

Frontier Colonization: Border Defense and Military Systems in the Northern Frontier of the Han Dynasty

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Abstract

This study investigates the evolution of border defense and military institutions on the northern frontier of the Han Dynasty (202 BCE–220 CE), a region continually challenged by nomadic powers such as the Xiongnu. It examines how the Han state combined military, administrative, and agricultural strategies to consolidate frontier governance. Drawing on historical texts and archaeological evidence, the research explores the composition of frontier forces including cavalry, infantry, and vassal troops the construction of military facilities such as fortresses, barriers, pavilions, and beacon towers, and the institutional framework of the Houwang system. Particular attention is devoted to the *tuntian* (military farming) system, which integrated agricultural production with defense and reshaped both the economy and social structure of border regions. The findings reveal that Han border defense was not solely a military undertaking but also a mechanism of political centralization, administrative reform, and cultural integration. This system secured relative frontier stability, extended state control, and reinforced imperial authority, though it also generated tensions that later undermined central power. Overall, the Han Dynasty's frontier defense represented a comprehensive model of governance that profoundly influenced subsequent Chinese dynasties.

Keywords: Han Dynasty; Border defense; Military system; Frontier governance; Military farming

INTRODUCTION

This article investigates how the Han Empire (202 BCE–220 CE) organized and managed border defense along its northern frontier, with particular emphasis on the consolidation of the defense system beginning in the reign of Emperor Wu. It analyzes how the Han government recruited, coordinated, and deployed diverse military forces across the strategic corridor from Hexi to Liaodong to secure trade routes, deter nomadic incursions, and project imperial authority. The central argument is that the Han border defense system operated through a multi-tiered and functionally differentiated structure: county-based cavalry units provided rapid-response capability; *tuntian* (agricultural) infantry ensured logistical support and local control; auxiliary forces from vassal states supplied mobility for frontier campaigns; and centrally commanded garrisons formed the backbone of large-scale operations. Rather than adhering to

a rigid hierarchy, these forces coordinated horizontally, and their combat practices were shaped by geographic conditions, logistical constraints, and ongoing negotiations with local groups.

This study adopts a qualitative historical research approach that integrates close textual analysis with material evidence. It draws upon primary historical sources, such as the *Records of the Grand Historian* (Sima 1959, 385) and the *Book of Han* (Ban 1962, 163), as well as excavated administrative documents, including bamboo slips unearthed in Gansu and Xinjiang, and archaeological reports on fortifications, beacon towers, roads, and garrison sites. A typological analysis of military units and administrative jurisdictions is undertaken, and spatial patterns are interpreted in relation to the region's geographical features and transportation networks.

A brief review of existing scholarship reveals three main areas of inquiry: first, analyses of frontier *garrison cities* and their spatial organization (e.g., Li Yiyu 1994, 49-50); second, studies of the dual military and economic functions of the *tuntian* (military farming) system and its role in stabilizing frontier populations (e.g., Yang Fang 2006, 3-16 and Wang 2007, 90-94); and third, investigations of the beacon-fire and road networks that facilitated rapid command and information transmission (e.g., Fan Enshi 2015, 44-56). While these works have illuminated aspects of urban planning, logistical supply, and communication infrastructure, the composition and coordination of frontier forces across overlapping administrative and ethnic jurisdictions remain insufficiently explored. Drawing upon both documentary and archaeological evidence, this article reconstructs the respective roles and interactions of prefectural and county cavalry, *tuntian* infantry, vassal auxiliaries, and centrally commanded garrisons. It argues that the integrated deployment of these diverse forces constituted the structural foundation of Han frontier governance, transcending a mere top-down extension of imperial authority.

BORDER DEFENSE AND MILITARY SYSTEM IN THE NORTHERN FRONTIER

Amid growing concerns over frontier security, the Han Dynasty implemented a comprehensive and multi-layered system of border defense and military administration to consolidate stability in the north. This system can be broadly divided into two interrelated components: (1) a network of border defense infrastructures, and (2) administrative and agricultural management mechanisms designed to sustain and support military operations (Li 2014, 18; Jiang 2013, 29).

The Han border defense network integrated fortresses, beacon towers, garrison towns, and checkpoints into a coordinated structure that served both military and administrative purposes. These fortifications were strategically positioned along vital routes, passes, and oases to monitor enemy activities and to provide rapid communication through the beacon-fire system. Historical records such as the *Hanshu* (《汉书》) describe how these fortifications were continuously repaired and expanded under Emperor Wu's reign to counter the Xiongnu incursions (Sima 1959, 2895; Zheng 1995, 570). Beyond their defensive role, these installations also functioned as centers of local governance and trade regulation, reflecting the dual military-civil nature of frontier administration under the Han state (Barfield 1989, 95).

Complementing this physical infrastructure was a well-organized system of military colonies (*tuntian*), in which soldiers and relocated settlers cultivated the land to ensure stable supplies of grain and other resources. This practice not only reduced the logistical burden of transporting provisions from the interior but also facilitated the gradual sinicization and economic development of frontier regions (Di Cosmo 2002, 148; Yu 2017, 214). Through this combination of military fortifications, agricultural self-sufficiency, and bureaucratic oversight, the Han court effectively transformed the northern frontier into a stabilized and productive zone

that reinforced imperial control while countering the persistent threat of nomadic incursions (Yang 2019, 53).

BORDER DEFENSE INFRASTRUCTURE

During the Han Dynasty, the imperial government established an extensive system of defensive structures along its frontiers to monitor enemy movements, relay military intelligence, and safeguard strategic locations. Historical sources indicate that this border defense network consisted of four principal types of fortifications as follows: (Zheng 1995, 570):

Sai (塞): Fortified or hazardous frontier zones frequently exposed to incursions from the Xiongnu and other northern nomadic groups.

Barrier (障): Small garrison towns or fortified checkpoints situated at vital passes and crossroads, designed to station troops and repel invasions.

Ting (亭): Strategically positioned outposts or minor fortresses that functioned as intermediate lookout points between larger military installations.

Sui (燧): Beacon towers forming part of the ancient military alarm system, used to transmit urgent messages, by smoke signals during the day and fire beacons at night.

(Zheng 1995, 570)

The integration of these fortifications created a coherent and multi-layered frontier security system that not only safeguarded the empire's borders from external incursions but also reinforced the administrative and military presence of the Han state in peripheral regions. By combining surveillance, communication, and defense within a unified framework, this system enabled rapid coordination of troops, effective governance of frontier territories, and the gradual consolidation of imperial authority across a vast and often volatile frontier landscape.

ADMINISTRATIVE AND LAND-RECLAMATION SYSTEMS

Beyond constructing physical fortifications, the Han Dynasty reinforced its frontier security through a well-organized administrative and agricultural system. Local military authorities not only supervised garrisons and maintained supply routes but also managed large-scale agricultural colonies (*tuntian*), where soldiers and settlers cultivated the land to sustain both themselves and the army. This integrated approach, which uniting governance, agriculture, and defense, was designed to ensure self-sufficiency and long-term stability in the border regions (Li 2014, 19; Loewe 1986, 53; Wang 2020, 212).

Building upon these measures, the imperial court enhanced the system's effectiveness through reforms that tied frontier commanderies and counties more closely to central oversight. Regional governors and inspectors were tasked with monitoring these territories, coordinating logistics, and reporting directly to the capital (Zhao 2018, 87; Hinsch 2017, 142). Meanwhile, newly reclaimed lands were distributed among soldiers and migrant farmers, strengthening local economies and binding the frontier population more closely to the imperial state. Together, these measures exemplify the Han government's strategic vision of transforming remote borderlands into productive and administratively integrated regions under firm central control (Nylan 2010, 224; Tse 2023, 61).

Table 1: Similarities and Differences Between Military Facilities

Dimensions	Ting	Zhang	Sai	Sui
Definition	Post station, for messengers to rest	Border outpost, with defensive function	Frontier fortress, border military stronghold	Daytime alarm facility, smoke alarm
Features	Transportation and communication, government order transmission, and rest area	Military garrison, patrol defense, border inspection	Border defense, prevent enemy intrusion, defend key points	Military intelligence alarm and enemy information transmission
Time	Warring States to Han Dynasty	Warring States to Han Dynasty	Appeared in the Western Zhou Dynasty and became popular in the Han Dynasty	Especially popular in the Han Dynasty
Communication	Manual delivery	Manual patrol and notification	Only used to block the enemy and defend	Smoke transmission (daytime)
Density	Gao (Ten Miles One Ting)	Higher (one obstacle every thirty miles)	Important border checkpoints and dangerous passes	Set points according to daytime visibility
Garrison	Mainly guard post/postman	Small garrison troops	Regular Army	A small number of police officers
Other	Officials rest and patrol the roads	Checking traffic and local security	Trade checkpoints, etc.	Dedicated police call
Usage	All day	All day	All day	Daytime use

Source: Zheng Shan (郑汕), in *The History of China's Frontier Defense* (《中国边防史》) (Social Science Literature Press (社会科学文献出版社), 1995), 570.

The former emperor felt deep compassion for the people who had long suffered from invasions and devastation in the border regions, and their plight caused him great sorrow. In response, he launched a comprehensive effort to repair fortifications, restore damaged beacon towers, and strengthen defensive structures (先帝哀边人之久患, 苦为虏所系获也, 故修障塞, 伤烽隧。屯戍以备之) (Sima 1959, 2895).

Historical records document the extensive construction and reinforcement of the Great Wall during the reign of Emperor Wu of the Western Han Dynasty, reflecting the significant advancement of the empire's border defense system under his rule. During this period, frontier defense reached an unprecedented scale and level of organization. Building upon the foundations established by the Qin Dynasty, the Han court not only preserved and utilized the Great Wall defense system but also extended its reach to secure newly acquired and strategically significant territories. Emperor Wu's expansionist policies were closely

intertwined with the imperative to confront powerful nomadic groups, particularly the Xiongnu, who posed persistent threats along the northern frontier (Li 2014, 18).

In response to this challenge, the Han government not only reinforced the existing Great Wall network but also extended the frontier defense lines further outward. In the Northeast, fortifications and watchtowers were erected to safeguard vulnerable mountain passes and protect newly developed agricultural settlements (Zheng 1995, 570). In the Northwest, the Hexi Corridor emerged as a critical focus of imperial strategy. By securing this region, the Han court controlled the gateway to the Western Regions, thereby ensuring both military security and access to economic opportunities along the Silk Road (Zang 2017, 323). The construction of forts, garrisons, and military colonies throughout the corridor signified the systematic incorporation of frontier territories into the empire's broader defensive framework.

Another strategically significant area was the Hetao region, situated within the great bend of the Yellow River. This fertile yet contested land had long served as a battleground between Chinese states and nomadic groups. During the reign of Emperor Wu, the Han court brought the Hetao firmly under imperial control through the establishment of military colonies and the construction of defensive fortifications (Sima 1959, 2906). These measures not only secured the northern frontier but also transformed the region into a vital source of agricultural production, providing essential support for the large armies stationed along the border.

Emperor Wu's reign represented a decisive turning point in Han frontier policy. By extending defenses beyond the Qin-built Great Wall and investing in new forts and fortified lines across the Northeast, the Hexi Corridor, and the Hetao region, the Han Dynasty established a comprehensive and far-reaching system of frontier governance. This system integrated military power with agricultural colonization and long-term settlement, ensuring both the security of the empire's borders and the consolidation of its territorial expansion (Zang 2017, 323).

By the time of Emperor Xuan, the defense system was becoming more and more perfect. According to the *Book of Han*: "From Dunhuang in the north to Liaodong, it is more than 1,500 miles, and there are 10,000 officers and soldiers guarding it. For several years, thousands of enemies were kept away and could not be harmed (北边,自敦煌至辽东,万一千五百余里,乘塞列燧,有吏卒数千人,虏数千大众久攻之不能害)" (Ban 1962, 2889).

During the Western Han Dynasty, frontier security became one of the most urgent priorities of the imperial court. Defense efforts were concentrated primarily in the northern and northwestern regions, where the threat posed by the Xiongnu confederation was especially severe. As a powerful nomadic polity of the steppe, the Xiongnu commanded highly mobile cavalry forces that frequently raided agricultural settlements and disrupted vital trade routes, posing a constant challenge to the safety of frontier communities and the stability of the empire (Ban 1962, 63).

Faced with this persistent threat, the Western Han court implemented a series of comprehensive military and administrative measures. In the north, the defensive infrastructure inherited from the Qin Dynasty most notably sections of the Great Wall was reinforced and extended to protect vulnerable passes and agricultural settlements. Simultaneously, large numbers of troops were deployed in frontier garrisons to deter incursions and maintain a constant military presence. These defenses were further supported by the construction of watchtowers, beacon-fire systems, and fortified outposts, which enhanced communication across vast distances and enabled rapid mobilization in response to sudden attacks (Jiang 2013, 29).

The northwest, particularly the Hexi Corridor, emerged as a critical strategic zone under Western Han policy. Securing this region not only created a buffer against Xiongnu incursions but also opened access to the Western Regions, thereby laying the groundwork for future trade

along the Silk Road. In an effort to consolidate control, the Han court established military colonies and agricultural settlements, which supplied both manpower and provisions, effectively integrating local resources into the empire's broader frontier defense system. (Jiang 2013, 29).

According to the *Biography of the Xiongnu* in the *Book of Han*, in the second year of Yuanshuo (127 BCE), the Western Han Dynasty “took the land of Henan, established Shuofang, and restored the fortress originally built by Meng Tian during the Qin Dynasty, which was further strengthened by the river (取河南地,筑朔方,复缮故秦时蒙恬所为塞,因河而为固)” (Ban 1962, 3766). This suggests that the term “Sai” likely refers to the Great Wall. Modern archeology research indicates that these “Sai” were not composed solely of rammed earth; they also incorporated natural features such as mountains, valleys, rivers, and were sometimes constructed using materials like timber (Xu 2013, 148). Additionally, the term *Sai* often refers to a specific section of the Great Wall (Li 2014, 131).

According to the *Records of the Grand Historian: Biography of the Xiongnu*, “a barrier is a small city in the mountains (障为山中小城)” (Sima 1959, 2895). Based on this description, a “Zhang” refers to a small, fortified city constructed as part of the Great Wall defense system. However, it is important to note that barriers are not exclusive to the Great Wall. Modern archeology research indicates that similar structures also existed outside the Great Wall. These facilities served as military garrisons affiliated with the broader defense system and were generally larger in scale Ting (Xu 2013, 149).

Ting and Sui were the most basic units of the border defense system during the Western Han Dynasty. *Sui*, also known as a type of pavilion, shared similar structural characteristics and could also be referred to simply as *Ting*. According to historical records, these structures were widely distributed both inside and outside the Great Wall. For instance, the *Book of Han*, in the “Biography of the Xiongnu,” states that “the city was built to block the pavilions to Luqu (筑城障列亭至卢朐)” (Ban 1962, 3776). indicating the extensive presence of such outposts along and beyond the frontier.

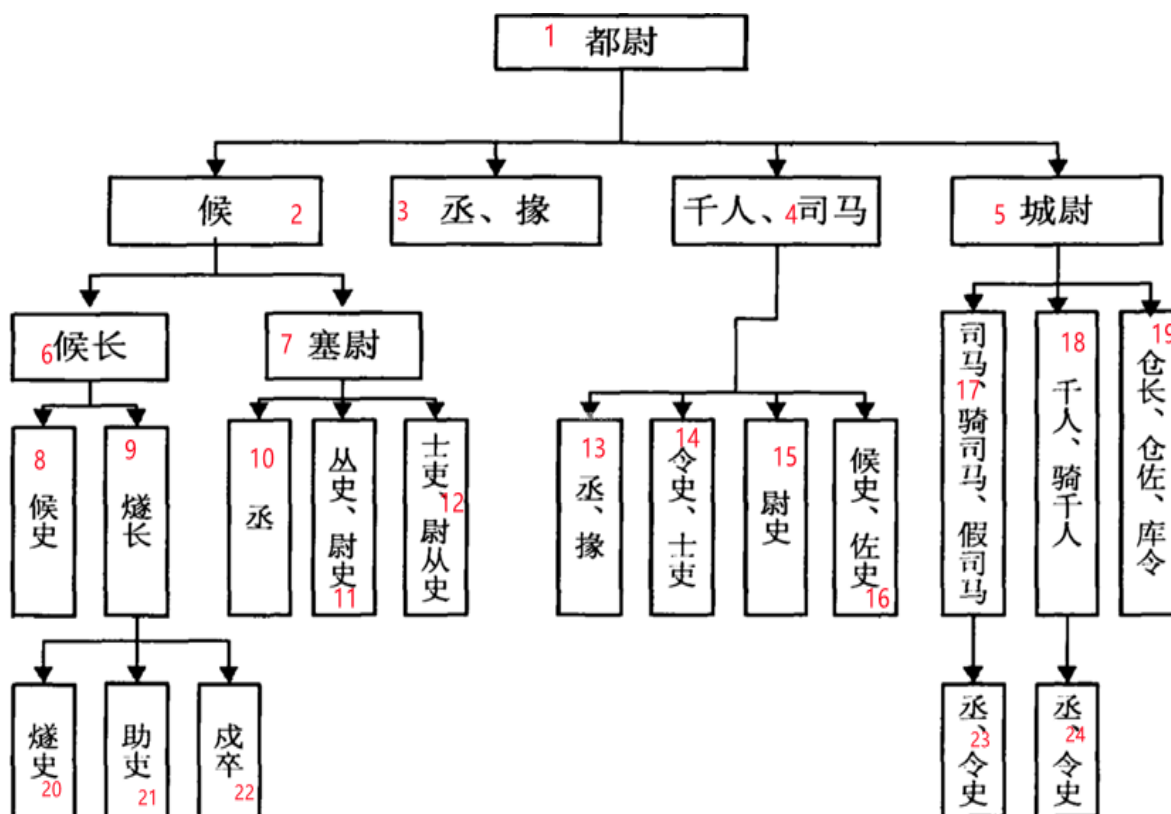
Modern research suggests that both *Ting* and *Sui* were originally established as outposts for relaying information. Among them, *Ting* was generally larger in scale and held limited defensive functions, while *Sui* primarily served as communication beacons or early warning systems (Li 2014, 132). Together, they played a crucial role in the transmission of military intelligence and the defense infrastructure of the Han borderlands.

From the above, it is evident that the border defense system of the Western Han Dynasty was structured with passes and barriers as its main framework, complemented *Ting* as auxiliary components. Passes and barriers served as the primary means of defense, while beacons functioned primarily for communication and information transmission.

THE HOUWANG SYSTEM OF WESTERN HAN DYNASTY

Each defense belt of the Han Dynasty operated under its own leadership structure. These systems, marked by clear divisions of labor and well-defined responsibilities, worked in coordination to form a cohesive administrative framework for frontier defense. In general, this framework followed the directives of the central government, fulfilled its assigned mandate, and ensured the smooth execution of border defense operations (Li 2014, 17). According to *Book of Han*, the Western Han Dynasty established a comprehensive border defense early warning system known as the *Houwang* system. The general structure of this system was as follows:

Diagram 1, Border Defense Administration Leadership System



Source: Jiang Na 江娜, *Study on the Border Defense System of Han Dynasty*, 29.

Translation: 1. Duwei; 2. Hou; 3. Cheng, Yuan; 4. Qianren, Sima; 5. Chengwei; 6. Houzhang; 7. Saiwei; 8. Houshi; 9. Suizhang; 10. Cheng; 11. Congshi, Weishi; 12. Shili, Weicongshi; 13. Cheng, Yuan; 14. Lingshi, Shili; 15. Weishi; 16. Houshi, Zuoshi; 17. Sima, Qi Sima, Jia Sima; 18. Qianren, Qi Qianren; 19. Cangzhang, Cangzuo, Kuling; 20. Suishi; 21. Zhushi; 22. Shuzu; 23. Cheng, Lingshi; 24. Cheng, Lingshi.

The *Han Shu*, "Table of Officials and Ministers" records: "The county magistrate is a Qin-era official responsible for governing the county, holding a rank equivalent to two thousand *shi* (石). The term *shi* (石) was an ancient Chinese unit of volume traditionally used to measure grain. One *shi* was equivalent to ten *dou* (斗). During the Han Dynasty, one *shi* of rice corresponded to approximately 30 kilograms. Rather than receiving monetary salaries, officials of the Han Dynasty were compensated in grain, with the amount determined by their official rank and calculated using this unit of measurement (Ban 1962, 721).

There is also a chancellor, and in border counties, a chief secretary responsible for troops and horses, with a rank of six hundred *shi*. In the second year of Emperor Jingdi's reign, the title was changed to *Taishou* (郡守, 秦官, 掌治其郡, 秩二千石。有丞, 边郡又有长史, 掌兵马, 秩皆六百石。景帝中二年更名太守)" (Ban 1962, 742). This indicates that the *Taishou* was the highest-ranking official in charge of border county administration and defense, with subordinate officials such as chancellors and chief secretaries under his command.

According to historical records, the *Duwei* was originally a county lieutenant responsible for assisting the guards in managing military officers and soldiers. The position

carried a rank equivalent to 2,000 *shi* of grain, while a subordinate official, the chancellor, held a rank of 600 *shi*. In the second year of Emperor Jingdi's reign, the title was officially changed to *Duwei* (掌佐守典武职甲卒, 秩比二千石。有丞, 秩皆六百石。景帝中二年更名都尉) (Ban 1962, 742). This transformation signified the institutional consolidation of local military authority and the rise of the *Duwei* as a pivotal intermediary linking the central command with regional defense administration.

During the Western Han Dynasty, frontier governance increasingly relied on such intermediate offices to maintain a balance between central authority and local administrative innovation. Border counties often contained multiple commanderies, each tailored to specific strategic or economic functions. For instance, Fanzhou Commandery oversaw regional defense, the Cavalry Commandery organized and directed mounted units crucial for mobile frontier warfare, while the Agricultural Commandery concentrated on land cultivation and fostering self-sufficiency in newly settled or contested territories (Li 2014, 102).

Despite their functional specialization, all commanderies within a border county ultimately remained under the authority of the county king. This arrangement allowed the empire to adapt to local conditions whether through military organization or economic management while maintaining a clear hierarchical order. As the central figure, the county king coordinated these diverse institutions, ensuring that commanderies did not develop into independent centers of power (Li 2014, 102).

This arrangement underscores the Han state's dual priorities on the frontier: securing territory through military means while simultaneously fostering agricultural development and permanent settlement. It also reveals a governance model in which differentiated institutions advanced collective imperial objectives, yet operated within a framework that preserved the supremacy of the county king and, by extension, the overarching authority of the Han court (Zheng 1995, 570).

According to the statistics compiled by Chen Mengjia (1980), there were a total of 56 *Duwei* positions across 21 northern counties during the Western Han period. These counties included Dunhuang, Jiuquan, Zhangye, Wuwei, Longxi, Tianshui, Anding, Beidi, Jincheng, Shangjun, Yunzhong, Xihe, Shuofang, Wuyuan, Dingxiang, Yanmen, Daijun, Shanggu, Liaoxi, Liaodong, and Lelang (Chen 1980, 79).

During the Western Han Dynasty, the *Hou* was an official responsible for the defense of the Great Wall. He was known by various titles, including *Hou*, *Zhang Hou*, and *Sai Hou*, and was typically stationed within the frontier defenses. The *Hou* operated under the authority of the *Duwei* and served as the highest-ranking defense officer for every 100 *li* along the border within the *Duwei*'s jurisdiction. His official rank was equivalent to 600 *shi*. Subordinate officials under his command included positions such as *Cheng* and *Shili*. One such subordinate, *Hou Zhang*, served directly under the *Sai Hou* and was responsible for managing sections of the defense zone that were divided and assigned by the *Hou* (Xu 1955, 835).

The chief of a *ting* or *sui* served as the highest-ranking official within the respective administrative unit, overseeing its daily affairs and directing its military operations. As the most fundamental components of the Western Han Dynasty's border defense system, the *ting* and *sui* functioned as localized units responsible for maintaining security along frontier regions. Their sizes varied considerably, typically comprising between one and five individuals, though in some cases the number could be even higher (Xu 1955, 835).

Garrison soldiers were the lowest-ranking personnel within the border defense system of the Western Han Dynasty, tasked with the routine defense of beacons. According to the *Book of Han: Annals of Emperor Xuan*, in the fourth year of the Wufeng era (54 BCE), "the Xiongnu Chanyu offered tribute and sent his brother, King Guli, to serve. Due to the destruction of the border defenses, the number of garrison soldiers was reduced by twenty percent (匈奴单于称

臣,遣弟谷蠡王入侍。以边塞亡寇,减戍卒什二)" (Ban 1962, 241). These soldiers formed the grassroots force of the Great Wall's defensive line. Their composition was highly diverse and generally included the following groups: conscripts serving under the military service system, hired soldiers, troops dispatched from interior counties, and regular soldiers stationed in border regions (Li 2014, 133).

MILITARY FARMING SYSTEM OF THE WESTERN HAN DYNASTY

The Western Han Dynasty inherited the Qin Dynasty's policy of military farming on the frontiers, making it a crucial component of its border defense strategy. The system was first proposed by Chao Cuo (c. 200 BCE - 154 BCE). In the 12th year of Emperor Wen's reign (169 BCE), in response to weaknesses in the northern frontier defenses, Chao Cuo advised the emperor to integrate military farming with border security. Under this system, civilians engaged in farming also served as a militia force, forming a dual-purpose team that supported both agricultural production and frontier defense (Ban 1962, 2286). This system was later gradually promoted and became a custom.

In 127 BCE, during the reign of Emperor Wu of the Western Han Dynasty, the state initiated large-scale military farming following its conquest of the Henan region. These military farming settlements were widely distributed, extending from the northeast and the Hetao area to the Western Regions and the Qiang territories. According to historical records from sources such as the *Book of Han* (*Han Shu*), the primary locations of Western Han military farming included: Shangjun, Shuofang, Zhangye, Wuyuan, Xihe, Beijia, Lingju, Wuwei, Jiuquan, Dunhuang, Juyan, Luntai, Quli, Yixun, Chigu, Cheshi, Bei Xu Jian, Gumo, Huangzhong, Liaodong, and Xuantu (Ban 1962, 3776).

During the Western Han Dynasty, military farming was categorized into two types: military-operated and civilian-operated. The primary form was military-operated farming, which was closely tied to border defense. Soldiers were not only responsible for guarding frontier regions but also engaged in agricultural production. For instance, military farming units stationed in locations such as Yixun (modern-day northeast of Ruoqiang, Xinjiang), Luntai (east of present-day Luntai, Xinjiang), Quli (now Korla, Xinjiang), Chigu (southeast of present-day Issyk-Kul Lake), Cheshi (now Turpan, Xinjiang), and Gumo (present-day Aksu, Xinjiang) bore dual responsibilities: defending the Western Regions and conducting agricultural work (Sima 1959, 2895).

As documented in the *Historical Records*, "The officials who opened up the fields in Shangjun, Shuofang, Xihe, and Hexi sent 600,000 soldiers to the frontier to cultivate the land (上郡、朔方、西河、河西开田官, 斥塞卒, 六十万人戍田之)" (Sima 1959, 1439). This account offers a glimpse into the extent and scale of military farming during the Western Han Dynasty, particularly under the reign of Emperor Wu.

Map 1, Expansion of Han Dynasty



Source: Norton, "The Han Dynasty,"

< <https://nerd.wwnorton.com/ebooks/epub/worldscon4/EPUB/content/7.2-chapter07.xhtml> > [accessed 22 August 2025]

The composition of military settlement personnel in the Western Han Dynasty was largely consistent with that of the garrison troops. For instance, the Yixun (伊循) garrison soldiers were regular troops, as were those under the command of the Wuji (戊己) Colonel, the Yihe (宜禾) Colonel. Additionally, some members of frontier ethnic groups who had surrendered to the Western Han Dynasty were also included among the military settlers (Li 2014, 135).

Military settlements during the Western Han Dynasty can be broadly classified into two types. The first type includes those established in regions such as Yixun, Cheshi, and Chigu, where the primary responsibilities were land cultivation and pacification of neighboring tribes. The second type combined military settlement with border defense, focusing on guarding the frontier and managing settlement affairs. The former was overseen by the Central Lieutenant, while the latter operated as part of the Houwang administrative system (Ban 1962, 742).

According to historical records, the population of frontier settlements during the Western Han Dynasty came mainly from three sources: voluntary migrants who sought new opportunities, people who were forcibly relocated by the government, and those displaced by natural disasters (Ban 1962, 1127). From an administrative perspective, these settlements were placed under a specialized agricultural management system. Local agricultural officials. Such as the Tuntian Xiaowei (屯田校尉Colonel of Reclamation Garrisons), Nong Duwei (农都尉Commandant of Agriculture), and Hutian Duwei (护田都尉Commandant of Household

Agriculture), were responsible for overseeing farming production, land allocation, and population management. All these officials operated under the supervision of the Grand Minister of Agriculture, ensuring centralized control over agricultural colonization and settlement affairs (Xu 1955, 835).

The military farming system of the Western Han Dynasty was a vital component of its border defense strategy. It not only addressed the logistical challenges of supplying frontier troops but also strengthened the overall security of the borders (Li 2014, 102). In particular, the introduction of civilian farming significantly altered the ethnic makeup of border regions and played a crucial role in consolidating and stabilizing these areas.

THE HOUWANG SYSTEM OF THE EASTERN HAN DYNASTY

As previously mentioned, the border defense management system of the Han Dynasty comprised a network of forts, barriers, pavilions, and beacon towers, alongside the Houwang system and the military farming system. The Eastern Han Dynasty inherited and further developed this system from the Western Han. In the seventh year of Jianwu (31 CE), the defensive infrastructure largely destroyed during the interregnum between the two Han periods was restored and rebuilt. For instance, the *Book of the Later Han* records that General Duan Chen (Date of birth and death unknown) was dispatched as an envoy to the Xiongnu and "established their court 80 miles west of the Wuyuan fort (立其庭,去五原西部塞八十里)" (Fan 1965, 2943). In this context, the term "fort", as in the Western Han, refers to the Great Wall.

The term "barrier" is frequently mentioned alongside "Sai". According to the *Book of the Later Han*, "there are barrier commanders in border counties (边县有障塞尉)" who were "responsible for preventing incursions by the Qiang and Yi peoples (掌禁备羌夷犯塞)" (Fan 1965, 3625). This suggests that the barriers established during the Eastern Han Dynasty were similar to those of the Western Han. They were constructed at strategic points along the frontier as auxiliary defense structures. However, these barriers were not exclusive to border regions.

In addition, there were pavilions defensive structures slightly smaller than barriers and often attached to them as well as flints, which were observation and communication facilities connected to both pavilions and barriers. Earth forts, known as docks, were also present. These features are documented in historical records from the Eastern Han Dynasty (Fan 1965, 737).

From the above, it is evident that the border defense facilities of the Eastern Han Dynasty were largely similar to those of the Western Han Dynasty, with the notable addition of structures known as "Wu". Regarding these "Wu", scholar Chen Mengjia (1980) noted that during the Western Han period, "Wu existed beneath the pavilions and watchtowers, divided into inner and outer sections. The walls of the Wu were over 14 feet high, which sometimes led to fatal falls. There were gates for both the inner and outer Wu, guarded by soldiers, and these gates were secured with locks. Steps known as 'Wu steps' were used to ascend to the pavilions and towers (亭台之下有坞,分为内坞、外坞。坞垣高丈四尺余,故有墮而伤要者。内外坞的出入,皆置门户,有卒主之;户有关、戍以闭之,故上升于亭台有坞陞)" (Chen 1980, 154).

Chen (1980) further explained: "Wu structures existed in the Western Han period, as evidenced by multiple references to 'Wu Shang' in Han bamboo slips. The pavilion atop the Wu was likely a fire beacon tower, as described by Xu Shen. Soldiers were stationed within the walls surrounding the pavilion, and the living quarters within were also referred to as Wu. Hence, terms such as 'Wansui Wu' and 'Wu Chang' emerged ("西汉时期已有坞。汉简屡

称“坞上”,坞上之亭如许慎所释乃是燧,而亭下周围坞壁以内屯兵,居室则称为坞,故万岁燧也可称为万岁坞,燧长亦可称为坞长”(Chen 1980, 154).

Historical records indicate that these Wu structures during the Eastern Han period were primarily concentrated in the frontier regions bordering the Western Qiang. The *Book of the Later Han (Hou Han Shu)* notes that “300 Wu were constructed along the Long Road, with troops stationed there (筑陇道坞三百所,置屯兵)” (Fan 1965, 269). These forts functioned primarily as defensive strongholds, strategically positioned to guard vulnerable mountain passes, river valleys, and key routes that the Western Qiang might exploit for incursions. Designed with the dual purpose of surveillance and rapid response, they served both as deterrents against external threats and as protective barriers for the frontier (Xu 1978, 600). Within their walls, garrisons of soldiers remained on constant alert, prepared to repel sudden attacks or launch countermeasures whenever border security was endangered.

The establishment of these forts highlights the Eastern Han Dynasty’s pragmatic approach to frontier challenges. By fortifying the borders against incursions from the Western Qiang, the Han not only protected its heartlands from potential devastation but also strengthened the stability and effectiveness of its frontier administration (Xu 1978, 600). Thus, the Eastern Han continued to maintain the system of Sai, Barrier, Pavilion, and Sui that had been established during the Western Han in the northern border regions. In addition, it introduced the Wu as a new type of defense facility to better guard against threats from the Western Qiang. Based on Records in the *Book of the Later Han*, a fortress is an earthen stronghold designed to house troops for long-term defense an approach well-suited to the frequent uprisings of the Western Qiang during the Eastern Han Dynasty (Fan 1965, 2897).

During the Eastern Han Dynasty, frontier defense maintained the broad framework established in earlier periods, but it also underwent important institutional adjustments. The governor of a frontier county remained the highest-ranking defense official, reflecting the central government’s reliance on local administrators to secure the empire’s borders (Xu 1978, 600). Yet this continuity was tempered by significant reforms, which revealed both the pressures of frontier management and the shifting demands of imperial governance.

One of the most notable features of this period was the merger and reorganization of offices. The Eastern Han court frequently sought to streamline administrative functions by consolidating civil and military responsibilities under fewer officials. This strategy not only reduced bureaucratic redundancy but also enhanced coordination between local administration and frontier defense (Gu 1955, 6294). In areas confronting external threats or internal unrest, such institutional restructuring enabled more direct lines of command and facilitated the rapid mobilization of resources.

The system of marquises and prefects in the Eastern Han Dynasty largely followed the model established during the Western Han Dynasty. This hierarchy included governors, commanders, marquises, marquis-chiefs, ting chiefs, chiefs, garrisons, and soldiers. However, adjustments were made during the Eastern Han period, particularly concerning the administration of commanderies. According to the *Book of the Later Han*, reforms included “abolishing the commanderies of various counties, merging the duties of governors, and eliminating the military examinations (省诸郡都尉,并职太守,无都试之役)” (Fan 1965, 3621). It further notes: “The commanderies in border counties were abolished; only the border regions retained commanderies and subordinate state commanderies, which were slightly subdivided into counties and administered the populace like ordinary counties (省关都尉,唯边郡往往置都尉及属国都尉,稍有分县,治民比郡)” (Fan 1965, 3621). Additionally, “border

counties established commanderies of barriers and forts, tasked with preventing invasions by the Qiang and Yi peoples (掌禁备羌夷犯塞)" (Fan 1965, 3625).

The "Wu" defense system established during the Eastern Han Dynasty primarily functioned as a strategic frontier arrangement against the Western Qiang. This system formed part of a broader defensive network integrating military garrisons, administrative oversight, and agricultural settlements (Li 2014, 242).

These highlight the Eastern Han's pragmatic approach to frontier defense. By preserving the authority of the county governor while reshaping the institutional framework around him, the dynasty upheld continuity with established tradition even as it introduced reforms to address emerging challenges. This careful balance between tradition and innovation illustrates the adaptive character of Han frontier governance and underscores how administrative flexibility was essential to sustaining imperial authority in turbulent border regions (Gu 1955, 6294).

MILITARY FARMING SYSTEM OF THE EASTERN HAN DYNASTY

According to *Book of the Later Han*, frontier farming during the Eastern Han Dynasty was significantly less prosperous than in the Western Han period (Fan 1965, 2909). In the Eastern Han, frontier agricultural activities were primarily concentrated in regions such as Hetao, the Western Regions, Hexi, and Northeast China. In the eighth year of Emperor Ming (28 CE–75 CE, reigned from 57 CE–75 CE) Yongping reign (65 CE), the Eastern Han Dynasty began cultivating land in the Hetao region (Fan 1965, 111). By the sixteenth year of Yongping (73 CE), agricultural development had also extended to the Western Regions. Historical records indicate that cultivation was primarily concentrated in areas such as Jinpu City of the Later Cheshi Kingdom, Liuzhong City of the Former Cheshi Kingdom, as well as Yiwu, Loulan, and surrounding locations (Fan 1965, 2909).

In the Hexi region, land cultivation had already begun in the early Eastern Han period, notably when Dou Rong (16 BCE–62 CE) took control of the area (Fan 1965, 111). Subsequently, the imperial court continued relocating populations to promote agricultural development in Hexi. The Han court recognized that stable agricultural production was vital for sustaining garrisons, provisioning trade outposts, and securing long-term control over the frontier. In pursuit of these objectives, the Han government frequently relocated families from the interior provinces to the Hexi region, granting them land, tools, and official assistance to establish new farms. (Fan 1965, 796). In many cases, entire communities including soldiers' families, government personnel, and skilled farmers were moved together, enabling rapid cultivation and the creation of durable settlements. This policy not only enhanced agricultural output but also functioned as a defensive measure. By settling the corridor with loyal subjects, the Han court established a human buffer against incursions by the Xiongnu and other nomadic groups (Fan 1965, 796). The expansion of agricultural colonies secured a dependable grain supply for the military, reducing reliance on costly shipments from the capital and thereby reinforcing the stability of frontier defense.

According to *Book of the Later Han*, on land cultivation in the northeastern frontier during this period are relatively sparse (Fan 1965, 261). However, studies suggest that while cultivation in the northern borderlands was less extensive compared to the Western Han Dynasty, it exhibited a distinctive feature in terms of personnel composition: many of the settlers were death-row prisoners from various counties and kingdoms. These individuals were granted a one-level sentence reduction and permitted to bring their wives to the frontier, where they were tasked with agricultural settlement (Fan 1965, 121).

In summary, the Han Dynasty significantly enhanced its frontier defense system by building upon the foundations laid by earlier regimes. The Han frontier defense structure was

composed of fortifications such as barriers, pavilions, watchtowers, and a system of military farming. Centered around the Great Wall as its main axis, the Han established a comprehensive defense network across the vast borderlands, integrating surveillance, early warning, and defense functions.

This system enabled timely monitoring of frontier activities, effective resistance against invasions, and the maintenance of border stability. The watchtower system functioned as a well-organized command and control structure, involving county governors, military commanders, watchtower chiefs, pavilion officials, and garrison soldiers. Together, they coordinated defense efforts in an efficient and hierarchical manner.

Additionally, the Han Dynasty implemented standardized military farming settlements across its northwestern, northern, and eastern frontiers. These settlements, primarily military but including some civilian elements, were overseen by frontier county governors, specialized frontier agencies, and school lieutenants. These soldier-farmers played a dual role: they contributed to the development of frontier regions and served as a crucial force in upholding border security.

CONCLUSION

The border defense system of the Han Dynasty gradually evolved into a comprehensive structure encompassing military leadership, force composition, the construction of defensive engineering works, and the delineation of responsibilities for border management. This system served as a crucial military foundation for the governance of both Western and Eastern Han dynasties and reflected distinct characteristics of its time. The Han Dynasty's approach to border defense played a significant role in the empire's development and exerted a lasting influence on subsequent generations.

The establishment of the border defense system had a profound and lasting impact on the political structure of the Han Dynasty. Border defense was not limited to the military realm; it also served as a tangible expression of the national political system in frontier regions. Through the development of border defenses, the Han Dynasty advanced the refinement of its political institutions and reinforced the stability of the state. In essence, the Han border defense efforts played a key role in consolidating the autocratic and centralized governance system. The Han Dynasty initially strengthened its control over the frontiers by implementing and reforming the county system. Building upon the territorial foundation of the Qin Dynasty, the Han established an autocratic, agriculturally based centralized state. Its domain stretched to the Yellow Sea and East China Sea in the north and the central Korean Peninsula, the Yin Mountains in the north, Central Asia in the west, the Gaoligong and Ailao Mountains in the southwest, and central Vietnam and the South China Sea in the south.

Seeking to strengthen governance over its vast frontier, the Han Dynasty expanded its administrative framework, improving and extending the county system into the border regions. Numerous counties were established along the frontiers, serving as the most powerful administrative units in these areas. These counties were not only essential for border defense but also instrumental in reinforcing the centralized authority of the Han government.

As part of broader efforts to enhance administrative oversight, the Western Han court appointed regional inspectors (or governors) who were tasked with patrolling and supervising the governance of prefectures, counties, and districts. During the reign of Emperor Ling of Han, in response to the Yellow Turban Rebellion, the role of inspectors evolved into that of governors, who held authority over both military and political affairs within a prefecture. Around this time, prefectures were also formalized as administrative regions.

By the late Eastern Han period, each prefecture was governed either by an inspector or a governor, depending on the individual's status and influence. While this reform initially aimed

to enhance administrative efficiency, it inadvertently laid the groundwork for regional fragmentation. Empowered governors and local elites grew increasingly autonomous, especially in frontier areas, undermining central authority. As a result, the very system designed to strengthen centralization eventually became a catalyst for local separatism and political instability, contributing to the decline of the Eastern Han Dynasty.

Secondly, the establishment of frontier defense officials, the reform of the official system, and the incorporation of administrative practices from ethnic minority groups represent significant developments in the Han Dynasty's state administrative structure. For certain frontier affairs that could not be effectively managed under the standard county system, the Han court established specialized institutions and appointed dedicated officials. These included positions such as the Protector of the Wuhuan and the General Who Pacifies Liao, responsible for the Wuhuan and Xianbei peoples in the northeastern frontier; the General Lieutenant of the Xiongnu, overseeing the Xiongnu in the northern regions; the Protector of the Qiang in the west; the Vassal State Commandant, in charge of tributary states; and the Protector General of the Western Regions, who administered affairs in Central Asia.

These officials were high-ranking representatives stationed in border areas, appointed by the central government and directly accountable to the imperial court. They functioned as both administrators and military commanders, safeguarding the frontiers while also overseeing civil governance. Their responsibilities extended to appeasement policies, reward distribution, regulation of ethnic minorities, trade, diplomatic relations such as imperial audiences and tribute, and integration of border areas into the imperial system. They also managed garrison troops and military-agricultural colonies, playing a key role in maintaining border security and stability.

In frontier regions inhabited by ethnic groups that had submitted to Han rule, the dynasty often retained traditional governance structures by appointing local ethnic leaders to administer their own communities. This policy of "governing according to old customs" reflected a pragmatic approach that respected local traditions while enhancing administrative effectiveness and promoting stability in these diverse regions.

Whether appointed directly by the central government or drawn from grassroots ethnic minority communities, frontier defense officials were neither isolated nor autonomous entities. Within a given region, officials across various levels of the frontier defense hierarchy operated within a well-defined system of responsibilities, division of labor, and cooperative relationships, forming a structured chain of command. In matters of defense, from grassroots beacon towers and barriers to administrative fortresses, and from garrison troops to prefects and colonels, there existed a clear stratification of duties and authority.

Particularly in the face of incursions or harassment by members of the same ethnic group, multiple defense systems such as the border surveillance network, combat response mechanisms, and urban defense structures functioned independently yet remained interrelated. The administrative framework of border counties, including full-time lieutenants and palace guards' generals, worked in tandem, while multiple local power institutions were established to cooperate, provide mutual oversight, and ensure accountability to the Han imperial authority.

Nevertheless, due to practical necessities, high-level positions were at times consolidated under a single individual, leading to the concentration of significant frontier defense power in one person's hands. Even so, the Han court's fundamental principle in appointing such officials remained grounded in the pragmatic demands of border defense and the evolving dynamics of ethnic relations along the frontier. This approach reflected an ongoing process of refinement in both the border defense system and the broader Han bureaucratic structure.

The establishment of the border defense system marked a significant shift in frontier society, transitioning it from loosely organized governance to one defined by institutional

regulation and formal norms. Border defense encompasses not only military operations but also a wide range of administrative and civil affairs, resulting in a governance structure in border counties that reflects a deep integration of military and political functions.

This system oversees all administrative activities in border regions, including day-to-day governance, economic development, trade regulation, diplomatic affairs, and the maintenance of social order. While the border defense apparatus ensures security, it also promotes the orderly development of frontier society, thereby reinforcing border stability.

Although the fusion of military and political authority may appear to hinder centralized governance, the unique characteristics of frontier regions marked by social fluidity and volatility necessitate a strong central authority. Such a power center is essential for managing diverse affairs, coordinating resources, and unifying efforts. In essence, the political structure of the Han Dynasty's frontier regions was both autocratic and centralized, reflecting the demands of effective border governance.

In border regions, governors and county governors were regarded as "parent officials," serving as the highest-ranking authorities within their respective jurisdictions. They exercised centralized local governance, reflecting the broader autocratic and hierarchical nature of China's feudal system. This form of governance characterized by centralized control extending from local to central levels was a defining feature of autocratic rule in imperial China.

Key measures to strengthen centralization included the refinement of the county system in frontier areas, the reform of the official bureaucracy, and the central government's comprehensive oversight of frontier affairs. These efforts enhanced the central authority's control over local regions and helped establish a structured relationship between the inland heartland and the peripheral frontier.

On one hand, this centralized control supported the consolidation of border defenses and contributed to the stability and development of frontier areas. On the other hand, a strong and secure border was itself a vital pillar of the centralized state's enduring authority.

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