

# A Study of Officials Responsible for the Management of Military Rations at Shanhai Pass in the Late Ming Dynasty

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## Abstract

After the Liaodong Incident in the 46th year of Wanli, the situation in Liaodong worsened. The fall of Liaodong and Shenyang in the first year of Tianqi made Shanhaiguan the frontline against the Jurchens and a strategic gateway to the capital. The concentration of troops and changes in maritime grain supply caused a sharp rise in military provisions revenue and expenditure around Shanhaiguan, overwhelming existing institutions. To improve provision management, the court set up specialized agencies including the Shanhaiguan Provisions Bureau and Maritime Transport Office in the first year of Tianqi. Under the supervision of the Governor-General and Provincial Governor, the Provisions Bureau oversaw the collection, allocation, registration and budgeting of military supplies, while the subordinate Maritime Transport Office managed in-kind procurement, financial affairs and maritime transportation. This system enhanced logistics efficiency in Shanhaiguan and coastal areas, eased supply shortages in Liaodong, and supported the temporary stabilization of the military situation there in the late Tianqi and early Chongzhen periods.

## Keywords

Shanhaiguan; military provisions administration; military rations.

## 1. Introduction

After the loss of vast territories in Liaodong in the late Ming, Shanhaiguan's strategic role was transformed from 1621 (the first year of Tianqi) into the capital's direct defensive gateway and frontline. In response to its geographic importance, large-scale troop deployment, military supply management, and altered maritime transport routes, the Ming court established the Shanhaiguan Provisions Bureau, Shanshi Military Prefecture, and Maritime Transport Office in the same year. A dedicated Shanyong Circuit Inspector was appointed in 1631 (the fourth year of Chongzhen), completing the formal establishment of Shanhaiguan's military provision system. These logistical institutions evolved naturally from Shanhaiguan's long-standing function as a key supply gateway. Although their operations and financial records were highly complex, they provide crucial insights for studying Shanhaiguan's changing status, Liaodong's military supply scale and system, the military structure of the Ji-Liao region, the Liaodong military situation, and even national finance in the late Ming.

## 2. A Review of the Academic History

With regard to the issue of military provisions in the late Ming period, previous academic research on the supply of provisions to Liaodong has been extensive. It has primarily focused on analyses by scholars such as Guo Songyi, Shimizu Taiji and Fang Xing, who examined the specific amounts of provisions allocated to Liaodong in the late Ming period, clarifying the details of each instance of additional provisions; Scholars such as Lin Meiling, Wang Qingpu and Chen Xiaoshan have conducted research on the methods of transporting provisions to Liaodong, particularly maritime transport and its evolution; Scholars such as Su Xinhong and Li Yiqiong

have examined the management and planning of the Liaodong provisions by central institutions such as the Taicang, the Ministry of Revenue, and the Ministry of War; Scholars such as Guo Songyi, Yang Tao and Zeng Meifang have examined the consequences of the additional levies on Liaodong provisions during the late Ming period, including the collapse of the fiscal system, the increased burden on the people, social unrest and the outbreak of uprisings across the country. However, in summary, academic research on the collection, expenditure, allocation, transport methods and official appointments regarding Liaodong provisions at Shanhai Pass remains insufficient, leaving considerable scope for further in-depth study.

Furthermore, regarding the officials involved in the management of military rations in the Shanhaiguan region, academic attention has largely focused on provincial governors and military commanders. The former includes studies by scholars such as Jin Runcheng on the changes in the locations of provincial governors and military commanders during the late Ming period, covering the changes in the locations and historical development of the Jili Governor-General, the North Zhili Provincial Governor, the Shuntian Provincial Governor, the Liaodong Provincial Governor and the Shanyong Provincial Governor, all of whom administered the Shanhai region; Scholars such as Lin Qian, Guan Wenfa and Chao Xiaohong have examined the origins and historical development of the provincial governors and military governors, focusing on the background and reasons for the establishment of the General Governors and Provincial Governors, the evolution of their powers, and their impact on various aspects of Ming politics, economy and society; Scholars such as Shen Weiqi and Zhang Jinkui have conducted a detailed analysis of the powers of the Governor-General and Provincial Governor, examining the process by which their authority shifted from a focus on supervisory powers to an emphasis on military authority, as well as their specific powers in areas such as the supervision of military affairs, the management of provisions and rations, and the assessment of officials. The latter includes investigations into the military defence system in the Shanhaiguan region—covering the system of military commands and garrisons, the Nine Frontier Garrisons system, and the system of provincial governors and military commissioners—by scholars such as Zhuang Hefeng, Xia Ran and Xiao Lijun; as well as studies on the historical development of military garrisons in Shanhaiguan by scholars such as Xiao Lijun, Wang Wenjuan and Bi Aonan. Furthermore, whilst some scholars have already drawn attention to administrative bodies such as the Shanhaiguan Military Supply Office and the Maritime Transport Bureau, which were directly responsible for the collection, expenditure and distribution of military provisions in Liaodong—for example, Li Huayan's analysis of the revenue and expenditure of the Shanhaiguan Military Supply Office during Wang Jianhou's tenure (1627–1628)—Zeng Meifang has noted the monthly reporting system of the Shanhai Rations Bureau, whilst Wang Qingpu has traced the evolution of Qinhuangdao's maritime status in ancient times, highlighting the background to the establishment of the Maritime Transport Bureau during the Ming Dynasty and some of its functions. However, on the whole, existing research has not conducted comprehensive, targeted studies of this institution, nor has it fully appreciated the vital role it played in the management of provisions and logistics in the Shanhaiguan region, and indeed across the entire Ji-Liao region. Consequently, this paper intends to take the Shanhaiguan Rations Office and the Maritime Transport Bureau as its primary points of entry, linking them with the governors and provincial governors of the Shanhaiguan region, in order to gain a preliminary understanding of the management of military rations in the Shanhaiguan region from the Tianqi era onwards.

### **3. Governors-General and Provincial Governors**

The Governor-General of Ji-Liao was the highest-ranking official in the Liaodong region during the late Ming dynasty. This office evolved from the Ji Zhou Inspectorate established in the 21st

year of the Jiajing reign (1542) and was formally renamed Governor-General in the 29th year (1550), with its headquarters established in Miyun; it has remained a permanent post ever since. According to the \*Chronological Table of Ming Governors and Provincial Commissioners\*, the Governor-General of Ji-Liao exercised authority over the three provincial commissioners of Shuntian, Baoding and Liaodong, as well as the four garrisons of Jizhou, Changping, Liaodong and Baoding. Although the boundaries of his jurisdiction underwent some changes due to the situation in Liaodong, the Shanhaiguan region remained under his jurisdiction from the very beginning and never changed. Under the Governor-General, there was also the post of Provincial Commissioner, who was subject to the Governor-General's authority and consulted with him on matters of governance. In the fifth year of the Xuande reign (1430), the imperial court dispatched Cao Hong, Right Vice-Minister of the Ministry of Justice, to serve as Provincial Governor of North Zhili. Since its establishment, the post of Provincial Governor of North Zhili had been abolished on multiple occasions, and its jurisdiction had undergone repeated changes; however, it was not until the eighth year of the Chenghua reign (1472), following the establishment of the Provincial Governor of Shuntian, that Shanhaiguan was separated from North Zhili and placed under the latter's jurisdiction. Subsequently, as Shanhaiguan was situated at the boundary between the jurisdictions of the Liaodong Provincial Governor and the Shuntian Provincial Governor, and due to factors such as the continuous contraction of the Liaodong Provincial Governor's territory following military defeats, the administrative affiliation of Shanhaiguan remained unclear. At one point, a chaotic situation arose where two provincial governors simultaneously exercised jurisdiction over the area. Consequently, upon the recommendation of Sun Chengzong, in the fourth year of the Chongzhen reign (1631), the imperial court established the post of Inspector-General of Shan-Yong specifically to administer Yongping Prefecture and the Shanhaiguan region. From that time until the fall of the Ming dynasty, Shanhaiguan remained within the jurisdiction of the Inspector-General of Shan-Yong. As senior local officials in the late Ming dynasty, one of the key responsibilities of the Governor-General and the Provincial Governor was to oversee the administration of grain and military provisions. They exercised macro-level control over the management of grain and provisions, namely by deploying, governing and supervising the specific administrative bodies responsible for grain and provisions within their jurisdictions, thereby exercising overall command over these matters. For instance, in the fifth year of the Longqing era, Liu Yingjie, the Governor-General of Ji-Liao, formulated an overall plan for the following year's tax grain and military provisions, proposing to the central Ministry of Revenue: "In the prefectures of Shuntian and Yongping and their subordinate counties and districts, commencing next year, all tax grain and fodder destined for the capital and the frontier, as well as the grain reserves for the frontier in Fengrun County, the grain in the garrisons, military camps and military farms, tun beans, and autumn green fodder for horses and mules, shall all be priced in silver in accordance with the precedent established in Yongping in previous years, and wealthy households shall be ordered to pay in kind. The silver previously allocated for transport to the capital and mutual aid shall be deducted from the annual silver disbursements from the Imperial Granary to make up the shortfall." Furthermore, according to the research of scholar Wang Zunwang, the specific duties of the Provincial Governor in the management of military rations also included: adjusting the number of relevant administrative staff in accordance with the complexity of financial and grain affairs; proposing solutions to problems arising during the collection and expenditure of funds and grain; supervising the collection and expenditure of rations; and impeaching corrupt officials.

#### 4. Border Rations Bureau

As the institution responsible for managing grain and rations nationwide, the Ministry of Revenue bore the primary responsibility for managing military rations in border garrisons. The so-called Rations Bureau, namely the Ministry of Revenue's Sub-Bureau for the Supervision of Border Rations, was an institution that dispatched officials from the Ministry of Revenue to oversee military rations in border garrisons or strategic locations. In the first year of the Tianqi era (1621), the court established the Shan-Hai Rations Bureau specifically to manage rations in the Shan-Hai region. Due to its jurisdiction and the nature of its officials, this Rations Bureau was also known by the alternative names of the Inland Rations Bureau and the Shanhai Household Department Sub-Bureau. Since its establishment, there have been a total of 17 officials serving as Chief Clerks of the Shanhai Rations Bureau, most of whom held the rank of Langzhong or Chief Clerk within the Ministry of Revenue and were responsible for overseeing the grain and military provisions in the Shanhai region. Upon its initial establishment, the Mountain and Sea Provisions Bureau were responsible for both the collection, expenditure and distribution of military provisions within and beyond Shanhai Pass. However, as the bureau within the Pass managed provisions for the regions beyond the Pass remotely, this proved to be highly impractical. Consequently, upon the recommendation of Yuan Chonghuan, Huang Chenghao and others, in the sixth year of the Tianqi era, the court established a separate provisions bureau in Ningyuan to manage provisions for the regions beyond the Pass. From then on, the Shanhai Rations Bureau was primarily responsible for matters concerning rations within the pass. As the saying goes, 'The Shanhai Rations Bureau handles a single task, yet oversees the inflow and outflow of millions of taels of grain and money, with a web of complexities', it occupied a pivotal position within the grain and rations management system of the Ji-Liao region, exerting a profound influence on the course of the war and even on the nation's fiscal operations.

Specifically, the duties of the Shan-Hai Rations Bureau were as follows: Firstly, the allocation and distribution of provisions and pay for the troops. The Bureau was responsible for supplying a vast number of recipients, primarily the regular officers and men stationed in the Liaodong region, as well as the designated horses. According to statistics compiled by Bi Ziyang, there were just over 110,000 officers and soldiers on the established strength in the Liaozuo region. From the third year of the Tianqi era to the first year of the Chongzhen era, although the monthly rations fluctuated from year to year, on average the Shanhai Rations Bureau was required to allocate 24.8398 taels of silver per month to each officer and soldier.[i] Furthermore, as can be seen from the table below, in addition to the monthly standard rice allowance, the Supply Bureau was also required to provide officers and soldiers with supplementary provisions such as rations and fodder when they were away from their garrisons on official duties such as marching, garrisoning, or escorting supplies. Moreover, the Bureau was responsible for disbursing other miscellaneous funds, including the 'horse dry silver' for the standard complement of horses and the 'ship tax silver' for the various regiments. Furthermore, 'the provisions and rations for the troops leaving the pass were to be distributed by the Shanhai Rations Office from the silver set aside for this purpose'. According to the Veritable Records of the Ming Dynasty, the supply of provisions and rations for the troops dispatched beyond the pass to aid Liaodong was also handled by the Shanhai Rations Office. Furthermore, following the fall of Yongping in the third year of Chongzhen, both the new and old military rations for that garrison were disbursed through the Mountain and Sea Rations Bureau until they were taken over by the Yongping Circuit on the first day of the fourth month.[ii] Additionally, in the third month of the fourth year of Chongzhen (1631), following a resolution by the Ministry of Revenue, troops dispatched from Guizhou to reinforce Liaodong, and the rations for the Guizhou troops stationed at Lengkou since the tenth month of the third year of Chongzhen

(1630) were also disbursed by the Shanhai Rations Office. This not only included the monthly rations for the Guizhou troops from March onwards, but also required the retroactive payment of four months' rations that had been in arrears from the eleventh month of the third year to the second month of the fourth year, due to uncertainty regarding the allocation of monthly rations during that period. "This department has never had any surplus funds to disburse to the frontier posts, nor does it hold any surplus silver in reserve; how am I, in my capacity, to meet the Guizhou troops' requests for both past and future rations?" It is evident that this additional expenditure was a further blow to the Shanhai Rations Office, whose financial situation was already strained.

The Shan-Hai Pay Office was required to record the income and expenditure of the grain and pay it handled each month in a register, which was then sent to the Ministry of Revenue for review and archiving. At the Shan-Hai Rations Bureau, the system of monthly reports was formally established in the second year of the Tianqi era (1622). These concise monthly ledgers served as a crucial basis for the performance appraisal of officials upon the conclusion of their term of office. The Ministry of Revenue would cross-check them against the officials' appraisal memorials to verify whether they had fulfilled their duties during their tenure and whether there had been any misconduct such as corruption or dereliction of duty. Furthermore, should any monthly register be missing or the data in the summary register be unclear during an official's term of office, that official would consequently face impeachment and punishment. For example, in the fourth year of Chongzhen (1631), Lin Xuan of the Shanhai Supply Office was impeached by Zhou Shipu, the Right Vice Minister of the Ministry of Revenue responsible for verification, due to unclear data in the summary registers for July and August of the third year of Chongzhen (1630). Although a joint investigation was conducted by the Directors of the Six Audit Bureaus of Shandong, Shanxi, Guangdong, Yunnan, Jiangxi and Guizhou within the Ministry of Revenue, along with the eunuch Zhang Yixian and the head official Bi Ziyang, who conducted the investigation and submitted a report, it was ultimately confirmed that the discrepancies in the data for those two months were due to errors in calculation and record-keeping, rather than corruption or dereliction of duty. Nevertheless, Lin Xuan was still punished with a three-month reduction in salary, whilst the clerk responsible for compiling the registers was dismissed from his post. This demonstrates the importance and strict requirements placed by the late Ming court on the preparation of the monthly summary registers by the Mountain and Sea Provisions Bureau. However, it must be noted that even monthly summary registers prepared to strict standards and containing accurate data required coordination with the troop numbers listed in the annual estimates submitted by the Guamen and Jimen offices—due to the 'unpredictable movements of garrison troops in various regions and the resulting inconsistencies in numbers'—in order to reconcile actual revenue and expenditure.

The Shan-Hai Rations Bureau was required to oversee ration-administering bodies such as the Maritime Transport Office and the Customs Administration Office. In the third year of the Chongzhen reign (1630), regarding the demand for fodder in the Shanhai region, the Ministry of Revenue "instructed the Shanhai Rations Bureau and the relevant provincial administration to supervise the Customs and Maritime Transport Bureaus, in conjunction with Funing and Changli counties, to devise methods for procurement", with the Shanhai Rations Bureau overseeing the Customs and Maritime Transport Bureaus in the procurement and distribution of supplies. Furthermore, as can be seen from the table below, between the first and fourth years of the Chongzhen era, the Shanhai Rations Bureau repeatedly allocated silver to the Maritime Transport Office and the Customs Office to procure rice, beans, fodder and other supplies; any surplus silver was often stored locally by these two offices for use in subsequent procurements. The Langzhong and Zhuishi of the Shanhai Supply Bureau were required to allocate provisions and rations reasonably in accordance with actual needs and to seek ways to reduce expenditure. For example, when Diao Huasheng served as Langzhong of the Shanhai Supply Bureau, he

substituted the standard ministry rate of one tael per shi of grain with eight qian per shi for the rations due to each camp, thereby saving a total of 7,807.16602 taels of silver equivalent to the value of the rice. Furthermore, Lin Xuan, a Langzhong of the Shanhai Rations Bureau, noted that in the Shanhai region, ‘since last year’s western expedition to recapture four cities, the depletion of horses has been severe. Presently, with the enemy besieging Dalingguan, civil and military officials lament the shortage of horses, which has allowed the enemy to evade divine retribution’.In response to the pressing needs of the time, he deducted 24,773.2 taels of silver from the rations of soldiers without horses and deposited this sum in the Pass Treasury to be used for the purchase of horses, which was expected to increase the Shanhaiguan garrison’s stock of horses by over a thousand.[iii] Furthermore, cost-saving was a key criterion in the performance appraisal of officials at the Supply Bureau upon the completion of their term of office. This even led to the practice of comparing the savings achieved by successive Supply Bureau officials, thereby increasing the pressure on them to manage the supply funds effectively.For example, during his assessment, Yan Gu-xing, a senior official of the Shanhaiguan Supply Bureau, specifically addressed the fact that the amount of silver he had saved during his tenure was less than that of his predecessor:“Upon examination, the previous commander, Wang, saved more than two or three times the amount of this office. It is not that this office’s resolve to economise was inferior to that of his predecessor, but rather that during Wang’s tenure, the Imperial Guard was deployed to the frontier, at which time the number of horses was at its peak, and the costs of fodder and beans allocated by the Ministry were correspondingly high. Soon after, the Imperial Guard was withdrawn and the horses were withdrawn with them; consequently, the surplus funds were not substantial, and were entirely accounted for as savings.”

Furthermore, a review of the revenue and expenditure of the Shanhai Rations Office from the first to the fourth year of the Chongzhen era, as summarised in the table below, reveals that, in addition to the aforementioned management of the military system,the Shan-Hai Rations Bureau was also responsible for providing grain and salary subsidies to officials in various administrative offices within its jurisdiction, as well as wages and rations for lower-level staff such as miscellaneous labourers, artisans and conscripted workers; for providing compensation to the families of officers and soldiers killed in action; and for paying freight charges to both official and private shipping operators for sea and land transport.Furthermore, within the structure of expenditure on provisions and pay, the proportion of silver far exceeded that of grain rations. Overall, the Mountain and Sea Rations Bureau frequently found itself in a situation where expenditure exceeded revenue. Additionally, items in the table such as ‘Borrowed silver for the pay of reinforcements from the Western Command’, ‘Borrowed silver for the pay of the Yong Command’,“Advance for the Manchu Deputy Commander in Qian’an County”, demonstrate that the Mountain and Sea Rations Bureau did not operate in isolation, but rather coordinated with other agencies to transfer military rations to meet emergencies. This collaborative operational mechanism enabled an efficient response to the complex and ever-changing wartime environment in the Ji-Liao region, ensuring, to a certain extent, that the army received timely supplies in accordance with the principle of priority.

Table 1: Expenditures of the Shanhai Rations Bureau from 27 September of the first year of the Chongzhen era to 23 August of the second year[26]

Revenue Items: Taels of Silver / Shi / Bundles	Expenditure Items: Taels/Shi/Bundles	Surplus: Taels/Shi/Bundles	
Silver in stock handed over by predecessor: 28,672.88494	Monthly rations, horse feed, boat taxes, etc. for each camp: 942,326.139625	Silver	Silver in the treasury: 30,851.5734
Silver saved from public funds by the previous administration and	Silver for the purchase of horses and fodder in the winter and		Silver set aside from the surplus of the sixth month’s

returned to the government: 3,236.14	spring of the first year of the Yongping era: 50,000		disbursements by this office: 16.5
Surplus silver from the previous incumbent's separate reserve for the seventh month: 21.3	Silver for the cost of fodder for horses procured in the winter and spring of the first year by the Maritime Transport Bureau: 14,472.567		Additionally, surplus silver from savings on official expenses retained by this department: 170
Silver originally set aside by the Maritime Transport Bureau to offset rations using savings from the price of beans: 36,637.6	Silver for the purchase of rice in the second year by the Maritime Transport Bureau: 20,000		Separately deposited savings from this Department on officials' and labourers' food and lodging expenses: 111.4
Silver for the transport of grain and fodder to the capital: 895,044.1885	Silver for the purchase of beans for two years by the Maritime Transport Bureau: 19,705	Total: 31,149.470034	
Surplus silver remaining from the disbursement of money and grain from the first year of Chongzhen (August) to the second year (June): 149.3	Silver for the purchase of two years' worth of beans in the three prefectures and counties of Luanzhou, Leting and Changli: 26,000	Savings	Surplus silver from the disbursement of August's rations and grain in the first year of Chongzhen to the disbursement in June of the second year: 149.3
Miscellaneous silver from Yongping Prefecture: 9,433.592665	Total rations silver: 1,072,503.76625		Public expenditure: 170
Silver for the purchase of rice, beans and fodder: 130,177.567	Rice: 228,044.171		Salaries and rations for officials and labourers: 111.4
Savings on public funds: 170	Beans transported by sea: 43,315.8		Surplus silver: 322.07094
Savings on silver for officials' food and labour: 111.4	Beans transported by land: 35,279.97		Savings on horse feed for the second and third months of the second year: 17,064
Total: 1,103,653.176659	Hay transported by land: 1,066,634		Total silver recovered from officials, savings and deductions: 19,461.22205
	Silver for rations and labour expenses allocated to various departments from the first to the eighth month: 16,525.9; Remaining: 2,935.32205 (set aside separately, to be used for the public expenses and labour rations of the various departments)		Rations and labour expenses disbursed to various departments from the first to the eighth month: 16,525.9; balance: 2,935.32205 (to be set aside for the provision of food and labour costs for the various government departments)
			Total: 40,177.992995

Table 2: Expenditure of the Shanhai Rations Office from 23 August of the second year of Chongzhen to 8 September of the third year

Revenue Item: Taels/Shi/Bundles	Expenditure Items: Taels/Shi/Bundles	Surplus: Taels/Shi/Bundles	
Silver in stock handed over by the predecessor: 30,851.570034	Soldiers' rations, horse feed and ship tax silver for each camp: 632,519.757358	Silver	Silver in the treasury: 5464.208142
New rations transported to the capital: 667,285.2	Retroactive payment for rewards for the green tea harvest in September and October of the first year: 1130		Silver for empty horse-drawn carts in the 11th and 12th months of the second year: 26,379.81
Total savings from the previous administration's public funds for labour and food, plus surplus from June: 297.9	Silver for the purchase of rice allocated to the Customs Office in the second year: 5,385.2159		Surplus silver from the external reserve for the sixth month: 14.2
Miscellaneous silver from the previous administration's handover inventory, applied towards September's military rations: 29,699.822684	Revenue from all regiments for July and August of the past two years, plus silver to make up for the shortfall in horse rations for the Wuji Regiment in June: 15,226.2		Savings from public funds held in external reserves: 200
Silver for the purchase of rice for the second year: 5,385.2159	Silver for empty horse posts from September to December of the second year: 33,894.21		Silver deducted from the handover accounts of the previous incumbent for minor reimbursements to officials, etc.: 2935.32205
Silver deducted from the original allocations for empty horse-drawn carts at the customs office and various garrisons: 22,085.7753	Silver for minor savings and shortfall in troops: 25,944.367		From July of the second year to June of the third year, silver deducted for small savings and reimbursement for missing troops: 31,233.7986; silver allocated to various government offices for public expenses, labour and food: 25,793.446; balance remaining: 8,375.67465
Silver contributed by Guo Chongjin, a student of Zhuge Zuo, the Deputy Commander, towards provisions: 82	Miscellaneous silver from the previous administration's handover, used to offset September's military rations as per official directive: 29,699.822684		Rice due to be distributed to the various camps was paid at a rate of eight cash per tael; savings from rice-to-silver conversion: 7,807.16602; deducted from this was the silver of 358.317 returned to the treasury for transport costs incurred by the Longwu Camp in Tianjin. After deducting the silver of 4,528.156055 paid for the transport of rice and beans by camel, the remaining silver available for expenditure is 3,637.326965
After deducting the advance borrowed by Guanyu Guiji for Qian'an County, the advance repaid by the Longwu Battalion for Jizhou, and the unpaid rations for the western	Silver for rice: 18,860.15193 Silver set aside for the purchase of provisions, fodder and other supplies: 14,753.0496	Included in the rations silver for proper accounting	Surplus silver remaining from July of the second year to May of the third year: 112.5 Rations silver disbursed to garrison troops in Qian'an County: 2,183 Silver recovered following an audit for the western relief troops of various camps in the 11th, 12th and

relief operations of all battalions, the total amounts to: 25,809.2179 (calculated result is 25,809.212884)			13th months of the second year: 4612.1094
		An audit has revealed the following silver from the empty accounts for the period September to December of the second year: 33,894.21. Excluding the 90 taels used for temporary adjustments over two months, the remaining silver on hand for the other two months is 26,379.81, held in the storehouse	
Silver for empty horse-drawn carts for the 90-tael month: 7,514.4	Silver lent for Yongzhen rations: 33,989.114204	Awaiting official authorisation for final expenditure	Surplus silver from the sixth month's allocation: 14.2 Savings from public expenditure: 200
Monthly surplus silver: 112.5	Repayment of silver borrowed by the Customs Office for the October pay of the fallen Colonel Yang Chun: 1000	After offsetting public expenditure on labour and food for various departments, the remaining balance is 8,375.67465	Total savings from deductions for manpower shortages and miscellaneous items: 25,944.367 Repayment of official funds: 5,289.4316
Reimbursement of old rations for the Jingyun and Yongzhen garrisons against new rations for Shanhai: 30,000	Silver borrowed for the provisions of the Western Reinforcement troops under the Commander-in-Chief of the Cavalry, excluding amounts already repaid: 1,257.5	Remaining after offsetting against transport costs: 3,637.326965	Silver for rice: 7,807.16602 Silver seized from the Longwu Garrison to repay official transport costs: 358.317
Total: 788,272.026784	Total rations silver: 813,659.388676 (calculated as: 813,659.3887)	Expenditure for regular rations completed	Silver returned to the government by Yongzhen: 2,820.65401 Confiscated silver from traitors: 2,146.6473
	Silver equivalent of copper coins originally borrowed by the Maritime Transport Bureau, converted and provided to Zuzhen for grain and rice: 288.29645	Silver returned to the authorities by Yongzhen: 32.87992, used to offset the new provisions for the Mountain and Sea regions	
	Silver paid to shipowner Qi Dabao for the purchase of rice 2,580.125	Silver for transport costs and bean freight in Leting County: 1000. Recovered by the Maritime Transport Office and returned to the treasury	
	Monthly rice rations for officials and transport provisions 3,038,075.3618	Total: 86,415.48225	
	Beans transported by sea and land: 152,904.83		
	Fodder: 87,541 bundles		

Table 3: Expenditure of the Mountain and Sea Provisions Office from the 8th day of the 9th month of the 3rd year of Chongzhen to the 20th day of the 9th month of the 4th year

Revenue Item: Silver taels / shi / bundles	Expenditure Items: Taels/Shi/Bundles	Balance: Taels/Shi/Bundles	
Silver for transport to the capital and reimbursement to officials: 760,396.962035	751,667.555402	Savings Silver	Silver for foot soldiers without horses: 24,773.2
Rice for maritime transport and repayment to officials: 241,331.753	Rice 230,228.691		Silver saved by the Maritime Transport Bureau from the purchase of beans in the second year of the Yuan era: 12,695.66 Silver for the wages and rations of clerks and labourers at the Maritime Transport Office for the second, third and fourth months of the fourth year: 47.25
Beans for officials, etc., transported by sea and land: 196,037.6646	Beans 86,291.64		July of the third year: savings from the return of official silver: 499.1165
Fodder purchased and reimbursed to officials: 628,760.018	Fodder 333,858.8		Unpurchased fodder for the third year: 1,207.01 Unpaid rice costs for the fourth year: 135.635
Total amount of grain and cash collected: 1,826,526.398	Total amount of grain and cash recorded in the ledger: 1,402,046.686		Purchase of rice (0.2 per shi): 4,622.372
			Total: 43,981.246065
		Expenditure: 24,773.2 taels of silver from the provincial savings fund, allocated to the customs warehouse to await the purchase of horses, sufficient to increase the number of four-horse teams by over a thousand; 2,000 taels for the construction of additional granaries at Nanhai Port; 600 taels for transport costs to move grain into the city in preparation for emergencies following urgent reports of enemy activity Actual balance in store: 16,608.046065	
		Additional savings: Four officials from the Ministry of Rites were dismissed; twenty household servants of officials in charge of rations were dismissed; ten unbranded horses were disposed of; nine taels of silver for oil and candles per month were saved; and a total of 875.4 taels of silver was saved annually from rations, labourers' food, beans and fodder	

## 5. Maritime Transport Bureau

In the first year of the Tianqi reign, the central government established the Maritime Transport Bureau in the Shanhaiguan region. The establishment of this institution was based on the practical needs of the time, and its functions were extensive, encompassing not only the administration of maritime transport but also the comprehensive review of revenue and

expenditure, the procurement of rice and beans, and other matters. Firstly, the Maritime Transport Bureau was established due to the increasingly prominent role of Shanhaiguan within the maritime grain and provisions system; its functions and importance in maritime administration continued to grow in tandem with the evolving nature of the war. Faced with increasingly severe pressure regarding grain and military provisions, the Ming court successively opened the southern and central shipping routes along the Liao River in Tianjin in the 47th year of the Wanli reign (1619) and the northern and central routes in the 48th year (1620). However, following the fall of Shenyang and Liaoyang in the first year of the Tianqi era (1621), the Ming Dynasty was forced to suspend the Dengliao and Huailiao maritime routes; the inland transport of unprocessed rice and beans, as well as naval support, were then conducted exclusively via the northern Tianjin-Liaodong maritime route.[27] The specific route of the Tianjin-Liaoning North Coast shipping lane was as follows: vessels from Tianjin would depart from the Dagou estuary, sail northwards along the coast of Yongping Prefecture to Shanhaiguan Pass, unload the grain and rice, and then have the goods transported overland by designated officials through the pass to Zhima Bay.[28] At this time, the role of Shanhaiguan in maritime transport rose sharply, and the volume of maritime cargo handled surged. As the existing grain administration bodies were unable to cope with the burden, the establishment of a new Maritime Transport Bureau to oversee maritime affairs became a necessity, and the Maritime Transport Bureau was thus established.

However, as the military situation in Liaodong progressed, maritime transport patterns evolved further. 'In the second year of the Tianqi era, troops were massed at the pass, and maritime transport reached only as far as the pass. In the third year of the Tianqi era, it gradually extended to places such as Qiantun and Juehua, though the volume remained small; all actual receipts were distributed by the Shanhaiguan Maritime Transport Office.' [29] During this process, the jurisdiction of the Maritime Transport Bureau gradually expanded from within Shanhaiguan to maritime transport beyond the pass. From the fourth year of the Tianqi era (1624), the number of troops stationed in the outposts beyond the pass exceeded those within, and the locations and quantities of grain and provisions supplied by maritime transport consequently changed. Consequently, the Shanhaiguan and Inner Shanhaiguan Administrative Divisions, in conjunction with the Maritime Transport Bureau, formally promulgated new regulations for transport operations within the Pass. The main provisions comprised the following two points: Firstly, the Deputy Magistrate of the Maritime Transport Bureau was to implement a system of regional management for maritime transport both inside and outside Shanhaiguan. "For the southern sea port within the Pass, Deputy Magistrate of Maritime Transport Wang Yingyu was appointed to have exclusive charge of collection and distribution; for the areas of Qiantun, Zhongqian and Zhonghou outside the Pass, Deputy Magistrate Ke Zhongjiong was appointed to have exclusive charge of collection and distribution; whilst the areas of Ningyuan, Zhongyou and Juehua were entrusted to Jin Qizhong, the Deputy Magistrate in charge of administrative affairs, to oversee the collection and distribution of goods"; [30] Secondly, to address the inefficiency in the collection and distribution of grain and provisions caused by the excessive jurisdiction and affairs of the Shanhaiguan Maritime Transport Office, the complex procedure—where "each party would travel from Tianjin to the designated location to hand over the goods, obtain a receipt from the local military commander, record the transaction privately and issue an official transfer document, before proceeding to the Shanhaiguan Maritime Transport Office to exchange seals and report the actual collection"—was revised.[31] It was stipulated that "goods should be distributed from Tianjin to their respective destinations; upon arrival, the Hall shall inspect them; if found fit for use, they shall be unloaded immediately. Upon unloading, the empty containers shall be returned to facilitate subsequent transport, and there shall be no need to collect the actual receipt from the Maritime Transport Office at Shanhaiguan, thereby avoiding delays." This simplified the maritime

handover process between Tianjin and Shanhaiguan, improving the efficiency of the transit of military provisions and other supplies by eliminating the need to repeatedly request actual receipt certificates from the Maritime Transport Office at Shanhaiguan. From this point onwards, the operations of the Maritime Transport Office gradually became standardised.

Secondly, the Maritime Transport Office was required to assist the Shanhaiguan Rations Bureau in overseeing the collection and distribution of grain rations within its jurisdiction. The regulations stipulated that, whilst local rations bureaus were originally responsible for managing both the collection and expenditure of grain rations and their verification, the scale of grain rations administered by the Shanhaiguan Rations Bureau had become so vast due to the military campaigns in Liaodong during the late Ming period that it was overwhelmed by the task. As the saying goes: 'The value of the converted rations amounts to millions annually; with only one official in the Rations Bureau overseeing all receipts and disbursements, it is impossible to keep pace with the collection and expenditure of the natural rations.' Consequently, in the Guan-Ning region, 'two bureaus—the Maritime Transport Bureau and the Land Transport Bureau—were established to share these responsibilities; this has become established practice over the years, with the Rations Bureau merely issuing a single order, while remaining uninvolved in the actual disbursement.' Although, in accordance with established practice, the Maritime Transport Bureau was responsible for the distribution of grain and provisions, it remained subject to the leadership and supervision of the Mountain and Maritime Provisions Office, assisting the latter in the management of provisions. As Tables 1 and 2 illustrate, the Mountain and Maritime Provisions Office would annually allocate provisions funds—such as silver for rice and silver for beans—to the Maritime Transport Bureau, which was then responsible for procuring the actual goods and distributing them. Furthermore, the Maritime Transport Bureau served as a repository for surplus funds from the Mountain and Sea Rations Bureau, primarily comprising the surplus silver from the Bureau's annual procurement of rice and beans, as well as the silver returned from transport fees. Moreover, should instances of corruption, such as embezzlement, occur during the Bureau's administration, the then-serving Director or Chief Clerk of the Mountain and Sea Rations Bureau would also be held accountable and punished. For instance, in the second year of the Chongzhen reign (1629), when the case of corruption involving Zhang Zhen of the Maritime Transport Bureau came to light, Wang Jianhou, the Langzhong of the Mountain and Sea Rations Bureau during Zhang's tenure, and his successor Yan Guoxing were both punished for "lacking due diligence and failing to verify the facts".[iv]

The establishment of the Maritime Transport Bureau not only alleviated the pressure on existing institutions but also significantly improved the efficiency of grain and provisions transport. Its responsibilities encompassed the dispatching of vessels, the inspection and acceptance of grain and rice, and coordination with local authorities regarding land transport, thereby forming a complete chain linking sea and land operations. Owing to the strategic location of Shanhaiguan, the Maritime Transport Bureau also assumed supervisory functions to ensure the safe passage of provisions through the border. This reform responded to wartime requirements, provided robust support for the defence of Liaodong, and became a significant measure in the restructuring of the maritime transport system during the late Ming period.

## 6. Summary

Following the Liaodong Incident in the 46th year of the Wanli reign, the situation in Liaodong grew increasingly critical. After the fall of Liaodong and Shenyang in the first year of the Tianqi reign, Shanhaiguan suddenly became the frontline in the resistance against the Later Jin and the direct gateway safeguarding the capital. The massing of troops at the pass, coupled with changes to the maritime transport routes for military provisions, led to a sharp increase in the

revenue and expenditure of military provisions handled by Shanhaiguan. As the existing institutions and officials were unable to meet the administrative demands, the imperial court established the Shanhaiguan Provisions Bureau and the Maritime Transport Office in the first year of the Tianqi era (1621) to specifically oversee the revenue and expenditure of military provisions. From then on, the Governor-General of Ji-Liao, the Provincial Governor of Shuntian, and the Provincial Governor of Shan-Yong were responsible for the overall planning of military provisions, as well as for the deployment, administration and supervision of the specific agencies managing these provisions. As a key institution for managing military rations in the Shanhaiguan region, the Shanhai Rations Bureau was required, under the leadership of the Governor-General and the Provincial Governor, to carry out the specific collection and distribution of military rations within its jurisdiction, to keep detailed records of the rations silver handled, and to plan rationally to reduce expenditure; it was a vital executive body within the Shanhai region's ration management system. Furthermore, due to the increasing volume of grain and military provisions transported by sea, as well as the complex nature of the Shanhai Rations Bureau's affairs, the Maritime Transport Office was established. Operating under the direct leadership and supervision of the Shanhai Rations Bureau, it was responsible for procuring rice and beans in kind, overseeing the collection and expenditure of local currency, and managing matters related to maritime transport. Under the operation of this supply system—comprising the Governor-General, the Provincial Governor, the Mountain and Sea Supply Bureau, and the Maritime Transport Office—the efficiency of grain and provisions distribution in the mountainous and coastal regions improved significantly. This played a supporting role in the improvement of the military situation in Liaodong during the late Tianqi and early Chongzhen periods, and constituted a crucial measure taken by the late Ming court to address the Liaodong crisis. However, the aforementioned system of military provisions was still unable to curb a series of problems, such as embezzlement of military funds, arrears in provisions, and supply shortages; nor could it salvage the fiscal situation or halt the decline of the late Ming dynasty. Furthermore, in this paper, the author focuses primarily on the Mountain-Sea Rations Bureau and the Maritime Transport Office, and has only provided a detailed discussion of certain institutions and officials within the Mountain-Sea region's rations system from the first year of the Tianqi era onwards; there remains considerable scope for further exploration and room for improvement.

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