

Military Expenditures in Sixteenth Century Ming China*

By Ray Huang

(State University College, New Paltz, New York)

I.

The military strength of the Ming Empire reached its nadir in the mid-sixteenth century. Altan-qayan^[1], who was perhaps capable of putting 100,000 cavalymen in the field, raided the suburbs of Peking more than once within a decade. During the 1550 forage Mongol horsemen galloped within sight of the city gates. The Peking garrison, after being reinforced by detachments of soldiers from six provincial commands, did not dare to give battle. The raiders were able to arrive at will and return to the borderland with their loot and capture, practically uninterrupted by the defending force. The Peking garrison was supposed to be a pool of combat-ready soldiers furnished by 78 capital guards; these 78 units had a total prescribed strength of 380,000 men¹.

A few years later, the military unpreparedness in the south was similarly exposed by the Wo-k'ou^[2] pirates. In 1555, rumors were in circulation that one band of such pirates, after penetrating inland to Wu-hu^[3], turned back to threaten Nanking. The latter city, according to KUEI Yu-kuang^[4], "boiled like a caldron". But afterwards Kuei related that the so-called band of pirates were in fact no more than 50-odd stragglers separated from their main group². Referring to the same incident, Ku Ying-t'ai^[7] recorded that 67 pirates had been able to dash through several thousand *li* inland and inflict some 4,000 to 5,000 casualties³. By mid-sixteenth century the Nanking garrison had a prescribed strength of 120,000 men.

* *Authors's Note:* The substance of this article is closely related to my long-term study of all facets of Ming governmental finance. While carrying out the project I have been generously aided by several foundations and educational institutions. A general acknowledgement is reserved for a later occasion. At the publication of this article, however, I would like to at first express my gratitude to the Center for East Asian Studies, University of Michigan, which gave me a summer research grant in 1968 and made its facilities available to me, thus enabling me to complete a major portion of the present survey.

Among the individuals who have graciously helped me, Dr. L. Carrington Goodrich read the original draft of this article and made many valuable suggestions and corrections. Professor James B. Parsons prepared an abstract from my draft and presented it on my behalf at the annual convention of the Association for Asian Studies in San Francisco in 1970.

¹ *Shih-tsung shih-lu*^[2] (Academia Sinica reprint; same for *shih-lu* under other reigns hereafter listed), 6514; Charles O. HUCKER, "Governmental Organisation of the Ming Dynasty", *HJAS*, 23 (1960-61), p. 61.

² Kuei Yu-kuang *ch'üan-chi* (Kuo-hsüeh Wen-k'u ed.)^[4], 95.

³ *Ming-shih chi-shih pen-mo* (San-min Shu-chü ed.)^[7], 55/597.

- | | | | |
|------------|-------------|---------|--------|
| [1] 俺答 | [2] 世宗實錄 | [3] 倭寇 | [4] 蕪湖 |
| [5] 歸有光 | [6] 全集 國學文庫 | [7] 谷應泰 | |
| [8] 明史紀事本末 | 三民書局 | | |

Where were the fighting men? The answer must be found deep in history. In the background the decline of the Ming *Wei-so*^[9] system had been a long-term development; the deterioration was the worst in the southern and interior provinces. During the Hung-wu era, the military colonies in Kwangsi had 120,000 men; in 1492 only 18,000 men or 15% remained. The Nan-ch'ang Left Guard^[10], Kiangsi province, had an authorized strength of 4,753 men; in 1502 only 141 of them were on barracks duty, which was less than 3% of the original quota⁴. The *Chin-hua* Battalion^[12], Chekiang province, was authorized to have 1,225 men; in the sixteenth century only 34 soldiers were at the camp, which again was 3% of its peak strength⁵. WANG Ch'ung^[14], Minister of War from 1510 to 1515, remarked that in his time eight or nine soldiers out of ten in the military colonies had deserted⁶. The statement is not an exaggeration.

Ming writers, commenting on the decline of the *Wei-so* system, often put great emphasis on the failure of military farming. Causes of this failure were traced to the loss of farm land in the northern frontier to Mongolian incursions, to the embezzlement of the army officers, and to the shortages of seed and draft animals. While their reasoning is valid, they in general have failed to point out the fundamental weaknesses of the Ming hereditary military service. It may be said that the institution itself is anachronistic. When the military colonies were organized in the Hung-wu era, not all the households appearing in the army roster voluntarily chose to be so registered, much less to commit their descendants forever to military service. Against their wishes, civilian households in Hukwang, Kwangtung, and Shansi were pressed into the military colonies en masse. In principle each soldier on farm duty should have been granted 50 *mou* of arable land. From local gazetteers we can see that this authorization was an ideal rather than a reality. In many cases each soldier received only 20 *mou* or less. Not all the farm land assigned to each colony was situated in one locale; it might be scattered over several counties. No regular payments in money were provided for the soldiers on barrack duty. Each man was, however, rationed one picul of grain per month plus a small amount of salt for family maintenance. Winter uniforms were issued either in ready-made garments or in cloth and cotton wadding, dependent upon the conditions of supply. Yet, in the fourteenth and early fifteenth centuries soldiers on active duty were not in a destitute state, due largely to the "general awards" handed out from time to time by the emperor. As awards, these grants were unscheduled. But in these years it was not uncommon for one soldier to receive 25 *kuan*^[17] of paper money as his annual recompense,

⁴ Hsiao-tsung shih-lu^[11], 1261, 3424.

⁵ *Chin-hua fu-chih*^[13] (1578 ed.) 21/5.

⁶ Wu Han, "Ming-tai ti chün-ping"^[15], (Soldiers and Troopers in Ming Dynasty), *Chung-kuo she-hui ching-chi-shih chi-k'an*^[16], 5.2 (June, 1937), p. 169.

- | | | | |
|----------------|-----------|-----------|------------|
| [9] 衛所 | [10] 南昌左衛 | [11] 孝宗實錄 | [12] 金華千戶所 |
| [13] 金華府志 | [14] 王瓊 | [15] 吳晗 | 明代的軍兵 |
| [16] 中國社會經濟史集刊 | [17] 貫 | | |

which, augmented by the food ration, allowed his family to be adequately supported. From the scattered entries in the *Shih-lu* we have a general idea of the amount of government notes issued by the court during this period. It is estimated that in 1390 alone somewhere between 85 million *kuan* to 90 million *kuan* of the currency was issued by T'ai-tsu to defray various kinds of expenses⁷. The amount, according to the official rate of exchange (one *kuan* to one picul of husked rice) was equivalent to two and a half years' income from taxation. Even in market value (four *kuan* to one picul) it still exceeded a half year's tax revenue. Apparently, to disburse military expenses with the unbacked paper money was not a permanent solution.

After the years of Hung-hsi and Hsüan-te, the government notes depreciated a 1,000 fold. Since then the general awards were rarely handed out; the occasional grants had also by this time become meaningless. In 1425, an imperial decree reduced the annual quota of grain to be turned in by soldiers on farm duty. Hitherto each soldier had been required to surrender 12 piculs of grain; thereafter six piculs was the requirement⁸. Historians have cited the event to praise the magnanimity of Emperors Jen-tsung and Hsüan-tsung, who authorized the 50% reduction. The magnanimous decree, it must be noted, was issued on the eve of the discontinuance of the general awards.

The military colony system had been expected to be self-sufficient. Our observation is that at no time had this goal been realized. The *Ta-kao wu-ch'en* [20], or *Grand Monitions to Army Officers* written by T'ai-tsu himself discloses that two military colonies in South Chihli had not attained self-sufficiency after practicing army farming for 20 years⁹. In the early years of Yung-lo, it was reported that soldiers in Honan engaged in farming could not even provide half the amount of grain consumed by themselves¹⁰. The *Ch'un-ming meng-yü lu* [23] lists the farm land assigned to the capital garrisons in the early part of the dynasty; the author comes to the conclusion that even under most favorable conditions the garrison could not have been self-sufficient¹¹. After the proceeds turned in by individual soldiers were cut to half by the decree of 1425, chances of self-sufficiency for the whole military colony system became even more remote.

No adequate remedy to the situation was provided by the Ming court in the fifteenth and early sixteenth centuries. When supplies were short, the army simply reduced the soldiers' food ration. Part of the ration could also be converted into paper currency, or cotton cloth, or pepper and sapanwood.

⁷ Based on 69 entries in *T'ai-tsu shih-lu* [18], spreading from p. 2981 to p. 3080.

⁸ *Jen-tsung shih-lu* [19], 0214; *Ch'un-ming meng-yü lu* (Ku-hsiang-chai ed.), 36/3; *Ta-Ming hui-tien* (1587), 18/13; *Ming-shih* (Taipei ed.), 77/820.

⁹ In *Ming-ch'ao k'ai-kuo wen-hsien* (Hsüeh-sheng shu-chü reprint) [21], vol. 1, Append. p. 9.

¹⁰ *T'ai-tsu shih-lu* [18], 0500.

¹¹ *Ch'un-ming meng-yü lu*, 36/2.

[18] 太祖實錄

[19] 仁宗實錄

[20] 大誥武臣

[21] 明朝開國文獻 學生書局

[22] 太宗實錄

[23] 春明夢餘錄

The conversion rates varied from one command to another; there was a differentiation between married soldiers and unmarried soldiers. At one picul per man per month, the ration was not abundant to begin with. The conversion virtually constituted a cancellation of payment. In 1468, some soldiers were told that the converted portions of their ration were reduced to four ounces of pepper and sapanwood per man and that the commodities were to be issued at distant warehouses; they simply refused the payment¹². A battalion headquarters in Shansi reported in 1489 that its soldiers had not received a grain ration for two years, and cloth and cotton wadding for six years¹³. Only in 1511 was the Ming government able to settle the arrearages due soldiers in Honan, some of which had been accumulating before 1502. The rations overdue were then converted into copper coins at the rate of 20 cash per picul¹⁴. The payment represented about 5% of the original value.

While soldiers were either totally unpaid or only slightly better than unpaid, many of them were burdened with financial obligations. When a soldier was called to active service he provided his own equipment. Those assigned to transporting grain on the Grand Canal were subsidized with the surcharges on grain payments collected from taxpayers, but they were also held responsible for the service ships. Those ships were due reconstruction every ten years. Usually each crew member was assessed three or four ounces of silver to defray the cost¹⁵. Rations due army units on the northern frontier were, as a whole, regularly issued, and, in the sixteenth century, payment in silver was substituted in part. However, each cavalryman must keep his horse in serviceable condition for 15 years. Unless lost in battle, a horse which died before the 15-year period was a financial responsibility of its rider, with the number of unserved years prorated. Since most likely the soldier was unable to pay, the army headquarters partially withheld the rations of a whole battalion or a whole regiment in advance. Henceforth the payment for the loss was not provided by individual soldiers, but drawn from this sinking fund¹⁶. In the light of such harsh treatment meted out to soldiers the numerous desertions should have surprised none.

For the soldier on farm duty with a land grant of 50 *mou*, the reduced rate of six piculs of grain due the government was still a considerable burden, in fact five to ten times the normal landtaxes paid by the peasants. The service obligations perpetually harnessed to his posterity did not make a

¹² Hsien-tsung shih-lu [24], 1166.

¹³ Hsiao-tsung shih-lu, 0579.

¹⁴ Ta-Ming hui-tien, 41/17.

¹⁵ See my dissertation, *The Grand Canal During the Ming Dynasty* (University of Michigan, 1964; available in microfilm), pp. 92—96.

¹⁶ TANI Mitsutaka, "Mindai no Chuang-p'eng-yin ni tsuite" [25], in Shimizu Hakase Tsutō Kinen Mindaishi Ronsō [26] (Tokyo, 1962), pp. 165—196.

[24] 憲宗實錄 [25] 谷光隆 明代の椿朋銀について

[26] 清水博士追悼紀念明代史論叢

pleasant thought. Furthermore, toward the mid-Ming period the official land register had been so corruptly managed that government land was often sold or mortgaged by its user¹⁷. By this time members of the hereditary military households had taken other vocations. The whole military colony system could not have survived, barring the vigorous "troop purification" policy of the Ming court. When a soldier deserted or absconded, the "troop purifying censors", armed with census books, held the deserter's relatives and neighbors responsible. The case was usually settled when the scores of persons thus encumbered would agree to purchase a substitute, finance his marriage and relocation, and send him off to fill the vacancy¹⁸. But all this was a slow process. Before one case was closed more desertions occurred.

By the early sixteenth century, a military colony in the interior at 10% of its prescribed strength could be considered as typical. The 78 guards around Peking could provide the capital garrison with no more than 50,000 to 60,000 soldiers, of them many were later converted to construction laborers by the palace, others were assigned as grooms in army stables, office attendants or household servants. Not many more than 10,000 men actually bore arms, among them were still paupers hired as substitutes¹⁹.

The situation of the army posts on the northern frontier fared somewhat better; they in general were maintained at 40% of their prescribed strength. In 1487 at the accession of Hsiao-tsung, the new monarch awarded each soldier on frontier duty two ounces of silver; altogether 615,320 ounces of silver was distributed on this happy occasion²⁰. Therefore, according to official count some 300,000 men were serving at the frontier. An inadequate force for the 2,000 mile border, this reduced army nevertheless required more supplies than before, when the defense installations were in top condition.

After the *T'u-mu* [84] Incident of 1449, the Ming court called in all the soldiers on farm duty in the borderland to active duty. The farm land left by these soldiers were leased to civilians. The rents on the leases varied from 0.015 piculs per *mou* to 0.03 piculs per *mou*, which was about 10% of the net receivables when the same land was cultivated by military personnel. By mid-sixteenth century of all the land controlled by the Hsüan-fu Command,

¹⁷ Wei Huan, *Huang-Ming chiu-pien k'ao* [27] (1936 reprint), 1/25, 1/26; Ku Yen-wu, *T'ien-hsia chün-kuo li-ping-shu* [28] (SPTK ed.), 13/71, 26/106—107.

¹⁸ For "troop purifying censors" see HUCKER, "Governmental Organization", p. 51 and *The Censorial System of Ming China* (Stanford, 1966), pp. 75—77. For actual cases see Lu Jung, *Shu-yüan tsa-chi* [29] (Ts'ung-shu Chi-ch'eng ed.) 1/11; Wu K'uan, "Ts'ui hsün-fu pien-wu chi" [30], in *Wu-tu wen-ts'ui hsü-chi* [31] (SPTK ed.), ch. 16; and Ni Hui-ting, *Ni Wen-cheng-kung nien-p'u* [32] (Yüeh-ya-t'ang [33] ed.), 4/22.

¹⁹ *Hsien-tsung shih-lu*, 4069; *Shih-tsung shih-lu*, 1899.

²⁰ *Hsiao-tsung shih-lu*, 0095.

[27] 魏煥 皇明九邊考 [28] 顧炎武 天下郡國利病書

[29] 陸容 菽園雜記 [30] 吳寬 崔巡撫辯誣記 [31] 吳都文粹續集

[32] 倪會鼎 倪文貞公年譜 [33] 粵雅堂 [34] 土木

80% was leased, only 20% under army cultivation²¹. The *Wan-li k'uai-chi lu* [35] further provides the following data: Farm income of Liao-tung in 1412 was 716,100 piculs; in the early sixteenth century 383,800 piculs, the latter being 53% of the former. The same of Ta-t'ung in 1442 was 513,904 piculs; in 1535 was 112,998 piculs, the latter being 22% of the former. That of Hsüan-fu in 1448 was 254,344 piculs; in 1515 it was 69,760 piculs, the latter being 27% of the former²². These data are not noted for any high degree of accuracy; the sharp differences between the figures nevertheless serve as a convincing indication that the extent of self-sufficiency of these army posts suffered a steady decline at the turn of the century.

While the internally-generated income was in decline, the expenditures of the army posts increased significantly. Since the early years of Cheng-t'ung these territorial commands had been filling their vacancies with recruited soldiers. About 1500, a general practice was adopted that each recruit be offered a bounty of five ounces of silver. In addition, horses and clothing had to be supplied. As mercenaries, the new personnel of course had to be paid regularly. In the mid-sixteenth century most of the recruits received six ounces of silver per man per year²³. The compilers of the *Ming-shih* estimated that at the beginning of the century already half of the soldiers at the frontier posts were recruits²⁴.

The number of army posts also increased. In 1507 when Oóai [36] penetrated into Ninghsia, the Ku-yüan [37] Command was established. In 1541 the Shan-si Command was created to check the threat of Jinong [38], who had recently occupied the Yellow River bend. The seven army posts of the fifteenth century were thus expanded into nine²⁵.

The army posts, old and new, constantly pressed the court for reinforcements. As Peking was unable to dispatch troops, the requests were by and large complied with in the form of increased subsidies instead. The annuities from the Ministry of Revenue to the frontier posts had originated in the Cheng-t'ung era; but in the fifteenth century the total amount was held below 500,000 ounces of silver²⁶. During the reigns of Ch'eng-hua and Hung-chih, however, the subsidies began to grow. At first the deliveries from Peking were divided into two kinds, as *chu-ping nien-li* [40] and *k'o-ping nien-li* [41], or annuities for host soldiers and annuities for guest soldiers. In theory, the former helped to pay soldiers organic to the field command; the

²¹ *Wan-li k'uai-chi lu* (University of Chicago microfilm), 23/7, 23/22.

²² *Wan-li k'uai-chi lu*, 17/5, 23/4—5, 23/147, 24/7, 24/11.

²³ *Ta-Ming hui-tien*, 41/16, 41/24.

²⁴ *Ming-shih*, 91/956; cf. "Ming-tai ti chün-ping", p. 221.

²⁵ *Ch'un-ming meng-yü lu*, 42/17, 42/19; *Huang-Ming chiu-pien k'ao*, 6/13.

²⁶ TERADA Takanobu, "Mindai ni okeru henshō mondai no ichisokumen" [39], in *Mindaishi Ronsō*, p. 278.

[35] 萬歷會計錄

[36] 火篩

[37] 固原

[38] 吉囊

[39] 寺田隆信 明代における邊餉問題の一側面

[40] 主兵年例

[41] 客兵年例

latter to pay reinforcements dispatched by other military districts. The fact is that by then every frontier command was under-strength. The so-called reinforcements were rarely dispatched. In the Chia-ching era, with the exceptions of Ning-hsia and Ku-yüan, all frontier posts received annuities for guest soldiers. The fiscal term, it may be said, was no more than a camouflage enabling the court to accept the reality that conscripted soldiers had been steadily replaced by recruits and consequently the payment had to be higher.

After 1449, never again did the Ming army fight an offensive war. Committed to defense, the frontier posts busied themselves in constructing the Great Wall. The construction as a systematic operation was started by Yü Tzu-chün^[42], Governor-General of Yen-sui^[43] in 1472²⁷. At the onset efforts were made only to carve vertical slopes on hillsides, dig deep trenches in the ravine, and connect the existing strongholds with pounded earthwork. The construction gradually became more elaborate. Soon massive brick structures appeared, crenelated walls were erected, and pill-boxes emplacing firearms were added. The fortification went on through Ch'eng-hua, Hung-chih, Cheng-te, Chia-ching and Lung-ch'ing eras and extended into the early years of Wan-li, that is, in the 1580's. It continued incessantly over a century. In mid-sixteenth century, the construction costs had already become impressive. For instance, in 1546 for constructing the Wall in Hsüan-fu and Ta-t'ung districts, where labor was conscripted and unpaid, the net cost to the government was still 6,000 ounces of silver for each mile²⁸. For constructing the section in Chi-ch'en^[45] in 1558, the labor cost was 6,357 ounces of silver for a mile if the workers were hired. A report indicates that when the labor was conscripted the population sharing the burden actually paid seven times that amount. Because of mismanagement the labor cost could be inflated to 44,500 ounces of silver for each mile²⁹.

In the wake of increasing military expenditures, the Ming court was in a dilemma. The *Wei-so* system could hardly be retained; yet it could not be abolished. The dynastic founder, anticipating that the military colonies would attain self-sufficiency and the government paper notes would remain in circulation, had assessed landtaxes at a low level. Business taxes had never been given any serious consideration. No clearcut division had been drawn to separate the finance of the central government and that of the local government. In the sixteenth century there were still no regional treasuries under the direct control of the central government. Tax incomes, as a whole, had been parceled out and appropriated in accordance with standing procedures, with each revenue agency making direct deliveries to a particular disbursing agency; the incomes and expenditures were thus

²⁷ *Hsien-tsung shih-lu*, 2110, 3471; *Hsiao-tsung shih-lu*, 0533; *Kuo-ch'ao hsien-cheng lu* [44] (Hsüeh-sheng Shu-chü ed.), 38/69.

²⁸ Computed from data in *Shih-tsung shih-lu*, 5800.

²⁹ Computed from *Shih-tsung shih-lu*, 7840.

considered to have, item by item, cancelled each other. By then tax delinquency had become a widespread phenomenon³⁰. To revamp the military establishment and to re-organize army logistics at this point would have meant to start everything anew. Not only should the governmental machinery be re-designed, but also, the prevailing ideology, the Confucian doctrine of benevolence and paternalism which emphasized that the nation's wealth should be preserved within the population, — a fundamental tenet which had been sanctioned by the dynasty ever since T'ai-tsu — must be, under the circumstances, revised. Indeed, Ming emperors and ministers, on the pretext that their ancestors' systems could never be altered, always showed a strong aversion to reform. The historian must also, at this juncture, acknowledge that in traditional China reforms during the middle period of a dynasty were by no means simple matters. Laws and regulations promulgated by the first emperor of a new dynasty often gave insufficient consideration to the social forces at work in the background. The decrees were based mainly on the sovereign's will and enforced by his sword. At the middle period the imperial control had already been relaxed. To remodel the existing institutions in these later days could easily speed the liquidating process, relinquishing what extent of control was still in grasp before the aims of reform could be realized. It is not surprising that in this age no attempt was made to abolish the *Wei-so* system. As a matter of fact, in 1644, only weeks before the Ming collapsed, Minister of Revenue Ni Yüan-lu^[46] brought up the question of abolition for the last time. There were still 1,700,000 hereditary military households in the census books. Ni suggested that each household contribute 100 ounces of silver to have its service obligations be forever removed. The suggestion met with only a mild reprimand from the emperor³¹.

In the fifteenth and sixteenth centuries Peking managed to mend the situation piecemeal. Unable to give substantial aid to the frontier army from its own resources, it at first ordered the increase of the supplies furnished by four northern provinces. The fragmentary data in the *Ta Ming hui-tien*^[48], when edited, lead us to the conclusion that by 1502, the population of Shantung, Shansi, Honan and North Chihli altogether delivered annually 1,600,000 piculs of grain or its equivalent to the frontier posts. In 1578, the delivery was in the vicinity of 3,300,000 piculs. The increase was over 100% in 76 years. Outwardly, these supplies were drawn from the regular land-taxes collected in these four province; the increased portion had been switched from other expenses, therefore, did not constitute an extra burden to taxpayers except for the transportation cost. However, the *Wan-li k'uai-chi lu* indicates: "In the early years of the Dynasty military supplies furnish-

³⁰ See my article, "Fiscal Administration During the Ming Dynasty", in *Chinese Government in Ming Times: Seven Studies*, edited by Charles O. HUCKER (New York, 1969), p. 118, 120—121.

³¹ Ni Yüan-lu, *Ni Wen-cheng-kung ch'üan-chi*^[47] (1772 ed.), Memorials, 11/6—7.

ed by Shansi province were largely made in grain, only in the Cheng-te period was the whole amount commuted to silver payments." We do not know the percentage paid in silver in the fifteenth century, but the *K'uai-chi lu* also discloses that in 1443, the conversion rate for the commuted portion was set at 0.25 ounces of silver to a picul. In 1457, or merely 14 years later, the rate was revised to one ounce for each picul³². At least for the commuted portion, the actual payments by the population increased four times, even though in terms of grain the quantity might have remained unchanged. In 1555, all the supplies furnished to Ta-t'ung by Shansi province, after being converted to one ounce of silver for a picul, carried an additional "transportation costs"³³. The theory is that the taxpayers, paying silver instead of grain, benefited by a saving on the transportation costs, this advantage must be surrendered to the state in time of need. This way the silver receivables at Ta-t'ung were boosted by another 20% increase.

As we have indicated earlier, the annuities from Peking also increased. After 1549, the total was never again below two million ounces of silver³⁴. It must be noted that before the crises of Altan qayan and the *Wo-k'ou* all the effort in improving military supply by the Ming court had been limited almost exclusively to the northern frontier. For this reason, the several field commands facing the borderland, though not most efficiently, were able to resist the Mongolian hordes over a half century. In comparison, the Peking garrison performed miserably. And the generalization may be offered that until then there was little national defense south of the Yangtze.

II.

Now the emergency of the 1550's forced the Ming court to take drastic action. Ostensibly, the easiest approach was to declare a general landtax increase. But this involved many technical difficulties peculiar to Ming times. While across the empire the general tax rates were low, the distribution of tax obligations was exceedingly uneven. Most counties and prefectures still carried on their tax quotas assessed in the Hung-wu era. In the past minor readjustments had been made; yet no general reapportionment was ever attempted. Moreover, for nearly 200 years, property transactions of the people were conducted in such a way that tax liabilities were virtually made detachable from land property. A wealthy landowner might carve out a small piece of his land for sale. The price could be unusually low, provided the buyer would take over a greater portion of the tax liability that previously had been assessed to cover the seller's whole estate. Conversely, this affluent person could also offer a premium price to purchase a great portion of his neighbor's land but accept only a lesser part of the latter's tax assessment. In other words, tax liabilities were divisible and not necessarily apportioned to reflect the acreage in transaction. This practice, we believe, had more to do with creating tax inequality than any other. Unless

³² Based on *Ta-Ming hui-tien*, 26/3—44 and *Wan-li k'uai-chi lu*, 24/22.

³³ *Wan-li k'uai-chi lu*, 24/27.

³⁴ TERADA, "Henshō mondai", p. 278.

a general land survey was conducted and assessment was reapportioned, a horizontal increase was most undesirable. Not only did depressed areas have to carry undue tax burdens, but also, poor peasants, who had already suffered heavy liabilities, find themselves forced out of existence. Inhibited from taking bold steps to tackle this fundamental problem, the Ming court had to be content with a diminishing revenue. Government finance under the Ming thus resembles a chain of links constructed in different sizes and strengths; its overall expansion is always restricted by the tolerance of the weakest ring. This description holds true for the rest of the dynasty, not for the Chia-ching era alone.

In 1551, at the urging of Minister of Revenue Sun Ying-k'uei^[49], Shih-tsung ordered a landtax increase of 1,157,340 ounces of silver. The increase was explicitly indicated as temporary, "to discontinue as soon as the frontier is pacified". Exempting five northern provinces, two southern provinces and six prefectures of South Chihli, it applied only to the most developed regions of the empire³⁵. By mid-century, the nation was assessed with a landtax totalling 26 million piculs of grain, which, with surcharges, was equivalent to some 25 million to 35 million ounces of silver. The 1551 tax increase, giving consideration to regional conditions and expanding the revenue by less than 4%, was indeed a mild if not an ineffective one.

Other fund-raising measures included the increase of salt productive quota of the Liang-Huai^[50] region, which we estimate could have grossed 300,000 ounces of silver. Part of the grain tribute to Peking was suspended and commuted to monetary payments, which we estimate could have produced about one million ounces of silver. Another portion of landtaxes, which had been commuted to one million ounces of silver ever since the reign of Cheng-t'ung and had been hitherto designated as the emperor's personal income, was temporarily yielded by the crown to the Ministry of Revenue through the duration of the emergency³⁶. The several items provided the Ministry with some 3,500,000 ounces of silver. Added to the regular incomes of the Ministry, which was close to two million, they enabled the empire to survive the crisis. Yet, all the incomes were temporary in nature; none of them was derived from new sources. The total amount was spent in Peking and the northern frontier. To finance the Wo-k'ou campaign in the south an entirely different program had to be devised.

III.

The fund-raising programs in the south had the following distinctive features: Firstly, all the funds were locally raised, not to be handled by the Ministry of Revenue. The court either permitted the governors and governor-generals to exercise discretionary power, or, at their requests, authorized

³⁵ *Ming-shih*, 78/826; *Shih-tsung shih-lu*, 6604.

³⁶ *Shih-tsung shih-lu*, 5339.

their impositions. Secondly, in principle all extra incomes were to be separate from existing revenues. They were to be audited independently. Thirdly, the sources of income were numerous. Managed by provincial officials and army officers, the total amount was never disclosed. Even the auditing by censorial officials failed to present a true picture. And fourthly, many of the new revenues and surcharges originated during the campaign, including a number of nuisance taxes, were never abolished afterwards.

The military situation in the south differed fundamentally from that in the north. There was no adequate army organization in being. The whole field command had to be built from the bottom up. Even the governors-general, military circuit intendants and commanders-in-chief were commissioned at short notices. A great majority of the fighting men were recruited in field. When Chang Ching^[51] was governor-general (1554—55), the recruits included mountain aborigines of Kwangsi and Hukwang, salt-smugglers of South Chihli, and Buddhist monks of Shantung³⁷. Later recruits, distinguished from one group to another by their native districts, were called P'ei^[53] troopers, Chang^[54] troopers, Kuang^[55] troopers, and I-wu^[56] troopers. On the other hand, Wei-so soldiers and militiamen played only a minor role. The *Shao-hsing*^[57] *Prefecture Gazetteer* summarizes the situation: "The Wei-so regulars are called soldiers; the recruits are called troopers. The troopers fight the enemy; the soldiers sit passively. Troopers are significant, soldiers not." Throughout the campaign, Chekiang province alone enlisted 100,00 such troopers. Even seafaring vessels were hired. The recruiting was carried out by officers of all ranks. Detachment commanders and above were encouraged to recruit "standard troopers" and "house men" to form an elite corps under their personal direction³⁸. The lack of system had been dictated by circumstances.

In the early phase of the campaign, the funds were derived principally from *t'i-pien*^[58]. There is no adequate English word equivalent to the term. While *t'i* means to lift up, *pien* means to organize. Originally the concept of *t'i-pien* is similar to the federalization of national guards by the United States, except in Ming China the term was used most exclusively in its fiscal sense, personnel having been rarely involved. In 1554, the court ordered all counties and sub-prefectures in South Chihli to defer the service of 40% of their militiamen, and that each deferred man was to contribute 7.2 ounces of silver to Chan Ching's war chest. The next year by an imperial decree each county of South Chihli and Chekiang, according to its size, was to make 200 or 300 militiamen available to the governor-general's command. Subsequently the service obligation was largely discharged by annual payments

³⁷ Li Kuang-ming, *Chia-ching yü-Wo Chiang-Che chu-k'o-chün k'ao*^[52] (Peking, 1933), *passim*.

³⁸ *T'ien-hsia chün-kuo li-ping shu*, 22/27, 22/33, 22/35, 33/109.

- | | | | |
|---------|----------|------------|---------|
| [51] 張經 | [52] 黎光明 | 嘉靖禦倭江浙主客軍考 | [53] 邳 |
| [54] 漳 | [55] 廣 | [56] 義烏 | [57] 紹興 |
| | | | [58] 提編 |

at 12 ounces of silver per man. In addition, one ounce of silver was assessed to every corvée laborer in the two provinces³⁹. As the campaign dragged on, the *t'i-pien* was extended to the *li-chia*^[59] and *chün-yao*^[60]. Starting from the Hung-wu era, one civilian household of every ten had to take a one-year turn to answer material requisitions by the government and to perform corvée labor service on behalf of the ten households. Since 1488 the obligation of filling material requisition and the labor service had been separated. The former was called the *li-chia* service, the latter the *chün-yao*. Each household, therefore, served two one-year terms in the decennial cycle, one for providing material, one for performing labor, in between there was a four-year rest period⁴⁰. The *t'i-pien* called those households who were scheduled to serve next year to active duty in the current year. In reality no material was required; no labor service was to be performed. All the obligations were commuted to silver payments.

In the course of the protracted campaign most of these impositions gradually transformed themselves into surcharges on landtaxes. The distribution varied from one county to another, and from one prefecture to another. The most common formula was *ting-ssu-t'ien-lu*^[63], or 40% of the fiscal burden to be borne by the pool of registered male adults in the district and the other 60% by landowners. What the central government had failed to legislate was now, at least partially, put into effect by provincial officials, or by governors-general in the form of military ordinances. At the high point, in both Chekiang and South Chihli the surcharges on landtaxes were close to 500,000 ounces of silver⁴¹. After the campaign the surcharges were reduced but not totally eliminated⁴².

On account of the campaign miscellaneous taxes in the southeastern provinces mushroomed. Monastic properties in Fukien province had been hitherto tax-exempted; during the campaign they were taxed to pay for the military expenditure. Hilly land in K'uai-chi^[65] county, Chekiang province, which had been only lightly taxed before the campaign, was saddled with an added assessment. Merchants and residents in Hangchow City were assessed with a "roof tax", based on the numbers of rooms of their shops and houses. Kwangtung province imposed a toll at the principal bridges. A

³⁹ *Shih-tsung shih-lu*, 3237—38, 7241—42.

⁴⁰ YAMANE Yukio, *Mindai yōeki seito no denka* [61], (Tokyo, 1966), pp. 104—106; HEINZ FRIESE, *Das Dienstleistungs-System der Ming-Zeit: 1368—1644* (Hamburg, 1959), p. 97. Note that LIANG Fang-chung [62], using insufficient source materials and writing in 1936, did not clarify that the *Chün-yao* Method was a modification of the *Li-chia* System. See LIANG, *The Single-whip Method of Taxation in China*, trans. by WANG Yü-ch'uan (Cambridge, Mass: 1956), p. 4.

⁴¹ *Chin-hua lu-chih*, 8/13; *T'ien-hsia chün-kuo li-ping shu*, 33/109.

⁴² Ho Liang-chün, *Szu-yu-chai ts'ung-shuo tse-chao* [64] (Ts'ung-shu chi-ch'eng ed.), 3/196—97.

- [59] 里甲 [60] 均徭 [61] 山根幸夫 明代徭役制度の展開
[62] 梁方仲 [63] 丁四田六 [64] 何良俊 四友齋叢說摘抄
[65] 會稽

cow-slaughter tax was collected in Shun-te^[66] county, an iron mining tax in Ch'ao-chou^[67] prefecture. A salt transit tax was added by Kiangsi province on its southern border⁴³. Fishermen on the coastal provinces were required to pay a new tax; without tax receipts they were not allowed to purchase salt. We cannot say for sure that none of the aforementioned taxes had existed before; but according to the gazetteers, the proceeds from all of them were designated as "troop supplies". Some existing revenues, such as stamp tax on real estate transactions and excises on wine and vinegar were also transferred by local official to defray the defense costs. In the last quarter of the century, Yüeh-kang^[68], Fukien province, was finally open for international trade. The income from the maritime trade was administered by military commanders. A tonnage based on the ship's carrying capacity was designated as "water force supplies"; import duty on merchandise was designated as "ground force supplies"⁴⁴. The rates of collection of all these impositions were low. Even the combined annual proceeds at Yüeh-kang were only in the vicinity of 20,000 ounces of silver. Nevertheless, the revenue was fragmented, its management decentralized, and there was no effective auditing.

After the *Wo-k'ou* were pacified, militia in the several provinces were partially demobilized. But in 1595 there were still 199,650 militiamen on duty. Although official regulations allowed each militiaman to have his service exempted upon presenting an annual payment of 12 ounces of silver, taxpayers who had been collectively assessed to provide a militiaman often had to pay 30 ounces to hire a substitute⁴⁵. Even at the rate of 12 ounces, the annual maintenance of the militia in the closing years of the century was still close to 1,200,000 ounces of silver. The burden, divided among the population of several provinces, was by no means excessive. But the militia was administered by local officials. Lacking any centralized supervision and with its maintenance relying upon local finance, it served only to pacify the districts and could not be expected to be a cadre for future mobilization.

In the Lung-ch'ing and Wan-li eras, there was a general demand to discharge the recruited troopers. Efforts were also made by the civil and military administrators to replace the recruits with *Wei-so* regulars. But the recruits could not be dismissed entirely. Toward the end of the century, Chia-hsing^[72] prefecture, Chekiang province, maintained a mixed ground force which consisted of five battalions. One battalion was filled with recruits, two battalions each with militiamen and *Wei-so* soldiers. The same

⁴³ *Chang-chou fu-chih* [68] (1573 ed.), 5/51—53; *K'uai-chi chih* (1573 manuscript, at Harvard University), 6/3—4; *Hang-chou fu-chih* (1579 ed.), 31/16—17; *Shun-te hsien-chih* (1585 ed.), 3/22; *T'ien-hsia chün-kuo li-ping shu*, 23/60, 23/62, 23/76, 26/94, 28/8.

⁴⁴ CHANG Hsieh, *Tung-hsi-yang k'ao* [70] (Ts'ung-shu ch'eng ed.), 7/95—97.

⁴⁵ LIANG Fang-chung, "Ming-tai ti min-ping" [71], (Militia in Ming Dynasty), *Chung-kuo she-hui ching-chi-shih chi-k'an*, 5.2 (June, 1937), p. 225, 231.

[66] 順德

[67] 潮州

[68] 漳州府志

[69] 月港

[70] 張燮 東西洋考

[71] 明代的民兵

[72] 嘉興

prefecture also maintained a water force of 1,500 men. The recruits in the water force were classified as "experienced helmsmen", the *Wei-so* soldiers as "assistant sailors". In 1574 the assistant sailors counted only 300 out of the 1,500. As late as in 1597, all the warships at service in the water force were hired⁴⁶. Even though these combat formations were under the direction of the military circuit intendant, they were locally organized and locally supported. It was nothing but a separate territorial command. There is no doubt that the locally raised funds now became indispensable.

IV.

Up to now there has been no overall estimate of the military expenditures of the sixteenth century Ming China. The studies by SHIMIZU Taiji^[73] and TERADA Takanobu^[74] are concentrated on the expenses of the northern army posts. Focusing their attention to the annuities delivered by the Ministry of Revenue, they only arrive at the minimum levels⁴⁷.

The task of ascertaining the level of expenses is a complex one. The accounts are scattered, the data not always complete. Another obstacle is that the Ming administrators never developed a uniform accounting system. The figures appearing in official documents and private papers were usually based on divergent standards and criteria. As a result, rarely can two sets of data be put on a comparable basis. The briefly cited figures are particularly of doubtful usefulness, for the fiscal terms often lack detailed clarification.

We have located 20 entries in the *Shih-lu* which give the subsidies dispatched to the northern army post by the Ministry of Revenue in 1544⁴⁸. Aside from regular annuities, the silver payments were also earmarked for recruiting, for construction of the Great Wall, and for purchasing food, animal fodder and horses. The total amount was some 2,700,000 ounces of silver. Promissory notes for salt delivery, that enabled the frontier commanders to barter government salt for cash or foodstuff with local merchants, were delivered in advance in 1543. These notes had an additional value close to one million ounces of silver. It must be borne in mind that besides the Ministry of Revenue, from time to time, the Ministry of War and Ministry of Works also delivered silver bullion to the army posts, though only irregularly. Counting the horses, food, firearms, and clothing which had been actually delivered from the capital, the army posts must have cost Peking some four million to 4,500,000 ounces of silver annually. Not cited above, there were also supplies delivered directly by the four northern provinces, which comprised silver, hay, cotton wadding and cloth. There were

⁴⁶ *T'ien-hsia chün-kuo li-ping shu*, 22/27—28.

⁴⁷ SHIMIZU, *Chūkoku kinsei shakai keizaishi* [73] (Tokyo, 1950), *passim*, and TERADA, "Henshō mondai", pp. 251—282.

⁴⁸ *Shih-tsung shih-lu*, 5483, 5486, 5488, 5490, 5497, 5502, 5513, 5547, 5548, 5556, 5562, 5566, 5575, 5577, 5581, 5595, 5611, 5624.

also internally-generated funds and material by the field commands, including, among many other items, conventional weapons submitted by the population in the respective military districts. With all these in view, a conservative estimate would expect the annual maintenance of the army posts to exceed seven million ounces of silver. In the 1550's, recruiting was conducted in Peking; *t'i-pien* was imposed on the southern provinces. There is no reason for us to believe that the annual military expenditure of the empire was below ten million ounces of silver. Most likely in the years of intensive military activities the expenses had run much higher.

Even in the early years of Wan-li, when peace settlement with Altan had been reached, the threat of *Wo-k'ou* abated, and the army efficiency had been improved, no reduction of expenditure was in sight. By this time the frontier establishment had further expanded to comprise 14 field commands. In 1576 the Ministry of Revenue compiled an account of the annual expenditures of those installations, including four key items: silver, food, animal fodder and hay. The account, reproduced in the *Shih-lu*, covers 21 pages⁴⁹. While it lists the quantities of each item, there is no total monetary value. The expensed articles are entered under the respective army posts, there is no aggregate figure. We added the figures together and converted the commodities into silver according to prevailing prices, the result shows that they altogether had a value of some 8,500,000 ounces of silver. The receivables of these 14 posts as of 1578 can be found in the *Ta-Ming hui-tien*, which also cover 28 double-pages⁵⁰. Processing the account with the same method, we find that they too, had a value exceeding eight million ounces of silver.

Unaccustomed to the level of expenditure, Ming officials found the experience shocking. With hinder sight we can see that the expenses could have only been expected. According to T'AN Lun [76], Minister of War from 1572 to 1577, the total strength of the Ming army in his time was 845,000 men⁵¹. We assume that some 500,000 men with a minimum of 100,000 horses were serving the northern frontier. This marked a significant increase from the mid-century. Naturally the defense costs could not be restricted to the previous level. Furthermore, due to the widening use of silver, pay for recruited soldiers was also rising sharply during the period. Until the mid-century, six ounces per man per year would have been adequate. In the later part of the century some of the recruited soldiers began to receive 18 ounces; the standard was gradually accepted and remained so in the seventeenth century⁵².

Another factor causing the expansion of military budget was the use of firearms. Although the Ming armies are known to have used firearms in the

⁴⁹ *Shen-tsung shih-lu*, 1162—1182.

⁵⁰ *Ta-Ming hui-tien*, 28/26—53.

⁵¹ *Huang-Ming ching-shih wen-pien* [77] (1954 reprint), 322/15.

⁵² *Ming-shih*, 222/2559; *Ming-ch'ien tsou-i* [78] (Ts'ung-shu chi-ch'eng ed.), 35/673—676; *Shen-tsung shih-lu*, 11266.

early fifteenth century, the wide use of these weapons seems to have been a development of later date, most conspicuously in the later sixteenth century, when the Portuguese-made cannons were extensively copied. A standing order of 1498 would have limited the manufacture of firearms to the Ministry of Works; frontier posts were not allowed to make them. In the later Chia-ching period this restriction was gradually removed⁵³. As late as in the 1560's, the standard cannonballs used by the Peking garrison were still encased with clay; in 1564 they were replaced by those made of lead; in 1568 they were cast of iron⁵⁴. In 1586 the Ministry of War dispatched an inspection mission to the four frontier posts in Shensi. The report subsequently submitted by the inspection team listed materials in store at those posts, some in connection with the use of firearms. Unfortunately, the inventory mixed iron and lead with rocks, making it impossible for us to calculate the costs. But one post alone had a stockpile of the mixed material over 2,000 tons⁵⁵. The so-called firearms obviously included chemical-propelled arrows and pellets by the piece, of which each post possessed two million or more. Evidently, modern warfare had already changed the complexion of the cost picture. The introduction of wheeled vehicles as a defensive equipment had taken place in the fifteenth century, but it was Yü Ta-yü^[79] and Ch'i Chi-kuang^[80] who promoted the deployment of those vehicles in mass in the later sixteenth century⁵⁶. The Ministry of Works indicated that in 1609 each of such vehicles cost 30 ounces of silver to produce⁵⁷. Neither had this expense existed earlier.

In the 1580's the Ministry of Revenue fixed its subsidies to the 14 frontier posts at the level between 3 million and 3,500,000 ounces of silver⁵⁸. The frontier governors-general repeatedly appealed to Peking to increase the payment, only to be told that no additional funds were available. It seems that even in peacetime to maintain an army of 500,000 men and some 100,000 combat horses for a year would have required more than the 8,500,000 ounces of silver or its equivalent then budgeted for the purpose. To replace the losses due to skirmishes and local engagements, which happened often, would have demanded more. Aside from subsidies from Peking, the field commands also relied on local delivery and local procurement. Not always were such materials and funds delivered in full. Understandably, the requests by the governors-general were not unjustified.

Facing a financial deficiency, the frontier posts had to stretch their resources to cover their needs. The accounts did not always correspond to

⁵³ *Ta-Ming hui-tien*, 193/1, 193/3—4.

⁵⁴ *Ta-Ming hui-tien*, 193/5.

⁵⁵ *Shen-tsung shih-lu*, 3249—53.

⁵⁶ *Ming-shih*, 212/2462, 212/2466.

⁵⁷ Ho Shih-chin, *Kung-pu ch'ang-k'u hsü-chih* [81] (Hsüan-lan-t'ang ed.), 8/84.

⁵⁸ *Ming-shih*, 224/2584; *Ch'un-ming meng-yü lu*, 35/28; *Shen-tsung shih-lu*, 2853, 3484, 4331.

the actual situation. Fiscal regulations were rarely followed to the letter. Personal manipulation by the governors-general became an important factor in the administration. Even in 1570's, when several army posts, under the leadership of Chang Hsüeh-yen^[82], Liang Meng-lung^[83] and Wang Ch'ung-ku^[84], showed general signs of improvement, this tendency of falsifying fiscal reports had already set in. Toward the turn of the century and thereafter the situation steadily worsened. On the eve the Ming collapsed, the field commands produced grossly inflated numbers of soldiers and horses to the Ministry of Revenue in requesting supplies, at the same time discounted the figures in their reports to the Ministry of War in order to evade combat responsibility. In 1643, Minister of Revenue Ni Yüan-lu discovered, to his disbelief, that two army posts alone inflated their combined strength to an impossible 1,300,000 men⁵⁹!

In the southern provinces ever since the *Wo-k'ou* campaign the defense installations and their finance were very much in the hands of provincial officials. Tax revenues for military expenditures were collected by the governors and governor-generals and disbursed by them. Once started, this practice also extended to the regions which had never been affected by the pirates. In the 1580's and 1590's, Yünnan was fighting a border war with Burmese leader Nanda Bayin. The governor repeatedly petitioned to Peking for aid; for some time the imperial court authorized the province to "borrow" from Szechuan. In 1594 when the border clash was still going on, the governor finally received a message from the emperor which in part reads: "Thereafter the military supplies of Yunnan must be raised by that province; no more borrowing is to be permitted." Consequently, the governor increased the tax on mining within the province from an annual quota of 50,000 ounces of silver to 80,000 ounces⁶⁰. Authorization for the increase seems to have been secured from the imperial government; but the control of Peking over the matter and similar matters was only nominal. Likewise, Szechuan province designated its excise on tea within its border as provincial military supplies⁶¹.

The *Wo-k'ou* campaign, therefore, created a deep impact on the Ming fiscal administration, perhaps deeper than it is usually visualized by historians. It may be argued that the military unpreparedness in south China prior to the campaign would have sooner or later precipitated some fundamental change, pirates or no pirates. On the other hand the fiscal decentralization effected since the campaign also had a long-term historical origin. At the founding of the dynasty, the Ming fiscal administration had been designed to operate in a village commodity economy. Taxes had been collected exclusively in kind. In handling the tax proceeds the government had avoid-

⁵⁹ *Ni Wen-cheng-kung nien-p'u*, 4/5.

⁶⁰ *Shen-tsung shih-lu*, 4177; *T'ien-hsia chün-kuo li-ping shu*, 32/46.

⁶¹ *Ta-Ming hui-tien*, 33/22, 37/2.

ed, as far as possible, the accumulation of commodities at high level, because such an accumulation would have strained the service facilities then available. The control by the central government was tight; yet the tight control was limited to fiscal direction, the court had little to do with field operations. Virtually every county magistrate and every prefect, by order of the central government, acted as if they were minor regional treasurers of the crown. Under the system the financial resources of the empire had never been physically consolidated. Instead, the operation featured numerous consignments of tax commodities, small in quantity, moving from one end of the realm to another. In the sixteenth century the widening use of silver came about at the same time as the military crises. The Ming court had neither the will nor the strength to initiate essential changes to correspond to the new circumstances. Playing the old tune with a new instrument, the fiscal administration in a fully developed money economy was still based on the early concept of commodity economy, except now the numerous grain consignments in transit were replaced by the numerous parcels of silver. Banking techniques were nowhere employed in the management. Once military expenditures added pressure to this setup, further decentralization became inevitable.

We regard that the new tax revenues created in the sixteenth century were justified. The rates of collection were in the main reasonable. The greatest drawback was that the impositions lacked an overall planning and supervision. To authorize local officials to create additional revenues and manage these funds themselves was a dangerous commitment. Efficiency of the management was low; abuses could not be curbed. In many cases the impositions wasted tax potentials of the empire, producing only insignificant incomes. The resultant regionalism further deprived the freedom in action of the central government and eliminated the empire's fiscal flexibility as a whole.

V.

Before we conclude this study we must pause to discuss the achievement of Chang Chü-cheng^[85]. Chang, one of the greatest statesmen in Ming times, dominated the court of Peking for a decade. Our story would be incomplete without discoursing on his fiscal management. Shortly before his death in 1582, the grain storage in Peking exceeded the need for nine years. The old vault of the T'ai-ts'ang^[86] Treasury accumulated a silver bullion over six million ounces. The Court of Imperial Stud held another four million. Likewise the vault in Nanking had 2,500,000 ounces in deposit. Food and cash on hand in the provincial treasuries were also plentiful. In the context of the sixteenth century financial history, this feat is a paradox, in a sense seemingly contradicting some of the remarks that we have presented earlier.

The truth is, Chang's financial entrenchment was put into effect directly after the peace settlement with Altan, at the same time the threat of Wo-k'ou

[85] 張居正

[86] 太倉

was also diminishing. His policy aimed at a vigorous reduction of government expenses without curtailing its income. Under his direction all unnecessary and less urgent official functions were either suspended or postponed. The number of students on government stipends was reduced; palace eunuchs on procurement missions were placed under stringent supervision. Provincial officials were ordered to effect a saving on corvée labor, in general to one third of the existing level. The hostel service provided by the Imperial Postal System was cut to a minimum. Yet, despite the cutbacks, contributions for these services by the population were not reduced. The saving was surrendered to government treasuries. Proceeds from fines, confiscations, and commutation of punishment which before had been handled with indifference were now brought under meticulous auditing. Tax delinquents, most of them affluent landowners, were prosecuted with vigor; their arrears were pressed for in earnest. The sale of official rank, which Chang himself loathed, continued when he was in office. The austerity program was extended to army logistics. Since the Mongols were for a time pacified, frontier guards and patrols to the borderland were reduced, so that extra allowances could be saved and more soldiers could be returned to farming duty. Governors-general in charge of the frontier posts were advised to save their expenditures up to 20% of the annuities delivered by Peking. Army studs that had been distributed to civilian households for upkeep were sold, the stable services that those households had performed in lieu of land-taxes were commuted to monetary payments⁸².

Effective as it was, the negative approach to the problem is apparent. The building of treasury reserves could not have been continued forever; its adverse effect on the economy cannot be at all measured. We speculate that Chang, a man of considerable foresight, implemented the program in preparation for a general fiscal reform; but the lack of definite evidence in extant materials prevents us from making strong assertions. It must be reiterated that in this age no courtier had the power to reorganize governmental institutions; merely to suggest drastic reforms could invite impeachment. Especially as the senior grandsecretary, Chang confined his function mainly to drafting rescripts for the emperor. To initiate fiscal legislations from his own office would have been clearly out of order. With the young emperor under his control, Chang did, indeed, actually exercise the power of appointment. Nevertheless before he proceeded to measures of any significance at all he had to urge his entrusted ministers and governors to submit memorials to the effect; only then in drafting rescripts to these memorials

⁸² *Ming-shi*, 213/2479—2482; *Kuo-ch'ao hsien-cheng-lu*, 17/60—108. CHU Tung-jun's *Chang Chü-cheng ta-chuan* [87] (Wuhan, 1957) has many errors in its discourse of fiscal administration. For Chang's political thought see Robert CRAWFORD, "Chang Chü-cheng's Confucian Legalism", in *Self and Society in Ming Thought*, edited by Wm. Theodore DE BARY (New York, 1970), pp. 367—414.

could he have his own wish fulfilled⁶³. In a letter to Wang Tsung-mu^[90], Imperial Commissioner for the Grand Canal, Chang disclosed: "Your servant now serves a youthful sovereign. He is obliged to be fearfully law-abiding and to go easy with the population. All policies involving grand designs must wait until His Majesty adds a few more years to his august age, and until his precious wisdom has further developed. Only then can suggestions be leisurely presented for his imperial decision."⁶⁴ In the light of the general practices of the Ming court, the statement must to some extent genuinely reflect the thought of the grand-secretary, even though it is tinted with over-exaggerated humility.

In late 1580 Chang finally in the name of the emperor ordered a national land survey, but by then he himself had only one and half years to live. The project was not completed at his death. Two months after his funeral the survey was brought to severe criticism in and out of the court. Shen-tung was compelled to authorize the provincial officials to modify the returns, in order to pacify the opposition. At the same time another survey was prohibited. Even two years later the land survey still remained as a controversial issue, suggestions were made that all returns of the 1580 land survey be completely invalidated and all landtaxes to remain *status quo ante*. The decision of the court was ambiguous⁶⁵.

As far as we know, except for the scattered and incomplete summaries appearing in the *Shih-lu*, the returns of the 1580 land survey has not been officially published. In 1618, when the Ming court ordered its first landtax increase to finance the Manchurian War, the assessment was still based on the 1578 land data⁶⁶, or the records prior to the survey. There is little doubt that Chang Chü-cheng's effort was a total failure.

Thus Chang Chü-cheng made no significant contribution to Ming fiscal institutions, regardless of his intentions and ambitions. But perhaps his fiscal retrenchment can be credited for having prolonged the life of the dynasty by a half century. The so-called "three grand expeditions of the Wan-li era", that is, the Korean campaign to check Toyotomi Hideyoshi's^[92] invasion, taking place from 1592 to 1598, the campaign against Pübei^[93] in 1592 and the suppression of Yang Ying-lung^[94] and his Miao^[95] tribesmen from 1594 and 1600 could never have been so successfully carried out without committing the treasury reserves accumulated in Chang Chü-cheng's days. The same success could not be repeated in the seventeenth century,

⁶³ See *Chang T'ai-yüeh ch'üan-chi*^[88] (late-Ming ed.), *Chang Chü-cheng ch'ih-tu* (Ch'ün-hsüeh Shu-she^[89] ed.), and *Chang Chü-cheng ta-chuan*.

⁶⁴ *Chang Chü-cheng ch'ih-tu*, 2/23.

⁶⁵ *Shen-tung shih-lu*, 2378, 2530, 2732.

⁶⁶ *Shen-tung shih-lu*, 10862; CH'ENG K'ai-hu, *Chou-Liao shih-hua*^[91] (1620), 11/13, 11/17, 15/41.

[88] 張太岳全集

[89] 尺牘 羣學書社

[90] 王宗沐

[91] 程開祜 籌遼碩劃

[92] 豐臣秀吉

[93] 倭拜

[94] 楊應龍

[95] 苗

when practically all granaries and silver vaults were empty, and the out-moded and over-worked fiscal machinery had to be tested for further endurance.

VI.

In summary, we conclude that the rising military expenditures in sixteenth century Ming China were largely caused by the decay of the *Wei-so* system, and to a lesser extent by the wide circulation of silver and the higher costs of modern warfare. When the effectiveness of the military colonies reached its vanishing point, army logistics should have been reorganized *in toto*. The Ming court evaded the manifest reorganization but could not shake off the financial consequence. In the later part of the century, a minimum annual appropriation of ten million ounces of silver for army maintenance perhaps could no longer be avoided. Unable to provide the funds with rational planning, the Ming emperors and ministers resorted to improvised and makeshift methods to handle the problem. They only passed the crisis to their successors.

The anachronistic character of the hereditary military service under the Ming has been pointed out. When history is reviewed in a wider perspective, however, we must also give allowance to the fact that in traditional China there was no easy way to solve the defense problem. Until the Opium War, China never considered herself to be on a competitive basis with other nations, militarily or economically. The peripheral states were too trivial to be seriously regarded as rivals. Under the circumstances to maintain an armed force at high level would make little sense. Not only wasteful, the powerful standing army could also impair internal security. Yet the potential threat of the nomads on the northern frontier, always unpredictable, would not let the Chinese relax their vigilance. An ideal approach to the peculiar situation was to develop modern techniques of mobilization, to allow a skeleton force to be expanded to a huge army in time of emergency. But such techniques were clearly beyond the organizational capabilities of the imperial dynasties. Fiscal readjustments to accompany such a program with tax incomes expanding and contracting to suit the fluctuating level of armament would have been an impossible task in a dominantly agrarian society. Nor would the ancient mode of transportation and communication permit their execution. By committing a segment of the population to both farming and soldiering, the military colonies filled the gap as a compromise. The *Wei-so* under the Ming derived its origin from similar arrangements in the Yüan⁶⁷, its main features were also retained by the Ch'ing in the Eight Banners. With a history of 600 years stretching to cover three consecutive dynasties, the development of such an institution could not be all incidental.

⁶⁷ See Romeyn TAYLOR, "Yüan Origins of the *Wei-so* System", in *Chinese Government in Ming Times*, pp. 23—40.

From today's vantage point, we can see the lack of realism of transplanting an organizational device of the nomadic tribesmen into agrarian China. The principle of vocational occupation by inheritance was also incompatible with the post-T'ang society, which already experienced considerable egalitarianism and social mobility. Such observations could not have been shared by the founders of the Ming and Ch'ing. The traditional concept of state to which they subscribed held society as an elastic entity; only through the molding and twisting by the Son of Heaven could it hope to attain excellence. For this reason, the fundamental laws proclaimed by the founding emperors should be firm and rigid, even if they had to contradict the social trend in their age⁶⁸. This doctrine, in fact, operated with some degree of success in traditional China. While condemning the hereditary military service, we often lose sight of the fact that before they turned impotent the *Wei-so* under the Ming and the Banners under the Ch'ing had remained workable for about 100 years in each case. Only in the long run did social forces manage to defeat imperial regulations. When this occurred, what the court encountered was no longer merely a military problem, but a fiscal one as well. The ensuing financial difficulties created a strange phenomenon recurring in Chinese history: In the early years because of the dynasty's nascent military and low cost of army maintenance the government had the taxation power but did not need the revenue; in the later period the government needed the funds but was unable to raise them.

After examining the financial difficulties of the late Ming, we suggest discarding the traditional belief that over-taxation caused the dynasty to fall. The failure rested in the incapability of the court in mobilizing the empire's resources. We have checked the landtax accounts of 102 counties and subprefectures in this period. Only very rarely can we discover that prior to 1618 the combined payments of the landowners in a county, with all surcharges added, exceeded 10% of the estimated crop production in that district. The accumulative increases thereafter until the end of the dynasty could not have doubled this amount. But owing to the inequality in tax distribution among individuals that we have cited earlier, we are unable to ascertain the financial burden of those taxpayers whose payments were the highest. Up to now there is no way for us even to construct a typical case.

The tax structure in the late Ming was a great maze. Nominally land properties were classified into dry and wet, marshy and hilly categories, gradings were assigned to the land according to soil productivity. These gradings and classifications varied from one district to another, in numerous counties multiplying themselves into scores of kinds⁶⁹. With all their complexities, however, they did not necessarily and genuinely reflect the

⁶⁸ Cf. Louis J. GALLAGHER, *China in the Sixteenth Century: The Journals of Matthew Ricci: 1583—1610* (New York, 1953), p. 43.

⁶⁹ Ping-ti Ho, *Studies on the Population of China, 1368—1953* (Cambridge, Mass., 1959), pp. 102—153.

relative fertility of land properties. The surcharges were many, seldom less than a dozen in a single county. Aside from the basic assessment, there were additional collections of hay, cotton wadding and other commodities. There were surcharges to cover grain shortages and transportation costs. A melting fee was added when the payment was commuted to silver. There were corvée labor and other services commuted and borne by land properties. There were impositions designated as military supplies and militia services. In addition, each county was free to add extras to compensate the losses and uncollectibles of that county's other revenues. Some of those surcharges were apportioned to the basic assessments, some were assessed according to acreage, regardless of land classification. Incomes from some of such surcharges could be infinitesimally small; in the extreme cases the total proceeds from an item within a county could be less than ten or five ounces of silver. The rate of collection, therefore, was fixed to include ten to 12 digits behind the decimal point of the picul, or, in the case of silver, the ounce. It would be a wonder indeed that, in view of the cumbersome tax schedule, abuses could have been at all prevented. Although the *Single-whip* Method eliminated some of the complexities, it was not such a sweeping reform as some historians have assumed it to be. In most counties the *Single-whip* was only designed to simplify the collection procedure, not to revise the tax structure. Even after the method was adopted, tax bills of many counties still preserved the multifarious items and the chaotic rates; only the total payable of an individual landowner was consolidated.

Had mental inertia been responsible for the lack of reform in the background? Only partly. In locating the responsibilities for the absurd tax structure, once more we have to trace its development to the early days of the dynasty. With the wishful thinking of the self-sufficient military colonies, the dynasty at the beginning started the landtax collection much too low. Even contemporary writers commented that landtaxes under the Ming were well below the level imposed by the Sung⁷⁰. What T'ai-tsu had devised was in reality a simple and lightly staffed administration. The lowered taxes and reduced governmental functions in turn made it possible for the court to maintain a small bureaucracy. In 1371, all the provincial and local officials across the empire counted only 5,488 persons⁷¹. Even in the later part of the dynasty the whole civil service probably had no more than 15,000 positions⁷². The insufficient administrative manpower compelled the government to enlist the elite in the country-side for rural leadership. Local tax collection was therefore delegated to the large landowners; disputes were settled by village elders. This design suited both practical considerations and traditional ideology. In the age of inadequate com-

⁷⁰ *Ku-su chih* [96] (1506 ed.), 15/1; *Chin-hua fu-chih*, 8/40; *Hui-chou fu-chih* [97] (1566 ed.), 7/1, 7/4; SHEN Te-fu, *Yeh-huo-pien pu-i* [98] (Fu-li Shan-fang ed.), 2/37.

⁷¹ *T'ai-tsu shih-lu*, 1176.

⁷² HUCKER, "Governmental Organization", p. 70.

munications, overstaffing of the local government was no blessing to the central government. The abundant personnel and the sophisticated office functions of the provincial officials would encourage them to build up their regional power to challenge the imperial rule. The minimum administration, on the other hand, permitted the imperial government to retain its monolithic structure and assured the control of the throne. At the same time the enlisting of the elite conformed to the Confucian doctrine which always sanctioned the dominance of the lettered over the unlearned. A long-term consequence of this arrangement was that the rural gentry benefited in every turn. The low tax rates facilitated them to achieve concentration of landholding in a few hands; the status as a governmental auxiliary enabled them to gain dominance to the extent of overshadowing local officials. In the later sixteenth century this process had been at work in the background over 200 years. Local officials had already started to leave complaints in the district gazetteers, charging the gentry for obstructing their tax administration⁷³. The development rendered the omnipotent power of the imperial government to be merely a fiction. It was omnipotent only when it was arbitrarily applied to few hapless individuals. In enforcing tax laws uniformly, it was grossly inadequate. There are sufficient evidences for us to believe that in the later part of the dynasty tax regulations could not be put into effect without the consent of the local gentry. Even Chang Chü-cheng's land survey failed because of their obstruction.

While conducting this study, we have become fully aware of the complexities in Chinese history. Starting from a limited scope to cover a specific topic in a short time span, in the course of the study we have found it necessary to re-examine the full-length of the dynasty's history. A technical inquiry can lead us to travel through numerous back alleys, including personalities, dominant thought, bureaucratic organization and social usages. The ideological orthodoxy is so entangled with practical considerations that it is difficult to distinguish which is which. Even though our purpose is to indite the Ming, while enumerating these complexities we cannot resist the temptation to add the following reminder to close our article: Currently all such complexities are still very much in existence in China, before our own eyes and to this date.

⁷³ *Ch'ang-shu hsien-chih* [99] (1539 ed.), 2/42; *Wen-shang hsien-chih* [100] (1608 ed.), 4/4; *T'ien-hsia chün-kuo li-ping shu*, 22/30.