Religion and Conflict: Evidence from China, 1860–1911

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Abstract

This paper examines the economic origins and consequences of anti-missionary conflicts during the late Qing China (1860–1911). Using a novel dataset, we find that violence was attenuated by economic complementarities—such as access to Treaty Ports and public goods—rather than triggered by religious competition with Confucian elites. We further document negative economic spillovers of anti-missionary conflicts, through reduced foreign and domestic investments in modern firms and banks. These negative outcomes were reinforced by Western media coverage and persist today through lower contemporary FDI and increased autarkic attitudes among local residents.

Keywords: Religion, Conflict, Economic Development, Historical China, Media, Culture
JEL Codes: Z12, D74, N35, O43

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1. Introduction

Religion is one of the most deep-rooted cultural beliefs in human societies (Weber, 1905; Durkheim, 1915; Freud, 1927). While religion can provide solace and meaning to one's life, it also has the potential to generate conflict, dividing the world into in-groups and out-groups, entailing significant socioeconomic costs (Bentzen, 2019; Norenzayan, 2013; Colussi et al., 2024). In this paper, we examine the economic origins of religious conflicts and their impact on development. To answer this question, we focus on one of the largest events of anti-Christian violence in history, the Boxer Rebellion of 1900 and the broader anti-missionary events surrounding it. Despite their historical importance, we have little empirical evidence about their root causes and economic consequences.

The conflictual relationship between China and the West dates back to at least the First Opium War (1839-1842) against Great Britain. After the *Treaty of Tientsin* in 1858 granted missionaries the right to preach across China's interior, a series of targeted anti-missionary incidents arose, spanning from 1860 to 1911. These episodes included both anti-missionary conflicts and pamphlets, with the Boxer Rebellion standing as the most notable instance of resistance against Western missionaries. We examine competing theories on the role of religious competition and economic complementarities during these conflicts, finding evidence for the latter, in line with Jha (2013), and Becker and Pascali (2019). In the short and medium term, we document persistent negative economic costs of anti-missionary conflicts on early industrialization and financial development in China, at a time when the country's economic modernization was reliant on Western technologies. These effects further extend into contemporary times, fostering mistrust toward foreigners, promoting more conservative economic attitudes, and dampening foreign investment flows.

Our first contribution is to construct a novel panel data set garnered from over 50 years of archival data on the distribution of anti-missionary events across the 269 prefectures of China proper. Our primary measure is the number of anti-missionary cases arising from conflicts and disputes between local Chinese and Christian missionaries (and their Chinese converts), sourced from the Archives of Missionary Affairs and Cases recorded by the Qing Dynasty's Ministry of Foreign Affairs, between 1860 and 1911. In addition, we manually compiled the number of anti-Christian pamphlets and prints from Wang's (1984) collection as a supplementary measure of latent religious violence. While the two measures are potentially correlated, the pamphlets can add important information

on anti-missionary sentiment, especially in cases where it did not escalate to actual violence.

In the first part of the paper, we investigate two competing hypotheses about anti-missionary movements, informed by the historical and historiographical literatures. The first hypothesis emphasizes religious competition, particularly the influence of traditional Confucian elites when facing unprecedented Christian penetration. The second one stresses economic complementarities arising from the opening of treaty ports after the First Opium War of 1842, as well as the provision of public goods, following the *doux commerce* hypothesis. In our empirical analysis, we find no significant relationship between episodes of anti-missionary conflicts and the prevalence of Confucianism. Instead, we find that treaty ports played a significant role in diminishing anti-missionary conflicts. Furthermore, missions that provided public goods such as schools, charities, printing presses and hospitals also attenuated conflicts, confirming the role of economic complementarities.

We employ different econometric strategies for identification. On the determinants of anti-missionary violence, we control for the missionary distribution across prefectures before testing its interaction with the strength of local Confucian elites (the metropolitan exam degree holders). This identifies the effect of religious competition net of the endogenous selection of missionary sites. To identify the effect of economic complementarities, we use a Propensity Score Matching algorithm to locate areas comparable to treaty ports. We match prefectures based on their geographic similarities (proximity to the coast and navigable rivers, terrain ruggedness, longitude and latitude), initial economic condition (population density in 1850), political status (whether they are a provincial capital or not), and the strength of Confucian elites and years of missionary presence. The results from the matched sample align with those of the main sample: specifically, the interaction between missionary entry and treaty ports is negative and significant for anti-missionary incidents, while the interaction with Confucian elites remains insignificant. Additionally, we perform a randomization inference exercise in the spirit of Dell and Olken (2020), in which we randomly select counterfactual treaty port prefectures and assign them opening years that preserve the structure of the actual treaty port prefectures. Through 2,000 random draws from samples with geographic and economic characteristics similar to those of treaty port prefectures, we find that counterfactual treaty ports show minimal association with anti-missionary movements, confirming the baseline results.

In the second part of the paper, we turn to the consequences of anti-missionary conflicts in the short and medium term. Using data on foreign and domestic investments from 1870 to 1929 (in five-year periods), we find that regions experiencing higher levels of anti-missionary conflict subsequently saw slower foreign investment growth in both industrial firms and banks. This chilling effect extended to domestic establishments that were following Western business models. In terms of magnitudes, one more anti-missionary case led to a 6-7.5% decrease in foreign investment to industrial firms and banks per quinquennium. The negative impact on domestic investments was about 4% for industrial firms and 11% for banks. We interpret these effects as a negative spillover from foreign investment to domestic establishments, impeding early industrialization and financial development in China, during a critical time-period.

To causally examine the short- and medium-term consequences of anti-missionary violence, we apply a difference-in-discontinuities design, leveraging the establishment of the Mutual Defense Pact of the Southeastern Provinces during the Boxer Rebellion in 1900. This pact was privately agreed between the provincial governors of southeastern China and the Western powers to preserve peace, forming a boundary defending the southeastern provinces. It effectively ended by 1904, following personnel reshuffles and the reassertion of central authority. We find no significant pre-trends in the number of foreign banks and firms before the Boxer Rebellion between these areas. However, after 1900, the series begin to diverge: in areas protected by the compact, the number of foreign banks and firms grew relative to those in regions without such protection. In our empirical estimates, we find a negative impact of the Boxer Rebellion after 1901 on the growth of foreign industrial firms and banks, as well as on domestic firms and banks. We continue to find such effects even as we limit the sample to the more homogenous North China Plain or to the bandwidth of 150 to 200 kilometers that covers the neighboring prefectures along the compact boundary. In terms of mechanisms, we explore how Western media shaped foreign perceptions of China following anti-missionary violence. Using digitized newspaper archives from four leading Western powers in China (1890–1930), we construct measures of Boxer-related coverage, including front-page mentions, reports of casualties or property destruction, and articles with negative sentiment. We find that greater exposure in the foreign press, particularly along these dimensions, predicts lower foreign investment from the corresponding country in the subsequent year. This suggests that collective memory, reinforced through media, amplified the economic fallout of the conflicts.

In the longer term, we still find economic and cultural legacies of historical anti-missionary conflicts. To examine this, we similarly employ a spatial regression discontinuity (RD) approach along the boundary to study the patterns of contemporary foreign investment from 1990 to 2020, alongside survey data on cultural beliefs from 2009. Our findings indicate that regions with a history of anti-missionary incidents experience lower levels of foreign investment, an effect particularly pronounced during the early stages of Chinese economic liberalization. The results are robust to measuring anti-missionary conflicts at both the extensive and intensive margins. Lastly, in terms of current attitudes, residents in these areas are also more inclined to support autarkic views and exhibit lower levels of trust towards foreigners. The patterns in differential beliefs persist even after controlling for other historical correlates, such as missionary duration, treaty port presence, Confucianism, and foreign investment levels, along with a full set of contemporary city-level and individual characteristics. In the interactive specifications, we find that the presence and extent of treaty ports mitigate these conservative economic attitudes, consistent with the findings in the first part of the paper.

Contribution to the literature. The literature on historical conflicts and their religious or cultural origins has been recently summarized by Montalvo and Reynal-Querol (2019) and Fenske and Voth (2024). Our empirical analysis evaluates two hypotheses on the origins of conflicts: one pertains to the cultural intolerance and resistance when the deep-rooted Confucianism encountered a competitive foreign culture as argued in Huntington's (1996) *Clash of Civilizations*, whereas the other asks whether such tension, if any, could be mitigated by economic complementarities. Our finding on the importance of economic complementarities in fostering religious or cultural tolerance aligns with Jha's (2013) study, which shows that trade reduced Hindu-Islamic conflicts in India, and Becker and Pascali's (2019) finding on the economic incentives (moneylending) in shaping the coexistence of Jews, Catholics, and Protestants in historical Europe, and similarly Voigtländer and Voth (2012) on the negative relationship between trade and anti-Semitism in medieval Germany. This also echoes Montesquieu's (1748) view in *Doux Commerce* that trade diminishes geopolitical conflicts by increasing the opportunity cost (see also Martin et al. (2008), Rohner et al. (2013), Grosfeld, Sakalli, and Zhuravskaya (2020), and Thoenig (2024), for example, for modern implementations of this view). In a broader sense, our findings also resonate with recent theories positing that market interactions promote the internalization

of impersonal prosocial norms and cooperative social traits (e.g. Hirschman, 1982; Henrich et al., 2001, 2005; Posch and Raz, 2025).

The literature on the economic impact of missions is now vast, so we point the reader towards recent surveys for Africa, Asia, and Latin America (e.g., Meier zu Selhausen, 2019; Valencia Caicedo, 2019; Becker, Rubin, and Woessmann, 2021; Lowes, Marx, and Montero, 2025). The first wave of papers looked at the direct impact of missions on religiosity (Nunn, 2010) as well as the political role of these religious institutions in promoting liberal democracies (Woodberry, 2012). A second wave focused on the human capital externalities of religious missions (Cagé and Rueda, 2016; Waldinger, 2017; Valencia Caicedo, 2019; Ma, 2021; Calvi, Hoehn-Velasco, and Mantovanelli, 2022). These impacts have also expanded the definition of human capital to include health outcomes in developing countries (Calvi and Mantovanelli, 2018; Cagé and Rueda, 2019). Still, very little is known about the local reaction to such Christian missions, especially in a non-Western context (except for Elshehawy and Saleh, 2025, for Egypt).

Our findings on the negative impacts of anti-missionary conflicts complement Bai and Kung (2015), who show that the Boxer Rebellion changed the geography of modern growth in early 20$^{\text{th}}$ century China by shaping the distribution of Protestant missionaries who facilitated knowledge diffusion activities in China. We expand the analysis of the Boxers (1899–1901) to encompass all instances of anti-missionary violence since 1860, including both cases and pamphlets. We analyze how conflicts targeted at foreign missionaries had a chilling effect on the economic activities of Western investors and had spillovers to Chinese entrepreneurs. This reveals the substantial economic costs of cultural conflicts, especially for an economy whose modernization relied on opening to the West (Jia, 2014; Keller and Shiue, 2021).[2]

Furthermore, we find that this history of anti-missionary violence casts a lasting memory shadow that discouraged foreign direct investment (FDI) in China until contemporary times. In this regard, our research resonates with Mattingly and Chen's (2022) finding that the anti-missionary movements stimulated early nationalism in China,

[2] Of the related historical studies, Joseph Esherick (1988) investigated the socioeconomic origins of the Boxer organizations in western Shandong, and his findings also hints the importance of economic factors: the Boxers were more likely to appears in areas that were more prone to natural calamities (droughts and Yellow River floods) and where the Confucian gentry class was weak or missing. Other known historical studies on the origins of the Boxers and anti-missionary movements, see Cohen (1963) and Lu (1985, 1990). Our findings also resonate with the collaboration between Confucian literati and the Jesuit missionaries, who introduced useful European sciences in the late 16th to early 18th century (Ma, 2021).

Che et al.'s (2015) finding that the regions that were ever invaded by Japan in 1937 to 1945 are less likely to trade with Japan today, and also the literature on the enduring legacies of historical collective memory (see, e.g., Grosfeld, Rodnyansky, and Zhuravskaya, 2013; D'Acunto, Prokopczuk, and Weber, 2019; Tur-Prats and Valencia Caicedo, 2020; Fouka and Voth, 2023).

The rest of the paper is organized as follows. The next section introduces the history of Christian missions in China, the hypotheses on the causes of Chinese anti-missionary movements and their economic costs. Section 3 presents the data from empirical tests. Section 4 explores the causes of anti-missionary movements. Section 5 examines the economic consequences of the anti-missionary movements. Section 6 provides a conclusion.

2. Historical Background

2.1. The missionary expansion and the anti-missionary movements in late imperial China

Western powers enforced the opening of China in 1842. The Qing dynasty, after being defeated by the British in the First Opium War (1839-1842), signed the Treaty of Nanking. The Treaty guaranteed the presence of Christian missionaries in the treaty port areas. Later, the Treaty of Tianjin and the Convention of Peking, signed after the Second Opium War (1856-1860), further opened China's inland to the West. Christian missionaries gained access to the interior of China and were able to preach to people who at the time followed a predominantly Confucian philosophy. Christian missions expanded rapidly in China. From 1842 to the end of the dynasty in 1911, the number of missionaries increased from fewer than 100 to about 4,000. During this time, there were 120 mission societies representing nine denominations preaching in China. By 1911 they had preached in 216 (80 per cent) of the 269 prefectures in China proper.

The rapid growth of Christianity in China was accompanied by endemic resistance and violence from the local population. There were about 2,000 anti-missionary incidents between 1860 and 1911, with an annual average of 40 episodes, covering 168 (62 per cent) of prefectures in China proper. Anti-missionary movements were manifested in their disputes with the missionaries over properties and lawsuits, propaganda that demonized missionaries via pamphlets and rumors, attacking and burning churches, and collective violence toward missionaries and Chinese converts. For instance, in Tianjin in 1870, an angry Chinese crowd killed 21 missionaries, because rumors spread that the missionaries

kidnapped children to sacrifice them to their God (Zhao, 2001). The climax of conflicts came with the outbreak of the Boxer Rebellion in 1900,[3] in which more than 30,000 Chinese Christians and 240 Western missionaries were killed (MacGillivray, 1903). The anti-missionary violence greatly shocked the West, as we show empirically using data from newspapers. The missionaries killed during this episode of violence have been memorialized by the Roman Catholic, Orthodox and other Western churches as the Chinese Martyrs of the Boxer Rebellion up until today.[4]

2.2. Possible reasons behind anti-missionary conflicts

A potential cultural reason for the anti-missionary violence is that Christian diffusion in China brought a profound 'heterodox' shock to the Confucian orthodoxy.[5] Confucianism and Christianity fundamentally diverge in many aspects of their cultural values, with each promoting distinct principles regarding social order, morality, and religious practices (Huntington, 1991, 1996). First and foremost was ancestral worship, which was criticized by the Christian missionaries as superstitious and a violation of monotheistic belief in God. Accordingly, Christians could not tolerate Chinese family norms on filial piety, female chastity, and concubinage practice, among others (Chen, 1991; Menegon, 2009). Conversely, Confucians viewed Christianity as a heterodoxy that seriously offended their beliefs and social norms, especially when the missionaries refused to adopt Chinese

[3] The 'Boxer' was a term used in English media at the time to describe the participants of the popular martial organization of *yihequan*, literally the 'boxing for righteousness and unity', in defense of their homelands from foreign missionaries.

[4] Certainly, this is not the first Sino-Europe conflict of religions. Between 1580 and 1720, when the Catholic Church first sent its missionaries (dominated by the Jesuits) to China, the missionaries were also occasionally blamed and persecuted by Chinese elites and were finally expelled by the emperor of Qing due to the Chinese Rites Controversy. That said, the missionary activities and tragedies in this period mostly happened in a very small elite circle of China, rather than penetrating the Chinese mass as their successors did in the late 19th century.

[5] While China has long accommodated various religions such as Buddhism, Daoism, and local folk traditions, the anti-missionary conflict is more closely linked to Confucianism. Unlike these other belief systems, the conflict with Christianity represented a deeper clash between Eastern and Western values, as Christian missionaries were seen as agents of foreign influence, threatening the established Confucian social and political order rather than simply introducing another religious belief. This tension was less about theological differences and more about defending cultural sovereignty and political power. On the other hand, Buddhism and Daoism, having lost much of their elite support by the late 19th century, were increasingly relegated to the realm of popular religion, functioning more as sources of local rituals and festivals than as institutionalized religions with significant social or political influence (Yang, 1967).

traditions (Litzinger, 1996). Thus, Confucians and Christians viewed each other as incompatible in many ways.

Beyond cultural intolerance, the entry of Christian missions brought to Confucian elites a new competitive force for cultural and administrative hegemony (Lyu, 1973). Confucianism, while often considered a philosophical and ethical system, operates as both a religious entity and a political ideology, wielding significant power and enjoying strong support from the elite (Jia and Kung, 2025).[6] Christian missionaries, however, enjoyed a competitive edge due to their extraterritorial status and protection by Western powers. Land disputes between the gentry and missionaries were a significant source of conflict, as both groups competed for cultural and religious dominance (Esherick, 1988).[7] The churches also extended their legal and political privileges to their Chinese converts, hence increasing the payoffs for Chinese people to be baptized (Cohen, 1963). To defend their local dominance, the Confucian gentry had an incentive to resist the churches and their 'imperialist' activities by various means.[8]

Despite this widespread resistance, the intensity of anti-missionary conflicts varied significantly across regions. Figures 1 and 2 depict the distribution of the major anti-missionary cases and pamphlets from 1860-1911.[9] For example, most of the conflicts were concentrated in the North China Plain (Shandong and Hebei provinces) and the southwest (Sichuan province), whereas many southern and southeastern cities witnessed a relatively peaceful coexistence between the local population and the missionaries. During the Boxer Rebellion in 1899-1901, when these xenophobic events were about to creep toward southern prefectures, Sheng Xuanhuai, the minister of transportation, called for the governors of southern and eastern provinces in Qing China to sign the southeastern compact to refuse to declare war on foreign nations in the summer of 1900 during the Boxer Rebellion. The proposal was well-received by the local governors in the southeastern

[6] Accordingly, we employ alternative measures for the prevalence of Confucianism in our empirical strategy, which we elaborate in Section 3.2.

[7] For instance, according to Esherick (1988), in 1887, Franciscans sought to build a church on a site previously occupied by a temple to the Jade Emperor. When missionaries began dismantling the temple to make way for the church, two lower gentry members, Liu Chang-an and Zuo Jian-xun, led an outraged mob to drive off the Christians and restore the temple using the building materials.

[8] Zhou Han (1842-1911), a Confucian literatus in Hunan Province, was well-known for his hatred of and abuse toward Christian missionaries. He published more than 30 anti-Christian books and pamphlets between 1890 and 1898. In fact, historical archives indicate that the local Confucian gentry headed many of the anti-Christian movements (Cohen, 1963; Lyu, 1973).

[9] 51 or 24 percent of the 216 missionary prefectures experienced neither anti-missionary conflicts nor prints. This implies that religious competition cannot fully explain the regional distribution of ant-missionary events.

provinces, which effectively kept most of the fighting and destruction in the northern Boxer regions out of southern China (Feuerwerker, 1958). The compact regions managed to provide shelter for foreigners in eastern and southern China and led to variation in the geographical distribution of anti-foreign movements. The protection agreement formally ended in 1904 when Empress Dowager Cixi regained power over the southeastern provinces. The foreign merchants and missionaries were able to move freely afterwards. We use this pact for identification in the empirical analysis.

The regional patterns in Figures 1 and 2 motivate us to investigate the potential economic reasons beyond religious competition. The missionaries not only brought to China a new religion but also economic benefits (Bai and Kung, 2015; Chen et al., 2022). Trade represented one. Before the 1840s, China remained largely autarkic with little trade and communication with the West. After the opening of the country, new trade opportunities gradually expanded from the treaty ports to the inland areas. But foreign merchants had little information and knowledge about the vast Chinese inland. As pioneers of the Western expedition to China, missionaries played a pivotal intermediary between locals and foreign merchants (Gu, 1991). This effectively lowered the entry costs of foreign trade and exposed China to the global markets. Besides trade, foreign banks, companies, and merchants also extended their branches and businesses to Chinese cities with a missionary connection. These modern economic institutions and technologies enlightened Chinese elites who were pursuing 'self-strengthening' and modernization, bringing to China a modern growth impetus (Spence, 1990).

Meanwhile, to develop their Chinese missions, many Christian missionaries provided new and superior public goods that could benefit the local population. First and foremost was a more modern educational infrastructure. By 1911, Christian missions had established 2,538 elementary schools and 18 colleges and universities (Dennis et al., 1911). By providing instruction in sciences and engineering, modern schools brought the first wave of the 'industrial enlightenment'—to borrow words from Mokyr (1990)—to the Chinese people (Elman, 2006; Tiedemann, 2009). The other types of public goods pertain to medicine and charity. Western medicine held a distinct advantage over traditional Chinese therapies in treating epidemics and procedures such as removing tumors and curing eye diseases (Spence, 1990). Likewise, the new charitable institutions established by the churches, such as creches,[10] orphanages, and learning institutes, broadened the

[10] Crèches, or *Yu-yin-tang*, referred to institutions that provided shelter and care for abandoned infants, especially baby girls amid widespread child abandonment driven by poverty and son preference.

scope of traditional Chinese charities that focused on poverty relief (Yang, 2006; Leung, 2015).

We hypothesize that in regions where local Confucian elites and people could benefit from the missionaries' secular contributions, they might value this complementarity and prefer not to engage in conflict. Yet, for many inland communities, the experience could be markedly different. According to Esherick (1988), "to the ordinary villager of north China, the unequal treaties, the gunboat diplomacy, the concessions along the coast were of little consequence. If such folk ever saw a foreigner, it was certainly a missionary—and the foreign presence meant the foreign religion." Unlike treaty port regions that gained from Western influence, inland Chinese were primarily exposed to imperialism through its connection with the church, potentially intensifying resentment and conflict. Hence, we expect more conflicts in areas with less economic complementarities with foreigners.

2.3. The economic costs of anti-missionary movements

Given the multi-faceted economic payoffs brought by the missionaries to China, the anti-missionary violence could offset the economic complementarities just described and discourage further foreign investments in China. This would cast a substantial cost on Chinese modernization, which relied heavily on Western influence. Indeed, the number of foreign banks and firms in prefectures experiencing the Boxer Rebellion decreased relative to prefectures with fewer conflicts after 1900. The same divergence applies to the number of Chinese banks and firms, suggesting a negative spillover of anti-missionary conflicts to China's domestic growth (see Appendix Figure A1). We scrutinize these descriptive trends in our empirical analysis.

Given that anti-missionary movements were sustained for more than 70 years, a xenophobic sentiment among Chinese and a memory of 'The Chinese Martyrs' among Westerners may persist for a long period of time. This is well captured in an article in *The Economist* on 16 December 2010, entitled "Remembering the Boxer Uprising: A righteous fist", stating that: "Ever since the uprising, memories of it have troubled the relationship between China and the West. For the West, 'Boxerism' became synonymous with a rabid, anti-foreign demon that was thought to lurk in China, ready to wreak bloody havoc if given a chance. As *The Economist* advised its readers in 1905: 'The history of the Boxer movement contains abundant warnings as to the necessity of an attitude of

constant vigilance on the part of the European Powers when there are any symptoms that a wave of nationalism is about to sweep over the Celestial Empire.'" Accordingly, the mutual hostility and mistrust between Chinese and foreigners may persistently discourage foreign trade and exchange in these anti-missionary regions up to the present.

3. Data

3.1. Anti-missionary movements

Our first contribution, from an economic history standpoint, is to construct a panel data set on the distribution of anti-missionary movements across the 269 prefectures in China proper.[11] Our primary measure is the number of anti-missionary cases, arising from conflicts and disputes between local Chinese and Christian missionaries (and their Chinese converts). The conflicts were mostly launched by locals to assault and blame the Christian missionaries. The motivations behind each incident varied, ranging from rumors—such as the Organ-Snatching Tales associated with missionaries' medical practices—to real conflicts of interest, including disputes over property rights (also consistent with Esherick, 1988; Su, 2001). Violence was frequently used, including killing missionaries and Chinese Christians, and burning churches.

The data is collected from *jiaowu jiao'an dang* (Historical Archives on Missionary Affairs and Cases) kept by the Qing Dynasty's Ministry of Foreign Affairs between 1860 and 1911. These archives provide the most comprehensive sources about missionary affairs in Qing China, recording each missionary case on an annual basis. For each case, the archives provide documents ranging from memorials to diplomatic notes, to written correspondence between officials and the court, among others, from which we can find the time and place of each case. Given the huge collection of more than 900 volumes and 30,000 pages, we employed a collection of case summaries in the First Historical Archives of China, *Missionary Cases in Late Qing* (Zhu and Lyu, 1996), to systematically enumerate the anti-missionary cases across prefectures and over time manually. This offers

[11] China proper refers to the 19 provinces dominated by Han Chinese, excluding the frontier regions of Xinjiang, Inner Mongolia, Northeast, and Tibet where most data used for this study are not available. The prefectures were administrative units between the provinces and the counties in Qing China. We choose prefectures as the units of analysis because the prefectural data are the most systematic and they provide more regional variations relative to the provinces.

a unique and detailed record with 2,049 missionary cases that allows us to study anti-missionary movements empirically during the late Qing China. By analyzing the texts of anti-missionary cases, we find that conflicts mainly took the forms of attacking missionaries and Chinese converts and destroying church entities, sometimes spreading to other foreigners and their businesses in China. As shown in Appendix Figure A2, the missionaries under attack originated from ten Western countries, dominated by France, Britain, and the United States of America. We also observe that the violence seems to emanate from the bottom up.

In addition to the anti-missionary cases, we utilize the number of pamphlets or prints as our secondary measure of anti-missionary movements. Propaganda was another popular form of anti-missionary activity in late Qing China. Local Confucian gentry often used pamphlets to demonize missionaries, spreading rumors and hatred among the local Chinese (Su, 2001). We collected data on the distribution of anti-missionary publications from *fan yangjiao shuwen jietie xuan* (Collections of Anti-Missionary Books and Pamphlets) (Wang, 1984). Wang collected declarations, announcements, pamphlets, and other published works that were used to demonize Christianity and missionaries. We manually identified the location of each work based on the home prefecture of the author, assuming that the pamphlets were mostly posted locally given the underdeveloped communications infrastructures at the time.[12] Furthermore, we count the total words of all works in each prefecture as a supplementary measure of the strength of anti-missionary propaganda. Overall, this alternative measure is helpful, as it captures latent and not necessarily realized violence.

The regional distribution of the anti-missionary cases and published works are shown in Figures 1 and 2. The figures show that the intensity of conflicts and propaganda varied widely across China, and as discussed above, most of which were concentrated in the North China Plain (Shandong and Hebei provinces) and the southwest (Sichuan province).[13] This motivates (and quantitatively allows) us to investigate why some local Chinese were more tolerant of a heterodox foreign religion but others were not, which we examine in the following section.

3.2. Data on the origins of anti-missionary movements

[12] Some pamphlets were diffused to a greater geographic scale, for example, the most well-known *jinzun shengyu pixie quantu* (The cause of the riots in the Yangtse Valley, a "complete picture gallery") by Hunan Confucian Zhou Han (1842-1911). However, there are no systematic records on the diffusion of the pamphlets.
[13] See also Appendix Figure A3 for temporal evolution in the frequency of anti-missionary conflicts.

Measuring religious competition

To capture the competition between Christian missionaries and Confucian elites, we make use of the variation in the entry of the missionaries into Chinese prefectures and interact it with the strength of the local Confucian elites. We digitized the time and location of Christian entry in each Chinese prefecture based on Stauffer's (1922) *The Christian Occupation of China*, Bureau Sinologique de Zi-ka-wei's (1935) *Annuaire des missions catholiques de Chine* (Directory of Catholic missions in China), and Huang's (2017) *Chronicle of Protestant Missions Development in China (1807-1949).* The three sources record the distribution of the Protestant and the Catholic missions in China after the opening up in 1842, respectively. They record the place of entry and time of each mission in China. Accordingly, we focus on the entry shock of the missionaries and observe the responses of the local Confucian elite, at the extensive and intensive margins.

To measure the strength of the Confucian elite, we use the number of the highest degree holders (*jinshi*) of the imperial examinations produced in each prefecture. As the masters of Confucianism, the degree holders were promoted as local Confucian gentry. They played a dominant role in consolidating the Confucian order in local societies. They diffused Confucian moral values, taught Confucian classics, and organized Confucian clans (Chang, 1955). Although most of the *jinshi* holders were officially appointed out of town, their number reflect the capacity of elite production and thus the strength of Confucian elite in their home prefectures. Moreover, we treat the strength of the Confucian elite dynamically, in the sense that some regions could not persistently produce degree holders and thus were subject to a changing Confucian influence over time. Accordingly, we use the number of *jinshi* degree holders produced in the past 30 years as the primary measure, reasoning that the average age for achieving the *jinshi* degree was about 35 and their average life expectancy was about 65, based on the estimates of Chang (1955) and Elman (2006), respectively. To mitigate the effect of prefectural population size, we normalize the number of *jinshi* degree holders per million people and take the natural logarithm of it. The data on *jinshi* degree holders are obtained from Chen, Kung, and Ma (2020), and the population data are obtained from Cao (2000).

Still, the number of *jinshi* degree holders may reflect the strength of the cultural elite but not necessarily the Confucian values of the masses in a prefecture, while the latter was also a source of movement against Christian occupation. For this reason, we

follow the literature and employ the density of Confucian temples, the density of Confucian clans (lineage organizations enforced by Confucian family values and rules), and the density of chaste women (a proxy for the specific Confucian norms of loyalty and subordination) as alternative measures of the strength of Confucianism. Their geographic distributions are highly correlated with that of the number of *jinshi* degree holders. We further construct the first principal component of the four variables. The data on the Confucian temples and clans are obtained from Chen, Ma, and Sinclair (2022), and the data on the chaste women are from *Jiaqing Chongxiu Yitongzhi*.

Measuring economic complementarities

In the context of late 19th century China, a primary economic complementarity between the Christian missionaries and the Confucian elite in China arose from the opening of treaty ports. The treaty ports were mostly located along the coast and the Yangtze River (the trunk waterway linking Shanghai port to China's interior). Through treaty ports, missionaries brought to China new industrial technologies and other useful knowledge. Modern industries, military weapons, Western medicine and business models, triggered the Chinese elites to learn from the West for self-strengthening. Missionaries played a pioneering and intermediary role in introducing Western knowledge to the Chinese elite by opening new schools, printing presses, and hospitals (Bai and Kung, 2015; Chen, Li and Ma, 2025).

Given that Western influence mainly spread around the treaty port and the missionaries' intermediary role therein, we hypothesize that prefectures around treaty ports were more likely to produce economic complementarities between Christian missionaries and Confucian elites, similar to the argument for India by Jha (2013). We thus examine whether anti-missionary conflicts were reduced in the treaty ports (and their neighboring) prefectures relative to other prefectures after the entry of Christian missions. Between 1842 and 1911, Qing China successively opened 61 treaty ports, as documented by Yan (2012), with 37 of these treaty ports located in our sample prefectures. We use a dummy variable that equals one for the years after a treaty port was opened in a prefecture (or in one of its neighboring prefectures to capture the spatial spillover of the port effect),[14]

[14] Specifically, we define a prefecture as the 'neighbor' of a treaty port if this prefecture's centroid is located within 136 kilometers from the centroid of the nearest treaty port prefecture on the five-year basis. The 136 kilometers is the average great circle distance between any two contiguous prefectures by centroids in the

and zero for the years before the port opening. We thus have 90 treaty port prefectures in the sample.

The missionaries' complementarities were not confined to the treaty port areas, because they also diffused Western knowledge and institutions to considerable interior regions of China. To gauge this variation, we use the number of public goods (schools, printing presses, charities, and hospitals) erected by Christian missionaries at the prefectural level. Historical narratives indicate that missionary hospitals and charities complemented Confucian clans' small-scale risk-sharing and welfare functions (e.g., Yang, 2006; Leung, 2015; Chen et al., 2022). We enumerate each type of public goods by prefectures and periods (on a five-year basis) from Huang's (2017) *Chronicle of Protestant Missions Development in China (1807-1949)* and Geng's (2009) *Biographies of Catholic Missionaries in China during 16th to 20th Century.*

3.3. Data on domestic and foreign firms and banks

The anti-missionary conflicts occurred during a critical period of China's economic modernization. We examine whether the conflicts cast an adverse impact on China's modern growth by deterring the introduction of Western technologies. To measure the introduction of Western technologies, we use the number of modern banks and industrial firms opened by Westerners in each Chinese prefecture between 1860 and 1930.[15] These banks and firms represent fundamental components of economic progress. During this period, 148 foreign banks and 273 foreign industrial firms were established across 29 prefectures in China proper. These modern establishments introduced new capital, technologies, and business models to China, stimulating Chinese elites to modernize the traditional economy (Spence, 1990). We obtain data on banks from Lin et al. (2020), and data on foreign industrial firms from Chang (1987).[16]

Another potential economic consequence of the anti-missionary conflicts lies in the spillover to Chinese domestic investment in modern firms and banks. Given that the missionaries were from the West (especially the UK, the US, France, and other industrial

sample. The results are robust to using the actual neighboring prefectures, i.e., prefectures adjacent to the treaty port prefectures. This approach resonates with Li and Han (2019), Keller and Shiue (2021), and Jin (2023) in capturing potential regional spillover effects of treaty ports.

[15] Modern banks refer to the formal, market-based financial institutions, as opposed to Chinese traditional banks (money houses) that operate local small credit businesses.

[16] This data on foreign industrial firms is available up to the period 1915-1919.

powers), these conflicts may have discouraged Chinese business elites from developing modern, Western-style business institutions. Furthermore, the anti-missionary conflicts could also indirectly affect China's economic modernization by expelling the missionaries and Western investments, especially since many modern domestic businesses needed to learn from and establish operations near their foreign counterparts (Kung, 2022). Otherwise, domestic players could have simply overcompensated locally the foreign decline in investment. To this end, we use the number of modern Chinese banks and industrial firms as outcome variables. We obtained data on banks from Lin et al. (2020) and on domestic industrial firms from Du (1991).

3.4. Data on newspapers

To gauge the chilling effect of anti-missionary conflicts on foreign direct investments in China, we explore Western newspaper reports on the Boxer Rebellion. We choose newspapers as they were the primary media reporting Chinese news in the West at the time. Specifically, we followed Beach and Hanlon (2023) and utilized the Newspapers.com archive that digitized newspapers of the United States, the UK, and other English-speaking countries between 1890 and 1930. For non-English-speaking countries, we sourced French newspaper data from *Gallica / Bibliothèque nationale de France* and German newspaper data from the *Deutsche Digitale Bibliothek Library*. We focus on the effect of the Boxer Rebellion simply because it is much clearer to identify and track in newspapers relative to the other anti-missionary events.

We find the reports on the Boxer events based on the words "Boxer rebellion", "Boxer uprising", and their equivalents in French and German (e.g., Révolte des Boxers, Boxeraufstand), across four leading Western powers in China (UK, US, France, and Germany) over 30 years. We use the total number of report pages that mention Boxers to measure the media exposure of the Boxer Rebellion to each Western country. Given the prominent media effect of the headlines, we also use solely the front-page mentions of the Boxer events as an alternative measure. Likewise, we also separately examine the reports that mention the Boxer destructions (e.g., casualties and property damages) and reports that GPT classified as generating a negative sentiment to substantiate the media

effect (the majority of reports).[17] We match these media measures to the direct investments in China of the four Western countries by years.

3.5. Data on long-run outcomes: investments and attitudes

Lastly, we examine the long-term economic impact of the anti-missionary movements by looking into the geography of foreign investments after China reopened its market to the West in the 1980s. We collect data on foreign direct investment (and domestic enterprises as well) in each Chinese city from the 1990-2020 *China City Statistical Yearbooks*. We also employ survey data on Chinese people's attitudes toward foreigners and foreign cultures from the *Attitudes towards Citizenship in China Survey (2009)*, conducted by the Research Center for Contemporary China at Peking University. We use this survey to examine the cultural transmission mechanisms linking historical anti-missionary conflicts to contemporary investment patterns. The survey interviewed 3,858 Chinese individuals living in 72 counties (or 51 prefectures). The questionnaire covers a wide array of topics including trust in institutions and out-groups, national identity, political participation, and attitudes toward globalization and foreign cultures.

4. The Origins of Anti-Missionary Movements: Religious Competition versus Economic Complementarity

4.1. Religious Competition: Confucian Elites

We first examine the potential role of religious competition between Christian missionaries and Confucian elites on Chinese anti-missionary movements using the following regression specification from 1860 to 1910. In this difference-in-differences framework, we assume that religious competition would occur following the entry of Christian missionaries into a Chinese prefecture, and the competition could become intensified in prefectures with a stronger Confucian elite, relative to other prefectures with a weaker Confucian elite. Namely, we estimate:

[17] We ask the most recent (at the time of writing) GPT-4o model to provide a sentiment score for the text, ranging from -1 (negative) to 1 (positive), and label it as either positive, neutral, or negative.

$$Conflict_{it} = a_i + \lambda_t + \beta_1 Mission_{i,t-1} + \beta_2 Confucian_{it} + \beta_3 Mission_{i,t-1} \times Confucian_{it} + \mathbf{X}_{it} + \epsilon_{it} \quad (1)$$

where $Conflict_{it}$ denotes the number of anti-missionary cases or prints in prefecture i in a five-year period t. $Mission_{i,t-1}$ is a dummy variable indicating the presence of Christian missionaries in the period $t-1$ (hereafter Missionary entry). Alternatively, we also use the number of years since missionary entry to measure the cumulative (competing) effect of Christian missionaries in each prefecture, denoted as Missionary duration. Functional form aside, this is an important control for the missionary effect, but not the main focus of our analysis. $Confucian_{it}$ refers to the strength of local Confucian elite, measured primarily by the number of *jinshi* degree-holders in the last 30 years. The tension between religious competition is captured by interaction term $Mission_{i,t-1} \times Confucian_{it}$, which captures whether the missionaries would trigger greater local resistance if they encountered a stronger Confucian incumbent. This interaction is our main object of interest to assess the role of religious competition.[18]

The prefectural fixed effects, a_i, absorb the effect of any prefectural-level characteristics. The common shocks are absorbed by the year fixed effects, λ_t. We still worry that some prefectural factors may affect both the level of religious competition and the intensity of anti-missionary conflicts over time. Thus, we additionally control for three prefectural geographic factors (provincial capital dummy, distance to the coast, and terrain ruggedness index) and initial economic conditions (population density in 1850).[19] Given the time-invariant nature of these variables, we interact each of them with the dummy of mission entry. Moreover, we control for the frequency of droughts and floods during each period, which could be important for conflict (Esherick, 1988; Liang, 2014).[20] These additional controls are denoted by the vector $\mathbf{X}_{it}$. Appendix Table A1 shows the summary statistics of these variables.

Our first set of results are on the causes of anti-missionary violence. We start with religious competition and then move to economic complementarities. Table 1 reports the estimates of Equation (1). To provide a benchmark, Column 1 examines the Christian

[18] Given that religious competition may be absent when local Confucian power is either too strong or too weak, we also tested an alternative specification that additionally includes quadratic terms of $Confucian_{it}$ and its interaction with $Mission_{it}$. We find no significant results.

[19] We use the population density in 1850 as a proxy for economic prosperity in pre-industrial society (see also Ashraf and Galor (2011) and Michalopoulos and Papaioannou (2013)).

[20] As a validity check, we find that the coefficients on droughts are significantly positive, consistent with historical interpretations discussed in footnote 2.

missionaries' entry effect. Not surprisingly, there is a mechanical relation between missionary entry and anti-missionary conflicts. We keep this important control going forward. We examine whether the size of the Confucian elite, which reflects the strength of local Confucian orthodoxy, correlates with anti-missionary violence in Column 2. The interaction term between missionary entry and the number of Confucian elites is not statistically significant and even has a negative coefficient. This suggests that a larger Confucian elite did not necessarily mobilize a violent resistance toward the new Christian entrants. This hypothesized competition effect is still insignificant after we rule out the potential confounding effects of prefectural geographic characteristics, population density, and weather shocks in Column 3, and when we use Poisson estimation give the count values in the dependent variable (Column 4). Similarly, there is also no such religious competition channel using the number and length of anti-missionary publications (Columns 5 and 6). The results remain insignificant when we employ the density of Confucian clans, temples, chaste women or the principal component of the four proposed Confucianism variables as alternative measures of Confucian strength, which might be reflecting more popular sentiment, rather than top-down leadership (see Appendix Table A2).

To further mitigate the concern that the religious competition effect is confounded by missionaries' selective entry into Chinese prefectures, we remove prefectures that had no missionaries throughout the sample period and repeat the analysis in Table 1, at the intensive margin. The variable of religious competition still has no relation with the distribution of anti-missionary conflicts (see Appendix Table A3). We obtain similar insignificant results on the religious competition effect when using the missionary duration to proxy for the missionary influence (Appendix Table A4). Overall, we do not find significant association between the strength of Confucianism and anti-missionary violence during this period.

4.2. Economic Complementarities: Treaty Ports

Having explored the role of religious competition, we next test whether the economic complementarity mechanism (via treaty ports and public goods provision) attenuates anti-missionary conflicts. For this we repeat the specification of Table 1, now adding the dummy of treaty port and its interaction with missionary entry, namely:

$$Conflict_{it} = a_i + \lambda_t + \beta_1 Mission_{i,t\text{-}1} + \beta_2 Confucian_{it} + \beta_3 Mission_{i,t\text{-}1} \times Confucian_{it}$$
$$+ \beta_4 TreatyPort_{it} + \beta_5 Mission_{i,t\text{-}1} \times TreatyPort_{it} + \mathbf{X}_{it} + \epsilon_{it} \quad (2)$$

Table 2 shows that Christian entry generated less resistance in the treaty port areas, where economic complementarities were higher. This finding is robust to using different estimation models and controlling for more prefectural characteristics in Columns 2 to 5. It is also robust to limiting the analysis to prefectures that had missionaries (Appendix Table A5) or using missionary duration as an alternative measure of missionary influence (Appendix Table A6). When we run a horse race between the treaty ports and the Confucian elites in shaping the missionary effect, there is still no effect on the level of anti-missionary movements (Columns 2 to 5). This indicates that the violence against Christians in late 19$^{\text{th}}$ century China is more likely to originate from economic rather than cultural reasons. This result is reminiscent of Jha (2013) for Indian medieval ports in reducing Hindu-Muslim violence. Furthermore, Appendix Table A7 shows that the conflicts were primarily driven by Catholic mission entry, consistent with the historical evidence suggesting that Catholic missionaries had more political interference in Chinese local affairs than the Protestants (Esherick, 1988).[21] As before, the Catholic effect on anti-missionary conflicts is insignificant when interacted with the strength of the local Confucian elite. Again, the observed effect in conflict reduction is more consistent with the economic complementarities hypothesis. Still, the results could be driven by the endogenous location of treaty ports, to which we turn next.

4.3. Identification of the Treaty Port Effect

To substantiate the complementarity effect of the treaty ports, we employ a Propensity Score Matching algorithm to attenuate the confounding effects of the treaty port correlates. For instance, it might be possible that some favorable geographic factors that enabled a prefecture to be opened as a treaty port correlate with anti-missionary conflicts. If this was the case, the treaty port effect would not come from the complementarity with the

[21] As Esherick (1988) notes, Catholic missionaries were more disruptive than Protestants in local Chinese society due to their assertive protection of converts and involvement in secular disputes. Backed by foreign powers, they often claimed semi-official status, denied local officials' authority over Christians, and shielded converts from legal penalties—practices that both Chinese authorities and Protestant observers criticized (pp. 79–84).

Christian missionaries, but merely from favorable geographic endowments. To address this potential concern, we use propensity scores to select 82 non-treaty port prefectures that have similar geographic and economic characteristics to the 82 actual treaty port prefectures (and their neighbors). Figure A4 presents the coefficient plots for balance tests between these samples before and after matching, assessing factors that most likely influenced the selection of treaty ports. After matching, the treatment and control groups become more balanced in terms of geographic and economic characteristics (distance to the navigable river, distance to the coast, provincial capital, terrain ruggedness index, longitude and latitude, population density, and years of missionary presence).[22] After comparing the treaty port prefectures to their synthetic counterparts, the treaty port effect remains significantly negative for anti-missionary conflicts in Appendix Table A8.

Furthermore, for identification, we employ a randomization inference method to draw counterfactual treaty ports and compare them with actual treaty ports in terms the effect on anti-missionary conflicts. We select counterfactual treaty ports from the prefectures in the control group using propensity score matching, such that they resemble actual treaty ports in both geographic and economic characteristics. Given the successive opening of treaty ports, we select the same number of counterfactual ports as that of actual port in each five-year period. We repeated the draw 2,000 times and thus constructed 2,000 sets of counterfactual treaty ports. The results confirm the (actual) treaty port effect on anti-missionary conflicts (Appendix Figure A5). Namely, only true treaty ports significantly attenuate religious conflicts.

4.4. Public Goods

Thus far we have examined the economic complementarities provided by treaty ports, we now turn to public goods provided by missions themselves. The economic complementarity effect remains significant when we use such alternative measures in Table 3. As noted in Section 2.2, missionaries established modern schools, hospitals, printing presses, and charitable institutions on an unprecedented scale. Since we are examining public goods provided by the missionaries, we restrict the sample to prefectures where there were

[22] To illustrate, one pair resulting from the algorithm is Sizhou prefecture from Anhui province and Jiangning prefecture from Jiangsu Province. They are neighbors with mission entry, similar geographic conditions and population density, neither are provincial capitals, around 200 km to coast and less than 20 km to navigable river, yet the latter had access to a treaty port.

missionaries. In this sample, we compare prefectures where the missionaries only preached to those where the missionaries not only preached but also offered secular contributions to local people.[23] We find that missionaries' inputs in public goods, especially charity and medicine, reduced local Chinese people's hostility toward Christianity. Both anti-missionary conflicts and publications became significantly less when the missionaries provided local population with more charitable and medical resources, as these new resources complemented the traditional Chinese ones. The results are also robust if we exclude the treaty port prefectures, in Appendix Table A9, given the results from the previous section. The overall message from this section is that anti-missionary conflicts in China rather than being inflamed by religious competition were mostly attenuated by economic complementarities, with regards to treaty ports and public good provision by the missionaries.

5. Economic Consequences of Anti-Missionary Movements

Having explored the different potential causes of anti-missionary violence, in this section we examine their economic consequences, beginning with foreign investment where the link to missionary activity and broader Western engagement was most direct and salient. We further examine the spillover effect of anti-missionary conflicts on Chinese domestic economic development; that is, whether the conflicts also discouraged Chinese from developing a modern or Western-style productive capacity.

5.1. The short to medium-term effect

We first examine these questions in the short to medium run, i.e., during and right after the anti-missionary episode from 1870 to 1930. This also constitutes China's early modern transitional period, when the country was adopting Western technologies to modernize. Therefore, Chinese anti-missionary movements could have profoundly affected China's modernization path. To measure foreign investments, we use the number of foreign banks and foreign industrial firms in China. To examine whether the impacts of anti-missionary

[23] We use the specification: $Conflict_{it} = a_i + \lambda_t + \beta Public\ Good_{i,t-1} + \mathbf{X}_{it} + \epsilon_{it}$, where $Conflict_{it}$ is the number of anti-missionary cases in every five-year and $Public\ Good_{i,t-1}$ is the cumulative number of public goods provided by the missionaries in the previous five-year period.

movements spilled over into Chinese domestic economic modernization, we use the number of Chinese banks and modern industrial firms as outcome variables.

We begin by testing the relationship between the anti-missionary cases, on the one hand, and variables of foreign and Chinese investments, on the other, at the prefectural level and on a five-year basis. Given that the anti-missionary data ends in 1911, we limit the period of analysis between 1870 and 1909.[24] We run the following regression specification:

$$Y_{it} = a_i + \lambda_t + \beta_1 Conflict_{it} + \mathbf{X}_{it}\gamma + \epsilon_{it} \qquad (3)$$

where Y_{it} measures the number of industrial firms and banks, respectively. $Conflict_{it}$ refers to the number of anti-missionary conflicts in each prefecture per five-year period. With $\mathbf{X}_{it}$, we disentangle the anti-missionary effects from the missionary effects by controlling for the years of duration of missionary presence in each prefecture. We also control for treaty port duration and the number of Confucian elites in the previous 30 years (*jinshi* degree holders), given our results from the causes part, and the same set of geographic factors (population density in 1850, provincial capital dummy, distance to the coast, and terrain ruggedness index) interacted with five-year dummies. a_i and λ_t control for the effects of unobserved prefectural factors and common time shocks, respectively.

We look first at the potential impact on foreign investments. The empirical results show a significant and negative impact of anti-missionary conflicts on the number of foreign banks and firms in China (Table 4, Panel A). This is true both for foreign industrial firms in the first two columns, and the number of foreign banks in the last two. On average, an additional anti-missionary event reduces the number of foreign firms by 0.007 or 7.5% relative to the mean and the number of foreign banks by 0.009 or 5.8%. This indicates that foreign (Western) merchants reduced investments in regions where local people were hostile to Christianity. Stated differently, religious tension or conflicts discouraged economic investments.

[24] We remove the observations before 1870 to avoid the potentially confounding economic effects of peasant revolts, particularly the Taiping Rebellion (1850-1864) in southern China and the Nien Rebellions (1851-1868) in the North. This concern is further attenuated by the fact that the distribution of Taiping Rebellion (measured by the soldier deaths in Bai, Jia, and Yang (2023)) is not significantly correlated with the distribution of the anti-missionary events as in Appendix Figure A6. And our results also remain robust if we control for the distribution of the Taiping Rebellion (not reported to save space).

Interestingly, anti-missionary conflicts also significantly reduced the number of modern banks and industrial firms established by Chinese people, around 4% and 11% relative to the mean respectively (Table 4, Panel B). Given that Chinese economic modernization followed the Western model, the anti-missionary movements may have discouraged Chinese business elites from learning from the West. It appears that local Chinese investments were unable to compensate for the drop in foreign direct investments and co-moved with them. To examine the observed pattern, we first perform a *t*-test comparing domestic establishments across prefectures with and without foreign presence in the full sample. Prefectures with foreign firms have an average of 6.42 domestic firms, compared to 0.29 in prefectures without foreign firms. Similarly, the average number of Chinese modern banks is 4.15 in prefectures with foreign banks, versus 0.38 in those without. Both differences are statistically significant at the 1% level. Second, we explore the potential spillover effect of foreign investments on domestic investments in Appendix Table A10. Domestic investment is positively correlated, co-moving with foreign investment in the previous period. In sum, anti-missionary violence not only reduced foreign investment, but it also spilled over to domestic investments, which is reasonable in a context where foreigners provided crucial technologies.

Moreover, we find that actions, rather than mere rhetoric, are crucial for anti-missionary movements to have tangible economic impacts. In Appendix Table A11, when we substitute the occurrence of actual conflicts with the number of anti-missionary pamphlets, the results for both foreign and domestic investment become statistically insignificant. This suggests that investors may have responded more to direct, physical threats than to indirect ideological propaganda. It appears that the pamphlets, written in Chinese and targeting a local audience, sought to cultivate anti-foreign sentiment, yet they failed to significantly influence investment decisions. This is consistent with our earlier discussion that Chinese investment decisions were closely tied to foreign capital flows.

5.2. Identifying the effect of anti-missionary violence

The above results show a negative relationship between the distribution of anti-missionary violence and the distribution of modern economic growth from 1870 to 1909. To examine the causal effect of anti-missionary violence on economic investments, we make use of the Boxer Rebellion, the largest and most devastating anti-missionary event in late Qing

China.[25] It directly led to the invasion of the Eight-Nation Alliance (about 45,000 troops) in China. The Alliance suppressed the rebellion and further opened China to the Western powers by signing a peace agreement, known as the Boxer Protocol, in 1901.

The Boxer Rebellion is a good laboratory, given its sudden rise and fall around 1900 and its unique geographic distribution. Specifically, the Boxers plundered mainly the northern provinces of Zhili, Shanxi, and Henan, but rarely entered the southeast because of the mutual protection of provincial governors in southeastern China (see Figure 3). The Southeast Mutual Protection ensured that provincial governors protected foreign residents and maintained local military control to resist the roving Boxers from the north. We exploit the fact that there is a sharp boundary defending southeastern provinces from the Boxer violence. This regional dynamic aligns with the patterns observed in the distribution of Christian martyrs—which we use, following Barro and McCleary (2016)—as a measure of the intensity of religious conflicts. As shown in Figure 3, martyrdoms were concentrated in the Boxer region, while incidents were very few and sparse in the Southeast Mutual Protection area. This unique setting allows us to use the difference-in-discontinuities design to identify the effect of the Boxer Rebellion on economic development,[26] based on the following specification:

$$Y_{it} = a_i + \lambda_t + \beta Post_t \times Boxer_i + Post_t \times f(location_i) + X_{it}\boldsymbol{\gamma} + \epsilon_{it} \quad (4)$$

where $Post_t$ is a dummy variable indicating the years after the Boxer Rebellion, so it equals one after 1900 and zero otherwise. $Boxer_i$ is an indicator variable that equals 1 if the prefecture is under the Boxer threat (i.e., outside the southeastern mutual protection areas). $f(location_i)$ is a second-order polynomial used to control flexibly for the effect of geographic location (i.e., distance to the boundary of the Boxer region), which we interact with the $Post_t$ dummy. Besides the usual set of control variables, we also include the distance to nearest garrisons of Western powers in China, interacted with the $Post_t$ dummy.[27] The sample period spans from 1870 to 1929, on a five-year basis, in which 1870-

[25] There is no consensus on the death toll during the rebellion. The rough statistics provided by the churches suggest that more than 200 Western missionaries and 200,000 Chinese Christians were killed in 1900.

[26] For the geographic difference-in-discontinuities design, see Grembi et al. (2016), Butts (2023), and Takahashi (2024).

[27] The garrisons were established under the Boxer Protocol of 1901, which, among other provisions, granted foreign powers the right to permanently station troops at designated locations across northern China to safeguard their interests.

1899 are the reference years.[28] We extend the treatment period to 1929 to capture the possible enduring effect of the rebellion. For robustness, we also restrict the analysis to the North China area where the Boxers are concentrated, or to the prefectures located near the Boxer boundary (e.g., within 200 kilometers) to reduce geographic heterogeneities.[29] These alternative sample regions are depicted in Appendix Figure A7.

Before running any regression, and to validate our empirical strategy, recall the differential investment patterns we found in Figure A1. There we observed low levels of investment before the Boxer Rebellion in areas with and without protection, and then differential patterns after this event. Empirically, we find that the Boxer Rebellion frustrated foreign investments in China, especially in the regions plundered by the Boxers. The growth of foreign industrial firms and banks in China becomes significantly smaller in the Boxer regions relative to the Protection regions after the Boxer Rebellion (Table 5, Panel A). The estimated effects are economically meaningful: in the full sample, the number of foreign industrial firms and banks declined on average by 0.11 and 0.27 per Boxer prefecture per five year after the Boxer Rebellion, equivalent to standardized betas of 0.04 and 0.08, while in North China the declines were more pronounced, with declines of 0.25 and 0.80 firms and banks per Boxer prefecture per five year (standardized betas of 0.18 and 0.31). It is worth mentioning that the Rebellion was soon exterminated jointly by the Eight-Nation Alliance and the Qing army, and that foreigners were promised better protection and privileges in China upon the signing of the Boxer Protocol between the Qing dynasty and the Western powers in 1901.[30] Despite this, the Boxer shock appears to have destroyed foreign investors' trust and confidence in China (the Boxer regions in particular) in the medium term. They rather invested in southeastern China, where the

[28] Although several events took place during this period, including the First Sino-Japanese War (1894-96), the Hundred Days' Reform (1898), and the Late Qing Constitutional Reform (1901-1911), the Boxer Rebellion remains the most critical in terms of anti-missionary conflict and its subsequent economic impacts. We also control for two-way fixed effects, leveraging within-prefecture and within-period variation to account for broader historical and temporal trends from other events.

[29] North China refers to the macroregion defined by G. William Skinner (1995), encompassing 77 prefectures across Zhili (modern Hebei, Beijing, and Tianjin), Shanxi, Henan, Shandong, and Anhui. Including Anhui ensures coverage of both the northern areas plundered by the Boxers (treatment) and prefectures across the Southeast Mutual Protection border that serve as a natural control group. This definition provides broad coverage of the north, while the control group differs from the North China Plain described in the introduction, a narrower geographic–ecological concept centered on the Yellow River basin.

[30] The Boxer Protocol imposed large indemnities on China, amounting to 450 million taels of silver, to be paid over 39 years with interest. While these reparations compensated foreign powers financially, they did not seem to restore trust.

local elites deliberately protected foreigners from the Boxers' invasion, most notably through the Southeast Mutual Protection Pact, which, though short lived (1900–1904), played a critical role in preserving local order and foreign confidence in the region.

Similarly, the Boxer unrest also negatively affected the development of Chinese industrial firms and modern banks (Table 5, Panel B). Here again the contraction is sizable: in the full sample, Boxer prefectures experienced average losses of 0.68 Chinese industrial firms and 0.84 banks per five-year period, corresponding to modest standardized effects of 0.05 and 0.09, with considerably sharper reductions in North China equivalent to 0.29 and 0.24 standard deviations, confirming our previous results.

Figure 4 shows the dynamic effect of the Boxer Rebellion by interacting the Boxer regions with a full set of five-year time dummies between 1870 and 1929, referenced by the period 1870-1874. First, there does not appear to be a pre-trend in the economic difference between the Boxer and the protected regions before 1900. The divergence in industrial and financial development between the two regions did not appear until after the Boxer Rebellion. Moreover, the short-lived Rebellion casted a long shadow throughout the sample period (until the 1930s). These findings remain robust when we restrict the sample to the more homogenous North China Plain or to the prefectures located near the Boxer boundary (within 200 kilometers), in the lower panel.[31] They are also accompanied by a chilling effect on domestic banks and firms.

The above discontinuity analysis omits the within-treatment variations in the level of violence. To address this, we employ the number of 'Christian martyrs' who were killed by the Boxers in each prefecture, as an intensive margin measure. The martyrs were widely reported and memorialized in the Western media. We obtained the name and residence of each martyr in China from Forsyth's (1904) *The China Martyrs of 1900* and Clark's (2011) *China's Saints: Catholic Martyrdom during the Qing (1644–1911).* Appendix Table A13 shows that the number of martyrs significantly hindered foreign and domestic investments in China. Furthermore, the effect of Catholic martyrs is greater than that of the Protestant equivalents, echoing the previous finding on the greater impact on the Catholic missions on anti-missionary conflicts. The findings at the intensive margin

[31] Appendix Figure A8 presents the balance tests for the full sample, North China Plain, and areas within 200 kilometers of the boundary. The 200 kilometers bandwidth approximately covers all prefectures along the boundary and their adjacent prefectures. The results also remain robust to other different distance cutoffs from the boundary (Appendix Table A12).

using martyrs confirm the previous ones at the extensive margin, underscoring the economic impacts of anti-missionary violence.

5.3. Media as a mechanism of collective memory

To explain the persistent negative impact of the Boxer shock, we focus on the collective remembrance of the Boxer violence among Western media. This remembrance was mainly sustained and diffused by the newspapers—the primary medium for Westerners to know what was happening in China at the time. In 1900, for example, the Boxers' siege of Peking was the headline of many newspapers in the West. The Boxer shock and panic in the Western audience were further intensified by the exaggerated and dramatized reporting (Cohen 1997), and this deepened their perceptions of China as chaotic and hostile to Western civilization.[32] Figure 5 shows a sharp surge in Boxer-related reports from 1900. The reports persisted even into the early twenty-first century despite gradual decline in the frequency of reports after the 1940s.[33] In Table 6, we present foreign investment data by country and year during this period, to examine the effect of newspaper coverage in the previous year on the number of banks and firms each Western country set up in China in the current year. We find negative results for total mentions, mentions in the front page, mentions on casualty and property damage, and articles with negative sentiments. Our findings indicate that greater media exposure deterred foreign investment. These results highlight the role of traditional media in reinforcing the short to medium-term economic costs of the Boxer Rebellion. Overall, the above results suggest that anti-missionary events negatively impacted foreign direct investment, hindering economic development nationwide.

5.4. The long shadow

[32] This epitomized by the news of "Peking massacre" in July 1900, which falsely claimed that all foreigners in the imperial capital had been slaughtered (Cohen 1997, p. 161). Newspapers headlined this with "All Massacred in Peking", "Peking Massacre is Confirmed", and "All Believed to Have Perished", among others. The news reports also detailed the massacre upon rumors and conjectures such as that the Boxers' attacks were supported by a Prince of the Qing court and the streets around the legations were strewn with dead bodies of Chinese and foreigners. See "The Boxer Uprising" in MIT Visualizing Cultures for newspaper coverage and illustrations.

[33] See Figure A9 for the persistence of reports across countries.

Lastly, we investigate whether the anti-missionary movements of the late 19th century China left a legacy on contemporary economic development, and how this effect may have evolved in the long run.[34] To this end, we regress the volume of foreign direct investment (FDI) after China's reform and opening-up (1990 to 2019) on the historical distribution of anti-missionary cases (1860 to 1911) at the city level.[35] Given China's progressive marketization and opening up since the 1980s, we allow for the anti-missionary effect to vary over time. Accordingly, we estimate the effect of historical anti-missionary cases on FDI volume using five-year periods between 1990 and 2019, controlling for other historical factors (the number of foreign firms and banks from 1870 to 1930, a treaty port dummy, missionary duration, and average density of Confucian elites in 1870-1930) and contemporary correlates of FDI, i.e. a provincial capital dummy, GDP, distance to the coast, as well as the shortest distance to Hong Kong, Macau and the early 5 major Special Economic Zones (SEZs) and 14 Open Coastal Cities (OCCs).

The results are reported in Figure 6. We first use the anti-missionary dummy to compare the prefectures that experienced anti-missionary conflicts to the prefectures without any anti-missionary events in terms of the volumes of FDI for estimating extensive margin, before using the continuous measure (log number of anti-missionary cases) to examine the marginal effect of anti-missionary conflicts. Both show that historical anti-missionary conflicts have had a persistent and negative association with foreign investment in China. Overall, there are fewer FDI flows in modern times in prefectures where there were more anti-missionary conflicts in the past. This suggests that, when China opened its market to foreign investors in the 1980s, the latter still preferred to locate their businesses in regions that were less subject to historical anti-Christian

[34] Between circa 1950 and 1980, China expelled Western investments, collectivized private businesses, and implemented central planning economy. The FDI did not return to China until the 1980s upon the reform and opening up to the world. Therefore, we omit this Socialist period from the analysis of the long-term effect of anti-missionary conflicts. However, an exception is that China received Soviet Union's industrial investments during this period. To examine whether this unique wave of FDI affects the anti-missionary legacy, we borrow from Giorcelli and Li (2025) the data on the 156 major industrial projects that Soviet Union aided in China in the 1950s. We find that most of these projects are located outside the Southeast Mutual Protection Pact region (see Figure 1 in Giorcelli and Li [2025]). However, controlling for these projects does not affect the long-lasting economic impacts of anti-missionary conflicts.

[35] We matched the prefectures in 1820 to the city administrative units in 2015 based on their GIS maps (Harvard CHGIS, version 6; National Geomatics Center of China, version 2015). We exclude the investments from Hong Kong, Macau, and Taiwan from the analysis, which are also included in the FDI statistics but should have little to do with the anti-missionary influence in the West.

movements. We interpret this as evidence of path dependence on investments, at a time when information flows were scarce.

The negative effect of historical anti-Christianity shrank over time, as evidenced by the inverted increasing pattern of coefficients in Figure 6. The anti-missionary influence was most marked when China opened during the 1990s. At the time, foreign investors may have been more skeptical about investing in China, given the uncertain business environment there, and hence they would be more likely to refer to the historical experience, i.e., the business environment faced by their precedent investors during the late 19th and early 20th century China. With the progress of Chinese market reforms, especially after China joined WTO and was firmly connected to the world market in 2002, there is convergence in FDI flows, which essentially covered the entire country.

We also find similar results in the long term, using the same RD boundary of the Southeast Mutual Protection Pact (see Appendix Figure A10). There is a discontinuity of average city-level FDI from 1990 to 2020 for cities around the Compact boundary. Consistent with the analysis in Section 5.2, we first restrict the sample to within 200 km to the boundary. Cities within the historical protection zone hold on average 2.14 times the amount of FDI flows as compared with their neighboring cities north of the boundary. Furthermore, even though we only have data on domestic enterprises from 2003 to 2020,[36] we still find that the average number of enterprises per city per year within historical protection 1.40 times that outside. The economic gaps gradually shrink but remain statistically significant when we expand the bandwidths from 200 to 500 km in unit of 50 kilometers, in Panel C of Figure A10.

5.5. Cultural attitudes

A potential channel for the persistent impact of historical religious conflicts pertains to people's trust and attitudes toward each other. Lower trust or even hatred would inhibit trade and cooperation between parties. We examine whether historical anti-missionary events fostered a hostile attitude toward foreign investments in China among local Chinese people. To this end, we refer to the Attitudes towards Citizenship in China survey conducted in 2009 and employ two survey questions on local Chinese people's attitudes, i.e., "whether you agree to restrict foreign imports to protect the domestic

[36] The data are obtained from *China City Statistical Yearbooks* (2003-2020).

economy" and "whether you trust foreigners".[37] We regress the two dummy variables for attitudes on the log number of anti-missionary cases between 1860 and 1910 in the respondents' home prefectures, conditional on a full set of historical controls (density of Confucian elites and the number of foreign banks and firms between 1870 and 1930) and contemporary prefectural factors, i.e. provincial capital dummy, GDP, distance to the coast, and proximity to Hong Kong, Macau and the Special Economic Zones (SEZs) and Open Coastal Cities (OCCs). We also control for individual characteristics that include employment status, gender, ethnicity, marriage status, education level, and birth cohort. The results are reported in Table 7.[38] In prefectures where there were more anti-missionary conflicts, people are generally less likely to trust foreigners and more inclined to support restricting foreign investment in China. Moreover, the anti-missionary effect is significantly smaller in prefectures with historical treaty ports, which echoes the complementary role of treaty ports discussed in Section 3.

To understand if the observed effects are specific to attitudes toward foreigners rather than generally 'outsiders' or strangers, we explore other trust variables in Columns (1)-(3) of Table A14. These include generalized trust, trust toward non-local Chinese and trust toward the local government. All these trust variables are not correlated with historical anti-missionary conflicts, suggesting that the observed effects operate through a more specific form of trust: towards foreigners. In addition, we explore other survey questions from the same 2009 *Attitudes towards Citizenship in China* survey on cultural conservatism or Chinese nationalism, such as national identity preservation, preferences for cultural prioritization, and perceptions of cultural threat from globalization.[39] We find these variables positively correlated with historical anti-missionary conflicts (Columns 4-6). Together, these findings suggest a lasting cultural impact of historical conflicts.

By and large, the legacies of the historical Chinese anti-missionary violence against the West have proven to be long-lasting, reflected in both modern foreign investment patterns and local attitudes. These enduring effects underscore the significant economic

[37] We also referred to China General Social Surveys and China Family Panel Studies that are widely popularly used in China studies but found few information regarding xenophobia.

[38] When we replace the explanatory variable with the number of anti-missionary prints, the results continue to show strong effects on trade protectionism but not on foreign trust.

[39] The exact survey statements are "We should preserve our own way of life to avoid gradually becoming a mere replica of other countries", "Chinese television should prioritize broadcasting Chinese movies and programs", and "The excessive influx of foreign films, music, and books is eroding our country's culture".

legacy of historical religious conflicts, extending beyond the short and medium-term impacts to shape long-term economic behavior and preferences.

6. Conclusion

In this paper we study the nexus between religion and conflict, focusing on the anti-missionary violence in China, during the late Qing dynasty. In the first part of the analysis, we look at two competing channels for the causes of violence: religious competition and economic complementarities. We find evidence for the second hypothesis: anti-missionary violence was largely attenuated through economic complementarities provided by the treaty ports and the provision of public goods by the Christian missionaries. We then examine the economic costs of anti-missionary violence. We find a negative effect on the investments by foreigners on firms and banks, as well as an accompanying chilling effect on Chinese domestic economic development. We employ a series of empirical strategies, including a matching specification, randomization inference and a spatial difference-in-discontinuities using the southeastern provinces' mutual defense pact that confirm our findings, providing a more causal interpretation of our results. We also show that media coverage served as an important mechanism for reinforcing the collective memory of anti-missionary violence abroad, amplifying its economic consequences through sustained negative perceptions and reputational damage in Western countries. In the longer term, the legacies of the anti-missionary events are reflected in FDI flows in the modern era, especially during the 1990s. They are also present in the attitudes towards trade and trust responses of the local population, even today. Overall, we find that the economic consequences of religious conflict are significant, have important spillovers, and are long-lasting.

The anti-missionary events of the 19$^{\text{th}}$ century in China offer important economic lessons beyond their historical significance. Anti-missionary violence is tied to the history of China's relationship with the West since the Opium Wars. The empirical results point towards the importance of economic forces in mitigating religious conflict, in line with Jha (2013) for India. They also show that conflict, in this case motivated by religious or cultural clash, can have important economic costs and spillovers in the medium run, extending well beyond its obvious short-term devastation. These findings are important for a country that ended up not adopting Christianity. The echoes of the Boxer Rebellion

can be seen even today, economically and culturally, as China continues to negotiate its complex economic and cultural relationship with the West.

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Figures and Tables

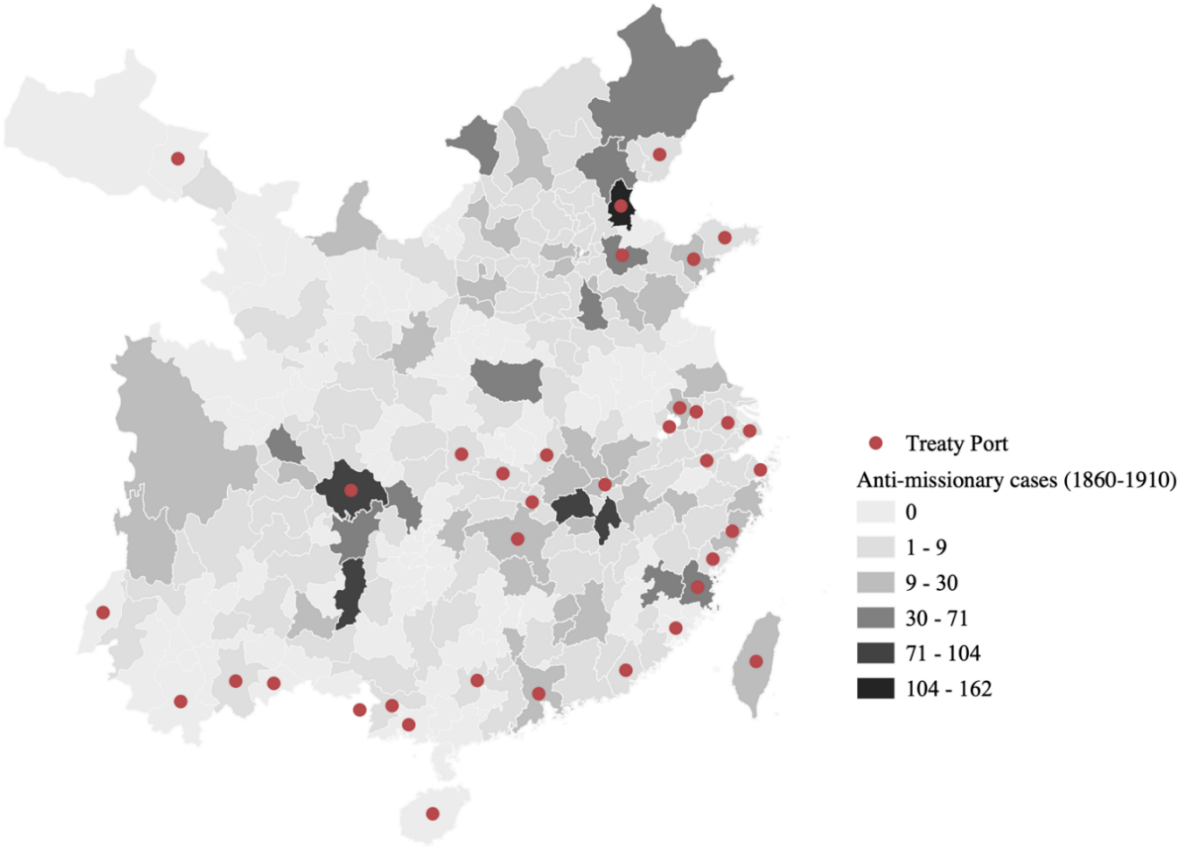


Figure 1. Distribution of Anti-missionary Cases, 1860-1911

Notes: This map shows the distribution of the number of anti-missionary cases between 1860 and 1910 across 269 prefectures of China proper. The map is based on the Qing dynasty's prefectural divisions in 1820 in the China Historical Geographic Information System (CHGIS) (2016). Anti-missionary cases include the conflicts and disputes between local Chinese and Christian missionaries, which are recorded by the Qing Ministry of Foreign Affairs in the Archives of Missionary Affairs and Cases (*Jiaowu Jiaoan Dang*).

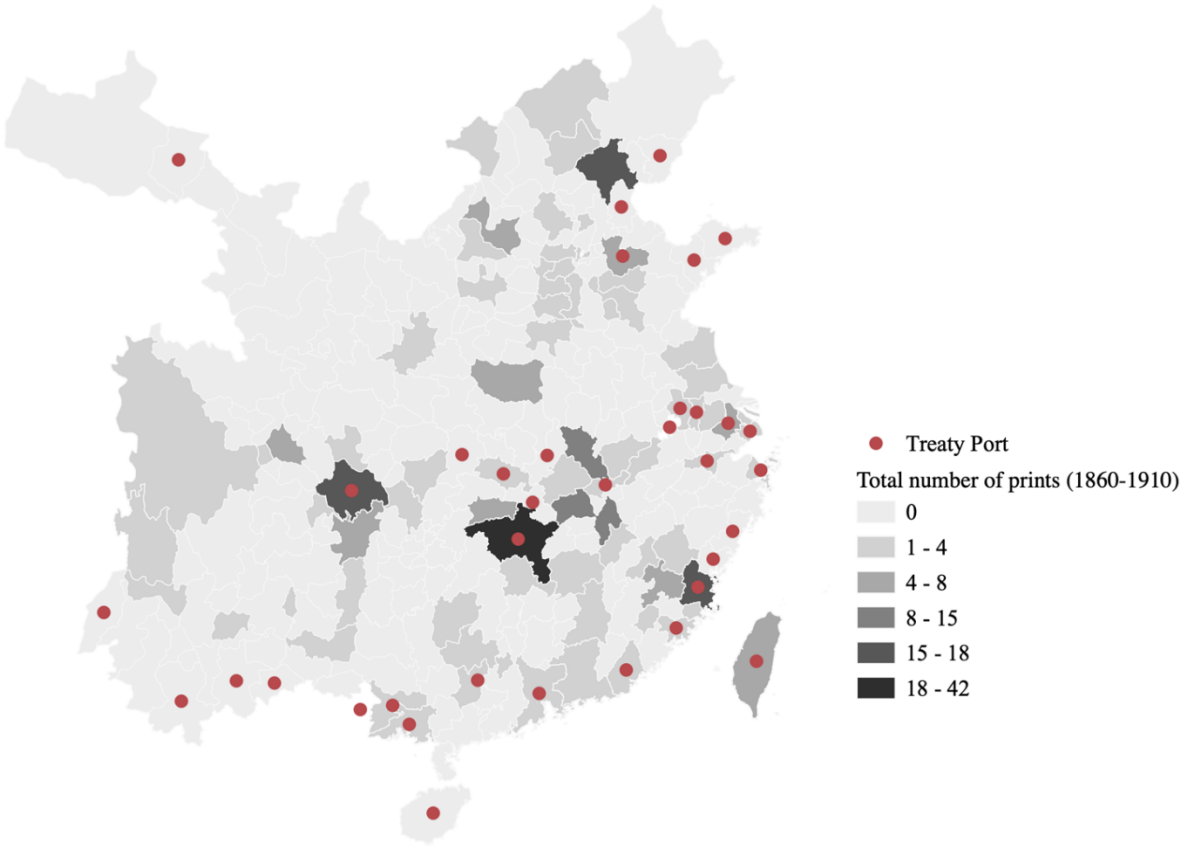


Figure 2. Distribution of Anti-missionary Prints, 1860-1911

Notes: This map shows the distribution of the number of anti-missionary prints between 1860 and 1910 across 269 prefectures of China proper. The map is based on the Qing dynasty's prefectural divisions in 1820 in CHGIS (2016). Anti-missionary prints were mostly made by local Confucian elites to demonize Christianity and missionaries, including but not limited to declarations, announcements, and pamphlets. The data are from Wang (1984).

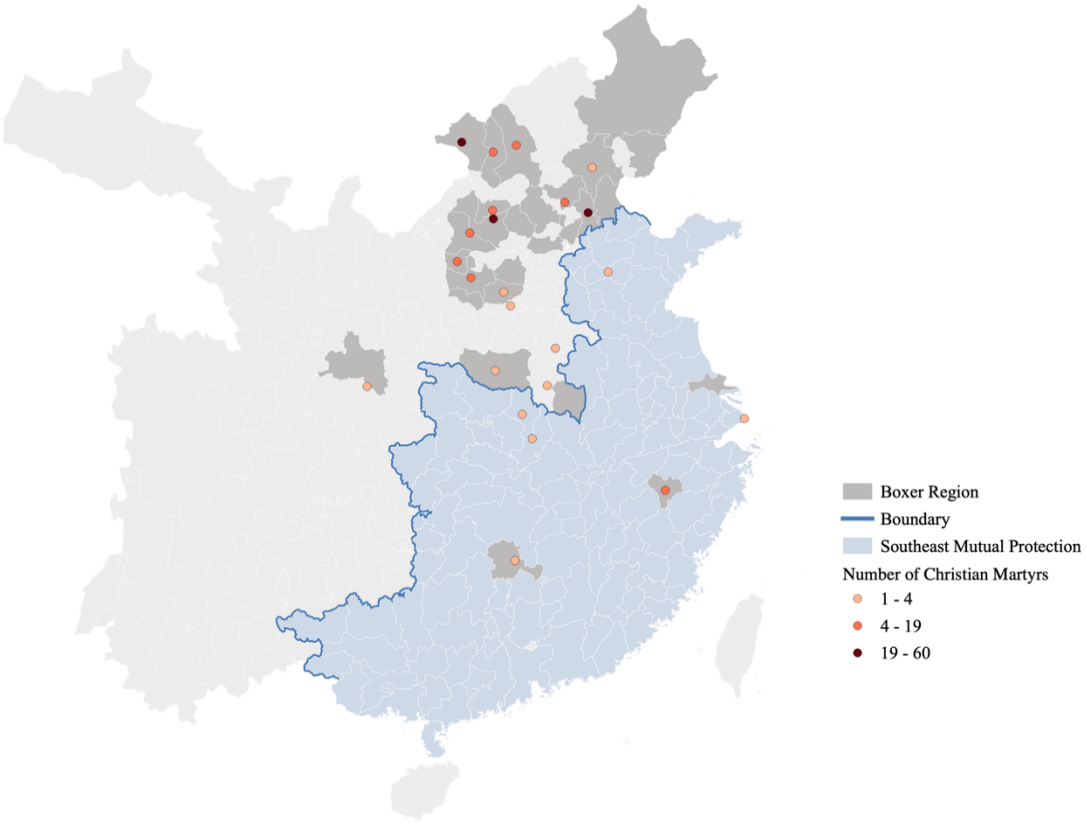
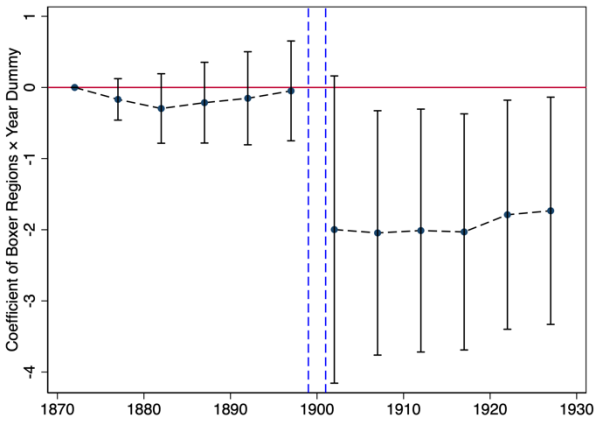
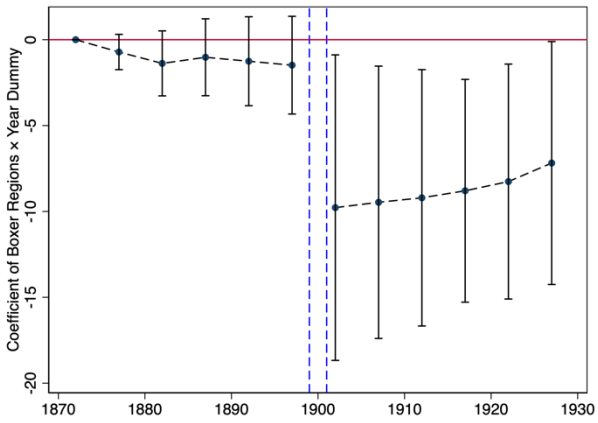


Figure 3. Boxer Rebellion and the Southeast Mutual Protection, 1900-1901

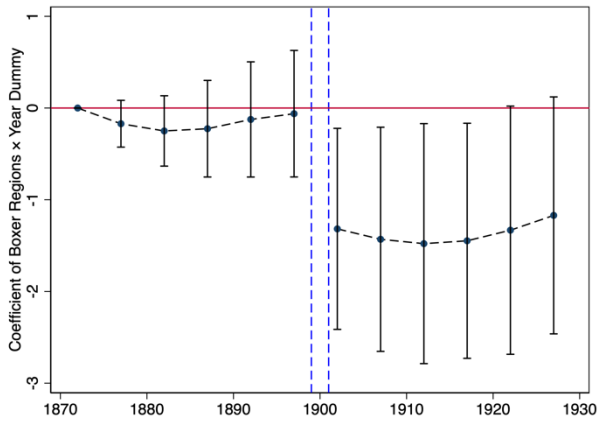
Notes: This figure shows the division of the Boxer Rebellion region and the Mutual Defense Pact of the Southeastern Provinces *(Dongnan Hubao)* region. The distribution of the Boxer Rebellions is based on the records in the *Boxer Protocol* in 1901. The distribution of the Boxer Christian martyrs is based on the records in Forsyth's (1904) *The China Martyrs of 1900* and Clark's (2011) *China's Saints: Catholic Martyrdom during the Qing (1644–1911)*. The pact boundary is drawn from the agreement among the governors of the southeastern provinces of Zhejiang, Shandong, Jiangsu, Jiangxi, Anhui, Hunan, Hubei, Fujian, Guangdong, and Guangxi, and the Western powers in June 1900 to jointly defend these provinces from the Boxers' invasion. The boxers originated from western Shandong but soon moved to Hebei (Zhili) in the spring of 1900.



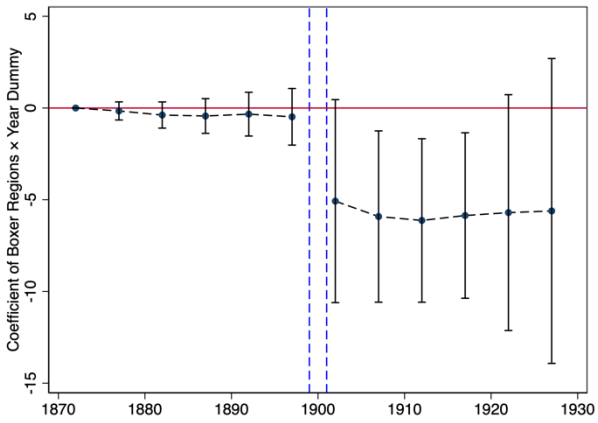
(a) Foreign Banks and Firms (North China)



(b) Domestic Banks and Firms (North China)



(c) Foreign Banks and Firms
(200 km away from the Protection boundary)



(d) Domestic Banks and Firms
(200 km away from the Protection boundary)

Figure 4. The economic impacts of the Boxer Rebellion

Notes: The figures show the estimates on the economic impacts of the Boxer Rebellion by each five-year interval. We compare the Boxer prefectures and the prefectures under the southeastern provinces' pact in terms of the number of banks and industrial firms around the Boxer shock in 1900. The reference period is 1870-1874. We control for the same set of prefectural factors as those in Table 5 and Table A12.

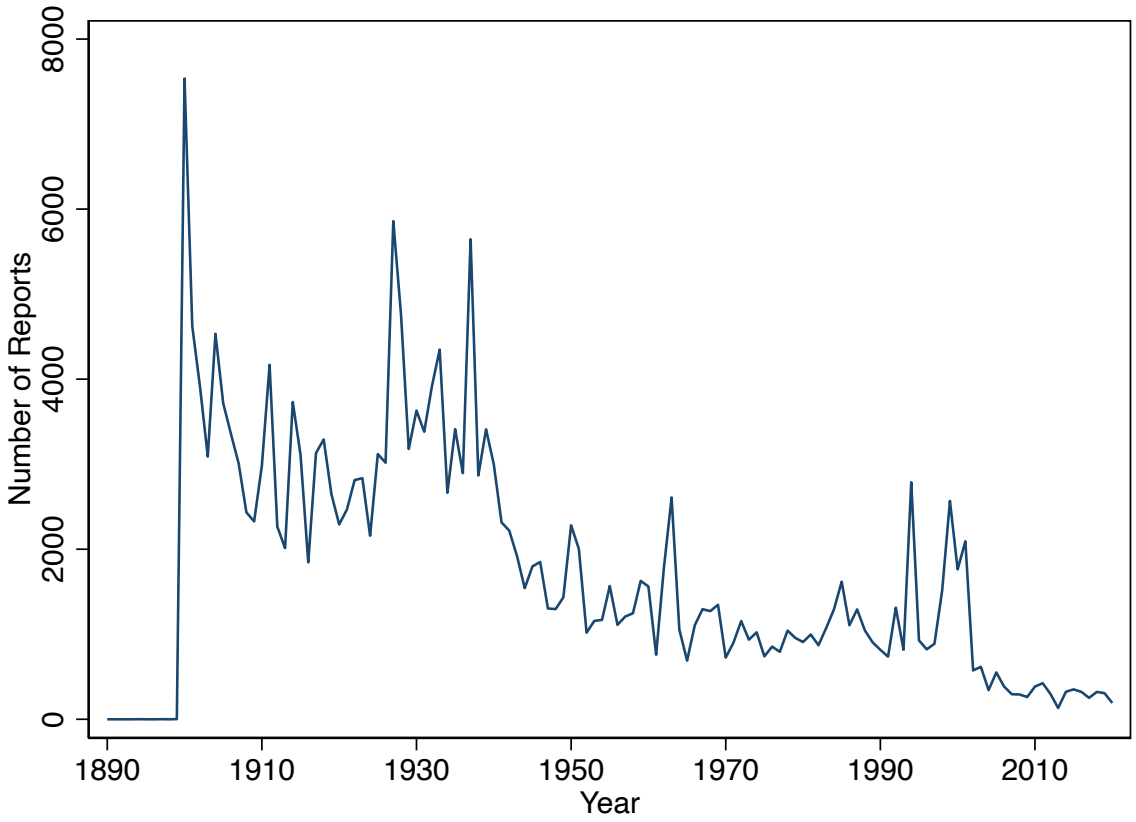
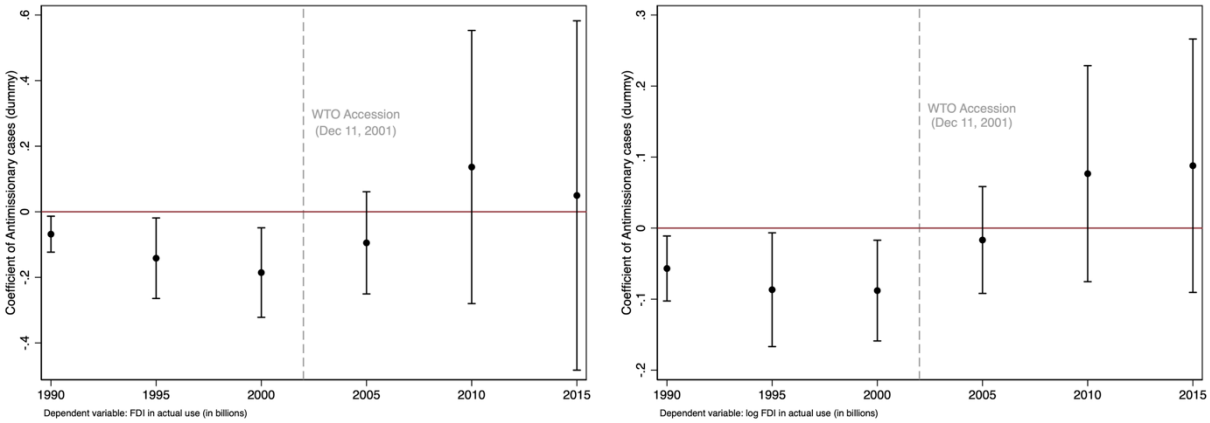
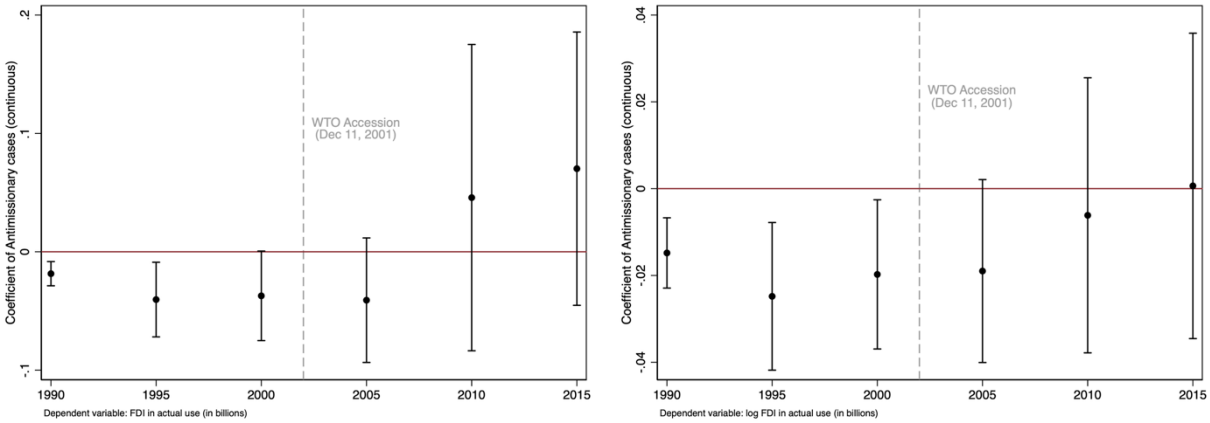


Figure 5. Frequency of newspaper reports on the Boxer Rebellion

Notes: This figure presents the total number of newspaper reports mentioning Boxer Rebellion from newspapers in the US, UK, France, and Germany between 1890 and 2020 sourced from Newspapers.com (for the US and the UK), Gallica (for France) and Deutsche Digitale Bibliothek (for Germany). Articles were identified using the keywords "Boxer Rebellion" and "Boxer Uprising" and their equivalents in French and German.



(a) The effect of the presence (dummy) of anti-missionary conflicts (1860 to 1910)



(b) The effect of the number of anti-missionary cases (1860 to 1910)

Figure 6. The persistent impact of anti-missionary conflicts on FDI

Notes: The figures plot the coefficients (in 95% confidence intervals) of historical anti-missionary variables in predicting the average FDI value across 249 Chinese cities by each five years between 1990 and 2019. All regressions control for other historical factors of the number of foreign firms and banks, missionary duration, treaty ports dummy and the density of Confucian elite (number of *jinshi*), as well as contemporary correlates of provincial capital dummy, GDP, and geographic proximity to Hong Kong, Macau and the early major Special Economic Zones (Shenzhen, Zhuhai, Shantou, Xiamen, and Haikou), following Jia (2014), and 14 Coastal Open Cities (Dalian, Qinhuangdao, Tianjin, Yantai, Qingdao, Lianyungang, Nantong, Shanghai, Ningbo, Wenzhou, Fuzhou, Guangzhou, Zhanjiang and Beihai). Standard errors are clustered at the city level.

Table 1. Religious competition and religious conflicts

	Number of anti-missionary cases				Number of anti-missionary prints	Word count of anti-missionary prints (log)
	(1)	(2)	(3)	(4)	(5)	(6)
	OLS	OLS	OLS	PPML	OLS	OLS
Missionary entry	0.492***	0.819**	3.571**	4.257***	0.551**	2.475***
	(0.179)	(0.353)	(1.758)	(1.517)	(0.230)	(0.914)
Confucian elites		0.038	0.015	0.045	-0.007	-0.051
		(0.089)	(0.089)	(0.254)	(0.017)	(0.065)
Missionary entry × Confucian elites		-0.180	-0.024	-0.120	-0.018	0.008
		(0.154)	(0.171)	(0.209)	(0.023)	(0.074)
Prefecture fixed effects	Y	Y	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y	Y	Y
Additional controls			Y	Y	Y	Y
Observations	2,690	2,690	2,690	1,730	2,690	2,690
Number of prefectures	269	269	269	269	269	269
R-squared	0.232	0.233	0.238		0.206	0.268
Mean of DV	0.593	0.593	0.593	0.923	0.099	0.335

Notes: The sample comprises 269 Chinese prefectures in 10 five-year time points between 1860 and 1910. Confucian elites are measured by the number of the highest civil examination degree holders produced in each prefecture in the previous 30 years (per million people and in natural logarithm). Missionary entry is a dummy variable that indicates when the missionaries had entered a prefecture in the previous period. Columns (1)-(4) winsorize the top 1% distribution of the dependent variable to mitigate the extreme value bias. Additional controls include population density, years of floods, years of droughts, and the interaction terms between missionary entry and the time-invariant prefectural factors (provincial capital dummy, distance to the coast, and terrain ruggedness index). Standard errors are clustered at the prefectural level and reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 2. Complementarity (through treaty ports) and religious conflicts

	Number of anti-missionary cases			Number of anti-missionary prints	Word count of anti-missionary prints (log)
	(1)	(2)	(3)	(4)	(5)
	OLS	OLS	PPML	OLS	OLS
Treaty port	-0.282	-0.264	0.108	-0.014	0.180
	(0.228)	(0.225)	(0.521)	(0.076)	(0.168)
Mission entry	0.665***	3.947**	3.871***	0.629**	2.554***
	(0.197)	(1.661)	(1.453)	(0.243)	(0.908)
Mission entry × Treaty port	-0.610**	-0.875***	-1.034**	-0.246**	-0.571***
	(0.306)	(0.333)	(0.515)	(0.105)	(0.219)
Confucian elites		0.038	0.028	-0.001	-0.041
		(0.088)	(0.244)	(0.016)	(0.064)
Mission entry × Confucian elites		-0.017	-0.130	-0.016	0.011
		(0.166)	(0.203)	(0.024)	(0.076)
Prefecture fixed effects	Y	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y	Y
Additional controls		Y	Y	Y	Y
Observations	2,690	2,690	1,730	2,690	2,690
Number of prefectures	269	269	269	269	269
R-squared	0.236	0.243		0.209	0.271
Mean of DV	0.593	0.593	0.923	0.099	0.335

Notes: Treaty port is a dummy variable that equals one if a prefecture (and its adjacent prefectures) had been opened as a treaty port. We use treaty ports to indicate the existence of economic complementarity between Christian missionaries and local Confucian elites, reasoning that the Confucian elites could benefit from Western (modern) influence around the treaty port areas. Columns (1)-(3) winsorize the top one percent distribution of the dependent variable to mitigate the extreme value bias. Additional controls are the same as those in Table 1. Standard errors are clustered at the prefectural level and reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 3. Complementarity (public goods provision) and religious conflicts

	(1)	(2)	(3)	(4)	(5)
Public goods type	Total	Schools	Charities	Printing Presses	Hospitals
Panel A	Dependent variable is the number of anti-missionary cases (mean = 0.70)				
Public goods	-0.076**	-0.099**	-0.819	-1.079***	-0.217
	(0.032)	(0.047)	(0.620)	(0.405)	(0.137)
R-squared	0.245	0.245	0.242	0.242	0.243
Panel B	Dependent variable is the number of anti-missionary prints (mean = 0.12)				
Public goods	-0.026**	-0.031*	-0.620***	-0.002	-0.098**
	(0.013)	(0.018)	(0.231)	(0.082)	(0.045)
R-squared	0.211	0.210	0.214	0.207	0.211
Prefecture fixed effects	Y	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y	Y
Additional controls	Y	Y	Y	Y	Y
Observations	2,160	2,160	2,160	2,160	2,160
Number of prefectures	216	216	216	216	216

Notes: All columns report the OLS estimates. The sample is restricted to prefectures where there were missionaries. Public goods refer to the cumulative number of schools, charities, printing presses, and hospitals established by Christian missionaries in each Chinese prefecture in our sample in the previous period. Additional controls include treaty port, population density, years of floods, years of droughts, and the interaction terms between missionary entry and time-invariant variables (provincial capital, distance to coast, terrain ruggedness). Robust standard errors are clustered at the prefectural level and reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 4. The economic impact of the religious conflicts, 1870-1910

	(1)	(2)	(3)	(4)
	OLS	OLS	OLS	OLS
Panel A: Foreign Investments	Number of foreign industrial firms		Number of foreign banks	
Number of anti-missionary cases	-0.008***	-0.007**	-0.009**	-0.009**
	(0.002)	(0.003)	(0.004)	(0.004)
Mean of DV	0.093	0.093	0.155	0.155
R-squared	0.741	0.749	0.913	0.917
Panel B: Domestic Investments	Number of Chinese industrial firms		Number of Chinese banks	
Number of anti-missionary cases	-0.018**	-0.016***	-0.004***	-0.004***
	(0.009)	(0.006)	(0.001)	(0.001)
Mean of DV	0.389	0.389	0.035	0.035
R-squared	0.478	0.548	0.247	0.309
Prefecture fixed effects	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y
Additional controls		Y		Y
Observations	2,152	2,152	2,152	2,152
Number of prefectures	269	269	269	269

Notes: The sample includes 269 prefectures between 1870 and 1910 (on a five-year basis). Panel A examines the effect of the anti-missionary conflicts on foreign direct investments in China measured by the number of foreign firms and banks. Panel B examines the effect of the anti-missionary conflicts on China's domestic economic modernization measured by the number of modern industrial firms and banks established by the Chinese. The controls are treaty port duration, missionary duration, Confucian elites, and the interaction terms between five-year dummies and the time-invariant prefectural factors (population density in 1850, provincial capital dummy, distance to the coast, and terrain ruggedness index). Standard errors are clustered at the prefectural level and reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 5. The economic impact of the Boxer Rebellion, 1870-1930

	(1)	(2)	(3)	(4)
	Full sample	North China	Full sample	North China
Panel A: Foreign Investments	Number of foreign industrial firms		Number of foreign banks	
Post 1901 × Boxer regions	-0.109*	-0.251**	-0.270*	-0.796***
	(0.062)	(0.119)	(0.144)	(0.285)
Mean of DV	0.092	0.077	0.233	0.210
R-squared	0.720	0.499	0.769	0.768
Observations	2,690	770	3,228	924
Panel B: Domestic Investments	Number of Chinese industrial firms		Number of Chinese banks	
Post 1901 × Boxer regions	-0.682	-1.625***	-0.836*	-2.460**
	(0.466)	(0.615)	(0.480)	(1.159)
Mean of DV	0.829	0.602	0.725	1.048
R-squared	0.536	0.570	0.426	0.532
Prefecture fixed effects	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y
Additional controls	Y	Y	Y	Y
Observations	3,228	924	3,228	924
Number of prefectures	269	77	269	77

Notes: In this table, we replicate Table 4 but focus on the effect of the Boxer Rebellion (1899-1901). Given that the Boxers were prevented from plundering southeastern China by the southeastern provinces' mutual defense pact (see Figure 3), we make use of the 'discontinuity' along the boundary dividing the Boxers and the compact regions to compare the two regions' economic development after the Boxers were suppressed in 1901. Columns 1 and 3 use the full sample of 269 China proper prefectures. Columns 2 and 4 limit the sample to northern China (i.e., 77 prefectures in Shandong, Henan, Anhui, Shanxi, and Zhili provinces) to mitigate the possible confounding effect of the north-south differences. Post 1901 is the time dummy indicating the years after the Boxer Rebellion. Additional controls include the treaty port duration, missionary duration, Confucian elites, and the interaction terms between five-year dummies and prefectural factors (population density in 1850, provincial capital dummy, distance to the coast, terrain ruggedness index, and distance to the nearest garrisons of Western powers in China). Standard errors are clustered at the prefectural level and reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 6. The economic impact of news reports on the Boxers, 1900-1929

	(1)	(2)	(3)	(4)	(5)
Newspaper report type	Total page mentions	Total front-page Mentions	Whether the report mentions casualty	Whether the report mentions business disruption	Whether the report delivers negative sentiments
Panel A	Dependent variable is the number of foreign banks (mean = 0.22)				
Newspaper (lag)	-0.012**	-0.048**	-0.013**	-0.030**	-0.015**
	(0.003)	(0.010)	(0.003)	(0.006)	(0.003)
R-squared	0.327	0.329	0.327	0.325	0.327
Observations	116	116	116	116	116
Panel B	Dependent variable is the number of foreign firms (mean = 1.17)				
Newspaper (lag)	-0.032***	-0.046	-0.028***	0.000	-0.017*
	(0.001)	(0.031)	(0.002)	(0.025)	(0.006)
R-squared	0.588	0.584	0.586	0.584	0.585
Country fixed effects	Y	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y	Y
Observations	64	64	64	64	64
Number of countries	4	4	4	4	4

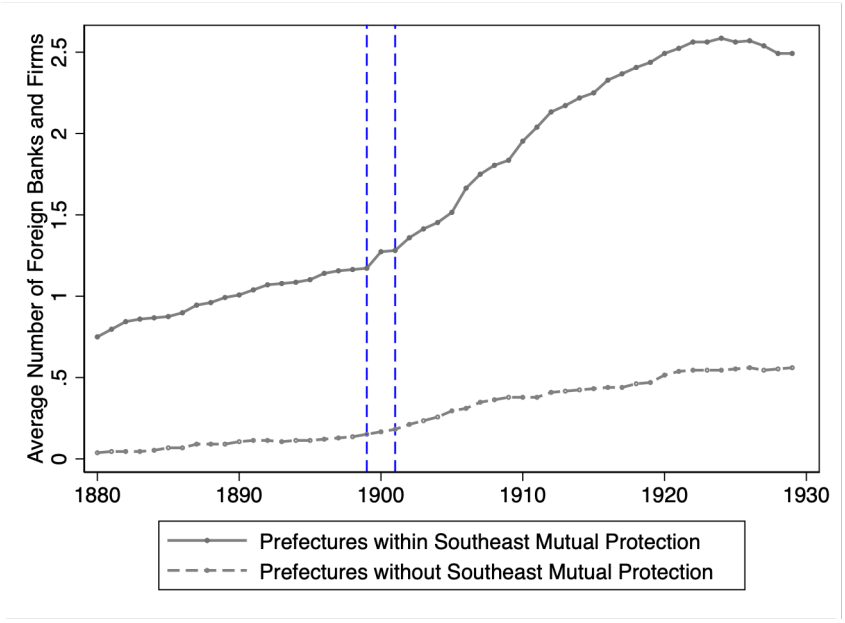
Notes: All columns report the OLS estimates on a panel data of four Western countries (UK, US, France, and Germany) over 30 years. Newspaper reports on the Boxer events include the total number of mentions, front-page mentions, reports about casualties or business destruction, and reports characterized by GPT as of negative sentiment. Robust standard errors are clustered at the country level and reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 7. The long impact of religious conflicts on people's attitudes toward foreign trade and foreigners

	Dependent variable: Whether you agree to restrict foreign imports to protect the domestic economy			Dependent variable: Whether you trust foreigners		
	(1)	(2)	(3)	(4)	(5)	(6)
	Logit	Logit	Logit	Logit	Logit	Logit
Anti-missionary cases	0.508***	0.470***	0.454**	-0.551***	-0.527**	-0.517***
	(0.173)	(0.163)	(0.189)	(0.207)	(0.213)	(0.178)
Treaty port	0.538	0.399	0.224	-1.188***	-1.190***	-0.951***
	(0.338)	(0.321)	(0.368)	(0.312)	(0.319)	(0.289)
Anti-missionary cases × Treaty port	-0.533***	-0.417**	-0.294	0.782***	0.709***	0.593***
	(0.204)	(0.201)	(0.225)	(0.224)	(0.237)	(0.198)
Missionary duration		-0.011*	-0.019**		0.005	0.007
		(0.007)	(0.010)		(0.005)	(0.007)
Historical Controls		Y	Y		Y	Y
City-level Controls			Y			Y
Individual Controls			Y			Y
Observations	2,175	2,175	1,992	1,619	1,619	1,465
Number of cities	51	51	49	51	51	49
Mean of DV	0.514	0.514	0.511	0.256	0.256	0.252

Notes: The dependent variable is measured at the individual level based on the survey of the *Attitudes towards Citizenship in China (2009)* (Shen et al., 2016). The original survey answers are graded from 1 (always agree) to 4 (never agree) for Columns (1)-(3), 1 (always trust) to 4 (never trust) for Columns (4)-(6). We code the grades 1 and 2 as 1, and 3 and 4 as zero. Anti-missionary cases are measured at the city level by aggregating the number of anti-missionary cases from 1860 to 1910 (in log). Historical controls include historical Confucianism (measured by the average density of Confucian elites) and foreign investment (measured by average number of foreign-invested banks and total number of foreign-invested firms) from 1870 to 1930. City-level controls include contemporary provincial capital dummy, GDP, distance to the coast, and proximity to Hong Kong, Macau and the Special Economic Zones (SEZs) and Open Coastal Cities (OCCs). Individual controls include employment status, gender, ethnicity, marriage status, education level, and birth cohort. OLS regressions report similar results. Standard errors are clustered at the city level and reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Appendix



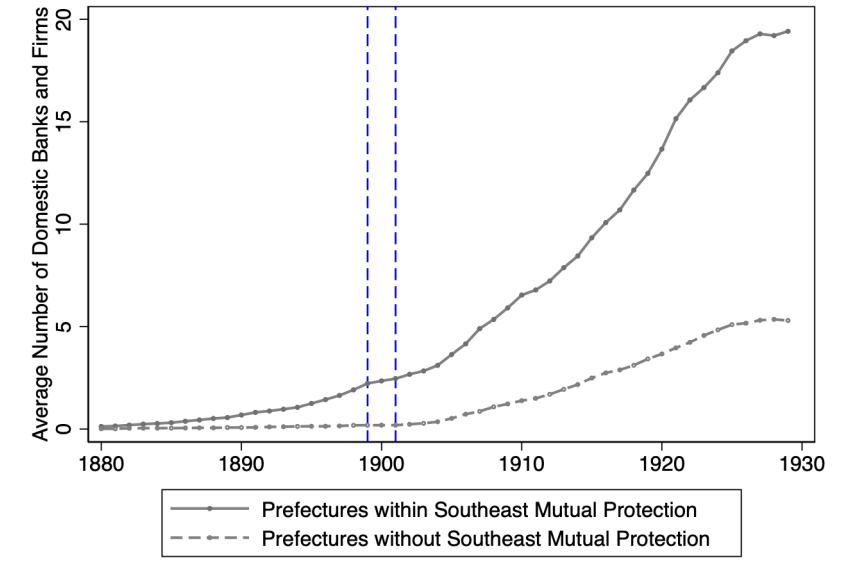


Figure A1. The Boxer Rebellion and comparative development of modern banks and firms

Notes: The two figures show the divergent growth of modern banks and industrial firms between the prefectures raided by the Boxers in 1899-1901 and those outside (i.e., within the southeastern provinces' mutual defense pact).

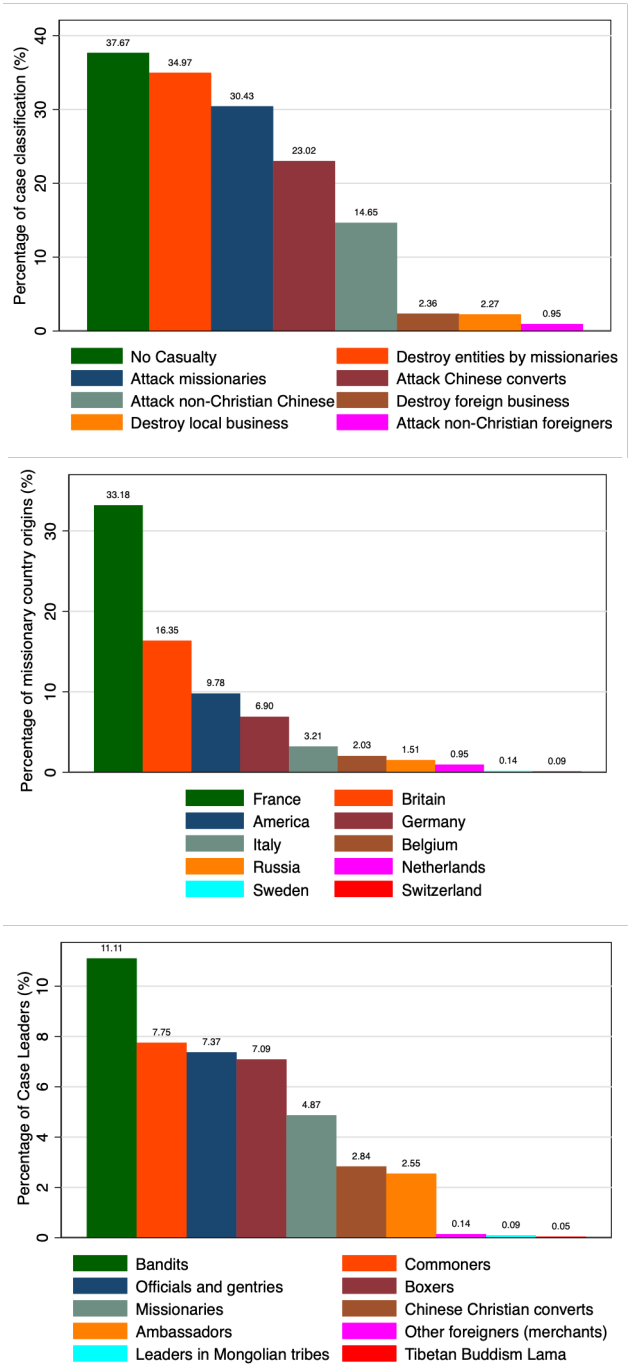


Figure A2. Classifications of anti-missionary cases

Notes: We classified the anti-missionary cases into different categories and calculated the percentage of cases in each category.

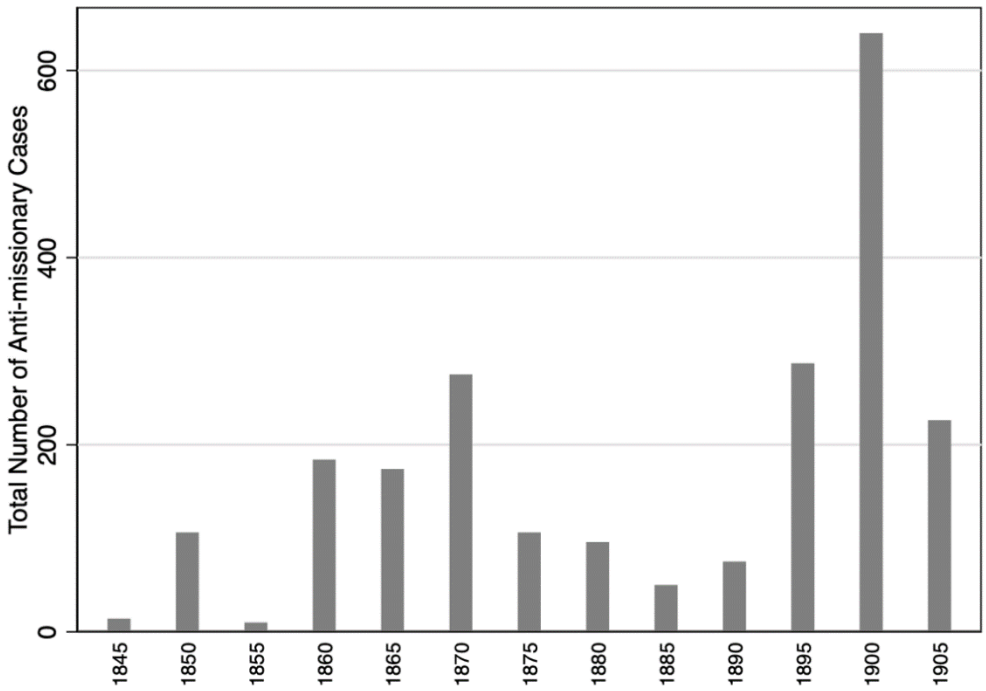
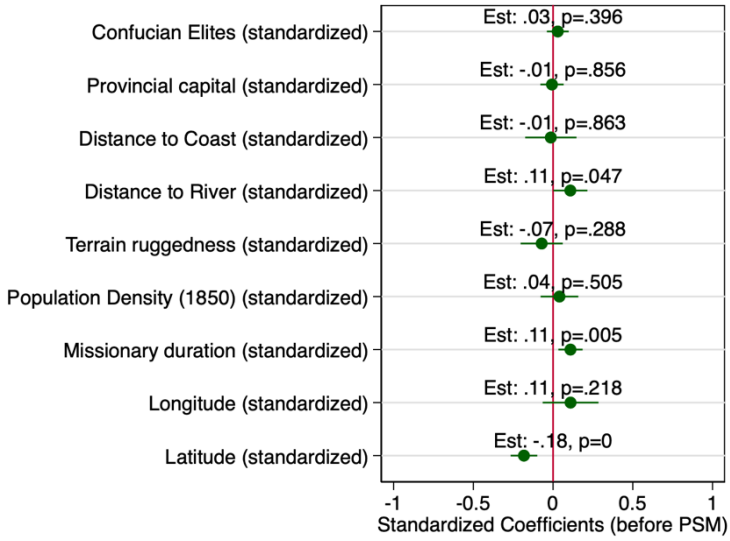
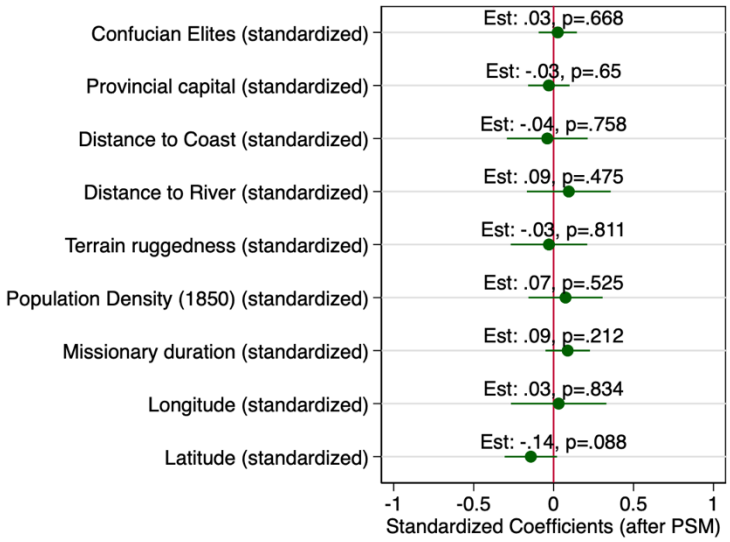


Figure A3. Dynamics of the anti-missionary cases in China (five-year aggregate, 1845 to 1910)

Notes: Anti-missionary cases include the conflicts and disputes between local Chinese and Christian missionaries, which are recorded by the Qing Ministry of Foreign Affairs in the Archives of Missionary Affairs and Cases (*Jiaowu Jiaoan Dang*) (see, The Institute of Modern History of the Academia Sinica (1974)).



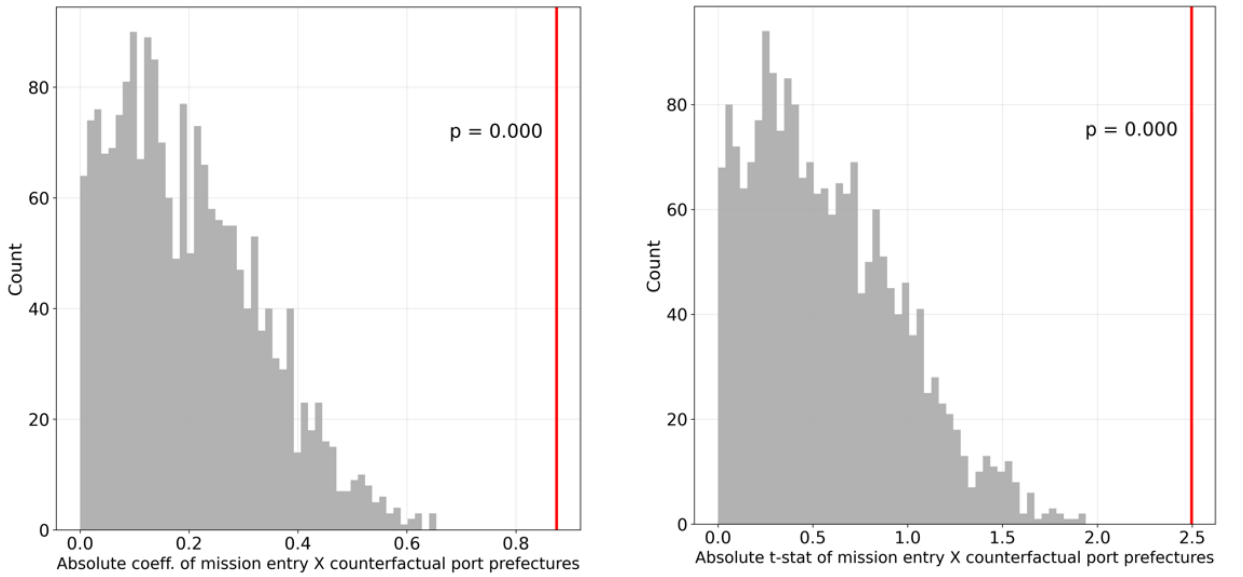
(a) Balance plot for economic complementarity hypothesis before PSM



(b) Balance plot for economic complementarity hypothesis after PSM

Figure A4. Coefficient plots for balance tests before and after PSM

Notes: This figure presents standardized coefficients from balance tests conducted before and after propensity score matching (PSM). The covariates include treaty port duration, missionary presence, Confucian elites, population density in 1850, provincial capital status, distance to the coast, distance to rivers, terrain ruggedness, and geographic coordinates (longitude and latitude). Bars represent clustered standard errors at prefectural level. The red line at zero indicates no systematic difference between treated and control groups. Each marker is annotated with its corresponding estimate and p-value. After PSM, covariate imbalances are significantly reduced.



(a) Distribution of counterfactual coefficients (b) Distribution of counterfactual t-statistics

Figure A5. Randomization tests for the treaty port effect

Notes: The figures plot histograms of the absolute coefficients and t statistics of the interaction between the missionary entry dummy and the treaty port dummy. All results are OLS estimates conditional on the same set of geographic factors as in Table A4. There are 90 treaty port prefectures (i.e., prefectures hosting or neighboring the treaty ports) that were opened successively between 1845 and 1911 in our sample regions, but only 82 of them are on common support. In each five-year bin, we randomly select the same number of counterfactual treaty ports as that of the actual treaty ports. The counterfactual treaty ports are drawn from the 82 prefectures matched with the actual treaty ports based on the propensity scores in the Appendix Table A9. In the sample, we repeat the drawing 2,000 times and thus construct 2,000 sets of counterfactual treaty ports that vary by the years of openings. The p-value refers to the share of the number of counterfactual coefficients (t statistics) that are greater than the coefficient (t statistics) of the actual treaty ports (red vertical line). For each figure, the vertical axis stands for the number of occurrences for the coefficients (t statistics) lying in a given range on the horizontal axis.

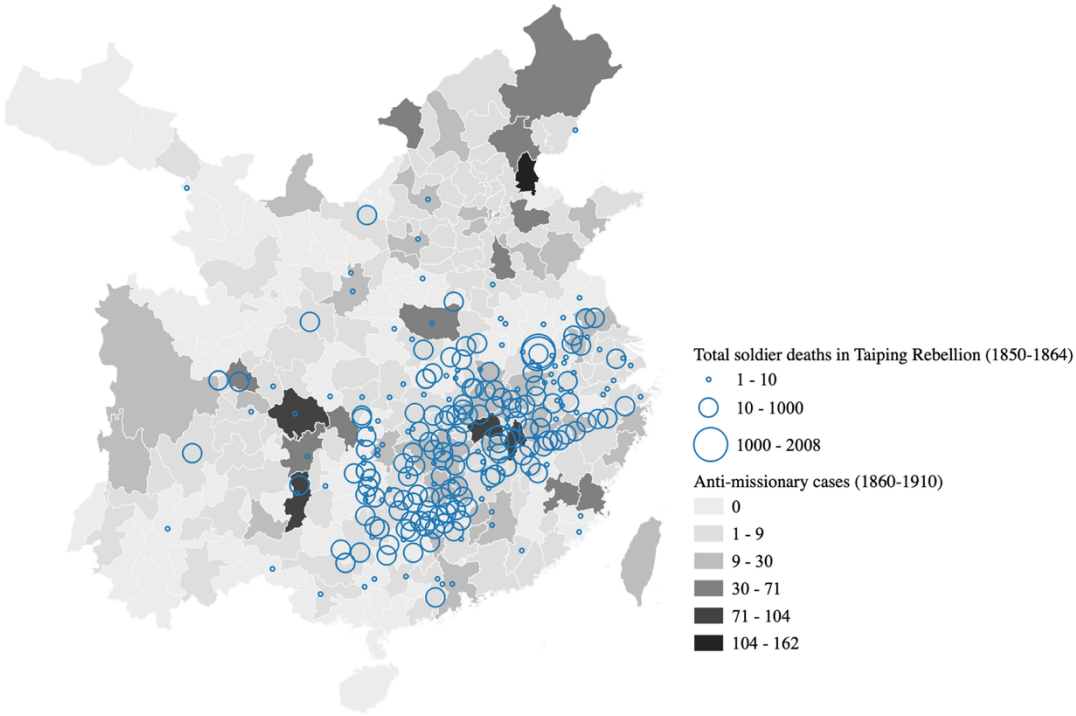
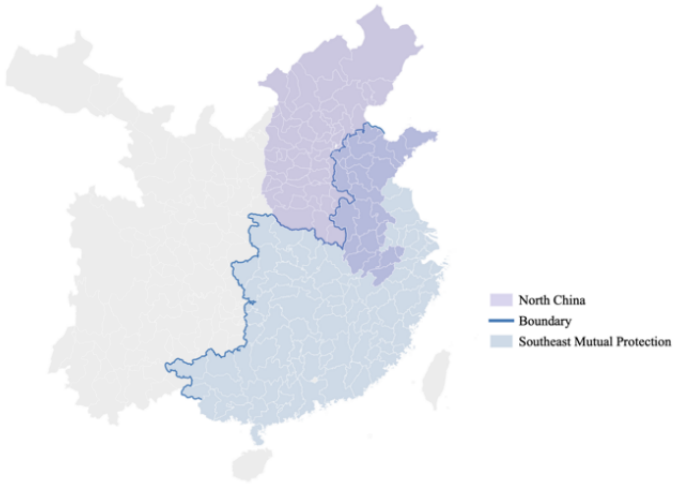
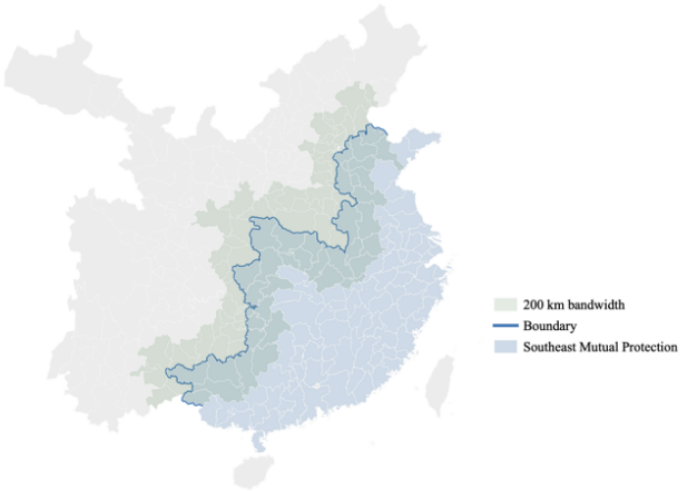


Figure A6. Distribution of the anti-missionary conflicts and the Taiping Rebellion

Notes: This map shows the spatial distribution of anti-missionary incidents overlaid on the intensity of Taiping Rebellion activity. Conflict intensity in the Taiping Rebellion (1850–1864) is measured using the total number of soldier deaths recorded in Bai, Jia, and Yang (2023).



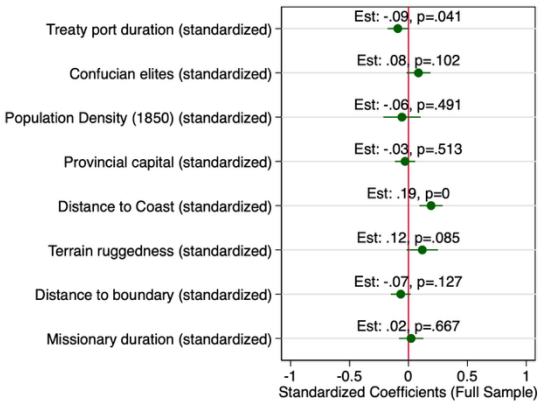
(a) North China sample



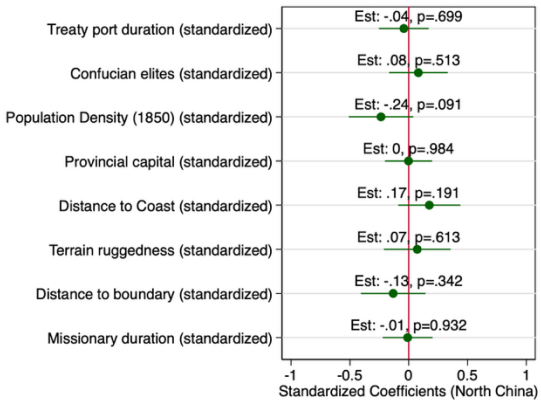
(b) 200-km bandwidth

Figure A7. Different samples for the Southeast Mutual Protection Pact

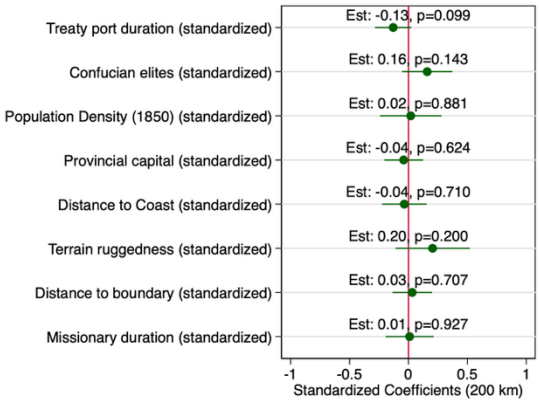
Notes: The two figures show the different samples for the Southeast Mutual Protection Pact. The northern China sample comprises 77 prefectures located in the provinces of Shandong, Henan, Anhui, Shanxi, and Zhili. The 200-kilometer bandwidth sample restricts the analysis to prefectures situated within 200 kilometers of the Southeast Mutual Protection Pact boundary.



(a) Balance plot for the full sample



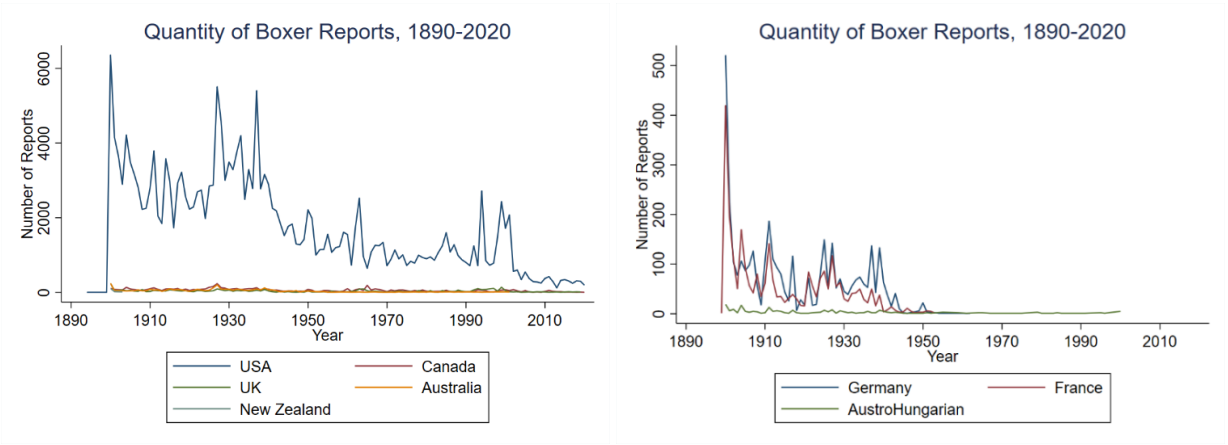
(b) Balance plot for North China sample



(c) Balance plot for the sample restricted to 200-km bandwidth

Figure A8. Coefficient plots for balance tests before the Boxer Rebellion

Notes: This figure presents the coefficient estimates from balance tests conducted on covariates across different samples based on the Southeast Mutual Compact prior to the Boxer Rebellion. The goal of the analysis is to assess the balancedness of these covariates to validate the comparability of the samples. Each point represents a standardized coefficient from a regression of the treatment indicator on the corresponding covariate, with the bars indicating clustered standard errors at prefectural level. The covariates include treaty port duration, missionary duration, Confucian elites, population density in 1850, provincial capital, distance to the coast and terrain ruggedness index. The red vertical line at zero indicates the null hypothesis of no systematic difference between treated and control groups for each covariate.

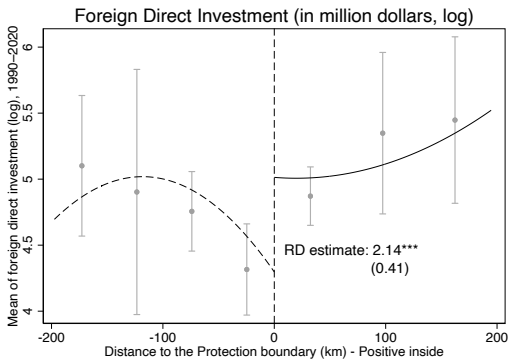


(a) Reports from English-speaking countries

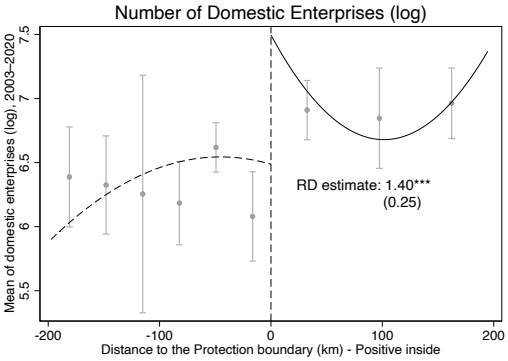
(b) Reports from non-English-speaking countries

Figure A9. Frequency of newspaper reports on the Boxer Rebellion

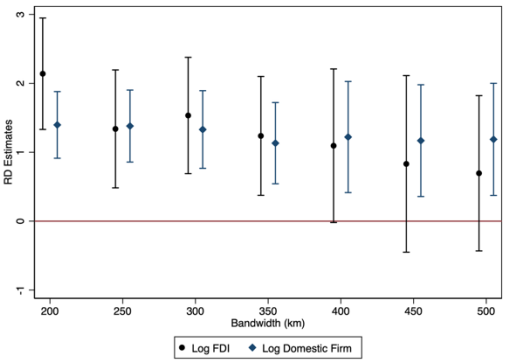
Notes: This figure presents the total number of newspaper reports mentioning Boxer Rebellion from historical newspaper archives from 1890 to 2020, based on digitized archives from major Western countries. Sources include Newspapers.com (U.S., U.K., Australia), Gallica (France), and Deutsche Digitale Bibliothek (Germany). Articles were identified using the keywords "Boxer Rebellion" and "Boxer Uprising" and their equivalents in French and German.



(a) City-level average foreign direct investment, 1990-2020



(b) City-level average number of domestic enterprises, 2003-2020



(c) RD estimates for both outcomes, 200-500 km

Figure A10. Discontinuity in contemporary economic outcomes by historical boundary of the Boxer Rebellion

Notes: Panel (a) examines the discontinuity in average FDI (1990-2020) along the boundary of the Boxer Rebellion. We limit the sample areas to 200 km, consistent with Table A12, away from the boundary. We use the STATA command rdrobust to estimate the regression discontinuity (RD) model with robust bias-corrected confidence intervals. Panel (b) examines the discontinuity in the average number of domestic

enterprises (2003-2020) in the same vein of Panel (a). Outcomes are measured in natural logarithms; coefficients therefore represent log-point discontinuities. For robustness, in Panel (c), we extend the analysis to cities located between 200 and 500 km from the boundary, in 50 km increments, and plot the RD estimates with 95% confidence interval from each corresponding regression. Additional controls include historical FDI, historical missionary duration, historical treaty ports, historical Confucianism, provincial capital, average gross domestic product (GDP), and the proximity to Hong Kong, Macau, the early major Special Economic Zones (SEZs), i.e. Shenzhen, Zhuhai, Shantou, Xiamen, and Haikou, and 14 Coastal Open Cities (OCCs), i.e. Dalian, Qinhuangdao, Tianjin, Yantai, Qingdao, Lianyungang, Nantong, Shanghai, Ningbo, Wenzhou, Fuzhou, Guangzhou, Zhanjiang and Beihai. Historical FDI includes the average number of foreign-invested banks and the total number of foreign-invested firms from 1870 to 1930. Standard errors are all clustered at the city level. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table A1. Summary Statistics

Variable name	Obs.	Mean	S.D.	Min	Max	Data sources
Economic origins (1860-1910)						
Number of anti-missionary cases	2,690	0.79	4.91	0	161	A
Number of anti-missionary prints	2,690	0.09	0.78	0	32	B
Word count of anti-missionary prints	2,690	72.19	631.67	0	24,287	B
Missionary entry	2,690	0.43	0.50	0	1	C
Missionary duration	2,690	9.31	17.23	0	108	C
Confucian elites (past 30 years)	2,690	8.41	11.41	0	86.50	D, G
Confucian temples	2,690	80.26	67.01	0	694.55	G, I
Confucian clans	2,690	13.12	36.26	0	331.12	G, I
Chaste women	2,690	244.03	215.08	0	1207.83	G, R
Treaty port	2,690	0.22	0.41	0	1	E
Treaty port duration	2,690	4.32	10.67	0	50	E
Schools	2,690	0.74	3.22	0	49	F
Charities	2,690	0.02	0.18	0	4	F
Printing Presses	2,690	0.01	0.10	0	1	F
Hospitals	2,690	0.28	1.08	0	14	F
Population density (1850)	269	4.53	1.05	0.38	6.83	G
Flood	2,690	0.47	0.68	0	4	J
Drought	2,690	0.32	0.62	0	4	J
Provincial Capital	269	0.07	0.25	0	1	D
Distance to Coast	269	511.64	369.33	2.19	1,924.74	H
Terrain Ruggedness	269	233.82	181.76	4.42	972.47	H
Economic consequences (1870-1930)						
Number of foreign banks	3,228	0.23	1.48	0	33	K
Number of domestic banks	3,228	0.73	3.89	0	101	K
Number of foreign industrial firms	2,690	0.09	1.05	0	28	L
Number of domestic industrial firms	3,228	0.83	5.84	0	186	M
Number of anti-missionary cases	2,152	0.82	5.04	0	161	A
Number of Christian martyrs	269	1.07	6.13	0	60	O, P
Number of Protestant martyrs	269	0.32	4.16	0	46	O
Number of Catholic martyrs	269	0.75	3.76	0	56	P
Economic consequences (1990-2020)						
Attitudes toward Restricting foreign imports to protect domestic economies	2,175	0.51	0.50	0	1	N
Trust toward foreigners	1,619	0.26	0.44	0	1	N
Foreign direct investment	1,618	0.47	1.36	0	18.07	Q
Number of domestic enterprises	1,156	917	1,151.66	3	10,141	Q
Number of anti-missionary cases	51	8.33	9.63	0	46.70	A

Table A2. Religious competition and religious conflicts: Confucian temples, Confucian clans and chaste women as alternative measures of Confucian strength

	Number of anti-missionary cases				Number of anti-missionary prints				Word count of anti-missionary prints (log)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	OLS	OLS	OLS	OLS	OLS	OLS	OLS	OLS	OLS	OLS	OLS	OLS
Missionary entry	3.977**	2.061	2.930*	4.212**	0.605**	0.724**	0.741**	0.508**	2.491***	2.827**	3.064**	2.245***
	(1.679)	(2.709)	(1.527)	(1.776)	(0.241)	(0.320)	(0.303)	(0.215)	(0.905)	(1.231)	(1.204)	(0.803)
Missionary entry	0.152*				0.004				-0.014			
× Confucian clans	(0.089)				(0.016)				(0.049)			
Missionary entry		0.295				-0.024				-0.058		
× Confucian temples		(0.263)				(0.028)				(0.098)		
Missionary entry			0.171				-0.037				-0.138	
× Chaste women			(0.123)				(0.025)				(0.099)	
Missionary entry				0.164				-0.020				-0.059
× First Principle Component of Confucian measures				(0.114)				(0.019)				(0.074)
Prefecture fixed effects	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Additional Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
R-squared	0.238	0.238	0.238	0.238	0.206	0.206	0.206	0.206	0.268	0.268	0.269	0.268
Observations	2,690	2,690	2,690	2,690	2,690	2,690	2,690	2,690	2,690	2,690	2,690	2,690
Number of prefectures	269	269	269	269	269	269	269	269	269	269	269	269
Mean of DV	0.593	0.593	0.593	0.593	0.099	0.099	0.099	0.099	0.335	0.335	0.335	0.335

Notes: This table replicates Table 1 except we use the Confucian temples, clans, chaste women and the first principal component of four proposed Confucianism variables to measure the strength of Confucianism. Confucian temples refer to the log number of temples worshipping Confucian figures in the 19th century (normalized by per million population). Confucian clans refer to the log number of genealogy books compiled during the Qing dynasty (1644-1840) (normalized by per million population). Chaste women as a proxy of Confucian norms refer to the log number of chaste women between 1127 and 1820 (normalized by per million population). Confucianism refers to the first principal component of four proposed Confucianism variables, namely, density of Confucian elites, temples, clans and chaste women. Standard errors are clustered at the prefectural level and reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table A3. Religious competition and religious conflicts: Excluding prefectures without Christian missionaries

	Number of anti-missionary cases				Number of anti-missionary prints	Word count of anti-missionary prints (log)
	(1)	(2)	(3)	(4)	(5)	(6)
	OLS	OLS	OLS	PPML	OLS	OLS
Missionary entry	0.405*	0.770**	3.426*	4.231***	0.584**	2.588***
	(0.211)	(0.371)	(1.779)	(1.520)	(0.235)	(0.922)
Confucian elites		0.063	0.036	0.046	-0.014	-0.061
		(0.131)	(0.130)	(0.251)	(0.025)	(0.091)
Missionary entry × Confucian elites		-0.201	-0.050	-0.136	-0.017	0.011
		(0.154)	(0.169)	(0.200)	(0.022)	(0.073)
Prefecture fixed effects	Y	Y	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y	Y	Y
Additional controls			Y	Y	Y	Y
Observations	2,160	2,160	2,160	1,580	2,160	2,160
Number of prefectures	216	216	216	216	216	216
R-squared	0.236	0.237	0.242		0.207	0.273
Mean of DV	0.697	0.697	0.697	0.953	0.119	0.397

Notes: The sample replicates Table 1 except that we only include the 220 Chinese prefectures that ever-had missions in 10 five-year time points between 1860 and 1910, with the purpose of mitigating the concerns on the endogenous selection of mission entry. Confucian elites are measured by the number of the highest civil examination degree holders produced in each prefecture in the previous 30 years (per million population and in natural logarithm). Missionary entry is a dummy variable that indicates when the missionaries had entered a prefecture. Columns (1)-(4) winsorize the top one percent distribution of the dependent variable to mitigate the extreme value bias. Additional controls include population density, years of floods, years of droughts, and the interaction terms between missionary entry and the time-invariant prefectural factors (provincial capital dummy, distance to the coast, and terrain ruggedness index). Standard errors are clustered at the prefectural level and reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table A4. Religious competition and religious conflicts: Missionary duration (years)

	Number of anti-missionary cases		Number of anti-missionary prints	Word count of anti-missionary prints (log)
	(1)	(2)	(3)	(4)
	OLS	PPML	OLS	OLS
Missionary duration	1.336*	1.159***	0.180**	0.745**
	(0.705)	(0.440)	(0.078)	(0.315)
Confucian elites	0.085	0.347	-0.006	-0.055
	(0.088)	(0.295)	(0.015)	(0.063)
Missionary duration × Confucian elites	-0.059	-0.144*	-0.006	0.007
	(0.070)	(0.087)	(0.011)	(0.030)
Prefecture fixed effects	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y
Additional Controls	Y	Y	Y	Y
R-squared	0.239		0.206	0.270
Observations	2,690	1,730	2,690	2,690
Number of prefectures	269	269	269	269
Mean of DV	0.593	0.923	0.099	0.335

Notes: This table replicates Table 1 except we use the missionary duration (years since the missionary entry in a prefecture) to measure the strength of missionary influence. Standard errors are clustered at the prefectural level and reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table A5. Complementarity (through treaty ports) and religious conflicts: Excluding prefectures without Christian missionaries

	Number of anti-missionary cases			Number of anti-missionary prints	Word count of anti-missionary prints (log)
	(1)	(2)	(3)	(4)	(5)
	OLS	OLS	PPML	OLS	OLS
Treaty port	-0.300	-0.276	0.171	-0.037	0.167
	(0.314)	(0.313)	(0.528)	(0.100)	(0.236)
Mission entry	0.573**	3.811**	3.830***	0.665***	2.656***
	(0.223)	(1.683)	(1.452)	(0.246)	(0.906)
Mission entry × Treaty port	-0.599*	-0.880**	-1.056**	-0.225**	-0.539**
	(0.334)	(0.360)	(0.521)	(0.100)	(0.241)
Confucian elites		0.074	0.038	-0.005	-0.046
		(0.130)	(0.242)	(0.024)	(0.090)
Mission entry × Confucian elites		-0.047	-0.152	-0.016	0.012
		(0.164)	(0.193)	(0.023)	(0.075)
Prefecture fixed effects	Y	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y	Y
Additional controls		Y	Y	Y	Y
Observations	2,160	2,160	1,580	2,160	2,160
Number of prefectures	216	216	216	216	216
R-squared	0.239	0.247		0.209	0.275
Mean of DV	0.697	0.697	0.953	0.119	0.397

Notes: Treaty port is a dummy variable that equals one if a prefecture (and its adjacent prefectures) had been opened as a treaty port. We use treaty ports to indicate the existence of economic complementarity between Christian missionaries and local Confucian elites, reasoning that the Confucian elites could benefit from Western (modern) influence around the treaty ports areas. Additional controls are the same as those in Table 1. Standard errors are clustered at the prefectural level and reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table A6. Treaty port and anti-missionary movements: Missionary duration (years)

	Number of anti-missionary cases		Number of anti-missionary prints	Word count of anti-missionary prints (log)
	(1)	(2)	(3)	(4)
	OLS	PPML	OLS	OLS
Missionary duration	1.434**	0.943**	0.199**	0.744**
	(0.667)	(0.416)	(0.086)	(0.313)
Treaty port	0.041	1.040*	0.052	0.322*
	(0.231)	(0.546)	(0.047)	(0.168)
Missionary duration × Treaty port	-0.461***	-0.631***	-0.123**	-0.256***
	(0.134)	(0.150)	(0.058)	(0.076)
Prefecture fixed effects	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y
Additional Controls	Y	Y	Y	Y
R-squared	0.248		0.211	0.274
Observations	2,690	1,730	2,690	2,690
Number of prefectures	269	269	269	269
Mean of DV	0.593	0.923	0.099	0.335

Notes: This table replicates Table 2 except we use the missionary duration (years since the missionary entry in a prefecture) to measure the strength of missionary influence. Standard errors are clustered at the prefectural level and reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table A7. Complementarity (through treaty ports) and religious conflicts: Protestant and Catholic missions

	Number of anti-missionary cases			Number of anti-missionary prints	Word count of anti-missionary prints (log)
	(1)	(2)	(3)	(4)	(5)
	OLS	OLS	OLS	OLS	OLS
Treaty port	-0.486	-0.312*	-0.244	0.050	0.319*
	(0.338)	(0.172)	(0.268)	(0.053)	(0.186)
Protestant mission entry	3.305		1.457**	0.064	-0.125
	(2.025)		(0.612)	(0.156)	(0.364)
Protestant mission entry	-0.369		-0.353	-0.136*	-0.510*
× Treaty port	(0.436)		(0.446)	(0.078)	(0.261)
Catholic mission entry		8.553***	2.341**	0.238	0.342
		(2.087)	(1.070)	(0.268)	(0.707)
Catholic mission entry		-2.509**	-2.038*	-0.900*	-1.091*
× Treaty port		(1.260)	(1.128)	(0.529)	(0.574)
Confucian elites	0.076	-0.040	0.064	-0.020	-0.073
	(0.101)	(0.096)	(0.093)	(0.017)	(0.065)
Protestant mission entry	-0.159		-0.216	-0.020	-0.100
× Confucian elites	(0.214)		(0.195)	(0.023)	(0.089)
Catholic mission entry		-0.273	-0.214	0.205	0.586
× Confucian elites		(0.698)	(0.550)	(0.174)	(0.379)
Prefecture fixed effects	Y	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y	Y
Additional controls	Y	Y	Y	Y	Y
Observations	2,690	2,690	2,690	2,690	2,690
Number of prefectures	269	269	269	269	269
R-squared	0.241	0.245	0.248	0.217	0.281
Mean of DV	0.593	0.593	0.923	0.099	0.335

Notes: This table replicates Table 2 but replaces the original mission entry with Protestant and Catholic missions to examine the heterogeneous effects of different missions. Standard errors are clustered at the prefectural level and reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table A8. Complementarity (through treaty ports) and religious conflicts: Results of propensity score matching

	Number of anti-missionary cases		Number of anti-missionary prints	Total word count of anti-missionary prints (log)
	(1)	(2)	(3)	(4)
	OLS	PPML	OLS	OLS
Treaty port	-0.242	0.377	0.008	0.309*
	(0.257)	(0.530)	(0.080)	(0.171)
Mission entry	1.866	4.638**	0.943**	3.552**
	(1.467)	(2.245)	(0.399)	(1.515)
Mission entry × Treaty port	-0.784**	-1.128**	-0.276**	-0.688***
	(0.352)	(0.525)	(0.110)	(0.220)
Confucian elites	0.176	0.386	-0.005	-0.090
	(0.148)	(0.268)	(0.031)	(0.115)
Mission entry × Confucian elites	-0.169	-0.324	-0.018	0.024
	(0.197)	(0.236)	(0.030)	(0.099)
Prefecture fixed effects	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y
Additional Controls	Y	Y	Y	Y
R-squared	0.229		0.202	0.275
Mean of DV	0.668	0.937	0.129	0.419
Observations	1,640	1,170	1,640	1,640
Number of prefectures	164	164	164	164

Notes: This table replicates Table 2 except for using a restricted sample region based on propensity score matching. We use propensity scores to identify 82 prefectures that have similar geographic and economic characteristics as the 82 actual treaty ports (and their neighboring prefectures), restricting to those within the common support of the propensity score distribution. The geographic and economic characteristics include the distance to the coast, the distance to navigable river, terrain ruggedness index, longitude, latitude, population density, provincial capital, density of Confucian elites and missionary duration. Standard errors are clustered at the prefectural level and reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table A9. Complementarity (public goods provision) and religious conflicts in samples without treaty ports

	(1)	(2)	(3)	(4)	(5)
Public goods type	Total	Schools	Charities	Printing Presses	Hospitals
Panel A	Dependent variable is the number of anti-missionary cases (mean = 0.62)				
Public goods	-0.112	-0.280*	0.614	-1.374***	0.267
	(0.104)	(0.156)	(1.227)	(0.300)	(0.282)
R-squared	0.241	0.245	0.239	0.239	0.240
Panel B	Dependent variable is the number of anti-missionary prints (mean = 0.08)				
Public goods	-0.037	-0.046	-0.726***	0.238***	-0.084
	(0.026)	(0.037)	(0.194)	(0.048)	(0.062)
R-squared	0.242	0.241	0.248	0.237	0.240
Prefecture fixed effects	Y	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y	Y
Additional controls	Y	Y	Y	Y	Y
Observations	1,840	1,840	1,840	1,840	1,840
Number of prefectures	184	184	184	184	184

Notes: All columns report the OLS estimates. The sample replicates Table 3 and excludes the actual treaty ports. There are 57 treaty port prefectures and 54 non-port prefectures hosting the public goods. Public goods include schools, charities, printing presses and hospitals established by the missionaries in China. Additional controls include the average number of missionaries of each five-year period, treaty port, population density, years of floods, years of droughts, and the interaction terms between missionary entry and time-invariant variables (provincial capital, distance to coast, terrain ruggedness). Robust standard errors are clustered at the prefectural level and reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table A10. The spillover effect of foreign investment on domestic investment, 1870-1920

	(1) OLS	(2) OLS
	Number of Chinese industrial firms	Number of Chinese banks
Foreign banks (lag)	-0.214	1.269**
	(0.818)	(0.518)
Foreign industrial firms (lag)	2.712***	0.085
	(1.044)	(0.190)
Chinese banks (lag)	2.214***	
	(0.773)	
Chinese industrial firms (lag)		0.208***
		(0.052)
Observations	2,690	2,690
R-squared	0.809	0.690
Prefecture fixed effects	Y	Y
Year fixed effects	Y	Y
Number of prefectures	269	269
Mean of DV	0.633	0.295

Notes: This table examines the potential spillover effect of foreign investment in the last five-year period on domestic investment. The analysis is restricted to the period up to 1920 due to data limitations on foreign industrial firms. The controls are treaty port duration, missionary duration, Confucian elites, and the interaction terms between five-year dummies and the time-invariant prefectural factors (population density in 1850, provincial capital dummy, distance to the coast, and terrain ruggedness index). Standard errors are clustered at the prefectural level and reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table A11. The short-term economic impacts of the religious conflicts, 1870-1910

	(1)	(2)	(3)	(4)
	OLS	OLS	OLS	OLS
Panel A: Foreign Investments	Number of foreign industrial firms		Number of foreign banks	
Number of anti-missionary prints	0.004	0.006	-0.006	-0.005
	(0.010)	(0.010)	(0.015)	(0.013)
Mean of DV	0.093	0.093	0.155	0.155
R-squared	0.740	0.748	0.911	0.915
Panel B: Domestic Investments	Number of Chinese industrial firms		Number of Chinese banks	
Number of anti-missionary prints	-0.067*	-0.006	-0.031	-0.024
	(0.036)	(0.038)	(0.022)	(0.020)
Mean of DV	0.389	0.389	0.035	0.035
R-squared	0.477	0.547	0.248	0.308
Prefecture fixed effects	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y
Additional controls		Y		Y
Observations	2,152	2,152	2,152	2,152
Number of prefectures	269	269	269	269

Notes: The sample includes 269 prefectures between 1870 and 1910 (on a five-year basis). Panel A examines the effect of the anti-missionary prints on foreign direct investments in China measured by the number of foreign firms and banks. Panel B examines the effect of the anti-missionary prints on China's domestic economic modernization measured by the number of modern industrial firms and banks established by the Chinese. The controls are treaty port duration, missionary duration, Confucian elites, and the interaction terms between five-year dummies and the time-invariant prefectural factors (population density in 1850, provincial capital dummy, distance to the coast, and terrain ruggedness index). Standard errors are clustered at the prefectural level and reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table A12. The short-term economic impacts of the Boxer Rebellion: Alternative bandwidths along the Boxer boundary

	(1)	(2)	(3)	(4)	(5)	(6)
	OLS	OLS	OLS	OLS	OLS	OLS
Panel A: Foreign Investments	Number of foreign industrial firms			Number of foreign banks		
Post 1901 × Boxer regions	-0.144*	-0.162*	-0.136*	-0.408***	-0.201*	-0.226*
	(0.073)	(0.091)	(0.071)	(0.153)	(0.116)	(0.129)
R-squared	0.501	0.505	0.500	0.807	0.807	0.815
Observations	980	760	1,010	1,176	912	780
Number of prefectures	98	76	101	98	76	65
Bandwidth	200 km	150 km	206 km	200 km	150 km	122 km
Panel B: Domestic Investments	Number of Chinese industrial firms			Number of Chinese banks		
Post 1901 × Boxer regions	-1.196***	-0.690**	-0.960*	-1.325***	-0.652	-0.910*
	(0.411)	(0.300)	(0.522)	(0.500)	(0.409)	(0.527)
R-squared	0.583	0.549	0.580	0.538	0.502	0.498
Observations	1,176	912	1,332	1,176	912	1,548
Number of prefectures	98	76	111	98	76	129
Bandwidth	200 km	150 km	235 km	200 km	150 km	276 km
Year fixed effects	Y	Y	Y	Y	Y	Y
Prefecture fixed effects	Y	Y	Y	Y	Y	Y
Additional controls	Y	Y	Y	Y	Y	Y
Polynomial distance to the boundary of the Southeast Mutual Protection	Y	Y	Y	Y	Y	Y

Notes: This table replicates Table 5 but uses different samples along the boundary of the southeastern provinces' mutual defense pact. Columns (3) and (6) use Epanechnikov kernel to calculate the optimal bandwidth, whereas the other Columns limit the sample region within 200 and 150 kilometers (which covers approximately two to three prefectures along the pact boundary). The controls are treaty port duration, missionary duration, Confucian elites, and the interaction terms between five-year dummies and the time-invariant prefectural factors (population density in 1850, provincial capital dummy, distance to the coast, terrain ruggedness index, and distance to the nearest garrisons of Western powers in China). Standard errors are clustered at the prefectural level and reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table A13. The economic impacts of the Boxer Rebellion: Alternative measure using Christian martyrs, 1870-1930

	Number of foreign industrial firms		Number of foreign banks		Number of Chinese industrial firms		Number of Chinese banks	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	OLS	OLS	OLS	OLS	OLS	OLS	OLS	OLS
Post 1901 × Total martyrs	-0.009*		-0.039***		-0.094***		-0.111***	
	(0.005)		(0.011)		(0.033)		(0.028)	
Post 1901 × Prot. martyrs		0.008		-0.118		-0.373		-0.175
		(0.050)		(0.078)		(0.236)		(0.210)
Post 1901 × Cath. martyrs		-0.010**		-0.034***		-0.079***		-0.107***
		(0.004)		(0.007)		(0.015)		(0.025)
R-squared	0.497	0.497	0.807	0.809	0.581	0.585	0.537	0.537
Prefecture fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
Additional controls	Y	Y	Y	Y	Y	Y	Y	Y
Observations	980	980	1,176	1,176	1,176	1,176	1,176	1,176
Number of prefectures	98	98	98	98	98	98	98	98
Mean of DV	0.074	0.074	0.245	0.245	0.535	0.535	0.830	0.830

Notes: This table replicates Table 5 but uses the 200 km sample along the boundary of the southeastern provinces' mutual defense pact to make the control and treatment group more balanced. We use the continuous measure of Christian martyrs during the Boxer Rebellion to replace the Boxer region dummy. The controls are treaty port duration, missionary duration, Confucian elites, and the interaction terms between five-year dummies and the time-invariant prefectural factors (population density in 1850, provincial capital dummy, distance to the coast, terrain ruggedness index, and distance to the nearest garrisons of Western powers in China). Standard errors are clustered at the prefectural level and reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table A14. The long impact of religious conflicts on other survey questions

	Dependent variable: *Other trust outcomes*			Dependent variable: *Cultural conservativism*		
	General trust	Trust non-locals	Trust local government	Preservin g native lifestyle	Preferring Chinese programs in television	Foreign cultural products erode native Chinese culture
	(1)	(2)	(3)	(4)	(5)	(6)
	Logit	Logit	Logit	Logit	Logit	Logit
Anti-missionary cases	0.274	-0.133	-0.059	0.458**	0.652***	0.548***
	(0.170)	(0.126)	(0.346)	(0.205)	(0.141)	(0.167)
Treaty port	0.103	-0.764**	-0.275	0.376	0.139	0.166
	(0.463)	(0.304)	(0.830)	(0.458)	(0.443)	(0.428)
Anti-missionary cases × Treaty port	-0.273	0.363**	-0.077	-0.235	-0.402*	-0.401*
	(0.219)	(0.152)	(0.391)	(0.305)	(0.206)	(0.221)
Missionary duration	0.006	0.011	0.008	-0.010	-0.016	-0.012
	(0.008)	(0.007)	(0.009)	(0.011)	(0.011)	(0.009)
Historical Controls	Y	Y	Y	Y	Y	Y
City-level Controls	Y	Y	Y	Y	Y	Y
Individual Controls	Y	Y	Y	Y	Y	Y
Observations	2,907	2,642	2,706	2,054	2,100	1,831
Number of cities	49	49	49	49	49	49
Mean of DV	0.555	0.288	0.786	0.874	0.724	0.590

Notes: The dependent variables are measured at the individual level based on the 2009 survey on the *Attitudes towards Citizenship in China* (Shen et al., 2016). The survey answers are graded from 1 (most agree) to 4 (most disagree). We aggregate the grades 1 and 2 as 1, and 3 and 4 as zero, to contrast the comparison. The outcome variable for "Trust non-locals" is trust non-local Chinese, i.e. other Chinese people but not from your home province. The full survey questions for Column (4)-(6) are literally translated as "We should preserve our own way of life to avoid gradually becoming a mere replica of other countries", "Chinese television should prioritize broadcasting Chinese movies and programs", and "The excessive influx of foreign films, music, and books is eroding our country's culture", respectively**.** Anti-missionary cases are measured at the city level by aggregating the number of anti-missionary cases from 1860 to 1910 (in log). Historical controls include treaty port, missionary duration, historical Confucianism (measured by the average density of Confucian elites) and foreign investment (measured by average number of foreign-invested banks and total number of foreign-invested firms) from 1870 to 1930. City-level controls include contemporary provincial capital dummy, GDP, distance to the coast, and proximity to Hong Kong, Macau, the Special Economic Zones (SEZs) and Open Coastal Cities (OCCs). Individual controls include employment status, gender, ethnicity, marriage status, education level, and birth cohort. Standard errors are clustered at the city level and reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.