


RESEARCH ARTICLE

The last guardian of the throne: the regional army in the late Qing dynasty

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Abstract

This paper investigates the organizational structure of the Xiang Army, one of the best-known regional armies in the late Qing dynasty. The army developed an organizational form to overcome problems that plagued the imperial army of the central government, namely, the poor recruitment and training of soldiers, the lack of incentives to fight in battles, and the coordination failure. This organizational structure, I argue, played a central role in the rise of the Xiang Army in the Qing dynasty.

Key words: Military institution; Qing dynasty; regional army

JEL Codes: N40; N45

1. Introduction

After the defeat of the Taiping Heavenly Kingdom in July 1864, the falling Qing Dynasty welcomed a restoration that prolonged its regime for almost half of a century. Unlike any previous dynasties after major rebellious activities, the imperial authority of Qing remained intact. Historians commonly agree that the key to this restoration of the throne was a militaristic one because the throne had to defeat the powerful rebels (Liu, 1978: 409).

During the 1850s, rebellious activities had become a very substantial factor that destabilized the regime of the Qing Dynasty in southern China. The central government was unable to cope with those rebels with its conventional military force. It authorized regional elites to organize armed forces to suppress rebellions. The military innovation in the 19th century – the formation of armies of regional elites – was to breed a new type of fighting force that replaced the imperial armies of the central government, namely Eight Banner Troops and the Green Standard Army, to suppress rebellious activities across the nation. These regional armies not only successfully protected the imperial authority of the central government but also significantly changed the balance of political power between Chinese officials and Manchu officials in the regime. Such a change in the balance of power played an essential role in the rest of the Qing Dynasty ruling period.¹

¹The Qing Dynasty was founded by the Manchus, an ethnic minority group from Manchuria. They conquered China after the demise of the Ming Dynasty in 1644. During the Qing's ruling, governors were leaders of provinces. Governors-general were leaders of regions that were composed of several provinces. According to Michael's summary (1949), among the governors-general during the decade of 1850–1860, there were 15 Manchus and 19 Chinese. From 1861 to 1890, the proportion of Manchu to Chinese had become to 10–34, as those Chinese provincial leaders earned promotions through their experience in regional armies.

The shift of balance of power was more significant at the provincial governors level. Between 1853 and 1860, the proportion of provincial governors between Manchu and Chinese were 20:25. But from 1861 to 1890, this figure became 13:104, for whom more than half had made their careers from regional armies. One of the most important movements that was initiated

What made those regional armies the preferred military institution in the late Qing dynasty? Some historians focused on the historical backgrounds of the rise of regional armies and the impact of regional armies in the political realm in the late Qing Dynasty (e.g., see Liu, 1978). They argued that the imperial armies of the central government were too corrupted to conduct any military operation. Others argued from a perspective of labor history. For example, Moll-Murata and Theobald (2013) emphasized the high cost of maintenance of the imperial armies created heavy fiscal burdens, which worsened by the two opium wars, for the central government. While these explanations provide external factors that contributed to the rise of regional armies, none has studied the question of why those regional armies themselves constituted an effective alternative. My conjecture is these regional armies had a superior internal organizational structure, which induced competent soldiers to join and provided proper incentives for soldiers to fight in battles.

The purpose of this paper is to explain the institutional arrangements governing regional armies. To do so, I focused on the Xiang Army (or the Hunan Army). This is justified by two considerations. First, the Xiang Army was the first regional army that was not under the direct command of the central government. Second, most regional armies in the late Qing dynasty have adopted the Xiang Army's organizational structure, making the arguments of this paper applicable to the study of those as well.

This paper extends the growing literature on the economics of military organizations. Brennan and Tullock (1982) provide a framework to analyze the incentive issues that individual soldiers face. They argue that proper incentive structure must be in place to induce soldiers to act in the collective interest. Allen's studies (1998, 2002, 2017) focused on the pre-modern military institutions of Britain. He argued that the organizational structures of the British armed forces mitigated various incentive problems to achieve the most efficient outcomes under the constraints they faced. Wood (2019) discussed how private provision of defense had aided Ukraine to fight Russian-backed separatists. Rouanet and Piano (forthcoming) set up a transaction cost framework to explain the rise and fall of the military replacement system in post-revolutionary France. In another study, they (Piano and Rouanet, 2019) also examined the desertion problem in the French army.

This article extends the literature by focusing on the organizational structure of the Xiang Army. As I argue, the regional army that fought with rebels during the late Qing Dynasty was able to overcome several of the problems that plagued the imperial army. First is the poor recruitment and training of soldiers. The imperial army was frequently criticized for the poor quality of its soldiers. These soldiers had become the liability due to their ineffectiveness on the battlefields. Second is the proper incentive for soldiers to fight their enemies, instead of fleeing from them. It was very common to observe high desertion rates in the imperial army, contributing to it being frequently crushed by rebels. Lastly, there was coordination failure in imperial armies. There was no specific mechanism in the imperial army to facilitate cohesiveness between commanders and soldiers since battalions were temporarily organized on an ad hoc basis. This lack of cohesiveness created the failure of coordination (Luo, 1984a: 8).

To investigate the organizational structure of the Xiang Army, I rely on a combination of archival records and primary sources. First, I use documents and letters of several founders of the Xiang Army and their staff members to examine the organizational structure of the army (The Collection of Marquis Zeng (2011a, 2011b, 2011c, 2011d, 2011e); The Collection of Hu (2008), and collections of several staff members). Second, I draw information from secondary sources, like Kuhn's (1970) and Luo's (1984b) accounts of the imperial army as a comparative case. Finally, I rely on historians' work on the performance of the Xiang Army and its development in the mid of the 19th century (Luo, 1984a; Wang, 2014).

My argument is organized as follows. I give a brief introduction of the historical background and evolution of the Xiang Army in the 19th century in section 2. In section 3, I identify the problems that plagued the Green Standard Army in detail, namely the poor recruitment and training of soldiers, the

by these Chinese officials was perhaps the Self-strengthening Movement in the late 19th century. This movement aimed to industrialize the regime militaristically and technologically.

lack of incentive to fight, and the coordination failure in the army. Section 4 investigates the organizational structure of the Xiang Army. The performance of the Xiang Army during the Taiping Rebellion is examined in section 5. Section 6 discusses the adoption of the Xiang Army's organizational structure in other armed forces in detail. Section 7 concludes.

2. Historical background of the Xiang Army in Qing dynasty

Prior to the 19th century, though rebellious activities were frequent, imperial armies could easily suppress them without seeking additional support because of the limited scale of activities.² However, such a pattern changed when the White Lotus Rebellion actively engaged in military conflicts with the central government in the tri-provincial boundary (Sichuan, Shaanxi, and Hubei) (Kuhn, 1970: 39). Because of terrains of the boundary, the number of rebels involved, and areas that needed to be covered, the Green Standard Army was not able to respond to skirmishes across the region effectively. According to the records from the Catalog of Historical Wars (Chinese Military History Compilation Group, 2003), the White Lotus rebels mainly used tactics of guerrilla warfare to ambush the Qing army. The mountainous region created a natural barrier for the Qing army to pursue rebels, and their high mobility often created attacks in surprises. Commanders of battalions constantly reported that they suffered heavy casualties from such an ineffectiveness of combating rebels in the regions. It led officials to seek for auxiliary ways to suppress rebels (Kuhn, 1970: 41).

The Qing dynasty started to employ local militias (Tuan Lian) and mercenaries (Yong Ying) in combating rebels at the beginning of the 19th century. These military forces were rallied and trained to conduct self-defense in the countryside. This method of adopting the rural military armed forces in the imperial armed forces proved to be very effective.³ In 1804, with the assistance of the rural militias, the central government defeated the White Lotus Rebellion.

The rural military force during the White Lotus Rebellion was attached to the central government. Although local gentries recruited the rural militaries, they were not authorized to command the rural military forces.⁴ Local administrators, the magistrates, possessed the power to coordinate operations of these forces. Moreover, local militias and mercenaries served as the auxiliary forces of the imperial army. They were regarded as 'a peripheral branch of the state bureaucracy itself, because the formal registration of each soldier with the Ministry of War was required, and they were under the military commanding structure of the central government (Kuhn, 1970: 62). Although under close bureaucratic supervision, the local militias and mercenaries in the early 1800s were precedents of the Xiang Army. They were trained and financed outside of the imperial armed forces of the central government.

In the 1850s, the Taiping Rebellions marched across the southern region of China (see map below). They established the Taiping Heavenly Kingdom after defeating the imperial army of the central government in six provinces in an overpowering manner. Unlike any previous rebellion in the Qing dynasty, the Taiping Rebellions had a conventional army that engaged with the imperial army in battles. The Taiping rebels had not only the scale of an army that matched with the strength of the imperial army of the central government but also competent commanders and soldiers, which gave them an advantage over the imperial army (Kuhn, 1978) (Figure 1).

The Taiping Rebellions posed a threat to overthrow the central government. Although previous tactics to utilize local militias and mercenaries as auxiliary forces were not effective anymore when

²For example, see the rebellion of Uyghur in 1765 and the rebellion of Shandong (Catalog of Historical Wars, 2003). Those rebellions were confined in both numbers of rebels and the area of activities.

³The rural military forces were very effective at combating rebels in two ways. First, local militias and mercenaries stationed in a dispersed manner. Such stationary position could defend rural areas that the imperial army could not. It would prevent surprise attacks of rebels effectively. Second, the strategy of 'strengthening the walls and clearing the countryside' (Jian Bi Qing Ye) became a standard administrative approach to suppress rebels. It was widely applied by rural militaries (Kuhn, 1970: 42). Under the strategy, local militias and mercenaries fortified their garrisons, while hoarding supplies, which prevented the rebels from plundering. This strategy essentially deprived food and recruits of the rebels.

⁴Local gentries were also responsible for the financial support of these armed forces.

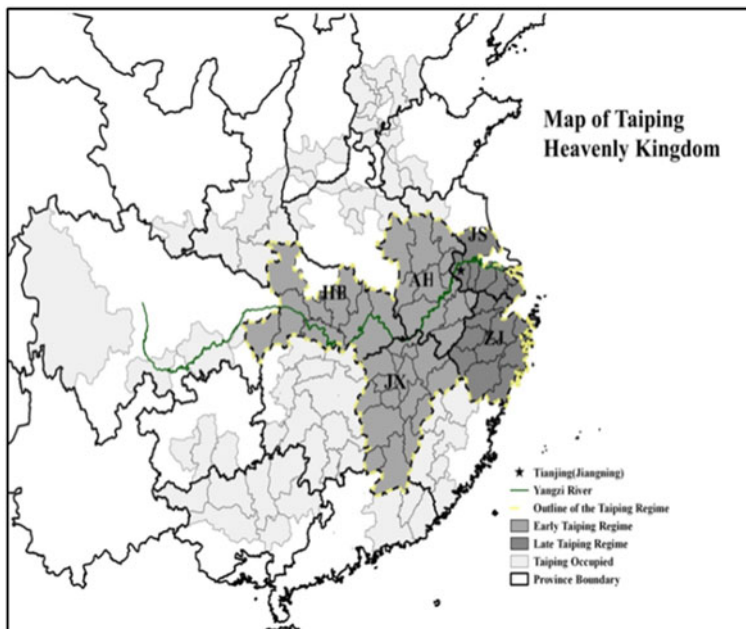


Figure 1. Map of Taiping Heavenly Kingdom. Source: Xu and Yang (2018). HB: Hubei Province; JX: Jiangxi Province; ZJ: Zhejiang Province; AH: Anhui Province; JS: Jiangsu Province. Early Taiping: 1853–1859; Late Taiping: 1860–1864.

combating the Taiping rebels, the previous positive experience with those armed forces convinced the central government regarding the viability of deploying them.⁵ While the throne was still concerned about regional elites would have too much military decision power, it authorized them to organize their regional armies to fight the rebels due to its insufficient budget and the declining imperial army.⁶ Because the rebels had already broken through the provincial defense line of Hunan, Zeng Guofan, who was the Hunanese deputy minister of war, was tasked to recruit his regional army to prevent the rebels from overrunning Hunan by the central government. This regional army of Zeng was not under the control of the Ministry of War or the emperor, nor did it receive any financial support from the central government.⁷

In August 1853, Zeng established the Xiang Army's first 13 infantry battalions and ten navy battalions based on local militias and mercenaries (Luo, 1984a: 24). The Xiang Army started its expedition toward eastern regions of China to prevent the further military expansion of the Taiping Rebellions in 1854. Until the downfall of the Taiping Heavenly Kingdom, the Xiang Army had engaged with the Taiping rebels in several hundred battles and skirmishes. During its more than a decade of combating the rebels, the Xiang Army had replaced the imperial army of the central government. It became an essential component of the imperial armed forces. The number of soldiers of the main group in the Xiang Army, which was led by Zeng directly, reached more than 120,000 in 1864 (Wang, 2014).

⁵For example, the governors of Hubei commanded his armed forces to defend the provincial capital, Wuchang, by adopting the strategy of 'strengthening the walls and clearing the countryside'. However, Wuchang was overran by the rebels after two months of siege, and the governor committed suicide after the defeat.

⁶The maintenance cost of both imperial armies, the Green Standard Army and the Eight Banners Troops, had already imposed serious fiscal burden on the central government. After suffering the defeat in the First Opium War (1839–1842), per the Treaty of Nanjing, the central government was forced to pay 21 million silver dollars for the reparation of the war, which further exacerbated its fiscal situation.

⁷Other provincial governors or governors-general also tried train local mercenaries and militias to defend their regions, but none of those ever reached the scale of the Xiang Army (Luo, 1984a: 17).

Although Zeng disbanded the group of soldiers under his direct command after the siege of the capital city of the Taiping Heavenly Kingdom in 1864, the Xiang Army continued to thrive under other Hunanese commanders. The army served as the main armed force in most of the major military operations in the following three decades. For example, it suppressed the Dungan Revolt and reconquest Xinjiang from the Kashgarian invasion (Wang, 2014). The Xiang Army also joined the expedition force to support Vietnam in the Sino-French War. The army's centrality to the empire's military system only started its decline after the end of the First Sino-Japanese War in 1895.

3. The problems in the imperial army

I use the Green Standard Army as the comparative case of regional armies in combating rebels instead of the Eight Banners Troops. There are several justifications. First, the Eight Banners Troops were mostly used to conduct expeditions during wartimes, and most of them served as royal guards in the capital area. The Green Standard Army had a broader set of duties; one of those duties was to station in local garrisons as a response to rebellious activities. Second, Eight Banners Troops had lost its combat effectiveness long before the Green Standard Army. In major military expeditions since the 17th century, emperors had relied heavily on the Green Standard Army. Third, the internal structure of the Xiang Army was designed to overcome problems in the Green Standard Army.

When the regional elite is tasked by the central government to organize his army as the last guardian of the throne, he must design his army in a way that would overcome problems in the imperial army. The following subsections will elaborate on those problems in detail.

3.1 The poor recruitment and training of soldiers

The first problem the regional army needed to solve was that of how to recruit high-quality soldiers, which was the same problem that had troubled the Green Standard Army during peacetime.⁸ Even in the absence of incentive issues, the Green Standard Army could not properly engage the rebels in battles because of its low combat effectiveness. Such low effectiveness was rooted in the structure of duties of the Green Standard Army.

The duties of the Green Standard Army were not limited in the military. It had to perform the function of police, such as maintaining public orders, escorting official supplies to destinations, investigating criminal activities, etc. Police duties during peacetime occupied a majority of the Green Standard Army's responsibilities (Luo, 1984b: 250). When it came to military training, the main focus was given to battle formations. Formations were critical because these simplified communications to coordinate soldiers in battles. However, this training emphasized the neatness of steps and timing while ignored the quality of individual soldiers for actual combat. In such a way, the actual combat training of the Green Standard Army was eroded (e.g., see Luo, 1984b: 261; and Zuo, 2009).

The wages paid to soldiers of the Green Standard Army were also low. According to Luo's (1984b) estimations, these payments could barely keep the families of the soldiers at subsistence levels. Zuo (2009) observed that to support their subsistence level of living and families, soldiers often devoted much more time to police duties because those would earn extra income for them. In addition to police duties, soldiers conducted side businesses as well. These non-military activities often diverted their attention from proper military training, which 'made soldiers too weak to be called soldiers' (Zuo, 2009; Luo, 1984b: 348).

The pervasive predatory behaviors of officers in the form of embezzlement further exacerbated the recruitment for potential high-quality soldiers in the Green Standard Army. Because of their low base wages, officers often skimmed or delayed wages of soldiers for their personal financial

⁸The fighting capacity of the Green Standard Army remained relatively high because of constant expeditions and warfare prior to the 19th century.

gains.⁹ Moreover, officers inflated the numbers of soldiers in their combat units to receive more supplies and payments from the Ministry of War. This further increased the fiscal burden of the central government to maintain the imperial army.

The predatory behaviors of officers were also facilitated by the rule of rotation in the imperial army. In the Qing Dynasty, in order to solidify the centralization of military forces, the central government created a rotation rule to prevent military commanders from establishing personal connections with their soldiers, which were deemed as potential threats to the authority of the throne (Luo, 1984b: 311). Once being promoted to middle-level officers, commanders would start the rotation among battalions outside of their native province every 3 or 5 years. Therefore, commanders had the incentive to prey on their soldiers as much as possible during their tenure at specific battalions without bearing negative long-term consequences, such as deterioration of combat effectiveness.

3.2 Lack of incentives in battles

Without proper incentives to induce soldiers to fight in battles, acquiring high-quality soldiers in the army is meaningless. It is human nature to protect their own lives in extreme situations of battles. Because soldiers often value their lives more than winning battles, fleeing from battles had been very common when facing potential injury or death. Brennan and Tullock (1982) discussed why soldiers' dominant strategy is always to flee in battles unless their principal introduces rewarding/punishment mechanisms to incentivized soldiers not only to fight enemies in battles but also not to flee from battles.

To incentivize soldiers to fight in battles, the Green Standard Army introduced a rewards system for the capturing of cities, the breaking of enemies' formations, the capturing of ships, and general rewards of victory. The size of the reward to each soldier depended on how many soldiers participated in achieving objectives in battles.¹⁰ In this rewarding system, only a few soldiers would receive these rewards in battles. Moreover, these rewards were irrelevant when the Green Standard Army did not have any competent soldiers to fight properly in battles.

Cowardice had also been a pervasive problem for the Green Standard Army. Massive desertion before and during battles was common among its soldiers (Xue and Wu, 2013: 181). For example, during several battles in Guangxi in the early stage of the Taiping rebellions, the Green Standard Army soldiers frequently failed to hit their enemies with firearms. Once rebels were closing in on them, soldiers started to desert from battles; even the commander threatened to execute the deserters. Prevention measures of desertion, such as punishments, were also ineffective. Most of those deserted soldiers could return or switch to another battalion very easily without suffering any punishment (Luo, 1984b; Xue and Wu, 2013: 181). Hu (2008: 277) summarized the desertion problem in the imperial army as 'soldiers have gotten used to flee from battles [for fear of facing their enemies]. They would desert from their combat units even there was just an alert for a possible battle, how do [we] expect they would engage with enemies [in battles]'.

3.3 Coordination failure

The coordination failure was in most military operations during the Taiping Rebellions. Assaults of the rebels on the imperial army were usually completed before the Green Standard Army could coordinate any effective defense. Such a failure was rooted in the commanding structure of the Green Standard Army.

⁹Conducting side businesses was illegal activities in the imperial army. It gave officers the leverage to prey on soldiers by threatening to report those illegal activities.

¹⁰For example, rewards of capturing a city could be given to up to five soldiers. The first soldier would receive 250 taels of silver. The reward diminished by 50 taels to each following soldier, and the fifth soldier would receive 50 taels (Luo, 1984b: 362). The diminishing principle of rewards applied to the other three types of rewards.

To prevent regional military leaders from having too much military power and solidify the military centralization, the central government separated the commanding power and the administration of the Green Standard Army at the provincial level. The commander-in-chief of a province was authorized to train and recruit his army. However, the commander did not have the power to deploy his army into battles. Such a commanding authority belonged to the provincial governor, and the emperor depends on the nature of the deployment. The provincial governor was authorized to deploy the army in battles in his province. In the situation in which the army needed to be dispatched to support armed forces in other provinces, the governor must submit his request to the emperor, who had the ultimate military commanding authority, for permission.

After receiving the permission of mobilization from the emperor, the governor could only send only a certain percentage of soldiers from each garrison/battalion to support military operations in other provinces, because garrisons/battalions were still responsible for local defenses and public orders. This method of assembling armed forces on an ad hoc basis would be extremely difficult, if not impossible, to achieve the military coordination of temporary battalions in battle. According to the observation of Zeng (2011c: 192):

‘when deploying soldiers for the preparation of battles, one battalion dispatched 50 soldiers, and another one dispatched 100 soldiers. For a combat unit of 1000 soldiers, one [commander] must choose them from several, possibly more than ten, battalions. When soldiers [from different battalions] were deployed into one combat unit, they do not know each other or their new commander... therefore, they would not look after their comrades or commander in battles.’

Citing the Xiang Army commanders, Liu and Smith (1980: 203) described this failure as soldiers are not accustomed to their commanders, and commanders do not know their soldiers at all. It would not be surprising to see a military operation under a temporary commander of a temporary battalion, which composed of soldiers from different battalions in different regions, disintegrated in battles, and led to fiascos. Soldiers would not help their temporary comrades if they were beleaguered by the enemies; commanders would abandon soldiers in adversarial situations.

4. The organizational structure of the Xiang Army¹¹

4.1 The high wage system and selection screening

Founders of the Xiang Army realized one of the major problems that affected the quality of the Green Standard Army was their low wages. Therefore, they set up a high wage system to recruit soldiers. According to Luo’s summary (1984a: 114 and 1984b: 344), a commander of a battalion would receive a base wage of 50 taels and a stipend of 150 taels for administration duty per month.¹² A regular soldier of the army would receive an average based wage of 4.5 taels per month plus a stipend for food provision. The table below is wage comparisons between soldiers/battalion commanders of the Xiang Army and soldiers/battalion commanders of the Green Standard Army (Table 1).

¹¹One obvious reason for the success of the Xiang Army might simply have been technical advantages over rebels. These advantages of the Xiang Army might have been better firearms and tactics. There has been little evidence on this point, but it would appear that the Xiang Army had a marginal disadvantage over these. Firearms of the rebels not only outnumbered the Xiang Army’s but were also more advanced (Xiang, 2009). Moreover, the rebels often hired western instructors to improve their proficiency in handling firearms (Kuhn, 1978). There is no record that indicates that the Xiang Army conducted the same training process.

Although their firearms and cannons were no better, the Xiang Army was often considered to have better tactics, such as superior battle formations. Unfortunately, there is no evidence to support such a claim. The best evidence suggests that the technical difference between the Xiang Army and the Taiping Rebels was minimal. Fighting forces at war could quickly adopt any obvious tool that would marginally increase their chance to win battles.

¹²Commanders whose ranks were higher than the echelon of the battalion would receive more compensations on the margin based on how many battalions were under their commands in the Xiang Army.

Table 1. Wage comparisons

	THE XIANG ARMY		THE GREEN STANDARD ARMY	
	Soldiers	Battalion Commanders	Soldiers	Battalion Commanders
AVERAGE BASE WAGES PER MONTH IN SILVERS	4.5 taels	50 taels	1.5 taels	20 taels
AVERAGE ADDITIONAL STIPEND PER MONTH IN SILVERS	A food stipend of roughly three taels depending on the length of the month regardless of deployment.	150 taels	<ul style="list-style-type: none"> • When deployed in battles: a lump sum one payment of 6 taels per deployment plus a stipend of 0.9 taels for food. • When not deployed: 0 	<ul style="list-style-type: none"> • When deployed in battles: a lump sum payment of 250 taels per deployment plus a stipend of 4.2 taels for food and a regular stipend of 42 taels • When not deployed: 42 taels
MAXIMUM WAGE PER YEAR IN SILVERS	90 taels	2,400 taels	<ul style="list-style-type: none"> • When deployed in battles: 34.8 taels • When not deployed: 18 taels 	<ul style="list-style-type: none"> • When deployed in battles: 1,044.4 taels • When not deployed: 744 taels

Source: Luo, 1984a: 114 and 1984b: 344.

According to the estimation, the average base wage of a Xiang Army soldiers was three times of a Green Standard Army soldier; the average base wage of a Xiang battalion commander was more than a double of a Green Standard Army battalion commander. Although the Green Standard Army would receive extra stipends and a lump sum payment per deployment during wartimes if they were deployed in battles, this form of income was not stable for them because there was the probability they would not be selected.¹³ Soldiers and commanders who were not deployed in battles would still receive their base wages.

The high wage system solved the two issues that were caused by low wages. First, the compensation package of wages and stipends in the Xiang Army was high enough for soldiers to support themselves and their families. In this way, soldiers did not need to conduct any non-military activities for extra incomes. Without concerns about providing sufficient living supports for themselves, soldiers would focus on proper military training for battles (Luo, 1984a). It was also one of the reasons that the Xiang Army could maintain the scale of the army by keeping recruiting soldiers, despite losses of soldiers in battles.¹⁴ According to the observation of Hubei provincial governor Luo Bingzhang, in Hunan, thousands of soldiers were recruited by the army to fight the rebels (Zuo, 2009).

¹³Moreover, even soldiers and commanders in the Green Standard Army received extra stipends from battle deployments, wages of their counterparts in the Xiang Army were still more than double theirs.

¹⁴Most soldiers of the Xiang Army were peasants. While there is no record to compare wages between soldiers and alternative employment opportunities of peasants directly in Hunan province, some figures of wages in other regions can provide indirect comparisons. For example, Broadberry and Gupta (2006) calculated the daily wage of hired farm laborers in the Yangzi delta area, which is adjacent to Hunan and was a more economically developed regions. Based on previous studies (Pomeranz, 2000; Von Glahn, 1996), they estimated those farm laborers earned about 0.033 taels of silver on average per day in 1850. In another study, Allen et al. (2011) estimated the daily wage in rural areas of Beijing. Based on their calculation, the average daily wage in the 1850s was 0.034 taels. Assuming farmer laborers worked 30 days every month, their monthly income would be 0.99 taels and 1.02 taels, respectively, in those studies. If those wage levels could serve as an approximation

Second, high wages curtailed officers' incentive to prey on soldiers. In one of his reports to the emperor, Zeng stated that providing officers with higher wages would enhance their discipline, which prevents them from looking for extra personal financial gains by imposing loss on their soldiers (Zeng, 2011a). Hu also argued that without proper compensation to officers, there would be no way to prevent corruption in the army (Hu, 2008). According to Wang's observation (1983), most of the commanders of the Xiang Army became wealthy because of the accumulations of their wages. Founders of the Xiang Army used this form of wage system to reflect their principle of 'high wages to raise the army'.

The high wage recruitment system could attract potential high-quality soldiers to participate in the army. However, sometimes it could attract too many people.¹⁵ Before signing up for the army, potential soldiers need to estimate whether they would reach the standard of 'high-quality' soldiers. Soldiers could make the wrong estimation regarding their potential combat effectiveness and their contributions to the army intentionally or accidentally. In the situation when under-qualified soldiers were recruited to fight rebels in battles, they became liabilities in their combat units and led to defeats in battles.

It would be very costly for recruitment officers to examine participants' abilities individually. To cope with the asymmetric information problem, the army set up a screening device to identify the quality of soldiers. Under the screening device, there was a list of criteria for recruitment consideration. Those criteria included fields in heavy-lifting, martial arts, sharpshooting, weapon crafting (both firearms and melee weapons), swimming (for the navy force of the Xiang Army) (Hu, 2008: 128). Consideration of recruitment would be given to participants who were experts in one or more of those fields. After the first round of selections, recruits were required to take military training for 2 months. Within 2 months, recruits who could not properly perform tasks or reach the standard of military training would be disqualified (Zeng, 2011b).

While the screening method could only recruit a small group of soldiers in each recruitment, the founders of the Xiang Army agreed that the quality of soldiers should always be placed before the quantity of soldiers because of the considerations of combat effectiveness in battles and budget constraints.¹⁶ As a result, the higher quality of soldiers compensated for the lower numbers of soldiers (Hu, 2008: 79).

4.1.1. Financing the Xiang Army

The Xiang Army's commitment to the high wage system required substantial financial support.¹⁷ To support the Xiang Army, Zeng established new types of local revenue that bypassed the Ministry of Finance to generate funds for the army. In addition to those local revenues, once members of Zeng's group became high-level provincial officials, they would immediately concentrate fiscal power into their own hands to avoid direct control of the Ministry of Finance (Kuhn, 1978: 288).

In the early 1850s, when the scale of the Xiang Army was relatively small, the main financial expedient was the sales of honorable titles and official ranks in Hunan, Jiangxi, and Sichuan. According to the estimation, the cost of supporting the army's military operations was around one million taels of silver in Jiangxi province in 1855 (Luo, 1984a: 122). Those sales in Jiangxi alone were able to generate revenue that covered over 90% of the cost in the same year (Luo, 1984a: 122).

of farm laborers' monthly earnings, becoming a soldier of the Xiang Army would be the better employment choice for peasants if they were qualified.

¹⁵Allen (1998) argued that officers in the pre-modern British Army acted as entrepreneur, who would estimate their ability before the purchase of commission, because their future returns depended on how well they would operate in battles. Purchasing commission as a form of investment would incentivize would-be officers to self-select themselves into appropriate ranks, which served as a screening device in the voluntary purchase of commissions.

¹⁶According to Hu's estimation, 10–20% of participants would be recruited as official soldiers in each recruitment of the Xiang Army (Xue and Wu, 2013).

¹⁷The central government was not able to provide any significant financial support since itself was virtually bankrupted in the 1850s. In 1853, the reserve silver remained in the warehouse of the Ministry of Finance were about 220,700 taels (Luo, 1984a: 121).

As the Xiang Army expanded, a provincial mercantile tax, Lijin, had replaced the sales of titles and ranks as the main source to generate revenue.¹⁸ Lijin levied ad valorem taxes on goods in stock, at places of manufacture, and in transit between provinces. The tax rate varied greatly among provinces and ranged from 2 to 8% (Kuhn, 1978: 289). While provinces were supposed to report the amount of tax and surrender portion of those collections to the central government, provincial needs to cope with the military crisis retained most of the reported taxes (and all of the unreported taxes) in each province.

Under the Lijin system, Zeng reached agreements with several provincial governors to divert their tax revenues to support the army prior to 1860. After his appointment as the governors-general of the Liangjiang region in 1860, Zeng further strengthened provincial control on the tax collection in regular categories besides the Lijin system in the region. At the same time, his subordinate commanders of the Xiang Army were also authorized to establish their own Lijin collection departments to maximize the revenue for the army.

There were also other minor ways that the army used to generate revenue. For example, a per head tax was levied during Zeng's tenure as the governor-general of the Liangjiang region. Zeng also requested to impose tariffs in Shanghai to generate extra revenue twice (Zeng, 2011c). Miscellaneous taxes were also introduced to expand the revenue for the army. These miscellaneous taxes included property tax, land tax, grain tax, etc.

These financial procedures were able to generate significant revenue to support the military expense of the Xiang Army. According to the available data, when combined together, these methods generated an annual average of 6.2 million taels of silver after Zeng's appointment of the governor-general. It offset the annual cost to support the army, which was around 6.1 million (Luo, 1984a: 119).

4.2 Incentives in battles

4.2.1 Incentive to fight

When combat units of the Xiang Army were deployed in battles, how to incentivize soldiers to fight instead of flight was critical. While the high wage system attracted high-quality soldiers to join the army, it did not guarantee soldiers would have the incentive to fight in battles. To overcome this issue, the Xiang Army used several mechanisms.

First, combat units were allowed to share spoils of war. While soldiers and commanders received stable wages in the army, spoils of war were the significant component of soldiers' income. While there is no systematic historical study on the actual figures of spoils of war, there is ample indirect and anecdotal evidence that indicates spoils of war played a critical role in incentivized soldiers to fight. Liu (1978) described that Zeng initially attempted to incentivize and discipline the army by teaching the concept of Confucian statecraft and man of integrity. However, he quickly realized that without material rewards, even his best commanders and soldiers would not exert much effort. In one of Zeng's letters to his brother, he accepted the fact that private gains from battlefields were very effective in maintaining the fighting capacity of the army (Zeng, 2011e).

Further evidence that the army used spoils of wars as extra payments to soldiers was records of pillages after the army captured the Taiping Rebellions previously occupied cities.¹⁹ For example, according to a former member of Zeng's staff's description, when the Xiang Army defeated the rebels in Anqing, 'the wealth of gold, silver, and cloth were unaccountable. One soldier even acquired 700 taels of pure golds. Whatever could be plundered in the city had been taken by soldiers, whatever could not be plundered were destroyed' (Zhao, 2013). Soldiers even dug graves for the treasures or heirlooms that were buried with the dead. Males who survived were forced to transport booty to the army's camp (Zhao, 2013). Another record of plunder is the fall of the capital city of the rebellions,

¹⁸Lijin literally means tax of a thousandth, which implied it only intended to tax a small amount.

¹⁹These records also explain why massive disturbance in battalions was seldomly observed in the army when soldiers were not paid on time. The main reason was the soldiers' expectation of receiving shares of booty, which would be much higher than their wages.

Nanjing. Every soldier and commander participated in the pillage. Treasures, rare collections of documents, golds, and silvers were all taken by the army. Less than a month of capturing Nanjing, around 25,000 of the Xiang Army's best soldiers and commanders were suddenly released from their services.²⁰ Historians conjectured it was because those soldiers and commanders had looted enough from the city (e.g., see Liu, 1978). While historians heavily criticized the pillages of the Xiang Army, spoils of wars incentivized soldiers to fight in battles.

To further encourage soldiers' full effort in battles, the Xiang Army also stipulated bonuses for soldiers who fought bravely and captured objectives in battles. For example, for each enemy killed, a soldier would receive 10 taels of silver and a citation for future promotion. Twenty taels of silver would be awarded to a soldier who captured an enemy alive. Capturing a barrel of gunpowder and a barrel of bullets would worth five taels and three taels, respectively (Zeng, 2011e).²¹

Another mechanism that provided incentives for soldiers' productivity was injury insurance. There were specific provisions of insurance for soldiers injured during battles. The amount of insurance that an injured soldier would receive depended on the seriousness of injuries, which was classified into three degrees. For the highest degree of injuries, soldiers would receive 30 taels of silver as compensation; soldiers would receive 20 and 10 taels of silver for the middle and the low degrees of injuries, respectively (Zeng, 2011e). Additional compensation would be paid to soldiers who suffered from permanent body damages. This insurance reduced the private cost individual soldiers incurred by putting themselves at risk when they exerted full effort in battles.

Another way of incentivizing soldiers in battles was the limited length of service in the army. To maintain the combat effectiveness of the army, the Xiang army rotated or replaced soldiers frequently. Founders of the army agreed that keeping soldiers fighting in battles for a long time would eventually wear out their combat effectiveness. Moreover, commanders also concerned that soldiers who had served a long time in the army would cause too many disciplinary problems in the army, which could ultimately lead to the same disciplinary problems of the imperial army they tried to overcome.²²

Soldiers were likely to be discharged from the army once they were rotated or replaced. The discharge would terminate not only their wages payments from the army but also potential spoils of wars in the future. While there was no definite limit of length of service in the army, in a letter to his commanders, Hu concerned about soldiers started to lose their combat effectiveness after several years they joined the army (Xu and Wu, 2013: 179). Therefore, the service length in the Xiang Army could be only several years for soldiers.

Because of the limitation of service length, soldiers would want to win every battle that they participated during their service in the army to maximize their earnings from spoils of wars and bonuses. Participating and fighting bravely would increase the chance of winning battles, earning bonuses, and receiving shares of spoils of war.

4.2.2 Prevention of desertion

The Xiang Army used a combination of punishments and a registration system to overcome the problem of desertion. If any deserter was caught, the severity of punishments depended on acts of soldier ex-post. If the soldier returned to the army before the end of the military operation that he deserted from, the soldier would be exiled to the western region of the frontier. If the soldier returned to the

²⁰According to the Shanghai Daily, some witnessed around 200 ships of the Xiang Army were escorting booty from Nanjing back to Hunan. It was also interesting to see the Xiang Army to burn down the storage of treasures of the rebels after capturing the city. Scholars speculated it was because the Xiang Army tried to destroy evidence of how much treasures they had plundered from the rebels to avoid surrendering spoils of war to the central government.

²¹In this bonuses system, soldiers could attempt to falsify their performance in battles to earn bonuses, however. To prevent soldiers from doing so, the Xiang Army imposed harsh punishments for those who falsified their combat performance. If soldiers used their own equipment as captured objectives for rewards for bonuses, they would be expelled from the army after severe corporeal punishments; if soldiers filed fraudulent reports by using others' combat performance, they would be executed by beheading.

²²For example, see Luo's summaries (1984a) of both Zeng and Hu.

army after the end of the military operation, the capital punishment of beheading would be implemented. Lastly, if the deserted were caught on the spot, they would be executed by the army immediately.²³

An alternative of the deserted would be disappearing without being caught by the army instead of turning themselves in. Disappearing would make punishments of desertion ineffective since punishments were not credible. In this situation, the founders of the Xiang Army utilized a family registration system. When soldiers were officially recruited by the army, they were required to register information of their families for the record. These included the names of their family members and the specific locations of their family members. One of the functions of such a registration system was to complement punishments of desertion, which further disincentivize soldiers to conduct any act of desertion.²⁴ If deserted soldiers decided to disappear to avoid severe punishments, the army would be able to track down their family members in cases that the deserted returned to their family or impose punishment on those family members directly.

The combination of severe punishments and the family registration system posed a credible threat to acts of desertion. Although far from conclusive, some anecdotal observations can be found in the log of implementations of punishments in the Xiang Army (Wang, 2014: 151–157). While there are plenty of cases that commanders and soldiers were punished for their failure in battles, acts of desertions were rarely observed. Most of those cases of desertions were concentrated in the early era of the Xiang Army, which was within 3 years of its establishment, punishments were uniformly immediate executions

4.3 ‘The soldiers belong to the commanders’

To overcome the problem of coordination failure in the imperial army, the Xiang Army adopted a method of personal supervision in recruitments. Under personal supervision, officers at each echelon of the army were personally responsible for recruitments of the echelon that was one level lower than them.²⁵ The personal supervision of recruitments drastically changed the commanding structure of the military institution in the Qing dynasty.

As previously mentioned, to prevent commanders and soldiers from establishing personal connections, commanders of the middle level and above would be rotated to other combat units every several years. Under the personal supervision of recruitments, soldiers would stay with the same commanders who recruited them throughout their services in the army. More importantly, under the method of personal supervision in recruitments, soldiers could not be freely transferred to form temporary battalions for any task force.

Zeng lauded such personal supervision of recruitment:

‘Troops were ... grateful to the officers for selecting them to be put on the rolls as if they had received personal favors from the officers. Since in ordinary times these existed [between the officers and the troops] relation of kindness as well as mutual confidence, in battle it could be expected that they would see each other through hardship and adversity’ (Liu and Smith, 1980: 203).

²³There were also punishments for soldiers’ unintentional acts of abandoning their units, such as absence from battles due to wounds. The soldiers of unintentional desertions would be exonerated if they return to their camp before the end of a military operation. However, they would face serious corporeal punishments and be exiled for 3 years in the western frontier region if they returned after the military operation.

²⁴There were other two functions of the family registration system. One was to enforce disciplines in the army. Recruits were chosen because of their potential combat effectiveness. However, the screening device of recruitment only screened out less-qualified soldiers, not potential bad behaviors of soldiers that would create issues in the army. If soldiers violated disciplines of the army, they could choose to leave the army in order to avoid punishments, as the deserted could. The family registration would be able to track down their family members and impose the same constraints on soldiers regarding the disciplinary issues.

The third function of the registration system was to accurately distribute compensations to family members if soldiers were killed in battles.

²⁵That is, battalion commanders recruited company commanders; company commanders recruited squad leaders; squad leaders recruited soldiers.

The personal recruitment made commanders the center of combat units.²⁶ Soldiers at each echelon only follow orders of officers at echelon one level higher than theirs. This method of ‘soldiers belong to the commanders’ improved the coordination in the army, which greatly increased the cohesiveness between commanders and soldiers in battles, and mobility of the Xiang Army in response to the rebels (Luo, 1984a).

Under the personal supervision of recruitment, the Xiang Army also adopted a unique method of disbanding battalions. If a commander of a battalion were killed, defeated, or retired, this battalion would be disbanded immediately. Soldiers of the battalions would be discharged as well. Zeng (2011d) argued that keeping the battalion active without its original commander would recreate the problem of coordination failure in the Green Standard Army. He worried that soldiers would not follow the new commanders, who did not participate in their recruitment, training, or battles they fought.

This method of disbanding combat units further enhanced not only the soldiers’ incentive to fight but also the cohesiveness between commanders and soldiers in battles. The main objective of a commander in battles is to defeat enemies. In order to do so, he must rely on his soldiers to bravely fight by his sides, besides appropriate battle decisions. To maximize their returns from fighting rebels, soldiers, on the other hand, must incorporate the protection of their commander into their battle decisions. If their commander was killed or the enemies defeated their battalion, the battalion would be disbanded. Once the disbandment happened, soldiers of the battalion would be discharged (Luo, 1984a: 141). The discharge would also terminate their wages in the army and future spoils of war.

There was also uncertainty regarding the length of battalion commanders’ tenure. Soldiers did not know when their battalion commander would be too sick to stay with them, when random shots would accidentally kill their battalion commanders in battles, or when their battalion would suffer defeat. Any of those situations would result in the disbandment of their battalions. Therefore, to ensure they would continue to receive payment from the army and spoils of war, soldiers had to fight hard and protect their commanders in battles, which would increase the possibility for their battalions to remain intact.

5. The performance of the Xiang Army during the Taiping Rebellion²⁷

The overall strength of the Xiang Army can be categorized into three periods, 1854–1856, 1857–1860, and post-1860 during the Taiping Rebellion. The Xiang Army was relatively weaker in the early period between 1854 and 1856. It defeated the rebels and recaptured Wuchang, which halted the momentum of the rebels’ strategy to solidify their military presence in the western expedition (Liu, 1978: 413). The naval force of the army also triumphed by destroying a large fleet of the rebels’ navy at the border of Hubei in the same year. However, it suffered several major defeats in 1855. One of those campaigns resulted in Zeng himself was encircled by the rebels in Nanchang for several months. According to Wang’s record of the army’s campaigns (2014) and the Catalog of Historical Wars (2003), the Xiang Army was defeated three times out of 12 major campaigns in this early period.

²⁶Moreover, battalions were named after the commanders.

²⁷I thank referee 2 for pointing out that the differences in performance between the Xiang Army and the Green Standard Army might have been due to the weakening of the Taiping Rebellions since 1854 when the rebels conducted two expeditions by separating their armed forces. I argue that while the northern expedition eventually failed, and the western expedition had limited success, the military power of the rebels remained strong. As Kuhn argues, the power of the rebels reached its prime in 1856 (Kuhn, 1978: 291). In the same year, they crushed the Great Camp of Jiangnan, which was composed of the best soldiers of the Green Standard Army. Although the subsequent Tianjin Incident, which was an internal political conflict among key leaders of the rebels, was a serious setback for the momentum of the rebels, the military strength of the rebels quickly recovered as they recaptured strategic regions in 1858 under the new military leadership (Kuhn, 1978: 296). The same military leadership had fought with both the Xiang Army and the Green Standard Army since then. In 1860, the rebels were able to defeat the Great Camp of Jiangnan for the second time, which resulted in the death of both supreme commanders of the imperial army. Moreover, historians have agreed that the fighting capacity of the Green Standard Army had been on the decline since the 19th century (Jones and Kuhn, 1978; Kuhn, 1978; Liu and Smith, 1980; Luo, 1984a, 1984b). Ichiko (1980: 383) suggested that the Green Standard Army ‘was of no use’ in the 19th century.

Two major changes in the Xiang Army improved the army's performance further. The first change was the selection of commanders after the mid-1850s. During the early years, the officer corps of the Xiang Army was selected from the civil literati/scholars. It was a practice that was consistent with Zeng's emphasis on discipline and morale of the Xiang Army. Zeng wanted candidates to have a 'spirit of loyalty and righteous duty', and valued these characters of candidates more than military experience in selecting his commanders and officers in the early 1850s (Liu, 1978: 412).

As the size of the Xiang Army expanded, Zeng had started to compromise his standards for the selection of commanders, while maintaining the organizational structure of the army after the mid-1850s (Liu, 1978: 413). Some of his best scholar-commanders had also been killed in battles, while the few remaining scholar-commanders were less fit with commanding soldiers in battles directly. Amidst these situations, illiterate lower-level officers and soldiers with more military experience had started to make their way into high ranks and dominated the echelon of battalion commanders by the end of 1858. Some of them achieved even higher ranks later, such as army group commanders, division commanders, and regiment commanders. Liu (1978: 414) suggests that 'experience showed that frontline duties required stamina rare among scholars, while among the illiterate and the semi-literate, there were brave men who were also brilliant tacticians'. Kuhn (1978: 288) also describes these commanders as men of 'brilliance and ruthlessness', who helped the Xiang Army's power 'grew fearsome'.²⁸ Between 1857 and 1860, the Xiang Army triumphed 12 campaigns out of 13 (Wang, 2014; Catalog of Historical Wars, 2003).

The second major change was in 1860 when the rebels crushed the Great Camp of Jiangnan for the second time. Both top military commanders of the imperial army were killed in the battle. The imperial army was also wiped out in the eastern region of the rebels' capital. The throne had no other choice but appointed Zeng as the imperial commissioner with the supreme military commanding authority in the lower Yangtze River to lead the war against Taiping rebels. At the same time, Zeng was also appointed as the governor-general of the Liangjiang region. As the regional official, Zeng was able to expand his ability to raise more local revenues and channeled more financial support into the Xiang Army. Kuhn (1978: 298) argues that this series of events was the turning point of the campaign against the Taiping rebels and the ultimate determinants of the throne's victory. In the post-1860s, the Xiang Army was undefeated in all 33 campaigns against the rebels (Wang, 2014; Catalog of Historical Wars, 2003).

6. Adoption of the Xiang Army's structure in other armed forces

6.1 *The imperial army*

It was difficult for the imperial army to imitate the organizational structure of the Xiang Army during the mid-19th century. In order to adopt those methods of the Xiang Army, one of the critical steps for the throne to take was to attract high-quality soldiers to join. It could have been done by using a high wage system like the Xiang Army's. The central government could have adopted a high wage system in two ways. First, if the throne wanted to maintain the scale of the imperial army, it could raise the wage of soldiers and commanders by increasing military expenditure. Another way would be reducing the size of the Green Standard Army if the throne did not want to expand the military expenditure. It would concentrate the budgets on the remaining soldiers and commanders and improve their wages. However, the central government faced a dilemma.

On the one hand, if it wanted to increase the military expenditure, the fiscal burden would prevent the central government from doing so. The overall fiscal condition of the central government had been on a decline.²⁹ Ma (2014) argued that a series of events, such as the First Opium War and the Taiping

²⁸This improvement of performance had deteriorated the army's discipline, however. Those capable commanders tolerated soldiers' pernicious behaviors, such indiscriminate killing or destructive pillage, after the capture of a city. The discipline of the Xiang Army never recovered ever since. It was a substantial factor that contributed to the corruption, and the eventual disbandment, of Zeng's Xiang Army after the defeat of the Taiping Rebellions.

²⁹See Jones and Kuhn (1978) for a detailed discussion on the decline of the dynasty since the early 19th century.

rebellions, has depleted the silver reserves of the Ministry of Finance and left the central government mostly bankrupted by the mid-19th century. On the other hand, if the central government attempted to reduce the size of the imperial army, it would create an insufficient number of soldiers in each garrison to maintain imperial orders locally (Luo, 1984b: 348). Therefore, neither way could be a viable option for the central government to reform the imperial army in the 1850s.

Because the throne never intended to abandon the Green Standard Army, it started to consider a reform of the imperial army in 1866.³⁰ However, the plan was halted by the more conservative faction of the imperial court in 1867 (Liu and Smith, 1980: 206). The reform of the Green Standard Army was rekindled when the Nian rebels attacked the capital regions and the subsequent appointment of Zeng as the governors-general of the Zhili region in 1868.

Zeng adapted the Xiang Army structure to the Green Standard Army in the reform, which derived a new branch of the imperial army, the Lian Army, or the Retrained (Green Standard) Army. The Lian Army selected soldiers and lower-level officers from battalions of the Green Standard Army, whose combat performance and quality would be evaluated by their new battalion commanders. Once soldiers and officers were selected by the Lian Army, their wages would increase as well (Luo, 1984a: 207). Zeng also attempted to increase officers' tenure length in the same combat unit to enhance the cohesiveness between soldiers and commanders.

Other provinces quickly adopted Zeng's reform of the Green Standard Army and organized their own Lian Army battalions. The Ministry of War also indicated that the reform was a preferred way to revamp the imperial army (Liu and Smith, 1980: 208). For the rest of the 19th century, these Lian Armies were stationed in revolt-prone areas of provinces. They were able to quell small scale rebellious activities and maintain a general internal peace. However, regional armies were still the main armed forces that could effectively combat enemies in larger-scale campaigns.

6.2 Other regional armies

Because the Green Standard Army had not been a reliable armed force in battles since the mid-19th century, provinces started to organize their own regional armies. The Huai Army (Anhui Army) was established in 1862. Li Hongzhang, who was the commander-in-chief of the Huai Army and once served as one of Zeng's advisors, organized the army based on the structure of the Xiang Army. Among the first 13 battalions of the Huai Army when it was established, eight of those were the best battalions in the Xiang Army and were transferred to the Huai Army (Luo, 1984a: 206). It succeeded Zeng's disbanded Xiang Army in the lower Yangtze region in the 1860s. The Huai Army served the main armed force that quelled another major rebellion, the Nian Rebellion, in 1868. Other regional armies included the Yu Army of Henan, the Dong Army of Shandong, the Dian Army of Yunnan, and the Chuan Army of Sichuan (Liu and Smith, 1980: 202). They were smaller armed forces, but all used the organizational structure of the Xiang Army (Luo, 1984a: 206).

By the end of the 1860s, these regional armies totaled more than 300,000 soldiers across the empire and stationed at strategic defensive locations of each province (Liu and Smith, 1980: 202). These regional armies were generally called the Defense Army (Fang Army) because they constituted the critical components of the national defense of Qing along with the Linan Army for the rest of the 19th century.

7. Conclusion

The rise of the Xiang Army was one of the most critical components of the restoration of the Qing dynasty. It prolonged the reign of the throne for nearly half of a century after the defeat of the Taiping Rebellions.³¹ The army became an essential component of the armed forces of the central

³⁰The imperial court also recognized that the Eight Banners Troops could not be revived easily.

³¹The fiscal decentralization in the post-Taiping Rebellion further exacerbated the principle-agent problem that had caused the decline of the state capacity of the throne. It ultimately contributed to the state failure of Qing in the early 20th century. See Ma and Rubin (2019), Ma (2014), and Sng (2014) for a detailed discussion.

government, while mostly remained independent from any bureaucratic controls from the throne. The army participated and served as the main armed force in most of the major military operations of the central government until its total disbandment in the early 20th century.

The Xiang Army significantly impacted the armed forces in the late Qing dynasty. All the armed forces, both regional armies and the imperial army of the central government, adopted the rules and the structure of the army at different degrees. In this paper, I argue that the Xiang Army overcame the problems that had plagued the imperial army, namely, the poor recruitment and training of soldiers, the low incentive to fight in battles, and the coordination failure in military operations, by setting up a set of rules. First, the army used a high wage system to attract potential soldiers while utilizing a screening device to select participants who met the standard of recruitments. Second, spoils of war, bonuses, injury insurance, and the limitation of the service length ensured soldiers had the proper incentive to fight in battles and achieve victories. Third, a combination of the severe punishments and the family registration system greatly disincentivize soldiers from deserting. Lastly, the coordination failure was mitigated by the personal supervision of recruitment.

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