be specified in advance for an investigation to occur and “[t]he range of accusations that could lead to a literary inquisition was virtually unlimited” (Wang, 2002, p. 634).¹⁸

An accusation could be based on something an individual was alleged to have written or to have said, on the possession of banned literature, or on the basis of personal connections to suspected individuals. An inquisition case could arise because an individual inadvertently made a favorable comment on previous dynasties, incorrectly interpreted a canonic Confucian text, used a character which for some reason offended the emperor, or used language that the emperor disapproved of, or for a host of other reasons. In addition to expressions or phrases that were interpreted as treasonous, “[r]ash fortune-telling and discussion of military strategy could be offenses, as could poetic works with “excessive anger” or “excessive hate,” or even expressions of “sorrow” regarding specific episodes in history . . .” (Wang, 2002, p. 628). “Most of the cases had nothing to do with anti-Manchu ideology or treason”. But despite the triviality of some of the cases, “the punishments could be shockingly

¹⁵ Eventually three of the four classic works of Chinese literature were prohibited. Historians speculate that some of the later chapters of *The Dream of the Red Chamber* were destroyed by their author Cao Xueqin due to fear of being persecuted.

¹⁶ Intellectuals and writers were received patronage and could find employment compiling dictionaries and writing official histories. As one historian notes: ‘Patronage of scholarship and expiation of dissent always went hand in hand’ (Grieder, 1981, p. 49).

¹⁷ We study the Qing-era persecutions because, while there had been “literary” persecutions in prior dynasties, they were sporadic events in comparison.

¹⁸ We explicitly compare the Qing literary inquisitions to earlier persecutions in Appendix 2.

harsh” (Wang, 2002, p. 612).¹⁹

We outline a simple signaling model in Appendix B to provide an conceptual framework to understand how persecutions were used by the Qing emperors. In this model, rulers use persecution in order to demonstrate their “strength” i.e. their capacity to investigate and eradicate all potential dissent and opposition. In our framework, the population are not informed about the strength of a ruler. Stronger rulers find it less costly to conduct persecutions than do weak rulers. Persecutions can thus be used to signal strength and deter potential opponents. Our model generates the following predictions: strong rulers from dynasties that lack legitimacy will be most likely to employ political persecutions to signal their strength and ability to root out opposition. As their purpose is to demonstrate the capacity of the ruler to destroy potential opposition, persecutions in fact occur in the absence of overt opposition. In contrast, weak rulers from dynasties lacking legitimacy will not be able to signal strength by undertaking political persecutions, while rulers from more legitimate dynasties will be less likely to use persecutions as a tool of governance because they have less fear of being overthrown.

This framework rationalizes several characteristics of the Qing literary inquisitions. First, there was no open opposition to the emperor. In the absence of open opposition, persecutions were intended to overawe and intimidate society at large (i.e to “send a signal”). They were not directed at known critics of the regime (as there were none) nor at specific regions or provinces. As such persecutions could not be anticipated and had a substantial random component. Second, persecutions were fundamentally different to the persecution of specific religious minorities in Europe as scapegoats for economic downturns or disasters. Third, the number of individuals tried and punished during these literary inquisitions was fairly small relative to the size of the population. Fourth, the trials and executions themselves were prominent and highly publicized: indeed “[p]ublic executions of literary culprits were so visible and publicized that most people felt one must be very careful while making open oral and written expressions” (Fu, 1994, p. 133).

The character of these persecutions is illustrated by the case of Wang Xihou. A dictionary maker, Wang was accused by a neighbor on the basis of the content of his writings. He was a minor figure in local society who posed no threat to the emperor. Nevertheless, although the provincial governor did not find anything overtly treasonous in Wang’s dictionary, when he passed the case to the Qianlong emperor, the emperor decided that Wang should be punished on the grounds that the dictionary did not show sufficient deference to the dictionary commissioned by the Qianlong emperor’s grandfather (Reischauer and Fairbank, 1958, p. 382). Wang Xihou sentenced to nine familial extirpations, the most severe punishment available. He was executed, as were all his sons, and 21 other members of his family were enslaved.²⁰

¹⁹Though they were studied by numerous scholars in the early and mid-20th century (e.g. Goodrich (1935), Ch’i-ch’ao (1959), and Wiens (1969)), the literary inquisitions have not been the subject of a major study among modern historians with the exception of Wang (2014). The existing literature comprises either narrative accounts, detailed case studies (Spence, 2001), or comparatively brief mentions in more general accounts of Qing China. See, for example, Gernet (1972, p. 506), Huang (1974, pp. 204–208), Guy (1987, pp. 166–179), and Kuhn (2002)).

²⁰We outline the standard procedure followed in inquisition cases in Appendix 3. Further detail about the case of Wang Xihou case are provided in Appendix 4.

This case highlights several important features of the Qing literary inquisitions. First, the guilt of Wang was determined by the emperor alone and the criteria employed were idiosyncratic and impossible to anticipate. Imperial paranoia determined the fate of individuals involved in literary inquisition cases. The guilt of those accused of “word crime” was “in the eye of the beholder who wield[ed] political power” i.e. the emperor (Fu, 1994, p. 134). Second, the Qing emperors understood the importance of deterrence: in the majority of cases individuals were executed in public, often through *Lingchi* (slow slicing).²¹ Third, punishment was collective. As in the Wang case, it was standard for close adult male relatives to be executed with the victim whereas female relatives and children would be enslaved.

B DATA AND SAMPLE CONSTRUCTION

Data on the persecution of individuals is from *Qing chao wen zi yu an* (Qing literary inquisition cases) (Guo and Lin, 1990). These data have been collected and compiled by historians from the imperial archives. A total of 88 cases are included in *Qing chao wen zi yu an*, dating from 1661 to 1788. This is the universe of official literary inquisition cases.²²

Qing China was the largest and most populous state in the world at the time: within the Qing empire, China proper was divided into 18 provinces and 275 prefectures during the Qing period. We focus on the deterrence and intimidation effects of persecutions within a prefecture.

Figure 1 depicts the prefectoral boundaries of Qing China and displays the prefectures associated with victims of literary inquisitions per quarter century.²³

We examine the effect of a literary inquisition on the prefecture of the persecuted individual. Confucian culture and the agnatic lineage system meant that families, clans and their sense of cultural identity were firmly located in their hometown. Although it was quite common for literate individuals (particularly those who graduated from the examination system) to be employed in another province or prefecture, they always returned to their home prefectures which remained the basis of their family and clan.

The data we employ comprises all official literary inquisition cases conducted by the imperial government. It is possible, though unlikely, that there were other locally directed persecutions, which were organized by local magistrates and not reported to the emperor. In the event that persecutions

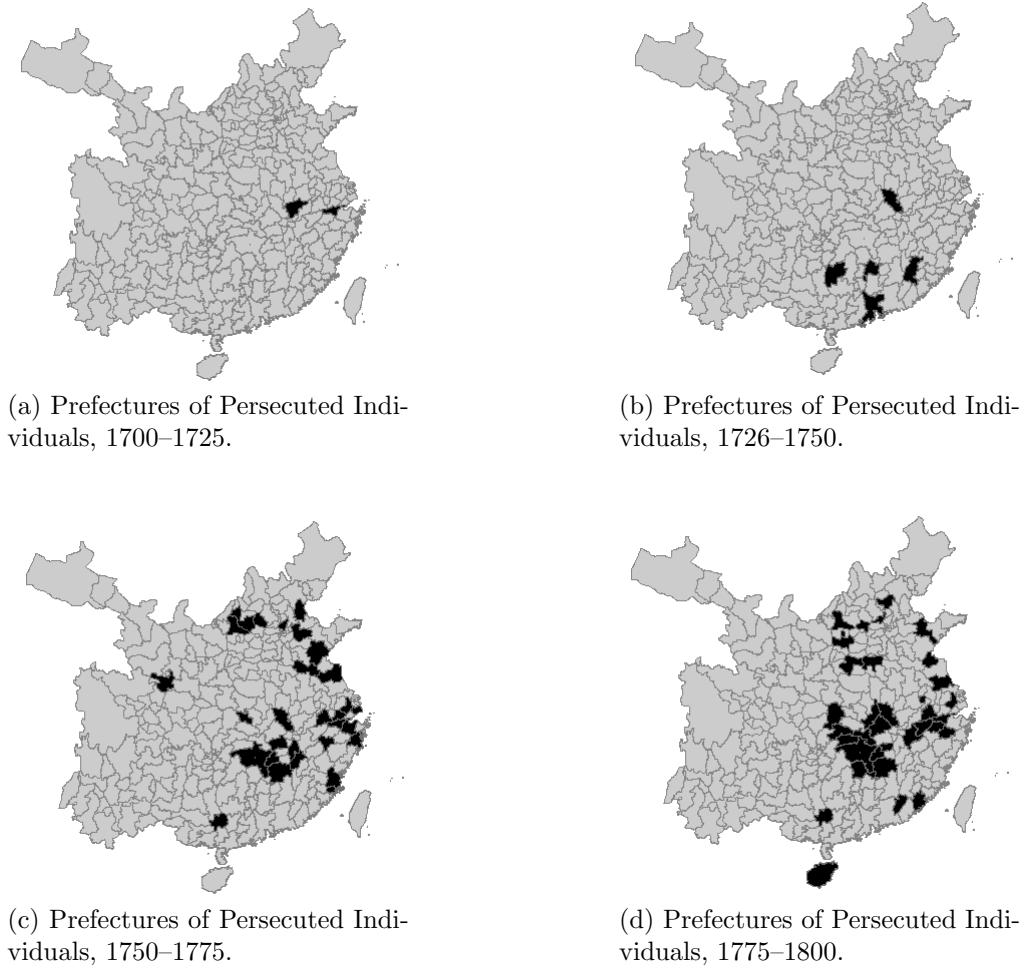
²¹Lingchi can be translated as death by a thousand cuts. Inquisition cases were prominent and widely publicized. Guy observes that “the emperor was using the Wang case to make a statement to the literary community about his determination to preserve his dynasty’s reputation. The singling out of one offender, repugnant though it may seem today, was not an uncommon means of communicating, in the 18th century to a large and diffuse community uncertain of Imperial directions” (Guy, 1987, p. 176). We detail other punishments used in inquisition cases in Appendix 3.

²²This is the most extensive source of information for inquisition cases. It is a collection of inquisition cases taken from archival material and it contains the universe of cases that historians agree to be genuine literary inquisition cases. We also consult *Qing chao wen zi yu dang* (Archives of Museum of Forbidden City, 1934). As we detail in Appendix 3, we also employ a more expansive but less precise list of inquisition cases which includes 180 cases in Table ???. The results we obtain are inline with our main estimates but subject to more measurement error as they include, for instance, political purges associated with the Ming-Qing transition.

²³There were three levels of administration in Imperial China: the province, the prefecture and the county. There were roughly five or six counties per prefecture and seven to thirteen prefectures per province. The prefecture level is the lowest level of aggregation at which we expect to find a measurable effect of a literary inquisition. Summary statistics for all data used in our analysis are provided in Appendix 1.

were carried out at a local level, this would be a source of downwards bias as we would find charities declining in the absence of a centrally directed persecution.²⁴

Figure 1: Prefectures of individuals persecuted as a result of a literary inquisition per quarter century: 1725, 1750, 1775, 1800.



To first verify that literary inquisitions had the impact on society that historians have suggested, we examine the impact of persecutions on prominent local individuals. We use Jiang (2005), a compendium of notable figures in Chinese history. This source is encyclopedic and includes a total of 21,141 individuals who were mentioned in local records for a host of reasons including their scholarly achievement (such as essay writing or writing an autobiography), for work as officials, or other actions that made them well-known. We extract information for all individuals born between 1640 and 1819 who came from prefectures in our matched sample. The resulting dataset comprises 3,509 individuals. While potential sampling issues might make this data problematic in a cross-section, our panel setting

²⁴Magistrates and provincial governors were made personally responsible for detecting “literary offenses”. Officials could be punished for omissions made by their staff; “[t]he names, ages, and addresses of suspicious men were transmitted to government offices” (Wang, 2002, p. 622). Given this incentive system, it is therefore highly unlikely that officials would fail to report cases to the emperor.

allows us to exploit variation over time within a prefecture.²⁵

Historians have suggested that literary inquisitions negatively affected intellectual life, but they have not explored the broader effects that these persecutions may have had on social activity more generally and have not considered their impact on social capital, nor have they attempted to quantify their impact. Our measure of social capital, the number of local charities, is from Liang (2001). This source is regarded as the definite compilation of local charities in Qing China and, to the best of our knowledge, we are the first to use it in economics. Social capital refers to the set of values and beliefs that help cooperation (Guiso, Sapienza, and Zingales, 2011). Social capital, thus defined is civic capital and thus well captured by our data on local charities as these organizations provided charitable relief including famine relief, help for the indigent, support of orphans and required cooperation among local individuals. Historians have documented that, while traditionally these services were provided within the clan (Greif and Tabellini, 2012), by the Qing period these voluntary associations had expanded to provide relief to those outside of the clan; they were seen to represent a contribution to the community (Rowe, 2009).²⁶

C IDENTIFICATION STRATEGY

Our empirical strategy identifies the effects of persecutions on social capital using a difference-in-differences strategy that exploits variation in the timing of a persecution within a prefecture. We consider a prefecture “treated” when it is exposed to a persecution where exposure is defined as the first persecution of an individual from the prefecture in question. Because our treatment occurs in different time periods, the control group comprises all of those prefectures that have not yet had a literary inquisition case.

To identify the effects of literary inquisitions, we rely on the fact that there was substantial variation in the timing of persecutions—due to the idiosyncrasies of the process determining the incidence of inquisition cases. Specifically, identification relies on the timing of the treatment being exogenous to the number of notable scholars and formation of local charities in a prefecture. The identifying assumption is that, in the absence of treatment, the average change in the number of notable scholars and/or local charities would have been the same for both the treatment and control groups.

If information about persecutions had spread perfectly freely, we would not expect to be able to distinguish a local reaction to an inquisition case. Of course, this was not the case in the premodern world. In the absence of newspapers or other forms of media meant that information spread slowly and within a limited geographical range. Thus we can expect there to have been a substantial local component to knowledge of an inquisition case.

One possible channel for dissemination was the imperial examination system. As large numbers of

²⁵As Jiang (2005) is a modern source, it is implausible that his selection criterion for a prefecture would change before and after a persecution. Of course, if persecutions led to individuals destroying their writings this would be a reason why fewer individuals would be recorded as notable and hence enter our sample. This, however, would be entirely in keeping with our interpretation that persecutions caused intellectuals to withdraw from public life.

²⁶These local charities were small-scale organizations there was no formal registration system. We report results using both the number and density of local charities.

individuals came together every two years to sit for the local level exams, this was a setting where information could be disseminated rapidly. Information was less likely to spread beyond prefectural level borders. One reason for this was that fewer individuals graduated to the provincial or metropolitan level exams (Elman, 1991; Chen, Kai-sing Kung, and Ma, 2016). Another reason was that the Chinese political system was highly centralized and, typical of the hub and spoke system of imperial rule, connections were much closer between each prefecture and the capital than between two prefectures.²⁷

Our choice of controls is motivated by the fact that the number of local charities could have been affected by a number of factors. On the demand side, more natural disasters such as floods might raise the need for charity to support indigent individuals. On the supply side, local charities relied on the voluntary contributions of local community members and this depended on the social capital within the community. To better ensure that we are capturing a decline in social capital, we control for (i) shocks such as natural disasters that could reduce the supply and/or increase the demand for charity; secular changes in the level of social capital over time; and (ii) policy interventions that could have directly affected the provision of charity.

In general, the cases we study often arose for reasons that had to do with idiosyncratic actions of individuals but were unrelated to the characteristics of prefecture. Literacy was, however, a precondition for many types of offenses for which individuals were accused in inquisition cases. For this reason, there may be a mechanical relationship between the proportion of literate individuals and inquisition cases. Hence “treated” prefectures—prefectures that faced a literary inquisition—could differ systematically from untreated prefectures in terms of characteristics such as population, prior stock of human capital, or economic development which could lead to possible violations of the parallel trends assumption. To address this, we use a propensity score matching approach to construct a more comparable control group for those prefectures that experienced an inquisition (see Dehejia and Wahba, 2002).²⁸

In our matching analysis the covariates we include are the number of Ming examination graduates, population in 1600, agricultural suitability, and socioeconomic macroregion. As literacy rates for premodern China are unavailable at the prefectural level, we include the number of Ming examination graduates (specifically graduates of the metropolitan exam or *jinshi*) as a measure of the level of intellectual stock in a prefecture (see Jiang and Kung, 2015). Because the number of Ming *jinshi* also reflects the prominence of the gentry, prefectures with more Ming *jinshi* could also have experienced differential levels and trends in the provision of local public goods.

Second, to control for underlying differences in economic potential between prefectures, we include estimates of population in 1600 and agricultural suitability. Third, to capture deep-rooted regional differences, we distinguish prefectures according to the socioeconomic macroregions they belong to, using an influential categorization developed by Skinner, Henderson, and Berman (2013). These socioeconomic macroregions were large economic areas with their own internal market systems and

²⁷Some information was likely to spread across the prefecture but much less than at the prefecture level.

²⁸The fact that we focus on the first inquisition case (rather on the total number of cases in a prefecture) partially mitigates this concern.

urban networks.²⁹

Prior to matching our sample is unbalanced in terms of economic fundamentals (Table A.4a). After matching we obtain a balanced sample (Table A.4c). This sample is also balanced in terms of pretreatment characteristics including the initial number of charities and notable scholars (Table A.5) thereby satisfying the conditions for difference-in-differences analysis.³⁰

It is important to note that we are interested in identifying the effects of political repression on the mentalities of individuals, their communities, and civil society. Though political repression could also affect the provision of local charities by decapitating local elites, this affect is likely to be small as the actual numbers of individuals killed in the literary inquisitions case was not large. It was the effect of persecutions on local mentalities, culture mores, social norms that had the potential to affect a much wider proportion of society and which is the subject of our study.

III THE IMPACT OF PERSECUTIONS ON SOCIAL CAPITAL IN IMPERIAL CHINA

A INITIAL EXAMINATION OF THE IMPACT OF LITERARY INQUISITIONS: THE EFFECT ON NOTABLE FIGURES

First, we establish that persecutions indeed had a negative effect on the number of well-known individuals in an affected prefectures. We estimate following equation:

$$\text{Notable Figures}_{p,d} = \beta \text{Literary Inquisition}_{p,d} + \Omega_p + \Lambda_d + \mathbf{X}'_p \Lambda_d + \epsilon_{p,d}, \quad (1)$$

where subscript p represents a prefecture and d a decade. The treatment $\text{Literary Inquisition}_{p,d}$ is an indicator variable that becomes equal to one in the decade d following an inquisition in a prefecture p . Prefecture fixed effects, Ω_p , absorb time-invariant prefecture-specific characteristics. Decade fixed effects, Λ_d , flexibly capture common time trends across prefectures. We include interactions between decade fixed effects and a range of time-invariant controls (\mathbf{X}'_p) to control for differential economic and political trends across regions.

To examine the effects of an inquisition, we look at different age cohorts. This is because we expect fear of persecution to have influenced individuals if they were at an malleable age at the time of an inquisition. In contrast, political repression was much less likely to affect the probability of an established scholar, for example, being recorded in our dataset as they were likely to have already produced their main work by the time of an inquisition. All specifications include decade and prefecture fixed effects and we interact decade fixed effects with Skinner's socioeconomic macroregion fixed effects, latitude and longitude, the number of Jing examination candidates (jinshi) during the Ming dynasty, the log of the population of a prefecture in 1600, and Distance to Beijing. We find a large and significant negative effect of an inquisition on the cohort of individuals aged between 20-30 during the decade of an inquisition. It suggests that a literary inquisition resulted in a 30% ($-0.524 \div 1.721$) decline in the

²⁹The socioeconomic macroregions identified by Skinner, Henderson, and Berman (2013) are based on Skinner (1977). This data is used in Xue (2016). Details on all our variables are provided in Appendix 6.

³⁰In Appendix 2 we show that our results hold when we match prefectures on a wider range of covariates. We also report results using Coarsened Exact Matching (CEM), which provides a less model dependent approach.

number of notable figures in every subsequent decade. For our cohorts the sign is negative but smaller and imprecisely estimated.

Prominent individuals could be persecuted in an inquisition case: 10 out of 88 inquisition case involved someone in our dataset of notable figures. So the finding that persecutions led to a decline in notable figures is highly plausible. This seems to represented the general deterrence effects associated with political persecution.³¹ Contemporary accounts suggest that fear of persecution caused some members of the gentry to retreat into their private worlds (Liu, Wang, and Wang, 2005). Wu Wei-Yeh, for instance, wrote that “each time a case of literary persecution erupted in the southeastern part of the realm, I apprehensively awaited the arrival of prosecutors indicting me for works of poetry or history I have written” (quoted in Wang, 2002, p. 611).

Our results suggest that such fear was indeed a general phenomenon. Intellectuals had to take drastic measures to reduce the risk of persecution, inhibiting their ability to produce important works. Alternatively, authors simply did not publish or even write works that they would otherwise have written and published due to the fear of persecution. A climate of intimidation produced individuals who censored themselves and thus created a culture of self-containment and withdrawal from society and from politics (Wang, 2014).

B THE IMPACT OF LITERARY INQUISITIONS ON LOCAL CHARITIES

We have shown that the fear inspired by literary inquisitions caused individuals to withdraw from society. Next we consider how this manifest itself in the provision of social capital as measured by local charities. We hypothesize that persecutions created a climate of fear and intimation. This reduced the incentives individuals had to standout by contributing to local institutions and public goods. To examine this we estimate the following equation:

$$\text{Local Charities}_{p,d} = \beta \text{Literary Inquisition}_{p,d} + \Omega_p + \Lambda_d + \mathbf{X}'_p \Lambda_d + \epsilon_{p,d}, \quad (2)$$

where subscript p represents a prefecture; and d a decade. The treatment $\text{Literary Inquisition}_{p,d}$ is an indicator variable that becomes equal to one in the decade d following an inquisition in prefecture p . Ω_p is a vector of prefecture fixed effects. Λ_d is a vector of decade fixed effects.³²

The magnitude of the effect is substantial. According to the estimate in Table 2, column (1), once there is a persecution the number of local charities falls by about 27% ($-0.75 \div 2.679$) relative to the sample mean. To control for differential trends between treated and untreated prefectures, we interact decade fixed effects with our baseline controls: the number of Ming-era examination graduates (jinshi), Skinner’s socioeconomic macroregions and latitude and longitude. Our preferred specification (column 3) suggests that a literary inquisition reduced the number of local charities by 38% ($-1.024 \div 2.679$) of the sample mean. Henceforth we refer to this as our baseline specification. To address concerns about the appropriate way to estimate standard errors, in column (4) we cluster our standard errors

³¹Our results are not driven by these 10 cases.

³²In Appendix we show that as an alternative to the number of local charities, we can use the number of charities per capita and obtain the same results (See Table A.17).

Table 1: The Impact of Inquisitions on Notable Figures

	# Notable Figures				
	Aged 10-20 (1)	Aged 20-30 (2)	Aged 30-40 (3)	Aged 40-50 (4)	Aged 50-60 (5)
Literary Inquisition	-0.478 (0.330)	-0.524* (0.272)	-0.303 (0.300)	-0.425 (0.315)	-0.309 (0.332)
Socioeconomic Macroregion \times Decade FE	Yes	Yes	Yes	Yes	Yes
Latitude & Longitude \times Decade FE	Yes	Yes	Yes	Yes	Yes
Ming Jinshi \times Decade FE	Yes	Yes	Yes	Yes	Yes
Initial Pop. Density \times Decade FE	Yes	Yes	Yes	Yes	Yes
Distance to Beijing \times Decade FE	Yes	Yes	Yes	Yes	Yes
Decade FE	Yes	Yes	Yes	Yes	Yes
Prefecture FE	Yes	Yes	Yes	Yes	Yes
Observations	1417	1417	1417	1417	1417
Adjusted R^2	0.235	0.213	0.211	0.139	0.140

This table reports the effect of a literary inquisition on the number of notable figures. We expect the effect to be largest on individuals who were coming of age during the decade of an inquisition (column 2). Columns 3-5 confirm that the effect was much smaller and less precise for individuals who were already mature during the decade in which there was an inquisition. All specifications include prefecture fixed effects and decade fixed effects as well as interactions between socioeconomic macroregion, interacts latitude and longitude, the number of Ming-era jinshi, the log of 1600 population, distance to Beijing, and decade fixed effects. In the other specifications robust standard errors are clustered at the prefectural level and are reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

by both prefecture and decade (Cameron and Miller, 2015). Our robustness checks below, include a richer set of controls which will allow us to take into account possible differences in initial conditions and trend confounders.

C CONFLICT, ACADEMIES, AND OPPOSITION TO QING RULE

The qualitative evidence we have presented suggests that the impetus for an inquisition was highly idiosyncratic. Historians find no evidence that persecutions specifically targeted particular regions or prefectures. Moreover, we match on factors such as the number of examination candidates which might affect the likelihood of an individual being persecuted. Nevertheless, there may have been underlying factors affecting (i) the attitude of individuals to Qing rule and hence their probability to resist the Qing; or (ii) the personal attitude or inclination of the emperor to a particular region, conditional on the probability of opposition. In this section we address these concerns.

First, we consider the conflicts that accompanied the Ming-Qing transition. Numerous conflicts accompanied the Qing takeover. Individuals from areas which resisted the Qing more may have been suspected more. Table 3, column (1) shows that the coefficient on literary inquisitions is unaffected when we interact the number of the conflicts between 1644 and 1690 with decade fixed effects.

Table 2: The Impact of Inquisitions on Charitable Organizations

	# Local Charities			
	(1)	(2)	(3)	(4)
Literary Inquisition	-0.750* (0.419)	-0.988** (0.419)	-1.024** (0.506)	-1.024** (0.469)
Initial Pop. Density \times FE	Yes	Yes	Yes	Yes
Ming Jinshi \times FE	No	Yes	Yes	Yes
Latitude/Longitude \times FE	No	No	Yes	Yes
Socioeconomic Macroregion \times FE	No	No	Yes	Yes
Cluster	Prefecture	Prefecture	Prefecture	Prefecture & Decade
Decade FE	Yes	Yes	Yes	Yes
Prefecture FE	Yes	Yes	Yes	Yes
Observations	1417	1417	1417	1417
Adjusted R^2	0.779	0.792	0.828	0.828

This table presents the effect of a literary inquisition on the number of charitable organizations. All specifications include decade fixed effects. Column (1) presents our results controlling only for the interaction between decade fixed effects and our measure of initial population density: log population density in 1600. Column (2) controls for the interaction between the number of Ming-era jinshi and Skinner's socioeconomic macroregion fixed effects and decade fixed effects. Column (3) is our baseline specification. It includes interactions with latitude and longitude. In Column (4) we cluster our standard errors by both prefecture and decade. In the other specifications robust standard errors are clustered at the prefectural level and are reported in parentheses. *

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Next, we consider the role of independent academies. In the late Ming period academies played a crucial role in shaping intellectual discourse (Wakeman, 1998; Dardess, 2002; Elman, 2002). Historians view them as potential vehicles for the rise of a nascent public sphere in China Rankin (1990) and Wakeman (1998).³³ Academies in the late Ming period encouraged gentry and intellectuals to take an active role in society (Peterson, 2002, p. 479). As academies magnified the impact that intellectuals could have, individuals in prefectures with Ming-era academies might have had different political preferences and attitudes to Qing rule. Our results remain unchanged when we include an interaction term between the number of Ming-era academies and decade fixed effects (Table 3, column (2)).

As the Qing faced considerable resistance in taking over parts of China, one factor that could influence the decision to persecute might be a legacy of support for the old Ming dynasty. To address this, we use data on “Ming Martyrs”—individuals who decided to sacrifice themselves for the Ming cause during the Qing conquest (Wakeman, 1985a; Wakeman, 1985b). As Koon-piu (1994) discusses, while it was claimed that it was the “universal duty” for officials and others to die in defense of the Ming dynasty, only a relatively small number of individuals did indeed sacrifice themselves. This

³³Historians describe these late Ming private academies as “centers for classical discourse on the one hand and dissent and political protest on the other” and describe one such academy, the Tung-lin Academy as “probably the largest and most sophisticated political organization[s] in the history of traditional China” (see Elman, 2002, p. 397). See Appendix

Table 3: The Impact of Inquisitions on Charitable Organizations: Political Economy Considerations

	# Local Charities				
	(1)	(2)	(3)	(4)	(5)
Literary Inquisition	-0.893* (0.533)	-0.897* (0.534)	-1.004** (0.503)	-1.057** (0.502)	-1.071** (0.500)
Baseline Controls \times FE	Yes	Yes	Yes	Yes	Yes
Resistance to Qing \times FE	Yes	No	No	No	No
# Ming-era Academies \times FE	No	Yes	No	No	No
# of Ming Martyrs \times FE	No	No	Yes	No	No
Distance to Army Base \times FE	No	No	No	Yes	No
Distance to Capital \times FE	No	No	No	No	Yes
Decade FE	Yes	Yes	Yes	Yes	Yes
Prefecture FE	Yes	Yes	Yes	Yes	Yes
Observations	1417	1417	1417	1417	1417
Adjusted R^2	0.829	0.828	0.828	0.829	0.840

This table reports the effect of a literary inquisition on the number of charitable organizations controlling for political economy factors. In all specifications we include decade and prefecture fixed effects, and interact our baseline controls with decade fixed effects. Baseline controls include Ming-era jinshi, log 1600 population, latitude and longitude and socioeconomic macroregion fixed effects. In Column (1) we interact the number conflicts between 1644–1690 that took place as the Qing established control over China with decade fixed effects. Column (2) adds an interaction term with the number of Ming-era academies. Column (3) includes an interaction with the number of individuals who died for the Ming cause (Ming Martyrs). Column (4) includes an interaction with distance to the nearest army base. In column (5) we include an interaction term with distance to the capital, Beijing. In all specifications robust standard errors are clustered at the prefectural level and are reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

variable therefore captures the strength of residual loyalty to the old dynasty and potential antagonism to the Qing state. We find that such residual hostility to Qing was not related to the impact of literary inquisitions on social capital (Table 3, column 3).

Next we consider factors that could enable the Qing state to suppress dissent without relying on direct repression. The Qing employed a range of methods to ensure peace and political stability and these could have negatively impacted social capital. To address this, we employ the geodesic distance to the nearest army base as a proxy for the ability of the state to suppress potential disloyalty and to intimidate the local population (column 4). In column (5) we include the geodesic distance to the capital Beijing as a measure of the political control of the Qing state. In both cases, the inclusion of these controls does not affect our estimate of the effect of persecutions on the number of local charities in a prefecture. Taken together these results are inline with our historical discussion: literary inquisitions were conditionally exogenous.³⁴

³⁴ As is apparent from Figure 1, there were more inquisition cases in southern China. This raises a concern that specific provinces in southern China were targeted by the imperial authorities. However, when we employ province fixed

D POTENTIAL THREATS TO IDENTIFICATION

We now provide additional evidence that our results are robust to a possible concerns about (i) different levels in initial social capital; (ii) differential economic trends; (iii) local shocks affecting either the probability of persecution or level of social capital; and (iv) spatial contagion or spillovers.

Different Levels of Initial Social Capital Different regions of China may have differed in their ability to support voluntary associations such as charities. Indeed historians detect subtle regional differences in the character of voluntary associations (Smith, 1987). Such broad regional differences are captured by our fixed effects. Nevertheless, there may be concern that different parts of China were experiencing differential trends in the development of such local charities. To address this, in Table 4, panel (a), we muster as much information as possible on initial social capital. The results we report suggest that the parallel trend assumption is satisfied and that our results not driven by differences in initial social capital.

Controlling for the initial number of local charities (column 1) does not effect the magnitude or precision of our estimates of the impact of persecutions on the number of local charities. Padro-i-Miquel et al. (2015) show that Buddhist temples reflect social capital in modern China. Controlling for the number of this measure of social capital, does not affect our estimates (column 2). Similarly, our results are robust when we include data on the funding agencies that helped to pay for the travel expenses of examination candidates, another proxy for initial levels of social capital (column 3). Finally, as ethno-linguistic fractionalization tends to be negatively correlated with social capital (Alesina and Ferrara, 2000; Alesina and Ferrara, 2002), we employ this as a proxy for latent levels of social capital. Using the ethno-linguistic fragmentation index introduced by Bai and Jia (2016), our results are unchanged (column 4).³⁵

Local Economic Conditions Differences in local economic conditions should not affect our estimates as there are differenced out by our DID strategy, but there might be some remaining concern that certain regions were on different economic paths. In Table 6, panel (b) we interact local economic factors with time dummies.

First, we consider urbanization. Satyanath, Voigtländer, and Voth (2016) find that urbanization predicts association density in Weimar Germany. Guiso, Sapienza, and Zingales (2016) find that the independent cities of northern Italy in the middle ages were characterized by high levels of social capital. We interact various estimates of total urban population from 1393—the only available year for which estimates of the urban population exist—with decade fixed effects to control for this possible driver of social capital (columns 2-4).

Second, to address the concern that the number of local charities is simply a proxy for population density, we show that our estimates are unaffected when we interact historical estimates of population

effects interacted with decade fixed effects instead of socioeconomic macroregion fixed effects, our results are unchanged.

³⁵Bai and Jia (2016) build on the work of Alesina and La Ferrara (2005) to calculate a measure of ethno-linguistic fragmentation at the prefectural level. This measure is based on modern data on dialects but Bai and Jia (2016) use it for historical analysis on the assumption that it is a good proxy for linguistic fractionalized in the Qing period.

density with decade fixed effects in 1580 (column 5). Third, we include interactions between a range of controls for economic conditions and decade fixed effects; these controls include agricultural suitability (column 6), distance to either the Grand Canal or the Yangtze (column 7), distance to the coast (column 8), and controls for Guangdong, the only part of China where foreign merchants were allowed to trade after 1750 (column 9).

Natural Disasters, Conflict and Human Capital Another possible concern is the role of natural distances and conflict. Research on early modern Europe and sub-Saharan Africa suggests that economic shocks increase the probability of persecutions (e.g. Oster, 2004; Miguel, 2005; Anderson, Johnson, and Koyama, 2017). There is also evidence that conflict can affect social capital.³⁶ These factors were unlikely to be important in our setting. As noted in Section 2, the persecutions we study were used to preemptively deter potential opposition. The model we develop in Appendix B makes it clear that we should expect persecutions to be uncorrelated with local shocks. Nonetheless, at the margin, adverse economic shocks could be associated with greater conflict at a local level leading to a greater probability of an inquisition case arising. In the event that natural disasters did increase the probability of persecution, then this would lead us to underestimate the effect of persecutions on social capital, as historians have suggested that if natural disasters tended to increase the demand for charities as ‘the need for aid was thus defined by the emergency’ (Smith, 1987, p. 310).

Table A.22 demonstrates that inquisitions were not a response to local conflicts or natural disasters (panel a) and that conflicts and unrest did not follow in response to episodes of political repression (panel b). We also show that our results are robust to controlling for local shocks such as the intensity of natural disasters and the number of conflicts (Table A.15).

Given the importance of upper-tail human capital highlighted by recent research such as Squicciarini and Voigtländer (2015) and Chen, Kai-sing Kung, and Ma (2016), we control for differences in the quantity of upper tail human capital by including the number of examination candidates (jinshi) per decade (column 4).³⁷ This measure enables us to control for the pool of individuals who were in a position to organize charities.

Spatial Correlation It is also natural to consider whether the negative influence of persecutions on social activity spread across prefectures. To address concerns that fear of persecutions could be spatially correlated, we conduct several tests. First, we employ Conley standard errors to correct for possible spatial autocorrelation in the error term (Table A.11). The spatially adjusted standard errors we obtain are slightly smaller than those we obtain when we cluster at the prefectural level so our estimates gain precision. Second, we explicitly allow for spillover lags to affect neighboring prefectures (Table A.12). Our estimates are unaffected and we find no evidence of a spillover effect.

³⁶Recent research suggests that exposure to civil war tends to *increase* measured social capital as it leads to greater social cohesion (see Gneezy and Fessler, 2011; Voors et al., 2012; Gilligan, Pasquale, and Samii, 2014).

³⁷While this measure is primarily a measure of human capital (Chen, Kai-sing Kung, and Ma, 2016), it also serves as a proxy for how politically connected a prefecture was during the Qing period. In another ongoing paper (Koyama and Xue, 2015), we investigate the impact of persecutions on human capital accumulation.

Additional Robustness Checks In the Appendix, we address several remaining endogeneity concerns. Specifically, our results are unchanged when we: (a) use different samples periods and vary the starting date and ending date of our analysis (Table A.13, columns 1-4); (b) drop prefectures which had no charities by 1750 (Table A.13, column 5); (c) drop prefectures which had had charities by 1830 (Table A.13, column 6); drop prefectures which had no Ming jinshi (column 7); (d) omit prefectures which are reported as having a large number of immigrants (Table A.13, column 8); and (e) use 50-year time periods (Table A.19).³⁸ Finally, we explore where political repression had heterogeneous effects. Splitting the sample into prefectures that had more or less than the mean number of Ming examination candidates (jinshi), we find no evidence of differential effects (Table A.21, columns 1-6). However, we find some evidence that the effect of inquisitions on the number of local charities was stronger in prefectures that had a higher quota for the examination system (Table A.21, columns 7-12).

E NO EVIDENCE OF DIFFERENTIAL TREATMENT BY THE STATE AFTER AN INQUISITION

It is possible that political repression affected other institutions of intellectual life. However, as we have noted, private academies were suppressed at the beginning of Qing rule prior to the onset of literary inquisitions. The only remaining institutions to consider were government sponsored academies. While private academies were suppressed, the Qing recognized government sponsored academies as “indispensable to provide classical education for a burgeoning pool of aspiring officials” (Elman, 2002, p. 400). A decline in the number of government sponsored academies following an inquisition case could suggest that political repression was accompanied by reduced spending or less favorable treatment in general.

Table A.10 confirms that there is no evidence that the government reduced spending on the number of government-sponsored academies after a persecution case.³⁹ The negative effect of persecutions on the number of local charities cannot be attributed to less government funding or to a less favorable fiscal environment.

Similarly, there is no evidence that preferences affected by literary inquisitions were treated differently by the state following natural disasters. In Table A.20, we find a positive (though statistically insignificant) relationship between natural disasters and charitable organization, suggesting that the provision of charities indeed increased in response to shocks such as natural disasters. While this helps to verify our measure of natural disasters, controlling for natural disasters does not affect the magnitude or precision of our estimates of the impact of persecutions on the number of local charities. We find no effect of disaster relief or tax relief on the number of charities.

³⁸We do this to avoid concerns about serial autocorrelation as it reduces time-series variation. In our main analysis, we focus on the periods prior to and shortly after an inquisition. A relatively small number of periods minimizes the chances of a false rejections in differences-in-differences setup (Bertrand and Mullainathan, 2004).

³⁹By the Qing period, even non-government funded academies had to take into consideration the attitude of the emperor as the previous independence of non-governmental academies had been curtailed (Wakeman, 1998). We document the role of academies in Ming and Qing China in Appendix 7.

Table 4: The Impact of Inquisitions Charitable Organizations: Initial Social Capital and Economic Conditions

Panel (a): Initial Social Capital				
	# Local Charities (interacting decade FE with controls for)			
	Initial Charities	Buddhist Temples	Funding Agencies	Fragmentation Index
	(1)	(2)	(3)	(4)
Literary Inquisition	-0.927* (0.494)	-1.056** (0.523)	-1.024** (0.510)	-1.034** (0.491)
Baseline Controls \times FE	Yes	Yes	Yes	Yes
Decade FE	Yes	Yes	Yes	Yes
Prefecture FE	Yes	Yes	Yes	Yes
Observations	1417	1417	1417	1404
Adjusted R^2	0.841	0.827	0.826	0.829

Panel (b): Economic Conditions				
	# Local Charities (interacting decade FE with controls for)			
	Ag. Suitability	Urbanization	Yangtze/Grand Canal	Coast
	(1)	(2)	(3)	(4)
Literary Inquisition	-0.999* (0.508)	-1.663** (0.637)	-0.993** (0.475)	-1.120** (0.519)
Baseline Controls \times FE	Yes	Yes	Yes	Yes
Decade FE	Yes	Yes	Yes	Yes
Prefecture FE	Yes	Yes	Yes	Yes
Observations	1417	975	1417	1417
Adjusted R^2	0.831	0.823	0.830	0.828

Table 5: This table presents the effect of a literary inquisition on the number of charitable organizations. In all specifications we include decade and prefecture fixed effects, and interact our baseline controls with decade fixed effects. Columns 1 to 4 control for the interaction between decade fixed effects and the initial number of charitable organizations, Buddhist temples, the number of funding agencies to support examination candidates, and ethnolinguistic fragmentation. Columns 5 to 8, control for interaction between decade fixed effects and agricultural suitability, urbanization during the Ming Dynasty (exact year to be found out, whether a prefecture is located on the Yangtze River or the Grand Canal, whether a prefecture is located with the 50km of the coast.

F DYNAMIC EFFECTS: THE LONG-RUN IMPACT OF PERSECUTIONS ON LOCAL CHARITIES

As we rely on variation in the timing of literary inquisitions, we can estimate the dynamic effects of persecutions on the number of local charities over time. Using a fully flexible model, we obtain results that coincide in sign and significance level with the original results. Figure A.3 plots the coefficients from this regression confirming that persecutions had a long-lasting impact on social capital, reducing number of local charities in a prefecture in each decade following an inquisition.

Recent research suggests that a history of high levels of social capital can have important implications for developmental outcomes today (e.g. Guiso, Sapienza, and Zingales, 2016). At the same time, while social capital is long-lasting and robust to small shocks, it is also vulnerable to large negative

Table 6: The Impact of Inquisitions on Charitable Organizations: Controlling for Local Conditions

	# Local Charities				
	(1)	(2)	(3)	(4)	(5)
Literary Inquisition	-0.999*	-1.663**	-0.993**	-1.120**	-1.045**
	(0.508)	(0.637)	(0.475)	(0.519)	(0.505)
Baseline Controls \times FE	Yes	Yes	Yes	Yes	Yes
Agricultural Suitability \times FE	Yes	No	No	No	No
Urbanization \times FE	No	Yes	No	No	No
Located on the Yangtze/Grand Canal \times FE	No	No	Yes	No	No
Located on the Coast \times FE	No	No	No	Yes	No
Guangdong \times FE	No	No	No	No	Yes
Decade FE	Yes	Yes	Yes	Yes	Yes
Prefecture FE	Yes	Yes	Yes	Yes	Yes
Observations	1417	975	1417	1417	1417
Adjusted R^2	0.831	0.823	0.830	0.828	0.827

Table 7: This table reports the effect of a literary inquisition on the number of charitable organizations controlling for local economic conditions. In all specifications we interact our baseline controls with decade fixed effects. Column 1 controls for an interaction term between agricultural suitability and decade fixed effects. Column 2 controls for the interaction between decade fixed effects and total urban population in 1393 (the only date for which urbanization data exists). Column 3 includes an interaction term for whether a prefecture is located on the Yangtze Delta or the Grand Canal. Column 4 includes an interaction term with distance to the coast. Column 5 includes an interaction term for whether a prefecture is in Guangdong. In all specifications robust standard errors are clustered at the prefectural level and are reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

shocks. Scholars have shown that one of the most pernicious effects of the slave trade in Africa was to undermine local social capital (Nunn and Wantchekon, 2011). In this respect, social capital is different to physical capital, which tends to rebound in the aftermath of shocks such as the Allied bombing of Germany (e.g. Waldinger, 2016).

Examining the dynamic effect of persecutions on the number of notable figures in Table A.9, we find that the effect of an inquisition was strong and negative in the first four decades after an inquisition took place before gradually weakening. One explanation for this is that over time writers were indeed able to learn how to avoid arousing suspicion or causing offense to the imperial authorities by avoiding certain subjects (Wang, 2002, p. 627). There was a rise of “inoffensive” literary subjects during the Qing period as, to reduce the risk of persecution, intellectuals “immersed themselves in the non-subversive “sound learning” and engaged in textual criticism, bibliography, epigraphy, and other innocuous purely scholarly pursuits” (Wiens, 1969, p. 16).

In contrast, the negative effect on social capital was permanent. Fear of persecution helped to cultivate individuals who were more reluctant to do anything that could attract notice or attention. In examining these dynamic effects, it is important to note that nothing changed in this period concerning

the formal institutional environment; it remained easy and low cost to establish local charities (Smith, 1987). The decline in the number of charitable organization instead reflects a self-perpetuating culture of apathy and disengagement.

Thus while the period after 1840 saw the flourishing of local charities in part due to Western influence, this growth was highly variable. In some regions the rise of local charities stagnated in comparison to other regions. Our results suggest that a legacy of state persecutions can explain part of this variation.

These findings can be interpreted as measuring a decline in the willingness of individuals to cooperate other and to invest effort and resources helping their neighbors. They may also reflect a decrease in trust as individuals withdrew from society because they distrusted their neighbors and peers who were often proximate causes of investigation in an era of literary inquisitions. While we cannot disentangle these two effects in our historical panel, in Section IV we provide evidence for trust channel.

IV THE EFFECTS OF POLITICAL REPRESSION ON SOCIAL CAPITAL TODAY

Having established that the persecutions of the Qing period had an immediate and lasting impact on social capital, we now examine the effects of autocratic rule in the even longer run and in a different political and institutional setting. To do this we study outcomes from the 20th century, after the fall of the Qing dynasty. We first document the effects of literary inquisitions on trust. Then we go on show that the impact of persecutions was visible in the provision of local public goods during periods of political decentralization.

A POLITICAL REPRESSION AND EROSION OF TRUST

Literary inquisitions involved a policy of intrusive state surveillance. Persecutions generated “a hydra of suspicion and denunciations” (Brook, 2005, p. 178). Individuals were expected to denounce suspects in inquisition cases and they could be punished themselves for failing to denounce. Thus persecutions had the potential to produce an atmosphere of mutual suspicion and distrust. We observe in our historical panel a persistent decline in charity provision after an inquisition. The qualitative evidence strongly suggests that this reflects the impact of persecutions in eroding trust and producing a climate of non-participation.

Moreover, these effects could have been cumulative. To the extent that charities and other forms of social participation helped to build trust and a community spirit, the negative impact of persecutions on local associations could itself have had a further negative impact on trust. These developments are necessarily difficult to track given our period of study. We can however provide direct evidence of the net impact of persecutions on trust by considering modern survey data. This strongly supports the claim that persecutions left a legacy of mistrust.

We first use the Chinese General Social Survey (CGSS) to demonstrate some intriguing correlations between literary inquisitions and modern levels of trust. Generalized trust is a widely used measure of social capital. It is closely related to our measure of charitable organization as collaboration on projects where the returns to an individual’s inputs may be ambiguous and difficult to measure requires trust.

Inline with the negative impact we found with respect to social capital, we find that the persecutions reduced generalized trust (Table 8). This parallels findings from Eastern Europe, where exposure to Communist rule has left of a legacy of non-participation, distrust in political institutions, and cynicism towards political parities, resulting in what scholars term an “impoverished public sphere”.⁴⁰

The impact of persecutions on generalized trust remains the same when we control for individuals factors such as age, gender, and education which may affect trust (column 2). In column 3 we control for modern societal level factors that the literature has shown to correlate with trust (Alesina and Ferrara, 2002; Butler, Giuliano, and Guiso, 2014). When we do this our estimate becomes slightly larger and more precisely estimated.

Literary inquisitions are negatively associated with generalized trust. Next we consider their relationship with an important form of particularized trust, trust within the family. This is important as literary inquisitions encouraged individuals to denounce their peers or superiors to the authorities, but unlike modern totalitarian states, individuals were not expected to denounce family members (who were, in any case, punished collectively with the perpetrator). The Confucian ideology of Qing China meant that cases involving family members were not investigated as thoroughly, as families were as seen as the foundation of social stability. As family members were not obligated to denounce one another in the same way that they were expected to denounce non-family members, we do not expect to find an impact of persecutions on trust of family members or relatives (see Rowe, 2002).⁴¹ Columns 4–6 of Table 8, confirm this: there is no effect of literary inquisitions on trust within families. This provides further reassurance that we are identifying the impact of political repression on trust.

B POLITICAL REPRESSION AND LOCAL PUBLIC GOODS

If persecutions reduced trust and this effect has persisted into the twenty-first century, this should be evident in outcomes for earlier years. To address this, we now consider evidence from the provision of public goods in early twentieth century China. In absence of provision by a strong central government, local public goods rely on the levels of social capital and trust within a community (Ostrom, 2000). This was the case in late Qing China when state capacity was low and the state did not actively govern below the level of the county (Feuerwerker, 1980; Kuhn, 2002; Sng, 2014; Sng and Moriguchi, 2014; Vries, 2015). Education, irrigation, and the provision of other public goods were not provided by the state but were the responsibility of private individuals. In particular, local gentry played a key role in the provision of basic education.⁴²

Provision of local public goods, such as primary schools in the absence of state education provides

⁴⁰See Bernhard (1996) and Mishler and Rose (1997), and Howard (2003). In particular, post-Communist societies are characterized by lower membership in civic organizations (Howard, 2003). Bernhard and Karakoç (2007) discuss the extent to which this is a general phenomenon characteristic of post-totalitarian societies. For a survey and empirical evaluation see Pop-Eleches and Tucker (2011).

⁴¹There were nonetheless cases where family members did report on one another but this was unusual.

⁴²The same individuals who were responsible for the organizing the provision of local charities in the Qing period also played a vital role in the provision of basic education. Basic education was the responsibility of either families or locally provided schools run on a voluntary basis by local gentry. Teaching was an “honorable profession for the gentry” and many “took the attitude that when they were accepted by the government, they should step into officialdom, and that if they were not in government service, they should be engaged in teaching” (Chang, 1962).

Table 8: Long-Run Analysis: Generalized Trust (CGSS)

	Generalized Trust			Trust in Family		
	(1)	(2)	(3)	(4)	(5)	(6)
Mean of Dep. Var	3.477	3.477	3.486	4.798	4.798	4.796
Literary Inquisition	-0.187** (0.0845)	-0.168* (0.0882)	-0.272*** (0.0851)	0.0397 (0.0460)	0.0402 (0.0466)	0.00492 (0.0510)
Individual Controls	No	Yes	Yes	No	Yes	Yes
Contemporary Controls	No	No	Yes	No	No	Yes
Socioeconomic Macroregion FE	No	No	Yes	No	No	Yes
Observations	3346	3343	3246	3345	3341	3244
Adjusted R^2	0.00354	0.0294	0.0510	0.000581	-0.00121	0.0115

This table shows the effects of a literary inquisition on modern levels of trust. Columns (1)-(3) examines the impact of persecutions on generalized trust. Columns (4)-(6) show that there is no impact on trust within the family. The dependent variable is a variable with scale 1-5. Individual controls include fixed effects for gender, age, and level of education. Contemporary controls include log per capita income and the proportion of the population belong to ethnic minorities, the percentage urban and the percentage enrolled in primary education. In all specifications robust standard errors are clustered at the prefectural level and are reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

a proxy for local levels of social capital. Thus the negative impact of political persecutions should be evident in data on basic education for the late Qing period. Specifically, if persecutions had a negative effect on social capital, this should be pronounced in local public goods provision under political decentralization but less evident when political institutions were more centralized.

To explore the impact of persecutions on the provision of basic education, we estimate literacy rates for individuals born between the late Qing period and the Cultural Revolution using data from the Integrated Public Use Microdata Series census (IPUMS). This source provides individual level literacy data for China in 1982—the earliest national census for which cohort-specific literacy data are available. To obtain covariates, we match individual-level observations from IPUMS data with prefecture-level data from the Historical China County Population Census (HCCPC) from 1982 and prefecture-level information gleaned from historical GIS data.⁴³

We examine literacy rates at the individual level by cohort in order to infer the level of basic education. Thus by looking at individuals who were at least 70 in 1982 (i.e. born before 1912) we can obtain information about the provision of education in the late Qing/early Republican period whereas later cohorts reveal information about the provision of education under either late Republican or Communist institutions.

We take into account several sources of potential bias: (1) there may be differences in survival rates between literate and illiterate individuals; (2) individual may have become literate later in life. To address (1), we explicitly control for the age structure of a prefecture in our analysis. Furthermore, because differential survival probability is likely greater for the older cohort, we look across all cohorts

⁴³We describe the process involved in matching different datasets in detail in Appendix 7.

and find that our results are not driven by the oldest cohorts but hold for all individuals educated under decentralized educational institutions. (2) is highly unlikely for the generations that we mostly focus on, as they were in their 40s and 50s by 1949, and hence not affected by the anti-illiteracy campaigns of the 1950s, and they would have been extremely unlikely to have opportunities to acquire literacy earlier (see Peterson, 1994).

We examine the effect of literary inquisitions on basic education at the end of the Qing dynasty by estimating:

$$\text{Literate}_{i,p} = \alpha + \beta \text{LiteraryInquisition}_p + \Omega \mathbf{X}_p + \Theta \mathbf{X}_i + \Gamma_{\text{prov}} + \Psi_m + \epsilon_{i,p} . \quad (3)$$

The dependent variable is a dummy variable that is equal to one if an individual was literate when surveyed in 1982. Throughout, we restrict our attention to Han Chinese only, and to China proper. We control for prefecture-level variables \mathbf{X}_p that might either directly affect literacy or are known to be correlates of social capital in the literature.

Following Guiso, Sapienza, and Zingales (2016) we control for a host of geographic and economic controls for historical development in our baseline controls. These include economic factors such as whether a prefecture is on the coast, has a historical courier route, its agricultural suitability, per capita taxation in 1820, log population density in 1820, geodesic distance to Beijing, and whether prefectures were identified in 1820 as important centers of transport and communication (Chong), and business (Fan), or were difficult to tax and affected by high crime (Pi). We also control for the examination quota as a proxy for the number of teachers in a prefecture. As human capital is a determinant of social capital and pro-social values (e.g. Glaeser, 2001), we control for the total number of examination candidates (jinshi) in all specifications.⁴⁴ The vector \mathbf{X}_i contains individual level characteristics that are known to be correlated with literacy, such as gender, household size, and marital status. In some specifications, we also employ a vector of modern controls. In addition to these baseline controls, we also control for the proportion of the population who were Manchu.⁴⁵ Socioeconomic macroregion fixed effects (Ψ_m) and province fixed effects (Γ_{prov}) capture broader economic differences across regions. We employ a linear probability model.

Table 9 reports our estimates of the effects of a literary inquisition on illiteracy in the early 20th century. Our preferred estimates indicate that in an prefecture with a legacy of Qing-era repression, the probability of individuals aged over 70 being literate decreases by 4 percentage points (column 4). The magnitude of this effect is relatively large: on average only 12% of individual aged 70 or above in 1982 were literate. In contrast, we do not find a negative effect of literary inquisitions on the number of 70 year olds with middle or high school education (Table A.24). This is consistent with the fact that these schools were centrally funded and not dependent on local social capital. The students able to

⁴⁴In addition, as a further robustness check in an unreported regression we control also for a city level measure of human capital: the average math score. These results are available on request.

⁴⁵In all specifications we use the same sample as in our prefectural level DID and, as in those estimations, we employ a caliper size of 0.002. We only report coefficients on control variables that are either statistically significant or otherwise of economic interest.

Table 9: Long-Run Effect on Literacy: Main Specification

	Literate			
	(1)	(2)	(3)	(4)
Mean of Dep. Var.	0.153	0.108	0.153	0.153
Literary Inquisition	-0.0371* (0.0199)	-0.0258* (0.0149)	-0.0387* (0.0202)	-0.0471** (0.0206)
Log Jinshi Density	0.126*** (0.0334)	0.0768** (0.0346)	0.165*** (0.0514)	0.177*** (0.0520)
Historical Controls	Yes	Yes	Yes	Yes
Individual Controls	No	No	Yes	Yes
Over 80 Year Olds	No	Yes	No	No
% Manchu	No	No	No	Yes
% Over 65	No	No	No	Yes
Log Population	No	No	No	Yes
Observations	72658	12035	72658	72658
Adjusted R^2	0.0331	0.0243	0.232	0.233

This table shows the effects of a literary inquisition at a prefectural level on the literacy of individuals older than 70 years old in 1982 using OLS. All specifications include province fixed effects and socioeconomic macroregion fixed effects. Historical controls include agricultural suitability, elevation, distance to the coast, distance to a historical courier route, whether a prefecture contained a treaty port, the examination quota, per capita taxation in 1820, log population density in 1820, and whether a prefecture was categorized as being a center of transportation (Chong), business (Fan), or difficult to tax (Pi). Individual level controls include gender, marital status, and the number of couples in the household. Column (1) includes our historical controls. Column (2) focuses only on individuals aged 80 or greater in 1982. Column (3) controls for population density in 1820 and includes individual level controls. Column (4) is our preferred specification and controls for log population, population structure and for the percentage Manchu. Robust standard errors, clustered at the prefecture level, are reported in parentheses. There are 72 clusters. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

attend middle or high school were also likely to be richer and hence less reliant on the basic education provided by local schools. The effect of a literary inquisition on 70 year olds in 1982 was concentrated on the least educated.

C POLITICAL AND DEMOGRAPHIC SHOCKS

Although, in all specifications we control for preexisting levels of education, there may be remaining concern that the preexisting stock of education could be correlated with both the probability of persecution and the likelihood of fleeing the Communists in 1949 and therefore dropping out of our sample. To ensure that this potential source of bias is not present, we collect new data to provide an estimate of the percentage of the population who migrated to Taiwan in 1949 (the main destination of migrants fleeing the Communists).⁴⁶ This data is from the Taiwan Family Genealogy Catalogue

⁴⁶Taiwan was the main destination for migrants. There were other minor locations but it is not possible for us to estimate the size of out-migration to those locations.

Database—a database that aggregates information from a range of sources, the most important of which is the Taiwan special collection maintained by the Genealogical Society of Utah (GSU).⁴⁷

Table A.27 shows that our baseline results on literacy are not affected by any of our measures of selective migration. Literary inquisitions continued to have a strong effect on literacy among individuals born at the beginning of the 20th century when we control for selective migration. Political persecutions undermined the provision of basic education in the Qing period and this had a long-run impact that is detectable among individuals older than 70 in the 1982 census.

Another natural concern is that the violence that took place during the Cultural Revolution might be affecting our estimates of the impact of literary inquisitions on the literacy rates of individuals aged over 70 in 1982. Using data on the number of victims from Walder (2014) in Table A.28, we show that our results are not confounded by the large-scale persecutions that took place during the Cultural Revolution.⁴⁸ The coefficient on the number of deaths is negative and significant, implying that literate individuals were more likely to be targeted and killed during the Cultural Revolution, but it does not affect the magnitude or precision of our estimates of the impact of Qing-era repression.

D INSTRUMENTAL VARIABLE STRATEGIES

While for our historical panel analysis we are able to exploit variation in the timing of an inquisition for identification, this is not available when conducting our analysis of the effects of persecutions on the provision of local public goods. As omitted variable bias is more of a concern in this setting, we now consider two instrumental variable strategies.

The aim of the literary inquisitions was to deter and intimidate the entire population. Persecutions were highly centralized, and the incidence of persecution did not reflect local conditions as the decision to punish an individual was always made by the emperor. One source of variation in the probability to persecute, however, was the unconscious attitude of the Qing emperors to particular parts of China. Where there was a greater history of such interaction, there was less distrust and less antipathy for Qing rule. In Shandong, for example, Chinese displayed different attitudes towards the Manchus due to cultural and economic interactions in the period before the Qing conquest (Wakeman, 1985a). Where there was much less history of shared interactions, however, the Qing rulers would have been more fearful of potential opposition from Han Chinese.

Motivated by this reasoning, we employ a proxy for the probability that Han Chinese and Manchus would have interacted with one another prior to the establishment of the Qing state. Specifically, we use distance to the Manchu capital in the years immediately *prior* to the Manchu invasion of China—Shenyang (Mukden)—as an instrument. Shenyang was one of the ancestral homelands of the Jurchen.⁴⁹ On the formation of the Manchu state, Shenyang became their capital until they invaded China in 1644. Thereafter, it was not an important economic or political center for China as a whole. On conquering China, the Manchu's adopted Beijing as their capital. Shenyang remained of cultural significance to the Manchu rulers of China. The Qianlong emperor even commissioned an “Ode to

⁴⁷Sources for this migration data and details of data construction are provided in Appendix 7.2.

⁴⁸Details of data construction are provided in Appendix 4.

⁴⁹It was also the place where members of the ruling Aisin Gioro clan were buried.

Mukden". Distance to Shenyang provides a source of exogenous variation in the underlying affinity between the Qing rulers and the Han population prior to the Qing conquest of China.

Distance to Shenyang is a relevant instrument because regions closer to Shenyang were more likely to have experienced a history of cultural contact between Manchus and Han Chinese. To satisfy the exclusion restriction, an instrument cannot affect social capital through any channel other than the probability of persecution. It is highly unlikely that social capital would be correlated with the old capital of the Manchus, as Shenyang was not an important economic or political center during the Qing period. In all specifications we control for distance to Beijing, the capital of China throughout this period. The resulting variation we identify reflects underlying tacit differences in the likelihood of a persecution taking place.

As a second IV we employ distance to Qing army bases. The presence of Manchu troops was a substitute for other means of political control such as the use of literary inquisitions. We therefore use distance to an army base as a source of exogenous variation in the likelihood of a persecution.

Table 10 reports our results using both IV strategies. First stage estimates are reported in Panel B. In Columns (1) and (2), we report results using distance to Shenyang as an IV. In Columns (3) and (4), we employ distance to Qing army bases. In panel A, we present our second stage results. Across specifications we find a strong negative effect of persecutions on literacy. The magnitude of these coefficients are comparable, and somewhat larger in magnitude, than in our OLS analysis.

E THE EFFECT OF INQUISITIONS ON BASIC EDUCATION BY SAMPLE

Another approach to ensure that we are identifying the effects of persecutions on social capital and trust, is to examine the full sample of individuals in the 1982 census. This allows us to distinguish between rural and urban individuals and to exploit temporal variation in the degree to which educational institutions were centralized.

The effect of inquisitions on literacy should only be visible during those periods when educational institutions were decentralized. Rural China was significantly less affected by the centralizing policies of both Republican and Communist governments. Therefore we expect to find strong effects among rural individuals. Inline with this prediction, the negative effects of literary inquisition are driven by the rural sample (Table A.25). This is also consistent with the fact that it was in rural areas that basic education was most reliant on the voluntary provision of local educated individuals. It also likely reflects the fact that cultural values are more likely to persist in a rural setting. Voigtländer and Voth (2012), for example, find that the transmission of medieval antisemitism was attenuated in larger cities.

We provide further evidence that the effect of persecutions was greatest when institutions were decentralized by looking across different cohorts and exploiting variation in the degree of institutional centralization over time. Under periods of centralization, local levels of basic education should no longer reflect local levels of social capital. Following the disruption that accompanied the demise of the Qing empire in 1912, the Republican period saw a brief, but intense, period of state building and investment in public goods (see Gao, 2015). In 1933 it became mandatory for local communities to provide primary

Table 10: Long-Run Effect on Literacy: IV Estimates

A. Second Stage IV Estimates				
Literate				
Literary Inquisition	(1) -0.138** (0.0689)	(2) -0.0941* (0.0550)	(3) -0.0742 (0.0575)	(4) -0.0926** (0.0427)
Additional Controls	No	Yes	No	Yes
Historical Controls	Yes	Yes	Yes	Yes
Individual Controls	Yes	Yes	Yes	Yes
Observations	72659	72659	72659	70316
B. First Stage IV Estimates				
Literate				
Distance to Shenyang	0.930*** (0.2913)	1.20*** (0.4315)		
Distance to Army Base			0.409*** (0.4315)	0.578*** (0.1619)
Additional Controls	No	Yes	No	Yes
Historical Controls	Yes	Yes	Yes	Yes
Individual Controls	Yes	Yes	Yes	Yes
Observations	72659	72659	72659	70316
Kleibergen-Paap Wald rk F statistic	10.19	7.76	7.47	12.74

This Table reports our IV estimates for the effects of a persecution on literacy. All specifications contain provence fixed effects. Columns 1 and 2 report results using distance to Shenyang as an instrument. Columns 3 and 4 use distance to Qing army bases as an instrument. Historical and individual controls are the same as in Table 9. Additional controls include number of Ming academies, number of Ming martyrs, Log Jinshi Density, and proportion of the population who are Manchu. Robust standard errors clustered at the prefecture level are reported in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

school education. Between 1929 and 1936, primary school enrollment increased from 17% to 43%. This process of centralization continued during the Communist period and the 1950s saw centrally-directed anti-illiteracy campaigns (Peterson, 1994). The Cultural Revolution, however, was accompanied by the disruption of centralized education institutions and a flurry of local educational initiatives. Overall educational investment continued to rise, but in many parts of the country state administration and educational institutions were thrown into disarray. Table A.26 exploits this variation over time in the extent to which basic education was centrally administered. We show that the baseline estimate of the effects of persecutions on literacy is attenuated for generations born after 1927 and before 1959, but discernible for cohorts born after 1959 who were educated during the Cultural Revolution.

In sum, our analysis indicates that Qing-era political repression is associated with worse provision of basic education. This finding is supported by several IV strategies, and robust to controlling for subsequent shocks such as the Communist takeover and the Cultural Revolution. The fact that the negative effects of literary inquisitions is strongest for the rural sample and disappears for generations

Table 11: Authoritarian Resilience? Evidence from Political and Social Participation

	Political Apathy		Volunteering on Committees		Making Suggestions to Local Committees	
	(1)	(2)	(3)	(4)	(5)	(6)
Mean of Dep. Var	3.540	3.546	0.0677	0.0666	0.121	0.121
Literary Inquisition	0.199** (0.0815)	0.134* (0.0746)	-0.753** (0.360)	-1.080*** (0.419)	-0.435* (0.248)	-0.693** (0.290)
Individual Controls	Yes	Yes	Yes	Yes	Yes	Yes
Contemporary Controls	No	Yes	No	Yes	No	Yes
Adjusted R^2 / Pseudo R^2	0.0507	0.0543	0.0397	0.0485	0.0495	0.0577
Observations	3320	3224	3280	3184	3335	3238

This table shows the effects of a literary inquisition on modern political and social participation. All specifications include socioeconomic macroregion fixed effects. Columns 1-2 examines the impact of literary inquisitions on political apathy. People are more likely to think that people like themselves cannot have an impact on government. Columns 3-4 studies the impact of inquisitions on whether individuals are willing to volunteer to work on village committees. Column 5-6 examine the impact of inquisitions on whether individuals actively participate and make suggestions in meetings. The dependent variable is scaled between 1-5. In all specifications we include individual controls and control for proportion of individuals who identify as ethnic Manchus. Contemporary controls include log per capita income and the proportion of the population belong to ethnic minorities, the percentage urban and the percentage enrolled in primary education. In all specifications standard errors are clustered at the prefectural level and are reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

educated under more centralized political institution, suggests that the effect of inquisitions operated via the channel of social capital.

V PERSECUTIONS, MODERN POLITICAL ATTITUDES AND AUTHORITARIAN RESILIENCE

Our historical panel combined with modern survey data and evidence from public goods provision in the twentieth century, provides strong evidence that political persecutions reduced social capital in both the short and the long-run. Now we turn to consider a question that is inherently more speculative and harder to test: did the Qing literary inquisitions produce a culture of political apathy and non-participation?

During the Qing period itself, persecutions and systematic repression “led to the formation of a social environment characterized by mutual deception” (Wang, 2002, p. 647). The threat of persecution encouraged the belief that political participation and social activism was dangerous. These cultural beliefs could have been perpetuated via intergenerational transmission (as in Bisin and Verdier, 2001). To explore this possibility, we examine how persecutions affected attitudes to political participation using modern survey data.

In Table 11 we investigate the impact of persecutions on political and social participation using data from the Chinese General Social Survey (CGSS). Individuals in prefectures with a literary inquisition

display greater political apathy and are less likely to think that people like themselves can have an impact on government (columns 1-2). They are less likely to volunteer for village committees (responsible for managing local affairs) (columns 3-4). Finally, they are also less likely to actively participate in village meetings (columns 4-6).

These findings have implications for China’s current political trajectory. One school of thought anticipates China undergoing a democratic transition as it develops (e.g. Acemoglu and Robinson, 2012). Indeed China has partially democratized its institutions at the local level as studied by Martinez-Bravo et al. (2014) and Padro-i-Miquel et al. (2015) who show that local elections work better in areas with higher levels of social capital. Others point to China as an example of “authoritarian resilience” (e.g. Nathan, 2003). It is in relationship to this line of argument that our focus on social capital becomes especially salient. North, Wallis, and Weingast (2009), for instance, emphasize the importance of organizations and civic capital in the transition to open-access societies. Our argument makes a novel contribution to this debate as we provide evidence that the suppression of social capital in the Qing period may contribute to this authoritarian resilience.

Writers from Orwell (1948) and Arendt (1951) onwards have worried that autocracies would, by destroying civil society and demoralizing individuals, produce a population incapable of self-governance and suited for autocratic rule. Alternatively, autocratic rule may produce individuals who are in fact supportive of autocracy, and have little interest in democratic institutions. Individuals inured to autocratic rule may be used to being directed by the state and hence not believe local elections or democracy to be worthwhile (Fuchs-Schündeln and Schündeln, 2015).

We turn to a different dataset—the Chinese Political Compass (CPoC)—to distinguish between these possible consequences of autocratic rule. The findings from the CPoC provide evidence that literary inquisitions produce political apathy, but they do not suggest that it has produced individuals who are more supportive of autocratic rule today.

Table 11 considers three different questions in the CPoC that elicit individual’s views over alternative political institutions. We find that individuals in prefectures with a history of a literary inquisition are in fact *less* likely to agree with the statement: ““Western-style multi-party systems are not suitable for China” ” (columns 1–3). They are also *less* likely to agree that: “Free speech is “western” and inherent dangerous” (columns 4–6). This suggests that in areas affected by literary inquisitions individuals are, if anything, more favorably inclined, towards liberal democracy. Similarly, individuals in affected prefectures are more likely to *disagree* with the statement that: “Modern China needs to be guided by wisdom of Confucius/Confucian thinking” (columns 7–9). They are more hostile to a traditional culture that has long complemented authoritarian rule.⁵⁰ In other respects, that is, on questions relating to social issues and economic policy, there is no discernible difference between prefectures from which individuals were persecuted and prefectures where individuals were not persecuted.

Contrary to the fears of mid-20th century authors like Orwell (1948) and Arendt (1951), the

⁵⁰Indeed the recent strengthening of autocratic power in China has been accompanied by a renewed emphasis on Confucianism (see Elliott, 2012; Kai, 2014).

Table 12: Authoritarian Resilience? Evidence from Modern Political Attitudes (CPoC)

	Multi-Party Systems [§]				Free Speech [†]				Confucianism [†]	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
Mean of Dep. Var	0.417	0.417	0.417	0.587	0.587	0.587	0.238	0.238	0.238	
Literary Inquisition	-0.147*** (0.0302)	-0.139*** (0.0292)	-0.159*** (0.0369)	-0.0962* (0.0545)	-0.0852 ⁺ (0.0593)	-0.107** (0.0441)	-0.149** (0.0676)	-0.114* (0.0619)	-0.123** (0.0623)	
Individual Controls	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes	
Survey FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Internet Access	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes	
Contemporary Controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes	
Historical & Geographical Controls	No	No	Yes	Yes	Yes	Yes	No	No	Yes	
Observations	52046	52046	51834	52062	52062	51850	52075	52075	51863	
Pseudo R^2	0.0121	0.0123	0.0124	0.0163	0.0165	0.0167	0.0356	0.0357	0.0359	

Table 13: This table explores the impact of past persecutions on modern attitudes to politics. The dependent variable are responses to questions on the CoPC survey. All specifications include providence fixed effects and socioeconomic macroregion fixed effects. Question: Western-style multiparty systems are not suitable for China[§]. Free speech is “western” and inherent dangerous[†]. Modern China needs to be guided by wisdom of Confucius/confucian thinking[†]. Contemporary controls include income and education, % Manchu, and ethnolinguistic fragmentation. We also employ fixed effects for the days and months in which individuals took the survey. Robust standard errors are clustered at the prefectural level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

intensification of autocratic rule in imperial China did not produce individuals who are more supportive of autocracy today. This suggests that the explanation for China’s autocratic resilience is not the ability of the state to shape preferences in favor of autocracy, but lies in the ways in which autocratic rule generate a culture of apathy that deters active political engagement. The findings of Table 11 and 12 suggest that prefectures which had a history of persecutions were both likely to be more supportive of alternative political institutions and more likely to have individuals who are disengaged from politics and public affairs. Taken together with Table 8, this suggests that autocratic rule has left a negative legacy on the forms of social capital that provide the preconditions for successful democratization.

These findings have implications for how we think about political reform in long-standing autocracies. On the one hand, a legacy of autocratic rule is associated with a political quietism that may make the task of building democratic capital more difficult. On the other hand, this legacy of political disengagement and apathy may also mean that autocracies are more fragile than they appear from outside because support for them is more apparent than real. Kuran (1995) showed that under autocratic regimes, individuals have an incentive to falsify their true preferences in response to the fear of persecution. This can lead to an equilibrium in which individuals believe that a regime has more popular support than it does in fact enjoy.⁵¹ While autocratic rule in China today appears to have considerable support, this may reflect political disengagement rather than genuine enthusiasm.

VI CONCLUSION

This paper studies the impact of political repression under autocratic rule on social capital. Using a difference-in-differences approach, we show that persecutions led to fewer notable figures and permanently reduced the number of charities in a prefecture. We interpret this as reflecting a decline in the level of social capital.

We show that this decline in social capital was long-lasting. local charities did not recover even decades after a persecution. Moreover, the negative effects on social capital survive even once China’s political and economic institutions were transformed. It is, for example, evident in levels of trust today and in local public goods provision during periods when institutions were decentralized. Finally, we show that persecutions have produced a culture of apathy and disengagement. We discuss how this has contributed to a vicious cycle whereby autocratic becomes solidified in part because it generates a culture that undermines resistance to autocracy.

Social capital plays a prominent role in many explanations of political development (e.g. Fukuyama, 1995).⁵² In particular, social capital contributes to the vitality of democratic institutions (Tocqueville, 1835/1840 (2000); Putnam, 1994; Padro-i-Miquel et al., 2015). Conversely, North, Wallis, and Weingast (2009) note that autocratic states restrict the growth of civil society because they are reluctant to permit organizations that are independent of the state. We contribute to this literature in a number of respects. We provide the new quantitative evidence that political repression reduces social capital

⁵¹Greif and Tadelis (2010) show how coercion or the threat of persecution can generate a crypto-morality—that is, the secret adherence to one morality while practicing another in public.

⁵²Recent work has also established the importance of social capital in Industrial Revolution Britain (Mokyr, 2009; Sunderland, 2013).

in both the short and the long-run and produced a culture of lower trust and political quietism that persists to this day.

Our analysis is consistent with the recent observation of Acemoglu and Robinson (2016, p. 39) that “the nature and extent of social capital in society is critically related to the behavior and policies of the state”. Historians have suggested that the stability of imperial autocracy in China is attributed to the fact that “the Chinese emperors were able to inhibit the formation of autonomous social groups outside the control of the state” (Fu, 1994, p. 141). But China has a long history of civil society organizations and of intellectual participation in society. At times in Chinese history these intellectuals came close to forming a nascent “public sphere” (Rankin, 1990; Wakeman, 1998). However, the status of civil society organizations has always been fragile and such organizations have been frequently repressed (Simon, 2013, p. xxvii). Scholars such as Xie (1990) and Liu (2000); and Liu, Wang, and Wang (2005) speculate that the style of government that developed under the Qing encouraged individuals to keep to the private sphere and not to engage in public affairs.

These results contain important implications for recent discussions of the failure of Qing China to develop. Parker observes that the Qing period saw “intellectual innovation and much “useful knowledge” as a potential threat, not a potential asset . . . China’s new masters refused to allow their leading scholars either freedom of expression or freedom to exchange ideas” (Parker, 2013, p. 667). Mokyr (2016) discusses this in context of the rise of a “Republic of Letters” and an “associational culture” in Western Europe. He noted that while there were important intellectual developments, Qing China did not produce cultural entrepreneurs in the same way that the European Enlightenment. On contrary, at the same time that Habermas (1962 [1989]) and Mokyr (2016) detect the origins of a public sphere in western Europe, the Qing state suppressed public discourse. The persecutions we study played a crucial role in this suppression. In fact, our estimates provide a lower bound on the negative impact of the Qing literary inquisitions on social capital as our matching estimator does not include the most economically advanced prefectures, prefectures that were likely to be leaders in both economic and political development in the twentieth century. As these prefectures were both more likely to experience a persecution and to produce figures inclined towards liberal reforms, we may be understating the contribution of Qing-era persecutions to China’s authoritarian resilience today.

Finally, while this paper is about China, the issues we address are relevant to other parts of the world including nascent autocracies such as Russia or Turkey and established democracies. Scholars such as Putnam (1994) have long been concerned with declining social capital in America (Skocpol, 2003). Recently these worries have extended to concerns about a growing democratic deficit (see Lax and Phillips, 2012). Our study shows how a legacy of autocratic rule can reduce social capital and thus undermine support for liberal democratic government. This suggests the need for greater vigilance against the erosion of democratic institutions.

REFERENCES

Acemoglu, Daron, Tarek A. Hassan, and James A. Robinson (2011). “Social Structure and Development: A Legacy of the Holocaust in Russia”. In: *The Quarterly Journal of Economics* 126.2, pp. 895–946.

Acemoglu, Daron, Tristan Reed, and James A. Robinson (2014). "Chiefs: Economic Development and Elite Control of Civil Society in Sierra Leone". In: *Journal of Political Economy* 122.2, pp. 319–368.

Acemoglu, Daron and James A. Robinson (2012). *Why Nations Fail*. New York: Crown Business.

— (2016). "Paths to Inclusive Political Institutions". Mimeo.

Alesina, Alberto and Eliana La Ferrara (2000). "Participation in heterogeneous communities". In: *Quarterly Journal of Economics* 115.3, pp. 847–904.

— (2002). "Who trusts others?" In: *Journal of Public Economics* 85.2, pp. 207–234.

Alesina, Alberto and Paola Giuliano (2015). "Culture and Institutions". In: *Journal of Economic Literature* 53.4, pp. 898–944.

Alesina, Alberto and Eliana La Ferrara (2005). "Preferences for redistribution in the land of opportunities". In: *Journal of Public Economics* 89.5-6, pp. 897–931.

Anderson, R. Warren, Noel D. Johnson, and Mark Koyama (2017). "Jewish Persecutions and Weather Shocks, 1100–1800". In: *Economic Journal* 127.602, pp. 924–958.

Archives of Museum of Forbidden City, ed. (1934). *Qing Dai Wen Zi Yu Dang (Archives of literacy inquisition in Qing Dynasty)*.

Arendt, Hannah (1951). *The Origins of Totalitarianism*. New York: Houghton Mifflin Harcourt Publishing Company.

Bai, Liang (2014). "Economic Legacies of the Cultural Revolution". Memo.

Bai, Ying and Ruixue Jia (2016). "Elite Recruitment and Political Stability: The Impact of the Abolition of China's Civil Service Exam". In: *Econometrica*, 84.2, pp. 677–733.

Becker, Sascha O. et al. (2016). "The Empire Is Dead, Long Live the Empire! Long-Run Persistence of Trust and Corruption in the Bureaucracy". In: *Economic Journal* 126.590, pp. 40–74.

Bentzen, Jeanet Sinding, Nicolai Kaarsen, and Asger Moll Wingender (2017). "Irrigation and Autocracy". In: *Journal of the European Economic Association* Forthcoming.

Bernhard, Michael (1996). "Civil society after the first transition: Dilemmas of post-communist democratization in Poland and beyond". In: *Communist and Post-Communist Studies* 29.3, pp. 309–330.

Bernhard, Michael and Ekrem Karakoç (2007). "Civil Society and the Legacies of Dictatorship". In: *World Politics* 59.4, pp. 539–567.

Bertrand, M.; E. Duflo and S. Mullainathan (2004). "How Much Should We Trust Differences-in- Differences Estimates?" In: *Quarterly Journal of Economics* 119.1, pp. 249–75.

Besley, Timothy and Masayuki Kudamatsu (2009). "Making Autocracy Work". In: *Institutions and Economic Performance*. Ed. by Elhanan Helpman. Cambridge MA: Harvard University Press, pp. 452–510.

Besley, Timothy and Torsten Persson (2011). *Pillars of Prosperity*. Princeton, New Jersey: Princeton University Press.

Bisin, Alberto and Thierry Verdier (2001). "The Economics of Cultural Transmission and the Dynamics of Preferences". In: *Journal of Economic Theory* 97.2, pp. 298–319.

Bockstette, Valerie, Areendam Chanda, and Louis Putterman (2002). "States and Markets: The Advantage of an Early Start". In: *Journal of Economic Growth* 7.4. available at <http://ideas.repec.org/a/kap/jecgro/v7y2002i4p347-69.html>, pp. 347–69.

Brandt, Loren, Debin Ma, and Thomas G. Rawski (2014). "From Divergence to Convergence: Reevaluating the History behind China's Economic Boom". In: *Journal of Economic Literature* 52.1, pp. 45–123.

Brook, Timothy (2005). *The Chinese State in Ming Society*. London: Routledge.

Butler, Jeffrey, Paola Giuliano, and Luigi Guiso (2014). "The Right Amount of Trust". Mimeo.

Cameron, A. Colin and Douglas Miller (2015). "A Practitioner's Guide to Cluster-Robust Inference". In: *Journal of Human Resources* 50.2, pp. 317–372.

Cantoni, Davide et al. (2017). "Curriculum and Ideology". In: *Journal of Political Economy* Forthcoming.

Chang, Chung-li (1962). *The Income of the Chinese Gentry*. Seattle: University of Washington Press.

Chen, Menglei and Tingxi Jiang, eds. (1725). *Imperial Exams: Schools (Xuanju dian, xuexiao bu)*. Vol. 383.

Chen, Ting, James Kai-sing Kung, and Chicheng Ma (2016). "Long Live Keju! The Persistent Effects of China's Imperial Examination System". Mimeo.

Ch'i-ch'ao, Liang (1959). *Intellectual Trends in the Ch'ing Period*. translated by Immanuel C. Y. Hsu. Cambridge MA: Harvard University Press.

Ch'ü, T'ung-Tsu (1962). *Local Government in China under the Ch'ing*. Cambridge MA: Harvard University Press.

Crossley, Pamela Kyle (1990). *Orphan Warriors: Three Manchu Generations and the End of the Qing World*. Princeton, NJ: Princeton University Press.

— (1999). *A Translucent Mirror: History and Identity in Qing Imperial Ideology*. Berkeley: University of California Press.

Dardess, John W. (2002). *Blood and History in China*. Honolulu: University of Hawai'i Press.

Dehejia, Rajeev H. and Sadek Wahba (2002). "Propensity Score-Matching Methods for Nonexperimental Causal Studies". In: *Review of Economics and Statistics* 84.1, pp. 151–161.

Dell, Melissa, Nathaniel Lane, and Pablo Querubin (2017). *The Historical State, Local Collective Action, and Economic Development in Vietnam*. Working Paper 23208. National Bureau of Economic Research.

Elliott, Mark (2001). *The Manchu Way: The Eight Banners and Ethnic Identity in Late Imperial China*. Palo Alto, California: Stanford University Press.

— (2012). "The Historical Vision of the Prosperous Age (shengshi)". In: *China Heritage Quarterly* 29.

Elman, Benjamin A. (1991). "Political, Social, and Cultural Reproduction via Civil Service Examinations in Late Imperial China". In: *The Journal of Asian Studies* 50, pp. 7–28.

— (2002). "The Social Role of Literati in Early to Mid-Ch'ing". In: *The Cambridge History of China*. Ed. by William J. Peterson. Vol. 9. Cambridge: Cambridge University Press, pp. 360–427.

Esteban, Joan and Debraj Ray (2011). "A Model Of Ethnic Conflict". In: *Journal of the European Economic Association* 9.3, pp. 496–521.

Fairbank, John King and Merle Goldman (1992). *China: A New History*. 2nd Enlarged Edition. Cambridge MA: Belknap Press of Harvard University Press.

Fearon, James D. and David D. Laitin (2003). "Ethnicity, Insurgency, and Civil War". In: *American Political Science Review* (01), pp. 75–90.

Feuerwerker, Albert (1980). "Economic trends in the late Ch'ing empire, 1870–1911". In: *Cambridge History of China, vol. 11*. Ed. by John K. Fairbank and Kwang-Ching Liu. Cambridge: Cambridge University Press, pp. 1–69.

Fu, Zhengyuan (1994). *Autocratic Tradition and Chinese Politics*. Cambridge: Cambridge University Press.

Fuchs-Schündeln, Nicola and Matthias Schündeln (2015). "On the endogeneity of political preferences: Evidence from individual experience with democracy". In: *Science* 347.6226, pp. 1145–1148.

Fukuyama, Francis (1995). *Trust: The social virtues and the creation of prosperity*. New York: The Free Press.

Galor, Oded and Marc Klemp (2017). *Roots of Autocracy*. Working Papers 2015-7. Brown University, Department of Economics.

Gao, Pei (2015). *Rise from chaos: what drives the spread of primary schooling in the early 20th century China*. Tech. rep. 89. EHES Working Paper.

Gernet, Jacques (1972). *A History of Chinese Civilization*. translated by J.R. Foster. Cambridge: Cambridge University Press.

Giles, John, Albert Park, and Meiyang Wang (2015). "The Great Proletarian Cultural Revolution, Disruptions to Education, and the Returns to Schooling in Urban China". IZA Discussion Paper No. 8930.

Gilligan, Michael J., Benjamin J. Pasquale, and Cyrus Samii (2014). "Civil War and Social Cohesion: Lab-in-the-Field Evidence from Nepal". In: *American Journal of Political Science* 58.3, pp. 604–619.

Glaeser, Edward L (2001). "The formation of social capital". In: *Canadian Journal of Policy Research* 2.1, pp. 34–40.

Glaeser, Edward L., David Laibson, and Bruce Sacerdote (2002). "An Economic Approach to Social Capital*". In: *The Economic Journal* 112.483, F437–F458.

Gneezy, Ayelet and Daniel M. T. Fessler (2011). "Conflict, sticks and carrots: war increases prosocial punishments and rewards". In: *Proceedings of the Royal Society of London B: Biological Sciences* 279.1727, pp. 219–223.

Gong, Zizhen (1991). *Gong Zizhen Selected Poems*. Shanghai: Shanghai Ancient Books Publishing House.

Goodrich, Luther Carrington (1935). *The Literary Lquisition of Ch'ien-Lung*. Baltimore: Waverly Press.

Gorodnichenko, Yuriy and Gerard Roland (2015). "Culture, Institutions and Democratization". Mimeo.

Greif, Avner and Jared Rubin (2015). "Endogenous Political Legitimacy: The English Reformation and the Institutional Foundations of Limited Government". Memo.

Greif, Avner and Guido Tabellini (2012). *The Clan and the City: Sustaining Cooperation in China and Europe*, Working Paper 445. IGIER (Innocenzo Gasparini Institute for Economic Research).

Greif, Avner and Steven Tadelis (2010). "A theory of moral persistence: Crypto-morality and political legitimacy". In: *Journal of Comparative Economics* 38.3, pp. 229–244.

Grieder, Jerome B. (1981). *Intellectuals and the State in Modern China*. New York: Free Press.

Gu, Ming Dong (2003). "Literary Openness: A Bridge across the Divide between Chinese and Western Literary Thought". English. In: *Comparative Literature* 55.2, pp. 112–129. ISSN: 00104124.

Guiso, Luigi, Paola Sapienza, and Luigi Zingales (2004). "The Role of Social Capital in Financial Development". In: *American Economic Review* 94.3, pp. 526–556.

— (2011). "Civic Capital as the Missing Link". In: *Handbook of Social Economics*. Ed. by Jess Benhabib, Alberto Bisin, and Matthew O. Jackson. Amsterdam: Elsevier, pp. 417–480.

— (2016). "Long-term Persistence". In: *Journal of the European Economic Association* Forthcoming.

Guo, Cheng Kang and Yijun Lin (1990). *Qing chao wen zi yu (Literary inquisition in the Qing Dynasty)*. Qun Zhong Press.

Guriev, Sergei and Konstantin Sonin (2009). "Dictators and oligarchs: A dynamic theory of contested property rights". In: *Journal of Public Economics* 93.1–2, pp. 1–13.

Guy, R. Kent (1987). *The Emperor's Four Treasuries*. Cambridge, M.A.: Harvard University Press.

Habermas, Jurgen (1962 [1989]). *The Structural Transformation of the Public Sphere*. Translated by Thomas Burger and Frederick Lawrence. Cambridge: Polity.

Howard, Marc (2003). *The Weakness of Civil Society in Post-Communist Europe*. Cambridge: Cambridge University Press.

Huang, Pei (1974). *Autocracy at Work: A study of the Yung-cheng period, 1723-1735*. Bloomington: Indiana University Press.

Jiang, Qin and James Kai-sing Kung (2015). "The Making of the Gentry Class: Reconsidering the Ladder of Success in Late Imperial China". Mimeo.

Jiang, Qingbo (2005). *Qingdai renwu shengzu nianbiao (Birth and Death Records of Notable Scholars in Qing)*. Renmin Wenxue Chubanshe.

Johnson, Noel D. (2015). "Taxes, National Identity, and Nation Building: Evidence from France". GMU Working Paper in Economics No. 15-33.

Johnson, Noel D. and Mark Koyama (2014). "Taxes, lawyers, and the decline of witch trials in France". In: *Journal of Law and Economics* 57.

Kai, Jin (2014). *The Chinese Communist Party's Confucian Revival*. URL: <http://thediplomat.com/2014/09/the-chinese-communist-partys-confucian-revival/>.

Karaja, Elira and Jared Rubin (2017). "The Cultural Transmission of Trust Norms: Evidence from a Lab in the Field on a Natural Experiment". Mimeo.

Koon-piu, Ho (1994). "Should We Die as Martyrs to the Ming Cause? Scholar-officials' Views on Martyrdom During the Ming-Qing Transition". In: *Oriens Extremus* 37.2, pp. 123–151.

Koyama, Mark and Melanie Meng Xue (2015). "The Literary Inquisition: The Persecution of Intellectuals and Human Capital Accumulation in China". Mimeo.

Kuhn, Philip A. (1990). *Soulstealers: the Chinese sorcery scare of 1768*. Cambridge: Harvard University Press.

— (2002). *Origins of the Modern Chinese State*. Stanford, California: Stanford University Press.

Kuran, Timur (1995). *Private Truths, Public Lies*. London, United Kingdom: Harvard University Press.

Lax, Jeffrey R. and Justin H. Phillips (2012). "The Democratic Deficit in the States". In: *American Journal of Political Science* 56.1, pp. 148–166.

Leeson, Peter and Jake Russ (2017). "Witch Trials". In: *Economic Journal* Forthcoming.

Li, Hongbin, Mark Rosenzweig, and Junsen Zhang (2010). "Altruism, Favoritism, and Guilt in the Allocation of Family Resources: Sophie's Choice in Mao's Mass Send-Down Movement". In: *Journal of Political Economy* 118.1, pp. 1–38.

Liang, Qizi (2001). *Charity and Edification: Charitable Organizations in Ming and Qing (Cishan yu jiaohua: mingqing de cishan zuzhi)*. Hebei Education Press.

Lichter, Andreas, Max Loeffler, and Sebastian Siegloch (2015). *The Economic Costs of Mass Surveillance: Insights from Stasi Spying in East Germany*. IZA Discussion Papers 9245. Institute for the Study of Labor (IZA).

Liu, Zehua (2000). *The rule of absolute monarchy in China (Zhongguo de wangquan zhuyi)*. Shanghai renmin chubanshe.

Liu, Zehua, Mao Wang, and lanzhong Wang (2005). *Absolute power and Chinese society (Zhuanzhi quanli yu zhongguo shehui)*. Tianjin guji chubanshe.

Lowes, Sara et al. (2017). "The Evolution of Culture and Institutions: Evidence from the Kuba Kingdom". In: *Econometrica* Forthcoming.

Martinez-Bravo, Monica et al. (2014). "Elections in China". Memo.

Miguel, Edward (2005). "Poverty and Witch Killing". In: *Review of Economic Studies* 72.4, pp. 1153–1172.

Mishler, William and Richard Rose (1997). "Trust, Distrust and Skepticism: Popular Evaluations of Civil and Political Institutions in Post-Communist Societies". In: *The Journal of Politics* 59.2, pp. 418–451. ISSN: 00223816, 14682508.

Mokyr, Joel (2009). *The Enlightened Economy*. New Haven: Yale University Press.

— (2016). *Culture of Growth*. Princeton, NJ.: Princeton University Press.

Naquin, Susan and Evelyn S. Rawski (1987). *Chinese Society in the Eighteenth Century*. New Haven: Yale University Press.

Nathan, Andrew James (2003). "Authoritarian resilience". In: *Journal of Democracy* 14.1, pp. 6–17.

North, Douglass C., John Joseph Wallis, and Barry R. Weingast (2009). *Violence and Social Orders: a conceptual framework for interpreting recorded human history*. Cambridge: Cambridge University Press.

Nunn, Nathan and Leonard Wantchekon (2011). "The Slave Trade and the Origins of Mistrust in Africa". In: *American Economic Review* 101.7, pp. 3221–52.

Orwell, George (1948). *1984*. London: Penguin.

Oster, Emily (2004). "Witchcraft, Weather and Economic Growth in Renaissance Europe". In: *Journal of Economic Perspectives* 18.1, pp. 215–228.

Ostrom, Elinor (2000). "Collective Action and the Evolution of Social Norms". In: *The Journal of Economic Perspectives* 14, pp. 137–158.

Padro-i-Miquel, Gerard et al. (2015). "Making Democracy Work: Culture, Social Capital and Elections in China". Mimeo.

Parker, Geoffrey (2013). *Global Crisis: War, Climate Change and Catastrophe in the Seventeenth Century*. New Haven: Yale University Press.

Peterson, Glen (1994). "State Literacy Ideologies and the Transformation of Rural China". In: *The Australian Journal of Chinese Affairs* 32, pp. 95–120. ISSN: 01567365.

Peterson, Willard J. (2002). "Arguments over learning based on intuitive knowing in the early Ch'ing". In: *The Cambridge History of China*. Ed. by William J. Peterson. Vol. 9, Part II. Cambridge: Cambridge University Press, pp. 458–512.

Pomeranz, Kenneth (2000). *The Great Divergence, China, Europe and the making of the modern world economy*. Princeton, New Jersey: Princeton UP.

Pop-Eleches, Grigore and Joshua A. Tucker (2011). "Communism's Shadow: Postcommunist Legacies, Values, and Behavior". In: *Comparative Politics* 43.4, pp. 379–399.

Putnam, Robert D. (1994). *Making Democracy Work: Civic Traditions in Modern Italy*. Princeton, New Jersey: Princeton University Press.

— (2001). *Bowling alone: America's declining social capital*. New York: Simon & Schuster Ltd.

Rankin, Mary Backus (1990). "The origins of a Chinese public sphere: Local elites and community affairs in the late imperial period". In: *Etudes chinoises* 9.2, pp. 13–60.

Reischauer, Edwin O. and John K. Fairbank (1958). *East Asia: The Great Tradition*. Boston: Houghton Mifflin Company.

Rowe, William T. (2002). "Social Stability and Social Change". In: *The Cambridge History of China*. Ed. by William J. Peterson. Vol. 9. Cambridge: Cambridge University Press, pp. 474–562.

— (2009). *China's Last Empire*. Cambridge, MA: Belknap Press of Harvard University Press.

Rubin, Jared (2017). *God, Power, and Printing: The Roots of Economic Success and Stagnation in Europe and the Middle East*. Cambridge: Cambridge University Press.

Satyanath, Shanker, Nico Voigtlander, and Hans-Joachim Voth (2016). "Bowling for Fascism: Social Capital and the Rise of the Nazi Party". In: *Journal of Political Economy* Forthcoming.

Shiue, Carol H. (2004). "Local Granaries and Central Government Disaster Relief: Moral Hazard and Intergovernmental Finance in Eighteenth- and Nineteenth-Century China". In: *The Journal of Economic History* 64.01, pp. 100–124.

Shiue, Carol H. and Wolfgang Keller (2007). "Markets in China and Europe on the Eve of the Industrial Revolution". In: *American Economic Review* 97.4, pp. 1189–1216.

Simon, Karla W. (2013). *Civil Society in China: The Legal Framework from Ancient Times to the "New Reform Era"*. Oxford: Oxford University Press.

Skinner, G. William (1977). "Cities and the Hierarchies of Local Systems". In: *The City in Late Imperial China*. Ed. by G. William Skinner. Stanford, California: Stanford University, pp. 275–352.

Skinner, G.W., Mark Henderson, and Merrick Lex Berman (2013). *Socioeconomic Macroregions of China*. URL: <http://hdl.handle.net/1902.1/21766>.

Skocpol, Theda (2003). *Diminished Democracy*. Norman, OK: University of Oklahoma Press.

Smith, Joanna F. Handlin (1987). "Benevolent Societies: The Reshaping of Charity During the Late Ming and Early Ch'ing". In: *The Journal of Asian Studies* 46.2, pp. 309–337. ISSN: 00219118, 17520401.

Sng, Tuan-Hwee (2014). "Size and Dynastic Decline: The Principal-Agent Problem in Late Imperial China 1700–1850". In: *Explorations in Economic History* 54.0, pp. 107–127.

Sng, Tuan-Hwee and Chiaki Moriguchi (2014). "Asia's little divergence: State capacity in China and Japan before 1850". In: *Journal of Economic Growth* 19.4, pp. 439–470.

Spence, Jonathan (2001). *Treason by the Book*. New York: Viking.

Squicciarini, Mara P. and Nico Voigtlander (2015). "Human Capital and Industrialization: Evidence from the Age of Enlightenment". In: *Quarterly Journal of Economics* 130.4, pp. 1825–1883.

Sunderland, David (2013). *Social Capital, Trust and the Industrial Revolution: 1780–1880*. London: Routledge.

Svolik, Milan W. (2012). *The Politics of Authoritarian Rule*. Cambridge: Cambridge University Press.

Tabellini, Guido (2008). "Presidential Address Institutions and Culture". In: *Journal of the European Economic Association* 6.2–3, pp. 255–294.

— (2010). "Culture and Institutions: Economic Development in the Regions of Europe". In: *Journal of the European Economic Association* 8.4, pp. 677–716.

Tocqueville, Alexis de (1856 (1998)). *The Old Regime and the Revolution*. Vol. 1. Chicago: University of Chicago Press.

Tocqueville, Alexis de (1835/1840 (2000)). *Democracy in America*. introduced by Harvey C. Mansfield and Delba Winthrop. Chicago: University of Chicago Press.

Tsu, Yu-Yu (1912). *The Spirit of Chinese Philanthropy: A Study in Mutual Aid*. New York.

Vidal-Robert, Jordi (2014). *Long-run effects of the Spanish Inquisition*. CAGE Online Working Paper Series, Competitive Advantage in the Global Economy (CAGE) 192.

Voigtländer, Nico and Hans-Joachim Voth (2012). “Persecution Perpetuated: The Medieval Origins of Anti-Semitic violence in Nazi Germany”. In: *Quarterly Journal of Economics* 127.3, pp. 1–54.

Voors, Maarten J. et al. (2012). “Violent Conflict and Behavior: A Field Experiment in Burundi”. In: *American Economic Review* 102.2, pp. 941–64.

Vries, Peter (2015). *State, Economy, and the Great Divergence: Great Britain and China, 1680s–1850s*. London: Bloomsbury.

Wakeman, Frederic (1985a). *The Great Enterprise: The Manchu Reconstruction of Imperial Order in Seventeenth-Century China*. Vol. 1. Berkeley: University of California Press.

— (1985b). *The Great Enterprise: The Manchu Reconstruction of Imperial Order in Seventeenth-Century China*. Vol. 2. Berkeley: University of California Press.

— (1998). “Boundaries of the public sphere in Ming and Qing China”. In: *Daedalus*, pp. 167–189.

Walder, Andrew (2014). “Rebellion and Repression in China, 1966- 1971”. In: *Social Science History* 38, 4 38.4, pp. 513–539.

Waldinger, Fabian (2010). “Quality Matters: The Expulsion of Professors and the Consequences for PhD Student Outcomes in Nazi Germany”. In: *Journal of Political Economy* 118.4, pp. 787–831.

— (2012). “Peer Effects in Science: Evidence from the Dismissal of Scientists in Nazi Germany”. In: *Review of Economic Studies* 79.2, pp. 838–861.

— (2016). “Bombs, Brains, and Science The Role of Human and Physical Capital for the Creation of Scientific Knowledge”. In: *Review of Economics and Statistics* Forthcoming.

Wang, Fan-Sen (2002). “Political pressures on the cultural sphere in the Ch'ing period”. In: *The Cambridge History of China*. Ed. by William J. Peterson. Vol. 9, Part II. Cambridge: Cambridge University Press, pp. 606–648.

— (2014). *Capillary function of power: ideology, scholarship, mentality during the Qing period*. Lianjing Press.

Wiens, Mi Chu (1969). “Anti-Manchu thought during the early Ch'ing”. In: *Papers on China* 22A, pp. 1–24.

Wong, R Bin (1997). *China Transformed: Historical Change and the Limits of European Experience*. Ithaca, NY: Cornell University Press.

Wong, R. Bin (2000). “Benevolent and Charitable Activities in the Ming and Qing Dynasties: Perspectives on State and Society in late Imperial and Modern Times”. In: *Revue Bibliographique de Sinologie* 18, pp. 249–258. ISSN: 00802484.

Xie, Tinyou (1990). *The mentality of the subjects under autocracy (Zhuanzhu zhuyi tongzhi xia de chengmin xinli)*. Jilin wenshi chubanshe.

Xue, Melanie Meng (2016). “High-Value Work and the Rise of Women: The Cotton Revolution and Gender Equality in China”. mimeo.