

Interaction and Integration: Economic Exchanges and Trade Networks in the Northern Borderlands of the Han Dynasty

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Abstract

This study examines the economic and trade dynamics of the Han Dynasty's northern frontier, a region shaped by both conflict and exchange with nomadic groups such as the Xiongnu. It investigates how state economic policies influenced frontier society and its integration with the Han heartland. Drawing on historical records and archaeological evidence, the paper analyzes agricultural colonization, animal husbandry, garrison economies, and official trade markets (*guanshi*). The findings show that frontier development, though highly militarized, was economically indispensable. *Tuntian* farming and horse breeding supplied critical resources for defense, while border trade facilitated the exchange of silk, grain, and manufactured goods for steppe horses, furs, and livestock. Despite persistent warfare and economic vulnerability, sustained state investment and tribute-trade systems fostered a hybrid economy that linked agrarian and nomadic networks. The study concludes that the northern frontier was not a peripheral zone but a strategically vital corridor that ensured imperial security, promoted cross-cultural integration, and contributed to the rise of the Silk Road. These insights underscore the central role of economic governance in Han frontier policy and highlight its lasting significance for understanding early Chinese border management before 220 CE.

Keywords: Han Dynasty; Northern Frontier; Economy; Trade; Xiongnu

Introduction

Formation and Role of the Northern Frontier Economy

The northern border of the Han Dynasty (Western Han 202 BCE–9 CE, Eastern Han 25 CE–220 CE), stretching across the grasslands of present-day Inner Mongolia and parts of Central Asia, was a vital zone where conflict and commerce converged. While this region is often viewed through the lens of military confrontations particularly with the nomadic Xiongnu (匈奴) tribes it also played a crucial role as a conduit for trade, resource exchange, and cultural transmission. Far from being isolated or solely militarized, the northern frontier refers to the marginal region where the

Han Dynasty engaged in interaction, communication, confrontation, and control with northern grassland ethnic groups such as the Xiongnu, Xianbei (鲜卑), and Wuhuan (乌桓) from the Western Han to the Eastern Han periods. This area roughly encompasses central and southern Inner Mongolia, northern Shanxi (山西), northern Shaanxi (陕西), Ningxia (宁夏), and the Hexi (河西) Corridor in present-day Gansu (甘肃). The economy of the Han Dynasty developed into a dynamic, interactive system that closely connected the agrarian society of the Han heartland with the nomadic economies of the northern steppes (Zou 2001, 13). In summary, the following research questions can be raised: 1. How did the geographic and ethnic composition of the Han Dynasty's northern frontier shape its dual role as both a defensive zone and a trade corridor? 2. In what ways did the interactions between the Han heartland and nomadic groups (e.g., Xiongnu, Xianbei, Wuhuan) transform the frontier into an integrated economic system? These questions will be addressed in the Economic Investigation of the Northern Frontier section.

Imperial Policies and Economic Integration

During the reign of Emperor Wu (汉武帝, 156 BCE–87 BCE; reigned 141 BCE–87 BCE) of Han and his successors, the Han court implemented an ambitious northern border policy that combined military colonization with economic integration (Zou 2001, 61). To stabilize the region and support logistical needs, the Han Dynasty established garrison towns, agricultural settlements (known as Tuntian 屯田), and administrative counties. These measures were not only defensive in nature but also formed part of a broader economic strategy aimed at exploiting border resources and promoting trade (Zou 2001, 176). Grain cultivation and animal husbandry were actively encouraged in frontier outposts, with the state supporting these efforts through immigration incentives and infrastructure development. Significant investments were made in constructing roads, defensive fortifications, and postal systems to enhance connectivity between the empire's heartland and its frontier regions (Zou 2001, 311).

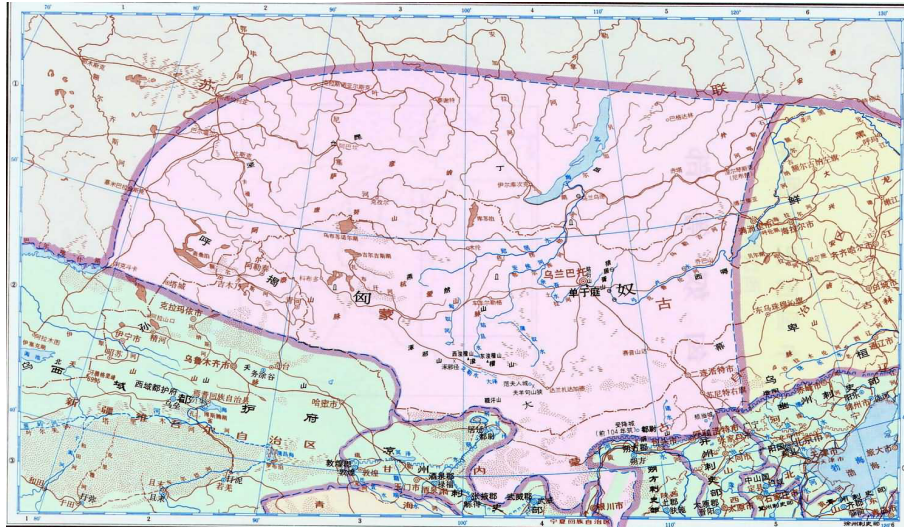
Trade with grassland nomadic and semi-nomadic peoples, particularly the Xiongnu, also played a vital role. Despite their often-confrontational relationship with the Han Dynasty, the Xiongnu maintained significant economic exchanges with the Han, especially through marriage alliances and formal tribute-trade systems. Horses, furs, livestock, and other rare steppe commodities flowed southward, while the Han supplied silk, grain, wine, iron, and luxury goods in return (Zou 2001, 352). Even during periods of conflict, informal trade and smuggling persisted, underscoring the deep interdependence between the two societies. These exchanges not only helped to alleviate regional resource shortages but also laid the groundwork for the early Silk Road, ultimately extending the Han Dynasty's commercial reach into Central Asia and beyond (Zou 2001, 357). In summary, the following research questions can be raised: 1. How did Han Dynasty's policies of military colonization reshape the economic landscape of the northern frontier? 2. How did tribute-trade and informal exchanges with the Xiongnu reflect both conflict and interdependence in frontier relations? These questions will be addressed in the Border Economy and Border Defense section.

Economic Investigation of the Northern Frontier

The economy of the "northern frontier" exhibits distinct characteristics that set it apart from the mainland, marked by strong military and political influences (See Figures 1 and 2 for maps of the northern borders during the Western and Eastern Han dynasties. These maps indicate that the northern frontier of the Han Empire was primarily situated on the Mongolian Plateau and

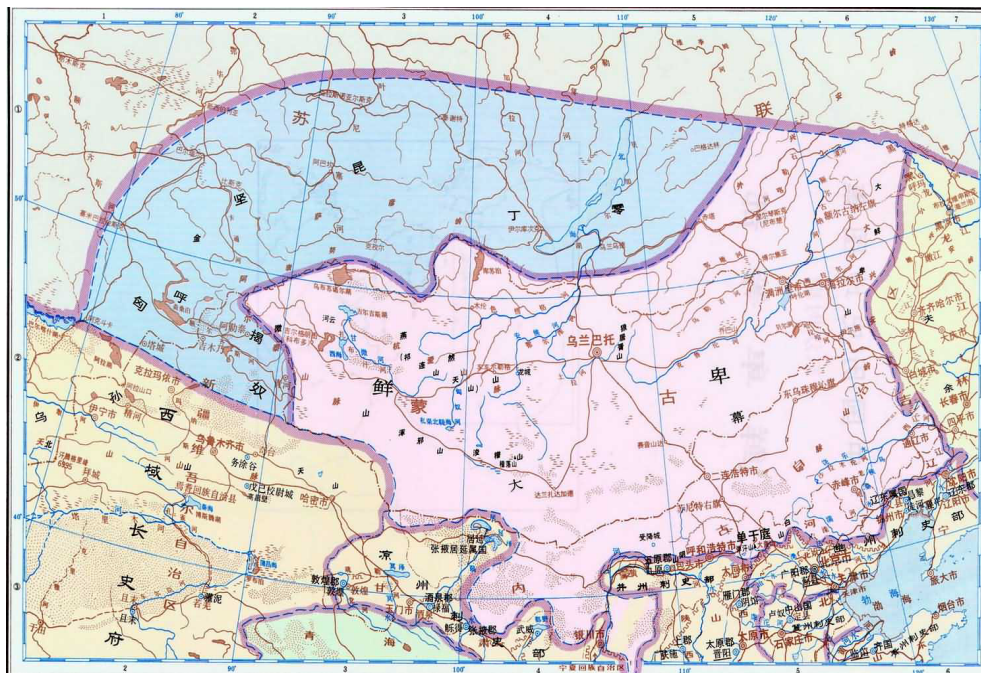
characterized by a nomadic economy, which stood in marked contrast to the agriculture-based production systems of the inland regions). Its development has faced significant challenges, and it tends to lack economic independence. These traits largely stem from complex ethnic relations and the imperial governance policies implemented in the region.

Figure 1: Map of the Northern Frontier of the Western Han Dynasty



Source: Tan Qixiang 谭其骧, *Atlas of Chinese Historical Geography*, 39.

Figure 2: Map of the Northern Frontier of the Eastern Han Dynasty



Source: Tan Qixiang 谭其骧, *Atlas of Chinese Historical Geography*, 67.

Local conflicts and large-scale wars were central to the communication and interaction between the Han Dynasty and the northern ethnic groups, with periods of complete peace and stability being relatively brief. Recognizing this objective reality, the Han government had to formulate and implement corresponding governance policies, which inevitably had a significant impact on the economy of the northern regions.

During the reign of Emperor Wen (汉文帝, 203 BCE-157 BCE, reigned from 180 BCE to 157 BCE) of the Han Dynasty, the court implemented Chao Cuo's (晁错 c.200 BCE-154 BCE) border management policy with notable success. However, life on the frontier differed significantly from that in the inland regions, exhibiting distinct characteristics. This reality compelled the court to adopt a policy that integrated military personnel with civilians, underscoring both strategic military considerations and political objectives.

The local standing army in the Han Dynasty was often referred to as "county soldiers" and "knights." Among their key sources were the organized border residents who had undergone military training. In times of peace, these individuals engaged in various forms of productive labor; they were farmers, artisans, or herdsman. In times of war, they fulfilled their national duties by donning military uniforms, taking up arms, and quickly assembling as "county soldiers" and "knights" to defend against enemy invasions and suppress rebellions by foreign tribes (Sima Qian 1959, 1439).

These laborers represented an integral part of social productivity. In the border regions, including the northern frontier, laborers embodied a dual identity: they were both producers and soldiers. As a result, the social and economic structure of these areas reflected a dual character deeply influenced by both military and political imperatives.

In addition to military and political immigrants, the northern frontier also hosted many garrison troops and their dependents, which inevitably influenced the local socio-economic landscape (Zou 2001, 132). In other words, since the population along the northwestern border during the Han Dynasty consisted primarily of military settlers and active-duty soldiers made up a significant portion of the local residents' social life in the region bore a distinctly military character. Consequently, the nature of folk trade was naturally shaped by this cultural influence.

The discussion above highlights the impact of those living and working in the "northern frontier" on the broader socioeconomic landscape. The region's economic activities were not only essential for sustaining local life but also strategically aligned with the nation's military and political objectives. This dual role was deeply embedded in the fabric of frontier society. Residents functioned simultaneously as farmers, artisans, and herders, while also serving as potential soldiers ready for mobilization. As a result, the frontier's economic output, whether in agriculture, handicrafts, or animal husbandry, was inextricably linked to military preparedness.

Agricultural production in the "northern frontier" society carried significant political and military implications. As the foundation of Han society, agriculture was essential to both the stability of the people and the strength of the state (Zou 2001, 176). In the frontier regions, the development of agriculture not only ensured the livelihood of local populations but also served as a political tool to suppress foreign threats (Zou 2001, 138). Consequently, it was highly prioritized by the central government.

For instance, during the early Eastern Han Dynasty, it was reported that "the cities west of the Qiang were mostly intact and strong, with fertile and well-irrigated fields that were easy to rely on (Fan Ye 1965, 835). If the Qiang were allowed to remain in Huangzhong, they would pose a long-term threat and should not be ignored (破羌以西域多完牢, 易可依固; 其田土肥壤, 灌

溉流通。如令羌在湟中，则为害不休，不可弃也)” (Fan Ye). In response, the emperor ordered the governor of Wuwei (武威) to relocate all the foreigners in Jincheng (金城). Over 3,000 people were moved back to their original towns. The imperial government then appointed local officials, repaired city walls, constructed forts, reclaimed paddy fields, and actively promoted both agriculture and animal husbandry, leading to a period of prosperity and stability in the region (Zou 2001, 13). It was likely under such measures that the Han government secured the political success described as “even the Qiang beyond the Great Wall came to seek peace (譬说塞外羌，皆来和亲)” (Fan Ye).

The northern frontier posed distinctive challenges for the Han state, representing both opportunity and vulnerability. Fertile lands suitable for cultivation existed alongside the constant threat of hostile nomadic powers, most notably the Xiongnu. Supplying garrisons from the interior was costly and logistically complex due to vast distances and limited transport infrastructure (Zou 2001, 311). Military farming provided a practical solution. During periods of relative peace, soldiers were tasked with cultivating fields, producing grain and other necessities locally (Zou 2001, 311). This practice reduced reliance on long and expensive supply lines, thereby alleviating the financial burden on the central government.

Beyond its economic role, military farming also fulfilled a defensive purpose. Agricultural settlements were deliberately established near garrisons and along critical transport routes. These fields functioned not only as sources of sustenance but also as visible markers of imperial authority (Zou 2001, 13). By cultivating the land, soldiers and their families transformed frontier zones into semi-permanent communities, reclaiming territory that might otherwise have remained under nomadic control. In this way, agriculture became an instrument of territorial consolidation (Zou 2001, 176).

Moreover, military farming reinforced the Han government’s broader vision of agriculture as the foundation of the state. Guided by Confucian ideology, Han rulers consistently emphasized the primacy of farming in sustaining the population, stabilizing society, and securing political order (Zou 2001, 138). On the frontier, this principle acquired a strategic dimension: to defend the empire meant to cultivate its borders. Grain was thus more than sustenance it was a weapon. By ensuring that armies were provisioned through local production, the Han government preserved military strength while reducing exposure to external threats and the risks of internal supply shortages (Zou 2001, 132).

The animal husbandry of the "Northern Frontier" society was closely intertwined with political and military imperatives. A prominent example of this is horse breeding and the associated "horse policy" (Zang 2017, 323). In national warfare, cavalry forces played a crucial role, creating a substantial demand for horses across the empire. Knights from various counties within the "Northern Frontier" made up a significant proportion of these cavalry forces. Whether state-owned or privately raised, horses in this region were primarily military assets, constituting a vital part of the border society's war reserves (Zang 2017, 323).

Wartime losses of horses were considerable, prompting the government to implement numerous measures collectively referred to as the "horse policy" to replenish and expand the equine population (Zang 2017, 200). The "Northern Frontier" thus became a critical region for the development and execution of these policies. For instance, during the reign of Emperor Wu, the government encouraged private livestock breeding in border counties: officials loaned out broodmares to civilians, who returned them after three years, while one-tenth of the offspring served as a form of tax payment to support military needs, particularly in Qinzhong (秦中) (Ban Gu 1962, 1172).

After the reign of Emperor Wu, the Han dynasty pursued an ambitious policy of frontier expansion and consolidation, particularly in the northwest. A key element of this strategy was the establishment and enlargement of state-run stables and pastures, institutions that carried both economic and political weight (Zou 2001, 56). These facilities not only supplied the cavalry with essential horses but also embodied the state's authority in contested borderlands (Zou 2001, 56). In this way, the development of the stables was at once a practical response to military demands and a tangible expression of imperial governance on the frontier.

Horses occupied a central place in Han military strategy. Confronted with the mobility and formidable cavalry of the Xiongnu and other steppe nomads, the Han court quickly recognized the indispensable role of mounted forces in both defending the borders and conducting deep campaigns into the steppes (Zang 2017, 300). During the reign of Emperor Wu, whose wars against the Xiongnu were costly and protracted, the state responded by massively expanding government-managed pastures. Concentrated in the Hexi Corridor and other key locations in the northwest, these pastures were designed to secure a steady and reliable supply of warhorses, ensuring the sustainability of the empire's cavalry (Zang 2017, 200).

The role of these ranches extended well beyond horse breeding. Their establishment brought the direct occupation of frontier lands by state officials, soldiers, and laborers. Through the appropriation and cultivation of land for horse pastures, the Han government transformed territories that might otherwise have remained under nomadic influence into zones of imperial control (Zang 2017, 150). In this way, the stables became instruments of territorial consolidation, embedding the Han dynasty's presence in regions where agriculture, settlement, and military preparedness converged.

These ranches demanded substantial investment of state resources. They required laborers to sustain fodder production, administrators to oversee the herds, and military personnel to protect them from raids. In some cases, they were integrated into larger frontier agricultural schemes, linking horse breeding with grain cultivation and the supply networks of garrisons. Their operation illustrates how the Han government sought to build a self-sufficient frontier economy, lessen dependence on long-distance transport from the Central Plains, and strengthen resilience in the face of warfare (Zou 2001, 352). Horses, fodder, and grain thus became interdependent components of a sophisticated frontier logistics system.

The economic strength and material supply capacity of border regions are relatively limited. If a country's political or military operations in these areas are overly extensive or prolonged, they may not only result in material shortages but also inflict hardship on local populations. During relatively peaceful periods, the "northern frontier" also assumed the role of supporting surrendered ethnic groups, highlighting the political dimensions of the region's socioeconomic structure. For instance, after Huhanye Chanyu (呼韩邪单于? -31 BCE, Reigned from 58 BCE to 31 BCE) submitted to the Han Dynasty, the imperial court "transferred 34,000 bushels of glutinous rice to the border regions to provide sustenance (转边谷米糲, 前后三万四千斛, 给赡其食)" (Ban Gu). Such aid from the Han government to ethnic groups like the Xiongnu undoubtedly deepened interethnic relations and contributed to the stability of border society.

Another defining characteristic of the social economy along the "northern frontier" is its underdevelopment and limited autonomy. Frequent invasions and plundering by foreign tribes often disrupted normal social and economic activities. For instance, in 115 CE, "the Xianbei in Liaodong surrounded Wuliu County, and the prefectures and counties joined forces to defend and clear the fields, but the Xianbei gained nothing (辽东鲜卑围无虑县, 州郡合兵固保清野, 鲜

卑无所得)" (Fan Ye). While such "defensive clearing of the fields" could thwart the invaders' goals, the negative impact on the local social economy was undeniable.

Conversely, if the soldiers and civilians in border regions were to relax their vigilance and shift their focus entirely toward economic production, the consequences could be even more severe. Military campaigns conducted by the empire also significantly influenced the economic development of the "northern frontier". Under the system that unified military and civilian responsibilities, imperial operations whether for defense or offense often led to the long-term, large-scale withdrawal of labor from agriculture, handicrafts, and other productive sectors in frontier society (Zou 2001, 207).

The Han dynasty's military campaigns on the northern frontier required not only soldiers and horses but also vast quantities of food and supplies. To meet these demands, the court frequently conscripted local officials and civilians, compelling them to serve as transport laborers (Chen 1980, 79). Many of these individuals were drawn directly from nearby border regions, communities that were already under considerable strain.

Transporting food and military supplies from the Central Plains to distant garrisons was both costly and uncertain. To ease this burden, the state relied on local residents to carry provisions, thereby reducing the risks and expenses of long-distance transport. Yet this strategy shifted the weight of hardship onto frontier households, which were compelled to divert labor away from farming and other essential subsistence activities (Chen 1980, 80).

The impact on the frontier was severe. The relentless demands of transport service and *corvée* compounded the burdens of military conscription, taxation, and the disruptions of warfare. Local officials, too, were caught between imperial expectations and regional realities, pressed to fulfill state requisitions while struggling to preserve stability within their jurisdictions (Chen 1980, 79).

The economic development of the "northern border" faces numerous challenges, and the livelihoods of its people remain insecure necessitating a policy shift from the central government. Politician Chao Cuo, in particular, advocated for state-led initiatives to stabilize immigration and promote the socio-economic development of frontier regions. His proposals underscore the limited economic and social self-sufficiency of border areas, including the northern frontier (Ban Gu 1962, 2286). During the Han Dynasty, the central mainland actively supported the "northern" regions through various forms of economic aid. However, even during the relatively stable Peace period, the northern border remained economically underdeveloped and heavily reliant on the central government. In times of social unrest and mass displacement, such dependency becomes even more concerning.

It is worth noting that the social and economic development of the Han Dynasty's "northern frontier" achieved remarkable progress. Even during times of social unrest, the region witnessed moments of cohesion between different social strata and the cultivation of prosperity in areas (Chen 1986, 881). However, these advancements were significantly constrained in both time and scope. As a result, their overall influence remained limited and was insufficient to fundamentally alter the economic character of the "northern frontier" during this historical period.

The inland society of the Han Dynasty formed the backbone of the empire, serving as the primary source of tax revenue and labor. Its prosperity was inseparably linked to the stability of the state, placing it at the heart of the national economy. Unlike the border regions where heavy military obligations and shifting conditions of frontier defense created uncertainty the inland areas enjoyed relative security. This stability fostered the steady growth of agriculture, handicrafts, and commerce, establishing a dependable foundation for state finances. The inland economy not only

sustained the imperial court and its vast bureaucracy but also ensured a consistent flow of resources for frontier defense and territorial expansion. In this sense, the inland regions stood in contrast to the borderlands: while the frontiers projected the empire's outward strength, the inland society embodied its inner resilience and enduring economic vitality (Chen 1986, 881).

According to the *Book of Han*, during the reign of Emperor Xuan, Gong Sui (龚遂 Date of birth and death unknown) was appointed governor of Bohai (渤海) (Ban Gu 1962, 3637). He led by example in practicing frugality and encouraged the people to engage in agriculture and sericulture. He ordered every household to plant an elm tree, one hundred radish plants, fifty onion plants, and a row of chives. Each family was also required to raise two sows and five chickens. When he saw some people carrying swords, Gong Sui instructed them to sell the weapons and purchase oxen instead, remarking, "Why carry swords that could be exchanged for oxen and calves?" (Ban Gu 1962, 1396). In spring and summer, the people were directed to work in the fields; in autumn and winter, they were urged to harvest and store grain. Every household was further instructed to preserve as much food as possible, including fruits, water chestnuts, and water caltrops (Ban Gu 1962, 1367). Politician Gong Sui himself traveled widely to offer comfort and encouragement. Under his governance, every family accumulated savings, officials and commoners alike enjoyed prosperity, and crime and lawsuits disappeared (Ban Gu 1962, 3640).

What Gong Sui promoted in Bohai County was the traditional smallholder economy of ancient China an agricultural foundation supplemented by minor sideline activities. The primary goals of this system were to stabilize social order, secure a reliable source of state taxes and labor, and strengthen governance through economic development (Ban Gu 1962, 805). Although this model served political purposes, it differed notably from the frontier economy, which was heavily militarized and lacked autonomy.

This policy of supporting the small peasant economy was later adopted by governors. For instance, on the Bingyin day of the second month in 86 CE, the imperial court issued an edict to officials in counties such as Changshan (常山), Weijun (魏郡), Qinghe (清河), and Julu (钜鹿). The edict stated: "Many fertile fields remain untilled. These lands should be allocated to the poor for cultivation, with grain seeds provided. The land must be fully utilized let none lie idle (今肥田尚多, 未有垦辟。其悉以赋贫民, 给与粮种, 务尽地力, 勿令游手)" (Fan Ye).

Another significant manifestation of the inland economic development during the Han Dynasty was the prevalence of the farm economy, particularly evident in the Eastern Han period. One notable example is *Cui Shi's* (崔寔 ?-170 CE) *Monthly Orders of the Four People* (《四民月令》), a text that reflects the agricultural practices of landlord estates. The book offers a detailed account of agricultural activities throughout the twelve months of the year and also includes content on animal breeding, animal husbandry, and handicraft production (Ebrey Patricia 1974, 173-205). For example, in the case of procurement activities, please refer to Table 1.

Table 1: Goods Bought and Sold Throughout the Year at the Estate of Cui Shi

Month of the Year	Bought	Sold
2	Charcoal, Firewood	Glutinous Millet, Soya, Lesser Beans, Hemp, Wheat, Unhusked Millet
3	Hempen cloth	Glutinous Millet
4	Regular Barley, Scrap Silk Wadding and Huskless	Not recorded

5	Regular Barley, Wheat, Silk Floss, Hempen, Silk Cloth, Straw and Huskless	Soya, Lesser Beans, Sesame
6	Wheat, Thick, Thin Silk, Huskless Barley	Soya Beans
7	Thick, Thin Silk, Wheat, Barley	Soya and Lesser Beans
8	Glutinous Millet, Leather Shoes	Seed Wheat or Barley
10	Soya, Lesser Beans, Hemp Seeds, Unhusked millet	Thick silk, silk, and silk floss
11	Husked, Unhusked Millet, Lesser Beans, Hemp Seed and Non-Glutinous Rice	Not recorded

Source: Ebrey Patricia (1974), in "Estate and Family Management in the Later Han as Seen in the Monthly Instructions for the Four Classes of People", *Journal of the Economic and Social History of the Orient*, 17 (2): 173–205.

Book of the Later Han (《后汉书》) records identify the Cui family as a prominent lineage from Zhuo County, Anping (涿郡安平 modern-day Anping, Hebei河北) (Fan 1965, 1703). Thus, the contents of *Monthly Orders of the Four People* likely mirror the production and management activities of the Cui family's estate. This text can also be regarded as a microcosm of the farm-based economy that characterized the Jizhou (冀州) region during the Han Dynasty.

Archaeological discoveries further support the development of the inland farm economy. Since 1949, numerous Eastern Han tombs have been excavated in regions such as Wen'an (文安), Langfang (廊坊), Nanpi (南皮). These tombs, typically single- or multi-chamber brick structures with passageways and corridors, contain a wide range of burial items including pottery towers, granaries, stoves, wells, figurines, livestock models, tables, and sometimes soul jars (Chinese Archaeological Society 1990, 151).

The tall and imposing pottery towers, along with granaries and soul jars, suggest that the tomb occupants held high social status most likely local officials or powerful elites. In the context of Han funerary practices, which emphasized "treating the dead as if they were alive (视死如生)," these burial objects reflect the lifestyle of the deceased and offer insight into the widespread landlord estate economy that flourished between the northern frontier and the inland areas of Youzhou (幽州) and Jizhou during the Han Dynasty (Chinese Archaeological Society 1990, 151).

In short, the northern frontier and the inland economy of the Han Dynasty differed markedly. The inland economy, centered around the Yellow River basin, was agricultural and governed by a bureaucratic system. It relied on intensive farming, tax collection, and trade along the Silk Road, resulting in a stable and densely populated region. In contrast, the northern frontier, bordering the nomadic Xiongnu territories, maintained a militarized economy focused on defense. It featured garrisons, fortresses, and horse breeding, and was less agriculturally productive, depending more on state subsidies and trade with nomadic groups. These distinctions reflected the inland region's emphasis on economic productivity and the frontier's strategic need for security.

Border Economy and Border Defense

The economy serves as the foundation for a nation's stable development and is a key indicator of regional prosperity and order. Since Emperor Wu of the Han Dynasty initiated frontier expansion, trade between border regions, the counties of the Central Plains, and the states of the Western Regions became increasingly frequent (Sima Qian 1959, 2879). Markets and fairs of various scales emerged across the frontier, often situated along major transportation routes, county seats, and other densely populated areas.

The widespread establishment of these border markets and the vibrant exchange of goods played a crucial role in enabling frontier garrisons to fulfill their duties effectively, thereby providing strong support for the development of the border economy. Particularly during periods when the Han Dynasty maintained close relations and active exchanges with ethnic minorities, economic activity along the borders reached unprecedented levels (Sima Qian 1959, 2879).

Compared to inland trade, border trade exhibited distinctive features. The diversity of participants ranging from Han officials to ethnic minority traders resulted in a variety of economic and trade practices. These included official exchanges through government-sanctioned markets and diplomatic missions, commercial transactions by garrison troops, commodity sales by transport renters, and grassroots-level folk trading. Collectively, these activities reflected the flourishing socio-economic landscape of the frontier regions (Sima Qian 1959, 2879).

The concept of "guanshi" (official trade markets) has a long history, dating back to the pre-Qin period (Before 221 BCE) (Sima Qian 1959, 2870). In the early Han Dynasty, official markets had already been established as the designated venues for economic and trade exchanges between the Han Empire and various ethnic minorities. They also served as the primary channels for the Han people to engage in commerce with neighboring groups such as the Xiongnu and Donghu (东胡) (Sima Qian 1959, 2870).

In the Western Han period, the Xiongnu emerged as the most powerful nomadic group on the northern frontier. Due to their nomadic lifestyle characterized by constant migration in search of water and pasture, they had a pressing need for the material goods produced in the agrarian Central Plains of the Han Dynasty (Ban Gu 1962, 3801). For the amount of silk and silk fabrics presented by the Han court to the Xiongnu leaders, please refer to Table 2. Also, through *guanshi* trade, the Han acquired valuable goods such as horses, cattle, leather, and wool from the north, which were considered important strategic and economic resources.

Table 2: Gifts from the Han Court to the Xiongnu Leaders

Year (BCE)	Silk Loss (Measured in Catties)	Silk Fabric (Measured in Bales)
51	1500	8000
49	2000	9000
33	4000	18000
25	5000	20000
1	7500	30000

Source: Yu Ying-shih (1967), in *Trade and Expansion in Han China: A Study in the Structure of Sino-barbarian Economic Relations*, 272.

At the same time, the *guanshi* system functioned as part of the Han government's appeasement and frontier control policies. The state used its abundant supplies offering luxury

goods, honorary titles, and access to official markets to foster peaceful relations and ensure stability along its borders. The Xiongnu, who lacked stable production capabilities, greatly valued Han products, especially iron tools, silk fabrics, and other manufactured goods, which they regarded as precious commodities (Ban Gu 1962, 3801).

The Han-Xiongnu conflict endured for centuries, yet beneath the persistent tension, trade between the Han dynasty and the Xiongnu nomads was never entirely severed. Instead, it reemerged intermittently, reflecting the enduring strength of economic necessity even amid prolonged hostility.

At the core of this phenomenon was the interdependence between the two great powers. The Han dynasty, sustained by its stable agricultural economy, supplied textiles, grains, and luxury goods highly valued by the Xiongnu elite. In return, the Xiongnu controlled access to horses, livestock, and steppe products essential to the Han military and frontier society. Although official campaigns sought to weaken the Xiongnu, persistent demand for these resources ensured the continuation of trade whether through state-sponsored negotiations, regulated border markets, or informal cross-border exchange (Sima Qian 1959, 2880).

The persistence of trade amid conflict underscores a broader historical reality: even in periods of hostility, the pursuit of survival and prosperity could transcend divisions. The tenuous yet enduring ties between the Han and Xiongnu exemplify the intricate balance of rivalry and cooperation that defined the early Eurasian frontier.

After Zhang Qian opened up the Western Regions, several important transportation routes were established: the Juyan (居延) Road connecting Hexi, the Silk Road linking the Western Regions with Central Asia, and the "Straight Road" that ran directly from Guanzhong to Jiuyuan. These routes significantly strengthened trade relations between the northwestern frontier and the Western Regions during the Han Dynasty (Sima Qian 1959, 2880).

During the Eastern Han period, the government frequently established *guanshi* (关市) (also known as *heshi* 合市 or *hushi* 互市) markets with the Xiongnu, and trade through these markets continued to flourish (Ban Gu 1962, 3801). However, these customs markets primarily served as a political tool for the Han government to weaken the Xiongnu and exert control over neighboring states, rather than as a means of economic gain. In fact, the Han Dynasty often treated these markets as diplomatic sacrifices "opening the markets and giving generously (通关市, 饶给之)" (Ban Gu).

Despite considerable concessions, the Han court did not receive essential goods in return. Instead, they acquired items like pearls, armor, rhinoceroses' horns for the palace, and dragon-patterned horseshoes for the emperor (Ban Gu 1962, 3801). The elite were supplied with luxury goods such as prized horses, fish eyes, sweat-blooded horses, elephants, and lions. These items had limited value in advancing productivity and carried minimal economic significance.

In summary, the primary objective of the Han Dynasty's foreign relations was to establish connections with the countries in the Western Regions, counter the threat posed by the Xiongnu to national security, and maintain peace along its borders. As a result, the Han Dynasty's interactions with these countries were largely characterized by an unequal tributary system, reflecting a suzerain-vassal dynamic. In this system, neighboring states demonstrated their political submission to the Han by offering modest tribute, while the Han Dynasty reciprocated with generous gifts as a gesture of appeasement. This diplomatic strategy enabled the Han to indirectly preserve border stability and foster peaceful interstate relations.

On the other hand, border counties are often situated in remote and desolate regions, characterized by sparse populations and underdeveloped agricultural economies. Since the reign of Emperor Wu of the Han Dynasty, large numbers of garrison troops have been stationed in these areas, with many permitted to bring their families (Sima Qian 1959, 2870). This policy significantly increased the population density of border regions and stimulated the growth of a commodity-based economy. The daily living expenses of military officials and soldiers relied, to a considerable extent, on market supplies. In turn, the presence of garrison troops brought vitality and opportunities for the development and prosperity of local markets. The two factors military presence and market growth were closely interconnected (Ban Gu 1962, 3800).

The frontier garrisons and local residents have become closely intertwined in their social lives. Both groups engage in market activities selling their surpluses and purchasing what they need. While many of the garrisons' supplies are funded by the central government, geographical and environmental constraints limit the extent of this support. As a result, the garrisons cannot rely entirely on official provisions and must supplement their needs through trade with local residents, exchanging goods for agricultural products, sideline produce, and handmade items (Sima Qian 1959, 2880).

Many garrison officers and soldiers were stationed in frontier regions where supplies were scarce and difficult to obtain (Cultural Relics Editorial Committee 1981, 140). The flexibility of the market economy compelled them to rely on trade to secure essential goods and currency. At the same time, the growing importance of money in acquiring supplies spurred officials within the garrison to actively pursue currency. Some began hiring others to engage in border trade on their behalf, leading to an increase in both the variety and volume of goods in circulation. Officially, the participation of a large number of garrison personnel in market activities was seen as a driving force behind the development and prosperity of frontier markets (Sima Qian 1959, 2880).

Meanwhile, the circulation of currency, grain, and cloth in the border regions created a localized economic system. Within this limited space, resources were distributed through market mechanisms, with garrisons and residents obtaining what they needed and merchants facilitating trade (Cultural Relics Editorial Committee 1981, 140). This dynamic formed an integral part of the broader commodity economy.

Conclusion

The economic and trade dynamics of the Han Dynasty's northern frontier reveal a region that was far from marginal or peripheral; rather, it was integral to the empire's survival and expansion. While often overshadowed by accounts of military confrontation with the Xiongnu and other nomadic groups, the northern borderlands emerged as a hybrid socio-economic zone where agrarian, pastoral, and mercantile systems converged under the supervision of imperial governance.

The northern frontier lies within the borderlands, where economic development has historically lagged due to factors such as geography, climate, transportation, and population density. A significant disparity existed between the border economy and that of the Central Plains, which severely limited the Central Plains dynasties' ability to effectively integrate and control these regions sometimes even triggering border crises. Relying solely on political or military force proved insufficient for sustainable governance of the northern frontier. In response, the Han Dynasty implemented a range of economic policies and strategies aimed at strengthening national security and maintaining social stability.

During the Han Dynasty, the government fostered economic exchange and regional harmony between the Central Plains and the northern frontier through various strategic measures, such as relocating populations to border areas and establishing large-scale garrison farms. By leveraging economic development as a unifying force and trade as a practical means, the dynasty facilitated sustained interaction between the two regions.

The northern frontier functioned primarily as a militarized economy. Its demographic composition dominated by military settlers, garrisons, and migrants bound production and defense inextricably together. Soldiers simultaneously served as farmers and herders, cultivating crops, raising horses, and maintaining constant readiness for war. This dual role allowed the Han court to reduce dependence on costly, long-distance supply lines, thereby securing the frontier and facilitating territorial expansion. In this way, agriculture and animal husbandry became strategic instruments of state power.

Agricultural and sideline products primarily grain and daily necessities such as silk fabrics from the Central Plains steadily flowed into the northern frontier. In return, the northern regions supplied livestock goods, especially high-quality horses, to the Central Plains. This reciprocal exchange significantly increased the supply of warhorses for the central government, met the inland officials' demand for leather and livestock products, and gradually reduced the economic disparity between the frontier and the interior.

Equally significant was the role of trade, both formal and informal. Through official tribute-trade systems, marriage alliances, and regulated markets (*guanshi*), the Han court secured vital supplies of horses, livestock, and other steppe products essential to its military and frontier society. In exchange, nomadic groups received silk, grain, wine, iron tools, and luxury goods. Despite recurrent warfare, exchanges endured sometimes openly sanctioned, at other times carried out through smuggling revealing a deep interdependence that neither side could fully sever. These economic ties, moreover, laid the groundwork for the Silk Road, transforming the northern frontier into a transregional corridor of exchange and diplomacy.

These policies helped maintain social stability along the northern border and reinforced the authority of the Central Plains regime. Key initiatives, including land reclamation and development, horse administration, and the expansion of transportation infrastructure, further enhanced economic connectivity. Barter trade, in particular, strengthened links between the heartland and the frontier, promoted the circulation of goods, and stimulated economic growth in the northern regions.

When set against the inland economy anchored in smallholder agriculture, sericulture, and landlord estates the distinctiveness of the frontier becomes more apparent. The inland regions cultivated stability, surplus, and bureaucratic regularity, generating the tax revenue and manpower that sustained the empire. The frontier economy, by contrast, was reactive, militarized, and often precarious, oriented less toward long-term productivity than toward maintaining defensive capacity and strategic leverage. This asymmetry highlights the complementary roles of core and periphery: the heartland as the stable source of taxation and labor, and the frontier as the buffer zone of defense and exchange.

The northern border has long been home to a diverse range of ethnic groups and complex interethnic relations. Owing to its unique geographical location, the region differs from the Central Plains in terms of economy, culture, language, and customs. During the Han Dynasty, policies were adjusted in response to the region's specific conditions and evolving border dynamics. The dynasty adopted a range of complementary strategies, leading to effective governance, promoting

economic development in the northern frontier, and making significant contributions to the formation and expansion of early Chinese territory.

In conclusion, the northern frontier of the Han Dynasty was a strategically vital corridor that shaped the course of imperial defense, commerce, and cross-cultural integration. Its economy, though constrained by militarization and dependency, proved indispensable in securing horses, grain, and other critical resources for the empire. Its markets and tribute systems, though often politically driven, laid the groundwork for the long-distance networks that would evolve into the Silk Road. Far from being a peripheral outpost, the frontier stood at the center of the Han vision of unity, prosperity, and expansion an enduring testament to the pivotal role of border economies in the making of empire.

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