

# **The Second Jinchuan Campaign (1771 – 1776)**

## **Economic, Social and Political Aspects of an Important Qing Period Border War**

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## Preface

This study was submitted to the Faculty of Cultural Studies (since October 2010 Faculty of Philosophy) at the Eberhard Karls Universität Tübingen as a doctoral thesis. It forms part of a wider research programme focussed on ‘Monies, Markets and Finance in China and East Asia, 1600 – 1900: Local, Regional, National and International Dimensions’. The funds sponsoring this study have been generously provided by the Deutsche Forschungsgemeinschaft (DFG; German Research Foundation), to whom I wish to express my sincerest gratitude.

I am deeply indebted to my supervisor, Prof. Dr. Hans Ulrich Vogel, who not only incited in me the energy to treat a subject that has hitherto received little attention, but also took the trouble to guide me through the intricate language of the Qing bureaucracy. Without his advice a lot of the sophisticated arguments of the political actors would not have been perceived by me. Similarly I have to thank my second assessor, Prof. Dr. Achim Mittag, with whom I had many a long session brooding over the Qianlong emperor.

I owe special thanks to Ms Dai Yingcong (William Paterson University, NJ) without whose support this study could not have been written. Not only did she provide me with invaluable hints as to sources and particular questions, she also encouraged me to carry out a deeper analysis of the numerous regulations concerning military expenditure.

I am also indebted to Roger Greatrex (Lunds Universitet) for valuable information on the background of the two Jinchuan wars. My thanks also go to Elisabeth Kaske (Johann Wolfgang Goethe Universität, Frankfurt), who particularly helped me with queries concerning the *juanna* and *juanshu* contributions.

Likewise I must thank Iwo Amelung from the same institution, who initiated me into the secrets of the First Historical Archives in Beijing. Special thanks go to Christine Moll-Murata (Ruhr-Universität Bochum). She not only helped me understand complicated accounting systems, but also tracked down the relevant regulations for military equipment in the ordinances of the Ministry of Works.

Not last, I must express my gratitude to Ms Gu Jia, who helped me find my way through the labyrinth of bureaucratic documents, as well as all the others whom I kept pestering with my questions: Werner Burger, Thomas Hirzel, Nanny Kim, Jane Kate Leonard, Ms Shan Kunqin, and Ms Wang Qing.

A final thank you goes to Karl A. Klewer who agreed to put this somewhat dry subject matter into decent English.

A few words have to be said about transcription and terminology. Chinese names, for persons and places alike, have been represented in the usual, modern system of *pinyin*. Apart from a few exceptions like *baturu*, *girdan*, *Artai*, *Iling'a*, *Ushhada* (syllables: er→r, yi→i, wu→u) this also applies to a large degree to Manchurian names and terms when written in Chinese characters. Place names in the area around Jinchuan have been represented using my own system of transcription based on the Chinese pronunciation, as I had nothing but the Chinese variants at my disposal and the better-known Tibetan names represent only the 'high Tibetan' variant. Moreover, since by no means all names of places and persons are known in their Tibetan written form, I have for the sake of consistency used transcriptions based on Chinese throughout, instead of writing some in one form and some in another. In this I have adhered to the following basic principles employing a variant of the International Phonetic System rather than *pinyin* (e. g. *Dzagu* for *Zagu*, *Djoktsai* for *Zhuokecai*, *Dandung* for *Dandong*); simplifying diphthongs (e. g. *Sonom* for *Suonuomu*, *Meno* for *Meinuo*); omitting vowels at the end of certain syllables (*Bolgu* for *Bolugu*, *Gyam* for *Jiamu*, *Ekshi* for *Ekeshi*, *Byesman* for *Biesiman*), and velarising palatals (*Kyakagyao* for *Qiaqajiao*). Exceptions, though, have been made in the case of place names with a specific meaning such as *Bajiaodiao* ('eight-sided tower'), parts of names that clearly show their meaning like *-gou* (valley) or *-yakou* (head of valley), or the place name *Dajianlu*, properly *Da-rtse-do* and according to my system 'Dagyenlu'.

Imperial China as a highly bureaucratized state traditionally had an astonishing variety of public offices, each with its own particular title. To translate these into English there exist a number of aids. Wherever possible I have used Hucker (1985), the standard and authoritative work of reference although his translations are not always entirely satisfactory. To quote an example, he renders the title *buzhengshi* as 'provincial administration commissioner', whereas a closer equivalent might be 'provincial treasurer'. Also Brunnert/Hagelstrom (1910) provided invaluable help with the plethora of military ranks and military terminology in general. Since this book, as opposed to Hucker, only deals with the late 19th and early 20th century it is more exact, especially regarding the titles of the Manchu elite of the Qing dynasty and the ranks within the different military units. All the same even these authors have left gaps, especially when it comes to the lower ranks. These I have taken the liberty of re-translating according to their context. Appendix 1 contains a list of the offices, titles and ranks that are of particular relevance to this study as well as to the *Junxu zeli*, (the '[Accounting] rules for military expenditure'), along with their translations.

Tübingen, Spring 2009

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## 1. Funds and Supplies for War

Military history can be a very long-winded and tiring affair, particularly when dealing with events covering long periods of time. Yet nothing seems to be more boring than the work a secretary of the war logistics bureau had to do when settling expenses. He was faced with nothing but price tables, statistics and endless columns of figures.

We may admire war heroes, despair over the unexpected failure of a strategic genius, heave a sigh of relief over a sudden turn for the better in battle or learn from the mistakes or the genius of commanders-in-chief.

But nobody, not even people who are accustomed to do battle with figures, like bookkeepers in companies during their annual accounting, seems right away ready to see the 'red tape' side of war.

After all a unit short of ammunition may get by with other solutions as impressively shown by Michael Shaara in his novel *The Killer Angels*. When during the battle of Gettysburg in the American Civil War Colonel Chamberlain's men ran out of ammunition, he ordered them to fix their bayonets in order to put the Confederates to flight.

But no army can make do without food, which is reflected in Napoleon's famous statement 'une armée marche sur son estomac' (an army marches on its stomach). It is probably because the bureaucratic side of the God Mars is neither spectacular nor heroic or 'sexy' (just think of the 'masculine' shape of swords, cannons and rockets) the subjects of war finance, war logistics and war accounting have received little attention in research and the resulting literature.

The financing of modern warfare being extremely costly due to the high degree of mechanization and the measures taken for the protection of the own troops will be more than ever of public interest because right now the first priority of all countries has to be the reconstruction of their economy as a consequence of the world-wide financial crisis, which means that less money will be available for armament and expenses for military actions.

The problem of financing wars and the military in general, though red-hot, is by no means new. All the same, surprisingly little western literature deals with it. The few works that have to be mentioned here are van Creveld's book *Supplying War: Logistics from Wallenstein to Patton*,<sup>1</sup> John A. Lynn's *Feeding Mars: Logistics in Western Warfare from the Middle Ages*

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<sup>1</sup> Creveld (1977).

to the Present,<sup>2</sup> both dealing with logistics, and the three volumes *War Finance*<sup>3</sup> edited by Larry Neal and containing essays from several decades of research on this subject. This pioneering work shows in an exemplary way how the problems of logistics were dealt with in the western world and how rulers (according to Carl von Clausewitz [1780 – 1831] only they can wage ‘war’) financed their armies.

As far as accounting is concerned, whose aim it is to show the state what a war has cost, research is still an enormous field that lies fallow.

Even figures about the cost are rarely available, as historiography has, as far as figures are concerned, almost exclusively concentrated on the degree of armament and the number of troops of the respective enemies, the number of soldiers and civilians killed as well as—in more recent times—on the sums of reparations that might have to be paid. Indeed this would be much simpler for the wars of the 18th century, during which what is now called ‘collateral damage’ was far less frequent (if it was worth mentioning at all during the so-called cabinet wars of the absolutistic rulers) than during e. g. the American Civil War or, more so, during World Wars I and II.

Tactical ploys and ruses on the other hand have always enticed posterity to study the writings of the forebears and to learn from them. Some classics like Clausewitz’ *Vom Kriege* (‘On war’)<sup>4</sup> or master Sun’s stratagems (*Sunzi bingfa* 孫子兵法) have been studied, translated and commented a hundred if not a thousand times. The use of the latter has even been transferred on non-military fields, as e. g. the management of a business.

Technology of war is another popular subject in research. Apart from the great number of books dealing with technical details like tanks, guns, uniforms and decorations there is a considerable number of works that explore the extended framework of technological development and organisational innovation as well as their repercussions. As works that give an outstanding overview may be mentioned MacGregor Knox and Williamson Murray (*The Dynamics of Military Revolution 1300 – 2050*),<sup>5</sup> Martin van Creveld (*Technology and War from 2000 B. C. to the Present*),<sup>6</sup> William H. McNeill (*The Pursuit of Power: Technology, Armed Force and Society since A. D. 1000*)<sup>7</sup> as well as Geoffrey Parker (*The Military Revolution: Military Innovation and the Rise of the West, 1500 – 1800*).<sup>8</sup>

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<sup>2</sup> Lynn (1993).

<sup>3</sup> Neal (1994).

<sup>4</sup> Clausewitz (2004). The book was first published in 1832.

<sup>5</sup> Knox/Murray (2001).

<sup>6</sup> Creveld (1989).

<sup>7</sup> McNeill (1982).

<sup>8</sup> Parker (1988).

One might think that research on war history offers a different aspect for areas outside Europe, e. g. China. But there as well one is caught between the praise of the new technology of armament and weaponry dating back to the Song era (960 – 1279 A. D.), which at the time was indeed progressive compared to what the west had to offer in the Middle Ages, thus it is no wonder that praise was enthusiastically echoed in western countries, and the boundless admiration of the semi-cryptic writings of master Sun, which can be interpreted in many different ways.

Sunzi is not only considered as a military strategist but also as a philosopher. Also the other, earlier, books on military strategy like the *Liutao* 六韜 ('The six secret [teachings]'), Master Wu (*Wuzi* 吳子), the *Simafa* 司馬法 ('The methods of the Minister of War'), the *Huangshigong sanlüe* 黃石公三略 ('The three strategies of Master Yellow Stone'), all of which Ralph Sawyer has commendably translated in one volume,<sup>9</sup> move largely, though not exclusively, on the fields of metaphysics and philosophy, so that they from early on were along with Confucianists, Legalists and Daoists attributed a 'master category' called *bingjia* 兵家 'military strategists'.

This tendency has continued to this day, as can be seen from the reception of Sunzi and from publications like *Zhongguo junshi sixiang tongshi* 中國軍事思想通史 ('A comprehensive history of military thought in China')<sup>10</sup> or *Zhongguo bingxue wenhua mingzhu* 中國兵學文化名著 ('Famous writings of Chinese military culture').<sup>11</sup>

Also the dictator Mao Zedong (1893 – 1976), the founder of the 'New China', did not only practice warfare and defeat the National Army of the Guomindang, he also wrote treatises of a philosophical and strategic nature.<sup>12</sup>

Technology, too, has been given special attention, as can be seen from Liang Jieming's book *Chinese Siege Warfare: Mechanical Artillery and Siege Weapons of Antiquity*.<sup>13</sup> Concerning the technology of weaponry in China of course Joseph Needham's work must not be forgotten, who particularly in the field of the 'gunpowder epic' made the running for others.<sup>14</sup> The most recent western publication on arms technology in Asia is by Peter A. Lorge.<sup>15</sup>

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<sup>9</sup> Sawyer (1993).

<sup>10</sup> Jiang (2006).

<sup>11</sup> Lei (1995).

<sup>12</sup> For example, Mao (1954).

<sup>13</sup> Liang (2006). There are also some other interesting articles in Chinese, like Wang (1998); Lu (2002); Zhou (2006).

<sup>14</sup> Needham (1962; 1986).

<sup>15</sup> Lorge (2008).

The fact that China has gained strength again recently and does not only aim at economic but also at geo-political targets, has revived the general interest in the country's former military culture. It must be said, though, that due to historic conditions the interest in the military aspect in the 'two Chinas' had never completely been forgotten. Thus two further works shall be mentioned, viz. the multi-volumed *Zhongguo lidai zhanzheng shi* 中國歷代戰爭史 ('History of wars in China'), published in Taiwan in 1963, and *Zhongguo junshi shi* 中國軍事史 ('A history of military and war in China'), published by the People's Liberation Army Press in 1986.

Concerning warfare in pre-modern China in general there is by now also a certain—small—number of western titles that deal with ancient China. There is Ralph Sawyer who writes about warfare using fire and water or about espionage,<sup>16</sup> and there are the very enlightening books by David A. Graff and Kenneth Swope,<sup>17</sup> containing a number of essays on different aspects of warfare in China through different ages. The books on warfare in pre-modern China published by Osprey supply quite a good introduction for the lay public.<sup>18</sup>

Joanna Waley-Cohen<sup>19</sup> has treated the cultural and social aspects of war, as well as a new book edited by Nicola di Cosmo,<sup>20</sup> Details on the ruling elite in Qing China, the Manchu, and their role as military elite, can be found in Mark Elliott's *The Manchu Way*. In this book the author describes particularities and problems of the Banner system.<sup>21</sup> In this context the three volumes by Pamela Kyle Crossley<sup>22</sup> cannot be left out. But next to nothing has been written in the west about war finance and war logistics in imperial China. The issue of war logistics is frequently mentioned in the relevant literature, like Peter Perdue's *China Marches West*<sup>23</sup> or Michael G. Chang's *A Court on Horseback*,<sup>24</sup> but never thoroughly studied. A fortunate exception to these shortcomings are the writings of Dai Yingcong who make important contributions to the question of the early and mid-Qing period emperor financed their military.<sup>25</sup>

Although philosophy and technology have always played a special part in China's historical works on war, a development into the direction that is of interest here can be observed. The first Chinese historical text that dealt in detail with a wide range of military subjects was the

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<sup>16</sup> Sawyer (1998; 2003).

<sup>17</sup> Graff/Higham (2002). Graff (2002). Swope (2005).

<sup>18</sup> For the period concerned, see Peers (1997).

<sup>19</sup> Waley-Cohen (2006).

<sup>20</sup> Di Cosmo (2009).

<sup>21</sup> Elliott (2001).

<sup>22</sup> Crossley (1990; 1997; 1999).

<sup>23</sup> Perdue (2005).

<sup>24</sup> Chang (2007).

<sup>25</sup> Dai (2001; 2005; 2009(1)).

*Wujing zongyao* 武經總要 ('All important matters of military management'),<sup>26</sup> which, though widely noticed, has so far only been translated in parts.

During the late Ming period (1368 – 1644) practical handbooks inspired by the reports of Jesuits on (at the time) modern fire arms<sup>27</sup> taken over from Central Asia or copied on Portuguese models (cannons used up the middle of the 19th century go back to that time). But all of these works basically concentrate on weaponry, training of troops, garrison system, structure of command, methods of attack and defence as well as strategy and tactics.

Only in the 18th and early 19th century, a period during which, due to the fact that the public coffers were notoriously short of cash, one began to keep tabs on expenditure by civil servants by exact instructions and regulations, we find at last works (primary sources) dealing with logistics and bookkeeping. At more or less the same time Carl von Clausewitz summed up the experiences the armies of the 18th century and the Napoleonic era had made.

Other than Clausewitz, who wrote a handbook for warring generals and their staff officers as a private person, the Chinese sets of rules on logistic organisation and financial accounting originated in state agencies. This makes possible a much more exact scrutiny and examination of the sums made available by the state and the amounts earmarked for certain expenses.

The Chinese state having a much closer grip on its generals and their logistics staff defined certain amounts that were permissible for a given performance to be made or result to be achieved. Thus theoretically the expenditure for a war can be calculated in advance, provided the corresponding numerical bases are available. On the backdrop of these 'marvels' of a quasi-legal regulation laying down even the least details the Chinese warfare appears as a 'bureaucratization of violence' which in its furor of regulation schedules all government activities as well as their cost down to the last penny.

War was thus meant to become the norm, something that secretaries in their offices could not only plan and control, but also conveniently settle the bills for. For that purpose on the one hand corpuses of laws with permanent validity were created (called *zeli* 則例) and on the other hand temporary sets of rules (*shili* 事例) which could be used as precedence for future situations. Where they have been preserved it is indeed possible to find details on the logistic organisation of a war and on questions of finance and settlement of accounts.

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<sup>26</sup> Compare the book by Liang (2006) and the many translations in Needham (1962; 1986). The *Wujing zongyao* contains a lot more on war, armament and organisation of the Song empire's military in peacetime and war than simple descriptions of weapons and techniques. The translation by Needham ('Collection of the most important military techniques') might therefore not be appropriate considering the total content of this voluminous book.

<sup>27</sup> For example, Sun Yuanhua's *Xifa shenji* 'Miraculous weapons of the West', Jiao Xu's *Huogong qiyeao* 'All important matters of firearms', or Zhao Shizhen's *Shenqipu* 'Miraculous weapons'.

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The delight Chinese governments took in bureaucratic regulations stems from two sources, the first of which being the tradition of Legalism (*fajia* 法家) whose main aim was to control the civil service considered by this state philosophy as the great challenge of the Emperor. Exact regulations should make it impossible for civil servants to embezzle state money and ask to be reimbursed for expenses considered unnecessary by the central government. In case too much was spent, the civil servants in question had to take the necessary money from their private purse or the amount was subtracted from their salary. The second source for this ‘furor of regulation’ is the simple fact that the Chinese government was permanently short of cash, which goes back to the ideas of Confucianism. As the Emperor had to show himself to be generous to his subjects the basic taxation stayed relatively low. Also war taxes like the ‘Turk penny’ (*Türkenpfennig*),<sup>28</sup> special levies for the crusades,<sup>29</sup> or even something like government bonds that in Europe had been quite usual since early modern age, were totally unknown in China. Thus the Chinese state had to make do without one of the most important financing instruments available to the English Parliament<sup>30</sup> due to the flourishing foreign trade (e. g. with the Netherlands) or to Emperor Charles V. (based on the Fugger method ‘buy yourself an emperor’).<sup>31</sup> As a result the state disposed of an extremely meagre income, so that every penny (in the case of China every crumb of silver) had to be accounted for. Exact regulations therefore also helped to economize.

Thus in China the 18th century is the first period for which more or less exact (and in some cases extremely exact) statements for logistics and accounting of a war may be found. Consequently Chinese secondary literature offers two valuable contributions to this subject, namely Chen Feng’s 陳鋒 *Qingdai junfei yanjiu* 清代軍費研究 (‘Military expenditure in Qing China’) and Lai Fushun’s 賴福順 *Qianlong zhongyao zhanzheng zhi junxu yanjiu* 乾隆重要戰爭之軍需研究 (‘The expenditure for the great wars of the Qianlong [emperor]’). Both have done invaluable work by collecting the overwhelming amount of material on this subject and to supply the interested reader with a first survey of this complex subject.

Lai Fushun provides an introduction into the deployment procedures (*junxing* 軍行) and the cost incurred for them, the supply with grain (*junliang* 軍糧) and weapons, the courier service, the supply with beasts of burden, soldiers’ pay and provisions in case of war

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<sup>28</sup> This tax levied for the wars against the Turks was officially never described as such, but instead was called ‘imperial aid against the Turks’ (*Reichstürkenhilfe*), ‘common penny’ or ‘imperial penny’ (*Gemeiner Pfennig* resp. *Reichspfennig*).

<sup>29</sup> Runciman (1954), p. 1261. The French king Philippe IV was so free to levy the crusade penny without initiating at all his planned campaign to free the Holy Land from the heathens.

<sup>30</sup> Compare the article by Neal (1977).

<sup>31</sup> Compare Ogger (1978).



(*junxiang* 軍餉), rewards and compensations (*shangxu* 賞卹), finance through private contribution (*juanshu* 捐輸) and the procedures for settling accounts.

In order to do this Lai has compared the ten successful campaigns (*shi quan wu gong* 十全武功) of the Qianlong emperor (r. 1736 – 1795) on these points, shown the differences and expounded successes and failures. But despite this pioneering work Lai has left out of consideration that the official regulations for war expenditure of the *Junxu zeli* 軍需則例, that were only enacted in the year Qianlong [QL] 49 (1784), were not in force for the campaigns prior to it. Until then for each individual campaign special regulations were enacted which in case of need could be disregarded. In his numerous tables based on the paragraphs of the *Junxu zeli* he pretends that these regulations were indeed applied at the time. Only the painstaking study of an individual set of regulations for such a war shows how difficult the settlement of accounts was in reality, due to the clash of the multitude of rules (the theory) with the departure from them (the practice). The wealth of material is also a reason why Lai, despite his intensive work in archives, presents inaccurate figures for individual campaigns that can be disproved by other documents. His work also contains not well thought-out statements like the one that the poor quality of cannons cast in high mountain areas was due to the low air pressure prevailing there.<sup>32</sup> But notwithstanding all this Lai's book is indispensable when looking at war logistics in late imperial China.

Chen Feng does not only speak of expenditure for war, but for military expenditure in general. Other than Lai he gives priority to the cost for the Chinese military in peace times, i. e. recurring expenses. In doing so he supplies a detailed description of the different types of troops prevailing during the Qing era (1644 – 1911: Banner troops and Green Standard troops), for which there was no equivalent in the West, where armed forces have traditionally been sub-divided into different corps.

In the context of these chapters he also refers in detail to different kinds of payment made to different types of troops in times of peace and war. He describes methods of accounting and paying out the amounts in question as well as the general cost caused by the standing army of the Qing state. His book contains two particularly important chapters in which he compares the different periods of the Qing dynasty in an effort to find out the war expenditure of individual rulers, as well as another of comparable importance on the financing of war. More is the pity that Chen stops at the last, essential, chapter in the Kangxi 康熙 era (1662 – 1722)

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<sup>32</sup> Lai (1984), p. 299 (footnote 24).

without giving an outlook on the fact that the Qianlong government not only managed to regulate war expense but also find an adequate solution for the question of finance.

Chen's figures are exceedingly helpful for a comparison of the military activities of individual emperors during the early and high Qing age. Especially the second Jinchuan war (1771 – 1776) with a cost of '70 million silver *liang*' (the monetary unit *liang* is also known as *tael*)<sup>33</sup> is over and over considered as extremely costly in the contemporary literature and compared with the other nine campaigns of the Qianlong emperor,<sup>34</sup> these being the first Jinchuan campaign (1749 – 1749), two campaigns against the Dzungars (1755, 1757), against the Muslims in the newly conquered western territories (1759), the Myanmar (or Burma) campaigns (1766 – 1769), one campaign in Taiwan (1786 – 1788), the one against Annam (Vietnam, 1788) and the two expeditions whose aim it was to suppress the Gurkhas in far-away Nepal who had invaded Tibet (1791, 1792). Zhuang Jifa 莊吉發 has written in great detail about the circumstances, the course and result of these ten campaigns.<sup>35</sup>

Luo Ergang 羅爾綱<sup>36</sup> is the author of a very good summary of the regulations for the purely Chinese Green Standard troops. It is a book that helps to obtain information about regulations for the Green Standards which can only partly be found in the official regulations for military expenditure.

For none of the Qianlong campaigns more figures are available than for the second Jinchuan war. This may have contributed to its being called 'the most expensive campaign of the 18th century', only overshadowed by the war against the White Lotus rebellion which the generals led unsystematically from 1796 to 1804, slowing it down on purpose.

What little material there is to make possible a comparison with former wars from the Shunzhi 順治 (1644 – 1661), Kangxi und Yongzheng 雍正 eras (1723 – 1735)<sup>37</sup> does not offer any details. Yet each of these three emperors was incessantly compelled to wage war against enemies inside and outside the empire, of which in the Kangxi era the war against the

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<sup>33</sup> Even though the silver *liang* (with a weight of one *liang* – for weight units see Appendix 4) indeed served as a currency unit in the form of silver bars or ingots, pieces of which could be cut off and would be weighed separately depending on the amount needed, the *liang* primarily served as a clearing unit for bureaucratic purposes.

<sup>34</sup> This does not comprise all of the Qianlong emperor's campaigns. In many respects the selection of these ten wars must be considered as absolutely arbitrary, and with some of them it is sheer euphemism to call them 'successful', as e. g. in the case of the campaigns in Myanmar or the first Jinchuan war, both of which were more or less aborted.

<sup>35</sup> Zhuang (1973; 1987).

<sup>36</sup> Luo (1984).

<sup>37</sup> The years indicated are those of the reign styles, not the years the emperor reigned. After an emperor's accession to the throne a new style was usually not proclaimed till after the beginning of the new year. The Kangxi emperor ascended the throne in 1661 after his father's death and proclaimed his reign style *kangxi* 'peaceful prosperity' only in the new year.

three Feudal Lords (the most famous of them being Wu Sangui 吳三桂 [1612 – 1678]) and the campaigns led in order to subdue the western Mongols were the costliest. Numerous documents from different collections of source material supply information on what practices for logistics, finance and settlement of accounts were applied during the second Jinchuan war. The most important one of all, though, is the completely preserved (bar a few losses) set of regulations for just that war, the *Pingding Liang Jinchuan junxu li'an* 平定兩金川軍需例案 ‘Precedent cases for war expenditure of the war against the Two Jinchuans’.

It is a stroke of luck that of all sources the set of regulations for the most expensive war of the Qianlong emperor has not only survived but also been published.<sup>38</sup> An in-depth study of the second Jinchuan war based on the rich source material will thus help to reappraise the topics of war logistics and war financing in late imperial China. Though this costly and long-lasting war seems to be an ideal object for such a study it has to be taken into account that the logistics of the war against the Jinchuan rebels was up against considerable difficulties due to the topography of the mountain area they inhabited. Thus it was necessary for the regulations to depart in some points considerably from what had been seen as normal procedure during the campaign against the Dzunghars.

This is particularly true for the cost of transport which was multiplied because of the steep mountain paths and the cost for horse fodder which had to be taken there since not enough hay was available locally. But all this does not impair the basic assumptions for organization and financing.

The purpose of this study is not to detail the conduct of the war, even though aspects like the bombardment of enemy fortresses by batteries of siege guns cast locally or the excellent organization of a system of communications enabling independently operating divisions separated by high mountain ridges to exchange information will need to be dealt with.

What the study aims at is to show how professional China’s warfare was in the 18th century, i. e. at a time which is on the one hand considered the apex of the empire and on the other as ‘the beginning of the end’, the time when European gunboats destroyed the ‘old’ China in the wars of the 19th century. At that time the attempt was made to exclude all contingencies and to make everything literally calculable with the help of objective rules.

Provided everybody complied with the rules, particularly the civil servants whose task it was to organise logistics and look after financing, but also the Banner generals who acted as ‘hinges’ between the civil and the military spheres, everything that falls in the category of *sine qua non* for a successful war had to run smoothly: pay and rations for the troops, supply

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<sup>38</sup> Beijing: Quanguo tushuguan weisuo fuzhi zhongxin 全國圖書館微縮複製中心, 1991.

of arms and ammunition, of means of transport, recruiting of labourers and workmen and, above all, the procurement of the necessary millions.

The insights gained from these observations help to understand the high degree to which a state had to be organized to be able to lead a kind of positional warfare for almost five years almost entirely without the participation of private persons. Where the private sector did intervene it is worth comparing with the western world in order to understand the differences. Only relatively little private money was involved and even then had often to be pre-financed by the state. The procurement of weapons and rations was almost entirely in the hands of the state, since rice came mainly from government granaries, while arms and ammunition, even gunpowder and clothing, were exclusively produced in state workshops. The only two fields in which private enterprise was permitted (!) at a larger scale were transporting rice and supplying the troops with food and other necessities. Both these services, which also included the changing of the silver currency in which the state paid the troops into copper cash were exclusively rendered by private persons or entities. That private enterprise was engaged at a large scale to transport certain quantities of rice to certain camps or logistics stations was an exception only admitted during the two Jinchuan campaigns. In short: while in Europe private enterprise was commissioned at a considerable extent to perform all sorts of logistics tasks, the Chinese state kept private enterprise as far away as possible. After all private contractors, dealers (*shang* 商), were according to the Confucian idea of state by definition wicked (*jian* 奸).

Another difference when comparing with the West lies in the fact that organization and financing were codified at all. In the European wars as well as in those of the New World it was necessary to improve the organization of logistics over and over again based on experiences made. But only rarely were the results of those experiences laid down in handbooks, let alone in corpuses of laws. Despite that standards must have developed so to speak on the quiet which were passed on from one generation to the next, the solution for the problem in western armies was the training of staff. Just as the ranks had systematically been drilled since the 17th century, officers of the different corps were trained in special fields of knowledge, be it engineering, the building of pontoon bridges or as sappers in the field of poliorcetics.

As a result staff with standard knowledge was permanently available and could be brought into action when needed, whereas in Qing China civil servants were appointed when it came to waging war. The Qing governors-general were said to be ‘naturally inclined to be warriors’ due to their descent from the Manchus, but this was of course just wishful thinking on the side

of the Manchu emperors. Apart from this the middle ranks of Chinese civil servants, namely prefects and magistrates who were used behind the lines, did not have the slightest idea of war logistics and thus could only cling to regulations. In many cases the persons appointed to deal with logistics were only candidates for office and as such had no practical experience whatsoever with financial affairs, with the result that they themselves as well as their staff had to stick to written instructions should they not totally fail.

The two wars waged against Jinchuan (rGyal-rong) were campaigns in the context of a colonisation of China's border territories beginning at the end of the 17th century. Half a century after Russia had done so China too moved towards central Asia and in doing so subjugated Mongolia, Turkistan and Tibet. It also defined its south-western frontiers and strove for stability in Myanmar and Vietnam. Disturbances in the interior were quelled mercilessly (e. g. the Miao people in Guizhou) and unsafe areas pacified (Taiwan). Thus the Kangxi emperor often praised as an enlightened ruler by Voltaire (1694 – 1778)<sup>39</sup> was no less belligerent than his contemporaries Louis XIV. (1638 – 1715) or tsar Peter the Great (1672 – 1725). Under the Qianlong emperor China achieved the largest expansion of her entire history.

The conquest of Tibet whose purpose had been to calm the western Mongols culminated in a permanent representation of an envoy of the Dalai Lama in Peking. Tibet's important role which consisted in ensuring that the Manchu could control the 'sister nation' of the Mongols found its expression in the two Jinchuan wars: Jinchuan's rebellious mountain dwellers—who were related with the Tibetans—were a threat to the politically, culturally and economically important road leading from Sichuan to Tibet. Quite apart from this Jinchuan's monasteries housed a school of Tibetan Buddhism which was a thorn in the side of the Dalai Lama's dGe-lugs-pa (Gelugpa) school, namely the old Bön school. Neither Jinchuan nor the Dzungar area were of notable economic value. Their conquest and subsequent colonization had to do with politics and imperial prestige. But there was another aspect. A war gave extra income to the professional army which was, just like the whole civil service, notoriously underpaid, and it also offered a chance of promotion, which concerned the frequently used troops from the provinces of Sichuan, Yunnan, Hubei, Hunan, Shaanxi und Gansu in particular. What the possibilities looked like will be shown here.

We owe the first study on the Jinchuan wars to Erich Haenisch,<sup>40</sup> who analyzed the most important historiographic sources dealing with them, for which he used the report from the

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<sup>39</sup> See, for example, Engemann (1932) or Tschang (1935).

<sup>40</sup> Haenisch (1922; 1935).

book *Shengwuji* 聖武記 ('The sacred wars [of our dynasty]'). In a former contribution Haenisch tries to reconstruct the geography of the area based on existing geographic descriptions made after the conquest (he obtained possession of Chinese maps) and using descriptions of places in the Manchurian versions of the official histories of the two Jinchuan wars, which makes for a valuable study on the geographical and political situation in Jinchuan before the war and in the decades after it. Roger Greatrex has supplied a thorough analysis of the first Jinchuan war and its background.<sup>41</sup> As he uses Tibetan sources he is in a position to render names of persons and places in roughly the original spelling. In his work he shows how the habitual raids of the local people became rampant in the course of time, which finally triggered the decision of the Qing government to stop the permanent quarrels in the border areas of Sichuan once and for all, and in a brutal way. Thus his study complements the work of Patrick Mansier and Dan Martin<sup>42</sup> who particularly stress the religious background of the second Jinchuan war and show how the Qianlong emperor as patron of the Gelugpa school was urged to put an end to the rule of the kings of Jinchuan who for their part protected the Bön school.

The Jesuits who worked at the imperial court were as well integrated into the war as surveyors and ballistics experts. Descriptions of the Jinchuan region can be found in some journey accounts, of which Albert Tafel's book *Meine Tibetreise* ('My travel through Tibet') describes very graphically the inhospitality of the region.<sup>43</sup> Also Walther Stötzner supplies a description of the area as it was at the beginning of the 20th century.<sup>44</sup>

On the part of the Chinese there exist about one dozen articles on the Jinchuan wars, most of which do not contribute results of recent research. Their only interest may be in that they stress particular aspects as e. g. the importance the local Bön religion had for the courage with which the Jinchuan 'rebels' fought.<sup>45</sup> Surprisingly it is repeated *ad nauseam* how the second Jinchuan war depleted the state's coffers and thus led to the decline of the dynasty, without the authors showing more proof than the generally stated costs of the two wars (20 respectively 70 million *liang*), statements which exaggerate the actual cost.<sup>46</sup> Particularly as far as such amounts are concerned Chinese again and again make the mistake to use figures from imperial edicts which often are very approximate and exceed in many cases the amounts

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<sup>41</sup> Greatrex (1994).

<sup>42</sup> Mansier (1990). Martin (1990).

<sup>43</sup> Tafel (1923).

<sup>44</sup> Stötzner (1924).

<sup>45</sup> Xu (1997).

<sup>46</sup> Zhang (1995). Cao (1999). Peng (2003).

really paid.<sup>47</sup> Again and again an alleged harmlessness of the quarrels between the different local rulers of the mountain region and with it the futility of the war is harped upon, particularly with view to the disregard for ‘national minorities’ and its culture. One author after all emphasizes that the mingling of the culture between Jinchuan and the Chinese immigrants in the area worked for the benefit of both sides. Also the relocation of persons from Jinchuan to Beijing helped, so the claim goes, to preserve their own culture and to enrich that of their new home.<sup>48</sup> The new settlement policy after the war is even said to have contributed to properly develop the productive forces there.<sup>49</sup> The Jinchuan example even seems to be used for an indirect justification of the political, economic and cultural restructuring of Tibet: the incorporation of Jinchuan into the administration of provinces, it is said, preserved the unity of the empire (*zuguolguojia de tongyi* 祖國/國家的統一) and safeguarded the stability of the south-western border.<sup>50</sup>

After all, one author maintains, the native rulers of the region had regularly taken part in the national wars against interior and exterior enemies and thus proved their sense of belonging to the empire.<sup>51</sup> Zhang Ting refers to the causes of the first Jinchuan war when she points out the ‘politics by marriage’ of the local kinglets, the enormous strength of the military in Sichuan, the ‘arrogance’ of the Qing government and the misjudgement of the imperial troops after the Djandui 瞻對 campaign in 1745.<sup>52</sup> Dai and Hua even say militarism (*duwuzhuyi* 黷武主義) had enticed the Qianlong emperor and his generals to start the risky war against

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<sup>47</sup> Peng (2004) speaks of 70 million *liang* spent, to which he adds the tributes of the merchants from Liang-Huai, Zhejiang, Shanxi and Guangdong amounting to 10 million *liang*, plus an equally high sum ‘originating from tribute campaigns and transferred to Sichuan’. Peng does not see that both sums are the same, and since he entirely overlooks the fact that the tributes were no expenses but income of the state, he arrives at the fantastic sum of 90 million *liang*.

<sup>48</sup> Zhang (1995). Zhang has also written a number of articles on the culture in rGyal-rong, the Jinchuan region, dealing with religious customs, tea culture, theatre masks, music and dance, or the stone towers people lived in (*diao* 碉). All these articles have been published in *Xizang yishu yanjiu* 西藏藝術研究 (in the meantime renamed: *Xizang yanjiu* 西藏研究).

<sup>49</sup> Xu (1995).

<sup>50</sup> Peng (2006).

<sup>51</sup> Zhang (1995). The author refers to the war against the Gurkhas as well as to the defence of Ningbo during the Opium War. But all these wars having taken place *after* the final overthrow of Jinchuan in 1776 cannot be taken as proof for the claim that the Jinchuan petty kings were in principle subservient and the assertion that these wars were ‘completely unjustified’. Both Cai (1994) and Chen (1994) examine the participation of troops from the former Jinchuan in these wars, but looking closer one sees that the persons concerned had quite early during the second Jinchuan war deserted to the Qing, the reason being that they had clashed with the rulers of Lesser and Greater Jinchuan. Thus it was not a deployment of former ‘rebels’ as neophytes of the imperial Banner elite, as the authors lead the reader to believe. On the other hand no consideration is given to the fact that the Jinchuan kings had indeed supplied regular troops *before* these two wars to fight e. g. against rebellious folks like Yangtung or Djandui, although these cases would support the argument that Jinchuan was normally loyal to the imperial dynasty. In this context it would likewise be fitting to show that Sonom of Greater Jinchuan hesitated a long time before promising his support to Lesser Jinchuan during the second Jinchuan war.

<sup>52</sup> Zhang (2004).

the rulers in the Jinchuan mountains after a number of campaigns had been successful without taking into account that the treasury only enabled the Qing state to conduct campaigns as quickly as lightning but was not up to positional warfare lasting for years.<sup>53</sup> Cao describes as one of the consequences of the war the fact that the administration of Sichuan became somewhat thin on the ground as many civil servants were appointed for logistics, which involved extra work for the magistrates who had to administer two districts instead of one. On top of this there were not enough troops available to take police actions against local brigands, because garrisons had been divested.<sup>54</sup>

Dai Yingcong's book *The Sichuan Frontier and Tibet: Imperial Strategy in the Early Qing*,<sup>55</sup> as well as her article 'The Qing State, Merchants, and the Military Labor Force in the Jinchuan Campaigns'<sup>56</sup> are of special importance for the military history of Sichuan. In these works the author does not only underline the significance of the Jinchuan region for the geopolitical planning of the Qing empire, she also shows what impact the recruiting of civilians for military purposes had in the area. The extent to which peasants were compelled to do 'corvée' work in the second Jinchuan war went beyond everything that had so far been seen in this respect.<sup>57</sup>

It is not the purpose of this book to exhaust the subject on the Jinchuan wars—on the contrary. Here the rebels from mountainous Jinchuan represent the unexpected challenges the Qing empire had to face at a time when it had reached the peak of its strength. In this respect comparable to the European powers in the autumn of 1914 it suddenly realized that the situation was going to last longer than planned and that new solutions had to be found. Chapter 2 will give an outline of the history of the Jinchuan wars with the course of action only roughly described without going into each of the battles, since the main attention is given to the importance of the region for the strategy of the empire in general and the way it was put into effect by military and political means. At the heart of the present study will be chapters 3 to 6, dealing with the cost for troops, civil servants involved as well as labourers and workmen (Chapter 3), the cost for equipment and implements, horses, rations and infrastructure (Chapter 4), the methods used for settling accounts and the overall cost (Chapter 5) as well as the financing of the war (Chapter 6). In Chapter 7 the consequences of a campaign as long and costly as the second Jinchuan war will be looked into.

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<sup>53</sup> Dai/Hua (1993).

<sup>54</sup> Cao (1999).

<sup>55</sup> Dai (2009).

<sup>56</sup> Dai (2001).

<sup>57</sup> It will be seen that the recruited peasants were paid for their labour, so that their rendering of services can actually not be called *corvée*.



The guidelines of the study were the following :

Concerning **logistics** it had to be found out who was entrusted with procuring the necessary goods and services and how these persons or groups of persons were organized. The next question to be looked into is how the military hardware (arms and weaponry) and consumables (gunpowder, cannon balls, musket ammunition, fuses, replacement for defective arms etc.) were acquired, how the troops were provided with vital implements (clothing, footwear, cooking gear) and how were they billeted. What was the private share in this and what the government's? How were the persons and organizations involved remunerated? How was the courier service organized and how were the horses needed for it provided and looked after? How was the baggage of the troops transported to the front?

With view to **cost** the question to be answered is how it was distributed. Were the extravagantly paid Banner troops indeed particularly expensive? What share in it had the soldiers' pay, the different special payments to the troops, rewards, payment for men wounded or killed in action and for medals? What was the share of ammunition and of transport of food and implements in the overall cost? Were there funds set aside for necessary repairs?

Under the heading **accounting** it will have to be found out how accounts used to be settled traditionally in China, a state of civil servants if ever there was one. Did it often happen that positions were 'pinned' on the state? What happened to civil servants caught lining their pockets and how severely were inspections through the custodians of the war chest?

As far as **funding** is concerned the task is to investigate what share the state contributed directly and in what way it obtained money when it became scarce: by compulsory contributions, by plundering or did the government issue bonds? What institutions within the financial structure of the imperial state had money at their disposal and how was the entire burden spread over them? What charges were imposed on humble peasants or at least on the local government? How were costs and responsibilities shared on the intermediate level of administration?

With view to the **historical perspective** the question has to be asked if the second Jinchuan war indeed contributed to the wilting away of flourishing China. Did the Qianlong emperor indeed squander the millions his father and grandfather had amassed? Was the second Jinchuan campaign really so costly that its cost eclipsed that of all other wars of the time? Were there discussions at the court about the necessity of more thrifty spending and how to go about wars in the future? Is it possible to calculate how much the war should have cost according to the regulations and are these figures comparable with its real cost? What were

the consequences of the five war years on the province of Sichuan in whose *hinterland* it went on? Were there profiteers and losers? Were there tax or price increases? Could social consequences be observed?

The answers to all these questions will help us to understand how it was possible to bring into being an enormous network comprising organisational and financial responsibilities in a situation of crisis which a war inevitable creates. It will be shown in which way the imperial and bureaucratic state of China managed to use the energy of innumerable persons to solve the difficulties that kept cropping up, using what limited means it had at its disposal.

Among the primary sources the following books and collections have been used:

*Pingding Liang Jinchuan fanglüe* 平定兩金川方略 ‘Military annals of the war against the two Jinchuan’. This is the official history of the second Jinchuan war. It was compiled under the directorship of Shuhede 舒赫德 (1711-1777), Agui 阿桂 (1717-1797), Yu Minzhong 于敏忠 (1747-1780), Fukang'an 富康安 (d. 1796) and Liang Guozhi 梁國治 (1723-1787), all of whom took part in the war either directly as commanding generals or in the central government attending to accounting, like Yu and Liang. The book was published in QL 49 (1784). The historiographic type of the *fanglüe* (literally translated ‘general plan’) was quite new at that time and was especially created to report the events of military campaigns against obstreperous rebels within China and its border regions, like the Kangxi emperor’s personally conducted war against the Western Mongols (*Pingding shuomo fanglüe* 平定朔漠方略), the war against the Dzunghars (*Pingding Dzunghar fanglüe* 平定准噶爾方略), or the war against the rebel Lin Shuang 林爽 in Taiwan (*Taiwan jilüe* 臺灣紀略). Part of the *fanglüe* histories is also included in the *Siku quanshu* 四庫全書 collection, which was compiled in the 1770s. Very typical for the historiographic style of the *fanglüe* is that it is not an account of the events in the shape of a narrative but a collection of important imperial edicts from which the reader has to extract the historic events and the core information. In this sense it is rather a source book than a history book. Some documents are commented with a few words by the compilers, with the traditional introductory words ‘[His Majesty’s] servants humbly note’ (*chen jin an* 臣謹案). The *fanglüe* of the first Jinchuan war, the *Pingding Jinchuan fanglüe* 平定金川方略, was compiled under the directorship of Laibao 來保, who had been responsible for keeping the war files in the central government. This history of the first Jinchuan war contains an imperial foreword, a map of the region with a description of the conditions prevailing in the area (*tushuo* 圖說), and 26 books or chapters (*juan* 卷 ‘scrolls’).

The *fanglüe* of the second Jinchuan war is much more voluminous (153 chapters), not only because the war lasted much longer, but because the history includes a short report about the events (*jilüe* 紀略), eight ‘head chapters’ (*juanshou* 卷首) containing the inscriptions of the steles erected after the war, and many odes written by the Emperor and his generals (quite a few of which can also be found in the biography of general Agui),<sup>58</sup> and eight literary chapters (*yiwen* 藝文) containing chants and hymns in the traditional style (*ya* 雅 ‘hymns’, *raoge* 饒歌 ‘plentiful chants’, *lüshi* 律詩 ‘regular poems’, *fu* 賦 ‘rhapsodies’, *lun* 論 ‘treatises’, etc.). The source book itself consists of 136 chapters. The documents collected in the *fanglüe* style histories seem, according to Haenisch,<sup>59</sup> to be unabbreviated, which is very important for an understanding of the context in which the generals submitted their memorials and how the Emperor and his advisors reacted to pending issues. The *fanglüe* histories were compiled by a large team of archivists in a special archival unit of the Hanlin Academy, the Military Archive (*fanglüeguan* 方略館). The early *fanglüe* histories were compiled in two languages, namely Chinese, and Manchu, which might differ in some points from the Chinese version. Of the *Pingding Liang Jinchuan fanglüe* three copies are available: that of the *Siku quanshu* corpus,<sup>60</sup> an edition in the series *Xizangxue Hanwen wenxian huike* (1) 西藏學漢文文獻彙刻 ‘Collected Chinese literature of Tibetology, Series 1’, and an edition published by the National Palace Museum (*Guoli gugong bowuyuan* 國立故宮博物院) in Taipeh. Unfortunately the pagination of all three versions is not identical so that it is necessary to identify the documents by date, in this case, cyclic characters.<sup>61</sup> Folio numbers in the footnotes follow the *Siku quanshu* version.

***Jinchuan dang*** 金川檔 ‘Archived [documents] of [the second] Jinchuan [war]’. This is a collection of documents from the bureaucratic paperwork of the second Jinchuan campaign. Besides imperial edicts, like the *fanglüe*, it also includes transcripts of minutes taken while interrogating war prisoners or collaborating natives in order to obtain information about the region and the enemy’s activities. Unfortunately the documents, arranged in three-monthly periods, are quite fragmentary, and whole periods are missing (months QL 37/1 – 9, QL 38/1 – 6, QL 39/4 – 6, and QL 40/4 – 6). Nevertheless the *Jinchuan dang* is a valuable complement to the documents recorded in the official history of the war, because it does not only prove that the documents in the *fanglüe* histories have not been altered for historiographical

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<sup>58</sup> Nayancheng’s *A Wenchenggong nianpu*.

<sup>59</sup> Haenisch (1930), p. 425.

<sup>60</sup> *Shibu* 史部: *Jishi benmo lei* 紀事本末類.

<sup>61</sup> Documents issued on the same day are headed by the words *tongri* 同日 or *shi ri* 是日.

purposes, but also because it contains a lot of documents not recorded in the *Pingding Liang Jinchuan fanglüe*. The *Jinchuan dang* files were published by the National Palace Museum in Taipeh in 2007.

A very selective collection of documents is **Jinchuan an** 金川案 ‘Files from the Jinchuan [wars]’, published in 1963.

Another set of original, and hitherto unpublished files are the document copies of the State Council, the *Junjichu lufu zouzhe* 軍機處錄副奏摺, housed in the First Historical Archives of China (*Zhongguo di yi lishi dang'an guan* 中國第一歷史檔案館) in Beijing. They are arranged according to topics, of which the war expenditure (*junxu* 軍需) category was of course important for this research. The document files contained in this collection are only made available on microfilms and are hand-written in *xingshu* ‘running script’ style. These two factors make it quite difficult to read through a large amount of documents. But luckily the documents are quite well catalogued according to sub-categories and a title for each document has been added by the archivists, making it easy to know about the contents by one glimpse at the page. Although a part of the documents in question is identical to the memorials in the other publications, the document copies also contain a lot of material not recorded in the official histories, the most important of which are the monthly accounts of the provincial treasurer of Sichuan, who was responsible for the war chest.

There are some important sources not used for this book, most notably that of the archives of the grand secretariat (*neige daku* 內閣大庫). XXX

**Gaozong shilu** 高宗實錄. The ‘veritable records’ of Emperor Gaozong (the Qianlong emperor) are part of the collection *Qingshilu* 清實錄, which contains important imperial edicts from the whole Qing period. Because it is not centred on the events of the Jinchuan war but encompasses all official activities of the emperor and all questions of daily routine, it can only be used as a supplement of the official history of the war. But its importance for the Jinchuan war lies in its dealing with points not documented in the other collections. Especially for the questions how the war was financed and what were the repercussions of the war, the documents in the *Qingshilu* are indispensable.

**Pingding Liang Jinchuan junxu li'an** (short title: **Jinchuan junxu li'an**) 平定兩金川軍需例案. These ‘Precedent cases for war expenditure of the war against the two Jinchuans’ is the only surviving collection of regulations for war expenditure of the Qianlong Emperor’s ‘ten successful wars’. It has been published in the series *Xizangxue hanwen wenxian huike* (2). The original title of this book, compiled by Zheng Qishan 鄭棲山, was

*Pingding Liang Jinchuan shili* 平定兩金川事例 ‘Regulations for the war against the two Jinchuans’, showing that these rules were applicable only for this single instance and not for any other wars. Zheng has collected all precedences of that war and compiled a compendium of 47 items (*tiao* 條) with more than 870 entries (*an* 案), as the forewords says. By this very cumbersome work he has made it possible to gain a quick overview over of the tremendous amount of rules (also called *zhangcheng* 章程 ‘statutes’) for the organisation of the second Jinchuan war. Without it a researcher would have to work his way through thousands of archival documents to reach comparable conclusions. Furthermore, it is not possible to obtain a complete set of rules applied for the war by only relying on the documents provided in other collections or archives. The many files were divided chronologically into three categories: During the first three months of the war, from QL 36/6 to 36/9 (Jul – Oct 1771), the files were archived in the so-called ‘regulations for barbarian affairs’ (*yiwu shili* 夷務事例), for which partly different rules were valid than later on. In many cases higher rates were paid out than later. From QL 36/9 on to QL 38/6/29 (Aug 17, 1773)<sup>62</sup> the accounts were included in the so-called ‘old files’ (*jiuan* 舊案), from QL 38/7/1 (Aug 18, 1773) on in the ‘new files’ (*xin'an* 新案). There were two reasons for this distinction. The first one is that the army was regrouped and reinforced with fresh troops after the defeat at the Mugom uprising, and the second one that general Fulehun 富勒渾 asked for a standardization of all rules for all troops. The *Jinchuan junxu li'an* is therefore very important because it makes possible an evaluation of the rules actually practised during the second Jinchuan campaign, and because it provides a plethora of indisputable data by which statements in different sources can be verified or disproved. Of special interest are the data for the first Jinchuan campaign (expenditure, troops deployed, rice consumed), for which strongly deviating statements can be found in other sources. In spite of the publisher’s stressing his having tried to eliminate errors in the manuscript version there are, nevertheless, still many clerical errors to be found in this publication of the ‘Jinchuan rules’ so that the figures often lead to inconsistent sums. The *Jinchuan junxu li'an* consists of the following parts: the introductory survey (*zonglüe* 總略) gives a general idea about what the campaign was meant to achieve and how much manpower and money was mobilized to undertake it. This is also the first instance where concrete statements about the costs can be found. The first ‘scroll’ (*juan*) of the *Jinchuan junxu li'an* contains the files of the barbarian affairs (*yiwu shili*) until QL 36/9, the exact numbers of the participating soldiers (*guanbing shumu* 官兵數目) and a crude overview over the civilian

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<sup>62</sup> The sixth month of QL 38 was a short one with only 29 days.

officials dispatched to the war theatre (*fengchai guanyi* 奉差官役); an account of the progress of the conquest (*fenbing kejie* 分兵克捷); a list of rewards (*teen gongshang* 特恩貢賞) and of cases in which the emperor waived repayment of money owed to the state by officials (*tezhun ruxiao huomian* 特准入銷豁免); the text of the steles erected after the defeat of the enemy, with the inscriptions composed by the emperor himself (*yuzhi beiming zan* 御製碑銘贊); and a laudatory list (*hebiao* 賀表). The second ‘scroll’ lists the compensations for the killed and injured (*enshang xushang* 恩賞卹賞) along with imperial favours concerning the salt-and-vegetable pay (*yancai kouliang* 鹽菜口糧); regulations concerning the animals and personal assistants for civilian officials (*wenyuan fenli* 文員分例); regulations concerning military equipment (*junzhuang guozhang* 軍裝鍋帳) and prices for grain and equipment (*liaowu jiazhi* 料物價值). It continues with the procedures for transporting military pay (*yun xiang yun wu* 運餉運物); pay for labourers and workmen (*fujian renyi* 夫匠人役); prices for the transport of grain and other transport regulations (*liangyun jiajiao* [s. l. *jiaojia*] 糧運價腳[=腳價]); regulations for the courier stations (*tangzhan shili* 塘站事例); regulations for building stations and other construction work (*fangwu gongcheng* 房物工程); proceedings for the logistics routes; proceedings with the *pingyu* surcharge (*pingyu li'an* 平餘例案); ‘attached items’ containing accounts rejected by the Ministry of Revenue (*fuxiao ankuan* 副銷案款); a long collection of documents about the correct accountancy for some matters of dispute for which the account figures had to be reduced or which could not be declared as war expenditure (*hejian shanchu* 核減刪除); and finally a general overview over the total expenditure and the sources of finance (*shouzhi dazong* 收支大總), including some documents concerning rectification of incorrect accounting.

The *Junxu zeli* 軍需則例 (‘Regulations for war expenditure’) is the official law code for war expenditure. It was issued in QL 49 (1784), after a compilation process that took almost eight years due to the problems which arose with accounting issues as a result of the second Jinchuan war and due to the complexity of setting up a general account for so many issues. Although all war expenditure was in the end paid by the main government treasury, which was in the hands of the Ministry of Revenue (*hubu* 戶部), only part of the issues was controlled by this governmental institution. The two other ministries involved were that of War (*bingbu* 兵部), and the Ministry of Works (*gongbu* 工部). The latter had the function to determine the prices for gunpowder (*huoyao* 火藥) and ignition powder (*zhayao* 炸藥),

bullets, fuses, the casting of cannonballs and cannons (and charcoal kilns, *tanyao* 炭窑, to produce fuel), the production of mines (*dilei* 地雷) and shells (*huodan* 火彈), as well as that of weapons, other military equipment (*junzhuang qixie* 軍裝器械) and ‘miscellaneous items’ (*zaxiang* 雜項) like packing material (like baskets, boxes, sacks, etc.), weighing and measuring equipment, saddles, and so on. But also the construction of bridges and roads, as well as the building of boats transporting the troops was part of the responsibility of the Ministry of Works. In many cases the cost of material and the circumstances of production depended on the local conditions with the consequence that—in spite of all efforts towards a total bureaucratization—it was virtually impossible to fix government prices for many of those items enumerated in the single chapter of the *Gongbu junxu zeli* 工部軍需則例. The regulations for which the Ministry of War was responsible (*Bingbu junxu zeli* 兵部軍需則例, in five chapters) deal with carts, horses and boats for transporting troops together with their equipment to the front and back, as well as with the horses in the courier stations (*tangzhan* 塘站) and the rewards and compensations to be paid to the families of injured and killed officers and common soldiers. The largest part (nine chapters) of the *Junxu zeli* covers issues for which the Ministry of Revenue (hence called *Hubu junxu zeli* 戶部軍需則例) was directly responsible namely the so-called ‘march-and-baggage pay’ (*xingzhuang* 行裝) paid out to all types of troops (Capital, north-eastern and other provincial Banner troops, Mongolian non-Banner troops, Chinese Green Standard troops, and native auxiliary troops) when leaving their garrisons, as well as to civilian officials from the central government taking part in a campaign; the so-called ‘salt-and-vegetable pay’ and daily rice rations (*yancai kouliang*), to which also civilian officials from local governments appointed to assume tasks in logistics were entitled. Its responsibility also applied to the number of riding horses and beasts of burden carrying the personal equipment of officers and troops (*qi-tuo ma-tuo* 騎馱馬駝); further to the prices prescribed to be paid out to transport rice and military equipment to the war theatre (*jiaojia* 腳價 ‘foot price’), as well as to the family allowances (*anjia* 安家 ‘appeasing the family’), to labour pay and rice rations for experts, workmen and labourers supporting the army (physicians, scribes, painters or map-drawers, ferrymen, granary overseers, station labourers and their foremen, craftsmen; and enemies who had surrendered); furthermore to the official prices for fodder, cattle and sheep, stationery and medicine, and to the conversion rates in case that horses could not be made use of or no meat was available. The last point deals with a multitude of different regulations for provisions and the setting up of camps for north-eastern Banner troops passing the Capital, payments due when the title of

a *baturu* ‘hero’ was bestowed, the anti-corruption pay (*yanglian* 養廉 ‘nourishing incorruptibility’) of civilian officials serving in a campaign, travel expenses (*panfei* 盤費) and renting private rooms (*zulin minfang* 租賃民房) for officials rushing to the Capital and back on duty calls, provisions for war prisoners (*zeifan* 賊犯 ‘criminals’), stationery and scribes for the war logistics bureau (*junxu gongju* 軍需公局, short: *junxuju* 軍需局), the production of transport sacks, regulations for bringing back injured troops and the corpses of men killed in action, the replacement of dead horses, officers in arrears with debts,<sup>63</sup> collecting transport surcharges (*pingyu*), and finally rules for accounting. The *Junxu zeli*, covering almost all aspects of organisation and accounting, can thus serve to complement our knowledge about the bureaucratisation with which the Qing government tried to normalise the ‘abnormal’ case of state life, a war, and to control war expenditure. In the commentaries to this code for war expenditure much information about the second Jinchuan war (‘the [old] Sichuan/Jinchuan precedents/ files’, *Sichuan li* 四川例, *Sichuan an* 四川案, *Sichuan junxu tiaoli* 四川軍需條例, *Chuansheng li* 川省例, *Jinchuan li* 金川例, *Jinchuan jiuli* 金川舊例, etc.) can be found, which is invaluable for comparison with the *Jinchuan junxu li'an* precedents, and to supplement issues missing in the Jinchuan arrangements. The *Junxu zeli* is also of great importance to solve the question of the impact of the second Jinchuan war on the accounting procedures: it was high time to compile a general code for war expenditure to save a lot of bureaucratic work, which otherwise would have resulted from discussing each and every matter not regulated, but also in order to save money in future wars.

These are the main sources used for this research. From the documents in the *Fanglüe*, the *Jinchuan dang*, and the *Gaozong shilu* it became evident how problems in war logistics and in financing the war arose and in what way the government tried to solve them until it was ready to have a code compiled with general rules for war logistics and war expenditure in shape of the *Junxu zeli*. The increasing need for bureaucratisation can also be seen from the large amount of canons compiled by the Ministry of Works, dealing with official work in general (the *Gongbu zeli* 工部則例 ‘Regulations of the Ministry of Works’) and with weaponry in particular (the *Gongbu junqi zeli* 工部軍器則例 ‘Regulations of the Ministry of Works for weaponry and military equipment’).

Concerning the Jinchuan wars and the Jinchuan region there is still a handful of minor sources of interest about the events in that region, but which contain barely any information about logistics or war finance. The book *Shengwuji* published in 1842 by Wei Yuan 魏源 (1794 –

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<sup>63</sup> Which was very commonplace among the Banner troops, as Elliott (2001), pp. 313-322, shows.



1857) is a eulogistic description of the wars and the military system of the Qing dynasty. Although it contains a considerable amount of information on all important wars of the Manchu ruling elite it must be used with caution, as it heaps praise on them and their warriorhood. A few other small books should be mentioned here, partly compiled by eye-witnesses who fought either in the first or the second Jinchuan campaign.

Zhao Yi 趙翼 (1727 – 1814) has written the short book *Pingding Liang Jinchuan shulüe* 平定兩金川述略 ('A short account of the war against the Two Jinchuans'), a very concise account of both the first and the second Jinchuan campaign. As a historian, who had taken part in the Taiwan campaign in 1787 Zhao has compiled a few books on military history, including his account on the Jinchuan wars. Slightly longer than the *Shulüe* is Cheng Muheng's 程穆衡 (academic *jinsheng* degree 1737) *Jinchuan jilüe* 金川紀略 ('Concise account on the Jinchuan [campaign]') in two chapters, which is only preserved as a manuscript.

Very typical for the Chinese literary style of 'brush notes' (*biji* 筆記) is Wang Chang's 王昶 (1725 – 1806) *Shujiao jiwen* 蜀徼紀聞 ('An account from the borderlands of Shu [i. e. Sichuan]'). Wang had fought in the second Jinchuan campaign himself and took part in the march from Yongchang 永昌/Yunnan to the so-called 'western division' attacking Lesser Jinchuan in the winter of QL 36 – 37 (1771 – 1772). His account in the style of a diary is a valuable addition to the information that can be gleaned from the official documents. It unfortunately ends in QL 37/3/30 (May 2, 1772) because he was 'too busy' (*bu xia wei zhaji yi* 不暇為劄記矣) with his task as a batman of general Wenfu 溫福.

Of particular value is Li Xinheng's 李心衡 (fl. 1784) book about the region of Jinchuan and its inhabitants with the title *Jinchuan suoji* 金川瑣記 ('Petty notes on Jinchuan') written in 1790. Though Li hails from Shanghai, he acted as vice magistrate (*xiancheng* 縣丞) of Xichang 西昌 in Sichuan for a while, from where during his travels he gathered information about the Jinchuan war which had not been over long as well as the newly-established prefecture in the west of Sichuan.

The events of the two Jinchuan wars left a deep impression on contemporaries, who over and over again referred to them. Many things not contained in the official bureaucratic documents have found their way into literature. There one may e. g. read that the Qianlong emperor pursued his objective, namely to throw down the Jinchuan rebels, so single-mindedly that he

could not close an eye day or night, as he anxiously waited for news from the front.<sup>64</sup> To some contemporaries the things that had happened there in the mountains seemed too unreal and incomprehensible, so that the complete failure of the formerly successful general Zhang Guangsi 張廣泗 (d. 1749) was attributed to the influence of a local princess who was said to have seduced him and other commanders. Xu Zhiyan 許指嚴 (1875 – 1923/25) writes about it in his novella *Jinchuan yaoji zhi* 金川妖姬志 ‘The seductress of Jinchuan’, dating from the early years of the Chinese Republic. But even before him there were novel-like narratives that recounted what (allegedly) had happened at the front.

‘His Majesty knew that it was just a matter of quarrels between a lot of bugs in their holes and thus there was no need to bother the imperial army with this trifling matter. At the same time it just happened that, just in the middle [of fights], the Empress Dowager, *Xiao Shengxian* 孝聖憲皇后, ordained the arms to be laid down and not to molest the people any further. Also the rebels had been considerably intimidated and offered capitulation to Yue [Zhongqi], Duke *Weixin* 岳威信公 as representant [of the empire]. Thereupon Fu[heng], Duke *Wenzhong* 傅文中公 ordered Duke Yue to come to the inspection of troops. Duke Yue put on his coat, mounted his horse and accompanied by thirteen men betook himself straight to Gala'i, to the den of the rebels. The *Shaloben* 莎羅奔, Prince Lama of Greater Jinchuan, along with his retinue kowtowed and welcomed [Yue Zhongqi] in full armour and holding their weapons. On seeing the *Shaloben* the Duke brought his horse to a halt and said, asking laughingly: “Do you still know me?” [All of the rebels] exclaimed in surprise “That is indeed our Lord Yue!”, prostrated themselves before him and asked for surrender. They fell over each other to lead his horse and took him to the tent where he was treated to food and drink. Having emptied his cup he announced that the Son of Heaven was graciously going to spare their lives. There was general rejoicing, and holding Buddhist sutras above their heads, solemn oaths were sworn and an ox was immolated and subsequently roasted. The Duke was invited to make himself comfortable in the tent where he took off his coat, dined and spent the night as formerly [when he had led the *Shaloben*'s troops against the rebellious Yangtung].’<sup>65</sup>

Another story says:

‘In those days, at the time of the Jinchuan war, the troops for years were unable to gain ground. Only in the winter of the year *yiwei* (1775) [the main castle] Le'uwé was taken. When Agui's, Duke *Wencheng*'s 阿文成公桂, report of the victory arrived, His Majesty was at table. Thinking of the many soldiers who had lost their lives in this war, his tears fell into the fish soup. He ordered the soup to be taken to the Duke und to and to tell him about [the tears]. When the Duke received [the imperial gift,] he said with tears in his eyes: “How could I not loyally remember this compassion of His Majesty till my dying day.”’<sup>66</sup>

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<sup>64</sup> *Qingbai leichao: Bingxing lei* 兵刑類: *Junbao* 軍報. This story is also told in *Xiaoting zalu* 1, p. 15.

<sup>65</sup> *Xiaoting zalu* 4, p. 99.

<sup>66</sup> *Xiaoting zalu* 1, p. 23.

But the subject of this study is not the historiographic and literary reception of the two Jinchuan wars, and as far as logistics and funding are concerned, only hard facts and figures count.

## 2. The Jinchuan Issue

### 2.1. The Region and its Inhabitants



□ 2.1 Map: The province of Sichuan and the location of Jinchuan and the surrounding native petty kingdoms. The two war towers symbolize Greater and Lesser Jinchuan. The western border of the province of Sichuan was more or less open and flexible.

In the western fringes of what is today Sichuan province, high mountains shape the far eastern part of Tibet. This region, which is called Kham (Chinese Kang-Zang 康藏, Xikang 西康, or Bianzang 邊藏), had always been relatively independent from the political centre around Lhasa, and therefore the native petty kings and village heads of the region were able to largely preserve their independence from the Dalai Lamas in Central Tibet, not only politically, but also as far as religion was concerned.<sup>1</sup> While central Tibet was dominated by the Gelugpa School ('Yellow Hats') since the rule of the Fifth Dalai Lama, Lobsang Gyatso (r. 1642 – 1682), many other schools like those of the Kagyu, Sakya, Nyingma, or Bön sought refuge in the remote parts of eastern Tibet. Like in Central Tibet the priests of important lamaseries

<sup>1</sup> The same is valid for the region of Amdo (in modern Qinghai province; Chinese Anduo 安多).

acted as secular rulers over the villages and communities of the area surrounding their monasteries, and the close ties between secular life and religion that characterized the daily life of the Tibetan people therefore played an important part in the wars the Qing government fought in the region of Kham and Jinchuan (rGyal-rong) throughout the 18th century.

The name of Jinchuan is derived from a river that has its sources in the present-day northwestern Sichuan province, in Ngawa (Aba 阿壩; rNga-ba) Tibetan Autonomous Prefecture (during the Qing period being the sub-prefecture of Songpan 松潘), and runs southwards through deep mountain gorges between the massif of the ‘Snow Mountains’ Xueshan 雪山 and Daxueshan 大雪山 in the west, with Mt. Gongga 貢嘎 (7,556 metres) as their highest peak, and that of the Qionglai 邛崃 ridge to the east, with the summit of Mt. Siguniang 四姑娘 (‘Four Maidens Peak’; 6,250 metres).<sup>2</sup> Near Mt. Gongga the course of the Jinchuan River bends to the east where it becomes a tributary of the river Min 岷江 in the city of Leshan 樂山 in the Sichuan Basin. From there onwards the river is called Dadu 大渡河 while further to the north it is called (Greater) Jinchuan River, which literally translated means ‘Gold Stream’, probably because some gold was found in its sands, or because the rocks of the mountains hold some gold.<sup>3</sup> In the northern part of its middle course the castles of the king-lamas of the region of Tsudjin 促浸 (Chu-chen; modern official transcription: Quqên; Manchurian transcription: Cucin; also called Rab-brtan) can be found, which the Chinese call Jinchuan.<sup>4</sup> More to the south was the important military post of Dajianlu 打箭爐 (also written 打箭鑪, Dartsedo; modern Kangding 康定) which protected the mountain road from Sichuan to Tibet. The name of the Dadu River is known from events that took place during the the Long March (1934 – 1936) when the Chinese Red Army crossed the iron chain bridge at Luding 瀘定 east of Dajianlu. Between Jinchuan and Dajianlu a smaller tributary river comes from the massif of Mt. Qionglai and sheds its waters into the Jinchuan River near Damba 丹巴 (also written 丹壩). This is the so-called Lesser Jinchuan River, or Dzanla 贊拉 (bTsan-lha; modern official transcription: Zainlha;

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<sup>2</sup> The name ‘Siguniang’ is a popular interpretation by Chinese settlers for the Tibetan name, sKu-bla.

<sup>3</sup> *Jinchuan suoji* 4, p. 44. *Shengwuji* 7, fol. 15a. The authors of *Zhongguo lidai zhanzheng shi*, Vol. 16, p. 177, derive the name of the river from that of a mountain called Jinshan, namely Mt. Gyagin 夾金 (also written 甲金 or Gyagi 甲幾), located northeast of Kangding (former Dajianlu). The name is a pure transcription of a Tibetan word and has actually nothing to do with gold. In the same source it is said that the Dadu River is also called the ‘Lesser Jinshajiang’ 小金沙江, derived from the name of the upper course of the Yangtse in the northwestern corner of Yunnan province, compare *Shengwuji* 7, fol. 15a. Even after five years of war some of the officials were still not aware that the Jinchuan River had nothing to do with the Jinshajiang River. *Jinchuan dang* QL 41/I/00185 (QL 41/2/13).

<sup>4</sup> The name of the territory is derived from the river (allegedly Tibetan for ‘Great River’). The Chinese name has nothing to do with the local name. The same is valid for the river and the territory of Lesser Jinchuan.

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Manchurian transcription: Zanla) in the local language. The whole region of Jinchuan (or Greater Jinchuan, Da Jinchuan 大金川) and Lesser Jinchuan (Xiao Jinchuan 小金川) is called Gyarung 嘉絨 (also written 甲壘; Gyalmorong 嘉莫絨; rGyal-rong).

Gyarung or Jinchuan is a quite inaccessible region, whose topography is characterized by precipitous mountains with steep slopes and deep gorges. The extreme character of the topography can be explained by the great incline between the Tibetan highland and the Sichuan Basin which makes creeks and rivers cut in deeply into the geological strata. Even in the valleys of the Greater and Lesser Jinchuan Rivers there was not much space for agriculture. The climate with its great number of rainy days has never been very friendly and it is reported that even in the summer months snow was no uncommon phenomenon.<sup>5</sup> Jinchuan was only accessible via a handful of mountain passes of which some have a height of up to 4,000 metres or more.

The direct way<sup>6</sup> (during the war called the western route, *xilu* 西路) from Chengdu 成都, the capital of Sichuan, lead via Guanxian 灌縣 (modern Dujiangyan 都江堰), the Wolong 臥龍關 ‘Crouching Dragon’ Pass and Mt. Balang 巴郎 (4,487 metres) to Meno 美諾 (modern Meixing 美興 or Xiaojin 小金) into the heart of Lesser Jinchuan. The logistics routes established during the war can also be seen in Map 2.5.

The middle route (*zhonglu* 中路) to Lesser Jinchuan passes from Ya'an 雅安 (or Yazhou 雅州) up the Baoxing River 寶興河 via a 4,114 metres high pass to Dawé 達維 east of Meno.

The northern route (*beilu* 北路) to Greater Jinchuan followed the Min River to Wenchuan 汶川 (near Maozhou 茂州, former Weizhou 維州), then went via Dzagunao 雜谷腦 (also written 雜谷鬧, simply Dzagu, also called San Dzagu 三雜谷,<sup>7</sup> modern Lixian 理縣) up the Dzagunao River and reached the northern part of Greater Jinchuan through the valley of the Somo River 梭磨河. The advantage of this route was that no higher mountain passes had to be negotiated, but the route was longer than the others.

The southern route (*nanlu* 南路) finally crossed the territory of various native kings west of the Jinchuan River. It began at Dajianlu, went northwards along the Yala River 雅拉河, crossed an almost 5,000 metres high pass and advanced along the valley of the Donggu River 東谷河 to Damba (also called Djanggu 章谷) where the Lesser Jinchuan River joins the

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<sup>5</sup> *Jinchuan suoji* 2, pp. 12-13.

<sup>6</sup> Descriptions following the *Jinchuan junxu li'an* 2, fol. 74b-79b, 91a-122b.

<sup>7</sup> According to Haenisch (1922), p. 72, the term San Dzagu comprised the kingdoms of Somo, Djoktsai, and Tsunggak.

Jinchuan River. From here, the territory of Lesser Jinchuan could be reached by following the river upwards. But from Damba it was also possible to reach the heartland of Greater Jinchuan by either travelling up the Jinchuan River, or through the territory of Gebshidza 革布什咱 (also written 革布什扎 or Geshidja 革什扎 ; Manchurian: Gebśiza), passing a more than 4,000 metres high plateau, and reaching again the Jinchuan valley through several routes along various valleys going down eastwards.

During the second Jinchuan war, in the year Qianlong [QL] 39/7 (Aug 1774), a new western route (*xin xilu* 新西路) was opened, which was partially identical to the northern route, but from Kyudi 楸底 (秋底, modern 丘地) on went directly to the west and reached Gala'i and Le'uwé by crossing the Qionglai mountains at a height of 5,000 metres.



□ 2.2 Figure: Man and woman from Greater Jinchuan  
Source: Huang-Qing zhigong tu 6, fol. 27.

The sources say that the region of Jinchuan was known to the Chinese since the Han period (206 BC – 220 AD), when it was called the outer regions of Ranmang 冉駝.<sup>8</sup> Since the Sui period (581 – 618) the region had been within the orbit of the Chinese empire, and there is one reference to a district (*xian* 縣) called Jinchuan.<sup>9</sup> Although the Tang dynasty (618 – 907) also created the district of Jinchuan there,<sup>10</sup> the direct administration by prefectures (*zhou* 州) actually went only as far as

Weizhou and Yazhou. Only from the very late 18th century on the actual border of the Chinese empire was shifted further to the west, and the sub-prefecture (*ting* 廳) of Maogong 懋功 (the former Lesser Jinchuan) became a regular administrative unit, while the territory of the prefecture of Yazhou was expanded as far as the hitherto known western border of Sichuan province. This was the 'new border' (*xinjiang* 新疆), a common term for the newly conquered territories in the west and southwest, and not only a designation for the future

<sup>8</sup> For a contemporary reference, see *Houhanshu* 86, p. 2857.

<sup>9</sup> *Suishu* 46, p. 1260.

<sup>10</sup> *Jiutangshu* 41, p. 1690. *Xintangshu* 42, p. 1085.

province of Xinjiang.<sup>11</sup> Beyond this old border, like in Central Asia and in Yunnan province, the Chinese government did not invest in a sophisticated administrative infrastructure, but instead bestowed Chinese titles on the native rulers and allowed them the use of an official seal (*yinxin* 印信) engraved with Chinese characters. Some rulers of more important territories were also granted a patent confirming the appointment (*haozhi* 號紙).<sup>12</sup> This type of indirect rule is called ‘loose rein’ (*jimi* 羈縻) politics. The Chinese emperors allowed the native rulers a high amount of autonomy and in turn expected to be presented with tributes and also of course that the region was kept quiet and peaceful and that there were no disturbances that would endanger the border regions of the Chinese prefectures and districts. In the Jinchuan region, as well as in Yunnan, Guizhou and southern Hunan, the native kings were called *tusi* 土司 (‘native administrator’) and were often given the honorary titles of *xuanweisi* 宣慰司 or *anfusi* 安撫司 (‘first-class resp. second-class pacification commissioner’).<sup>13</sup> Except the hereditary *tusi* there were also titles for families of lower nobility. If *tusi* is translated as ‘king’ (following the translation of Roger Greatrex and Albert Tafel),<sup>14</sup> *tushe* 土舍 might be translated as ‘baron’ and *tumu* 土目 as ‘baronet’.<sup>15</sup> Village heads are also often referred to as *qiu* 酋 ‘chief’, or *touren* 頭人 ‘head person’. In some places it was possible that the wives, widows or sisters of native kings took over important tasks in the local government or personally ruled over their territory when there was no male ruler or the male ruler was too young. In such cases the Chinese contemporaries speak of *tufu* 土婦 ‘native female ruler’ or ‘native queen’.<sup>16</sup> Most of the *tusi* regions can be relocated (see Map 2.1 and 2.5). There were Dzanla (Lesser Jinchuan), Tsudjin (Greater Jinchuan), Ekshi

<sup>11</sup> *Pingding Liang Jinchuan fanglüe* 133, fol. 15b (QL 41/2/renyin).

<sup>12</sup> For the formalities, see for example *Pingding Jinchuan fanglüe* 1, fol. 1b (no date); (Yongzheng) *Sichuan tongzhi* 19: *Tusi* 土司: *Baoxian shu* 保縣屬.

<sup>13</sup> A detailed description of the insignia of the *tusi* kings can be found in *Jinchuan suoji* 2, p. 20. The *xuanweisi* had the official rank 2 or 3 (Hucker: 3b), the *anfusi* the rank 3 or 4 (Hucker: 5b), the latter always being one rank lesser, and the holders of the rank bore different head insignia. *Jinchuan dang* QL 39/IV/00195 (QL 39/12/10).

<sup>14</sup> Greatrex (1994), p. 248. Tafel (1914), pp. 427-428. Yet in other places, Tafel speaks of ‘chieftains’ (*Hauptling*, *Oberhauptling*) when pointing at the *tusi* kings. Martin (1990) also speaks of ‘chiefs’ and ‘kings’ concurrently. Mansier (1980) calls them ‘local chiefs’ (*chefs locaux*). Haenisch (1922, 1934) and Stötzner (1924) speak of ‘lords’ (*Fürsten*). Dai (2001) and Waley-Cohen (2006) call them ‘chieftains’.

<sup>15</sup> It is known that the *tushe* was one official rank lower than the *tusi*. *Jinchuan dang* QL 39/IV/00093 (QL 39/11/11).

<sup>16</sup> For example, the *tufu* of Somo 梭磨 who offered a contribution of food and cattle to the imperial army during the second Jinchuan war. *Pingding Liang Jinchuan fanglüe* 128, fol. 3b-4a (QL 40/11/dingchou). See Chapter 6.2. Even Sonom, the rebel leader, had been assisted by his mother and an aunt at the beginning of his reign as lord of Greater Jinchuan (see below).



鄂克什 (Wori 沃日, Manchurian: Okši),<sup>17</sup> and Dzagu (Manchurian: Zagu)<sup>18</sup> in the center; Dangba 黨壩 (including Djoso 周叟), Chosgyab 綽斯甲布 (Manchurian: Cosgiyab), Somo, Tsunggak 從噶克 (Sunggang 松岡; Manchurian: Sunggak), and Djoktsai 卓克采 (Djokgyi 卓克基; Manchurian: Jokz'ai) in the north; Bulakdi 布拉克底 (Badi 巴底; Manchurian: Burakdi), Bawang 巴旺, Gebshidza, Djanggu (Damba), and Mingdjeng 明正 (Manchurian: Mingjeng) in the southwest; Derget 德爾格忒, Mashu 麻書, Kungsa 孔撒, Batang 巴塘, Litang 裡塘, Lumi (Rumi) 魯密 and Djandui 瞻對 (Manchurian: Jandui) in the remote west, along the road to Tibet; and Muping 木坪 and Wasi 瓦寺 (Manchurian: Wasse) to the southeast. Chinese sources speak of the nine native kings (*jiu tusi* 九土司),<sup>19</sup>

sometimes also of twelve<sup>20</sup> or even eighteen kings.<sup>21</sup>

The ethnic affiliation of those ethnic groups is clearly Tibetan although the local dialect is quite distinct from that of Central Tibet. Modern classifications subsume the dialects of the region (Gyarung and Horpa) as members of the Tangut-Qiang-Gyarung branch of the Tibeto-Burman family.<sup>22</sup> The People's Republic of China government classifies them ethnically as Qiang 羌, although



□ 2.3 Figure: Man and woman from Lesser Jinchuan  
Source: Huang-Qing zhigong tu 6, fol. 25.

<sup>17</sup> There are several Chinese designations for this location. In the *Sichuan yanfa zhi* 7, the following names occur: Ako 阿口, Aži 阿日, Heko 河口. A similar diversity in names is seen in (Yongzheng) *Sichuan tongzhi*. 14: *Yanfa* 鹽法, 19 *Tusi*: *Baoxian shu*. Wo(k)ri is an older transcription for Ekshi.

<sup>18</sup> Dzagu was made sub-prefecture in QL 17 (1752).

<sup>19</sup> *Pingding Liang Jinchuan fanglüe*: Xu 序, fol. 2a, naming Chosgyab, Gebshidza, Bawang, Bulakdi, Damba, Ekshi, Tsunggak, Somo, Djoktsai. 2, fol. 3b, names Lesser Jinchuan (Dzanla) instead of Bulakdi. *Jinchuan dang* 38/III/00481 (QL 38/9/9) names Chosgyab, Derge(t), Damba, Somo, Djoktsai, Tsunggak, Ekshi, Bulakdi, and Bawang. It is interesting that Greater and Lesser Jinchuan are not always counted among the nine *tusi*.

<sup>20</sup> *Pingding Liang Jinchuan fanglüe* 131, fol. 17a (QL 41/1/jimao), naming Chosgyab, Gebshidza, Somo, Djoktsai, Tsunggak, Damba, Mingdjeng, Muping, Bulakdi, Bawang, Ekshi, and Wasi.

<sup>21</sup> The exact names and seats, according to Haenisch (1922), p. 72, cannot be found out. The number of eighteen seems to be a 'traditional' figure including tribes who had disappeared or migrated over time.

<sup>22</sup> Gordon (2005). Retrievable as [http://www.ethnologue.org/show\\_family.asp?subid=91455](http://www.ethnologue.org/show_family.asp?subid=91455). *Jinchuan suoji* 6, p. 60, lists a few words in the local language: *dagyi* 答幾 'water' (tə-ci), *tumi* 突米 'fire' (sə-mə?), *dalu* 達魯 'chieftain' (tɣ-ru), *rgyarbu* 而甲而布 'lord' (rɣɣl-pu). Compare Jacques (2004), pp. 3, 124, 220.

the Jinchuan Tibetans are not granted official status as an ethnic minority. This might still be one of the consequences of the second Jinchuan war after which the whole region was incorporated into the direct administrative system of the empire and the ‘ruling class’ of the native population was virtually annihilated. From then on, any kind of autonomy for the belligerent natives of Jinchuan would be impossible. Today, Jinchuan and Lesser Jinchuan are districts (modern term: counties, *xian* 縣) within the Ngawa Tibetan Autonomous Prefecture (namely Jinchuan and Xiaojin).

The inhabitants of Gyarung or Jinchuan—estimated to have been about 30,000<sup>23</sup>—lived a simple and austere life in the hostile surroundings of the mountains. They often went barefooted and with disheveled hair (we know it from the hairstyle of the Tibetans of Tibet proper)<sup>24</sup> and built their dwellings on the slopes of steep hills. The overall steepness of the territory made it impossible to ride horses or to use mules or to breed larger flocks of cattle, as is the average way of life more to the west, in Kham and Hor 霍爾, and the north, where the territory is more flat and covered with prairies. The daily life of the inhabitants of Jinchuan was therefore very hard, and their austere diet was mostly made of barley (*qingke* 青稞) or buckwheat flour (*qiaomai* 蕎麥) in the shape of porridge (*tsampa* 糌粑), roasted balls (*momo* 饅頭) or flatbread (*jiaotuan* 焦團), enriched with yak butter or tea.<sup>25</sup> Additional nutriments only growing in the river valleys were black beans (*heidou* 黑豆), peas (*wandou* 豌豆), so-called ‘steelyard scale rice’ (amaranth? *tianxingmi* 天星米)<sup>26</sup>, and some kinds of fruits like pears (*li* 梨), jujubes (*zao* 棗), mandarin oranges (*gan* 柑), walnuts (*hetao* 核桃), pomegranades (*shiliu* 石榴), as well as chestnuts (*li* 栗) and squashes (*nangua* 南瓜).

The rivers and creeks were often simply impassable, and only a few bridges allowed to safely get across gorges or canyons. The natives normally used cow hide boats (*pichuan* 皮船) in order to cross the rivers, but there were also some places where makeshift bridges held by bamboo ropes (*zuoqiao* 竿橋) crossed the two Jinchuan rivers.<sup>27</sup> It is reported that in autumn, when the grain was ripe, thousands of parrots gathered from the southern regions and

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<sup>23</sup> *Zhongguo lidai zhanzheng shi*, Vol. 16, p. 188. According to *Jinchuan suoji* 2, p. 11, there were 10,000 households in Jinchuan. When adding the 12,000 natives killed during the war, a population of 50,000 or 60,000 seems reasonable, of which 20,000 surrendered during the war. Zhuang (1982), pp. 168, 172.

<sup>24</sup> *Jinchuan suoji* 3, p. 24. *Huang-Qing zhigong tu* 6, fol. 24-27.

<sup>25</sup> *Jinchuan suoji* 3, p. 31; 4, pp. 35, 38.

<sup>26</sup> According to *Jinchuan suoji* 3, p. 30, the grains are as small as that of millet, the leaves turn red in autumn after the first frost, ‘which gives the landscape a very beautiful colour’. The natives made cakes of *tianxingmi* flour. Another name for this type of bread was *lamasu* 喇嘛酥 ‘lama cakes’. Shi Menglan who describes this plant in his book *Zhiyuan bitan* 8, believes that it is the same as what he calls ‘western grain’ (*xifang gu* 西方穀).

<sup>27</sup> *Jinchuan suoji* 2, p. 16.

plundered the fields of the Jinchuan peasants.<sup>28</sup> In summer, the flowering chrysanthemums, peonies and orchids dotted the gardens of the mountain villages white and red. Together with the green water of the rivers and creeks, the flowers were said to have created a short-lasting but beautiful summer landscape in the valleys. This contrasts with reports of a cold, dizzy and unfriendly atmosphere enshrouded by overpowering mountain peaks.<sup>29</sup> What could not be produced by the Jinchuan peasants themselves, like tea, fabric, iron tools, tobacco, salt, and luxury goods like pearls, corals, agate and nephrite, had to be bought in Chengdu for which purpose the native village heads issued special purchase tickets (*zhaopiao* 照票) to their subjects.<sup>30</sup> If tea was not available the natives made an infusion of the bark of different kinds of trees. Wheat liquor was also known.<sup>31</sup> Many Jinchuan people spoke Chinese, which they learned during their stay in Chengdu. Intense economic and religious relations with Central Tibet existed as well, where Jinchuan people studied medicine, bought sutras or procured tea.<sup>32</sup> It is therefore said that the Jinchuan people used the ‘Tangutic’ (*tangute* 唐古特 or 唐古忒), i.e. Tibetan, script.

For the Chinese troops fighting the Jinchuan ‘rebels’ the most impressive phenomenon of the region were the dwellings of the natives. Usually houses were made of crude stones and therefore could not only withstand the harsh winter breezes from the glaciers but also resist any attack by marauders from the neighbourhood. Because the inhabitants of Jinchuan were frequently afflicted with the shortness of food they resorted to a lifestyle that was characterized by simple robbery or banditry.<sup>33</sup> When any village in Jinchuan suffered from hunger, it was normal for people to band together in order to take food from a neighbouring village or—even better—from a village in the territory of another *tusi* king. Stealing cattle or taking hostages in order to obtain ransom in the shape of food had therefore become an integral part of the hard life of the population of Jinchuan, an aspect later rarely considered by Chinese historians.

The Chinese perception of Jinchuan was that of a territory whose ‘aggressive’ (*changjue* 猖獗)<sup>34</sup> kings were becoming more and more active in occupying territory of neighbouring fiefdoms out of a thirst for power (*can shi lin tu* 蠶食鄰土 ‘hungry for [actually: devouring] neighbouring territory like silkworms [devour mulberry leaves]’). The belligerent activities of

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<sup>28</sup> *Jinchuan suoji* 3, p. 30.

<sup>29</sup> *Jinchuan suoji* 4, pp. 35, 43.

<sup>30</sup> *Jinchuan dang* QL 37/IV/00473 (protocol).

<sup>31</sup> *Jinchuan suoji* 4, pp. 36, 42.

<sup>32</sup> *Jinchuan dang* QL 37/IV/00458 (protocol), 00471 (protocol). *Jinchuan suoji* 2, pp. 14-15; 3, p. 23.

<sup>33</sup> *Jinchuan dang* QL 37/IV/00458 (QL 37/12/protocol).

<sup>34</sup> *Pingding Jinchuan fanglüe* 1, fol. 13a (QL 12/2/dinghai). *Pingding Liang Jinchuan fanglüe* 4, fol. 8a (QL 31/2/gengxu).

the region were not seen as a necessary result of an environment hostile to human life, but as part of the natural character of the Jinchuan people: ‘Vendettas are their daily business.’ (*xun chou bao yuan, shi qi chang shi* 尋仇報怨是其常事, or *xue dou nai qi chang shi* 穴鬪乃其常事).<sup>35</sup> This belligerent character (*qi xing xi li, hao dou* 其性嗜利好鬪 ‘they seek for profit and love to quarrel’)<sup>36</sup> was reflected in the war-towers (*diao* 碉) that the Jinchuan village heads had erected all over their country. Those war-towers, of which many can be seen still today, were an ideal protection for each house in case of a siege: They were easy to build and easy to defend even against a large number of attackers. It was especially the seats of village heads (*guanzhai* 官寨) that were protected by many war-towers grouped in several circles around the central castle and the glacis. We will encounter descriptions of some of the larger fortifications later. Common designations for fortifications are *diaoqia* 碉卡, *shiqia* 石卡, *pingdiao* 平碉, *zhandiao* 戰碉, *diaozhai* 碉寨, or *zhailuo* 寨落.<sup>37</sup>

## 2.2. The Failing of Traditional Indirect Rule

The two Jinchuan wars were an attempt to bring the permanent territorial conflicts of the region to an end. In the eyes of the Qing government the quarrels along the border were a sign of pure disrespect towards the emperor who had officially appointed each one of the native kings as a semi-autonomous governmental official. The autonomy went so far that no territory of China proper was endangered, which would always be the case, when one of the native kings became too mighty and disturbed the balance of power in the border region. This was exactly what had happened when the king-priest (*shaloben* 莎羅奔) of Greater Jinchuan had occupied Lesser Jinchuan in 1746.

In a much wider sense, Jinchuan belonged to the rebellious border territories of the southwest which had menaced the Qing central government for a long time: From this area the disturbances of the Three Feudatories (1673 – 1698) had spread out; and from Yunnan and Guizhou the permanent rebellions of the native Miao 苗 tribes endangered the peace of the region. It was therefore essential to secure peace at the borders, a task which had been taken seriously during the times of the Kangxi and Yongzheng emperors. Both had spent tremendous amounts of money to suppress rebellions and to counter aggressions from beyond

<sup>35</sup> *Pingding Jinchuan fanglüe* 1, fol. 20a (QL 12/3/renyin). *Jinchuan dang* QL 37/IV/00115 (QL 36/10/1).

<sup>36</sup> *Da-Qing yitong zhi* 423, fol. 4b.

<sup>37</sup> Detailed descriptions of different kinds of buildings and how they were constructed, are given in *Jinchuan suoji* 2, pp. 18, 21, 25.

the border. The imperial projection of the Qianlong emperor went even further: The ruler of the Qing empire was not only a secular regent but also the spiritual head of the Chinese world. He was the Buddhist *cakravartin rāja*, the Wheel-Rolling King, who moved the world, the pole star around whom the whole universe turned.<sup>38</sup> As such he was responsible for the welfare of all people and religions in his realm. He had to display righteousness and benevolence which in turn had to be replied to by obedience and filial piety. Rebellious tribes in the mountains did not display such a spirit of filial duty and thus had to be castigated. The fact that the highest representatives of the Tibetan Gelugpa School had a great interest in subjugating their Eastern Tibetan opponents from other Schools (Bön, Nyingma) and especially the local variant of those ‘heretics’ (*xiejiao* 邪教) in the Yungdjung Lamasery 雍中喇嘛寺, seems a point of minor interest but played an important part in governmental decision-making and the determination to wage war against the ruler-priests in Jinchuan.<sup>39</sup> The two Jinchuan wars were no singular expeditions fought in the eastern outskirts of Tibet and represent only two cases in a long series of colonial wars,<sup>40</sup> which were waged in order to dominate Tibet. In 1700 Qing troops occupied the important place of Dajianlu to safeguard the road from Sichuan to Tibet. In 1718 – 1720 Central Tibet was invaded and liberated from the domination of the Ölöd (Oirat or Oyrat) Mongols (Chinese Elute 厄魯特, also written 額魯特). At the same time the rulers of China installed their own candidate as Seventh Dalai Lama (Kelsang Gyatso, r. 1720 – 1757). Between 1721 and 1724 Kokonor and Amdo were pacified and assigned the name Xining 西寧 region (later becoming the province of Qinghai). In 1727 a rebellion in Lhasa against the Chinese domination was quelled. In 1745 the petty kings of Djandui (along the road to Tibet) staged a rebellion. From 1747 to 1749 the Qing army invaded Jinchuan for the first time. In 1750 again the Tibetans rebelled against the Qing garrison in Lhasa. In 1752 the petty kings of Dzagu, not very far from Jinchuan, revolted. Between 1771 and 1776 the second Jinchuan war took place. The final incorporation of Tibet into the Chinese orbit came after the expulsion of the Nepalese Gurkha that had invaded Lhasa in 1788. From the year 1793 on all important matters of the administration of Tibet (frontier defence, tax levies, foreign contacts, appointment of religious dignitaries) were within the responsibility of Chinese officials, the so-called Grand Minister Residents of Tibet (Manchu *amban*, Chinese *zhu Zang dachen* 駐藏大臣).<sup>41</sup>

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<sup>38</sup> Compare Crossley (1999), pp. 223-246.

<sup>39</sup> Compare the articles of Martin (1990) and Mansier (1990).

<sup>40</sup> Haenisch (1935).

<sup>41</sup> See Rockhill (1910), pp. 27-51.

The first step of the Qing government to secure the western borders of Sichuan and the road to Tibet had thus been to occupy Dajianlu in 1700. A military post was installed there that was connected with the provincial capital Chengdu via a road running through Yazhou, Tianquan 天全, and Luding, where the famous iron chain bridge was constructed to pass the Dadu (Jinchuan) River.<sup>42</sup>

For many decades the Qing court had followed the good old well-trying method of ‘using the barbarians to fight against barbarians’ (*yi yi gong yi* 以夷攻夷 or *yi man zhi man* 以蠻治蠻 ‘to check the primitives by primitives’), which means that each time a native king had to be punished because his people had stolen sheep from another village, the Qing court viz. the governor-general of Sichuan, ordered other, native kings to dispatch their men to subdue the insubordinate. Another method was to systematically divide the territory into ever smaller kingdoms in order to weaken each native king (*divide et impera*; in this case: *fen fang bian'ai* 分防邊隘 ‘dividing up the frontier defence’)<sup>43</sup> by systematically reducing their income and the men in their territories being fit for military service. But this kind of maintaining the barbarian affairs (*chouban yiwu* 籌辦夷務) did not prove effective. While some native kings were really weakened and never or very rarely staged raids on foreign territory, like Djoktsai, Muping, Somo or Ekshi, it was especially the kings of Jinchuan and Lesser Jinchuan who more and more achieved a dominating position within the region. When conflicts arose—and there were a lot of them, not only concerning stolen cattle, but also issues concerning intermarriage and curses against each other—it was common that the native kings created alliances to fight the common enemy. As soon as the task was fulfilled the temporary alliance was dissolved and could transform into very different constellations for the solution of another conflict. In other words, the deepest hatred could transform into the most intimate friendship without great difficulties. Many of the native kings of the region were intermarried and therefore often hesitated to whole-heartedly engage in an alliance against a king, who might be their son-in-law or cousin. Such temporary alliances could therefore never be really trusted, especially when one partner was an outsider like the Qing government. Although the negligence of the leading commanders in the Jinchuan wars also played an important role, it was exactly this kind of unreliability of the native rulers that twice heavily affected the outcome of the two campaigns against Jinchuan. In the first war, the factual ruler of Lesser

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<sup>42</sup> The subsequent military history details of the two Jinchuan campaigns follow largely the account of Zhuang (1987), pp. 116-181.

<sup>43</sup> *Pingding Liang Jinchuan fanglüe* 1, fol. 5a (QL 36/7/yihai).

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Jinchuan acted as a spy for Greater Jinchuan, and in the second war, Lesser Jinchuan rebelled against the Qing occupants.

It soon became clear that the traditional politics of *divide et impera* had no deeper effect on the kings of the Jinchuan region, and therefore the Yongzheng emperor made the governor-general of Sichuan, Huang Tinggui 黃廷桂 (gov. Yongzheng [YZ] 9 – 13 [1731 – 1735]),<sup>44</sup> regularly dispatch a military officer (*zhenchen* 鎮臣) visit the native kings ‘to admonish them’ (*huihua* 誨化 or *huahui* 化誨). Since this custom was not respected for a long time the absence of representatives of the Qing government in the area gave the native kings a false sense of independence from the government in Beijing. This was quite similar to the situation in Central Tibet, for whose government the Mongols played a much more important role as protectors than the Manchus in Beijing until the 1790s when the Dalai Lamas were finally forced to accept the suzerainty of the Qing emperors.

It was especially the petty kings of the remote and inaccessible Jinchuan who year after year harassed their neighbours and dominated the politics of the region. But not only strength made it possible for Jinchuan to control its neighbours and pursue effective politics of intermarriages, it had also to do with the fact that Jinchuan was a region of considerable religious importance. It is said that during the Ming period (1368 – 1644) the king-priest of Jinchuan (at that time identical to the later Lesser Jinchuan), Ha'ima'i Lama 哈衣麻衣喇嘛, was given the title of the Dhyāna Master of Manifestation (*yanhua chanshi* 演化禪師) by the Ming government and obtained an official seal for this position, and in the year Shunzhi [SZ] 7 or 9 (1650 resp. 1652) therefore, Jinchuan became subject to the Qing government.<sup>45</sup> King Gyirbuhi 吉兒卜細, and later his son Tangpeng 湯鵬 inherited the seal of the Dhyāna Master but ceased to deliver the contractual tributes (mainly ‘tribute horses’, *gongma* 貢馬) to the Qing court.<sup>46</sup> In the course of the two Jinchuan wars it would become evident that the secular leaders of the ‘rebels’ at the same time acted as religious heads of the population, a fact of which the Qing commanders had not been aware for a long time. In many places lamaseries (*lamasi* 喇嘛寺) were fortified and withstood the attacking Qing troops.

<sup>44</sup> For a list of the governors-general of Sichuan see Appendix 3.

<sup>45</sup> According to *Pingding Jinchuan fanglüe* 1, fol. 1b (no date), in SZ 9 (1652), the same in (Yongzheng) *Sichuan tongzhi* 19: *Tusi: Baoxian shu* ; yet *Qingshigao* 69, p. 2239, and (Jiaqing) *Sichuan tongzhi* 6, fol. 30b, say, in SZ 7 (1650). The *Qingshigao* source gives KX 6 (1667) as the date, when Greater Jinchuan submitted to the Qing (*gui fu* 歸附), and YZ 1 (1723) as the date, when the king of Jinchuan was granted the title of pacification commissioner. (Jiaqing) *Sichuan tongzhi* writes in KX 61 (1722) the Shaloben became a subject of the Qing, which is an indication that the *Qingshigao* text simply omits a part of the figure ‘61’.

<sup>46</sup> (Yongzheng) *Sichuan tongzhi* 19: *Tusi: Baoxian shu*. (Jiaqing) *Sichuan tongzhi* 6, fol. 30a-30b, writes ‘Burgiyi’ 卜兒吉細.

The king of Jinchuan, Dorgyigyal 多爾濟嘉勒 (son of Tangpeng?), had a son named Lamub 拉木布, who fathered three sons: Gyartailipo 嘉爾泰利坡 (Gyalba 嘉勒巴, Gyaltarba 嘉勒塔爾巴), Gyalbuslai 嘉勒布思來, and Lawangbacha 拉旺巴插 (father of the later rebel, the Shaloben king-priest).<sup>47</sup> In the year Kangxi [KX] 5 (1666) Gyartailipo left the office of the Dhyāna Master to his son Dzewang 澤旺.

In KX 60 (1721) Lawangbacha dispatched his son with 500 troops to support the Qing army quelling the rebellion in Yangtung 羊峒 at the border to Qinghai,<sup>48</sup> where the young man lead his native auxiliary troops (*tubing* 土兵) under the command of Yue Zhongqi 岳鍾琪 (provincial military commander, *tidu* 提督) and Sertu 色爾圖 (governor of Sichuan KX 60 – 61 [1721 – 1722]). When the war was over, the future Shaloben was entrusted with the administration of the northern part of Jinchuan, with the title of a pacification commissioner (*anfusi*).<sup>49</sup> In the next year (YZ 1 [1723]) he adopted the name of ‘Greater Jinchuan’ for his territory and named the territory of Dzewang ‘Lesser Jinchuan’. This is often seen as the origin of the two Jinchuans as political entities. The appointment of the Shaloben as pacification commissioner of Greater Jinchuan was a simple way to divide Jinchuan into two parts in order to weaken the power of the native king of Jinchuan (*yi fen Jinchuan tusi zhi shi* 以分金川土司之勢), as the official history of the war, the *Pingding Jinchuan fanglüe*, clearly says.<sup>50</sup> The upcoming of the name of ‘Greater Jinchuan’ was thus not only an expression of the growing power of the Tsudjin king-priests, as is often said,<sup>51</sup> but reflects a partition of the Jinchuan realm planned by the Qing government in order to weaken its rulers. We can therefore not even be sure if the designation of ‘Greater Jinchuan’ was an invention of the Shaloben, if it was assigned by the Qing government, or if it was a traditional name for the northern part of Jinchuan, as Zhuang Jifa suggests.<sup>52</sup> From now on, the name of ‘Jinchuan’ always meant Greater Jinchuan (castles of Le'uwé and Gala'i), while before, ‘Jinchuan’ had actually been Lesser Jinchuan (castle of Meno). The different secular and religious seals of the native kings of the two Jinchuans caused some confusion for the imperial commanders because the Jinchuan rulers not only used the actual official seal of the pacification commissioner but also that of the Dhyāna Master and—to complete confusion—the old seals

<sup>47</sup> Names according to *Pingding Liang Jinchuan fanglüe* 15, fol. 2a (QL 37/1/wuxu).

<sup>48</sup> *Pingding Jinchuan fanglüe* 1, fol. 1b (no date). Yangtung was located somewhere at the sources of the Min River 岷江 and the Fu River 涪江. Compare *Qingshigao* 69, p. 2238; *Da-Qing huidian tu* 232, [fol. 11]; *Da-Qing yitong zhi* 399, fol. 3a.

<sup>49</sup> *Pingding Jinchuan fanglüe* 1, fol. 1b (no date). *Qingshigao* 69, p. 2239.

<sup>50</sup> *Pingding Jinchuan fanglüe* 1, fol. 1b (no date).

<sup>51</sup> *Shengwuji* 7, fol. 15b.

<sup>52</sup> Zhuang (1982), p. 113.



of the Ming period. The Jinchuan rulers even produced their own unofficial seals for ‘internal use’, which were not approved by the Qing government. The position of Beijing was thus not really taken seriously by the Jinchuan rulers.

### 2.3. The First Jinchuan War (1747 – 1749)

The kings of Greater Jinchuan had, as said before, been given the official title of pacification commissioner at the beginning of the Yongzheng reign and thus had to present tributes to the governor-general of Sichuan in the shape of horses, furs, or silver. But because it was difficult to force the Jinchuan kings to pay their tributes regularly, they enjoyed relative autonomy in their mountain region which was barely accessible from Chengdu. Nian Gengyao 年羹堯, governor-general of Sichuan (gov. KX 57 – YZ 3 [1718 – 1725], governor since KX 48 [1709]), decided to discipline Jinchuan by granting the castle of Metong 美同 (near Meno) to the king of Ekshi. The subsequent encroachments of Jinchuan on the territory of Ekshi prompted governor-general Yue Zhongqi (gov. YZ 3 – 7 [1725 – 1729]) to return Metong to Jinchuan and to compensate Ekshi with another village. In QL 4 (1739), after Greater and Lesser Jinchuan had incessantly harassed their neighbours, the governor-general ordered the kings of Dzagu, Somo, Muping and Ekshi to attack Lesser Jinchuan. Greater Jinchuan meanwhile took advantage of this situation and staged several attacks on the territory of Gebshidza. Only when the governor-general sent some officials to give the native kings a talking-to, they began to call back their troops. The governor of Sichuan, Fang Xian 方顯 (gov. QL 4 – 5 [1739 – 1740]), disagreed with the subsequent suggestion of the court in Beijing to convert the native kingdoms into ‘common’ districts and counties, and to replace their kings by government officials (a procedure called *gai tu gui liu* 改土歸流 ‘transforming [territory governed by] native [rulers] into a common [system]’), a method that had proved successful in pacifying the rebellious Miao tribes in Guizhou. The bureaucratic investments, Fang Xian said, would be too expensive for such a remote territory, and the best method to control that region would be to keep up the *status quo*.<sup>53</sup> An often cited reasoning was that Jinchuan was ‘not worth to be defended [as state territory], its inhabitants not worth to be subjects’ (*qi ren bu zu chen, qi di bu zu shou* 其人不足臣, 其地不足守),<sup>54</sup> or: ‘Its soil

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<sup>53</sup> *Qingshilu: Gaozong shilu* 105, fol. 20a-21a (QL 4/11/rengshen).

<sup>54</sup> *Pingding Jinchuan fanglüe* 1, fol. 11a (QL 12/2/guiyou).

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cannot be ploughed and its inhabitants not be guided.’ (*qi di bu zu geng, qi ren bu zu shi* 其地不足耕，其人不足使).<sup>55</sup>

Sichuan province had been ravaged for many years by local bandits (*guolu* 囫嚅, *guoluzi* 囫嚅子, or *guofei* 囫匪) under leaders with religious banners (‘heretics’), who permanently disturbed villages by robbing and plundering (see Chapter 7.3.).<sup>56</sup> Those unrests made it necessary to engage large military contingents for suppression that could not be made use of for other military activities. It was just before that background that there was trouble again in Jinchuan.

In QL 7 (1742) the king of Greater Jinchuan, Seleben 色勒奔 (i.e. Lawangbacha), died and was succeeded by his son ‘Shaloben’ or—according to other sources—his younger brother Selebenhi 色勒奔細. The similarity of all those names hints at their actual meaning: *Shaloben* is not a name, but a title, meaning ‘teacher’, ‘master’, or ‘lama abbot’ (Gyalrung Tibetan: *slo-χpun*).<sup>57</sup> Families with several sons, including the family of the kings, sent one or several sons into a monastery to become a monk. A prince of course was never an ordinary monk but a higher priest. As will be seen later, the sons and brothers of the Greater Jinchuan kings were all more or less involved in monastic life and therefore many of them bore the title of Shaloben. The king of Greater Jinchuan was not only a secular ruler but at the same time a priest.

The land of Badi south of Jinchuan was reigned over by King Nawang 納旺, who was the nephew of Wangdja 汪札, a relative of the king of Gebshidza. In QL 9 (1744) Gebshidza and Jinchuan therefore joined forces to attack villages in their territory. The Shaloben of Greater Jinchuan and Dzewang, king of Lesser Jinchuan, were nephew and uncle. The Shaloben planned to take control of Lesser Jinchuan and therefore married his daughter (according to other sources, his niece, *zhinü* 侄女)<sup>58</sup> Ako 阿扣 to Dzewang. But Dzewang was a weak ruler and could therefore easily be dominated by Ako. She and her father thus came into possession of the official seal of the ruler of Lesser Jinchuan. Dzewang’s younger brother,

<sup>55</sup> *Pingding Jinchuan fanglüe* 23, fol. 20a (QL 14/2/wuzi).

<sup>56</sup> The suppression of the *guolu* made it necessary to dispatch more than 1,000 soldiers from certain garrisons, who therefore were not available for the Jinchuan campaign. Compare *Pingding Jinchuan fanglüe* 4, fol. 24a (QL 12/12/yihai); 19, fol. 19b (QL 13/12/yiwei). Whether the Jinchuan kings really took advantage of this situation, as Zhuang (1982), p. 116, suggests, cannot be proved by documentary evidence. To the *guolu* issue, see Chapter 7.3.

<sup>57</sup> Compare Jacques (2004), p. 110.

<sup>58</sup> *Pingding Jinchuan fanglüe* 11, fol. 12b (QL 13/8/gengyin). *Qingshilu: Gaozong shilu* 322, fol. 21a-21b (QL 13/8/gengyin). Yet *Shengwuji* 7, fol. 15b writes ‘daughter’, likewise *Pingding Liang Jinchuan shulüe*, p. 1, and *Qingshilu: Gaozong shilu* 286, fol. 18a (QL 12/3/renyin).

baron Lyang'ergyi 良爾吉, had an affair with her<sup>59</sup> and in QL 10 (1745) asked for support by Greater Jinchuan to seize power in Lesser Jinchuan. With the pretext that Dzewang was lacking adequate behaviour (*wu li* 無禮) and therefore had to be castigated,<sup>60</sup> the Shaloben had arrested Dzewang and in QL 11 (1746) stole his seal to hand it over to Lyang'ergyi, Ako's new husband. It is not clear whose plan it had been to seize the reign of Lesser Jinchuan—sometimes the charge is made against the Shaloben, but it is also said that it was Lyang'ergyi's plan.<sup>61</sup> Qingfu 慶復, governor-general (gov. QL 8 – 12 [1743 – 1747]), and Jishan 紀山, governor of Sichuan (gov. QL 8 – 13 [1743 – 1748]), investigated the affair and ordered the Shaloben to free Dzewang and to hand him back his seal. But only after the rebellion in Djandui had been quelled and troops were available to the Sichuan governor-general, the Shaloben promised to follow the orders of the Qing government. The emperor was not at all alarmed by this affair because all those quarrels had been confined to the 'caves' of the natives (*bu guo xue zhong zhi dou* 不過穴中之鬪).<sup>62</sup>

But in QL 12/1 (Feb 1747; according to other sources, already in QL 11), the Shaloben attacked again some villages in the territory of Gebshidza, and in the next month his soldiers encroached on the territory of Lumi and Djanggu in the territory of Mingdjeng. These were only four travel days away from the garrison of Dajianlu at the road to Tibet, and because the garrison was quite weak under normal circumstances,<sup>63</sup> governor Jishan dispatched regional vice commander (*fujian* 副將) Zhang Xing 張興 from the garrison of Taining 泰寧協 (north of Dajianlu) to Dajianlu, and regional vice commander He Qixian 何啟賢 to Dzagunao in order to be ready.<sup>64</sup> He had also dispatched regional vice commander Ma Liangzhu 馬良柱 from the garrison of Kuizhou 夔州 in eastern Sichuan, to Weimao 威茂協 (Weizhou), a place that could serve as a gateway to Sichuan province if the worst came to the worst. The marauding troops of the Shaloben had advanced as south as Maoniu 毛牛 not far from Dajianlu. In the north, Greater Jinchuan had dispatched troops right into the territory of Dzagu and Damba in order to subject the native village heads. Because it would be very difficult to attack Greater Jinchuan, which was protected by high mountains on

<sup>59</sup> About the Jinchuan wedding rites and premarital love, see *Jinchuan suoji* 3, pp. 24-25. Promiscuity is also a topic in the same source, 3, p. 28.

<sup>60</sup> *Pingding Jinchuan fanglüe* 1, fol. 9a (QL 11/11/dingsi).

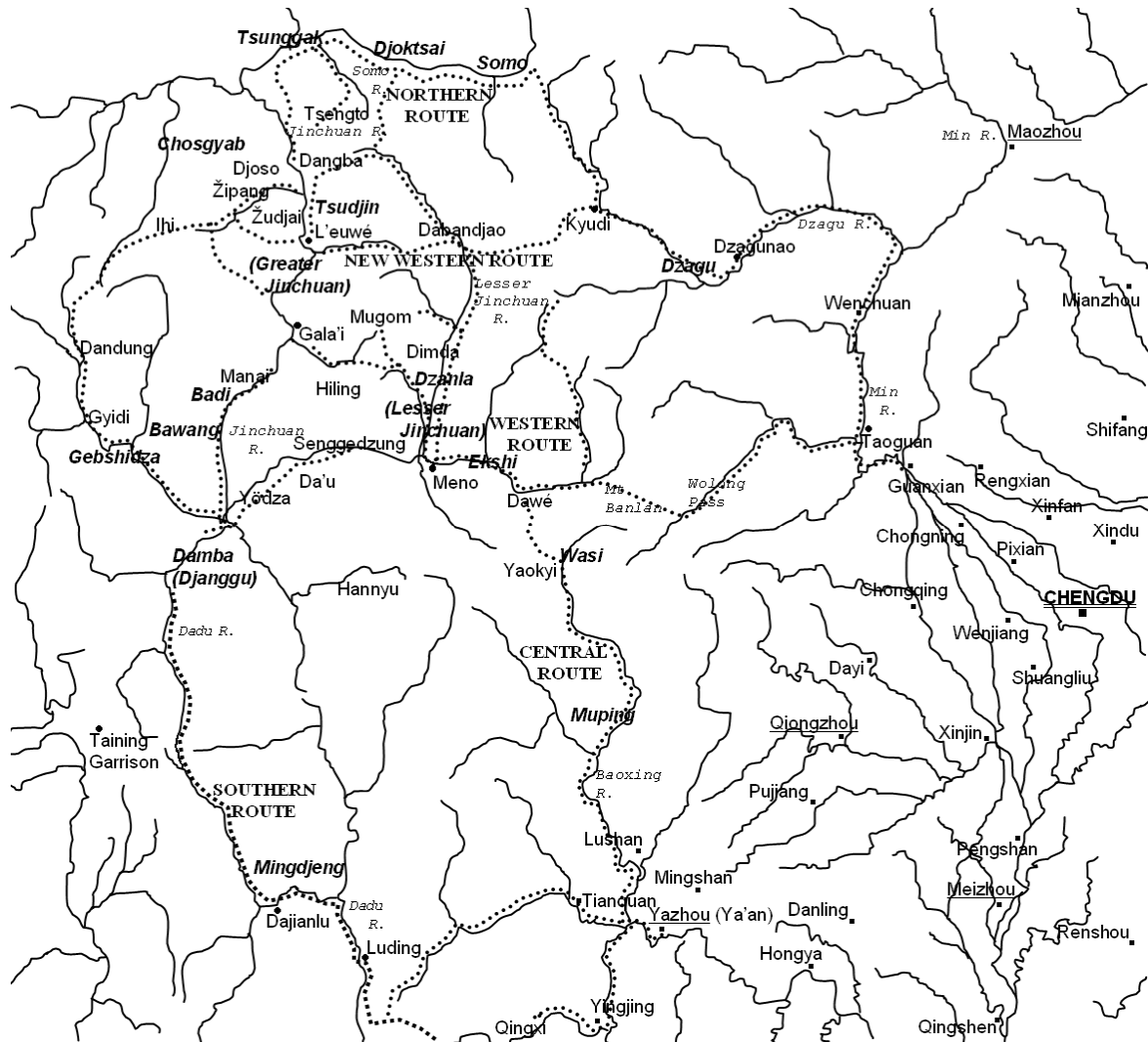
<sup>61</sup> *Pingding Liang Jinchuan shulüe*, pp. 1-2.

<sup>62</sup> *Pingding Jinchuan fanglüe* 24, fol. 3a (QL 14/2/renchen).

<sup>63</sup> During the Yongzheng reign, the small garrison (*xun* 汛) of Dajianlu was manned with only 50 troops. (Yongzheng) *Sichuan tongzhi* 22 B: *Bingzhi* 兵制. According to (Jiaqing) *Sichuan tongzhi* 85, fol. 28b-29b, the average troop strength during the early and middle Qianlong reign was about 700 men that were reinforced by cavalry later, and during the Jiaqing reign were as strong as almost 1,000 men altogether.

<sup>64</sup> Concerning a translation of the military ranks, see Appendix 1.

all sides, Qingfu ordered the native kings of Lesser Jinchuan, Gebshidza, Bawang, Dzagunao and Somo to attack Greater Jinchuan, according to the old and well-tried method of ‘attacking the



2.5 Map: The Jinchuan area and the routes leading to the war theatre.

Prefectures, districts, and places in Jinchuan in normal letters, names of native kingdoms in bold italics.

Tibetans with Tibetans’ (*yi fan gong fan* 以番攻番). The emperor and his advisers meanwhile had changed their minds and considered the method of *divide et impera* as insufficient for the taming of belligerent barbarians at the borders of the Qing empire. The military activities of the recalcitrant Greater Jinchuan had been too numerous over the past years, and the attacks on neighbouring territories proved that the Shaloben of Greater Jinchuan was not willing to keep the promises he had made—to stay peaceful and not to harass his neighbours. The king of Greater Jinchuan had to be punished in a much more exemplary way than hitherto, since otherwise Jinchuan would never become a quiet country.<sup>65</sup> Therefore the emperor in QL 12/3 (Apr 1747) made Zhang Guangsi 張廣泗 the new

<sup>65</sup> Pingding Jinchuan fanglüe 1, fol. 18a (QL 12/3/xinchou).

governor-general of Sichuan. Zhang Guangsi was an experienced military and had won his laurels in the campaigns against the rebellious Miao tribes in Guizhou. Since they had been quelled so quickly the emperor as well as his new high commander expected that Greater Jichuan would be pacified by the end of the year.<sup>66</sup> On QL 12/4/13 (May 21, 1747) Zhang marched from Guizhou to Sichuan, with 3,000 troops experienced in fighting in the subtropical forests of Guizhou, but without the slightest idea what was waiting for them in the snow-covered mountains of Jinchuan.

Meanwhile Greater Jinchuan had formed an alliance with Chosgyab and occupied Hor-Djanggu 霍耳章谷 (also written 章古, i.e. Djanggu). With 600 soldiers brigade commander (*youji* 游擊) Luo Yuchao 羅于朝 and company commander (*qianzong* 千總) Xiang Chaoxuan 向朝選 tried to expel the Jinchuan troops from foreign territory, but their battalion was annihilated by the rebels. Brigade vice commander (*dusi* 都司) Ma Guangzu 馬光祖 advanced with 500 troops to protect the territory of Ekshi east of Lesser Jinchuan but they were surrounded in the castle of Želung 熱籠 (also written Žilung 日隆). On 4/21 (May 29, 1747) the rulers of Lesser Jinchuan, Dzewang and Lyang'ergyi, gave back three war-towers of Ekshi that they had occupied before and offered their help in the war against Greater Jinchuan. Lesser Jinchuan thus became an ally of the empire, at least rhetorically. Ma Liangzhu with 1,500 soldiers freed the castle of Želung and thus secured the territory of Ekshi.

On 4/24 (Jun 1, 1747) Zhang Guangsi as new governor-general of Sichuan left Guanxian 灌縣 at the foot of the mountains and marched on Dzagunao. Qingfu was called back to Beijing to become a member of the Grand Secretariat (*neige* 內閣).<sup>67</sup> Zhang, who took camp in Meno, split his troops into two divisions; the western division was sub-divided into four lines. Regional commander (*zongbing* 總兵) Song Zongzhang 宋宗璋 commanded 4,500 troops and attacked the castle of Le'uwé 勒烏圍 (also written Lewai 勒歪, Leye'uwé 勒葉烏圍)<sup>68</sup> from Damba. The two assistant regional commanders (*canjiang* 參將) Lang Jianye 郎建業 and Yongzhu 永柱 commanded 3,500 troops to attack Le'uwé from the Tsengto Valley 曾頭溝 in the north. Gala'i 噶拉依 (also written Guaryai 刮耳崖, Garya

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<sup>66</sup> *Shengwuji* 7, fol. 16a.

<sup>67</sup> In QL 14/9 (Oct 1749) he was ordered to commit suicide because he had concealed the fact that the leader of the Djandui rebels, Bangun 班滾, had fled to Jinchuan and that Qingfu himself had provided Bangun's son asylum as a monk. Compare *Qingshigao* 297, pp. 10397-10398; *Qingguoshi: Dachen zhengbian* 大臣正編 146, pp. 900-901.

<sup>68</sup> Mansier (1990), p. 127, deducts the name Le'uwé from the words for 'ancient capital'. This seemed to be the old capital of a polity known as Rab-brtan ('Rabdan') to the Central Tibetans.

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噶爾垭) was to be attacked by 3,500 troops from Senggedzung 僧格宗 under the command of Ma Liangzhu, and from Damba and Gala'i by 3,000 troops under the command of assistant regional commander Mai Guoliang 買國良 and brigade commander Gao Delu 高得祿. The southern division was divided into three lines: Regional commander Xu Yinghu 許應虎 marched with 2,700 troops from Gebshidza and was supposed to liaise with the battalion of Song Zongzhang and Lang Jianye for a united attack on Le'uwé. Zhang Xing and brigade commander Chen Li 陳禮 marched with 3,200 troops from Badi to liaise later with Ma Liangzhu and Mai Guoliang for the attack on Gala'i. Brigade commander Luo Yuchao 羅于朝 finally marched with 2,000 men from Chosgyab to conquer all war-towers west of the Jinchuan River. The whole Qing army thus consisted of more than 30,000 troops, mostly Green Standard units, but also many native auxiliary troops provided by the native kings.<sup>69</sup> From 6/28 (Aug 4, 1747) on all units were simultaneously to advance against the rebels in Greater Jinchuan. During the first week the advance was relatively quick, and the commanders were able to report the conquest of many war-towers. But each attack cost many lives on the side of the conquerors, and after a few weeks already more than 1,000 men were heavily wounded. Assistant regional commander Cai Yunfu 蔡允甫 for example, whose units had excelled in bravery at the beginning, had to report that his troops had abandoned all weapons and the battalion had disintegrated after a short while of fighting. On all lines the advance had come to a halt, and a static warfare had developed in which the imperial troops for months were not able to gain a foot of ground.

Zhang Guangsi reported to the throne and explained the overall situation in the war area:<sup>70</sup> The territory was characterized by precipitous mountains reaching up to the sky, which made any move to advance extremely difficult. Furthermore, the rebels had erected war-towers wherever possible. These towers were constructed from stones piled up like a city wall. The highest of them had many stories and were as tall as 16 *zhang* (about 51 metres). On all sides the towers were equipped with embrasures that made it possible to observe the surroundings without being seen by attackers. The defenders meanwhile were able to conveniently shoot down at the Qing troops who had no chance to see the enemy. In some places the towers did not stand isolated but were clustered together in a kind of fortification where each tower could protect the neighbouring one. Around them walls and moats made any approach impossible. Common methods for conquering a fortress, like sapping the walls or digging tunnels in which mines could be placed, or to erect walls for a battery, from which the fortifications

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<sup>69</sup> About the types of troops, see Chapter 3.1.

<sup>70</sup> *Pingding Jinchuan fanglüe* 3, fol. 18a-21a (QL 12/9/yiwei).

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could be bombarded, or to surround the castle to starve the enemy, could not be employed in Jinchuan because the rebels found it easy to counter such methods. The experience during the rebellion in Djandui had taught the Jinchuan rebels to be prepared: they either dug wide and deep moats that could not be crossed, or stored enough water and eatables inside their castles, or erected walls and other fortifications around the castle and the towers. Of immense help to the rebels were the physical conditions of the territory: cliffs and steep slopes made attacks virtually impossible. Even the cannons and howitzers could not be used because there was often no place to erect a battery platform (*paotai* 炮臺, see Chapter 4.4.1.). In order to destroy the war-towers the Qing army needed heavy artillery, but many of them were erected in places the cannons could not even be taken to, neither by mules nor by manpower. Smaller cannons had almost no effect on the construction of the war-towers, and the rebels could easily repair damage caused by them. Another method to destroy the war-towers was the old method of burning them down. The soldiers cut down large trees and transported the wood to the foot of the towers. During that work they had to be protected by wooden shelters because the rebels could easily fire at the defenceless soldiers transporting the fuel. Fire-tipped arrows to burn down barns and granaries, a common method when assailing a village or a city, were also of no use, because all buildings were made of stone and the food was stored deep inside the towers. Another reason why the method of burning down the castles was often unfeasible was the regular rainfall during the whole year, and in winter the snow made it often impossible to move forward at all. The tactics of the native auxiliaries who were accustomed to conquer such towers by climbing up from the outside and fighting against the defenders from the top of the building could not be applied either, as there the rebels could easily fire at the invaders.

At the end of the summer Zhang Guangsi altered his strategy: He decided to conquer Mt. Hiling 昔嶺, a gateway to both Gala'i and Le'uwé. On 9/9 (Oct 12, 1747) the joint attack on the two castles was to start from there. But a few days before the situation worsened. An allied native ruler named Entso 恩錯, who had supported the Qing army, now began to rebel because he did not feel treated well enough. Some of the native auxiliary troops even might have feared to be forced to fight against their cousins in Jinchuan. The troops of Xu Yinghu were not able to prevent the rebels from leading more than 1,000 soldiers of Greater Jinchuan to make an attack on the camp of Chen Li in Mabang 馬邦 (also written Marbang 馬爾邦). Xu Yinghu's own troops were surrounded in Digyao 的交 and ran short of provisions.

Zhang Guangsi blamed Xu for imprudent heroism and denied to send him support.<sup>71</sup> Instead he had withdrawn troops to Meno with the pretext to cast cannons. Mabang was an important place as a barricade for Manai 馬奈, from where the castles of Badi and Bawang could be reached, and was therefore vehemently defended by the rebels, so that Zhang Xing, who was commander at this point, could not advance at all for half a year. Ma Liangzhu therefore suggested sending troops to bring support to the Qing units in Mabang, but Zhang Guangsi only allowed the deployment of a few hundred.

During the night of 11/29 (Dec 30, 1747) rebel troops made their way across a mountain ridge and surrounded Zhang Xing's camp. Ma Liangzhu and Yongzhu repeated their suggestion to send a larger relief contingent, but again Zhang Guangsi refused and accused Zhang Xing of incompetence.<sup>72</sup> Zhang's camp was bombarded with stone catapults from the wooden fortifications that the rebels had quickly constructed on the hills around the camp. The enclosed troops had totally lost their confidence and began to run away, trampling each other to death, but many officers and soldiers also died during the flight in the wintery mountains. On 12/8 (Jan 8, 1748) Zhang Xing surrendered to the rebels but was allowed to buy free his way with silver (*yi baijin fen san mai lu* 以白金分散買路) and promised not to be harassed on his way out.<sup>73</sup> A few days later the camp was broken and the victors guided the Qing troops along the mountain ridges on three different lines. The relief troops standing on the other side of the Jinchuan River could observe what happened a few days later. Zhang Xing and Chen Li had to hand over all their weapons and were massacred. 500 – 600 men were killed, and only about 300 managed to escape. The men of Lang Jianye and brigade commander Meng Chen 孟臣 on the other side of the river, as well as assistant brigade commander Xu Keyou 徐克猷 with his troops on top of the mountain, were unable to help. On QL 13/1/2 (Jan 31, 1748) the rebels crossed the river with 500 – 600 people and attacked the imperial troops in Gagu 噶固, whose defenders surrendered to Greater Jinchuan after a few days. Lang Jianye withdrew his troops to Danga 丹噶, Xu Keyou withdrew, crossed the Xueshan Range and arrived in Badi on 1/20 (Feb 18, 1748). Ma Liangzhu's troops panicked and during the flight abandoned cannons, weapons and other equipment. In the course of the last months the situation had been so bad that Ma's troops were forced to cook and eat their leather gear because food had entirely been lacking.

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<sup>71</sup> *Pingding Jinchuan fanglüe* 4, fol. 16a (QL 12/11/xinmao).

<sup>72</sup> *Pingding Jinchuan fanglüe* 5, fol. 12b (QL 13/1/dingwei).

<sup>73</sup> *Pingding Jinchuan fanglüe* 5, fol. 10b (QL 13/1/dingwei).

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Zhang Guangsi was well aware of all the disasters that had befallen his army on the western front, but instead of reporting those defeats and the lack of food he only asked for reinforcement by 10,000 troops and planned a fresh advance by 12 different lines.<sup>74</sup> From the beginning Zhang Guangsi had underestimated the ability and strength of the enemy and in each case had not deployed enough troops. In the course of the past year the Qing troops had made almost no progress at all, and Zhang had therefore wasted provisions and brought to death many troops, in other words, he had squandered state finances (*mi fei bu zi* 糜費不貲)<sup>75</sup> and could therefore be accused of corruption. His tactical methods were also ‘not appropriate’ (*diao du shi yi* 調度失宜):<sup>76</sup> Native auxiliaries were put in the first line of attack, before the Green Standard soldiers, with the result that the less well equipped and barely trained soldiers of the native kings ceased to fight as soon as they met serious resistance.<sup>77</sup> Another fault lay in his approach to divide the troops into too many small contingents, which had no chance to conquer the well-protected castles of the rebels in such small numbers. Zhang Guangsi’s personal stance towards his subordinates aggravated the situation because he tended to blame the disasters of the past months on the respective officers without giving them support in dangerous situations.<sup>78</sup> Accustomed to quick victories, he was not willing to see the reason for the failure in his own shortcomings. It was even said that he favoured troops from Guizhou, where he had been governor-general before.<sup>79</sup>

The emperor was not at all happy with the development of the Jinchuan campaign and in QL 13/4 (May 1748) dispatched Neqin 訥親 as Grand Minister Commander (*jinglüe dachen* 經略大臣) to supervise the war. Neqin took with him troops from the imperial palace guard (*jinjun* 禁軍) and high officers from the Capital Banner troops:<sup>80</sup> An important member of the group of newly dispatched officers was Yue Zhongqi, who had gained experience with the Tibetans and their way of conducting a war in the course of the campaigns in Tibet and Qinghai during the Yongzheng reign. During the Dzunggar campaign in 1732 – 1735 he had been demoted (interestingly enough after being criticized by Zhang Guangsi), accused of incompetence and harsh treatment of subordinates,<sup>81</sup> sentenced to decapitation, but later

<sup>74</sup> *Pingding Jinchuan fanglüe* 5, fol. 16b-17b (QL 13/1/dingwei); 7, fol. 4a-4b (QL 13/5/jiachen), 10b-11b (comment of the editor).

<sup>75</sup> *Pingding Jinchuan fanglüe* 19, fol. 4b (QL 13/12/renchen).

<sup>76</sup> *Ibid.*

<sup>77</sup> *Pingding Jinchuan fanglüe* 7, fol. 3b (QL 13/5/jiachen); 8, fol. 13a (QL 13/7/renchen); 11, fol. 9a, 12b (QL 13/8/gengyin).

<sup>78</sup> *Pingding Jinchuan fanglüe* 19, fol. 4b (QL 13/12/renchen).

<sup>79</sup> *Ibid.*

<sup>80</sup> *Pingding Jinchuan fanglüe* 6, fol. 11b (QL 13/4/jiazi).

<sup>81</sup> Such accusations were very common as a means to demote or execute an official. They were mainly: false methods (*diao du guai fang* 調度乖方), unfair treatment of subordinates (*bu xu shi zu* 不恤士卒), non-

pardoned by the Qianlong emperor. Yue was installed as provincial military commander and on 4/23 (May 19, 1748) took off to join the campaign in Jinchuan. He was to lead the attack on Le'uwé.

On 6/3 (Jun 28, 1748) Neqin arrived in the Meno camp. With the will to destroy the enemy within shortest time, he announced that Gala'i was to be taken within three days.<sup>82</sup> On 6/13 (Jul 8, 1748) he ordered the regional commanders Ren Ju 任舉 and Hapanlong 哈攀龍, regional vice commander Tang Kaizhong 唐開中, and Mai Guoliang to storm Hiling under the command of Zhang Guangsi. The soldiers were ordered to cut down trees and to erect wooden shelters to be moved forward with each pace of advance. As before, the native auxiliaries were in the first line and followed by the Green Standard troops. Mai Guoliang's corps, too busy with defending their own fortifications instead of attacking, was surrounded from three sides, the commander and many soldiers died. Hapanlong sent for reinforcement, salvaged the corpse of Mai Guoliang and withdrew to the camp. Three days later the Qing troops attacked a second time with the result that Ren Ju was killed and Tang Kaizhong heavily wounded.

Neqin thereupon altered his strategy and fought a war of defence instead of attacking. His method was to have the Qing troops build war-towers and fortifications, and 'to force tower by tower and fort by fort' (*yi diao bi diao, yi qia bi qia* 以碉逼碉，以卡逼卡).<sup>83</sup> Neqin suggested that it was possible to hold a war-tower with only a few men against many attackers and that therefore more men could be engaged in direct attacks and just a few were needed to give cover to the attackers from the rear. The emperor disagreed with these suggestions and argued that the task of the Qing troops was to attack and not to defend; the erection of war-towers would furthermore require too much manpower, cost an enormous amount of time to construct and to secure them when advancing.<sup>84</sup> Surprisingly Zhang Guangsi had retired into a thoroughly passive stance and even openly supported Neqin's strange tactical approaches in their common reports to the emperor although he as an old military should have known that none of Neqin's plans would work. The suggestion of censor (*yushi* 御使) Wang Xianxu 王顯緒 to exclusively employ native soldiers in the first line of attack because they were thought to be very experienced in fighting against other 'barbarians', was rebuffed by Neqin

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acceptance of better suggestions (*bu na shan yan* 不納善言), selfishness (*ao man bu gong* 傲慢不恭) and obstinateness (*gang bi zi yong* 剛愎自用), as well as inappropriate behaviour towards the emperor when reporting: empty words and lies (*xu jia zha wei* 虛假詐偽). Compare *Qingshi liezhuan* 17, p. 1256. The same charges can be seen when dealing with Zhang Guangsi, Neqin, and Wenfu.

<sup>82</sup> *Pingding Jinchuan fanglüe* 22, fol. 9b (QL 14/1/bingyin).

<sup>83</sup> *Ibid.*

<sup>84</sup> *Pingding Jinchuan fanglüe* 8, fol. 21b-23b (QL 13/7/xinmao).

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with the argument that even Tibetans were not able to fight more effectively against the war-towers.<sup>85</sup> His father Wang Rou 王柔 even suggested to use Daoist magic (the ‘five-thunder method’ *wuleifa* 五雷法) against the enemy which was not as absurd as it may seem at first sight—tantric magic was also employed by the Tibetan lamas who cast charms against the Qing army that were intended to evoke wind, rain and snow.<sup>86</sup>

What Neqin did not say, but what surely was a reason for the lack of fighting spirit among the native auxiliaries, was not only the fact that they were poorly equipped, but much more the relationship of their kings with the Shaloben of Greater Jinchuan that could not necessarily be definitely hostile in the long run. In other words: they could not entirely be trusted as would become apparent soon.<sup>87</sup>

The depressed mood in the Qing camps was best seen during the attempt to conquer the castle of Kangbada 康八達 near Damba that failed after several attacks. When only several dozen rebels came whooping down the mountain and caused a whole battalion of 3,000 men to disintegrate in panic. The fleeing soldiers trampled each other to death. It was clearly time for a change.<sup>88</sup>

The emperor thereupon suggested dispatching Solun (Ewenke) 索倫 elite cavalry, but Neqin argued that cavalry would be useless in the high mountains and their arrows would not be much help against the war-towers of the Jinchuan rebels. Although Banner troops were far more willing to fight than Green Standard troops or native auxiliaries, the assault on one single tower would need the use of up to 200 Banner troops that had to be protected by several hundred troops from the rear, and many more marksmen (actually snipers, *maifu bingding* 埋伏兵丁) securing the territory. Not even then the Green Standard troops and auxiliaries in the rear would follow the Banner troops when advancing, and would instead leave them alone in the line of fire. The use of Banner troops alone for all tasks would be much too expensive.<sup>89</sup> Neqin had lost all ideas how to deal with the enemy, and worse, he had lost the impetus to fight at all. It is said that he withdrew to his tent, spent lazy days and

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<sup>85</sup> *Qingshilu: Gaozong shilu* 322, fol. 14a-14b (QL 13/8/wuzi). *Pingding Jinchuan fanglüe* 9, fol. 11b-12b (QL 13/7/wushen).

<sup>86</sup> *Qingshilu: Gaozong shilu* 321, fol. 12b (QL 13/i7/xinwei). *Pingding Jinchuan fanglüe* 10, fol. 1b (QL 13/7i/xinwei). See also Waley-Cohen (2006), pp. 57-61.

<sup>87</sup> Even during the second Jinchuan campaign, it was rumoured that the native auxiliary troops had many connections with the enemy, so that one had to assume that military secrets were betrayed. *Jinchuan dang* QL 36/III/00077 (QL 36/9/12).

<sup>88</sup> *Pingding Jinchuan fanglüe* 11, fol. 22b-24a (QL 13/8/gengzi).

<sup>89</sup> *Pingding Jinchuan fanglüe* 10, fol. 13b-14b (QL 13/7i/xinwei).

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did not want to receive any officer.<sup>90</sup> It was even said that he avoided to participate in battles and instead was looking for a hiding place.<sup>91</sup>

All military commands were now issued again by Zhang Guangsi who for a long time had followed the orders of Neqin. At this point a deep rift between Zhang and Neqin opened. Zhang was an experienced old military who had won countless battles, and he therefore despised the civilian Neqin who had no military experience at all.<sup>92</sup> Deeply hurt that he had now a superior who was only experimenting with the forces of the Qing soldiers, he had not tried to prevent Neqin to implement his useless methods of conquering Jinchuan. Zhang deliberately let Neqin walk straight into the self-laid trap of military disaster and now, when Neqin had given up, the old general tried to gain new ground. The defeats of the past months and of the coming time could all be blamed on the highest commander, Neqin,<sup>93</sup> while any future advances could be counted as Zhang's merits.<sup>94</sup> Both knew quite well that they were creating problems but none of them dared to tell the emperor the truth.<sup>95</sup>

The mutual accusations began when Neqin sent a secret letter<sup>96</sup> to the emperor in which he criticized Zhang's tendency to split up the troops into small battalions that were to advance via different lines to surround the enemy. This was really not a way to show the strong will to crush the enemy, but showed—as Neqin argued—that Zhang did not have any strategy at all. Zhang's ideas also ran contrary to those of governor Jishan, with the result that both mutually disregarded the orders of the other and forfeited all chances for successful combat (*yiwu junji* 貽誤軍機).<sup>97</sup> The emperor also felt that Zhang Guangsi's ruthless leading style would not encourage the troops. Shortly after, on QL 13/9/19 (Nov 9, 1748), Yue Zhongqi also sent a secret letter to the emperor that revealed a much greater problem than questions of strategy and leadership:<sup>98</sup>

Zhang had a Chinese adviser named Wang Qiu 王秋 who cooperated with the enemy (the sources therefore call him the 'Chinese traitor' *Hanjian* 漢奸).<sup>99</sup> Wang Qiu obviously had suggested to Zhang to make extensive use of native auxiliary troops that were commanded by the local leaders. One of those persons was baron Lyang'ergyi in Lesser Jinchuan, a relative of

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<sup>90</sup> *Pingding Jinchuan fanglüe* 22, fol. 9b-10a (QL 14/1/bingyin).

<sup>91</sup> *Pingding Jinchuan fanglüe* 14, fol. 13a-13b (QL 13/10/yiyou).

<sup>92</sup> *Shengwuji* 7, fol. 16a.

<sup>93</sup> *Pingding Jinchuan fanglüe* 19, fol. 4b-5a (QL 13/11/renchen). The story can also be read in *Xiaoting zalu* 4, p. 98.

<sup>94</sup> *Pingding Jinchuan fanglüe* 18, fol. 20b-21a (QL 13/11/wuzi).

<sup>95</sup> *Pingding Jinchuan fanglüe* 22, fol. 10a (QL 14/1/bingyin).

<sup>96</sup> A secret memorial by Neqin is mentioned in Zhuang (1982), p. 124. So far no other sources mention such a secret memorial written by Neqin.

<sup>97</sup> *Pingding Jinchuan fanglüe* 13, fol. 30a-30b (QL 13/9/gengchen).

<sup>98</sup> *Pingding Jinchuan fanglüe* 13, fol. 5b-6a (QL 13/9/gengwu).

<sup>99</sup> *Pingding Jinchuan fanglüe* 13, fol. 19a-19b (QL 13/9/dingchou).

the Shaloben, who had promised to cooperate with the Qing troops but whose help did not only offer no substantial contribution but was even counterproductive: first of all the native auxiliary troops refused to fight because of cowardliness; Wang Qiu and Lyang'ergyi, who could apparently take part in the meetings of the general staff, also knew well in advance the next tactical step of the Qing troops and promptly informed the Jinchuan rebels (*louxie junqing* 漏泄軍情 'he had given away military secrets') who thus could take precautions.<sup>100</sup>

The auxiliary troops secretly transmitted ammunition and provisions that they were given to the enemy and during battle refused to attack and instead of fighting ran away. The Jinchuan rebels therefore probably knew better than the Qing troops what was going to happen on the battlefield, and Zhang Guangsi, instead of using barbarians against barbarians ('enemies against enemies', *yi chou gong chou* 以仇攻仇) 'supported one gang through the other' (*yi dang ji dang* 以黨濟黨). Instead of fighting against the Jinchuan rebels, Zhang Guangsi had supported them (*wan bing yang kou* 玩兵養寇 'he played with the troops to nourish the bandits').<sup>101</sup>

In QL 13/9 (Nov 1748) the emperor dismissed Zhang Guangsi from his offices because of false strategies, unjust treatment of subordinates, inappropriate allocation of troops and use of spies. Zhang was escorted to Beijing and handed over to the Ministry of Justice for trial. Dzewang, the king of Lesser Jinchuan, later accused him that the interpreters of some relatives (*jiaren* 家人) of Zhang's had cooperated with Wang Qiu to extort money and precious objects from Dzewang.<sup>102</sup> The emperor became so enraged that he personally questioned Zhang on the Yingtai Terrace 瀛台 in the Forbidden City and ordered the members of the State Council (*junjichu* 軍機處) to lay down a punishment for Zhang, together with the Ministry of Justice. Zhang was executed in QL 13/12 (Feb 1749).<sup>103</sup>

Neqin was also dismissed because of cowardice and laziness, squandering state finances and exhausting the troops (*lao shi mi xiang* 老師糜餉) and because he had stubbornly persisted in his passive stance (*wu yi mou* 無一謀). In QL 14/1 (Feb 1749), ten days after the execution of Zhang, he was forced to commit suicide in front of the army with the sword of his own grandfather Ebilun 遏必隆.<sup>104</sup>

<sup>100</sup> *Pingding Jinchuan fanglüe* 19, fol. 5a-5b (QL 13/12/renchen).

<sup>101</sup> *Pingding Jinchuan fanglüe* 13, fol. 30a-30b (QL 13/9/gengchen).

<sup>102</sup> *Pingding Jinchuan fanglüe* 15, fol. 26a-26b (QL 13/10/wuwu).

<sup>103</sup> *Pingding Jinchuan fanglüe* 18, fol. 20a-22b (QL 13/11/wuzi). *Qingshigao* 297, pp. 10401-10402. The exact date is not known.

<sup>104</sup> *Pingding Jinchuan fanglüe* 20, fol. 6b-7a (QL 13/12/guimao).

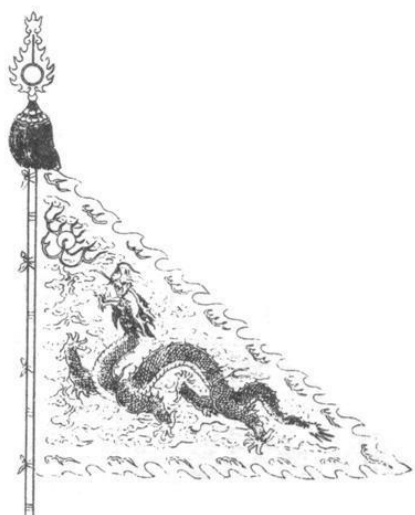


Figure 2.6: The imperial girdan banner  
Source: *Da-Qing huidian tu* 104, [fol. 16].

Under such conditions the conquest of Jinchuan seemed to be more difficult than ever. Yet to call off the campaign would have resulted in exaggerated self-confidence of the Jinchuan kings. If the Qing troops withdrew, the Shaloben would be able to dominate the whole area and to subdue all neighbouring kings; in the worst case he would even stage raids on the territory of Sichuan province. Therefore the emperor decided to nominate Fuheng 傅恆 (d. 1770) Grand Minister Commander and governor-general of Sichuan and ordered to dispatch 5,000 Banner troops from the Capital and the Three Eastern Provinces (*dong san sheng* 東三省: Jilin, Shengjing [today's Liaoning], and Heilongjiang), 2,000 Banner troops from Xi'an 西安, and 1,000 Banner troops from Chengdu. All Banner contingents took with them several heavy cannons of the *weiyuan* 威遠 'far-reaching authority' type (see Chapter 4.4.1.) that had proved to be very effective during the former campaigns in Tibet. Fresh battalions were also dispatched from among the Green Standard garrisons in the following provinces: 15,000 from Shaan-Gan (Shaanxi and Gansu), 2,000 men from Yunnan and Guizhou each, and 4,000 men from Hunan and Hubei each. In order to stimulate the fighting spirit of the Green Standard troops and the native auxiliaries the emperor set aside 100,000 silver *liang* for rewards.<sup>105</sup> On QL 13/11/3 (Dec 22, 1748) Fuheng set off from the Capital having received a cup of wine from the hands of the emperor himself. Fuheng was allowed to mount his horse in front of the imperial tent and escorted by imperial princes and by Laibao 來保,<sup>106</sup> member of the State Council, as far as Liangxiang 良鄉, the first village outside of Beijing.<sup>107</sup> His escort carried the imperial dentated 'centipede' *girdan* banner (*girdan du* 吉爾丹纛), which was normally reserved for the emperor in person.<sup>108</sup>

Each day Fuheng's contingent covered 200 *li* and arrived in Sichuan province on 11/24 (Jan 12, 1749).<sup>109</sup> That means that Fuheng's contingent needed 20 days for the distance from

<sup>105</sup> *Pingding Jinchuan fanglüe* 14, fol. 10b (QL 13/10/guiwei), 19a-21a (QL 13/10/yichou).

<sup>106</sup> Grand-Academician Laibao did not himself go to Jinchuan, but as Minister of War, member of the State Council and Grand-Minister he was well-informed about the events and was later entrusted with the compilation of the official history of the war, the *Pingding Jinchuan fanglüe*.

<sup>107</sup> *Pingding Jinchuan fanglüe* 15, fol. 16a-18b (QL 13/10/guichou).

<sup>108</sup> *Da-Qing huidian tu* 104, [fol. 16].

<sup>109</sup> *Pingding Jinchuan fanglüe* 16, fol. 6b-7a (QL 13/11/jiazi).

Beijing to Chengdu. The commander's first task after he arrived in the camp, was to punish Lyang'ergyi. The scoundrel was lured from his military camp under the pretext that the new high commander would receive all leading officers. He was then arrested and executed, his head was presented on the gate of the camp as a sign of a new wind at the front. On 12/22 (Feb 9, 1749) Ako was arrested and executed. Her head was likewise presented to the public. Yue Zhongqi had further persons arrested and executed, among them Lyang'ergyi's commander Tsangwang 蒼旺 and, of course, Wang Qiu who was tortured to death, as well as his wife and their two sons.<sup>110</sup>

After these executions that Fuheng considered necessary he resumed the strategic faults of the past:<sup>111</sup> The attack on individual war-towers instead of strategically important castles had led to a waste of time and manpower. Despite their considerable height—some were even higher than a normal pagoda in China—war-towers could be erected within a few days. Cannon ball damages could also be quickly repaired. The rebels defended their towers, undaunted by death, and even took up the fight after their tower was totally destroyed by cannonade. To conquer one tower was more difficult than to conquer a whole city. According to experience, one hundred Qing soldiers were necessary to cope with one rebel, which means that for the 3,000 or so rebels of Jinchuan, the Qing army would need 30,000 troops.

The emperor was indignant that he had not been informed earlier how difficult the conquest of Jinchuan would be and therefore asked for suggestions of his highest advisors, namely his uncle Yunlu 允祿 (Prince Zhuang 莊親王) and his brother Hongzhou 弘晝 (Prince He 和親王), who he wanted to discuss whether the whole imperial corps in Jinchuan should be called off (*ban shi* 班師).<sup>112</sup> Even the emperor's mother, Empress Dowager Xiao 孝聖憲皇后, is said to have suggested (or 'ordered', *yizhi* 懿旨) ending the war.<sup>113</sup> On QL 14/1/3 (Feb 19, 1749) the emperor commanded to withdraw the army, but suddenly there were news from Jinchuan. The Shaloben had sent envoys to offer surrender. Yue Zhongqi transmitted this offer through a memorial, and on 1/20 (Mar 8, 1749) the king-priest of Greater Jinchuan presented a written pledge (*ganjie* 甘結) and swore on a sutra that he would fulfil the following six conditions for his surrender:<sup>114</sup> to never again annoy his neighbours;

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<sup>110</sup> *Qingshilu: Gaozong shilu* 332, fol. 23b (QL 14/1/bingchen). *Pingding Jinchuan fanglüe* 21, fol. 14b-15a (QL 14/1/yimao).

<sup>111</sup> *Pingding Jinchuan fanglüe* 22, fol. 8b-14b (QL 14/1/bingyin). This passage is also partially cited in *Shengwuji* 7, fol. 17a-19b.

<sup>112</sup> *Pingding Jinchuan fanglüe* 14, fol. 1b (QL 13/10/renwu).

<sup>113</sup> *Pingding Jinchuan fanglüe* 22, fol. 16b (QL 14/1/dingmao). *Xiaoting zalu* 4, p. 99. The older women of the court were also involved in the affair when everything was over and they received the emperor's report of the fortunate termination of the campaign. *Pingding Jinchuan fanglüe* 24, fol. 21b-22a (QL 14/2/gengzi).

<sup>114</sup> *Pingding Jinchuan fanglüe* 24, fol. 1a-1b (QL 14/2/renyin). *Shengwuji* 7, fol. 19b.

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to return all territory belonging to other kings that he had seized in the past; to arrest and hand over the criminals (? of the Marbang massacre, *fxian xiongshou* 縛獻兇首); to return the muskets and cannons his troops had captured; to return war prisoners and captured horses; and to annually deliver his tributes and offer his services to the Qing court. An altar was erected in front of which the Shaloben swore an oath that he would keep his promise and be peaceful in the future. On 1/28 (Mar 16, 1749) he invited Yue Zhongqi to Le'uwé (according to other sources, to Gala'i)<sup>115</sup> where the commander spent the night with his escort of fifty men. On the next day he assembled the Shaloben and his son or nephew Langkya 郎卡,<sup>116</sup> their retainers and the king of Chosgyab in the sutra hall (*jingtang* 經堂) to solemnly swear their oaths.

The close interaction between Yue and the Shaloben—if this story is true—cannot come as a surprise. As the king of Greater Jinchuan had once participated in the Yangtung campaign under the command of Yue Zhongqi, both knew each other quite well. Nevertheless neither of them knew of the other's part in the Jinchuan war (at least the Shaloben could have heard that Yue was one of the supreme commanders—the spies should have reported this fact); only when facing each other in the castle, thus the story goes, they recognized the old companion. During the Yangtung campaign, the Jinchuan prince did not yet bear the title of *shaloben* king-priest, but had probably been called by his personal name, which we unfortunately do not know.

On 2/4 (Mar 21, 1749) the Shaloben had an altar erected in front of Fuheng's military camp and the high commander received the submission of the lamas and the various barons of Jinchuan. The representative of Greater Jinchuan was not the king-priest, but his nephew Langkya who offered tribute in the shape of a Buddha statue and some silver ingots.<sup>117</sup> Two days later Fuheng left the camp to return to Beijing where he was granted the title of Duke Zhongyong 忠勇公, the 'Loyal-heroic'. Yue Zhongqi was given the title of Junior Guardian of the Heir Apparent (*taizi shaobao* 太子少保) and made Minister of War (*bingbu shangshu* 兵部尚書) with the rank of a 3rd class duke (*sandeng gong* 三等公).<sup>118</sup>

<sup>115</sup> *Pingding Jinchuan fanglüe* 23, fol. 23a (QL 14/1/yichou), says, in Le'uwé. *Xiaoting zalu* 4, p. 99, says, in Gala'i. The story of Yue Zhongqi's personal visit of Le'uwé, as reported in *Shengwuji* 7, fol. 19b, seems to be of later origin, as it is probably too phantastic to represent historical reality.

<sup>116</sup> There is the same confusion with the terms *zi* 子 and *zhi* 侄 as in the case of Ako.

<sup>117</sup> *Pingding Jinchuan fanglüe* 24, fol. 6b-7a (QL 14/2/renchen). Langkya might have been the actual secular ruler of Greater Jinchuan: The short report on the history of Jinchuan in the *Da-Qing yitong zhi* 423, fol. 2a, names Langkya and not the Shaloben as the person surrendering to the Qing commander.

<sup>118</sup> *Pingding Jinchuan fanglüe* 23, fol. 14a-14b (QL 14/2/bingxu).



During the past two years the emperor had dispatched more than 80,000 troops from several provinces to subdue a few thousand rebels. Between QL 12/3 (Apr 1747) and 13/3 (Apr 1748) 62,560 Green Standard and native auxiliary troops had been involved, from QL 13/9 (Oct – Nov 1748) on almost 20,000 new troops had been dispatched from regions as far as China's northeast. The whole war had cost no less than 7,127,500 silver *liang* (according to Artai)<sup>119</sup> (or 7,604,800 *liang*, according to the Ministry of Revenue);<sup>120</sup> Sichuan province had spent 772,900 *liang*, the Ministry of Revenue and other provinces had contributed 8,791,100 *liang*, which amounts to a total of 9,564,000 *liang* sent to the war chest, of which 1,503,000 were left over (according to Shuhede).<sup>121</sup> During the war years the emperor had to announce tax remittances for the relief of regions struck by natural disasters, like the inundations in southern China. The state treasury was therefore lacking more than 10 million *liang*, for which reason rich merchants from the Liang-Huai region and the salt administration zone of Ludong 蘆東 had to pay contributions (*juanshu* 捐輸; see Chapter 6.2.) to fill this hole in the state treasury. The lack in finances caused by the inundations and the subsequent tax remittances were included into the accounts of the Ministry of Revenue so that statements can be found that the first Jinchuan campaign had cost 20 million *liang* of silver.<sup>122</sup>

The first Jinchuan war was actually not fought to the end but was concluded in a kind of truce. At least the Qing generals did not instantly accept the surrender of the Jinchuan rebels—as the secondary sources on the war seem to suggest—but several times demanded that the Shaloben personally came to the imperial camp to offer surrender. The negotiations for this action took a certain time. It is not clear why the Shaloben suddenly submitted to the Qing. Probably he was impressed by the large army and the new martial spirit that had arrived in Jinchuan with Fuheng, but he might also have been tired of a war that had interrupted all normal life in the region. Up to then the 'normal' feuds among the native kings had never taken on such dimensions. But his sudden willingness to give in after the execution of Lyang'ergyi and Wang Qiu also demonstrates the degree to which the imperial army was infiltrated with spies and defectors. Without their helpful information the Jinchuan rebels would never have been able to demonstrate such strength as they had. And a last dimension might have played a role: the massacre of Mabang had apparently not been planned and ordered by the rebel leader himself but by one of the native barons. In how far the king-priest of Greater Jinchuan was the real sovereign in his territory cannot be assessed but there definitely were some among the

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<sup>119</sup> *Pingding Liang Jinchuan fanglüe* 30, fol. 19a-19b (QL 37/6/renshen).

<sup>120</sup> *Jinchuan junxu li'an: Zonglüe* 總略, fol. 1b.

<sup>121</sup> *Pingding Jinchuan fanglüe* 25, fol. 2a-2b (QL 14/2/guimao).

<sup>122</sup> *Pingding Jinchuan fanglüe* 25, fol. 3a (QL 14/2/guimao).

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barons and village heads that tried to display a certain range of independence from their king. The native baron who ordered the massacre of Mabang disposed of a force of 1,000 men, which is a third of the often cited 3,000 that the rebels of Jinchuan mustered.<sup>123</sup> Other documents speak of 7,000 to 8,000 well-trained soldiers (plus auxiliaries) on the side of the rebels.<sup>124</sup> Did the Shaloben or his son Langkya try to get rid of a competitor for power, something that could be achieved only through offering surrender to the Qing? We do not know.

During the second Jinchuan war the strength of the Jinchuan army was not much over 15,000 men, 7,000 of whom came from Lesser Jinchuan and 8,000 from Greater Jinchuan.<sup>125</sup> This seems to be a very weak force compared to the 80,000 or even 120,000 Qing troops that were mobilized during the second Jinchuan campaign. The reasons for this asymmetric relation were not only the extraordinary circumstances under which the Qing troops had to fight, like the mountainous territory, the inaccessible war-towers and the bad climatic conditions, but also to some extent the unwillingness of many imperial and native auxiliary soldiers to risk being killed in battle.

#### 2.4. Intermittent Feuds

After the surrender of the Jinchuan king-priest and his son Langkya in QL 13/1, there were no great changes within the politics between the different native kings of the region, and the *status quo ante* was resumed—and that does mean that the Qing government was not able to tame the belligerent mountain tribes. When therefore Sichuan governor-general Huang Tinggui suggested in QL 18 (1753) to incorporate Lesser Jinchuan into the normal administration system (*gai tu gui liu*), for example by transforming it into a sub-prefecture, his proposal was rejected as before.

In QL 20 (1755) Chemben 徹木本, Lama of Kungsa, fled to Mashu to hide somewhere, an escape which caused tensions between the native kings of Kungsa and Mashu. Greater Jinchuan and Chosgyab supported Mashu, while Kungsa was supported by Gebshidza and Dergat. Greater Jinchuan and Chosgyab therefore dispatched troops that attacked a monastery in the territory of Gebshidza. The governor-general therefore sent out brigade commander

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<sup>123</sup> *Pingding Jinchuan fanglüe* 10, fol. 9b (QL 13/7/xinwei).

<sup>124</sup> *Pingding Jinchuan fanglüe* 5, fol. 29b, 32a (QL 13/3/bingxu).

<sup>125</sup> According to *Pingding Liang Jinchuan fanglüe* 84, fol. 14a-14b (QL 38/12/jiachen), 8,000 men surrendered in Lesser Jinchuan. Compare also 29, fol. 7b (QL 37/5/xinhai). But such figures are not very reliable, e. g. there is one document talking of 8,000 rebels in one single place. *Pingding Liang Jinchuan fanglüe* 38, fol. 21a (QL 37/9/gengshen).

Song Yuanjun 宋元俊, who was to pursue different neighbouring kings in order to punish Greater Jinchuan. After this conflict was settled, all parties involved had to swear a solemn oath not to fight against each other in the future. But the oath could not be relied on. Peace was soon broken, when in QL 23 (1758) the relationship between Greater Jinchuan and Gebshidza again showed rifts in connection with a marriage by which Greater Jinchuan tried to gain control of his neighbour: Ashno 阿什諾, daughter of King Langkya of Greater Jinchuan, was to take over control over her husband Selangdudob 色楞敦多布, son of the king of Gebshidza, his official *tusi* seal and his territory. This was an exact repetition of the Ako-Dzewang case some years earlier, and it seems to have been a common method to control foreign territory by intermarriage. There was even a revolt against Gebshidza in a baronship named Dandung 丹東, whose troops attacked Gebshidza. Langkya was supported by a group of native barons in Dandung, which were actually subject to Gebshidza but who now were willing to rebel against their king. At that time Senggesang 僧格桑, son of King Dzewang of Lesser Jinchuan, sent out troops to support Gebshidza against the rebels. Greater Jinchuan meanwhile looked for help in Bulakdi and attacked the castles of Dandung and Gyidi 吉地 with a force of 3,000 men. Selangdudob and Senggesang were surrounded in Lesser Jinchuan. Five days later Selangdudob managed to escape with his family and fled to the garrison of Taining near Dajianlu, to seek for help. His territory, deprived of its master, meanwhile was occupied by Greater Jinchuan. Governor-general Kaitai 開泰 (gov. QL 20 – 24/28 [1755 – 1759/1763]) ordered the kings of Ekshi, Dzagu and Damba to send out troops to liberate Lesser Jinchuan. At the same time Chosgyab was to stage an attack on Greater Jinchuan, most of whose troops were engaged in Lesser Jinchuan. His troops were to be supplied with gunpowder and cannons made available by Kaitai. Although each of the kings was promised all conquered territory of Greater Jinchuan for possession, no territorial progress was made within the next few years. Kaitai thus pursued the old politics of *divide et impera* and tried to split up Greater Jinchuan and to weaken its aggressive rulers.

As the king of Greater Jinchuan, the Shaloben, had inherited the sacral office as a high lama of Jinchuan the secular government was in the hands of his nephew Langkya. On QL 26/5/11 (Jun 13, 1760) the Shaloben died and was succeeded by Langkya who now probably took over both secular and sacrificial functions.

Two years later Langkya staged the next foray upon his neighbours: Troops of Greater Jinchuan supporting some barons of the Damba region attacked the castle of its king. Kaitai immediately ordered the neighbouring kings to dispatch troops to relieve the king of Damba.

This time the emperor voted against an intervention into local affairs and criticized Kaitai for his overhasty actions in the past few years: Kaitai had made preparations for military attack even before there was the need to do so.<sup>126</sup> The Qing central government wanted to wait and see what the native kings were doing before commanding a large-scale military intervention. It was especially Kaitai's policy to receive the representatives of Langkya openly in the provincial capital Chengdu and to acknowledge their pleas, while secretly not interfering when neighbouring kings attacked unprotected castles in Greater Jinchuan. This Janus-faced behaviour was neither a policy that could convince Langkya that it was worthwhile to display honesty and loyalty towards the Qing government nor could it demonstrate to the native kings how sincere and honest politics should work.<sup>127</sup> As long as there was no danger for Chinese territory or for strategic points beyond the border, like the Dajianlu garrison and the road to Tibet, the native kings were supposed to manage their affairs among themselves. In QL 28 (1763) Kaitai was therefore replaced by Artai 阿爾泰 as provisional governor-general (gov. QL 28/6 – 29/3, 29/6 – 30/5 [Jul 1763 – Apr 1764, Jul 1764 – Jun/Jul 1765]). Artai wanted all native kings to unite for a well-concerted action against Greater Jinchuan. The emperor did not agree with such an action because the native kings would not be capable to appease Langkya, who had already several times disturbed the peace of the region. Thus the emperor appointed Agui as acting governor-general of Sichuan (QL 29/3 – 6). The idea was that Agui was to rely on a far more concentrated action to punish Langkya. Yet since there was a war with Myanmar (Burma), there was not much time left for planning, and because Agui took over supreme command in the actual Myanmar campaign, Artai was reinstated on the understanding that his policy to use barbarians against barbarians was still to be used for the next years.

The government of Sichuan took advantage of the situation that many kings of the surrounding territories had for a long time a bone to pick with Greater Jinchuan and therefore went along to command them to attack the aggressive Jinchuan rebels. But almost none of the *tusi* kings obeyed to the command of the Qing governors, for fear that Greater Jinchuan might take its revenge as soon as the troops had withdrawn. Artai therefore ordered all native kings in QL 30 (1756) to withdraw from the Greater Jinchuan borders (as apparently not even a single war-tower could be occupied by the anti-Jinchuan allies) and ordered Langkya to return all foreign villages and castles hitherto occupied by him and to free all people he had abducted. Langkya complied with the request but instead of liberating, as promised, the fifty

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<sup>126</sup> *Pingding Liang Jinchuan fanglüe* 2, fol. 10a (QL 27/11/yihai).

<sup>127</sup> *Pingding Liang Jinchuan fanglüe* 2, fol. 15a-15b (QL 28/7/renwu).

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households of Damba he had occupied, he only handed over three war-towers, and during the following months continued harassing the region of Damba. In QL 31 (1757) the emperor ordered Artai and the provincial military commander Yue Zhonghuang 岳鍾璜 to personally inspect the region as a demonstration of the Qing government's authority over all native kings. Artai proceeded via Weizhou and Dzagu and met with Langkya and some barons and village heads in Kangbada.<sup>128</sup>

Langkya promised to withdraw his troops and to keep peace in the future, but not without conditions: he wanted to retain five war-towers at the important strategic point of Bolgu 博嚕古, to be reconfirmed in his official position as native king, to be allowed to intermarry with Chosgyab as well as the liberation of his own lamas, who had been arrested as spies in Dajianlu on their way to Tibet. Artai complied with all of his demands—which was not exactly to the liking of the emperor—and, as promised, Langkya eventually withdrew his troops and liberated all the hostages he had captured in the territory of Damba.<sup>129</sup> The only point in which Langkya did not keep his promise was that he did not give his daughter to the king of Chosgyab, but to Senggesang instead, who was son of the king and heir of Lesser Jinchuan. Thus both territories, that of Greater Jinchuan and that of Lesser Jinchuan, were united by marriage and formed one large and powerful block in that area.<sup>130</sup> The politics of *divide et impera* therefore once more had failed in the case of Jinchuan: the neighbouring kings would not be strong enough to challenge the mighty ruler of Greater Jinchuan in the future.

Dzewang, the king of Lesser Jinchuan being old and senile, left governmental affairs to his son, baron Senggesang who took up residence in the castle of Meno, while Dzewang retired to Dimda 底木達.

In QL 35/3 (Mar – Apr 1770) the king of Ekshi, Sedakla 色達克拉, had a lama cast out evil mantras against Lesser Jinchuan and write the spells upon a paper that he had hidden somewhere around his castle.<sup>131</sup> Dzewang and Senggesang eventually fell ill, and one of Senggesang's sons even died, leaving the house of Lesser Jinchuan without an heir. Senggesang thereupon deployed a smaller contingent to attack Ekshi under the pretext to take possession of the spell mantra—although he also made booty and stole cattle from the villages of Ekshi. Dzewang also wrote an official justification to the emperor, in which he defended

<sup>128</sup> *Pingding Liang Jinchuan fanglüe* 5, fol. 2b (QL 31/9/gengchen), 8a-8b (QL 31/10/jiachen).

<sup>129</sup> *Pingding Liang Jinchuan fanglüe* 5, fol. 2b-3a (QL 31/9/gengchen).

<sup>130</sup> *Pingding Liang Jinchuan fanglüe* 5, fol. 11b-12a (QL 32/2/wushen). The *Jinchuan suoji* 3, p. 26, writes that Senggesang's wife was the aunt (*gu* 姑) of Sonom, which would mean that Langkya was Sonom's great-uncle.

<sup>131</sup> *Pingding Liang Jinchuan fanglüe* 5, fol. 13b-14a (QL 35/4/xinwei).

his military action. Senggesang was supported by two of his relatives in Greater Jinchuan, Sonom 索諾木 and Langyka, who both wrote official reports to the imperial court to defend their aggressions. Ekshi meanwhile gave in and offered three castles with villages as a sacrifice to remove the evil spell, and whose income should serve as a compensation for the losses caused by the spells. The king of Ekshi asked the Qing government for support, when Senggesang did not only not call off his troops from Ekshi territory, but even occupied the castle of Ekshi. Ekshi's main argument was that the Jinchuans had disturbed the peace they had promised to all native kings not long ago. The emperor thereupon ordered Artai and the provincial military commander Dong Tianbi 董天弼 to bring the kings together for a settlement of the affair. Artai left Chengdu on QL 35/7/20 (Sep 9, 1770) via Wenchuan and Wasi and arrived in Dambadzung 達木巴宗 (Dawé 達圍), where he met with Senggesang. At the same time he ordered the kings of Dzagu, Mingdjeng, Bawang, Wasi and Muping to dispatch a total of 3,000 troops to keep ready for intervention at the borders to Lesser Jinchuan. On QL 35/8/19 (Oct 7, 1770) Senggesang was received by Artai and promised to hand over two villages he had occupied, and the relatives of the king of Ekshi, who he had taken as hostages. But the castle of Ekshi and the territory to the west were still in possession of Senggesang, and he went on to ask Artai to allow him to take revenge according to local customs. That implied that the occupied territory would be ceased to him. Artai, who lacked the patience for dealing in such complicated ways complied with Senggesang's demands, wanting to terminate the affair as soon as possible. But it was a mistake to allow Lesser Jinchuan to take revenge according to the customs of the 'barbarians'. Lesser Jinchuan could not be made to keep the peace and even turned to their relatives in Greater Jinchuan for help. In QL 35/4 (May – Jun 1771) Langkya in Greater Jinchuan died from a disease, allegedly likewise caused by an evil spell mantra cast by the king of Gebshidza. His heir was his fourth son Sonom, aged 19 *sui*,<sup>132</sup> and therefore assisted by his mother Atsang 阿倉 and his aunt Atsing 阿青. One contemporary source even accuses 'Atchim' rather than young Sonom of fomenting the quarrels between the native kings.<sup>133</sup> Similar statements can be found in Chinese sources that reflect the active part taken by Sonom's aunt.<sup>134</sup>

On QL 36/4/5 (May 18, 1771) a baron of Gebshidza named Langkya Wargya 郎卡瓦爾佳 asked for support by Greater Jinchuan because he wanted to stage an attack on the king of

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<sup>132</sup> The Chinese *sui* age is normally around one year more than the age according to Western counting because not the real time elapsed since birth is considered but the number of calendar years elapsed since birth.

<sup>133</sup> Amiot (1778), p. 401: 'cette femme cruelle qui a soufflé et attisé le feu de la rébellion' (this cruel woman who has fanned the flames and poked the fire of rebellion).

<sup>134</sup> *Pingding Liang Jinchuan fanglüe* 134, fol. 20b-21a (QL 41/4/xinhai); 135, fol. 27a-27b (QL 41/5/rengshen). Compare also *Jinchuan suoji* 3, p. 27.

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Gebshidza, Selangdudub (Lawang Sbudeng 拉旺斯布登, Sonom Dobdan 索諾木多布丹), who was at that time staying in the thermal baths of Mt. Dangli 黨裏.<sup>135</sup> The origin of this case was seen in the love affair between the king of Gebshidza and his cousin. This affair, of course, caused trouble with his actual wife, who was the daughter of Langkya, king of Greater Jinchuan. When his wife suddenly died, some of his barons—who had not been very content with their ‘cruel’ (*keke* 苛刻) king for quite a while anyway—decided to kill him, probably with the charge to have murdered his wife.<sup>136</sup> Other sources say that the wife of Selangdudub, who was a daughter of the king of Jinchuan, was abducted by Sonom after the murder.<sup>137</sup>

Upon the assassination of the king of Gebshidza in the spa village, Song Yuanjun was sent in QL 36/5 (Jun – Jul 1771) to order Greater Jinchuan to immediately withdraw its troops from the territory of Gebshidza. Sonom offered the excuse that the king of Gebshidza had planned to kill his nephew Dundju Wangdjar 敦珠汪札爾 and that nobody from Greater Jinchuan had anything to do with the death of the king of Gebshidza.<sup>138</sup> His murderer was, according to the official history of the war,<sup>139</sup> a baron called Gyamtsan 甲木參 who originally came from Jinchuan but was ‘enfeoffed’ with a territory in Gebshidza. In QL 36 Gyamtsan returned to Jinchuan and was ‘enfeoffed’ there as a Jinchuan baron. The territories of Gebshidza and Mingdjeng had been part of Jinchuan in earlier decades, and Langkya, former king of Jinchuan, wanted this territory back. Together with the territorial claims of Lesser Jinchuan, Sonom would thus greatly increase his dominion and power.<sup>140</sup>

The politics to make use of barbarians to fight against barbarians proved to have backfired—instead of weakening all native kings in their internecine fights, the Qing government had failed to prevent the creation of an alliance between two related families whose power was constantly growing.

Artai, Dong Tianbi, Song Yuanjun and assistant regional commander Zheng Guoqing 鄭國卿 thereupon inspected the border and ordered Sonom on QL 36/5/11 (Jun 23, 1771) to withdraw his troops, hand in his seal and hand over the murderers, Sonom refused to cooperate. Instead

<sup>135</sup> *Pingding Liang Jinchuan fanglüe* 6, 1b (QL 36/5/renxu). The existence of thermal sources is also documented by *Jinchuan suoji* 2, p. 13, and in many modern place names.

<sup>136</sup> *Pingding Liang Jinchuan fanglüe* 6, fol. 1b (QL 36/5/renxu).

<sup>137</sup> *Pingding Liang Jinchuan fanglüe: Jilüe* 紀略, fol. 3b. *Pingding Liang Jinchuan shulüe*, p. 44. *Jinchuan suoji* 3, p. 26. *Jinchuan dang* QL 40/II/00300 (protocol).

<sup>138</sup> *Pingding Liang Jinchuan fanglüe* 6, 5b-6a (QL 36/5/jiawu).

<sup>139</sup> *Pingding Liang Jinchuan fanglüe* 131, fol. 18b-19b (QL 41/1/jimao). The story itself is reported in 6, fol 1b-2a (QL 36/5/renxu). The *Jinchuan suoji* 3, p. 26, says that the murderer was Sonom’s grandfather (*zu* 祖) Leržirhi 勒爾日爾習。

<sup>140</sup> According to a Gebshidza baron, cited in *Jinchuan dang* QL 41/II/00147 (protocol).

he, like Senggesang before him, claimed that some territory of Gebshidza had to be ceded to him to compensate him for losses. Lesser Jinchuan at that time took advantage of the weakness of Mingdjeng, whose king had assembled all his troops at the border to Gebshidza, and occupied a village in the territory of Mingdjeng. In the night of QL 36/6/5 (Jul 16, 1771) more than 1,000 troops of Lesser Jinchuan occupied important strategic points to the east, including Mt. Banlan 斑攔 (Balangla 巴朗拉; modern Mt. Balang), and began to fortify war-towers and castles. The government troops garrisoned in Dawé were surrounded by the rebels of Lesser Jinchuan.

Just at that time the end of the Myanmar campaigns was declared, so that the emperor decided to intervene in the Jinchuan area with large forces to end the quarrels between the native kings and to demonstrate the overwhelming authority of the Qing state. On QL 36/7/24 (Sep 2, 1771) the decisive declaration of war was proclaimed. The emperor's plan was first to subdue Lesser Jinchuan in a short and powerful campaign, after which Greater Jinchuan would automatically give up. The campaign, he thought, would be quite short because the troops and commanders could make use of their rich experience from the first Jinchuan war.<sup>141</sup>

## 2.5. The Second Jinchuan War (1771 – 1776)

On QL 36/6/15 (Jul 26, 1771) provincial military commander Dong Tianbi hurried from Dajianlu to the western route and advanced on Lesser Jinchuan with 5,000 troops. On 7/2 (Aug 11, 1771) he reached the Wolong Pass. Artai came from the south. Lesser Jinchuan had fortified a castle at Mt. Banlan which blocked all access to Ekshi, Dawé and Meno. The Qing troops were not yet very well equipped, and it was especially the lack of firearms that made it impossible to advance further to the west. The emperor decided thereupon that it was time to replace the senile Artai as governor-general of Sichuan by the younger Defu 德福, governor-general of Yun-Gui (Yunnan and Guizhou; gov. QL 35/10 – 36/8 [Nov/Dec 1770 – Sep 1771]) who had won great merits in the western campaigns. Defu was ordered to Dajianlu to care for the logistics, and for further support the Banner garrison of Chengdu was dispatched under the command of Banner vice commander-in-chief (*fudutong* 副都統) Tiebao 鐵保. The experienced general Wenfu 溫福 was given orders to guide troops from Guizhou and Yunnan to the western camp. One person among his staff, Wang Chang, has written a kind of diary that ends with the first conquest of Lesser Jinchuan, the *Shujiao jiwén* 蜀徽紀聞. Wang

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<sup>141</sup> *Pingding Liang Jinchuan fanglüe* 6, fol. 14a-14b (QL 36/7/renxu).



Chang was also one person of the compilation team of the official history of the war, the *Pingding Liang Jinchuan fanglüe*. Wenfu was to be given supreme command of the Qing army and was shortly later even appointed temporary governor-general of Sichuan when it became evident that Defu had misrepresented facts in his reports during one of the Myanmar campaigns. On 7/12 (Aug 21, 1771), after taking Mt. Banlan and advancing along the Shanshen Valley 山神溝, Dong Tianbi succeeded in conquering the village of Dermi 得爾密; on 8/16 (Sep 24, 1771) assistant brigade commander Yuan Guolian 袁國璉 occupied Mt. Byebeng 別蚌山 (Biwangla 畢旺拉). Yet four days later the rebels reconquered the site and captured several imperial troops; on 8/22 (Sep 30, 1771) Dermi was lost to the rebels, too. Nevertheless, Song Yuanjun, who so far had been only a brigade commander (rank 3b), won his spurs when he commanded native auxiliary troops provided by the native king of Badi and the native female ruler of Bawang. He descended from Mt. Nading 納頂 and crossed the Gyachu River 甲楚河 (the lower reaches of the Lesser Jinchuan River) with boats covered by canvas to hide the soldiers and was able to recapture some places in Mingdjeng occupied by Lesser Jinchuan troops. The emperor rewarded him with the rank of a regional vice commander (rank 2b). Artai had moved to the military camp in Djanggu (Damba) west of Lesser Jinchuan, where he took over the organisation of supplies. On 9/7 (Oct 14, 1771) Dong Tianbi started an attack on Dawé. He set out from Muping and Yaokyi 堯磧 and was supported by another brigade advancing from Djanggu, in the west. The emperor also dispatched new generals to assist Artai and Wenfu: Guilin 桂林, Wudai 五岱, and the Banner vice commanders-in-chief Chang Baozhu 常保住 and Manggacha 莽噶察.

On 10/16 (Nov 22, 1771) more than 16,000 government troops were assembled, including Banner units, Green Standard units and native auxiliaries. The whole corps was split up to attack from three directions: Artai advanced on the southern route towards Yödza 約咱 with 7,000 troops; Fuchang 福昌 marched along the Shanxian Valley on the western route with 1,700 troops; Dong Tianbi attacked Dawé on the so-called middle route, leading 5,300 troops. Dong Tianbi was able to take Gyaginda 甲金達 and Niuchang 牛廠, but lost the places again on 11/7 (Dec 12, 1771). Four officers were taken prisoners and four pieces of cannon were lost to the enemy. Almost one hundred soldiers had lost their lives during the battle. Dong Tianbi was thereupon demoted and replaced by Agui. When Agui immediately reported

that Artai had lost control,<sup>142</sup> the emperor dismissed the latter and made Agui official governor-general in Sichuan on 11/20 (Dec 25, 1771). Artai had to stay in the camp to serve his sentence (*liu ying shu zui* 留營贖罪). In his incompetence he was even compared with Neqin who had been forced to commit suicide for his failure during the first Jinchuan war.<sup>143</sup> On the same day Song Yuanjun and assistant regional commander Xue Cong 薛琮 conquered Yödza, whereupon Song was promoted to the rank of a regional commander (rank 2a). During the night of 11/22 (Dec 27, 1771) the ground gained on Mt. Banlan was lost again, with heavy casualties among the officers. The Green Standard troops had lost their positions during the rebel attacks and could only be brought back through the extraordinary strictness of Wenfu who personally killed soldiers trying to flee.<sup>144</sup> On 12/14 (Jan 18, 1772) the encircled soldiers in Ekshi could finally be liberated by Dong Tianbi's troops. According to a report, during the past seven months the crew in the garrison had suffered enormously from shortage of food and had had to cook cow-hides after no more rice was left. On 12/17 (Jan 21, 1772) Guilin and Song Yuanjun conquered the castle of Lamasi 喇嘛寺 near Kyaya 卡丫 that protected a hill called Mt. Molung 墨壟, where the king of Lesser Jinchuan undertook his annual offerings. Agui ordered all trees on the site to be cut down and to burn down everything.<sup>145</sup> On 12/18 (Jan 22, 1772) Wenfu conquered Žilung and recovered one of the cannons Dong Tianbi had lost. On 12/28 (Feb 1, 1772) Song Yuanjun began his attack on Kyaya from four sides and was able to conquer more than 200 fortified houses.

The conquest of Ži'r 日耳 and Dzili 資哩 proved to be hard work: Over the years the Jinchuan rebels had used the experience gained in the first Jinchuan war and reinforced their war-towers from inside with wooden beams, which made the war-towers much more resistant to the impact of cannonballs. Furthermore, the valley west of Ekshi was so narrow (and therefore often referred to as 'goat's bowels and birds paths', *yangchang niaodao* 羊腸鳥道)<sup>146</sup> that the large cannons (weighing 3,000 – 4,000 *jin* each [1,800 – 2,400 kilos]) could not be transported in one piece but had to be dismantled and the barrel to be recast on site. It took the Qing army four days and nights of permanent barrage with several hundred (shoots by) middle-weight pieces (700 – 800 *jin* [420 – 480 kilos]) to destroy the war-towers of Ži'r. During that cannonade Lesser Jinchuan sent for help to Greater Jinchuan. When the

<sup>142</sup> *Pingding Liang Jinchuan fanglüe* 11, fol. 10a (QL 36/11/xinyou).

<sup>143</sup> In the end Artai was also ordered to commit suicide. *Shengwuji* 7, fol. 20b. *Qingguoshi: Dachen zhengbian* 147, p. 925. For the comparison with Neqin, see *Jinchuan dang* QL 36/IV/00141 (QL 36/10/9), 00147 (QL 36/10/14), 00167 (QL 36/11/1).

<sup>144</sup> *Pingding Liang Jinchuan fanglüe* 12, fol. 4a-4b (QL 36/12/gengwu).

<sup>145</sup> *Pingding Liang Jinchuan fanglüe* 15, fol. 7b-8a (QL 37/1/renyin).

<sup>146</sup> *Pingding Liang Jinchuan fanglüe* 16, fol. 13a (QL 37/1/xinhai).

Qing troops had conquered Ekshi there would only be Meno left, and Meno, the messengers argued, was the heart of Lesser Jinchuan. But Sonom refused to help and said that Lesser Jinchuan had to cope with its own problems. Four times Senggesang had to send for relief troops from Sonom, before Greater Jinchuan finally dispatched 700 soldiers, but only after Senggesang had promised that he would bequeath his territory to the king of Greater Jinchuan in case that Lesser Jinchuan would be liberated from the Qing occupants. At the same time he threatened Sonom that if no aid came he would leave his territory to the Qing government and flee to Greater Jinchuan—with the consequence that the Qing army would attack Greater Jinchuan. Thus by supporting Lesser Jinchuan Greater Jinchuan would defend its own borders.<sup>147</sup> But instead of throwing his soldiers into battle, Sonom first chose to arbitrate between Ekshi and Lesser Jinchuan in order to arrange a peace that would result in the withdrawal of the Qing troops. But Wenfu refused any arbitration, aided and abetted in this stance by defectors from Greater Jinchuan who stated that Sonom would never halt his aggression and would step by step ruthlessly push forward his borders until he reached the border of China proper. The emperor backed his general and decided that it was time for a definite end to all the quarrels in the border region: Jinchuan and Lesser Jinchuan were to be destroyed forever (*yong chu bian huan* 永除邊患 ‘forever extirpate the border problem’).<sup>148</sup>

On QL 37/1/8 (Feb 11, 1772) Guilin attacked Gargin 噶爾金 near Gyam 甲木, and on the same day, Wenfu lead an army of more than 10,000 to occupy the hills around Ži'r, but during the night the rebels of Lesser Jinchuan repelled the invaders in the cover of storm and darkness, captured three cannons and killed or wounded many soldiers and officers. Their ample provisions permitted them to keep up their stubborn resistance. Wenfu commanded sustained fire against the castle and war-towers, but the rebels were well-prepared. In order to avoid the cannon balls they had dug holes in the basement of the towers or around the towers and reinforced them with wooden beams and stonework. These ‘bunkers’ permitted them to withstand the heavy cannonade. Wenfu had therefore cast heavier pieces weighing 3,000 *jin* and had them fired day and night, leaving the rebels no chance to repair their walls and fortifications. On 2/25 (Mar 28, 1772) the soldiers were prepared for an assault on the castle, but the rebels had dug a moat that could not easily be crossed, and many of the assailants were killed. Furthermore, the rebels defended their stronghold from a tunnel system which gave them good protection, and the cannons and howitzers had not the slightest chance to destroy these refuges. It took the Qing troops another two weeks to surround Ži'r and cut off all access

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<sup>147</sup> *Pingding Liang Jinchuan fanglüe* 17, fol. 4b-5b (QL 37/1/bingchen).

<sup>148</sup> *Pingding Liang Jinchuan fanglüe* 26, fol. 15b (QL 37/4/gengchen).

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to the castle. A long line of crossbow positions (*nuqia* 弩卡) was set up, and from the south 4,000-*jin* pieces fired from a battery platform. Only after all routes of access to Ži'r had been cut off, the Qing troops were able to occupy the castle on 3/11 (Apr 13, 1772) with the result that the defenders of Akamya 阿喀木雅 took to their heels. The conquest of Ži'r had cost Wenfu more than two months.

Meanwhile Guilin had on 3/5 (Apr 7, 1772) begun to attack Mubala 木巴拉 and Bodzu 博租, together with auxiliary troops of Gebshidza. He divided his force into four battalions in order to attack Ayang 阿仰; one day later Da'u 達烏 was taken, a place covered with more than 600 war-towers. The attack cost the lives of more than 500 rebels and many Qing soldiers. Until then, more than 300 *li* of territory within Gebshidza had been conquered and more than 2,000 households restored under the command of the king of Gebshidza. On 3/22 (Apr 24, 1772) Song Yuanjun led his men to crush open the doors of Dandung castle with axes.

The next targets were the castles of Senggedzung 僧格宗 and Wenggurlung 翁古爾壠 opposite of Da'u across the Lesser Jinchuan River and protected from the rear by a high mountain flank. Many war-towers had been erected from strong wooden beams, cut out of the nearby forest, and stonework filled the wooden frames. They were so numerous that each of them was protected by a network of surrounding fortifications. Pointed wooden stakes were stuck into the bottom of the moats with the aim to severely wound any Qing soldier who fell into the moat, which made an assault even more difficult. The Qing rearguard suffered a heavy defeat during an attack by more than 1,000 troops from Lesser Jinchuan which had cut off their line of retreat. When a battalion under regional commander Wang Wanbang 王萬邦, expectant brigade commander Ma Yingzhao 馬應詔 and brigade vice commander Guang Zhu 廣著 tried to battle their way through by an attack from behind the enemy's lines at the Molung Valley, Xue Cong and many troops were killed by the superior enemy. The plan to attack the rebel troops through a pincer movement had failed because Xue Zong's troops, having to cross the snow-covered mountains of Molung before they could attack the enemy from the rear, were not sufficiently supported by an adequate attack from the front. Guilin's troops, commanded by Mingliang 明亮, Tiebao, and Wang Tenglong 汪騰龍, did not advance as far as possible and only fired their muskets from beyond the river before withdrawing. When Xue Zong's troops ran out of provisions, Guilin refused to support them and did not even send troops in order to relieve the hard-pressed Xue. When he finally did send support it was too late: Xue's half-starved troops had either submitted to the enemy or

been killed or even drowned, and only a few hundred regulars and native auxiliaries could survive the massacre that cost the lives of 3,000 Qing troops. Guilin was discharged.

After this disaster the emperor charged Fulong'an 福隆安, Minister of Works and husband of an imperial noblewoman (Heshuo *efu* 和碩額駙) with an investigation of the affair.<sup>149</sup> Agui also rushed southward to take the command of the military in that part of the front. For the next two months the Qing troops were totally paralysed by the disastrous defeat. Guilin had withdrawn to Mt. Gyarmu 甲爾木 where he, instead of devising new strategies, kept cursing and humiliating officers and troops. He stopped dwelling in his tents and had a house built for himself instead. Rumour has it that he day by day entertained Tiebao and Wang Tenglong with the best wine.<sup>150</sup>

Finally Fukang'an suggested taking Senggedzung from the west and not from the east. But the results were disappointing: The troops had to be protected by wooden forts every few miles, whose construction meant hard work with the result that only one fifth of the troops were actually able to fight, while the remainder had to work for the protection of the line of retreat. On 7/10 (Aug 8, 1772) Haguoxing 哈國興, provincial military commander of Yunnan, was dispatched to the western route to support Wenfu and Hailancha 海蘭察 and to devise new strategies. After some negotiations with the leader of Lesser Jinchuan, Senggesang, the rebels promised to withdraw their troops from all castles that had belonged to Ekshi. On 8/26 (Sep 22, 1772) Senggesang fulfilled his promise, burnt down the occupied castles and withdrew. Haguoxing's plan was to deceive Senggesang and to capture him as soon as the way to Meno was free.

On 8/12 (Sep 8, 1772) Mingliang tried to conquer the castle on Mt. Gyarmu (Gyam), but a sudden onset of winter on top of the mountains forced the Qing troops to withdraw. Song Yuanjun who had a long experience with the Jinchuan rebels and therefore was of great importance for the commanding generals, died at the beginning of QL 37/9 (Sep – Oct 1772) from a disease. On 9/28 (Oct 24, 1772) brigade commander Ninglu 寧祿, who had been captured at Molung, was liberated by Sonom and handed over a message from the king of Greater Jinchuan. Sonom offered to surrender to the imperial troops. Yet Wenfu refused to accept the surrender and took advantage of the new situation that Ekshi was free and the way

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<sup>149</sup> Fulong'an—being the son of Fuheng, the victor of the first Jinchuan war—had been Minister of War before he was appointed Minister of Works. *Qingshi liezhuan* 25, pp. 1884-1885.

<sup>150</sup> *Pingding Liang Jinchuan fanglüe* 32, fol. 7a (QL 37/6/jiashen). *Qingshi liezhuan* 25, p. 1892. *Qingshigao* 326, p. 10879. The investigation by Fulong'an brought to light that the accusations against Guilin had been fabricated by Song Yuanjun. Mingliang, Tiebao and Wang Tenglong, having been involved in an affair of overspending, were discharged. Guilin was sent to serve his sentence in the remote garrison of Ili in the far west.

to Meno, including the most difficult part of the mountains, was open before him. He ordered Hailancha to attack Ludingdzung 路頂宗 and Hamser 哈木色爾, where he occupied fifty war-towers, several hundred fortified houses, and captured several cannons. Haguoxing advanced further north and took Do'u 兜烏 and Menggu 猛固. Agui was meanwhile able to conquer a considerable number of castles in the west, not far from Senggedzung, the heavily fortified castle on a steep hill, whose defenders were independent from external water sources. On 11/19 (Dec 13, 1772) Agui commanded assistant brigade commander Li Zhishan 李植善 to cross the river with leather boats and to attack the castle from the front, while brigade vice commander Liu Feng 劉俸 attacked from the rear. This time the Qing were successful and the defenders of the castle surrendered. On 12/5 (Dec 28, 1772) the castle of Shelung 奢壘 near Meno fell, a few days later Chim 尺木 and the lamasery of Medu 美獨. The imperial troops attacked Meno and the surrounding castles from three sides with troops led by Mingliang, Sanbao 三保, and Dehebu 德赫布, and on 12/6 (Dec 29, 1772) conquered the heart of Lesser Jinchuan. The defenders of Meno had fled during the night. The whole complex of the castle of Meno stretched out over an area of 2 to 3 *li* in length, the main tower reached up to a height of 18 stories. Within the castle, around 70 families had served the king of which about 30 were liable for military service.<sup>151</sup>

Wenfu lead his troops via four routes to undertake a night attack on Minggodzung 明郭宗 (also written Migodzung 密郭宗) which was not protected, and burned down the sutra hall (*nianjinglou* 念經樓). He reached Meno just when the castle surrendered. Senggesang had already escaped by boat and hid in a place called 'Octogonal Tower' (Bajiaodiao 八角礮) upstream the Lesser Jinchuan River. On 12/8 (Dec 31, 1772) Wenfu began his attack on Bajiaodiao from two sides, but again Senggesang had fled with his wife and children to Blanggodzung 布郎郭宗. Two days later Wenfu's troops arrived at the lamasery of Daido 岱多, a well-protected castle where 200 troops of Greater Jinchuan had barricaded themselves. When the Qing troops had totally surrounded the castle-monastery, a lama came out, holding a Buddha figure, and beseeched Wenfu to allow the lamas to leave the castle. The monks within the monastery thereupon cooperated with the Qing troops, and thus Daido soon fell into the hands of the Qing army. Wenfu rushed forwards to Blanggodzung. The castle was surrounded by hundreds of fortified houses but had only three large war-towers of 10 stories each, and there was no surrounding wall. As soon as Wenfu's troops began to surround the

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<sup>151</sup> *Jinchuan dang* QL 37/IV/00464 (protocol), 00474 (protocol). For information on the service of such families, see *Jinchuan suoji* 3, p. 23. The people delivering *corvée* for their lords were called *ula* 烏拉.

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castle, the defenders set fire to the rooms and fled. Senggesang had already removed all valuables, his wife and children had been escorted to Greater Jinchuan via the Mewo Valley 美臥溝, and Senggesang himself planned to look for protection in Dimda where he wanted to join his father Dzewang. Yet Dzewang refused to receive his son and did not open the castle's gates so that Senggesang had no choice but to seek refuge in Le'uwé with Sonom—not without killing the door-keepers (*hunren* 閩人).<sup>152</sup> Dimda castle had three large war-towers, one of which even had 15 stories. On 12/11 (Jan 3, 1773) the Qing troops crossed the Lesser Jinchuan river and advanced from Blanggodzung to surround Dimda. Dzewang surrendered without fighting and was immediately sent to Beijing.

The booty from Blanggodzung, the castle of Dimda, was very rich and included many objects of bronze, coral, glass and enamel, many different kinds of stones, pearls, ivory and crystal vessels and adornment, clothes, medicine, and some antique cannons with wooden barrels (*mupao* 木炮). The most interesting objects were again the seals: one for the native administrator (*zhangguansi* 長官司) of Yanzhou 崑州 (allegedly from the year Hongwu 11 [1378]), one for the pacification commissioner (*anfusi* 安撫司) of Yangtang 楊塘 (issued in the year Yongle 4 [1406]), and one for the pacification commissioner of Byes 別思 (dating Xuande 10 [1435]). None of the three locations were known to the conquerors, and only after some investigations could it be found out that these were the names of territories of former native kings once conquered by (Lesser) Jinchuan. Some eight other bronze or iron seals discovered there engraved with illegible characters were thought to be seals of some barons under the suzerainty of (Lesser) Jinchuan. The 'correct' or official seal conferred to the Dhyāna Master in the year KX 5 (1666) was also found in Dimda.<sup>153</sup>

On 12/17 (Jan 9, 1773) Agui lead his troops back from Blanggodzung to Meno, where they were to stay in garrison in order to rest. Lesser Jinchuan was now pacified. The title of General Pacifying the Borderlands (*dingbian jiangjun* 定邊將軍) was bestowed on Wenfu, Agui and Fengsheng'e 豐昇額 were promoted to the rank of *fujiangjun*. A messenger was sent to Sonom with the request to hand over Senggesang, which Sonom refused. The ruler of Lesser Jinchuan seemed to be a hostage in the hands of Sonom rather than a guest, and after the second occupation of his territory it became clear that he would be of no further value for Sonom.

The new plan to conquer Greater Jinchuan was the following: Gala'i should be attacked from two sides; one division under the command of Wenfu and Grand Minister Commander

<sup>152</sup> *Pingding Liang Jinchuan shulüe*, p. 45. *Pingding Liang Jinchuan fanglüe* 46, fol. 5a-6a (QL 37/12/xinsi).

<sup>153</sup> *Pingding Liang Jinchuan fanglüe* 46, fol. 16b-17a (QL 37/12/dinghai).

Shuchang 舒常 started from Mt. Kungka 控喀 (also written 空卡) and was to occupy Kyasa 卡撒; another division commanded by Agui and Hailancha as Grand Minister Commander was to advance on Gala'i from Nawé 納圍, Nadjam 納扎木 and Danggarla 當噶爾拉. Le'uwé was to be attacked by the troops under Fengsheng'e and Haguoxing from Chosgyab and Epo 俄坡.

In the night of QL 38/1/1 (Jan 23, 1773) Wenfu ordered Purpu 普爾普, Ushhada 烏什哈達, and Dersenbao 德爾森保 to attack the war-tower of the Gunggarla Canyon 功噶爾拉丫口 (*yakou*, also written 啞口). In deep snow and along steep mountain flanks the Qing troops attacked several times, but each time had to withdraw. Because it proved so difficult to conquer Gonggarla, Wenfu had the idea to go around the the fortress and attack it from the rear. Therefore the soldiers had virtually to bore their way through a glacier on Mt. Gumbur 固木卜爾. It was Wenfu's plan to bypass Gonggarla and instead to advance on Mugom 木果木, just within the Hiling Range. There the army could be split up into two battalions one of which could advance on Gala'i and the other on Le'uwé. After Mugom had been taken, Wenfu decided to move his headquarters to a large camp to be set up in Mugom. Minor camps were established in Tsulagyok 簇拉角克 and Dabandjao 大板昭, north of Dimda. Dong Tianbi who had displayed great fighting spirit was reinstated as provincial military commander.

Mt. Hiling was virtually covered with war-towers, the ten largest of which were reinforced by stone fortifications in the approaches. Wenfu divided his troops into several battalions for attack, but because of deep snow and the steep slopes of the hills it was impossible to gain any territory. The troops suffered not only from injuries but also from lack of food, and therefore the only chance to conquer any tower was to resort to a preparation for assault by barrage cannonade.

On the route of Agui the situation was no better: as the soldiers had to fight for each foot of ground, they were soon exhausted. The ridge of Mt. Danggarla was about 20 *li* long, and apart from the fourteen large war-towers there were many smaller stone and wooden fortifications connecting them and deep moats making a normal assault (beginning on 1/24, i.e. Feb 25, 1773) almost impossible. It was especially the moats that proved extremely dangerous because wooden spikes were hidden under mud and snow and injured many soldiers trying to cross them. Once the moat negotiated the Qing soldiers had to fight against an enemy far above their heads for whom they were like a sitting duck. Agui had also large cannons cast to bombard the war-towers with, but often snow and fog made it impossible to take proper aim.



On 2/26 (Mar 18, 1773), when the weather was better, Agui ordered four battalions to attack one of the war-towers. The soldiers were able to pass the moat, break down the wooden fences and the stone fortifications. Arrived at the bottom of the war-tower, one group started to batter against the wall (presumably with a kind of battering ram) while another protected them from the enemy who flung stones down upon them. After opening a breach into the wall the attackers made use of hand grenades (*huodan* 火彈) which in a way proved useless because they only were effective against those on the ground-floor, but not those in the higher stories.<sup>154</sup> Therefore the soldiers climbed the tower and tried to throw their hand grenades from the top of the building, but the roof was made of wooden beams covered with stones and howitzer, which again made the grenades useless against the enemies within the tower. Only when the attackers destroyed its base, they were finally able to bring it down. Another tower, which could only be conquered on 3/22 (Apr 13, 1773), had been protected by tunnels (*dijiao* 地窖) which made it very easy for the rebels to aim at the Qing troops without the slightest risk to be captured or shot at. All other war-towers stood on high ground and were surrounded by deep trenches. Even stones and earth, excavated while digging the moats, were used to pile up walls provided with embrasures or spiked with wooden stakes to create each kind of obstacle (*abatisses*).

Fengsheng'e began to attack the large war-tower on Mt. Dartu 達爾圖, which was also well-protected by a wide and deep moat on 1/10 (Feb 1, 1773). For this he had many trees cut down to erect a wooden fortress that was likewise protected by a moat. On 3/2 (Mar 24, 1773) he led his troops into battle against the war-towers of Žipang 日旁, but there the moat was so deep that not even a 'centipede' ladder (*wugongti* 蜈蚣梯) could reach the ground.<sup>155</sup> Therefore he ordered to set up fascines with beams (*chaikun* 柴捆) along the moat to form some kind of parapet. Thus protected the imperial troops threw hand grenades and made use of 'flame-throwers' (*pentong* 噴筒) against the rebels hidden in the moat.<sup>156</sup>

Of all three lines that were gradually advancing, Wenfu's was the nearest to the rebels' stronghold at Gala'i. But without taking the war-towers on top of Mt. Hiling it would not be possible to advance further. Fengsheng'e, whose troops advanced from Chosgyab, would have

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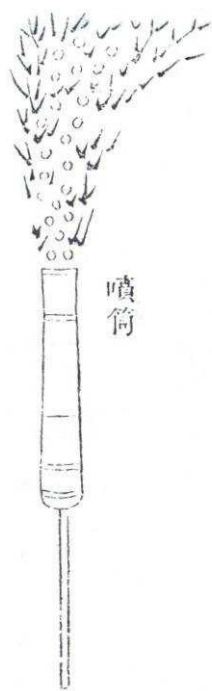
<sup>154</sup> According to *Jinchuan suoji* 2, p. 17, the hand grenades were also called 'water-melon bombs' (*xiguapao* 西瓜礮). A description of hand grenades can also be found in *Pingding Liang Jinchuan fanglüe* 98, fol. 9a (QL 39/6/guimao). See also some short information in Chapter 4.4.

<sup>155</sup> 'Centipede ladders' were not rope ladders, as might be suggested here, but were made of bamboo.

<sup>156</sup> A *pentong* consisted of a short length of bamboo of about two internodes long and was filled with gunpowder to which all sorts of small objects were added. Attached to a pole it spat, once ignited, its flames up to a distance of thirty or forty yards. A detailed description of a *pentong* can be found in the late Ming book on firearms technology called *Huogong qiyeao*, which was compiled according to instructions by the German Jesuit Johann Adam Schall von Bell (1592-1666).

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to take the towers of Ihi 宜喜 and Žipang before it was possible to occupy the territory along the Jinchuan River with its rich fields and dense population from which the rebels took their economic potency. The conquest of the river valley would therefore be decisive, although the castle of Le'uwé was on the other side of the river.



□ 2.7 Figure: A late Ming period pentong flame thrower firing canister. Source: *Huogong qiexiao*, plate 20.

The plans of Sonom and Senggesang meanwhile were to stir up rebellion in Lesser Jinchuan. Apparently the troops of Lesser Jinchuan were to return to their homes, but keep prepared for an uprising against the Qing troops that had already deeply advanced into the territory of Greater Jinchuan. During the night, the rebels harassed the enemy again and again, stole weapons, gunpowder and other supplies and this way disconcerted the Qing intruders.<sup>157</sup>

Dong Tianbi's troops in Dabandjao, farthest away from Gala'i, were the first target of the rebels. During the night of QL 38/6/1 (Jul 20, 1773) rebels invaded the camp near Dimda and set fire to the tents. Dong Tianbi commanded his son to flee with the seals and to ask for support, before setting out on a fast march to the castle of Dimda, during which rebels

surprised him at Caiyuan 菜園 and killed him. On the

next day, Kyalun 卡倫 near Dabandjao was occupied and the granary of the nearby lamasery taken by the rebels. One day later, Mupo 木波, Bogargyok 帛噶爾角克, Blanggodzung and Kedo 科多 fell into the hands of the rebels, and Wenfu's line of retreat was now cut off. On 6/8 (Jul 27, 1773) Hailancha planned to lead his men back to protect Wenfu in Mugom, but when the Green Standard troops saw that all the rebels were rising up against the Qing troops, they dispersed like hay in the wind. The camp foundry in Mugom which had been constructed to cast cannons (see Chapter 4.4) fell into the hands of the rebels. Wenfu thereupon ordered to close all four gates of the camp, and not even the 3,000 grain porters who normally lived outside the military camp, were allowed to enter the gates. They all fled in panic, and many of them sought protection in the logistics station of Dengchun 登春, which was under Liu Bingtian's 劉秉恬 command. When two days later all the wooden fortifications around Mugom had been occupied by more than 1,000 rebels, Wenfu commanded a sortie which

<sup>157</sup> *Jinchuan dang* QL 39/II/00400 (QL 39/3/28); 40/1/00226 (QL 40/3/8); QL 41/II/00067 (protocol).

ended in a disaster—not only because the Green Standard troops refused to fight, but because Wenfu was killed in its course. His son Yongbao 永保 was also wounded and lost his way in the mountains, while the rebels conquered the camp, looting and burning down everything. When Hailancha saw that all was lost, he ordered Grand Minister Commandant of the Forces (*lingdui dachen* 領隊大臣) Fuxing 福興 to led the surviving troops back along Dadjakgyao Range 達扎克角 to find their way, and withdrew with his own troops. His battalion reached the camp at Gunggarla on 6/10 (Jul 29, 1773) and Meno on 6/12 (Jul 31, 1773), where most of the dispersed troops had tried to flee to. A part of his troops under Banner vice commander-in-chief Arsune 阿爾素訥 and the regional commanders Zhang Dajing 張大經 and Fushen 富伸 was sent to Dengchun to relieve Liu Bingtian who was surrounded by rebel troops as well. Meno was also shaken by rebellion, and the Qing soldiers tried to flee to Minggodzung. Therefore Hailancha and Ushhada had to display the greatest spirit of resistance to prevent the Green Standard troops from dispersing again. For a short time they were able to stabilize the situation in the heart of Lesser Jinchuan.

Of the 20,000 troops in the main camp of Mugom 4,000 had been captured by the rebels, and only somewhat more than 10,000 had been led back by Hailancha. A very great number of soldiers had either been killed or were reported missing. The breaking down of an iron chain bridge in the course of the flight was said to have caused the death of several hundred people. More than 17,000 *dan* of grain fell into the hands of the rebels, as well as 50,000 *liang* of silver, 70,000 *jin* of gunpowder, 5 large cannons and 7 smaller pieces.<sup>158</sup> A company of 500 men managed to survive in the mountains in the north of Lesser Jinchuan until 10/4 (Nov 17, 1773), when they were rescued.<sup>159</sup>

Agui had been able to protect the way from Danggarla to Senggedzung by occupying Semdze 色木則 in time and by impeding any traffic across the Lesser Jinchuan River, all of which had made further preparations for the uprising in that region impossible. Agui had also ordered the native kings of Mingdjeng, Bawang and Bulakdi to dispatch troops by recruiting all males from the villages in Lesser Jinchuan still in the hands of the imperial army. He also had given order to confiscate their weapons in order to prevent any recruitment by the rebels of Jinchuan. Anyone disobeying that order was instantly executed or drowned in the river. The others were sent to Djanggu and Dajianlu as prisoners of war or handed over to the collaborating kings as house slaves. On 6/21 (Aug 9, 1733) Meno and Minggodzung were

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<sup>158</sup> *Pingding Liang Jinchuan fanglüe* 76, fol. 4b (QL 38/10/wuzi), 10a-10b (QL 38/10/jichou).

<sup>159</sup> *Jinchuan junxu li'an* 1, 64a-64b.

lost, and although Hailancha decided to break through to the territory of Ekshi, it was not possible to reconquer the territory lost to the enemy.

Sonom sent an envoy to Agui with the request that the Qing armies should withdraw from the territory of Greater Jinchuan. He promised not to harass the retreating troops. Under the circumstances the imperial army had no choice but to obey and withdrew all troops on the southern and western routes as well. Thus Lesser Jinchuan and Ekshi were back in the hands of the rebels. Since Fengsheng'e's position in the northwest was also not easy to defend it was given up. Sonom even sent envoys to Chosgyab, who menaced the king of that territory declaring that Jinchuan would take revenge on him if he were to continue collaboration with the imperial troops.

From the ensuing investigations it became clear that the uprising had been planned for months and that it was by no means a spontaneous rebellion. A baron from Lesser Jinchuan, it was said, had asked his uncle Chitu'andur 七圖安都爾 in Greater Jinchuan for help, who thereupon sent some troops to occupy Blanggodzung and the area of the Tsengto Valley. Chitu'andur's nephew had fought as a native auxiliary officer with the Qing troops for some time and had witnessed the moral among Lesser Jinchuan soldiers who had been recruited for the imperial army. All of them were of the opinion that it was better for them to fight for Greater Jinchuan instead of the Qing, because the latter option would not profit them in the future. Just at that time Sonom sent envoys to secretly drum up followers among the native auxiliaries in the Qing camps, and to reconnoitre the situation in Mugom and Djangu. The whole attack had been carefully prepared, and on the same day rebel troops invaded all military camps in the region. The success of their invasion cannot only be explained by the total surprise of the affair, it was also due to the fact that some Jinchuan warriors disguised as lamas had taken weapons into the Qing camps for the more than 1,500 native auxiliaries that had pretended to fight for the imperial army.<sup>160</sup> Other natives used as auxiliary troops threw the Qing camps to the rebels so that they could easily be invaded. The unchecked presence of local denizens in the military camps was therefore a crucial factor for the perfect success of the orchestrated uprising against the invaders, and thus Dong Tianbi, the first victim of the rebellion, had no chance to hold his camp against the enemy. All this goes to show that the commanders had not learned their lesson from the espionage affair during the first Jinchuan war.

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<sup>160</sup> *Jinchuan dang* 38/III/00207 (QL 38/7/22).

The emperor saw the main reason for the disaster in Liu Bingtian and Dong Tianbi not having protected the access to Mugom along the Mewo Valley,<sup>161</sup> but also in Wenfu's not having immediately eliminated all suspect elements in northern and central Lesser Jinchuan after the conquest of Meno, as Agui had done in the southwest. Instead of securing the occupied territory he had rushed forward to the next battlefield.<sup>162</sup> Another reason for the disaster was seen in the lacking fighting spirit of the Green Standard troops that had often virtually fled in face of the enemy. Wenfu, he decided, should have brought into action more experienced and better equipped Banner troops.<sup>163</sup> The fighting spirit of the rebels was, on the contrary, as excellent as before, particularly as they were by far outnumbered by the invaders. Supported by Greater Jinchuan the rebels in Lesser Jinchuan would immediately return to the weapons if their village heads called them.

Investigators like Zhou Huang 周煌, Bayar 巴雅爾 and Fuxing 富興 reported later that Wenfu had totally misjudged the situation in Mugom after the conquest of Meno and Dimda, which had been relatively easy compared to that of other castles. Having drunk all day together with Dong Tianbi, as it was said, he had not taken necessary preparations for the military camp set up in the heart of the enemy's homelands and far away from any fresh water supply. He was also blamed for rough treatment of officers and soldiers wounded during an attack and not listening to the suggestions of his subordinate officers.<sup>164</sup> It cannot be proved if this criticism was justified or not because most of those charges might just have been stereotypes; but there is the possibility that persons who had been killed in the course of events were given the blame for the disaster, similarly to the first Jinchuan war when Neqin and Zhang Guangsi had been blamed for the disastrous course of the campaign. Later comments e. g. the essay collection *Xiaoting zalu* 嘯亭雜錄 ('Miscellaneous records of the Whistling Pavilion'), present Wenfu even as the sole person responsible for the disaster<sup>165</sup> and maintained that other officers like Dong Tianbi, Niu Tianbi 牛天畀 or Zhang Dajing had died because of Wenfu's incompetence as a leader. Wenfu was even compared to Neqin who had failed during the first Jinchuan campaign because of irrational tactics.<sup>166</sup> The accusation may partly be justified: When the camp of Mugom was surrounded, Wenfu had the gates closed and did not allow the porters and labourers to come in (the term *kemin* 客民—'guest people', i.e. additional, short-time labourers hired in times of peak labour need, also says that

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<sup>161</sup> *Pingding Liang Jinchuan fanglüe* 79, fol. 14b-15a (QL 38/11/jiwei).

<sup>162</sup> *Qingshilu: Gaozong shilu* 940, fol. 10a-12a (QL 38/8/xinmao).

<sup>163</sup> *Pingding Liang Jinchuan fanglüe* 66, fol. 14a-14b (QL 38/7/renyin).

<sup>164</sup> *Pingding Liang Jinchuan fanglüe* 71, fol. 1a-2b (QL 38/8/dingmao).

<sup>165</sup> *Xiaoting zalu* 7, p. 217.

<sup>166</sup> *Jinchuan dang* QL 38/III/00244 (QL 38/7/25).

they were not considered as regular government-hired labourers and therefore not worth protecting in case of imminent danger). The Qing Green Standard troops were probably influenced by the horrors to which the defenceless people were exposed. Wenfu's harsh treatment of his subordinates—a common *topos* when blaming fallen generals—and the underestimation of the Jinchuan rebels' fighting spirit might also have contributed to the results of lacking preparation for a case of uprising. But to blame him alone for the disaster is surely not correct.<sup>167</sup>

The whole Jinchuan army had to be reorganised and reinforced after the Mugom disaster. Agui ordered 12,000 Green Standard troops to be dispatched from among all provincial garrisons, as well as 10,000 elite Banner troops.<sup>168</sup> The use of elite troops from the Capital had been considered before, but Wenfu—again the scapegoat—had at that time declined the emperor's suggestion because such elite troops would be too expensive. The situation had changed now substantially. It was the Green Standard troops who had been totally unreliable and therefore had contributed to the complete disintegration of the front line. At first sight of the attacking enemy most Green Standard troops had run away instead of standing their ground. Therefore the emperor now decided to dispatch 9,500 elite Banner troops from the Scouting Brigade (*jianruiying* 健銳營) and the Firearms Brigade (*huoqiying* 火器營) in the Capital, as well as Banner troops from Jilin, Heilongjiang and the garrisons in Chengdu, Jingzhou 荊州 and Xi'an, also some Öläd Mongol and Solun troops. To reinforce the whole army, 11,000 fresh Green Standard troops were dispatched from Guizhou, Yunnan, Hubei, Hunan and Shaanxi, so that now there were 38,000 Green Standard troops in Jinchuan. Together with the Banner troops and the native auxiliaries, 74,900 imperial troops stood in Jinchuan at the end of summer in QL 38 (1773).<sup>169</sup>

The first task set them was the recapture of Lesser Jinchuan. Sebteṅgbarzhur 色布騰巴爾珠爾, as the husband of an imperial noblewoman (Gulun *efu* 固倫額駙), was appointed Grand Minister Commander and dispatched to Jinchuan, together with several dozens of high Banner officers from the Capital. The army was split up into three divisions: The southern division, 20,000 strong and commanded by vice general (*fujiangjun* 副將軍) Mingliang and Grand Minister Commander Fude 富德, was to attack Meno from Marli

<sup>167</sup> Originally Wenfu was posthumously granted the rank of an earl (*bo* 伯), *Jinchuan dang* QL 38/III/00065 (QL 38/7/10), but when it came to light that the catastrophic defeat had been mainly his fault, this was nullified and sum of 2,000 *liang* set aside for his funeral was canceled. His heirs were only given the regular compensation for officers killed in action. If Wenfu had survived, the emperor said, he should have been handed over to the Ministry of Justice for trial. *Qingshi liezhuan* 24, p. 1788.

<sup>168</sup> For the exact figures of the newly dispatched Banner troops and Green Standard troops in the edict see *Pingding Liang Jinchuan fanglüe* 69, fol. 17a-18a (QL 38/7/jiashen). Compare also Chapter 3.1.

<sup>169</sup> *Pingding Liang Jinchuan fanglüe* 79, fol. 7a-7b (QL 38/11/dingsi).

瑪爾里. The 25,000 men of the western division under the command of general Agui and Grand Minister Commander Sebtengbarzhur were to conquer Ekshi, Dimda, and Blanggodzung. The northern division with 15,000 troops under the command of vice general Fengsheng'e and Grand Minister Commander Hailancha were to advance from Chosgyab. The men not attributed to one of those divisions were to protect the logistics stations and the camps in Gebshidza and Damba. Supreme commander beside Agui was governor-general Wenshou 文綏. Wenshou had a large number of heavy 'mountain-braking cannons' (*pishanpao* 劈山砲, see Chapter 4.4.1.) cast, 55 of which were to be sent to the western division. The further progress of the war was so important to the emperor that he ordered a lama priest with the title of ICang-skya Khutukhtu 章嘉胡土克圖 (his personal name was Rolpay Dorje, 1717 – 1786)<sup>170</sup> to select auspicious days for the renewed attack.<sup>171</sup> On QL 38/10/27 (Dec 10, 1773) Agui comanded Hailancha to advance from Dawé. Two days later Hailancha divided his corps into three lines that advanced to the west. The conquest of those many castles and forts had formerly taken the Qing troops five to six months, whereas it was now only a matter of a few days. On 11/1 (Dec 14, 1773) Hailancha took the two castles of Byesman 別斯滿.

The castles of Lesser Jinchuan fell one after the other within a few days. The conquest of the whole territory of Lesser Jinchuan just took six days. This quick advancement seemed to confirm the emperor's assumption that the lack of elite Banner troops had been the reason for the long drawn-out war with almost nothing to show for it. But it should not be forgotten that the castles of Lesser Jinchuan and their defenders, having already been conquered just one year ago, were substantially weakened and could definitely put up less resistance than in the past.<sup>172</sup>

It had been decided that Lesser Jinchuan should never rise its head again, and therefore the emperor ordered a harsh treatment of all 8,000 captives who had not succeeded in escaping to Greater Jinchuan. Most of them were given as slaves to the collaborating native kings: 670 to the king of Wasi, 200 to the king of Ekshi, 519 to the king of Dzagunao, and 1,000 to the kings of Bawang, Bulakdi, and Mingdjeng. Many hundreds who were known as notorious

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<sup>170</sup> The Rolpay Dorje was the most important Tibetan advisor of the Qianlong emperor and assisted him—as official representative of the Dalai Lama in Beijing, residing in Yonghe Palace 雍和宮—in all questions concerning Tibet and the Mongols, in secular as well as in religious affairs. His influence at the imperial court was crucial for the domination of the Yellow Hat school over its competitors. Compare Waley-Cohen (2006), p. 57. Martin (1990), pp. 6 ff. Mansier (1990), pp. 134 ff.

<sup>171</sup> *Pingding Liang Jinchuan fanglüe* 77, fol. 10b-11a (QL 38/10/jiawu).

<sup>172</sup> *Jinchuan dang* 38/IV/00237 (QL 38/12/3), 00399 (protocol).

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rebels from the first conquest were massacred.<sup>173</sup> The castles of Meno, Dimda, and Medu lamasery were razed to the ground. This work took the whole winter, and where fire could not help, soldiers tore war-towers down to the last stone.<sup>174</sup> Meno had been converted into a pure desert where no rebel could find food or shelter. This was apparently the only way to protect the *hinterland* of the army that was now prepared to conquer Greater Jinchuan in the next spring.

Starting on QL 39/1/10 (Feb 29, 1774) the Qing troops advanced on all three fronts: Agui and Esente 額森特 lead their troops to the Guga Canyon 谷噶丫口, and during the night occupied Lamlam 喇穆喇穆 and Dzambalak 儂巴拉克. Hailancha, also during the night, attacked and conquered Mt. Denggu 登古. Mingliang advanced from Manai, west of the Jinchuan River, and took Lako 拉窠 and Mani 馬尼. Fude's troops conquered the war-tower in Yakou 啞口, Helungwu 和隆武 conquered Kyakyagyao 卡卡角 (also written 卡卡腳) and united his troops with that of Mingliang for the conquest of Žungbu 絨布 and Muhi 木谿. Brigade vice commander Chen Shigeng 陳世庚 conquered Mudi 木底. Kuilin 奎林 crossed the river with leather boats and occupied the wooden fort of Sdibodu 思底博堵 (also written Bodu 博堵 or 博賭).

Now the whole southern area between the Jinchuan River and its tributary, the Lesser Jinchuan, was in the hands of the Qing army. Fengsheng'e's division marched from Djoktsai in the north of Jinchuan to Kailaye 凱拉葉 (also written Kailiye 凱立葉), which it soon conquered. Luoluo 羅羅, a Solun member of the imperial bodyguard (*qinjun* 親軍), conquered Dardjak 達爾札克. On 2/3 (Mar 14, 1774) Mingliang's division took Mugu 穆谷 and occupied a territory protected by more than 400 war-towers. On 2/23 (Apr 3, 1774) Agui divided a battalion to surround Lobowa 羅博瓦 from two sides, where the troops crossed high mountains, conquered eight war-towers and killed more than 200 rebels. On 3/23 (May 3, 1774) the emperor sent new elite officers, like Funing 富寧, Gelerde 格勒爾德, Taifeiying'a 台斐英阿 and 15 members of the imperial bodyguard, to replace older Banner officers. Thus the forces were to be given new vigour through fresh and young troops. From 6/22 to 25 (Jul 30 – Aug 2, 1774) Agui ordered Esente, Ushhada, Fukang'an and Hailancha to surround the castle of the Židze Canyon 日則丫口 near Lamlam. On 7/4 (Aug 10, 1774) Mingliang's division conquered Dartu, Epo, and Gelgu 格勒古. In order to speed up the

<sup>173</sup> *Pingding Liang Jinchuan fanglüe* 82, fol. 11b-12a (QL 38/12/dinghai), 13b-14a (QL 38/12/jiachen).

<sup>174</sup> *Pingding Liang Jinchuan fanglüe* 82, fol. 10b-11a (QL 38/12/dinghai).



conquest, Agui had some ‘Heaven-assailing cannons’ (*chongtianpao* 衝天炮) cast. Since this was a very special type of cannon, the emperor sent Banner guardsman (*shiwei* 侍衛) Amida 阿彌達 to Jinchuan to bring special cannonballs, moulds, and technicians.<sup>175</sup> Shuhede was ordered to select either Michel Benoist (Chinese name: Jiang Youren 蔣友仁, 1715 – 1774) or Félix de Rocha (Fu Zuolin 傅作霖, 1731 – 1781) to supervise the cannonade of the forts and to teach the gunners how to make the necessary calculations for better results. De Rocha, a geodesist of Portuguese origin, and a member of the Societas Jesu (better known as the Jesuits), was selected and sent to the front.<sup>176</sup> On 7/13 (Aug 19, 1774) he left Beijing and was escorted by a company under the command of *shiwei* Debao 德保.

On 7/14 (Aug 20, 1774) the attack on Mukesh 木克什 (also written 木刻什), Gaibudashno 該布達什諾, Gyadegu 甲得古, Sepengpu 色溇普 and Gelwagyao 格魯瓦角 began. Denggu was reconquered, likewise the towers of Sasgyatchi 薩斯嘉赤 (also written 薩斯甲尺). The next step was to conquer the stronghold of Shünkerdzung 遜克爾宗. On 7/21 (Aug 27, 1774) the fortifications of Žirdi 日爾底 were taken, three days later the Qing army began to burn down the numerous fortifications on the right and left flanks of the castle, a measure that led to an enormous inferno because the winds blew heavily down from the mountains so that the flames devoured countless persons in the towers, young and old, including all their cattle.

There was a rumour that Sonom had poisoned Senggesang. There is no proof for his having committed the act, but it is a fact that Senggesang was dead at that point of time.<sup>177</sup> Defeat had become so apparent that Sonom, in order to save his life, sent a baron (*touren*) named Chowosgya 綽窩斯甲 on 8/15 (Sep 20, 1774), to hand over Senggesang’s body. The latter also brought with him the late king’s wife, Tselé 側累 and some barons, to offer surrender.<sup>178</sup> But Agui refused, took Sonom’s messenger hostage and sent Senggesang’s head to Wenshou to keep it until it could be presented to the emperor together with Sonom’s head. Chitu'andur, who had organized the rebellion in Lesser Jinchuan, still expressed his hopes that everything could be well and that there could be peace one day between Jinchuan and its

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<sup>175</sup> *Pingding Liang Jinchuan fanglüe* 98, fol. 8a-9a (QL 39/6/guimao).

<sup>176</sup> De Rocha was a third-rank Capital official (*sanpin jingtang* 三品京堂). His involvement in the improvement of artillery may have been the decisive factor for the victory of the imperial army over the Jinchuan rebels. Compare Waley-Cohen (1993), pp. 1536-1540.

<sup>177</sup> *Jinchuan dang* 38/IV/00057 (QL 38/10/10), 00083 (QL 38/10/17). According to the statement of one Chinese defector called Zhang Kunzhong 張坤忠, Senggesang died after two months of imprisonment (*bangfu liang ge yue jiu si le* 綁縛兩個月就死了). *Jinchuan dang* QL 41/II/00070 (protocol).

<sup>178</sup> *Pingding Liang Jinchuan fanglüe* 101, fol. 5a (QL 39/7/jisi); 104, fol. 2a (QL 39/8/gengxu). Tselé died somewhat later in Chengdu, *Jinchuan dang* QL 10/10/16 (40/IV/00127).

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neighbours, whose rulers after all were relatives of Sonom. Many people like him thought that it would not be possible to conquer the strongholds of Le'uwé and Gala'i, counting on the strength of the two castles or hoping that the Qing emperor would once more treat Jinchuan with the same magnanimous clemency that he had shown during the first Jinchuan war. The Qing officers interrogated their war captives and in many cases found out under what circumstances it would be easier to approach a certain castle.<sup>179</sup>

The attack on the castle of Shünkerdzung proved to be a difficult affair. The rebels did everything to make a conquest as hard as possible. With different kinds of cannons and howitzers (*er jiangjun pao* 二將軍炮, *san jiangjun pao* 三將軍炮, *si jiangjun pao* 四將軍炮; see Chapter 4.4.1.) the Qing army pounded on the walls of the castle, which was protected by several stone rings and deep trenches. The rebels even made use of 'flame-throwers' (*pentong*) they had captured in Mugom. The rebels shot at the attackers from the trenches and flung down stones from walls and towers. During the siege many high officers died or were heavily wounded. The lamas of the rebels resorted to a proven means of spiritual fighting and cast spells (or mantras, *djada* 札達) that should help to deteriorate the enemy's position by storm, rain and thunder. It was especially the native auxiliary troops that believed in the magic power of the lamas' spells and ran away instead of fighting.<sup>180</sup> But also the Qing troops had Buddhist monks chant sutras for victory.<sup>181</sup>

After some months of siege warfare Agui decided to circumvent the castle. Mingliang meanwhile sent out Kuilin to conquer the fortresses of Žipang in the north. The camps of Agui and Mingliang were not very far from each other and were only separated by the river. The rebels began to evacuate Le'uwé, located only 20 *li* away. Food and other supplies were taken to Gala'i by leather boats down the river.<sup>182</sup>

Sonom soon sent another messenger to offer surrender. His messenger brought along twenty-six Qing officers, captured earlier on and who were released now to demonstrate the rebels' willingness for a peaceful arrangement. But the emperor again refused so that Sonom said he would rather burn down his castles and die with his family in the flames than offer surrender again. Agui therefore was afraid that he might not capture Sonom alive.<sup>183</sup> On QL 40/1/12 (Feb 11, 1775) Agui's division occupied Mt. Kungsar 空薩爾 (also written Kangsar

<sup>179</sup> See for example the interrogation of Chitu'andur, in *Pingding Liang Jinchuan fanglüe* 107, fol. 15b-16a (QL 39/10/xinmao).

<sup>180</sup> *Pingding Liang Jinchuan fanglüe* 105, fol. 3a-4b (QL 39/9/gengshen). See also *Jinchuan dang* 38/III/00415 (protocol). One such *djada* ceremony is described in *Jinchuan dang* QL 41/I/00341 (QL 41/3/18).

<sup>181</sup> *Jinchuan dang* QL 39/I/00341 (QL 39/3/13); QL 39/IV/00036 (QL 39/10/14).

<sup>182</sup> *Pingding Liang Jinchuan fanglüe* 110, fol. 16b (QL 39/11/dingmao).

<sup>183</sup> *Pingding Liang Jinchuan fanglüe* 113, fol. 4a-4b (QL 40/2/jimao). *Jinchuan dang* QL 40/III/00183 (protocol); QL 40/IV/00027 (QL 40/10/14), 00259 (QL 40/12/6).

康薩爾). The spring rainfall prevented the Qing troops from advancing farther. Therefore the two divisions began from 7/14 (Aug 9, 1775) on to encircle the stronghold of Le'uwé, located on a cliff above the Jinchuan River and protected by steep mountains from the rear on each of whose several terraces fortifications were built. One strong fortress of the castle complex was the 'turning-sutra' building (*zhuanjinglou* 轉經樓) with its numerous war-towers.<sup>184</sup> Walls and moats protected the castle from all sides, like the one at Meno, but in an even more sophisticated pattern. The tallest of the five great war-towers of the square main castle was 24 stories high.

On 7/15 (Aug 10, 1775) Agui ordered the attack on Mt. Togulu 托古魯. Its wooden fortifications were conquered, and two days later Purpu conquered the three war-towers of Lungsde 隆斯得 at the flank of the mountain, an important point for intercepting the traffic of the rebels. In Lungsde the rebels had stored gunpowder and ammunition: the Qing troops captured more than 100 baskets of gunpowder, more than 10,000 cannonballs and 143,000 musket bullets.<sup>185</sup> Hailancha divided his battalion into three parts for an attack of the fortifications on Mt. Kebkyü 科布曲, the left flank of the sutra tower. During the next days, more than 30 fortifications between the sutra tower and the castle were conquered. Agui ordered the erection of seven battery platforms which Fukang'an coordinated. The castle was taken under fire from two sides, and the howitzers were remarkably precise—eighty per cent of the cannonballs are said to have hit their target. On 7/18 (Aug 13, 1775) five relatives of Sonom's offered to hand over the castle of Le'uwé. They suggested concluding peace under terms similar to those agreed upon at the end of the first Jinchuan war and promised that a Qing commander could take his garrison there in the future. Yet the emperor refused again. Sonom wrote messages to the neighbouring kings asking them not to side with the Qing army, and it was said that he even sought support from the Dalai Lama.<sup>186</sup>

Sonom grouped his last supporters around him. They shaved their heads, cut their nails and put them into a bag to be deposited in a box. This ritual was intended to cast a bad spell upon anyone who might try to escape. Meanwhile the Qing army had totally surrounded the castle and burned down all fortifications around it, which could have protected the fortress proper. During the night, Purpu cut off all paths among the towers. But the people in the fortress fought stubbornly and resisted all efforts to take the castle. Fude on 7/23 (Aug 18, 1775) began to dig a tunnel under some towers, in which gunpowder was placed. Its ignition utterly

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<sup>184</sup> A description of such a 'sutra-turning hall' can be found in *Jinchuan suoji* 2, p. 18.

<sup>185</sup> *Pingding Liang Jinchuan fanglüe* 122, fol. 1b-2a (QL 40/8/dingchou).

<sup>186</sup> *Pingding Liang Jinchuan fanglüe* 120, fol. 10b-11b (QL 40/6/bingshen). *Jinchuan dang* QL 40/III/00195 (QL 40/8/24).

destroyed many positions, and the detonation was so vehement that stones, mud, and even corpses were flung through the air.<sup>187</sup> It was later said that the gigantic explosion had been caused by a prayer of a Yellow Hat lama in Beijing.<sup>188</sup> An important bridge south of the castle called Gyaržisang Bridge 甲爾日磾 was destroyed by divers from Hunan, who tore down the wooden pillars of the construction. Despite this the traffic between the castle and the outside could never be totally impeded. Agui further cleared the territory between the sutra tower and Le'uwé and had his soldiers advance in trenches and with hand grenades. On 8/13 (Sep 7, 1775) the large terraced cliff behind the castle was finally occupied. The sources describe the mountainside as having eight escarpments (*gao kan* 高礮), upon which defensive towers had been erected on several levels, which was essential for the defence of the whole castle. From then on the attacks from four sides continued incessantly, and on 8/16 (Sep 10, 1775) during the night Le'uwé was conquered. The last remaining insurgents in the castle were virtually massacred by the Qing troops.<sup>189</sup>

It took the messenger who travelled to Beijing with the news of the fall of Le'uwé, only seven days to haste from Jinchuan to the Capital, and the emperor could not but weep tears of relief about the end of the war that had cost so many lives and so much silver.<sup>190</sup> To cover the distance between the headquarters and the Capital (between 7,200 and 7,500 *li*) normally took eleven to twelve days.<sup>191</sup>

In the small hours of the following day, Agui set his troops in march to conquer the second stronghold, Gala'i, where Sonom had escaped to some days before. Mingliang's division of 25,000 attacked Gala'i from the region of Nyendjan 碾占, Agui's division of 32,000 surrounded Gala'i from Da'uda 達烏達. Before very long the Qing troops conquered more than thousand war-towers as well as the important Yungdjung lamasery, the religious heart of Jinchuan. The castle of Gala'i was almost totally isolated until 12/18 (Feb 7, 1776). Agui, afraid that Sonom might once more escape by boat along the Jinchuan River, had a pontoon bridge (*fuqiao* 浮橋) thrown across the river which he had rigorously controlled, so that no watercraft could pass unnoticed.<sup>192</sup> Sonom's female relatives offered their capitulation, and on 12/20 (Feb 9, 1776) the rebel leader's mother Atsang, his aunt Atsing, as well as his

<sup>187</sup> *Pingding Liang Jinchuan fanglüe* 122, fol. 9b-11a (QL 40/8/jiashen).

<sup>188</sup> The Dalai Lama is also said to have assembled 40,000 Tibetan monks to pray for good weather. *Pingding Liang Jinchuan fanglüe* 85, fol. 1a (QL 39/1/bingchen).

<sup>189</sup> *Pingding Liang Jinchuan fanglüe* 123, fol. 1a-5a (QL 40/8/jihai).

<sup>190</sup> *Xiaoting zalu* 1, p. 23.

<sup>191</sup> *Jinchuan dang* QL 36/IV/00191 (QL 36/11/15); QL 40/III/00305[?=00205] (QL 40/9/23); QL 41/I/00111 (QL 41/1/[17]).

<sup>192</sup> *Pingding Liang Jinchuan fanglüe* 131, fol. 11b-12a (QL 41/1/jimao). *Jinchuan dang* QL 41/I/00072 (QL 41/1/13).

sisters, accompanied by some barons, came to Agui's camp and surrendered.<sup>193</sup> The commander thereupon tried to use the authority of the rebel's mother to persuade him to surrender. That would have been much more convenient for the Qing side, because the castle of Gala'i could only be conquered under great difficulties. But only Sonom's eldest brother Shaloben Gangdak 莎羅奔岡達克 surrendered. On QL 41/1/3 (Feb 21, 1776) Agui sent Sonom's relatives to the castle for a third time to persuade the defenders to surrender with the promise that only the worst scoundrels would be punished.<sup>194</sup> Sonom replied that he would surrender if he were pardoned and allowed to live unmolested as a private person in Gala'i in the future. In case he were not to be pardoned, he asked that at least his head might be buried in Gala'i.<sup>195</sup> From then on the cannons started to pound down upon the castle day and night—which was very easy at that time of night because the full moon illuminated the scene and immersed it in a phantastic light.<sup>196</sup> Only on 2/4 (Mar 23, 1776) Sonom came out of the ruins, presenting his seal. He was accompanied by his brothers, his wives and children and some last village heads who had been loyal to their master up to the last moment. The whole castle surrendered with more than 2,000 persons, old and young, men and women.<sup>197</sup> Jinchuan was finally pacified. The messenger carrying the red banner (*hongqi* 紅旗) signalling victory (*lubu* 露布) covered the distance to Beijing within eight days.<sup>198</sup>

Agui was presented a yellow rider jacket with fox fur, made by the emperor in person (*qinyu heihutui huang magua* 親御黑狐腿黃馬褂), and was awarded the title of a 'Master-Strategist Heroic Duke' (*chengmou yingyong gong* 誠謀英勇公), Hailancha was awarded the title of a 'Brave Marquis' (*yiyong hou* 毅勇侯), Helongwu 和隆武 was awarded the title of a 'Courageous Marquis' (*guoyong hou* 果勇侯), and Mingliang with the title of a 'Stalwart Earl' (*xiangyong bo* 襄勇伯). Agui was furthermore given the posts of assistant grand secretary (*xieban daxueshi* 協辦大學士) and of Minister of Personnel (*libu shangshu* 尚書吏部). He was thus a permanent member of the State Council and additionally allowed the highest privilege to mount his horse within the walls of the Forbidden City. One hundred eminent generals and officers the first fifty of whom were additionally praised by an ode written by the emperor in person were painted by imperial artists to fill the official gallery of

<sup>193</sup> *Pingding Liang Jinchuan fanglüe* 131, fol. 13a-13b (QL 41/2/jimao).

<sup>194</sup> *Pingding Liang Jinchuan fanglüe* 131, fol. 17b-18a (QL 41/2/jimao).

<sup>195</sup> *Pingding Liang Jinchuan fanglüe* 132, fol. 3a-3b (QL 41/2/jichou).

<sup>196</sup> *Pingding Liang Jinchuan fanglüe* 132, fol. 10b-11a (QL 41/2/gengzi).

<sup>197</sup> *Pingding Liang Jinchuan fanglüe* 132, fol. 17a-19a (QL 41/2/jiyou).

<sup>198</sup> *Pingding Liang Jinchuan fanglüe* 132, fol. 19a-19b (QL 41/2/jiyou).

war heroes in the Ziguang Hall 紫光閣 in the Imperial City.<sup>199</sup> This was done in accordance to a precedent after the war in Dzungharia.<sup>200</sup> Other painters were ordered to create eight paintings of battle scenes.<sup>201</sup> As the emperor said, the Qing troops in Jinchuan had fought more than one hundred battles, more than double than during the western campaigns and in Dzungharia.<sup>202</sup> For this reason a triumphant parade and state offerings (*jiaolao dadian* 郊勞大典) would be an indispensable means to feast the victorious troops and to show the war prisoners to the emperor. The events were to take place on QL 41/4/27 and 29 (Jun 12 resp. 14, 1776).<sup>203</sup>

Sonom and his elder brothers and his barons were taken to the Capital with the first military contingent returning. The prisoners of war were escorted by 100 soldiers of the Scouting and the Firearms Brigades. Senggesang's head was also among the objects and men that were transported with this triumphant contingent. Sonom's younger brothers and female relatives were escorted by a second contingent. On 4/27 and 28 (Jun 13 – 14, 1776) the prisoners of war and the booty were presented during the ceremonial offerings at the national altars (*taimiao sheji* 太廟社稷) that were supervised by the emperor in person. The rebel leaders, Sonom, Shaloben Gangdak, Sonom Pengchuk 楚克索諾木彭, Gyarwawodzar, Shantar 山塔爾 and Samtan 薩木坦, were executed through the punishment for the heaviest crimes: slicing to peaces before being beheaded (*ling chi chu si* 凌遲處死).<sup>204</sup> The children and juveniles and some of the women were sentenced to lifelong imprisonment (*yongyuan jianjin* 永遠監禁), some other women were donated to Ölöd Mongol and Solun lords as household slaves.<sup>205</sup> In three places (Meno, Gala'i, Le'uwé) the emperor had stone steles (*bei* 碑)

<sup>199</sup> *Pingding Liang Jinchuan fanglüe* 131, fol. 14ab-15a (QL 41/1/jimao).

<sup>200</sup> *Jinchuan dang* 41/I/00191 (QL 41/2/14).

<sup>201</sup> *Pingding Liang Jinchuan fanglüe* 135, fol. 6a-6b (QL 41/4/yiwei).

<sup>202</sup> *Jinchuan dang* 40/IV/00068 (QL 40/r10/6).

<sup>203</sup> *Jinchuan dang* QL 41/I/00131 (QL 41/1/25), 00027 (QL 41/1/5).

<sup>204</sup> *Pingding Liang Jinchuan fanglüe* 135, fol. 13b-15b (QL 41/4/jisi), 23a-24b (QL 41/4/renshen). Twelve other prisoners, among them Sonom's aunt Atsing, were executed by the same method. A 'simple' beheading was the fate of nineteen minor culprits, including Sonom's mother Atsang. Sixteen people were sentenced to lifelong imprisonment, 52 people were enslaved and given to Ölöd Mongols, 45 to the Solun, and 34 to members of the Sanxing garrison 三姓 in Jilin. 58 other people were given as 'living booty' to some generals.

<sup>205</sup> *Pingding Liang Jinchuan fanglüe* 135, fol. 2b-3a (QL 41/4/yiwei), 10a-10b (QL 41/4/guihai). Sonom's wife Deržidjang 得爾日章, for example, was not executed because she was the daughter of the lord of Bulakdi. Another source states that 13,535 prisoners of war were to become the slaves of various local lords, and 6,789 others were ordered to populate the military colonies (*zuo wei tunbing* 作為屯兵). *Jinchun junxu li'an* 1, fol. 74b.

erected upon which three odes, composed by the emperor himself, were chiselled (*leming* 勒銘) reporting the victory over and subjection of Jinchuan.<sup>206</sup>

According to official statistics, about 13,000 Tibetans had been killed during battle, yet if one includes those slaughtered as potential rebels, especially after the disaster of Mugom, where Agui had killed thousands of people in order to protect his line of retreat, the number of dead Jinchuan Tibetans could reach as many as 20,000.

## 2.6. ‘Reconstruction’ and Restructuring

The Chinese term for the governmental activities following the (re-)conquest of a territory is *shanhou* 善後, which literally translated means ‘reconstruction’ or—somewhat more poetical—‘lead things thereafter on a fruitful path’. Whenever a war occurred on Chinese territory, the term *shanhou* of course referred to the reconstruction of roads, bridges, dykes, villages, monasteries, in one word: the infrastructure. This was partly also true for a territory originally not belonging to an imperial province, like Jinchuan, or the western territories and even the old *tusi* territories in Guizhou pacified during the Yongzheng reign. Yet for those kinds of territory the term *shanhou* also implies a thoroughly new administrative structure to be built. In the case of Jinchuan, the old ‘*tusi*-doms’ of Dzanla and Tsudjin were at first administered by military governors, later by sub-prefects. This is the administrative aspect of *shanhou*, which goes hand in hand with a cultural restructuring of the population. Not only were the inhabitants of Jinchuan, at least the ‘bad’ ones, systematically annihilated but also gradually replaced by Chinese invited to settle in the mountain valleys of Jinchuan. A very large number of villages in the Jinchuan region therefore have Chinese names today, like Sunjiagou 孫家溝 (‘Sun Family Valley’), or Hujiashan 胡家山 (‘Hu Family Mountain’). For the remaining population of Jinchuan, the cultural *shanhou* was the thorough obliteration of the native ‘heretic’ Bön religion (Chinese: *benbur* 奔布爾 or *bumbur* 布木布爾), which was decided just after the Mugom catastrophe.

After the surrender of the Jinchuan leaders the rest of the people of the two countries had to be dealt with. Some of the barons and village heads were executed, as far as they were considered potential rebels who might stage another uprising in the near future. The whole population of the two Jinchuans was spread over the neighbouring territories and thus made subjects or even slaves of the village heads and kings of the twelve original states of the

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<sup>206</sup> The text of the steles can be found in *Jinchuan suoji* 1, pp. 1-4; *Jinchuan junxu li'an* 1, fol. 127a-139b; and *Pingding Liang Jinchuan fanglüe: Juanshou* 卷首: *Tianzhang* 天章 1.

region. Thus Jinchuan people were resettled in Chosgyab, Gebshidza, Somo, Djoktsai, Tsunggak, Damba, Mingdjeng, Muping, Bulakdi, Bawang, Ekshi, and Wasi. Some castles of Jinchuan were, if still intact and not used for the occupation troops, given to the neighbouring kings, who then sent a new village head to rule over the new dominion. This kind of reward for the contribution of the native kings to the conquest of Jinchuan was justified, yet important places should not be given into the hands of natives—the Qing government never totally trusted their native allies.<sup>207</sup> The region of Jinchuan was provisionally administered by two native assistant brigade commanders, one for the area west of the Jinchuan River (*hexi* 河東), and the other for that east of the river (*hedong* 河東; see Map 7.3). But this does not mean that the Qing government passed the region of Jinchuan on to new native kings. Quite on the contrary, each of the native kings was obliged to travel to the Capital until the end of the year QL 41 (1776), and from then on each year a delegation in turn (*ban lun ru jin* 輪班入覲), to make their obeisance to the emperor and to acknowledge the Qing dynasty as sovereign of the native polities west of the Sichuan province.<sup>208</sup> The native kings were to be reminded that they were not autonomous rulers, but in fact nothing else than state officials of the Qing empire (*jin cheng nei di* 盡成內地 ‘the whole [area] became inner territory’).<sup>209</sup> This was what also had happened to the peoples of the territories in the far west whose rulers also had to render homage annually to the ruler of the Qing empire.

Another measure to subdue the rabble-rousing character of the native kings and their people was the systematic transformation of Bön monasteries into monasteries of the Gelugpa school.<sup>210</sup> The most important monastery of the region was Yungdjung lamasery. Its beautiful interior as well as the copper rooftiles were completely stripped down and sent to the Capital to demonstrate to the court what beautiful buildings had been conquered.<sup>211</sup> Governor-general Wenshou had a new monastery called Guangfa Monastery 廣法寺 (meaning ‘expanding the *dharma*’) built, which was equipped with Buddhist figures and statues and that served as the seat of a new Gelugpa lama, who was installed in Jinchuan. The monastery was totally

<sup>207</sup> *Jinchuan dang* QL 41/I/00054-55 (QL 41/1/8).

<sup>208</sup> In QL 41/12 Mingliang ordered 200 natives to travel to the Capital. The *Pingding Liang Jinchuan fanglüe* 136, fol. 5b-6b (QL 41/12/dingsi), contains a list of the native lords and chieftains who were obliged to render homage to the emperor. In some cases the official statements pretend that the native lords asked the emperor to be allowed to render homage, like the lords of Hor-Djanggu, Nalinchung 納林冲 and Kungsa. *Pingding Liang Jinchuan fanglüe* 134, fol. 3b (QL 41/3/jiachen). See also *Jinchuan dang* 39/I/00053 (QL 39/1/18); QL 41/I/00137 (QL 41/2/1), 00275-277 (no date).

<sup>209</sup> *Pingding Liang Jinchuan fanglüe* 136, fol. 23a-23b (QL 41/11/renwu).

<sup>210</sup> See for example, *Pingding Liang Jinchuan fanglüe* 119, fol. 7b (QL 40/5/wuchen), where it is told that the Jinchuan lamaseries had to be thoroughly destroyed in order to extirpate the ‘Bön heresy’.

<sup>211</sup> *Qingshilu: Gaozong shilu* 1001, fol. 4a-4b (QL 41/1/gengyin). *Jinchuan dang* QL 41/I/00113 (QL 41/1/19); QL 41/II/00007 (QL 41/4/2).



renovated, and the old, non-orthodox figures and paintings were removed. In QL 43/7/13 (Sep 3, 1778) the monastery was inaugurated in a festivity in which all kings of the region participated to express their willingness to accept their new spiritual masters. The monastery in Meno (Medo lamasery) was likewise renovated and became subject to the jurisdiction of Guangfa monastery. The new orthodox monastery of Lesser Jinchuan called Shengyin monastery 勝因寺 (meaning ‘vanquishing the causes [for rebirth]’), was inaugurated on QL 44/10/9 (Nov 16, 1779).<sup>212</sup> Both became a virtual instrument for taming the belligerent natives of the region who had to send their minor sons to the monasteries to become monks and adherents of the orthodox Gelugpa School, dominated by the Dalai Lama and the Yellow Hat lamas in Beijing—who for their part were controlled by the Qing government. A situation similar to that during the war when Bön lamas had cast spells against the imperial army and the monks of whole monasteries had supported the rebels, was to be made impossible in the future.<sup>213</sup> The Yellow Hat school monasteries acted as spiritual administrators of the Jinchuan Tibetans and had to prevent any deviation of thought from the imperially favoured Gelugpa School. In Chosgyab, Bulakdi and Bawang Gelugpa monasteries were opened too, in order to strengthen the religious ties with the empire.<sup>214</sup>

For the secular administration the emperor ordered a thorough changeover of Jinchuan from the rule by native kings nominally installed by the empire to a direct administration through imperial state officials (*gai tu gui tun* 改土為屯 ‘transforming [territory governed by] native [rulers] into military colonies’). A similar changeover had taken place in Guizhou province after the suppression of the Miao rebellions during the Yongzheng reign. Native rulers there had been replaced by military governors and later on by magistrates and prefects. But in Jinchuan the affair was slightly more sensitive. The Jinchuan Tibetans were known for their belligerent character, which, after two long and costly wars, had to be repressed forever. In each important place a garrison was erected to keep an eye on the inhabitants of the mountain villages. The next year was to witness a military occupation of Jinchuan with 6,000 soldiers being garrisoned in military colonies (*tuntian* 屯田).<sup>215</sup> Not long after the war, in QL 41/2 (Mar – Apr 1776), the State Council suggested appointing a provincial military commander (*tidu*) in Meno and a General of Chengdu (*Chengdu jiangjun*) in Yazhou—whose office was later shifted back to Chengdu.<sup>216</sup> A month later the emperor named Mingliang General of

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<sup>212</sup> *Jinchuan suoji* 1, pp. 6-7. *Da-Qing yitong zhi* 423, fol. 8a.

<sup>213</sup> *Pingding Liang Jinchuan fanglüe* 133, fol. 13b-14a (QL 41/3/renyin).

<sup>214</sup> Statements by Zhuang (1982), pp. 168-169, without quotation.

<sup>215</sup> *Pingding Liang Jinchuan fanglüe* 136, fol. 11a-12a (QL 43/9/jiyou).

<sup>216</sup> *Pingding Liang Jinchuan fanglüe* 133, fol. 18b-20b (QL 41/3/guimao); 136, fol. 12a-12b (QL 42/12/guichou).

Chengdu (who in the end stayed in Chengdu and not in Yazhou) and Agui provincial military commander. Both had to administer civil and military affairs of the region.<sup>217</sup> From then on, all documents concerning the region had to be transmitted to the commanders as well as the governor-general of Sichuan and to be discussed by both sides before being passed on to the imperial court. Both persons were obliged to inspect the Jinchuan region once or twice each year.<sup>218</sup>

In Jinchuan, four military garrisons (*zhen* 鎮) were established and manned with 3,000 Green Standard soldiers: In Le'uwé (renamed Suijing 綏靖 'Tranquil pacification') 1,000 soldiers were garrisoned. Gala'i was renamed Chonghua 崇化 ('Venerable civilisation') and staffed with 700 soldiers. In Gardan 噶爾丹, 300 soldiers were posted, and another 400 in Žudjai 茹寨. The garrison in Marbang was staffed with 300 soldiers, that of Tsengda 曾達 with 300.<sup>219</sup>

In Lesser Jinchuan, 3,000 more soldiers were garrisoned in Meno (now called Maogong 'Energetic effort', with 1,000 troops) and in important places around the adjacent area, like Dimda (renamed Fubian 撫邊 'Appeasing the border'), Dabandjao, Senggedzung, Wenggurlung, and Yödza. The garrisons were intended to be self-sufficient in order to save the money for the transport of necessary food, mainly rice. One soldier out of three had therefore the task to work in the fields in order to produce enough food while the two others fulfilled military duties. The village opposite of Le'uwé across the river, Argu 阿爾古, was made prefecture (*zhou* 州) and Meno made sub-prefecture (*ting* 廳). In QL 44 the prefecture of Argu was incorporated into the latter, which itself was transformed into the sub-prefectural military colony (*tunwu ting* 屯務廳) Maogong in QL 48, under which all five colonies (Maogong, Bianfu, Zhanggu, Chonghua, Suijing) and two native kingdoms (Ekshi, Chosgyab) were administered (see Chapter 7.4).<sup>220</sup>

On the other hand, the Qing army profited from its experience gained in the warfare in Jinchuan: It was especially the war-towers that contributed to the development of new tactics when fighting against rebels in Hunan, Yunnan and Shaanxi later.<sup>221</sup>

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<sup>217</sup> *Pingding Liang Jinchuan fanglüe* 135, fol. 8b-9a (QL 41/4/xinyou).

<sup>218</sup> *Pingding Liang Jinchuan fanglüe* 133, fol. 26a-27a (QL 41/3/yisi).

<sup>219</sup> *Pingding Liang Jinchuan fanglüe* 136, fol. 18a-19b (QL 44/11/renwu).

<sup>220</sup> *Da-Qing yitong zhi* 423, fol. 2a-3a.

<sup>221</sup> See for example, *Qingshilu: Renzong shilu* 82 (JQ 6/4/xinwei).

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### 2.7. What Were the Jinchuan Campaigns Good for?

In the fight against the Dzunghars and the Muslims in China's west, the emperor had spent 30 million *liang* during a series of wars that took five years. The campaigns enlarged the Chinese territory by 20,000 Chinese 'miles' (*li*, in length). The total suppression of the Miao rebellions in Yunnan and Guizhou during the Yongzheng and Qianlong reigns took twelve years and cost the Chinese state 70 million *liang*—without enlarging the territory of the empire. The war against the Jinchuan kings only brought a territorial gain of rarely 1,000 'miles' of rough mountainous territory and an additional tax-paying population of not more than 30,000. Yet the second Jinchuan campaign had cost more than 60 million *liang*, and the lives of about 30,000 soldiers, including high officers and generals (some of whom had to be executed: Zhang Guangsi, Neqin during the first war, and Artai and Wenfu—if he had survived—during the second war), and the lives of more than 20,000 natives, who were killed or massacred in the course of the war. The background to these wars was also of different importance to the survival of the empire. While the rebellion of the Dzunghars—as successors of the Ööd Mongols—threatened the supremacy of the Qing emperors not only on the northern steppe but also their suzerainty over China itself, the rebellions of the Miao in the southern regions of China endangered the peace of the region. Since the highly important transport routes for mint metals (copper, lead, tin) crossed these territories, hitherto governed indirectly through native *tusi* kings, their transformation into normally administered units was essential for the functioning of the economy of the whole empire. Furthermore, Chinese settlers and 'entrepreneurs' (*shang* 商, i.e. people not engaging in agriculture as business) living in that region had to be protected against their belligerent neighbours in the native villages. The Qing court also feared that Chinese could collaborate with the native tribes against the Qing government, the way Wu Sangui 吳三桂 (1612 – 1678) had done. The southwestern provinces had been cut off at the beginning of the Qing period to be governed as virtually autonomous realms of the three feudal lords (*san fan* 三藩: Wu Sangui, Geng Jingzhong 耿精忠 [d. 1682] and Shang Kexi 尚可喜 [1603 – 1676]) and were therefore still seen as a kind of semi-foreign territory until wholly conquered by the 1690s. All sudden raids by natives on Chinese villages and settlements had to be suppressed. Contrary to Guizhou and Yunnan, Jinchuan was of no economic importance.

Yet it would not be right to put forward the argument that Jinchuan was only a wild and barren mountain land and that the expenditure for the Jinchuan wars was pure extravagance, probably to nourish the military or to fulfil the ambitions of an emperor dreaming of ruling

the world. As said before, any rebellious tribes in that region would endanger the security of the road from Sichuan to Tibet, which was the lifeline between southern China and one of its most important religious centers, in Lhasa.

But there is also another aspect that may have played an important role: The case of Wang Qiu, the Chinese collaborator during the first Jinchuan campaign,<sup>222</sup> shows that there were many Chinese working hand in glove with the native tribes against the Qing government, which was nothing else than a continuation of the adherents of the Southern Ming who cooperated with the southern tribes to rebel against the Qing government: Jinchuan can thus also be considered the last stronghold of the last of the Ming (in the sense of ‘anti-Manchu’).<sup>223</sup> After the final suppression of the Jinchuan rebels, the emperor therefore carried out some exceptional state rituals and rewarded the generals with utmost generosity and extremely high gratifications.

While these arguments only point to the southern danger (in the persons of the last of the Ming princes and Wu Sangui), there is also another connection which shows how earnest the Qianlong emperor took his task to subdue the rebellious montagnards: the problem he had with the Mongols. From the founding of the Manchu empire on, the different Mongol tribes had always played an important role and had either served as allies of the Manchus, or had been their arch-enemies who threatened the Manchu dominance of the northern sphere. Again and again the Qing emperors had had to fight against the Khalkha, the Ölöd, and the Dzungars, and just like in that never-ending fight against the steppe people, the imperial troops in Jinchuan had the impression that no enemy hitherto known showed such a kind of stubborn resistance. The words of Fuheng describing the doggedly fighting Jinchuan rebels sound as if he was talking of zombies who would rise again even if the war-towers had collapsed down upon them.<sup>224</sup> When Sonom in his last hiding-place in Gala'i said that he would rather burn himself and his family alive than to surrender, the Qing commanders and the emperor commented this statement with the following words: ‘The Tibetans (*fanren* 番人) have a character very similar to the Mongols, and therefore do not take their lives lightly like the [Chinese] rebel Wang Lun 王倫 had done [in 1773].’<sup>225</sup> This argument shows that the Jinchuan rebels, like the Mongols, were an enemy who did not fight for an idea (e. g. the

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<sup>222</sup> The Wang Qiu case is only the worst of a whole series of cases when Chinese defectors collaborated with the rebels during the Jinchuan campaigns.

<sup>223</sup> This line of argument is found in *Zhongguo lidai zhanzheng shi*, Vol. 16, pp. 188-190.

<sup>224</sup> *Pingding Jinchuan fanglüe* 22, fol. 9a-14b (QL 14/1/bingyin).

<sup>225</sup> *Jinchuan junxu li'an* 1, fol. 73a. *Jinchuan dang* QL 40/III/00327[?=00227] (QL 40/9/28). The emperor and the generals did not believe that Sonom would burn himself. This can be seen from the edicts in *Jinchuan dang* QL 40/III/00183 (no date); QL 40/IV/00027 (QL 40/10/14); 00259 (QL 40/12/6). About the Wang Lun rebellion, see Naquin (1981).

foundation of an empire) with the objective to either succeed or die but for sheer survival and therefore did not risk easily being killed. And there is another similarity to the Mongols—like them, the Jinchuan rebels barricaded or at least endangered the free access to Lhasa, the seat of the Manchu's highest religious leader, not only by threatening the road from Chengdu to Tibet,<sup>226</sup> but also by harbouring heretic sects denying the supreme leadership of the Gelugpa school over Tibetan Buddhism.

The Jinchuan rebels therefore, standing—also geographically—in one line with the disobedient Mongol tribes and the Guizhou tribes sympathising with Wu Sangui, had to be castigated, whatever the cost. This was the philosophical background of the two Jinchuan campaigns. That the military in Chengdu and elsewhere profited from the permanent campaigns in the west and southwest, that it was better to occupy professional soldiers by giving them work and that it was a great advantage to pay tens of thousands of unemployed people for their labour during a military campaign, is different story.<sup>227</sup>

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<sup>226</sup> During the second Jinchuan war rebels in the region of Litang west of Jinchuan plundered a logistics station, which goes to show how uncertain the peace in that region was. *Jinchuan dang* QL 39/III/00207 (QL 39/8/19); 00277 (QL 39/9/6); QL 39/IV/00025 (QL 39/10/11).

<sup>227</sup> For the monetary advantages of the southwestern campaigns for the military in Sichuan, see Dai (2009 (2)).

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### 3. The Cost of Staff

The two following chapters (Chapters 3 and 4) will show in detail the expenditure incurred for the second Jinchuan war. Though the final account as found in the *Jinchuan junxu li'an* collection is not detailed enough if one wants to be thoroughly informed about the exact amount of all different kinds of expenditure investigated here, it contains a considerable number of regulations for various items based on precedents (*li* 例), some from earlier campaigns (the first Jinchuan war, the campaigns in the west, or the Myanmar [Burma] campaigns), others directly from the first months of the second Jinchuan war. Most precedents could only be related to the province in question (like Gansu and Shaanxi for the western campaigns, Yunnan for the Myanmar campaigns, and Sichuan for the Jinchuan wars). Those case-related precedents (*shili* 事例) as well as the regulations which became codified as generally valid rules (*zeli* 則例) with the promulgation of the *Junxu zeli* canon, the rules for war expenditure, permit an attempt to reconstruct the approximate expenditure for a multitude of items. First of all the expenditure for staff will be reconstructed: how much money did the Qing government have to spend in order to send the troops from their garrisons to the war theatre, to feed them there and to bring them back home? What amount of money was necessary to pay the more than 700 civilian officials working in the logistics of the war machine? And finally, a considerable part of the expenditure was used for the more than 400,000 persons who supported the army as labourers, craftsmen, porters and in many other different jobs. The last item as far as expenditure for staff is concerned covers rewards and promotions, as well as compensation for casualties and wounded—all these expenses make for a substantial part of the expenditure for staff. In some cases this will overlap with the expenditure for supplies (Chapter 4). This is especially the case for rice, for which a pure 'net' base price (material) will be discussed in Chapter 4.3., as well as a 'gross' final price (material and transport cost) containing expenditure for staff.

The expenditure as calculated in the following two chapters are merely reconstructed values which can differ widely from the real expenditure for the particular items (which we do not know in detail). Nevertheless this tentative reconstruction provides an excellent insight into the problems the imperial officials had to deal with when either assessing how long the money in the war chest would last, or when settling finished transactions. Only when strictly observing the rules for military expenditure the responsible state officials could avoid being

made liable for budgetary deficits and having to compensate them out of their own pockets. In addition to that the reconstruction of expenditure for staff in the following chapter will supply some insight into the differences in pay for different types of troops, and the way the government dealt with the members of various trades and professions it made serve the military. And finally, it will become evident how detailed the rules were issued by the Qing government to make the complexity of the organisational system more manageable, with the result that—at least in theory—there were clear regulations for each different item in question.

It should be particularly pointed out that the terms ‘cost’ and ‘pay’ regularly used in the next two chapters do not refer to market prices for goods and real wages unless this is especially stated along with the corresponding figures. All values concerning expenses for staff and material have been gleaned from official canons, the latter being nothing but guidelines telling officials what expenses and what amounts they were allowed to consider respectively had to enter in accounts. These statutory guidelines contained in regulations like the *Junxu zeli* and the *Jinchuan junxu li'an* represented at the same time maximum and minimum values—the latter in particular as far as rice was concerned, since troops and labourers were entitled to daily rations. The Ministry of Revenue (*hubu*) refused to accept any accounting entries exceeding the officially permissible values with the result that the officials had to defray the costs themselves or find other sources to cover them. Thus only a few scattered documents show what has been really paid. This is in particular true for wages paid to bearers and workmen, but also for material bought on the open market. All the other prices were officially limited.

To begin with, the expenditure for staff will be explained and reconstructed.

It is possible to distinguish between three different groups of people involved into the war. The first group is, of course, the military staff, that is, common soldiers and officers. Among the highest ranks commanding the troops there were also some non-combatants, who were obliged to go to the front because of their position within the administrative structure. Such people are, for example, the governor-general (*zongdu*) of Sichuan, but also officials from the central government who were delegated by the emperor to take over military duties. Such personalities were, for example, the Grand Ministers Consultant (*jinglüe dachen*).

The second group to be investigated are civilian officials from all over the country (see Map 3.52) dispatched to the war theatre in order to take care of the organisation of supplies of all kinds. District magistrates for instance had to take care for the camps and to procure transport vehicles, draught and pack animals for troops marching through their district on their way to



the front. Governors of other provinces had to raise funds from the local gentry and from among the officialdom within the domain they were responsible for. But such tasks were within the normal duties of civilian officials and were not paid for by extraordinary funds. Nevertheless many civilian officials were dispatched to the war theatre to exercise their administrative duties, especially within the field of logistics. As opposed to the military staff, whose exact numbers are known, we are unaware of the exact number of civilian officials acting in Jinchuan. But as we will see, there are several possible ways to reconstruct approximate figures of civilian officials dispatched to the front.

By far the largest group involved in the war were the hired porters and labourers. Again, there are only approximate figures of how many people were hired to transport rice, gunpowder, bullets and all the other items necessary to wage a war. Yet at least some figures for the porters are known, while we are only able to roughly estimate the number of labourers involved, as carpenters, ferrymen, cannon casters, as well as that of professionals like physicians or map drawers.

While each person was given their wages and in most cases also a daily ration of rice—or a corresponding sum of money to buy rice and other food—, some extraordinary allowances for personnel were made under certain conditions. The first of these is money disbursed to reward soldiers and officers. Such rewards were normally granted after an important castle had been conquered, but they could also be given when troops had been deployed with exceptional speed. Soldiers and officers of lower rank were normally awarded a sum of money, but officers of higher rank were rewarded by granting them a honorary title (*baturu*, ‘hero’) or they were promoted to a higher grade or rank. This kind of promotion resulted in a raise of income for this person and can therefore only indirectly be counted among the war cost. Other types of reward were the presentation of a peacock feather—a symbol similar to Western military decorations—or some valuable brocade fabrics. The second case of extraordinary expenditure for personnel during the war, are recompenses for soldiers (or civilian officials) being wounded, and a funeral allowance for those killed in action.

### 3.1. Military Officials (Officers) and Soldiers

The soldiers taking part in the second Jinchuan war came from three different types of military units. The largest proportion were regular soldiers from garrisons in various provinces, some from provincial capital garrisons (*biao* 標), and others from smaller types of garrison throughout the provinces (called *zhen* 鎮, *ying* 營, *xie* 協, and *xun* 汛). Larger

garrisons were divided into sub-garrisons, which were called central, left, right, anterior, and posterior garrison (*zhongying* 中營, *zuoying* 左營, etc.). This system of purely Chinese professional soldiers was called that of the ‘Green Standards’ (*luying* 綠營; a special pronunciation), and was inherited from the Ming dynasty military system with its local garrisons (*zhenshu* 鎮戍). The total number of Green Standard soldiers throughout the country was about 650,000.<sup>1</sup> During the second Jinchuan war, Green Standard troops were deployed from garrisons in the provinces of Sichuan, Yunnan, Guizhou, Shaanxi, Gansu (subsumed under the abbreviation Shaan-Gan), Hunan and Hubei (abbreviated as Liang-Hu 兩湖, or Hu-Guang 湖廣). The Green Standard troops are commonly called ‘Chinese troops’ (*Hanjun* 漢軍, or *Hanbing* 漢兵), sometimes also *luqi* 綠旗 ‘the Green Banners’.

Apart from this purely Chinese type of military troops, the rulers of the Qing dynasty installed a different, genuinely Manchurian system of professional troops, the so-called Eight Banners (*baqi* 八旗). While the standards of the Chinese troops were green,<sup>2</sup> as the name suggests, the standards of the Eight Banners were yellow, red, white, and blue, in two different types, namely plain (*zheng* 正) and bordered (*xiang* 鑲). Although a great part of the Banner troops were Manchus, there were also eight Chinese Banners, and eight Mongol Banners (adding up to a total of twenty-four Banners, of which the Chinese and Mongol Banners were of much smaller dimensions), but because each person could be shifted from one Banner to another, the ethnic composition of the Banners was often mixed. The name ‘Manchu troops’ (*Manbing* 滿兵) is therefore misleading, because there were also many Chinese and Mongols serving in the Banner troops, and thus it seems better to use the term ‘Banner troops’ instead. While the garrisons of the Green Standard troops were scattered throughout the country, the Banner garrisons were concentrated at certain points of strategic importance. These were, of course, the Capital, where many guard units served to protect the imperial city and the belongings of the imperial family (viz. the Qing state). In Beijing, some elite units equipped with modern weapons, namely muskets and artillery, were garrisoned. Of great importance was further the homeland of the Manchus, the three northeastern provinces (or Three Eastern Provinces, *dong san sheng* 東三省) of Shengjing (later Liaoning), Jilin and Heilongjiang, and some strategic points in the newly conquered far west (the ‘new territories’, *xinjiang* 新疆), like Ili 伊犁, or

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<sup>1</sup> For more information about the Green Standard troops, see Luo (1982).

<sup>2</sup> For the Chinese troops the colour green was used instead of black, the latter being one of the five traditional colours of Chinese cosmology (corresponding to the points of the compass, the annual seasons, etc.). While the Banner troops were accompanied with standards of the more ‘active’ or livelier colours yellow (imperial center), red (south, summer), white (west, autumn) and blue [blue/green, emerald] (east, spring), the Chinese Green Standard troops were allocated the ‘passive’ and ‘non-acting’ colour black (resp. green), which stands for the ordinary people, the subjects of the Manchu emperors.

Xining 西寧 (later Qinghai). In the other provinces, the Banner troops were quite few and concentrated in the provincial capitals or other important places. The Banner garrison in Chengdu, for example, was only 1,638 men strong, 32 of whom were workmen needed for the production of bows and arrows (*gong-jianjiang* 弓箭匠) or iron tools (*tiejiang* 鐵匠).<sup>3</sup> The Green Standard troops in Chengdu, on the other hand, consisted of 6,272 men.<sup>4</sup>

The third type of troops participating in the second Jinchuan campaign were native auxiliary troops (*tubing* 土兵) provided by native kings being loyal to the Qing government. Whenever the rulers of Jinchuan harassed their neighbours, the governor-general of Sichuan had ordered the kings of the region to dispatch a contingent of soldiers to calm down the insubordinate Jinchuan rulers. This kind of troops were not regulars within a standing army, but fighting units consisting of recruits called to the arms to fulfil their obligations towards their village heads and kings. The skill of those native auxiliary troops was therefore not very high (although the Jinchuan warriors were known for their belligerent nature). Sometimes the native auxiliary troops were equipped with weaponry provided by the government of Sichuan, and the structure of their units imitated that of the Green Standard units. The standard equipment of the native auxiliary, nevertheless, were the widespread *niaoqiang* muskets (see Chapter 4.4.1.).

The task to determine the exact number of military personnel who had taken part in the campaign is quite easy. It is slightly more complicated to find out how many soldiers were fighting at the front at what point of time, in other words, how many man-months had been generated in total. This figure will have an important influence on the consumption of food, but also on the number of civilians working for the military. The higher the number of soldiers, the higher the number of labourers must have been.

The first problem to be solved here is to find out, when exactly how many troops were leaving their home garrison, when they arrived in their encampments 'outside the country' (*kouwai* 口外),<sup>5</sup> and when they were led back at the end of the campaign. Soldiers killed in battle could not immediately be replaced by fresh troops from the home garrison. Fighting units were therefore always grouped according to circumstances and often placed under the command of a new high-ranking officer, although it can also be assumed that a leading officer commanded the same troops, supposedly those of his home-garrison, over a long period of time. The standard size of military units (*ding'e* 定額) therefore was to be reached again by

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<sup>3</sup> Added up according to figures in *Baqi tongzhi* 35, p. 625.

<sup>4</sup> Added up according to figures in *Huangchao wenxian tongkao* 187: *Bingkao* 兵考 9, p. 6490.

<sup>5</sup> The terms *kounei* 口內 and *kouwai* 口外 might be simplifications of *guonei* 國內 and *guowai* 國外.

replacing the wounded and killed by new recruits (*xinmubing* 新募兵) or by the supplementary troops (*yuding* 餘丁, *yubing* 餘兵), which otherwise served as personal assistants (*genyi* 跟役, ‘orderlies’).

Wounded soldiers were allowed to pause for some months to regain their full strength. In some cases, wounded high-ranking officers could be taken back to their home-garrison and civilian officials to their home-towns.<sup>6</sup> No exact figures are available telling how many military or civilian officials were transported back, but we can at least try to make some rough estimate.

To begin with, the listing of participating military staff will be presented, as recorded in the *Jinchuan junxu li'an*.<sup>7</sup>

Between QL 36/4 and 36/8 (May – Sep 1771) governor-general Artai dispatched 6,190 native auxiliary troops and 8,415 Green Standard troops from Sichuan. As these detachments were still seen as being within the frame of normal ‘police actions’ and not as troops deployed for a war, they are registered in the files for ‘barbarian affairs’ (*yiwu an* 夷務案), and not in those for military supply (*junxu an* 軍需案). From 36/9 on, the new acting governor-general, Defu (gov. QL 35/10 – QL 36/8 [Nov/Dec 1770 – Sep 1771]), and general Wenfu brought in new troops from Yunnan (actually Capital troops which had participated in the Myanmar campaigns), but only after the catastrophe of Mugom in the summer of QL 38 (1773), general Agui and governor-general Fulehun 富勒渾 (gov. QL 38/6 – QL 41/2 [Jul/Aug 1773 – Mar/Apr 1776]) had dispatched more elite Banner troops from Beijing. In total, troops from fourteen garrisons of different provinces were dispatched, which, including the auxiliary troops provided by eighteen native kings, amounted to a total number of 129,500 men (*Man-Han-tu bing* 滿漢土兵). Of all those 14,731 were killed, i. e. 11.4 per cent, a figure which will be discussed later.<sup>8</sup>

The following number of soldiers is said to have taken part at the beginning of the campaign:<sup>9</sup>

<i>rank</i>	<i>number</i>
<i>zongdu</i>	1
<i>tidu</i>	1
<i>zongbing</i>	2
<i>canjiang</i>	2
<i>youji</i>	6
<i>dusi</i>	5
<i>shoubei</i>	8

<sup>6</sup> Compare *Hubu junxu zeli* 6, fol. 6b-8a.

<sup>7</sup> *Jinchuan junxu li'an: Zonglüe*, fol. 2a-3b; 1, fol. 1a-2b, 7a-15b.

<sup>8</sup> Figures according to *Jinchuan junxu li'an: Zonglüe*, fol. 2a-3b.

<sup>9</sup> *Jinchuan junxu li'an* 1, fol. 1a-2b. From the rank of *shoubei* on, the names of the officers are listed.

Interestingly, also names of common soldiers are sometimes listed, in the shape ‘Common soldiers: NN etc., 8,000 men’. Concerning the ranks of soldiers, see Appendix 1.

### 3. THE COST OF STAFF

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<i>qianzong</i> and <i>bazong</i>	90
<i>waiwei</i>	59
common soldiers ( <i>bingding</i> )	8,241
<i>total</i>	8,415
native auxiliaries ( <i>tu bianbing</i> )	6,190

□ 3.1 Table: The first detachment of the war in the summer of QL 36 (1771)

Furthermore, 3,960 long distance porters (*changfu* 長夫) were dispatched, probably supplementary troops or private assistants. Of these soldiers, who came purely from Green Standard garrisons, the following numbers were dispatched to the particular routes (see Map 2.5):

<i>route</i>	<i>imperial</i>	<i>native auxiliaries</i>
western	3,374	1,204
southern	4,505	2,422
northern	474	764
sum	8,353	4,390

□ 3.2 Table: The first detachments on different routes in the summer of QL 36 (1771)

Comparing the figures of this table with those of Table 3.1, it can be seen that the number of Chinese soldiers is quite exact (when adding the officers to the common soldiers), while almost 2,000 native auxiliary troops are missing in Table 3.2. These might have been dispatched to other locations or were meant to serve to protect the *hinterland*. Yet there is a third figure for the Green Standard troops some pages later,<sup>10</sup> which talks of 8,415 troops listed in the files of the ‘barbarian affairs’. This is the exact sum of all soldiers and officers, up to the governor-general, but without the native auxiliaries.

Problems with exact figures will continue to crop up through the whole research. While the total figure for all soldiers participating, including all different types of troops, was said to be 129,500 men in the introduction, the *Jinchuan junxu li'an* confronts the modern scholar with the figure of 145,126 men a few pages further on.<sup>11</sup> Of these, 47,795 men returned to their garrisons (in other provinces than Sichuan) at the end of the campaign, and more than 40,000 were wounded, or ill or had deserted. Over 27,000 men out of the total number were native auxiliaries. In order to resolve the question of diverging figures, we will have a closer look at the particular units deployed to Jinchuan.

Capital Banner troops being transferred from Yunnan to Jinchuan:<sup>12</sup>

<i>rank</i>	<i>number</i>
<i>fujianjun</i>	2
civilian officials from the Capital ( <i>jingyuan</i> )	5

<sup>10</sup> *Jinchuan junxu li'an* 1, fol. 8a.

<sup>11</sup> *Jinchuan junxu li'an* 1, fol. 7a.

<sup>12</sup> These troops had participated in the Myanmar campaign shortly before and were still garrisoned in Yongchang (modern Baoshan 保山) in the Yunnan borderland.

### 3. THE COST OF STAFF

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consultant ( <i>canzan</i> )	1
<i>fudutong</i>	2
<i>shiwei</i>	13
<i>canling</i>	6
<i>yizhang canling guan</i> <sup>a)</sup>	23
<i>qianfeng xiaoji</i>	25
<i>cuirassiers (jiabing)</i>	186
<i>sum</i>	263

☐ 3.3 Table: Capital Banner troops from Yunnan

<sup>a)</sup>The *Jinchuan junxu li'an* writes '93', which is obviously a clerical error for '23', when considering the supposed total sum of 263.

While the first detachment of 8,415 Green Standard troops from Sichuan was still listed in the files of the 'barbarian affairs', the next detachments were already to be found among the documents for military affairs (*junxu an*), 18,421 men in the old files (*jiuan*, including the 8,415 men from summer QL 36 [1771]) being compiled before QL 38/7/1 (Aug 18, 1773), and 6,906 in the new files (*xin'an*) being recorded after that date. In total, Sichuan province dispatched the following numbers of Green Standard soldiers:

<i>rank</i>	<i>number</i>
<i>tidu</i>	2
<i>zongbing</i>	2
<i>fujian</i>	6
<i>canjiang</i>	7
<i>youji</i>	11
<i>dusi</i>	16
<i>shoubei</i>	19
<i>qianzong</i> and <i>bazong</i>	141
<i>waiwei</i>	154
<i>common soldiers (bingding)</i>	24,909
<i>sum</i>	25,267

☐ 3.4 Table: Green Standard troops from Sichuan

While the sum of the above-listed soldiers is 25,267, that of the above-mentioned troops as listed in the old and the new files, 25,327 men, is somewhat higher (by exactly 60) and gives a hint that somewhere, like in the Yunnan Banner case, a clerical error might have been involved.

The next contingent was the Banner troops from Chengdu. In two batches, 1,444 Chengdu Banner troops were dispatched before QL 38/7/1 (Aug 18, 1773), and 318 men later. This makes a total of 1,762 troops.

<i>rank</i>	<i>number</i>
<i>fudutong</i>	1
<i>xieling</i>	2
<i>zuoling</i>	8
<i>fangyu</i>	14
<i>xiaojixiao</i>	14
clerks ( <i>bithesi</i> )	1
<i>cuirassiers (jiabing)</i>	1,722
<i>sum</i>	1,762

☐ 3.5 Table: Banner troops from Chengdu

Of greatest importance were the elite Banner troops from ‘east of the Capital’ (*jingdong* 京東). The old files include only 280 elite Banner troops, while the largest part of the 6,497 men are included in the new files, after the Mugom catastrophe, when the emperor had dispatched elite troops from the Firearms Brigade (*huoqiying*), the Scouting Brigade (*jianruiying*), and troops from Jilin and Heilongjiang. The sum of all persons, nevertheless, is 28 people higher than the given figure of 6,497. One person coming from those Banner troops is Fulong'an, whom the *Jinchuan junxu li'an* mentions separately at the end of the list.

<i>rank</i>	<i>number</i>
minister ( <i>shangshu</i> )	1
consultant ( <i>canzan</i> )	2
civilian officials ( <i>yuanwailang</i> )	1
readers-in-waiting ( <i>shidu</i> )	3
ministerial secretaries ( <i>zhushi</i> )	1
clerks ( <i>bithesi</i> )	5
<i>tongling</i>	4
<i>sanzhi dachen</i>	1
<i>fudutong-shilang</i>	1
<i>fudutong</i>	10
<i>tidu lingdui</i>	2
<i>zongbing</i>	3
<i>canling</i>	6
<i>fujian</i>	2
<i>canling [=canjiang]</i>	8
<i>toudeng shiwei</i>	7
<i>zongguan</i>	3
<i>youji</i>	10
<i>xieling</i>	6
<i>yuqian lingdui, er-, sandeng shiwei</i>	33
<i>yingzong</i>	1
<i>dusi</i>	8
<i>canling and fucanling</i>	36
<i>shoubei</i>	13
<i>lanling shiwei</i>	8
<i>bujunwei [=bujunxiao]</i>	1
<i>zuoling</i>	40
<i>qianfengxiao</i>	39
<i>hujunxiao</i>	52
<i>xiaojixiao</i>	48
<i>fangyu</i>	13
<i>jiduwei</i>	3
<i>yunjiwei</i>	14
<i>qingche duwei</i>	1
<i>yizhang</i>	17
<i>cuirassiers (jiabing)</i>	6,118
<i>sum</i>	6,521

□ 3.6 Table: Banner troops from the Capital and the northeastern provinces

The important garrison of Jingzhou in the province of Hubei supplied 2,202 troops, who were all dispatched after mid-QL 38 (1773). Summing up the different officers and common soldiers results in 140 fewer men than the number just mentioned.

<i>rank</i>	<i>number</i>
<i>jiangjun</i>	1
<i>fudutong</i>	1
<i>xieling</i>	3
<i>yingzhang [=yingzong]</i>	1
<i>canling</i>	9
<i>zuoling</i>	17
clerks ( <i>bithesi</i> )	2
<i>jiyanggin [=zuoling]</i>	8
<i>qianfeng(xiao)</i>	8
<i>xiaojixiao</i>	32
cuirassiers ( <i>jiabing</i> )	1,980
<i>sum</i>	2,062

□ 3.7 Table: Banner troops from the Jingzhou garrison

A last important Banner garrison was Xi'an in Shaanxi, which provided 2,041 troops dispatched after the Mugom disaster. These figures confront the reader with the problem of 1,000 people missing. The documents in the *Pingding Liang Jinchuan fanglüe* nevertheless give evidence that in fact 2,000 troops were dispatched from Xi'an to Jinchuan.<sup>13</sup> The listing in the table below (Table 3.8) is therefore not complete and probably only represents part of the Xi'an troops. For calculating the costs of all troops, we will therefore double the respective figures, an operation which results in the exact figure of the total number of dispatched Xi'an Banner troops.

<i>rank</i>	<i>number</i>	<i>number doubled</i>
<i>fudutong</i>	1	2
<i>xieling</i>	2	4
<i>canling</i>	2	4
<i>zuoling</i>	2	4
<i>fangyu</i>	8	16
<i>xiaojixiao</i>	8	16
cuirassiers ( <i>jiabing</i> )	997	1,994
<i>sum</i>	1,020	2,040

□ 3.8 Table: Banner troops from the Xi'an garrison

By far the largest part of the imperial troops engaged in Jinchuan were Green Standard troops. Although almost a quarter of them came from the province of Sichuan, large contingents were dispatched from neighbouring provinces. 15,388 troops came from the province of Guizhou, 5,118 of whom were dispatched (in three contingents, *san qi* 三起) before QL 38/7/1 (Aug 18, 1773), and 10,270 after that date (in four contingents).

<sup>13</sup> *Pingding Liang Jinchuan fanglüe* 65, fol. 24a (QL 38/7/dingyou); 68, fol. 8a (QL 38/7/renzi); 71, fol. 7a-7b (QL 38/8/gengwu).



### 3. THE COST OF STAFF

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<i>rank</i>	<i>number</i>
<i>zongbing</i>	3
<i>fujian</i>	6
<i>canjiang</i>	3
<i>youji</i>	14
<i>dusi</i>	6
<i>shoubei</i>	23
<i>qianzong</i> and <i>bazong</i>	165
<i>waiwei</i>	133
common soldiers ( <i>bingding</i> )	15,035
	<i>sum</i> 15,388

☐ 3.9 Table: Green Standard troops from Guizhou

From various Green Standard garrisons in the two provinces of Shaanxi and Gansu (Shaan-Gan), 36,643 soldiers, and several thousand supplementary soldiers (*yubing*, *yuding*) were dispatched. In six contingents, 22,493 regular men and 7,500 supplementary troops had been deployed before QL 38/7/1 (Aug 18, 1773), and 6,650 regular troops after that date, in two contingents.

<i>rank</i>	<i>number</i>
<i>tidu</i>	1
<i>zongbing</i>	6
<i>fujian</i>	5
<i>canjiang</i>	8
<i>youji</i>	10
<i>dusi</i>	21
<i>shoubei</i>	20
<i>qianzong</i> and <i>bazong</i>	282
<i>waiwei</i>	290
common soldiers ( <i>bingding</i> )	36,000
	<i>sum</i> 36,643

☐ 3.10 Table: Green Standard troops from Shaan-Gan

Hubei and Hunan (Liang-Hu) provided 15,940 troops, a number out of which 5,091 regular troops and 1,700 supplementary troops were dispatched before QL 38/7/1 (Aug 18, 1773), and 8,149 regular and 1,000 supplementary troops after that date. This makes for a total of 2,700 supplementary troops and 13,240 regular troops. Although the figures of the Shaan-Gan and Liang-Hu are correct, the total figure of Shaan-Gan, as presented in the *Jinchuan junxu li'an*, includes the supplementary troops, but that of Liang-Hu does not, another hint that the authors of either the underlying documents in the archives or the compilers of the *Jinchuan junxu li'an*, did not work very punctiliously.<sup>14</sup>

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<sup>14</sup> There were also supplementary soldiers from Sichuan, yet exact numbers are not known. The ratio, according to the precedents, was 30 supplementary soldiers for 100 standard troops. *Hubu junxu zeli* 3, fol. 4a; *Jinchuan junxu li'an* 2, fol. 28b-29a. In practice, four cavalymen and five infantrymen were supported by one supplementary soldier (25 resp. 20 per cent of the standard troops), according to the precedents of the western campaigns. This would mean that of the 25,000 Green Standard troops from Sichuan, 8,833 supplementary soldiers (alternatively personal assistants, *genyi*) were recruited.

### 3. THE COST OF STAFF

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<i>rank</i>	<i>number</i>
<i>zongbing</i>	2
<i>fujian</i>	3
<i>canjiang</i>	10
<i>youji</i>	15
<i>dusi</i>	12
<i>shoubei</i>	16
<i>qianzong</i> and <i>bazong</i>	139
<i>waiwei</i>	52
common soldiers ( <i>bingding</i> )	13,000
<i>intermediate sum</i>	13,249
supplementary soldiers ( <i>yuding</i> )	2,700
<i>total sum</i>	15,949

□ 3.11 Table: Green Standard troops from Liang-Hu

From Yunnan province finally, 8,097 Green Standard troops were dispatched, 3,036 being listed in the pre-Mugom files, and 5,061 in the new files.

<i>rank</i>	<i>number</i>
<i>fujian</i>	3
<i>canjiang</i>	3
<i>youji</i>	1
<i>dusi</i>	3
<i>shoubei</i>	7
<i>qianzong</i> and <i>bazong</i>	60
<i>waiwei</i>	20
common soldiers ( <i>bingding</i> )	8,000
<i>sum</i>	8,097

□ 3.12 Table: Green Standard troops from Yunnan

Except the Banner troops and the Green Standard soldiers, there were also many native auxiliary troops dispatched by various native kings. Their number was as high as 29,597 and included officers (*tubian* 土弁), soldiers (*tubing*), and recruits from the military colonies (*tunlian* 屯練, probably from Djandui or Dzagu). 6,100 of these troops were included in the old 'barbarian affairs' files, 20,348 in the old files, and 3,149 in the new, post-Mugom files. The following native kings dispatched troops:<sup>15</sup>

<i>country/origin</i>	<i>number of auxiliary soldiers</i>
Litang 裡塘	500
Mingdjeng	1,796
Batang 巴塘	200
recruits from the colonies ( <i>tunlian</i> 屯練)	3,514
Wasi	933
Wori (Ekshi)	196
Djoktsai	1,305
Sunggang	1,305
Somo	1,390
Muping	1,156
Damba	120

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<sup>15</sup> If the figures in Table 3.13 are correct, is not known. The important country of Dzagu, for example, is missing in this list, whose kings has dispatched several thousand soldiers (see for example *Pingding Liang Jinchuan fanglüe* 5, fol. 19a [QL 35/8/gengchen]; 12, fol. 19a [QL 36/12/bingzi]; 49, fol. 23a [QL 38/1/yichou]).

### 3. THE COST OF STAFF

San'aba 三阿壩	967
Chosgyab	3,647
Gebshidza	1,503
Hor-Djangu	1,407
Dertet 德爾特忒 (sl. Derget)	500
Lumi-Djaba 魯密渣壩	142
Badi	1,700
Bawang	1,700
small countries in the sub-prefecture of Songpan	967
defectors to Muping	4,293
Hannyu 漢牛 (also written 汗牛)	356
<i>sum</i>	29,597

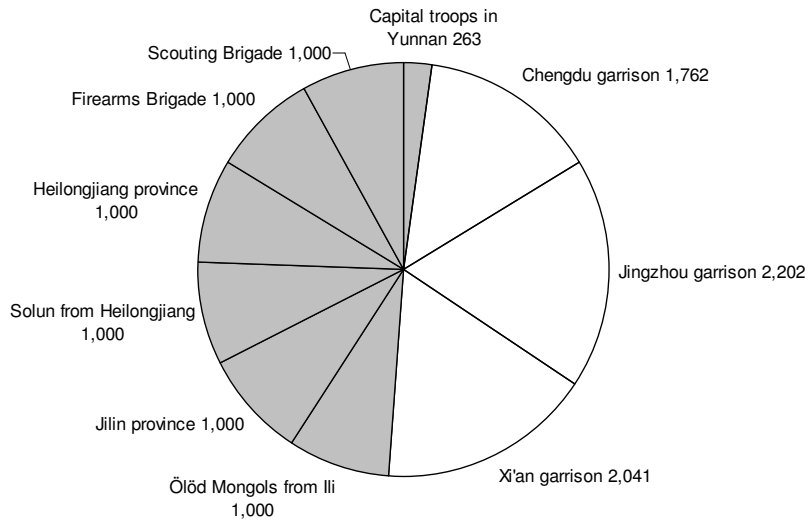
□ 3.13 Table: Auxiliary troops provided by the native kings

For additional information about the origin of the soldiers and the costs that had to be distributed to their home garrisons and the respective provinces, we will resume how many soldiers came from which province.

<i>origin</i>	<i>number</i>
<b>Banner troops</b>	
Capital troops from Yunnan	263
Chengdu garrison	1,762
Capital and northeastern provinces	6,521
Jingzhou garrison	2,202
Xi'an garrison	2,041
<i>sum</i>	12,789
<b>Green Standard troops</b>	
Sichuan	25,267
Guizhou	15,388
Shaan-Gan	36,643
Liang-Hu	15,949
Yunnan	8,097
<i>sum</i>	101,344
<i>sum Banner and Green Standard troops</i>	114,133
<b>Native auxiliaries (tubing)</b>	29,597
<i>total sum</i>	143,730

□ 3.14 Table: Types, origin and proportions of the imperial troops

The intermediate sum of 114,133 is 15,367 men lower than the 129,500 men mentioned in the introduction (*zonglüe*) of the *Jinchuan junxu li'an*. Yet when adding the figure of 29,597 native auxiliary troops to the 114,133 Banner and Green Standard troops, we come to a total figure of 143,730 men, which is only 1,396 men less than the documented total number of 145,126 troops. This is the total number of participating soldiers of all types of troops, including the native auxiliary troops and the 10,200 supplementary troops (*yuding*) from Shaan-Gan and Liang-Hu. For the following calculations, the figures of Table 3.14 will serve as a basis.



□ 3.15 Diagram: Banner troops participating in the second Jinchuan campaign (elite troops in grey)

Of the 12,789 Banner troops which took part in the war, more than half came from the two elite units in the Capital and the provinces of Jilin and Heilongjiang. The exact figures are the following: The two elite units in Beijing, the Scouting Brigade and the Firearms Brigade, provided

1,000 troops each.<sup>16</sup> The order to commit 4,000 other troops was issued in QL 38/6/23 (Aug 11, 1773).<sup>17</sup> Although it was clear from the beginning that the Firearms Brigade and the Scouting Brigade should provide 1,000 men each, it was considered to dispatch 1,000 Öläd Mongols (Oirats) from Ili,<sup>18</sup> and 1,000 troops from Heilongjiang,<sup>19</sup> which do not appear in all statements.<sup>20</sup>

But in the end, it has to be concluded that more than 1,000 troops came from various garrisons in Jilin province, 1,000 troops were provided from among the Solun (Ewenke) banners in Heilongjiang,<sup>21</sup> general Shuhede lead his Öläd contingent of about 1,000 men from Ili to Jinchuan,<sup>22</sup> and 1,000 other troops must have come from other garrisons in

<sup>16</sup> The Firearms Brigade, founded in KX 30 (1691) as Musketeer Brigade (*niaoqiang hujun* 鳥槍護軍), was expanded and modernized in the early Qianlong period. In QL 36 (1771), just at the beginning of the second Jinchuan war, the number of trainee soldiers (*yangyubing* 養育兵) of both the Firearms and the Scouting Brigade, was raised from 100 to 1,000 men. The size of professional troops was 2,000 in the Firearms Brigade (from QL 33 [1768], probably without officers; see *Huangchao wenxian tongkao* 181: *Bingkao* 3, pp. 6419-6420), and 1,000 vanguard troops (*qianfeng*) and 1,000 deputy vanguard troops (*weishu qianfeng*) in the Scouting Brigade. Compare *Baqi tongzhi* 34, pp. 602-603.

<sup>17</sup> *Qingshilu: Gaozong shilu* 937, fol. 20a-22b (QL 38/6/xinhai), 33b (QL 38/6/guichou).

<sup>18</sup> *Pingding Liang Jinchuan fanglüe* 63, fol. 16b (QL 38/6/renzi).

<sup>19</sup> *Pingding Liang Jinchuan fanglüe* 63, fol. 12a (QL 38/6/xinhai).

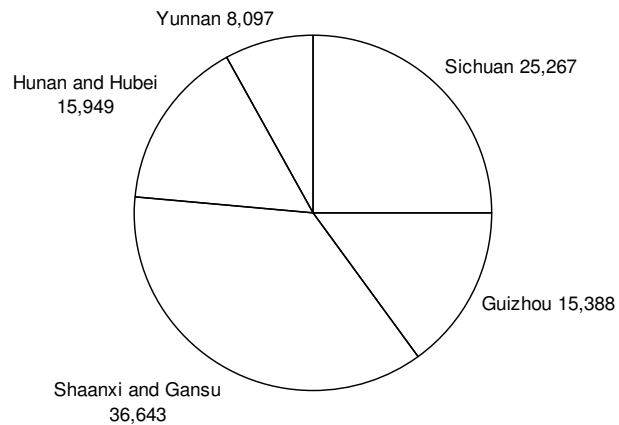
<sup>20</sup> See for example, *Pingding Liang Jinchuan fanglüe* 69, fol. 17a-18a (QL 38/7/gengshen); 73, fol. 2a (QL 38/8/jiashen), where the emperor generally speaks of 2,000 troops from Jilin and the Solun units, each, where 'Solun' stands for Heilongjiang in general.

<sup>21</sup> The Solun unit consisted of 2,000 men (Ewenke, Daghur, and Oroqen), which means that it could also have been dispatched as a whole. But as the emperor wanted to field elite troops with enough firepower, musketeer contingents from elsewhere in the province could also have been dispatched. Compare *Baqi tongzhi* 35, pp. 615-617.

<sup>22</sup> *Pingding Liang Jinchuan fanglüe* 41, fol. 7a (QL 37/10/dinghai); 66, fol. 3b (QL 38/7/gengzi). Lai (1984) does not talk at all about the Öläd troops in his specification of the march routes through the provinces, pp. 116-125, although he signalizes in his map (Map 1) that there were indeed troops coming from Ili.

Heilongjiang province, under the command of Wosheng'e 倭昇額.<sup>23</sup> Although it is known that Ölöd troops took part in the campaign,<sup>24</sup> the *Jinchuan junxu li'an* does not list any particular number of Ölöd troops from Ili—which actually does not belong to the three Eastern Provinces.

2,000 other troops from the Capital should have been dispatched earlier, in QL 37/2 (Mar 1772),<sup>25</sup> but were finally replaced by 5,000 Green Standard troops from Shaanxi and Gansu, because their home garrison was too far away from the war theatre as that the elite troops could be ready for use, and because Banner troops were much costlier than Green Standard troops.<sup>26</sup>



3.16 Diagram: Green Standard troops participating in the second Jinchuan campaign

The rest of the Banner troops, in almost equal proportions of about 2,000 men, came from the Banner garrisons in Chengdu, Jingzhou, and Xi'an (Diagram 3.15).

Concerning the figures for the Green Standard troops (Diagram 3.16), it becomes evident that Sichuan itself provided 25 per cent—one fourth—of all Green Standard troops, while the most part of the 'Chinese' military units came from neighbouring provinces. Yunnan, whose troops had taken part in the Myanmar campaigns, did only procure a smaller number of troops, while the main part came from the area of Shaanxi and Gansu. After the territories in the west and Tibet had been largely pacified, the units of those two provinces could be freely used for the Jinchuan campaign. The rest of the troops came from the neighbouring provinces of Hubei, Hunan and Guizhou, whose troops did not only have to march a distance, which was not too long, but had also experience in fighting insurgent native tribes. Troops of those provinces were all experienced combat units and were permanently deployed for the numerous wars which the Qing emperors waged. It was rarely seen that troops from eastern

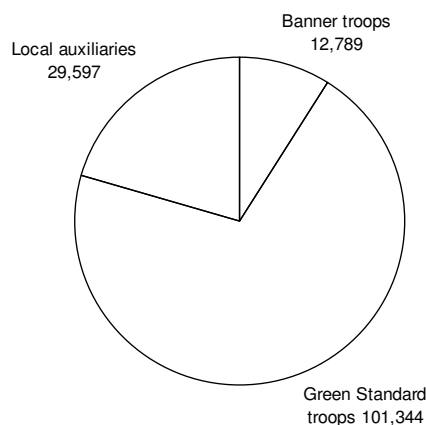
<sup>23</sup> *Pingding Liang Jinchuan fanglüe* 63, fol. 13b (QL 38/6/xinhai).

<sup>24</sup> For example, *Pingding Liang Jinchuan fanglüe* 38, fol. 16a-16b (QL 37/9/dingwei), naming Dersenbao, Purpu and Ulus 玉魯斯. Idem 41, fol. 7a (QL 37/10/dinghai) names Shuhede, who was general of Ili. Idem 43, fol. 6b (QL 37/11/yimao). Shuhede was ordered to choose 1,000 brave Ölöd troops to be sent to Sichuan under the command of Chengguo 成果. Idem 63, fol. 15b (QL 38/6/xinhai).

<sup>25</sup> Although Lai (1984), p. 116, writes that the Capital troops should be dispatched in QL 36/12 (Jan 1772), any considerations in the documents are only reflected in 37/2 (Mar 1772), when the emperor thought about fielding troops from Beijing, but then decided not to dispatch Capital troops. *Qingshilu: Gaozong shilu* 902, fol. 9b-11a (QL 37/2/dingmao).

<sup>26</sup> *Qingshilu: Gaozong shilu* 903, fol. 18b-19a (QL 37/2/dinghai); 909, fol. 14a-14b (QL 37/5/wuwu).

provinces like Jiangxi, Jiangsu, or Zhejiang were used for campaigns. The heartland of the empire should not be deprived of its troops.



□ 3.17 Diagram: Proportions of Banner, Green Standard and native auxiliary troops participating in the second Jinchuan campaign

A third diagram (Diagram 3.17) will elucidate the proportion of Banner troops, compared to Green Standard troops and units of native auxiliary troops. It can be seen that 70 per cent of the troops were Green Standard troops, and that their units took over the main part of the fighting, at least in pure numbers. Yet the combat strength of the Banner units, which account for only 8

per cent of all troops, can not be neglected. While many Green Standard troops were quite poorly equipped, a musket was—besides the traditional bow and arrow—standard equipment of the elite Banner troops. The native auxiliary troops, amounting 22 per cent of all troops, can almost be neglected in respect to their effectiveness. The official documents permanently speak of their uselessness and cowardliness, and it seems to be that the native auxiliaries only served as a kind of ‘cannon fodder’ in the first front. The relation between Banner troops, Green Standard troops and native auxiliaries was thus roughly about 1 : 10 : 3.

In order to find out how much money the troops cost the Qing government, the relation between the different ranks of officers has to be determined. Although compared to the number of common soldiers the number of officers was very small, their income was much higher and has therefore to be taken into consideration when talking about their baggage pay and their monthly salt-and-vegetable pay. We will start with the easier part of that work, the proportions of the Green Standard troops ranks, which are far less than that of the different Banner ranks. The proportions are the following:

rank	rank grading	number	percentage
<i>tidu</i>	1b	3	0.003
<i>zongbing</i>	2a	13	0.013
<i>fujian</i>	2b	23	0.023
<i>canjiang</i>	3a	31	0.031
<i>youji</i>	3b	51	0.050
<i>dusi</i>	4a	58	0.057
<i>shoubei</i>	5a	85	0.084
<i>qianzong</i> and <i>bazong</i>	6b-7a	787	0.777
<i>waiwei</i>	8a	649	0.640
common soldiers ( <i>bingding</i> )	--	99,644	98.323
	<i>sum</i>	101,344	100.000

□ 3.18 Table: Proportions of ranks within all Green Standard troops

The proportion between soldiers and officers is quite extraordinary: Almost 99 per cent of all military persons were no officers (or officials). The same applies to the Banner troops (Table 3.19). Surprisingly, among the Banner troops there are some officers with the rank of Green Banner units serving in Banner garrisons (*zongbing*, *fujiang*, *youji*, *dusi*, *shoubei*). Yet if looking at the regulations of the *Junxu zeli* it becomes clear that such a situation was quite common during a war, when officers killed (or even whole units dissolved) they had to be replaced by officers from other units, wherever available. It happened frequently that officers of lower rank, like ‘corporals’ or ‘sergeants’ (*waiwei*, meaning ‘detached’), were serving in a higher position (in this case, *bazong* or *qianzong*). Officers from Green Standard units, when serving in a Banner unit, were given the pay of the corresponding Banner position, and would enjoy all preferential treatment, which a Banner officer had the right to be given. The same applies to soldiers from the native auxiliary troops, which were serving under the command of a Green Standard officer: The native auxiliary troops, soldiers and officers alike, were then treated as Green Standard troops.<sup>27</sup> A small number of civilian officials are also included into the following calculation. The respective persons were obviously dispatched to the front as members of a certain garrison in the Capital, and were therefore members of the units dispatched.

<i>rank</i>	<i>rank grading</i>	<i>number</i>	<i>percentage</i>
minister ( <i>shangshu</i> )	1b	1	0.008
consultant ( <i>canzan</i> )	1b	3	0.023
civilian officials ( <i>wenyuan yuanwai</i> )	1b	1	0.008
<i>jiangjun</i>	1b	1	0.008
<i>tidu lingdui</i>	1b	2	0.016
Capital officials ( <i>jingyuan</i> )	2	5	0.039
<i>tongling</i>	2a	4	0.031
<i>zongbing</i>	2a	3	0.023
<i>fudutong</i>	2a	17	0.133
<i>sanzhi dachen</i>	2b	1	0.008
<i>fujiang</i>	2b	4	0.031
<i>yizhang</i>	3a	17	0.133
<i>yingzong</i>	3a	2	0.016
<i>canling</i>	3a	29	0.227
<i>canling [=canjiang]</i>	3a	8	0.063
<i>toudeng shiwei</i>	3a	7	0.055
<i>zongguan</i>	3a	3	0.023
<i>canling and fucanling</i>	3a-3b	55	0.430
<i>youji</i>	3b	10	0.078
<i>xieling</i>	3b	15	0.117
<i>dusi</i>	4a	8	0.063
<i>zuoling</i>	4a	69	0.540
<i>yuqian lingdui, er-, sandeng shiwei</i>	4a-5a	46	0.360
<i>shoubei</i>	5a	13	0.102
<i>qingche duwei</i>	5a	1	0.008

<sup>27</sup> *Hubu junxu zeli* 1, fol. 4b-5a; 3, fol. 4b-5b.

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<i>fangyu</i>	5a	43	0.336
<i>jiyanggin</i>	5a	8	0.063
<i>jiduwei</i>	5b	3	0.023
<i>yunjiwei</i>	5b	14	0.109
<i>bujunwei [=bujunxiao]</i>	5b	1	0.008
<i>lanling shiwei</i>	6a	8	0.063
<i>qianfengxiao</i>	6a	72	0.563
<i>hujunxiao</i>	6a	52	0.407
<i>xiaojixiao</i>	6a	110	0.860
readers-in-waiting ( <i>shidu</i> )	6a	3	0.023
ministerial secretaries ( <i>zhushi</i> )	6a	1	0.008
clerks ( <i>bithesi</i> )	7-9	8	0.063
cuirassiers ( <i>jiabing</i> )	--	12,141	94.933
<i>sum</i>		12,789	100.000

□ 3.19 Table: Proportions of ranks within all Banner troops

We do not know the exact distribution of ranks among the native auxiliary officers, but it is known that the local village heads were bestowed the ranks of Green Standard officers. We therefore assume that the proportion of ranks was largely equal to that of the Green Standard soldiers and officers (with a rate of 2 : 98 for officers: soldiers), with the exception that for the higher ranks there is not such a sophisticated distinction as for the Green Standard officers. The names of officer ranks for the native auxiliaries can be known from the *Junxu zeli*, and from other documents. Our basis for the calculation of personnel costs for the native auxiliary troops is displayed in Table 3.20.

<i>rank</i>	<i>rank grading</i>	<i>number</i>	<i>percentage</i>
<i>tu fujiang</i>	2b	8	0.027
<i>tu canjiang</i>	3a	10	0.036
<i>tu youji</i>	3b	18	0.061
<i>tu dusi</i>	4a	20	0.069
<i>tu shoubei</i>	5a	30	0.101
<i>tu qianzong</i> and <i>tu bazong</i>	6b-7a	277	0.935
<i>tu waiwei</i>	8a	228	0.771
common soldiers ( <i>tubing</i> )	--	26,006	98.000
<i>sum</i>		29,597	100.000

□ 3.20 Table: Assumed proportions of ranks within all native auxiliary troops

After having created those basic data, we will come to an exact calculation for the personnel cost for the military participating in the second Jinchuan campaign.

#### 3.1.1. Baggage Pay

The Chinese military system of the early and high Qing period was that of a group of professionals which were paid their salary (*fengxiang* 俸餉) in peacetime and during war. When talking about the war time expenditure, we therefore cannot regard the regular salary of the soldiers as money spent for the military campaign. Yet we have to have a look at the regular salary of the military in order to calculate a certain amount of money that was paid at



the beginning of each campaign. The so-called march-and-baggage pay (*xingzhuangyin* 行裝銀) served to support the soldiers when preparing their luggage and to care for all things necessary when leaving the garrison and going out to a campaign (*chuzheng* 出征). This baggage pay was a stipend given according to the regular annual salary of officers, and was a one-time pay, which should enable the soldiers to make ready for deployment. Of course, a part of the money was also to be used to nourish the family which was left behind. ‘Corporals’ (*waiwei*, *lingcui*) and common soldiers were given a fixed sum of money.

This money was first meant to be a surplus stipend by the emperor, which had not to be given back (*shang ji* 賞給), but from the Kangxi reign on the *xingzhuang* stipend was intended to be a loan (*jie zhi* 借支) for the soldiers, although it was often the case that after the campaign, the emperor dispensed with the back payment. In some exceptional cases, when a campaign was lingering on for a long time, the *xingzhuang* stipend could be paid for a second time (*fu xing jia shang* 復行加賞).

Until the final edition of the *Junzu zeli* was compiled in QL 49 (1784), the practice during the various campaigns was very different, and the amounts of the stipends could exhibit large disparities. High officers could get a pay varying from one to two years’ salaries, or only a stipend 100 of *liang*, and it was not prescribed if the money was donated or only given on loan. Unfortunately the commentary to the *Junxu zeli* does not explicitly say which regulations were in force for the second Jinchuan campaign (‘the Sichuan precedents’, *Sichuan li* 四川例), so that we, for the time being, will rely on the new regulations as issued in the *Junxu zeli*, which was compiled only eight years after the termination of the second Jinchuan campaign, a fact which leads to the assumption that the Jinchuan precedents—a war which was waged for a very long time and therefore gave enough impetus to learn from the practice—must have played an important role for the suggestions made by the compilers of the *Junxu zeli*. We will later come to the concrete practice of baggage pay during the second Jinchuan war, which was very different for troops from different provinces. Except that the different amounts of baggage pay, which were granted to the different types of civilian and military staff (Banner troops from the Capital, civilian officials from the central government and the local governments, Banner troops from the northeast, from other provinces, Mongol non-Banner troops, Green Standard troops, and native auxiliary troops), the greatest difference is that the money given to Banner troops was intended to be a gratification, while the *xingzhuangyin* for Green Standard troops should partly be granted for free, and partly be given on loan. Furthermore, the Green Standard troops were not given any baggage pay for

their personal servants or assistants (*genyi*). In this chapter, expenditure for baggage pay for the various kinds of troops shall be calculated. The respective data are directly derived from the *Junxu zeli* regulations.<sup>28</sup>

Let us begin with the easier part of the calculation, i. e. with the Green Standard troops. Officers received a two years' salary, while 'corporals' and common soldiers were given a fixed pay (see Table 3.22).<sup>29</sup> The salary upon which the baggage pay was based, was only the nominal salary (*fengxiang*) of the officers and not their actual annual income, which was much higher, when adding the so-called firewood allowance (*xinyin* 薪銀), vegetable-candle-and-coal allowance (*shucaizhutanyin* 蔬菜燭炭銀), and the sealpaste-and-paper allowance (*xinhongzhizhangyin* 心紅紙張銀). As from QL 18 (1753) all pay for military officials was given according to rank grading (*pinzhi* 品質). Except those items which were nominally intended to be used for daily life and to manage the office, military officials, like civilian officials, were given a so-called anti-corruption allowance (*yanglianyin* 養廉銀 'pay nourishing incorruptibility'), which was intended to prevent corruption of officials caused by inadequate income. We will give just one example to demonstrate the ratios of all those sources of official income compared to the pure nominal salary of a *tidu* (provincial military commander).

<i>type of official income</i>	<i>amount [liang]</i>	<i>percentage</i>
nominal salary	82	3
firewood allowance	144	6
vegetable-candle-and-coal allowance	180	7
sealpaste-and-paper allowance	200	7
anti-corruption allowance	2,000	77

□ 3.21 Table: Income of a provincial military governor in peacetime

Source: Luo (1984), pp. 342-343.

The peace 'price' of Banner troops for example can be found out through a calculation by an unknown official who estimated that 500 Banner troops cost 54,000 *liang* annually, according to other figures, 1,000 men cost 84,800 *liang* annually, which means, between 85 and 108 *liang*.<sup>30</sup>

Compared to this income situation, the gratification, which is given as baggage pay when preparing for a military campaign, is indeed not very high. It therefore will be interesting to calculate how much *xingzhuangyin* the Qing state had to spend for the Green Standard troops who participated in the second Jinchuan war. Yet the following circumstances might be

<sup>28</sup> *Hubu junxu zeli* 1. The data are also included in Lai (1984), pp. 395-399, and Chen (1992), pp. 50-51, 118-119.

<sup>29</sup> Annual pay in accordance with Luo (1984), pp. 342, 359; Huang/Chen (2005), pp. 632-633.

<sup>30</sup> *Jinchuan dang* QL 37/IV/00107 (QL 37/10/16).

assumed: Firstly, the 8,000 troops deployed during the ‘police’ action within the framework of the ‘barbarian affairs’ during the summer of QL 36 (1771) did indeed receive their baggage pay. Secondly, there was no multiple baggage pay during the second Jinchuan campaign for any of the troops deployed. And thirdly, the money provided on loan to the Green Standard troops was finally waived and had not to be paid back. The first assumption can be backed by the fact that the troops left the territory ‘inside the country’ (*kounei* 口内 or *neidi* 內地) in order to fight outside the country (*kouwai*), for which reason the term ‘police action’ ceases to be adequate and has actually to be replaced by the term *chuzheng* ‘to take off for campaigning’. The *Jinchuan junxu li'an* writes that during the first months the expenditure for provisions was settled as disposal of ‘tea profit’ (*cha xi* 茶息), which means that the campaign was at first financed by the income of the Sichuan tea tax.<sup>31</sup> The money the governor-general had used for the Jinchuan campaign was later returned to the provincial treasury, and the expenditure declared as part of the military finance.<sup>32</sup> The second assumption is supported by the statement in the commentary to the *Junxu zeli*, which says that before, when there were no clear empire-wide regulations, sometimes multiple gratifications were handed out. The commentary thus suggests that this practice was not to be used as precedent, although it might have occurred here and there. The third assumption, which cannot be proved by documentary evidence, can nevertheless be supported by the fact that after the first Jinchuan war the loans were given as gratifications and were not to be paid back in annual instalments, as the *Junxu zeli* prescribes (*fen nian kou huan* 分年扣還).<sup>33</sup> Furthermore only the troops of Shaanxi and Gansu were originally given an additional loan on top of their baggage gratification. After some discussion it was, contrary to the precedents from the first Jinchuan war, allowed that the troops of all provinces could be given a loan.<sup>34</sup> Table 3.22 contains a calculation showing how much deployment money (baggage pay) the Green Standard troops cost the Qing government. Officers from *tidu* down to *bazong* rank were given twice their annual salary, ‘corporals’ (*waiwei*) and common soldiers obtained fixed sums. The sums for loans granted to the deployed soldiers were likewise fixed, but for all ranks.

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<sup>31</sup> *Jinchuan dang* QL 36/III/00025 (QL 36/8/8). *Pingding Liang Jinchuan fanglüe* 6, fol. 18a (QL 36/8/bingzi). This was quite usual in Sichuan, like in QL 32 (1767), when a period of peace in Jinchuan allowed allotting the tea tax fund for repairing the city wall of Chengdu. *Idem* 5, fol. 11a (QL 32/2/wushen).

<sup>32</sup> *Jinchuan junxu li'an* 1, fol. 1a.

<sup>33</sup> Documented by Chen (1992), p. 228.

<sup>34</sup> *Jinchuan junxu li'an* 2, fol. 40a.

### 3. THE COST OF STAFF

<i>rank</i>	<i>number</i>	<i>gratification/ person</i> [liang]	<i>sum</i> [liang]	<i>loan/person</i> [liang]	<i>sum</i> [liang]	<i>sum total</i> [liang]
<i>tidu</i>	3	163.368	490	500	1,500	1,990.104
<i>zongbing</i>	13	135.150	1756	400	5,200	6,956.950
<i>fujian</i>	23	106.914	2,459	300	6,900	9,359.022
<i>canjiang</i>	31	78.678	2,439	250	7,750	10,189.018
<i>youji</i>	51	78.678	4,012	200	10,200	14,212.578
<i>dusi</i>	58	54.768	3,176	150	8,700	11,876.544
<i>shoubei</i>	85	37.410	3,179	100	8,500	11,679.850
<i>qianzong</i> and <i>bazong</i> <sup>a)</sup>	787	27.435	21,591	50	39,350	60,941.345
<i>waiwei</i>	649	15	9,735	30	19,470	29,205.000
common soldiers ( <i>bingding</i> ) <sup>b)</sup>	107,144	8	797,152	8	797,152	1,594,304.000
<i>sum</i>	108,844		845,992		904,722	1,750,714.411

□ 3.22 Table: Baggage pay for the Green Standard troops, according to Junxu zeli

<sup>a)</sup> In this case, the average value for *qianzong* and *bazong* is given, because the individual numbers of *qianzong* and *bazong* officers are not known, only their combined number (*qian-ba*).

<sup>b)</sup> In the case of the common soldiers the average pay for cavalymen (*mabing*) and infantrymen (*bubing*; including guardsmen *shoubing* 守兵, and new recruits, *xinmubing*) is given, because the individual numbers of cavalry and infantry common soldiers from the Green Standard garrisons are not known.

For all Green Standard troops used the Qing government had theoretically to disburse 1,799,914 *liang* in order to deploy them.<sup>35</sup> Even if we assume that the loans (*jie*) were paid back within the next few years after the victory, as set forth in the regulations, still about half of this sum had to be disbursed by the Qing government: 867,592 *liang* were to be given as gratification. In reality the practice for loans granted to Green Standard troops was far more complicated and differed from one province to the other.<sup>36</sup> In Sichuan, for example, a *fujian* was lent 500 *liang*, while a *youji* was only lent 150 *liang*, and *qianzong* and *bazong* only 40 *liang* (compare the figures above). In Shaan-Gan the loans were also much lower than shown in Table 3.22. The loan rates of Hu-Guang (Liang-Hu) partially correspond with the table, but are higher for the lower ranks. The loans for Yunnan troops were lower, but did not have to be paid back as for all troops engaged on the western route. The only troops which were given gratifications and additional loans at the same time were those from the garrisons in Shaanxi and Gansu. This fact was first criticized by the Ministry of Revenue, but later on all other provincial troops were also allowed to be given loan to be subtracted from their salary after the war was over. Although the emperor had given his blessing to the plan of handing out loans to all Green Standard troops, no generally applicable numbers and amounts had been fixed at that time.<sup>37</sup> Table 3.23 shows how different the regulations for the different provinces were.

<sup>35</sup> 43,200 *liang* have to be added to the sum of 1,750,714 *liang* for the 2,700 supplementary soldiers from the Liang-Hu garrisons, half of which sum was given as a loan.

<sup>36</sup> *Jinchuan junxu li'an* 2, fol. 39a-40a.

<sup>37</sup> The regulations in the *Jinchuan junxu li'an* are somewhat confusing. In 1, fol. 38b, it is written that all officers of either type of troops (*Man-Han guanbing*) are given a gratification of twice their yearly salaries. Yet the same paragraph deals with gratifications only for Banner troops.

### 3. THE COST OF STAFF

rank	Sichuan	Shaan-Gan		Hu-Guang	Yun-Gui
	loan [liang], to be paid back in instalments	gratification [liang]	loan [liang], to be paid back	loan [liang], to be paid back	gratification [liang]
<i>tidu</i>	1000	2 years salary	350		
<i>zongbing</i>	1000	“	250	500	
<i>fujian</i>	500	“	200	300	60
<i>canjiang</i>	150	“	150	250	60
<i>youji</i>	150	“	150	200	40
<i>dusi</i>	100	“	100	100	40
<i>shoubei</i>	100	“	100	80	30
<i>qianzong</i> and <i>bazong</i>	40	“	40	50	15
<i>waiwei</i>	12	“	12	40	8
common soldiers ( <i>bingding</i> )*	5	8	4	19.5	1 <sup>a)</sup>
*average of:	cavalrymen 6 infantrymen 4	cavalrymen 10 infantrymen 6	cavalrymen only, 4	cavalrymen 24 infantrymen 18 guardsmen 15	

□ 3.23 Table: Gratifications and loans as baggage pay for Green Standard troops from different provinces at the beginning of the second Jinchuan war, according to Jinchuan junxu li'an

<sup>a)</sup> The common soldiers from Yunnan and Guizhou were given an extra pay of 0.3 *liang* to buy felt clothing (*zhanyi* 毡衣), because their gratification was extremely low.

A calculation of the cost for baggage pay according to the real practice as it was determined at the beginning of the campaign, gives a theoretical sum of 37,304 *liang* of gratification for the troops from Yunnan and Guizhou; 325,060 *liang* of loan for the troops from Hunan and Hubei; 145,233 *liang* on loan for the Sichuan troops; 168,410 *liang* of loan and 304,910 *liang* of gratification for the troops from Shaanxi and Gansu.<sup>38</sup> If this practice had consistently been followed up to the end of the war, the baggage pay would have cost the Qing state 980,917 *liang*, 638,703 of which would have been loaned. This is only half the costs which results when calculating according to the regulations of the *Junxu zeli*. The reality must be sought somewhere in the middle between the regulations of QL 49 (1784) and the practice at the beginning of the campaign. The real cost exceeded 980,917 *liang* after the emperor had allowed to give loans to all Green Standard troops. Furthermore, the regulations finally issued in the *Junxu zeli*, are based on the real practice during the wars of the years past, and it therefore can be concluded that the real cost for baggage pay for the Green Standard troops approaches the costs as calculated in Table 3.22. We follow the general assumption that the second Jinchuan war was extremely costly and therefore base our calculation on the relatively high loans which were later fixed in the *Junxu zeli*, and at the same time assume that those loans were not to be paid back, backed by the fact that during the compilation of the *Jinchuan*

<sup>38</sup> Lai (1984) gives the figure of 18,300 *liang* of baggage pay for 7,500 Shaan-Gan troops, yet without naming his source.

*junxu li'an* there were still no amounts of money fixed, which had to be paid back at a certain point of time.

Concerning the native auxiliaries, the *Jinchuan junxu li'an* says that each person was given 3 *liang* of baggage pay and 2 *liang* of family allowance (*anjiayin* 安家銀), which comes to a lump sum of 5 *liang*.<sup>39</sup> In the *Junxu zeli* this practice is reflected in the commentary which criticizes that it does not make any sense not to distinguish between ranks and officers (the latter actually village heads, barons, and local kings). In the Myanmar campaigns the baggage pay for native troops was 6 *liang*, an amount which served as the basis for the new regulations for military expenditure in the *Junxu zeli*. Nevertheless the *Junxu zeli* commentary omits the existence of a family allowance, paid to the native troops deployed against Jinchuan, and which was normally only given to labourers (see Chapter 3.3.). With 29,597 deployed native auxiliary troops we have therefore a theoretical expenditure of 147,985 *liang*.

This sum is credible, unless any of the native auxiliary troops were promoted to the rank of a Green Standard soldier, a possibility which cannot be neglected. Although the *Junxu zeli* says that the regulation that promoted native auxiliaries, when holding a Green Standard post (*shi ren* 實任), were to be given the pay of a Green Standard soldier, only became valid with the issuing of that book, such regulations cannot be without precedent. The corresponding regulation would mean that a native auxiliary officer or soldier promoted to a Green Standard rank and appointed to the post within a Green Standard unit would obtain the baggage pay (gratification and loan) in arrears. Although the documents supply no figures, the following assumption shall be made: Of all examples of common soldiers and officers rewarded, there are a few per cent within all cases, in which officers of native auxiliary troops were promoted, like Sungnai Wenbu 松乃温布, a village head of Chosgyab, who had already been rewarded before with a pheasant feather (*lanling* 藍翎; see also the expenditure for rewards, Chapter 3.4.1.) and was then granted the honour to wear a hat button of fifth rank (*wupin dingdai* 五品頂帶).<sup>40</sup> When assuming therefore that two per cent of the native auxiliary troops (592 persons) were promoted to the position of Green Standard troops (which might not be too few, because in most cases the native auxiliary troops were regarded as inefficient and cowardly, while in the last phase of the war it was especially the new elite troops who took over the main burden of destroying Sonom's strongholds; and on the other hand it might have been that in some places native auxiliary troops replaced killed members of Green Standard units), this measure cost the Qing state an additional sum of 9,625 *liang*, i.e. 4,896 *liang* for

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<sup>39</sup> *Jinchuan junxu li'an* 1, fol. 3b.

<sup>40</sup> *Pingding Liang Jinchuan fanglüe* 88, fol. 12a-13a (QL 39/1/guiwei).

the gratification (*shang*), and 5,139 *liang* as loan (*jie*). If this procedure was carried out correctly, the 5 *liang* disbursed as baggage pay and family allowance for native auxiliary troops would have been deducted from that sum (2,960 *liang* for all 592 persons). This would lead to a total sum of 6,665 *liang* paid in arrear for promoted native auxiliary troops, a negligibly small sum, especially if the loan was in fact paid back after the war, in which case the total cost for those promotions would amount to not more than 1,526 *liang*.

Yet the baggage pay and family allowances for native auxiliary troops were obviously not to be paid back. At least there is no such regulation in the *Junxu zeli*, and it would also have been quite difficult to enforce back payment because the native auxiliaries were not professionals garrisoned in a particular place which could easily be controlled.<sup>41</sup>

<i>rank</i>	<i>number</i>	<i>baggage pay/ person [liang]<sup>a)</sup></i>	<i>personal assistants per soldier<sup>a)</sup></i>	<i>sum [liang]</i>
<i>jiangjun</i>	1	(180)	24	228
<i>fudutong</i>	4	155	(18)	656
<i>yingzong</i>	1	(130)	8	146
<i>canling</i> and <i>fucanling</i> <sup>b)</sup>	13	130	(5.5)	1,701
<i>xieling</i>	9	130	6	1,182
<i>zuoling</i>	29	105	4	3,053
<i>fangyu</i>	30	(80)	4	2,408
<i>jiyanggin</i>	8	(70)	(4)	568
<i>qianfengxiao</i>	8	60	3	486
<i>xiaojixiao</i>	62	60	(3)	3,726
clerks ( <i>bithesi</i> )	3	31	(1)	95
cuirassiers ( <i>jiabing</i> ) <sup>d)</sup>	5,837	20	0.5	116,741
personal assistants ( <i>genyi</i> ) <sup>c)</sup>	[3,629]	2	--	[7,258]
<i>sum</i>	6,005			130,990

□ 3.24 Table: Baggage pay for the provincial Banner troops and their personal assistants

<sup>a)</sup> Figures in brackets are estimated according to the official rank.

<sup>b)</sup> In the case of *canling* and *fucanling*, the average of 6 resp. 5 personal assistants is given, because the particular numbers of *canling* and *fucanling* officers from the provincial Banner garrisons is not known.

<sup>c)</sup> The number of personal assistants and their deployment costs are not included in the sums below.

<sup>d)</sup> Two cuirassiers were waited on by one personal assistant.

The most complicated question concerning the baggage pay is that of the Banner troops. Here we have to distinguish between Banner troops from the Capital, troops from the northeastern provinces, and troops from the provincial garrisons. Apart from the soldiers, their personal assistants were also given a kind of pay for deployment, which was called leather clothing pay (*piyiyin* 皮衣銀).<sup>42</sup> It is therefore necessary to add the respective number of personal assistants for each soldier and officer rank.<sup>43</sup> Concerning the annual salary of provincial

<sup>41</sup> *Jinchuan dang* QL 39/III/00217 (QL 39/8/20).

<sup>42</sup> *Hubu junxu zeli* 1, fol. 2a-3a.

<sup>43</sup> The respective numbers of personal assistants assigned to officers and soldiers can be found in *Hubu junxu zeli* 2, fol. 3b-7a; 3, fol. 1a-2a.

Banner troops, there are no lists to be found, so that we have to rely on the studies of Huang Huichen and Chen Feng who conclude that the salary of the provincial troops was not very different from that of the Capital troops.<sup>44</sup>

The total costs for deploying the provincial Banner troops were theoretically 137,936 *liang*, which consists of a one-year's salary for each of the officers, of 60 *liang* for each 'corporal', 31 *liang* for a clerk (*bithesi*), and of 20 *liang* for each common soldier. This money was a gratification according to the *Junxu zeli* and did not have to be paid back to the provincial treasury or to the bursar of the garrison. The cost for the personal assistants alone added up to 7,258 *liang*. At the beginning of the campaign, the provincial Banner troops from Sichuan took with them (*guodai* 裹帶) a certain amount of the baggage pay (in that case called *jiaxiangyin* 甲餉銀),<sup>45</sup> namely 40 *liang* for a *fudutong*, 4 *liang* for officers of the rank of *xieling*, *zuoling* and *fangyu*, 2.5 *liang* for *xiaojixiao* officers and military clerks (*bithesi*), 2 *liang* for 'stout' (*zhuangda* 壯大) 'corporals' (*qianfeng*, *lingcui*), cavalrymen and gunners, and 1 *liang* for military workmen (*jiangyi* 匠役).

Compared to the Green Standard troops, of whom each individual generated deployment cost of 16.1 *liang*, the Banner troops were more expensive: Each provincial Banner man generated deployment costs of 22 *liang*—almost one third more than a Green Standard soldier, and the complaints that Banner troops were several times as expensive as the Green Standard troops<sup>46</sup> can be well understood (although, on the other side, the Banner troops were esteemed to be of much higher military value than the 'spineless' or 'gutless' Green Standard troops). But the deployment costs are superseded by the running costs during the campaign. Furthermore, we still have to take a look at the Capital and northeastern provinces Banner troops who were given a much higher baggage pay.

There are no particular regulations concerning the number of personal assistants for Banner troops from the northeastern provinces, and we therefore assume that those troops were allowed to be waited on by the same number of personal assistants as those of the Capital Banner garrisons, corresponding to their status as elite troops, and not least due to the fact that only disposing of combined figures for troops from the Capital and the northeast we do not know the exact number of officers and soldiers from the Capital, although we can estimate that about a fifth of all Banner troops came directly from the Capital (see Diagram 3.15). For

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<sup>44</sup> Huang/Chen (2005), pp. 605-606.

<sup>45</sup> *Jinchuan junxu li'an* 2, fol. 26a. The term *jiaxiangyin* might be a clerical error for *yuexiangyin* 月餉銀 'monthly pay', as the character *jia* can only be seen in the combination *majia xiangyin* 馬甲餉銀 'pay for armoured cavalrymen'.

<sup>46</sup> *Pingding Liang Jinchuan fanglüe* 20, fol. 14b-15a (QL 37/2/dinghai).



this reason we are also not able to tell apart the baggage pay for Capital troops and that for northeastern troops. The *xingzhuangyin* for both types of troops differed, as can be seen, for example for the common soldiers (40 *liang* for Capital troops and only 30 *liang* for northeastern troops), and for the *canling* grade (260 *liang* for Capital troops and only 180 *liang* for Shengjing, Heilongjiang and Jilin troops). In the *Junxu zeli* the baggage pay for the Capital and northeastern troops was called ‘packing pay’ (*zhengzhuangyin* 整裝銀 ‘pay for fixing the equipment’). The Capital officers were granted a pay of a two years’ salary, the troops from the northeast were given a fixed amount of money. The Ölöd Mongol troops from Ili are included in these figures, although there existed some special regulations for the baggage pay and the number of personal assistants for non-Banner Mongol troops.<sup>47</sup> We will nevertheless try to undertake the complicated calculation with four fifths of the respective Banner troops being paid the sums prescribed for the northeastern Banner troops, and one fifth of the Banner troops being paid according to the annual salary.<sup>48</sup>

<i>rank</i>	<i>number</i>	<i>xingzhuangyin/</i> <i>person [liang]<sup>a)b)</sup></i>	<i>personal</i> <i>assistants per</i> <i>soldier<sup>a)</sup></i>	<i>sum [liang]</i>
<i>tidu lingdui</i>	2	(360) : (360)	24	816
<i>tongling</i>	4	310 : (300)	20	1,368
<i>zongbing</i>	3	(310) : (300)	(20)	1,026
<i>fudutong</i>	11	310 : 300	20	3,762
<i>sanzhi dachen</i>	1	(280) : (250)	(20)	296
<i>fujian</i>	2	(280) : (250)	12	560
<i>yizhang</i>	17	(260) : (180)	10	3,672
<i>yingzong</i>	1	(260) : (180)	10	216
<i>canling</i>	6	(260) : (180)	8	1,272
<i>canling [=canjiang]</i>	8	(260) : 180	10	1,728
<i>toudeng shiwei</i>	7	(260) : (180)	8	1,484
<i>zongguan</i>	3	(260) : (180)	16	684
<i>canling and fucanling<sup>d)</sup></i>	36	235 : (180)	7.5	7,416
<i>youji</i>	10	(210) : (180)	10	2,060
<i>xieling</i>	6	(210) : 180	6	1,188
<i>dusi</i>	8	(210) : (150)	6	1,392
<i>zuoling</i>	40	(210) : 150	6	6,960
<i>yuqian lingdui, er-,</i> <i>sandeng shiwei<sup>d)</sup></i>	33	185 : (130)	6.5	5,082
<i>shoubei</i>	13	(160) : (120)	6	1,820
<i>qingche duwei</i>	1	(160) : (120)	(6)	140
<i>fangyu</i>	13	(160) : 120	(6)	1,820
<i>jiduwei</i>	3	(140) : (100)	(6)	360
<i>yunjiwei</i>	14	(140) : (100)	(6)	1,680
<i>bujunwei (sl. bujunxiao)</i>	1	(140) : (100)	(6)	120
<i>lanling shiwei</i>	8	(120) : (80)	6	800

<sup>47</sup> *Hubu junxu zeli* 1, fol. 3a; 3, fol. 2b-3a. Those regulations probably only concern ‘proper’ Mongol banners (the new leagues and banners, not the old Mongol Banners) in Outer Mongolia and not contingents of other Mongols which were part of other units, like the Ölöd Mongols, who served under the General of Ili.

<sup>48</sup> The figures for the Capital troops are from Huang/Chen (2005), p. 605. The figures for the northeastern Banner troops have been excerpted from *Hubu junxu zeli* 1, 1b-2b.

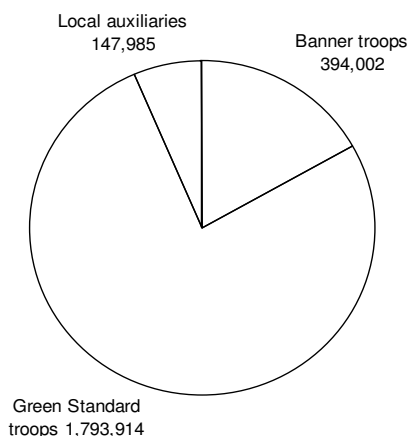
### 3. THE COST OF STAFF

<i>qianfengxiao</i>	39	120 : (80)	3	3,666
<i>hujunxiao</i>	52	120 : (80)	3	4,888
<i>xiaojixiao</i>	48	120 : 80	3	4,512
clerks ( <i>bithesi</i> )	5	(80) : (60)	(1)	330
cuirassiers ( <i>jiabing</i> ) <sup>e)</sup>	6,118	40 : 30	0.5	201,894
personal assistants ( <i>genyi</i> ) <sup>c)</sup>	[5,537]	2	--	[11,074]
<i>sum</i>	6,521			263,012

□ 3.25 Table: Baggage pay for the Capital and northeastern Banner troops and personal assistants

- a) Figures in brackets are estimated according to the official rank.  
 b) The left-hand numbers in this column represent the *xingzhuangyin* for Capital troops, which constitute one fifth of the respective troops, and the right-hand numbers represent the *xingzhuangyin* for northeastern troops.  
 c) The number of personal assistants and their deployment costs are not included in the sums below.  
 d) In the case of *canling* and *fucanling*, the average of 7 resp. 8 personal assistants is given, because we do not know the particular numbers of *canling* and *fucanling* officers. The same applies to *erdeng* and *sandeng shiwei* (7 resp. 6 personal assistants). The baggage pay for *canling* and *fucanling* ranges between 210 and 260 *liang* for the Capital troops, and that for *erdeng shiwei* and *sandeng shiwei* between 160 and 210 *liang*.  
 e) Two cuirassiers were waited on by one personal assistant.

The 6,500 troops from Beijing, Jilin and Heilongjiang (and Ili) required a baggage pay of 263,012 *liang*, of which 11,074 *liang* (about 4 per cent) were to be paid for the personal assistants. The total deployment costs for the troops coming from the Capital and the northeast were therefore twice the costs for the Banner troops from provincial garrisons. If we divide these costs by the number of participating soldiers, we come to the conclusion that the deployment of one elite Banner soldier cost 43 *liang* on average, more than twice as much as for Green Standard soldiers. The deployment expenditure for Capital officers constituted one fourth (26%) of the total costs of Capital troops, while that for the personal assistants only amounted to 4 per cent. In the case of the Green Standard troops, the share of the costs for the deployment of officers is only 8 per cent, while the personal assistants did not receive any baggage pay at all.



□ 3.27 Diagram: Proportions of the costs for baggage pay for Banner, Green Standard and native auxiliary troops (figures in liang)

An item not prescribed by the *Junxu zeli* are loans (*jie*) for the Banner troops. Although the regulations issued in the *Junxu zeli* are based on 'older' precedents (*jiuli* 舊例) from several former wars, and only talk of gratifications (*shang*), the case of the second Jinchuan war shows that it was not uncommon for the baggage pay for Banner troops to be given on loan and not as a gratification. The *Jinchuan junxu li'an* only talks of loans given to the Banner troops<sup>49</sup>

<sup>49</sup> *Jinchuan junxu li'an* 1, fol. 37b-38b.

and does not list any memorials which ask for a remission of the loans. During the western campaigns, the conditions had been much better: Each officer—Banner and Green Standard—had obtained a gratification of two years' salaries, and Capital Banner troops were given a baggage pay of 40 *liang*, provincial troops 30 *liang*, and Green Standard troops 20 *liang*.<sup>50</sup> These statements correspond to the later regulations of the *Junxu zeli*. Because the rank listings in the *Jinchuan junxu li'an* concerning the loans for Banner troops are very short and only itemise the most common officer ranks and not the complex titles of the Capital Banner troops (see Appendix 1 and Table 3.25), we suppose that baggage pay on loan was only given to the provincial Banner troops and not to the Capital and northeastern troops, which were given their baggage pay unconditionally. We further assume that the baggage pay of 2 *liang*, which were given to support each personal assistant, were generally given unconditionally as well, i. e. it had not to be paid back.

If the deployment costs for all troops are added up, we reach a sum of 2,335,901 *liang*, 1,057,150 of which were theoretically to be paid back in instalments after the war, i.e. the baggage pay for the Green Standard troops (926,322 *liang*) and the baggage pay for the provincial Banner troops (130,828 *liang*).

<i>item</i>	<i>amount [liang]</i>
Green Standard troops	1,793,914
native auxiliary troops	147,985
provincial Banner troops	130,990
Capital and northeastern Banner troops	263,012
<i>sum</i>	2,335,901

□ 3.26 Table: Costs for baggage pay for all different types of troops

With a view to the proportions of deploying costs concerning the different types of troops (compare Diagram 3.27), we come to the conclusion that the baggage costs for Banner troops are almost two times as high (17%) as their percentage among all participating troops (8%), while the baggage costs for Green Standard troops are slightly higher (77%) than their proportion within all types of troops (70%). The deployment costs for native auxiliary troops are visibly lower (6%) than their quota among the participating troops (22%). It should be kept in mind that these calculations are only tentative and only approximately reflect the real expenditure.

### 3.1.2. Salt-and-vegetable Money and Daily Rations

Except the baggage pay, which was a lump sum paid out at the beginning of each campaign (except in some cases, when only half of the money was paid in the home garrison, and the

<sup>50</sup> *Jinchuan junxu li'an* 1, fol. 38b. There are also the ranks of a 'stout' (*zhuangda* 壯大, 40 *liang*) and *lingcui* (30 *liang*), which do not appear in the listings of participating troops.

other half later, upon arrival in Chengdu),<sup>51</sup> the soldiers were paid a certain sum of money per month or day to buy their food. The name for this allowance is therefore salt-and-vegetable pay (*yancai yin* 鹽菜銀),<sup>52</sup> together with the money for daily rations (*kouliang yin* 口糧銀) often subsumed under the name of *yancai kouliang*. For all different kinds of professionals taking part in the war, there were diverging regulations and practices for the daily rations. These could either be given in rice ('original commodity' *bense* 本色), or as a sum of money to buy food with (*zhese* 折色 'converted commodity'), or partly given as rice and the rest paid out in silver (*ban zhe ban se* 半折半色). For the conversion of rice into money, the government had fixed an official conversion rate, which is at 1.2 *fen* (0.012 *liang*) of silver for 1 *sheng* of rice, or 1.2 *liang* for 1 *dan* of rice, or the other way round, 0.85 *sheng* of rice for 1 *fen* (0.01 *liang*) of silver. Because the Qing government only calculated in the silver unit *liang*, one could come to the conclusion that soldiers and labourers were paid out chunks from silver ingots. This was indeed the case and can be traced back on the simple fact that silver was much easier to transport than copper cash. The conversion from silver crumbs to cash was then undertaken by money changers in the camps who calculated with an actual market price (*shijia* 時價). At the beginning of the war it had even been custom to pay out the daily provisions inside the country in cash (*qianwen* 錢文), namely 30 *wen* for 0.0135 *liang*, in total accruing to a sum of 2,624.0285 *liang* in that case. The reason for this procedure had been that the dispatch of the troops was so urgent that they had to be equipped with 3,000 cash each (corresponding to the provision of 100 days) to take with them. The troops would then be able to buy their food from the sutlers without undergoing a time-consuming transaction with the money changers. When drawing up the respective account, of course, silver had to be used as calculation currency. But the Ministry, although allowing such a procedure to the war logistics bureau, did not want to pay any sums surpassing the regular amount of provision pay. A part of these sums therefore had not been brought to account at all (probably because of conversion problems) and was later waived by the emperor.<sup>53</sup>

Officers did not only have to care for their personal assistants but also to maintain a certain standard of living and to perform official duties, for which reason they were given a much higher monthly pay for their daily expenditure in the camp than common soldiers.

The procedure at the beginning of the war, in the summer of QL 36 (1771), was as follows: the soldiers, while on their way from the garrison to the front, were daily given 0.0135 *liang*

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<sup>51</sup> *Pingding Liang Jinchuan fanglüe* 35, fol. 13b-14a (QL 37/7/jiachen).

<sup>52</sup> Might also be translated as 'pay for salted vegetable'.

<sup>53</sup> *Jinchuan junxu li'an* 1, fol. 3a; 2, fol. 147a.

of silver to buy (one *sheng* of) rice. The money was disbursed in the garrison for the number of days the soldiers would need to leave the country (*kounei*), which means that they took along (*guodai*) the money to buy their food on the way. Upon leaving the district of Guanxian or the prefecture of Yazhou they were given a daily ration of 1 *sheng* of rice (1,035 l), or 1 *jin* (0.597 kg) of flour. The officers were not given any money to buy food with, as long as they were within (inside) the imperial territory. Once past the border of the districts and on entering the territory of the native kings, they were allotted 1 *sheng* of rice per day, irrespective of rank. This practice was based on the idea that while a common soldier had to be taken care of by the government, an officer as a state official had an income, which was supposed to be high enough to feed him, as long as he was on ‘Chinese’ territory. It is interesting to see that the daily rations later declined from 1 *sheng* of rice per day to 0.83 *sheng* per day. So far the practice for the daily provisions (*kouliang*) in the first period of the war. The salt-and-vegetable pay (*yancai*), which was given to buy other food than rice, was 0.01 *liang* per day for each soldier, but nothing for the personal assistants, thus the soldiers and officers had to care for their personal assistants and to buy additional food for them from their own salt-and-vegetable pay. To make things more complicated, on the southern route (from Dajianlu northwards), the soldiers were given 0.015 *liang* per day from QL 36/8/15 (Sep 23, 1771) on.<sup>54</sup>

For the native auxiliary troops, the same regulations applied in the beginning: 0.0135 *liang* of silver per day to buy rice when inside the country, and 1 *sheng* of rice or 1 *jin* of flour when outside the country. The reason for this is that it is easier to supply rice than to arrange a possibility to buy rice with money—which then both (rice and cash) have to be provided. Upon arrival in the camp, the troops were daily given a salt-and-vegetable pay of 1 *fen* (0.01 *liang*), on the southern route 1.5 *fen* (a supplement of 0.5 *fen*/day to rent a porter). We will neglect the special case that the 700 troops from Batang and Litang were given 3 *fen* daily because those were the native troops from most far away from the war theatre. Additionally, native auxiliary troops received a monthly encampment pay (*zuoxiangyin* 坐餉銀) of 9 *qian* and monthly 3 *dou* (31.05 l) of rice. Although the commentary to the *Jinchuan junxu li'an* says that part of this money was not paid for a certain time and therefore problems in the accounting had arisen, there is documentary evidence that the encampment pay was paid out throughout the whole campaign,<sup>55</sup> a fact which is also reflected in the commentary to the *Junxu zeli* which says that native auxiliary soldiers and ‘corporals’—not the officers—

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<sup>54</sup> *Jinchuan junxu li'an* 1, fol. 3a-3b.

<sup>55</sup> *Pingding Liang Jinchuan fanglüe* 57, fol. 17b (QL 38/r3/renwu). See also *Jinchuan junxu li'an* 2, fol. 32b.

obtained a monthly encampment pay of 1.155 *liang* of silver (0.9 *liang* plus some 25.5 *fen* [0.255 *liang*] to buy rice). The native barons and village heads who acted as native officers, were not eligible for this payment.<sup>56</sup>

During the first five months of the campaign, from QL 36/4 to 36/8 (May – Sep 1771), the 6,190 native auxiliary troops cost the Qing state 65,588 *liang*. In this calculation we have assumed that all native auxiliary troops came from beyond the border (which at least is not the case for those from Mingdjeng, which is attached to the prefecture of Yazhou), because we do not know how many native auxiliary troops during this period came from what region. Yet it is likely that the 4,500 troops of the southern route came from Mingdjeng, but even if we knew this fact, it would not be clear at what point of time they passed the border, and from when on rice or flour had to be given instead of money. But because the precedents calculate with an official conversion rate for rice and its fixed price, there is no difference concerning the direct costs for *yancai kouliang* (although there is a difference when considering the transport costs of money and rice).

Later on, when the campaign developed into a war and the ‘barbarian affairs’ were transformed into military affairs, the regulations for the monthly and daily provisions became more complicated because there were no generally applicable rules for the whole empire, so that each province followed a different practice how to nourish their soldiers during war.<sup>57</sup> Only when the *Junxu zeli* was issued, the rules described in that canon became applicable throughout the empire. In our calculations we will therefore not follow the rules in the *Junxu zeli* but try to evaluate the detailed precedents as described in the *Jinchuan junxu li'an*.

Before starting to calculate it is necessary to find out how many soldiers of what types of troops were in the camps at what point of time. Only then we are able to know how much *yancai kouliang* had to be paid in the course of time.

After carefully evaluating the numbers of troops dispatched from different garrisons throughout the country, and looking at the different types of troops we have tried to determine at what point of time contingents from what province were dispatched to the front in Jinchuan. This was no easy task, because many data are missing, and not each deployment has been recorded in the official documents. But fortunately, we know quite exactly what number of troops came from what place, and even among those numbers we often know how many soldiers had been deployed until the summer of QL 38 (1773), and how many thereafter. In many cases the memorials and edicts also sum up the total number of troops in Sichuan or the number of troops up to then deployed from one province. In some rare cases we even learn

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<sup>56</sup> *Hubu junxu zeli* 1, fol. 4b-5a.

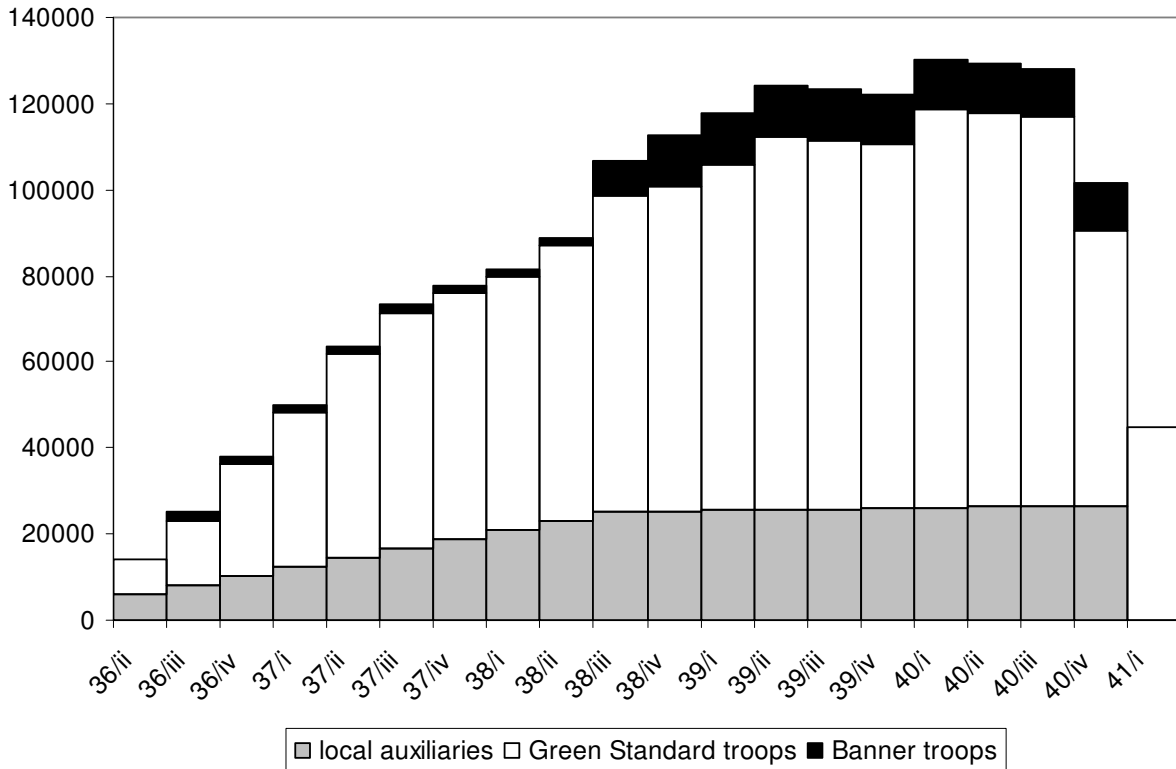
<sup>57</sup> See *Jinchuan junxu li'an* 2, fol. 25a-43b.

what garrison the Green Standard troops came from, for example, Zhaotong 昭通/Yunnan, Xiangyang 襄陽/Hubei, or Guyuan 固原, Xining 西寧 and Liangzhou 涼州, all in Gansu. On the other hand, the figures cited in the edicts and memorials are very crude (in the style ‘the newly dispatched 3,000 troops from Qian 黔 [Guizhou]’)<sup>58</sup> or even summed up as a figure embracing the troops from several provinces (‘the newly dispatched 5,000 troops from Dian-Qian 滇黔 [Yunnan, Guizhou]’). In some cases it can be learned that parts of such contingents have already arrived in the camps, while the ‘third detachment has still not arrived in Chengdu’. The numbers quoted in memorials are also quite low for the provinces of Hu-Guang and Shaan-Gan, which might be a result of the fact that supplementary soldiers (*yuding*), who constitute a fourth to a third of the total troops, were not included in such figures. The result of this situation is that with view to correct timing, it is often not possible to calculate in detail, from what point of time how many troops were paid their march rations. For this reason we decided not to be more accurate than it is possible anyway, and thus the number of soldiers staying in Jinchuan is only shown according to three-month periods (from QL 36/ii to QL 41/i).<sup>59</sup> As far as the monthly pay is concerned we will nevertheless generate the respective number of man-months (how many men worked how many months), because salt-and-vegetable pay and the wages for the labourers and workmen were paid out monthly. In order to determine the exact number of soldiers staying in Jinchuan at a certain time, it was necessary to subtract a certain number of soldiers killed, which is not negligible, because ten per cent of all troops were killed in action (*zhenwang* 陣亡). Although the total number of soldiers killed, viz. 14,731 men, is known, we do not know the exact distribution among the three types of troops—a problem to which we will return in Chapter 3.4.2. It was therefore assumed that the distribution of types of troops among the casualties was the same as the distribution in per cent of the three types of troops among all soldiers (9% Banner troops, 21% native auxiliaries, and 70% Green Standard troops), which may not be the case for the native auxiliaries, who—serving as cannon fodder in the front line—could have suffered higher losses. The ratio of casualties was furthermore adapted to the actual figures of all troops, which means that the number of losses rose with the number of soldiers arriving in the war theatre.

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<sup>58</sup> The memorials, for example, repeatedly mention 500 additional Banner troops the Chengdu Banner garrison has promised to dispatch, but in fact, only 318 men were brought into action.

<sup>59</sup> The respective three-month periods are expressed in lower case Roman figures: i, ii, iii, iv.



3.28 Diagram: Chronological distribution of imperial and native auxiliary troops deployed in the second Jinchuan war

Another point not possible to determine exactly was the time of deployment for the particular contingents of native auxiliary troops. We only know that in the first quarter of the war, QL 36/ii (Summer 1771), 6,000 native auxiliary troops were brought into action. 20,000 troops were dispatched by the summer of QL 38 (1773), and only 3,000 after that till the end of the war. The 23,000 troops were therefore distributed over time according to the dividing line of the summer of QL 38 with the result that a very high number of native auxiliary troops were dispatched within the first two years of the campaign and very few later. In fact, it might have been that after the Mugom disaster in the summer of QL 38 the native auxiliaries played a less important role and that even many contingents of native auxiliary units were sent home. For this reason the number of native auxiliary troops present at the front may possibly have been somewhat lower.

It is quite surprising, when looking at the resulting Diagram 3.28, that the number of soldiers rose quite constantly over time, and not in sudden batches, as the event history of the second Jinchuan war suggests. After a strong increase of force level in QL 37 (1772), there was a smaller increase from the summer of QL 37 till the summer of QL 38, when the troops in Jinchuan were reinforced, but especially with Banner troops, and less with Green Standard troops. During the year QL 39 (1774) there was even a decrease in the actual strength of



troops, and only at the beginning of QL 40 (1775) fresh Green Standard troops were dispatched from Shaan-Gan, Sichuan, and Guizhou, in order to back the lethal blow to the Jinchuan rebels. After the castle of Le'uwé was destroyed in QL 40/8 (Sep 1775), the first contingents made ready to march home. The first quarter of QL 41 (1776), after Sonom had surrendered, all the tens of thousands of troops from all over the country were sent back home.

The regulations concerning *yancai kouliang* became more complicated when the first troops not coming from Sichuan garrisons were dispatched. The *Jinchuan junxu li'an* explains all details for troops coming from different provinces, and in the commentary to the *Junxu zeli* the respective amounts of pay for troops in the Sichuan (Jinchuan) regulations are cited.<sup>60</sup> The number of personal assistants each officer and soldier was allowed was also different in some cases.

<i>rank</i>	<i>salt-and vegetable pay [liang/month] in Junxu zeli</i>	<i>salt-and vegetable pay [liang/month] Sichuan precedents</i>	<i>personal assistants in Junxu zeli</i>	<i>personal assistants in Sichuan precedents</i>
<i>tidu</i>	12	<b>15</b>	24	<b>32</b>
<i>zongbing</i>	9	<b>15</b>	16	<b>24</b>
<i>fujian</i>	7.2	7.2	12	<b>16</b>
<i>canjiang</i>	4.2	4.2	10	10
<i>youji</i>	4.2	4.2	8	8
<i>dusi</i>	3	<b>4.2</b>	6	6 ( <b>8</b> ) <sup>c)</sup>
<i>shoubei</i>	2.4	2.4	6	6
<i>qianzong</i>	2	<b>2.4</b>	3	3
<i>bazong</i>	1.5	<b>1.2</b> (1.5?)	3	3
<i>waiwei</i>	1.5	<b>1.3</b> ( <b>0.9</b> ) <sup>c)</sup>	2	2 ( <b>1</b> ) <sup>c)</sup>
common soldiers ( <i>bingding</i> ) <sup>b)</sup>	0.9+0.4	<b>1.3</b> (before: <b>0.9</b> )	0.3 <sup>a)</sup>	0.3 <sup>a)</sup>
personal assistants ( <i>genyi</i> ) of officers	0	0	--	--
personal assistants of soldiers	0.5	0.5	--	--
each person is given a daily ration of 0.83 <i>sheng</i> of rice (worth 0.01 <i>liang</i> ) or 1 <i>sheng</i> of flour				

□ 3.29 Table: Salt-and-vegetable pay and daily rations for Green Standard troops

<sup>a)</sup> Ten soldiers were waited on by three personal assistants.

<sup>b)</sup> Common soldiers were given an additional monthly pay of 0.4 *liang* when entering foreign territory.

<sup>c)</sup> The commentary to the *Junxu zeli* in some cases cites figures which differ from the 'original' precedents in the *Jinchuan junxu li'an*.

In Table 3.29 the differences between the final regulations in the *Junxu zeli* and the practice in Jinchuan can be seen. The most important differences are that officers of higher ranks were paid better and were served by more personal assistants. The problem of the pay for lower ranking officers and common soldiers (*waiwei* and common soldiers obtaining a higher pay

<sup>60</sup> *Hubu junxu zeli* 3, fol. 3a-4b. These Sichuan data are largely identical to those for the Sichuan Green Standard troops as listed in *Jinchuan junxu li'an* 2, fol. 27b-29a. In Table 3.29, differences are marked in bold figures. Some figures are doubtful, correct ones are given in brackets. A part of these regulations followed older precedents from the western campaigns.

than their superiors, the *bazong* officers) as discussed in the commentary to the *Junxu zeli* cannot be resolved (*si fei ti zhi* 似非體制 ‘This seems to be an improper practice.’). The difference between the salt-and-vegetable pay for *qianzong* (2.4 *liang*/month) and *bazong* (1.2 *liang*/month) officers is indeed considerable, so that it can be assumed that the *bazong* were rather given 1.5 *liang* per month in reality, as it was later fixed by the *Junxu zeli*. Common soldiers were given an extra monthly pay of 0.4 *liang* after passing the border onto non-Qing territory. Salt-and-vegetable pay was only given when a contingent left the home province or the country; within the borders of the home province, only the daily ration (*kouliang*) was doled out. Officers were not given any special salt-and-vegetable pay to nourish their personal assistants, but had to provide for them with their own pay, while the personal assistants of soldiers were given a monthly salt-and-vegetable pay of 0.5 *liang*.

The regulations for the Guizhou and Yunnan troops, as reported in the *Jinchuan junxu li'an* were the following: From the home garrison to the camps, all officers from the rank of *shoubei* upward were not given any pay or provisions; *qianzong* officers received a monthly salt-and vegetable pay of 1.2 *liang*, *bazong* officers 0.6 *liang*, and ‘corporals’ (*waiwei*) and common soldiers 0.45 *liang*. There were no daily rations. Officers from Hunan and Hubei, on the contrary, were given their daily rations, but no salt-and-vegetable pay. Soldiers were given rations and half their salt-and-vegetable pay (0.4 *liang*). In the beginning of the war, Hu-Guang troops were even given (the money for) 3 *jin* of firewood, a practice which was criticized by the Ministry of Revenue and therefore forbidden later. The numbers of personal assistants (for officers), or supplementary troops (for common soldiers) in Guizhou and Hu-Guang were identical to those of the Sichuan troops, but were lower for the Yunnan troops, for which province the numbers were identical to those in the later regulations of the *Junxu zeli*. For the Yunnan troops, salt-and-vegetable pay was as high as that for the Sichuan troops. All in all the differences concerning salt-and-vegetable pay between the various provinces are so small that it is possible to calculate this expenditure according to the figures for the Sichuan precedents as presented in Table 3.29. Concerning the salt-and-vegetable pay for *waiwei* and common soldiers, the calculation was based on 1.3 *liang*, this being the sum that apparently became the norm in the course of the campaign.

<i>three-month period</i>	<i>Green Standard troops</i>		<i>Banner troops</i>		<i>native auxiliary troops</i>	
	<i>men</i>	<i>man-months</i>	<i>men</i>	<i>man-months</i>	<i>men</i>	<i>man-months</i>
36/ii	8,000	24,000		0	6,000	18,000
36/iii	14,916	44,748	2,000	6,000	8,201	24,605
36/iv	25,751	77,253	1,987	5,961	10,384	31,153
37/i	35,484	106,452	1,960	5,880	12,551	37,655
37/ii	47,125	141,375	1,920	5,760	14,700	44,101

### 3. THE COST OF STAFF

37/iii	54,653	163,959	1,867	5,601	16,833	50,501
37/iv	57,097	171,291	1,814	5,442	18,948	56,845
38/i <sup>a)</sup>	58,710	234,840	1,761	7,044	21,048	63,145
38/ii	64,113	192,339	1,695	5,085	23,129	69,389
38/iii	73,253	219,759	8,129	24,387	25,196	75,589
38/iv	75,436	226,308	12,049	36,147	25,351	76,053
39/i	80,558	241,674	11,956	35,868	25,503	76,511
39/ii	86,616	259,848	11,864	35,592	25,656	76,969
39/iii	85,602	256,806	11,771	35,313	25,806	77,420
39/iv	84,588	253,764	11,678	35,034	25,957	77,872
40/i	92,587	277,761	11,572	34,716	26,106	78,318
40/ii	91,492	274,476	11,466	34,398	26,255	78,765
40/iii	90,397	271,191	11,360	34,080	26,402	79,206
40/iv <sup>a)</sup>	63,746	254,984	11,254	45,016	26,548	79,646
41/i <sup>b)</sup>	45,000	135,000		0		0
<i>sum</i>		3,827,828		397,324		1,171,754

□ 3.30 Table: Man-months supplied by all types of troops

<sup>a)</sup> There were two intercalary months (*runyue*), one in QL 38/r3, and one in QL 40/r10

<sup>b)</sup> The Banner troops (and supposedly also the native auxiliary troops) were called off very quickly (as soon as QL 41/1), while the last Green Standard troops only left Jinchuan in QL 41/3, except 6,000 men of occupying forces, finally reduced to 3,000 troops as late as QL 41/11.

The next step will be to evaluate the number of personal assistants who participated in the war. For the provinces of Hu-Guang and Shaan-Gan, the number of personal assistants for common soldiers (in some troops called ‘supplementary soldiers’, *yuding*) is already included in the figure for at least part of the troops (compare Tables 3.10 and 3.11). According to the regulations of the different provinces, 100 soldiers had to be waited on by 30 supplementary soldiers.<sup>61</sup> The Green Standard troops from all provinces were waited on by 25,171 personal assistants (10,200 have been subtracted as already included in the figures of common soldiers from Shaan-Gan and Liang-Hu).

<i>rank</i>	<i>distribution in per cent</i>	<i>man- months/rank</i>	<i>pay/month [liang]</i>	<i>monthly pay per rank [liang]</i>
<i>tidu</i>	0.003	114	15	1,722
<i>zongbing</i>	0.014	535	15	8,038
<i>fujian</i>	0.025	956	7.2	6,890
<i>canjiang</i>	0.033	1,263	4.2	5,305
<i>youji</i>	0.054	2,067	4.2	8,681
<i>dusi</i>	0.062	2,373	4.2	9,967
<i>shoubei</i>	0.091	3,483	2.4	8,359
<i>qianzong</i> and <i>bazong</i> <sup>a)</sup>	0.839	32,115	1.8	57,807
<i>waiwei</i>	0.692	26,488	1.3	34,435
common soldiers ( <i>bingding</i> )	98.188	3,758,467	1.3	4,886,008
<i>sum</i>	100.000	3,827,828		5,027,217

□ 3.31 Table: Salt-and-vegetable pay for Green Standard troops

<sup>a)</sup> Average of 1.2 and 2.4 *liang*.

<sup>61</sup> The following numbers are documented in *Pingding Liang Jinchuan fanglüe* 36, fol. 2b-3b (QL 37/7/jiyou): For Hunan and Yunnan troops, 30 long-distance porters (*changfu*) were given to each 100 troops. The Ministry had allowed Shaan-Gan troops to be supported by 30 supplementary soldiers for 100 troops. Yet there were precedents from the western route (s. l. western campaigns) that 4 cavalymen were given 1 supplementary soldier and 5 infantrymen 1 supplementary soldier respectively. The Sichuan troops had to be supported according to these precedents. It was then decided that troops who could not put up the respective number of supplementary soldiers, should hire civilian assistants to carry their luggage.

Through the whole period from QL 37/4 (May 1772) to QL 41/1 (Mar 1776) the 101,344 Green Standard troops supplied 3,827,828 men-months (compare Table 3.30), which means that each soldier on average served at the front for 37.8 months. Considering the distribution in per cent of military ranks, a sum of 5,027,217 *liang* of salt-and-vegetable pay is reached which had to be spent for the Green Standard troops. The 22,510 personal assistants of the soldiers supplied 850,878 man-months and were therefore paid 425,439 *liang* for salt-and-vegetable pay. The 2,661 personal assistants of Green Standard officers were not given any salt-and-vegetable pay as already mentioned.

The paragraphs in the *Jinchuan junxu li'an* dealing with the daily rations regularly specify sums of money given to buy rice (1 *fen* [0.01 *liang*] for 0.83 *sheng* of granary-*dou* rice [*cangdoumi* 倉斗米], or for 1 *sheng* of flour [*mian* 麩]).<sup>62</sup> Yet the respective regulations of the *Junxu zeli*, which were compiled on the basis of the precedents from Sichuan (Jinchuan), talk of rice, which was handed over to the troops.<sup>63</sup> It might therefore be that the statements in the *Jinchuan junxu li'an* were made to provide a better overview of the costs, which is made easier when noting down amounts of money rather than volume units of grain or flour. Yet the real value of the rice reaching the camps was much higher than the official conversion rate of 1 *fen* for 0.83 *sheng* (see Chapter 4.3.), so that the official pay for rations (*kouliang*) is only a theoretical sum. Still it might be of importance for the accounting, and we will therefore nevertheless include it as theoretical expenditure into the calculations for the provisions.

The 101,344 Green Standard troops and their 25,171 personal assistants (including those of the officers), served a total of 4,782,267 months in the field, and had therefore to be fed with 119,078,448 *sheng* of rice (1,190,784 *dan*) at a theoretical cost of 1,428,941 *liang* (at 1 *fen* per 0.83 *sheng*).

The regulations for the salt-and-vegetable pay for Banner troops are not specified enough in the *Jinchuan junxu li'an*. There is a small paragraph about the pay for the provincial Banner troops in Chengdu, and a paragraph describing the general regulations for the salt-and-vegetable pay for Banner troops deployed to Sichuan (Jinchuan), which is largely based on precedents from the western campaigns. This listing is very detailed for each rank of the Capital Banner troops, but can only partially be used for the calculation of salt-and-vegetable pay with the data of rank distribution, as provided at the beginning of the *Jinchuan junxu li'an*.<sup>64</sup> As can be seen in Table 3.32, the monthly pay for Banner troops—even that for those

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<sup>62</sup> *Jinchuan junxu li'an* 1, fol. 25b, 28a.

<sup>63</sup> *Hubu junxu zeli* 2-3.

<sup>64</sup> *Jinchuan junxu li'an* 2, fol. 25a-27b.

from the Capital—did not exceed that for the Green Standard troops. The higher costs for the Banner troops therefore originate in the higher deployment costs (baggage pay) and not in any luxurious allowances for their daily life in the camps.

<i>rank</i>	<i>salt-and-vegetable pay</i> [liang/month]	<i>personal assistants</i>
<i>fudutong</i>	12	18
<i>xieling</i>	7.2	6
<i>zuoling</i> and <i>fangyu</i>	4.2	5
<i>xiaojixiao</i>	2.4	2
cuirassiers ( <i>jiabing</i> )	1.5	1
personal assistants ( <i>genyi</i> )	0.5	--

□ 3.32 Table: Salt-and-vegetable pay for the Chengdu Banner troops, according to Jinchuan junxu li'an

Because these documents are not sufficient, we have to rely on additional data from the regulations in the *Junxu zeli* which provide much exacter details about sums and procedures. According to the same mathematical operation as demonstrated for the Green Standard troops in Table 3.31, the salt-and-vegetable pay for the 12,789 Banner troops can be calculated. On the base of 397,324 man-months, the calculation results in 665,238 *liang* which had to be paid to the Banner troops. Each Banner soldier served an average of 31.1 months at the front. The 9,499 personal assistants of the Banner troops therefore supplied 295,149 man-months and had to be paid 147,575 *liang* as salt-and-vegetable pay. Unlike the personal assistants of the Green Banner officers, who were not entitled to a salt-and-vegetable pay, the personal assistants of Banner officers received this pay.

Banner troops and their personal assistants consumed 17,242,955 *sheng* (172,429 *dan*) of rice, at a theoretical cost of 206,915 *liang*.

<i>rank</i>	<i>daily pay</i> [liang]	≅ <i>monthly pay</i> [liang]	<i>personal assistants</i>
kings ( <i>tusi</i> )	0.08		2.4
barons ( <i>tumu</i> )	0.04, later 0.06		1.2, later 1.8
<i>tu canjiang</i>	0.08		2.4
native common soldiers ( <i>tubing</i> )	0.03	0.9, from QL 38/11 on 1.3	5

□ 3.33 Table: Some figures for the salt-and-vegetable pay for native auxiliaries, from the Jinchuan junxu li'an

The regulations concerning the native auxiliary troops as reported in the *Jinchuan junxu li'an* are quite different from those of the later *Junxu zeli* and therefore shall be listed here in detail. The most important difference is that the native auxiliary troops, from the kings (acting as native officers) down to common soldiers, were given a daily pay and not the otherwise usual monthly salt-and-vegetable pay. In the procedures for the 'barbarian affairs' at the beginning of the campaign, each Green Standard soldier was likewise handed a daily salt-and vegetable

pay of 1 *fen* (corresponding to 0.3 *liang*/month).<sup>65</sup> The monthly pay for the native auxiliaries was, as already noted, not called salt-and-vegetable pay, but encampment pay (*zuoxiangyin*, if handed out *in specie*, called *zuoxiangmi* 坐餉米 ‘encampment grain’).

Because it is not possible to calculate with such incomplete figures, the necessary data have to be taken from the *Junxu zeli* regulations and those in the respective commentary, which are quite similar to those for the Green Standard troops.<sup>66</sup> The 29,597 native auxiliary troops supplied 1,171,754 man-months, which is 39.6 months per person, i. e. each native auxiliary soldier theoretically served longer than three years. The costs for salt-and-vegetable pay for the native auxiliary troops (called ‘encampment pay’) amounted to a total of 1,522,484 *liang*. The 1,040 personal assistants of the auxiliary troops were not eligible for the salt-and-vegetable pay and only received their daily rice ration.

In the beginning auxiliary troops were monthly given the money for 3 *dou* of rice (with an official price of 0.255 *liang*), which corresponds to one *sheng* of rice per day, somewhat more than for the other types of troops. It is not clear from the formulations in the *Jinchuan junxu li'an* if this amount was reduced later to 0.83 *sheng*, but it is reasonable to assume it. Native troops could also be given 1 *sheng* of flour instead of the rice, because the native people were more accustomed to eating *tsampa* (a paste or dough made of roast barley flour) instead of rice. If the soldiers wanted money instead of food, they were given 8-9 *fen* per *sheng* or rice, according to the old regulations of the transport stations.<sup>67</sup> The native auxiliary troops and their personal assistants consumed a total amount of 30,209,308 *sheng* (302,093 *dan*) of rice, which cost 362,511 *liang*.

<i>type of troops</i>	<i>salt-and-vegetable pay [liang]</i>	<i>provisions [liang]</i>
<i>Green Standard troops</i>	5,027,217	1,144,644
-- <i>personal assistants</i>	425,439	284,297
<i>Banner troops</i>	665,238	118,729
-- <i>personal assistants</i>	147,575	88,186
<i>native auxiliary troops</i>	1,522,484	350,205
-- <i>personal assistants</i>	0	12,305
<i>sum</i>	7,787,953	1,998,366

□ 3.34 Table: Salt-and-vegetable pay and expenditure for daily rations for all kinds of troops

The *Junxu zeli* includes regulations for a further category of soldiers, namely those having changed sides and defected to the imperial troops (*touchengren* 投誠人). They were allowed monthly salt-and-vegetable pay according to the regulations for the Green Standard troops.<sup>68</sup>

<sup>65</sup> *Jinchuan junxu li'an* 1, fol. 3a; 2, fol. 32b.

<sup>66</sup> *Hubu junxu zeli* 3, fol. 4b-5b.

<sup>67</sup> *Jinchuan junxu li'an* 2, fol. 33a-33b.

<sup>68</sup> *Hubu junxu zeli* 3, fol. 5b-6a.

Unfortunately there are no concrete figures as to how many Jinchuan soldiers surrendered to the Qing and then fought within their ranks, and therefore this item can be neglected.

The expenditure for salt-and-vegetable pay (*yancai*) for all types of troops and their personal assistants during the war accrued to 7,787,953 *liang*. This amount was quite appropriately distributed among the different types of troops, which means that the Banner troops were not better paid than the Green Standard troops or the native auxiliaries. The money disbursed to pay the daily provisions (*kouliang*) of the soldiers theoretically amounted to 1,998,366 *liang* (with a government price of 1.2 *liang* per *dan*). From this sum the commanding generals had to purchase 166,530,500 *sheng* of rice (or 1.6 million *dan*), of which the Banner troops (counting for 7% of all troops) consumed 11 per cent, which is slightly more than their proportion among all troops. The native auxiliary troops consumed only 15 per cent of the rice, but made out 21 per cent of all troops.

Yet the troops were already paid daily rations when leaving the garrison and on their way to the front. Because the Qianlong emperor sent elite troops from garrisons which were far away from the war theatre, the amounts to be paid on the march cannot be neglected. In order to calculate the respective sums, it is necessary to estimate the time the troops needed to march to the front, and, when the war was over, back to their garrisons. The small book of Wang Chang, *Shujiao jiwén*, is quite helpful as it includes a kind of diary for the march from Yongchang/Yunnan to the front in Jinchuan. The Banner troops who had to march along this route, needed 23 days from Yongchang to Chengdu, and a few days more to the front,<sup>69</sup> which is about one month for 1,500 km. Based on these figures, the following data will be used for the calculation of the march to the front:

<i>origin/type of troops</i>	<i>march to the front (one way) [months]</i>
native auxiliary troops	0.25
Sichuan (including Chengdu Banners)	0.5
Guizhou	0.6
Hu-Guang (including Jingzhou Banners)	0.7
Shaan-Gan (including Xi'an Banners)	0.8
Yunnan	1
Capital Banners	1.4
Jilin Banners	2
Heilongjiang Banners (including Ölöds)	2.4

□ 3.35 Table: Time needed for marching to the front

Although it is not clearly stated in the *Junxu zeli*, the Banner troops were only given their salt-and-vegetable pay after leaving Qing territory (*chu kou* 出口) and were only paid the money

<sup>69</sup> *Shujiao jiwén*, fol. 7-11. The troops at first marched to the southern route via the prefecture of Yazhou, but were then called back to Chengdu and redirected to the western route.

to buy their daily rations on the march.<sup>70</sup> Yet Green Banner troops were already given salt-and-vegetable pay when leaving the home province.<sup>71</sup> Therefore we have subtracted 2\*0.15 months for the time needed to cross through the home province when calculating the necessary salt-and-vegetable pay for Green Standard troops from other provinces. In all cases all grades within the troops were given their pay, from officers down to personal assistants. The expenditure for the salt-and-vegetable pay for the Green Standard troops on the march added up to 118,286 *liang*. According to the regulations, the troops, while on the march, were not given rice but cash to buy rice from merchants, who therefore had to organise market stalls and booths. For the 6,829,282 *sheng* of rice needed to feed the troops on their way, 81,951 *liang* had to be disbursed by the government, so that the final sum for salt-and-vegetable pay and the daily rations adds up to 7,542,940 *liang* (*yancai*), resp. 2,002,232 *liang* (*kouliang*), but the latter sum is only theoretical and has to be contrasted with the real costs of rice, which was much higher than the government price of 1.2 *liang* per *dan* (see Chapters 3.3. and 4.3.3.).

### 3.2. Civilian Officials

Although war is actually a matter of the military, the troops do not fight for their own purposes, but act on orders of a civilian government. It is therefore necessary that from time to time government representatives have a look at what happens in the war theatre. Even the highest commanders were often no professional generals but governors and governors-general of provinces who had to take part in the war because the action took place on or near the territory of the province they were responsible for. The governors-general of Sichuan were therefore automatically involved in the two Jinchuan wars.

Commanding generals often did not act alone but were assigned a civilian official by the central government, often a member of the State Council and thus bearing high responsibility and enjoying the confidence of the emperor. After the Mugom catastrophe, for example, all divisions on the particular routes were commanded by a mixed military-civilian team of officials: Mingliang – Fude, Agui – Sebtengbarzhur, Fengsheng'e – Hailancha. The 'militaries' had the position of a general, the 'civilians' that of a Grand Minister Consultant (*canzan dachen*).

Some officials were even dispatched on special order by the emperor to investigate corruption cases, like Fulong'an who was sent to look into the corrupt activities of Artai, or Zhou Huang,

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<sup>70</sup> *Jinchuan junxu li'an* 2, fol. 25b, 27b.

<sup>71</sup> *Hubu junxu zeli* 3, fol. 4a-4b.



Bayar and Fuxing, who were separately sent out to find out why the army had failed during the uprising in the summer of QL 38 (1773).

The *Jinchuan junxu li'an* as well as the *Junxu zeli* contain long lists of civilian offices in the central government whose occupants could participate in a campaign. Especially officials from the Censorate, the Grand Secretariat, the Hanlin Academy, the Directorate of Education, the Directorate of Astronomy and the Imperial Academy of Medicine could be dispatched to the front, from ministers and directors down to secretaries, to take over various tasks in the military camps (*sui ying ban shi* 隨營辦事 or *ban chai* 辦差; see Tables 3.38 and 3.39).<sup>72</sup>

Among the victims of the Mugom incident two were secretaries in ministerial bureaus. This could be taken as a hint that the respective ministries, viz. that of Revenue and that of Justice, dispatched secretaries whose task it was to make sure of correct accounting. Representatives of the Ministry of Justice might have been dispatched to Jinchuan with the task to check if state officials sentenced to serve in the camps or in the administration, really did their work. Artai, for example, had been stripped of his rank of governor-general and was to serve his sentence (*shu zui* 贖罪) in the organisation of logistics.

Meanwhile, the hardest work fell to the many officials from the local government who were dispatched to organise the logistics network in the *hinterland*. Their concrete tasks shall be highlighted by a few examples:

The provincial administration commissioner (*buzhengsi*) of Sichuan organised the logistics, together with 2 to 3 circuit intendants or prefects (*daofu*).<sup>73</sup> From Dzagu to Djoso, each grain station (*liangtai* 糧臺, *taizhan* 臺站) was administered by one circuit intendant or prefect.<sup>74</sup>

The prefect (*zhifu*) of Ningyuan 寧遠 had displayed greatest diligence in organising the transport of rice along the transport routes through the land of Chosgyab and was therefore rewarded with the title of a circuit intendant.<sup>75</sup> If the transport did not go well, as an example in the area of Kyudi shows, the responsible civilian official was removed from his office.<sup>76</sup>

Just as in the top echelons of the commanders it was also common on the lower levels that a military official and a civilian official worked together to resolve transport problems, for example, one *youji* officer, and a prefect, the former commanding the troops protecting the logistics station.<sup>77</sup> Some civilian officials were also appointed to supervise the camp

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<sup>72</sup> *Jinchuan junxu li'an* 2, fol. 41b-43b. *Hubu junxu zeli* 2, fol. 2a-3a. For the official titles and terms of the government institutions, see Appendix 1.

<sup>73</sup> *Pingding Liang Jinchuan fanglüe* 32, fol. 4a-4b (QL 37/6/jiashen).

<sup>74</sup> *Pingding Liang Jinchuan fanglüe* 78, fol. 17b-18a (QL 38/10/xinhai).

<sup>75</sup> *Pingding Liang Jinchuan fanglüe* 89, fol. 12a (QL 39/2/guisi).

<sup>76</sup> *Pingding Liang Jinchuan fanglüe* 103, fol. 22a-22b (QL 39/8/wushen).

<sup>77</sup> *Pingding Liang Jinchuan fanglüe* 65, fol. 6b-7a (QL 38/7/guisi).

foundries (*paoju* 炮局)<sup>78</sup> or had, as it was in their area of jurisdiction, to care for the supply of metal and the recruitment of casters.<sup>79</sup> After the war, the assistant district magistrate of Baoxian 保縣 was dispatched to Wenchuan in order to take care of the construction and supervision of the new transportation route.<sup>80</sup> High civilian officials were dispatched on imperial command (*qinchai* 欽差) and were appointed to certain locations or ‘followed to the camps’ (*suiying*) to supervise a whole logistics route or a section of it or an important station like a camp (*juning* 軍營). The list of the stations in the supply line in the *Jinchuan junxu li'an* mentions several times supervising civilian officials with the ranks of prefects (*zhifu*), circuit intendants (*daoyuan*), provincial surveillance commissioners (*niesi*), provincial administration commissioners (*fansi*), vice ministers (*shilang*), and governors-general (*zongdu*).<sup>81</sup>

Rank and task of the civilian officials sent to the war theatre managing the logistics and courier routes reflected their position in peace-time government: While single stations were managed by district magistrates, prefects had to oversee larger stations or a couple of smaller stations, and circuit intendants were responsible for whole routes.

The *Jinchuan junxu li'an* says that 740 government officials served in Jinchuan,<sup>82</sup> but does not expressly say how many came from the central government, and how many had the rank of a civilian official of the local government. We therefore have to rely on evidence in edicts and memorials. It was deduced that in each station one assistant (*zuo-za*) or a higher official of the civil government of the prefectures and districts had to act as supervisor, one person for each station in the supply line.<sup>83</sup> The assumption that in each station a district magistrate (*zhixian*) of rank 7a exercised his office would probably not be borne out by the facts but the office of district magistrate is an appropriate average rank between that of an assistant of rank 8 or 9 and a prefect of rank 4b, of which surely fewer people were employed in logistics.

<sup>78</sup> *Pingding Liang Jinchuan fanglüe* 123, fol. 19b (QL 40/8/jiyou).

<sup>79</sup> *Pingding Liang Jinchuan fanglüe* 101, fol. 23b (QL 39/7/yihai).

<sup>80</sup> *Pingding Liang Jinchuan fanglüe* 135, fol. 9b-10a (QL 41/4/renxu).

<sup>81</sup> *Jinchuan junxu li'an* 2, fol. 91a-122b. The persons mentioned here are prefect Sheng Ying 盛英; the circuit intendant of Songpan and Maozhou; circuit intendant Bai Ying 白瀛; provincial administration commissioners Hao [Shuo] 郝碩, Yan N. 顏, and Li [Shijie] 李世傑; provincial surveillance commissioners Du [Yulin] 杜玉林 (actually salt control commissioner, *yandao* 鹽道) and Li [Ben] 李本; vice minister E[ba]o 鄂寶; governor-general and Minister of Personnel Liu [Bingtian]; the generals Feng[sheng'e] 豐昇額 and Ming[liang] 明亮; and provincial military commander Ma [Quan] 馬全. One person opening (*kaichuang* 開創) a transport route and called Huang Jiexiang 黃家相 is not known by his rank.

<sup>82</sup> *Jinchuan junxu li'an: Zonglüe*, fol. 3b.

<sup>83</sup> *Pingding Liang Jinchuan fanglüe* 107, fol. 19b (QL 39/10/renchen). The term *zuo-za* is a combination of *zuoer* 佐貳 and *zazhi* 雜職, the first being of rank 8, the latter of rank 9 or without rank (sub-official post). *Shuhai cong'an* 2, fol. 8a.

A list of the civilian officials who died during the Mugom disaster will show a typical composition of civilian staff in an important camp.<sup>84</sup> In the encampment of Mugom—at that time the headquarters of the division advancing against Gala'i and Le'uwé—and during the flight twenty-six civilian officials lost their lives. Three of them were ministerial secretaries (*zhushi*, 6a), one a provincial record keeper (*zhaomo*, 9); apart from them there were two prefects (*zhifu*, 4a), one sub-prefectural magistrate (*tongzhi*, 5a), four department magistrates (*zhizhou*, 5b), two assistant sub-prefectural magistrates (*tongpan*, 6a), six district magistrates (*zhixian*, 7a), one assistant district magistrate (*xiancheng*, 8a), one chief of police (*limu*, 9a), one police officer (*xunjian*, 9b), and three district jailers (*dianshi*, no rank). From these data<sup>85</sup> it is possible to reconstruct the proportions of civilian and military personnel in the encampment of Mugom.

<i>type of personnel</i>	<i>number</i>	<i>percentage</i>
Green Standard soldiers	3,919	94.46
Banner soldiers	97	2.34
Green Standard officers	64	1.54
Banner officers	46	1.11
civilian officials	23	0.55
<i>sum</i>	4,149	

□ 3.36 Table: Proportions of civilian and military staff killed during the Mugom uprising

The interesting point at first sight is that although the overwhelming majority of casualties belonged to the Green Standard troops—a fact which confirms the statements of some Chinese scholars that the purely Chinese Green Standard troops were used as cannon fodder<sup>86</sup>—there is no considerable difference between the number of officers killed from both types of troops (1.54 : 1.11). Of all casualties only half a per cent were civilians.

<i>type of personnel</i>	<i>number</i>	<i>percentage</i>
common soldiers	9,710	93.27
Banner officers	176	1.69
Green Standard officers	483	4.34
native auxiliary officers	12	0.12
civilian officials	29	0.28
<i>sum</i>	10,410	

□ 3.37 Table: Proportions of civilian and military officials and soldiers killed during the second Jinchuan campaign

<sup>84</sup> Pingding Liang Jinchuan fanglüe 66, fol. 9b-10b (QL 38/7/renyin).

<sup>85</sup> Jinchuan dang, QL 38/III/00075-84 (no date).

<sup>86</sup> Luo (1984), pp. 11-12.

At the end of each year the emperor had a list of the casualties compiled, who were to be honoured by reciting their names before the Altar of the Patriotic Heroes (*ru si zhao zhong ci* 入祀昭忠祠).<sup>87</sup> When evaluating these lists, we come to the result seen in Table 3.37.

The sum of 10,410 is some 4,000 lower than the total number of casualties in the second Jinchuan war. Yet as the edicts proclaiming the state-organised honouring of war casualties only include people really worth being praised in such a solemn way, there might be hundreds of others who were just not thought worth to be dignified by such a ceremony. Wenfu, for example, the general who was blamed for the Mugom disaster, is not included in the lists, and definitively no native auxiliary soldier or any personal assistants who lost their lives. The figure of 0.55 per cent is probably somewhat too high as an average figure for civilian officials active in the war theatre, as Mugom was a headquarters where important persons gathered to deliver their reports and to receive commands. The same is perhaps true for the great number of Banner officers killed during the summer uprising of QL 38 (1773): In Mugom surely more Banner officers were to be found than the general average at the front. We will nevertheless take the figure of 0.55 per cent (Table 3.36) as a reasonable proportion of civilian officials active in the war theatre, as it approaches very closely the 0.57 per cent, which is the proportion according to the figures in the *Jinchuan junxu li'an* (740 : 129,500). The lists of casualties include only extremely few native auxiliary personnel (and only officers). This figure refers exclusively to people occupying an office of rank 7 and higher: assistants (*zuo-za*, rank 8-9) are not included. A typical relationship between middle-rank officials and assistants is probably reflected at the beginning of the *Jinchuan junxu li'an*, where it is said that one district magistrate and 26 assistants took part in the campaign.<sup>88</sup> These are only exemplary figures, probably from one region, but taking these as a kind of standard would mean that about 8,300 civilian assistants served in the war, including all kinds of secretaries and servants. Interestingly, there is not one *zuo-za* mentioned in the lists of casualties, for which there could be one reason: While a prefect or a magistrate had the opportunity to enter the camps and to visit the front, civil government assistants were solely used for the organisation of the logistics line, and were rarely exposed to contact with the

<sup>87</sup> *Qingshilu: Gaozong shilu* 923, fol. 53b-54a (QL 37/12/gengyin; for QL 37); 949, fol. 31a-32a (QL 38/12/jiayin; for QL 38); 973, fol. 30b-31b (QL 39/12/wushen; for QL 39); 999, fol. 32b-33a (QL 40/12/renshen; for QL 40); 1023, fol. 24b-25b (QL 41/12/yichou; for QL 41). No such list exists for the year QL 36, only a very short one for one person honoured for his death in the Myanmar campaign. Yet the list for QL 41 is actually too long to comprise the soldiers killed during the one month that fighting still went on in that year, which means that it also includes soldiers and civilians killed during QL 40, and it could therefore be similar to the list for QL 37, which probably also includes soldiers and civilian officials killed during QL 36. However, in the frame of this research the lists are only of value for the relationship between the different ranks of military and civilian officials.

<sup>88</sup> *Jinchuan junxu li'an* 1, fol. 15b.

enemy. Of all 29 dead civilian officials mentioned in the honorific edicts in the *Qingshilu*, two thirds fell victim to the Mugom uprising. Under normal circumstances for a civilian official the chance of being killed was not very high; only 4% of all civilian officials were killed, as opposed to 11.4% of all soldiers.

Surprisingly, the lists of casualties do not include any officials from the central government at all, except a few secretaries. Memorials and edicts likewise give only rare evidence of the presence of central government officials in Jinchuan. One example is the dispatch of Felix da Rocha, vice director of the Directorate of Astronomy (*qintianjian jianfu*), who was to instruct the gunners on the subject of ballistic calculations. Such occasions are few and far between, and we have to assume in general that the number of civilian government officials dispatched to the war theatre was relatively low and can therefore be neglected. A few persons, nevertheless, have to be mentioned because it was exactly the highest echelon of the Qing commanders in Jinchuan who were not professional militaries (except for their 'natural inclination' to war, caused by their ethnicity as Manchus), but members of the local and central government: Agui, Fude, Haguoxing, Hailancha, Mingliang, Sebtengbarzhur and Wudai were Grand Ministers Consultant (*canzan dachen*), which means, members of the central government dispatched to supervise a military campaign. The military task of those civilian officials becomes more evident in a post designation which is called Grand Minister Commander (*lingdui dachen*). Some of these officials were promoted during the war, for example to Grand Minister Assistant Commander (*sanzhi dachen*; rank 2a, with hereditary privilege), like Artai, Purpu and Esente, or to Grand Minister Assistant Commander of the Imperial Household Department (*neidachen*; rank 1 b), like Hailancha; Grand Ministers Consultant could also be promoted to Grand Minister Commander, like Fude, Hailancha, and Wudai. Among the second-rank commanders there were some occupying a position called imperial guardsman commander (*lingdui shiwei*). Such persons came from among the military ranks in the Capital guard units and therefore served to assist their civilian superiors. For many high-ranking officials their original post is mentioned in the memorials, like that of the ministers Agui and Fulong'an or that of the vice ministers (*shilang*) Yuan Shoutong 袁守侗, Liang Guozhi, Guilin, Liu Bingtian, Ebao 鄂寶, Fukang'an, or that of the vice directors (*yuanwailang*) Mingde 明德 and Liushiwu 六十五.<sup>89</sup> Wenfu's son Yongbao 永保 was a reader-in-waiting (*shidu*) in a central government agency.

Yet the problem is that most of those mentioned, although for a time occupying certain posts in the central government, could be shifted to a post in the local government or take over the

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<sup>89</sup> Personal names with the the form of numbers were quite common among Manchus.

responsibility for a military Banner unit, like Mingliang, who was commissioner of the imperial procession guard (*luanyiwei luanyishi*) before taking over the responsibility of Grand Minister Commander in Ili. He then became vice commander-in-chief (*fudutong*) of a Chinese banner in the Capital, then in Jilin, later in Ningguta 寧古塔. He then took part in the Myanmar campaigns and was finally sent to Jinchuan as commander-general of the guardsmen (*hujun tongling*).<sup>90</sup> Among the many names of soldiers listed in the *Jinchuan junxu li'an*, there are also some cited with posts actually belonging to the civilian government, like governor-general Artai, head of the civil administration of Sichuan, vice director Mingde, Grand Minister Fuxing, minister Fulong'an, reader-in-waiting Yongbao, one ministerial secretary (*zhushi*), and five clerks (*bithesi*) of central government agencies. We therefore come to the conclusion that only very few high central government officials were dispatched to the front just as observers, and therefore neglect the cost arising from such duties. But for general information we will nevertheless give an overview of the baggage pay and the monthly cost payable to central government officials. In the *Jinchuan junxu li'an*, there is only one small paragraph concerning the salt-and-vegetable pay and other allowances for Grand Ministers dispatched to the front to arrange grain transport. Such a person was, for example, Artai who was stripped of his post of highest commander and had to take care of the logistics. The number of Capital officials in the field was probably so low because the service in the army camps was considered as a kind of sentence for offences committed, or as a chance for officials waiting for a post to fall vacant.

According to the precedents for vice ministers (*shilang*) and consultants (*canzan*), a Grand Minister was given a monthly salt-and-vegetable pay of 12 *liang* and was served on by 24 personal assistants. Each interpreter/translator (*tongyi* 通譯)<sup>91</sup> in his service was given a monthly pay of 1 *liang*. Apparently each personal assistant was allowed to have one interpreter, which means that the personal assistants were not only used to clean their master's shoes and to prepare food (*qiao ji chui cuan* 樵汲炊爨 'making firewood, drawing water and cooking food'), but had much more important tasks to fulfil which required intensive communication with the surroundings. Civilian officials from the Capital (*jingyuan*) were given 30 *liang* monthly and were supported by two secretaries (*shuli*) who obtained a wage of 4 *liang* a month each, further four personal assistants for whom daily 0.09 *liang* was spent on

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<sup>90</sup> *Qingshi liezhuan* 29, pp. 2214-2215.

<sup>91</sup> There might have been interpreters for oral communication between the imperial troops and the native population as well as translators for the paperwork of bureaucracy, like the term *yizi* 譯字 suggests (*zi* being something written).

food. Each secretary was supported by one interpreter.<sup>92</sup> The information in the *Junxu zeli* is more complete: Each Grand Minister was given a baggage pay of two years' salaries, according to his rank, and each personal assistant leather clothing pay (*piyiyin*) of two *liang*.<sup>93</sup> This regulation followed precedents, which means that Grand Ministers dispatched to Jinchuan should also have received this pay—although there is no mentioning of it in the Jinchuan precedents. For the civilian officials of the local government, there was apparently no baggage pay at all. Concerning the salt-and-vegetable pay, the *Junxu zeli* quotes also many more precedents and says that all civilian officials of the central government received their monthly pay according to their rank. There was one case in which a high official called Liu Bingtian claimed a monthly pay of 30 *liang* for the travel expenses (*gongfei* 公費) of one of his subordinates, a certain Lü Yuanliang 呂元亮, because there had been a precedent during the Myanmar campaigns. Yet the payment of the sum Liu claimed was refused by the Ministry of Revenue.<sup>94</sup> Although we will not use this list for a calculation, the regulations in the *Junxu zeli* shall be presented here as an example, what members of the central government could be dispatched to the front.

<i>title/rank</i>	<i>salt-and-vegetable pay</i> [liang]	<i>personal assistants</i>
• Grand ministers, 1st rank	12	24
• Grand ministers, 2nd rank	12	22
• academicians of the Grand Secretariat; vice censors in chief (2b-3a)	10	20
• officials in the central government ( <i>jingtang</i> ) of 3rd rank	10	16
• officials in the central government of ranks 4 and 5; • academician readers-in-waiting of the Grand Secretariat; • officials of ranks 4 and 5 of the Hanlin Academy and the household administration of the Heir Apparent; • Manchu directors of studies in the Directorate of Education; • supervising censors of the six offices of scrutiny; • investigating censors of each circuit	7.2	10
• directors and vice director of a ministerial bureau; • readers-in-waiting of the Grand Secretariat; • officials of ranks 6 and 7 of the Hanlin Academy and the household administration of the Heir Apparent; • Chinese directors of studies of rank 6 in the Hanlin Academy and the Directorate of Education; • director and vice director of astronomy; • commissioner and administrative assistant of medicine; • officials of each yamen of ranks 5 to 6	4.2	8
• secretaries ( <i>zhongshu</i> ) in the Grand Secretariat; • small Capital officials ( <i>xiao jingguan</i> ) of the Hanlin Academy, the household administration of the Heir Apparent or any <i>yamen</i> • imperial physician (rank 7)	2.5	8

<sup>92</sup> *Jinchuan junxu li'an* 2, fol. 41b-42a.

<sup>93</sup> *Hubu junxu zeli* 1, fol. 1a-1b.

<sup>94</sup> *Hubu junxu zeli* 2, fol. 2a-3b.

• clerks ( <i>bithesi</i> ; ranks 8-9), astronomers, and below	2.5	3
• personal assistants	0.5	--

□ 3.38 Table: Salt-and-vegetable pay and personal assistants for officials from the Capital

Just one example shall highlight how much cost accrued for officials from the Capital dispatched to encampments: If a high civilian official from the Capital stayed half a year in the camps, this might have well cost the state a sum of 240 *liang* in salt-and-vegetable pay plus wages for his scribes and interpreters. This sum is quite high compared to what generals were given, but because the persons concerned were so few, we will neglect this sum.

Of much higher importance are the officials of local government who received the following amounts of salt-and-vegetable pay according to the Jinchuan precedents:<sup>95</sup>

<i>title</i>	<i>salt-and-vegetable pay [liang] in Sichuan</i>	<i>salt-and-vegetable pay [liang] in Junxu zeli</i>	<i>personal assistants</i>
• circuit intendants ( <i>daoyuan</i> , <i>dao-fu</i> )	30	4.2	8
• prefects ( <i>zhifu</i> )	25	4.2	7
• sub-prefectural ( <i>tongzhi</i> , <i>tongpan</i> ), department ( <i>zhizhou</i> ) and district magistrates ( <i>zhixian</i> )	20	4	5
• assistants ( <i>zuo-za</i> )	15	2.5	3
• personal assistants		0.5	

□ 3.39 Table: Salt-and-vegetable pay and personal assistants for officials from the local government

It is very important to compare the figures cited here with the later final regulations in the *Junxu zeli*, because they are much higher than those, just like in the Yunnan precedents (30 *liang* monthly for a prefect). The *Jinchuan junxu li'an* also quotes the respective amounts for the western campaigns, in the course of which the civilian officials were given an annual instead of a monthly pay, which was substantially higher than in the final regulations of the *Junxu zeli* (360 *liang* instead of 240 *liang*, which became applicable later). There was a discussion in the respective agencies about the salt-and-vegetable pay for the civilian officials, and it was decided that these should also receive a pay geared to the fixed annual salary, with the result that the monthly pay was lowered considerably after the second Jinchuan war.

The above-mentioned figure of 740 civilian officials taking part in the campaign included members of the central government as well as members of the local administration. The *Jinchuan junxu li'an* says that it is impossible to list all different ranks, positions, names and figures with the corresponding time of service, as being far too various and numerous. Yet a listing in the Jinchuan precedents<sup>96</sup> states how many civilian officials served at what route and enumerates 284 people from the rank of prefect down to assistants. Yet some higher

<sup>95</sup> *Jinchuan junxu li'an* 2, fol. 41b-43a. *Hubu junxu zeli* 2, fol. 6a-7a.

<sup>96</sup> *Jinchuan junxu li'an* 1, fol. 16a-17b.



officials did supervise the routes, and they were circuit intendants or staff from the provincial administration commission (*fansi*) or from the provincial surveillance commission (*niesi*). We will therefore extrapolate the figure of 284 along with the proportions of the different ranks to the figure of 710 (subtracting some 30 people from the central government), in order to obtain a distribution of official ranks among all 710 persons. The average service period of soldiers of all types staying in Jinchuan being 36.5 months we will on this basis calculate how much time each civilian official of the local government spent at the front and how much salt-and-vegetable pay he was given.

<i>office</i>	<i>persons</i> (→ <i>extrapolation</i> )	<i>salt-and-vegetable pay</i> [liang]
(central provincial administration)	17 (→40)	43,800
<i>zhifu</i>	2 (→5)	4,563
<i>tongzhi</i>	10 (→24)	17,520
<i>zhizhou</i>	27 (→64)	46,720
<i>zhixian</i>	100 (→235)	171,550
<i>zuo-za</i>	145 (→342)	187,245
personal assistants <sup>a)</sup>	[2,996]	54,677
<i>sum</i>	301 (→710)	526,075

□ 3.40 Table: Salt-and-vegetable pay for local civilian officials in the second Jinchuan campaign

<sup>a)</sup> The number of personal assistants is not included in the sum below.

From these data we are able to calculate the costs of the local civilian officials and their personal assistants, which add up to 526,075 *liang*, about one tenth of which was spent on the personal assistants (54,677 *liang*). According to the old precedents, everybody was given a daily ration of 0.83 *sheng* of rice, which results in a total need of rice of 33,682 *dan*, at a theoretical cost of 40,418 *liang*. Yet this is a minimum because it becomes evident, when looking at the list of war casualties, that there were some officials being distributed to the different logistics routes, like sub-prefectural magistrates (*tongpan*), assistant district magistrates (*xiancheng*) and several police officers of lower rank, which are not mentioned in the *Jinchuan junxu li'an* list of the civilian officials serving in logistics. Among those persons, by the way, many were waiting (*houbu* 候補) for a position to fall vacant (6 out of 23), which means that not all district magistrates serving in Jinchuan were actual heads of a district, but many virtually unemployed officials to be were used to fill the ranks of the organisers of logistics. By this management it was not only possible to test the usefulness of the candidates, but also to save a lot of money because officials on probation were not paid any salary.

The real cost of the civilian officials can not be found out because of the fact that in the general account in the *Jinchuan junxu li'an* it is categorized under the heading 'pay for civilian officials, constructing roads and bridges and crafting boats (*chaiyuan zhiying*,

*chuanwu gongliao, xiuli daoqiao* 差員支應，船物工料，修理橋道)，with a sum of 912,172 *liang*. The sum is composed of the expenditure for 89 different items without separating the particular entries from each other.<sup>97</sup>

### 3.3. Hired Porters, Labourers and Workmen

There were three groups of civilian employees serving in the logistics of campaigns undertaken by the 17th century Qing dynasty. The first one was that of professionals working in the logistics stations and camps in various trades like blacksmiths, vets, boatbuilders, casters, physicians, painters, and so on. The second group of civilian employees was that of professional labourers overseeing the transport of grain and military items, like accountants and secretaries, or simply foremen. The third group were the least specialized, which only served to do the hard work of transporting rice and ammunition to the camps and to the front. At the beginning of the war, the local government recruited porters (*kangfu* 扛夫) from several districts in Sichuan who were obliged to make available their physical strength as part of the tax they had to pay to the government. This procedure demonstrates that the merging of the *corvée* tax with the poll tax, first carried out in 1530 in the so-called ‘single-whip method’ (*yi tiao bian fa* 一條鞭法), and later systematised from 1729 on (in a process called *tan ding ru mu* 攤丁入畝 ‘merging the *corvée* with the field tax’), was not yet implemented in a thorough and consistent manner, which can best be seen by the fact that the household registration through which each able-bodied male was enrolled, was only given up as late as 1772. Yet the difference between *corvée* labour and conscripts for military labour is that the latter were at least given some money for their work. It was not much, but something to live on and even a pay for their way to their destination and back home, and on days when waiting for fresh work to do. The recruiting was undertaken according to the tax rate of the region liable for recruitment. For each 100 *liang* of taxes, between 2 and 10 labourers were to be supplied. As a compensation to the district, the *jintie* 津貼 surcharge (a kind of additional tax used as funding for labour subsidies and the transport of tax grain) was suspended in districts which had provided labour force to the government. This way, about 150,000 labourers had been recruited from throughout the prefectures and districts of Sichuan (see Map 3.41).<sup>98</sup> The locations where the *corvée* labourers came from were spread over the whole

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<sup>97</sup> *Jinchuan junxu li'an* 2, fol. 177b-178a.

<sup>98</sup> *Jinchuan junxu li'an* 2, fol. 71b-72a. Compare also the important article of Dai (2001), p. 49.

territory of the province of Sichuan, so that there was virtually no district where peasants were not to serve the army.



3.41 Map: Districts in the province of Sichuan dispatching labourers for the second Jinchuan campaign. For all those districts tax remittances were granted

The ‘barbarian affairs’ files contained the following regulations concerning labourers:<sup>99</sup> From ten granaries in Sichuan (compare Map 4.4),<sup>100</sup> 32,900 *dan* of rice had been moved, and 79 *dan* been purchased from private suppliers. When buying rice, the current monthly price officially reported to the local government had to be taken into account, which was about 1.1 to 1.2 *liang* per *dan*.<sup>101</sup>

For the 12 logistics stations (*zhan* 站) from Ya'an to Ludingqiao, the transport price (*jiaojia* 腳價) per *dan* and station was 0.15 *liang*. From the various granaries to Ya'an, the transport

<sup>99</sup> *Jinchuan junxu li'an* 1, fol. 3b-5a.

<sup>100</sup> Chengdu, Tongchuan 潼川, Ya'an, Jiading 嘉定, Xuzhou 叙州, Zizhou 資州, Mianzhou 綿[s. 1.綿]州, Meizhou 眉州, Qiongzhou 邛州, Luzhou 瀘州.

<sup>101</sup> *Jinchuan junxu li'an* 2, fol. 73a.

price overland was first brought to account with 0.1 *liang* per *dan* and day, from the granaries to Guanxian 0.12 *liang*, yet the Ministry of Revenue rejected this amount and only allowed to bring to account a transport price of 0.1 *liang* for each daily section on the way to Ya'an and Guanxian. The price for transport by waterway was 0.026 *liang* downriver, and 0.06 *liang* per *dan* and day upriver. On the long road to the southern route and onwards to Djanggu on the Greater Jinchuan River, for each *dan* of rice two porters had to be used, who were to be paid 0.05 *liang* when working inside the country (*kounei*), and 0.08 *liang* when working outside the country (*kouwai*), but not given any rations, neither inside nor outside the country. Native porters (*Fanfu* 番夫) working inside the country, i. e. between Ya'an and Dajianlu, were only paid a daily 0.05 *liang* per person. As the situation for 'barbarian' workers (*manfu* 蠻夫) was the opposite of that for people coming from Sichuan—because the region 'outside the passes' (*kouwai*) is nearer to their homes—they were not even given any pay outside the country but just a daily ration of 1 *sheng* of rice. Porters working at a logistics station (*anzhan renfu* 安站人夫 or *lifū* 里夫 'people from the villages'), were given a daily pay of 0.05 *liang* and obtained a ration of 1 *sheng* of rice.

While two porters were to carry one *dan* of barley (*kemai* 稞麥) the quantity of roast flour (*chaomian* 炒麪) to be carried by two porters was 1.5 *dan*.

Subordinates of a civilian official (*guanyi* 官役) supervising a logistics station (as *zhanyuan* 站員 'station head') were given a monthly allowance of 12 *liang* and paid 0.03 *liang* for rice,<sup>102</sup> each *fen* being worth 0.83 *sheng* of rice. Civilian runners (*chaiyi* 差役) were monthly paid 8 *liang* and given 2 *fen* to buy food with. It may be well to remember that the lowest civilian official, a *zuo-za* assistant, was paid 15 *liang* per month (see Table 3.39).

People working in other trades, like granary accountants (*cangshu* 倉書 or *cangfu* 倉夫), runners (*tongshi* 通事), interpreters (*yizi* 譯字) and grain measurers (*douji* 斗級), obtained rations of 0.83 *sheng* of rice or 1 *sheng* of flour. The *Jinchuan junxu li'an* does not list any wages for this kind of staff for the granaries or the logistics stations, at least not for the period of QL 36/6 – 9 (Jul – Oct 1771). Yet we must assume that they were, of course, given a monthly pay, which had been fixed in the Jinchuan precedents, according to the notes of the *Junxu zeli*, as 1 *liang* monthly.<sup>103</sup> When a logistics station had no supervisor, a scribe (*shuban*

<sup>102</sup> 3 *fen* of silver bought only about 4 *sheng* of rice. It can therefore be doubted that 3 *fen* was a monthly allowance for rations, and it should have been a daily pay which the respective persons could buy rice or other food marketed by sutlers with, be it for themselves or as well for servants or personal assistants. A runner was paid 2 *fen*, which was sufficient to purchase rice for two to three persons daily. This assumption is supported by the statements for ration payments for boatmen, see below.

<sup>103</sup> *Hubu junxu zeli* 6, fol. 2b-3a.

書辦) had to be employed plus one runner, and three grain measurers in a station receiving grain. Grain measurers were used to see to it that the correct amount of rice was shifted from one station to the other and to check if rice had been lost or stolen on the way.

Boatmen (*shuishou* 水手) and blacksmiths (*tiejiang*) were paid a family allowance of 1 *liang*, and received 2 *fen* daily for food. When reaching the station where they were due to do their work, they obtained a daily wage of 0.0666 *liang*,<sup>104</sup> and rations of 1 *sheng* of rice.

Two soldiers each were helped by one porter (*beifu* 背夫) who was given a wage (*gongjia* 工價) of 0.05 *liang* daily, but neither rations nor pay when not working or on his way back to his home district (*huikong* 回空).<sup>105</sup>

From these data we will try to produce a calculation of the service cost for personnel during the first part of the war, from QL 36/6 to 36/9 (Jul – Oct 1771). Although the total amount of rice supplied by various prefectures in Sichuan province is known, namely 2,963,527 *dan*,<sup>106</sup> we do not know exactly how many *dan* of rice came from what district or prefecture. We therefore equally distribute the rice on all ten main supplying prefectures and establish an average value of distance.<sup>107</sup>

<i>prefecture of origin</i>	<i>destination</i>	<i>method</i>	<i>distance [stations] (Øaverage)</i>	<i>price per station [liang]</i>	<i>cost of rice shipped [liang]</i>
Chengdu	Guanxian	land	3	0.1	989.4
Qiongzhou 邛州	Guanxian	land	3 – 6 (Ø4.5)	0.1	1,484.1
Mianzhou 綿州	Guanxian	land	5 – 12 (Ø8.5)	0.1	2,803.3
Tongchuan 潼川	Guanxian	land	8 – 11 (Ø9.5)	0.1	3,133.1
Zizhou 資州	Guanxian	land	6 – 13 (Ø9.5)	0.1	3,133.1
Meizhou 眉州	Ya'an	upstream	4	0.06	791.52
Jiading 嘉定	Ya'an	upstream	1 – 4 (Ø2.5)	0.06	494.7
Xuzhou 叙州	Ya'an	upstream	8 – 14 (Ø11)	0.06	2,176.68
Luzhou 瀘州	Ya'an	upstream	11 – 15 (Ø13)	0.06	2,572.44
Ya'an	Ya'an	--	--	0	0

□ 3.42 Table: Grain transport cost in Sichuan at the beginning of the war

The grain transport from various prefectural granaries in Sichuan to the shipping posts in Guanxian and Ya'an cost the Qing state 17,578 *liang*.

From there on, the way on to Ludingqiao and Dzagunao was still within the country (*kounei*), with a daily shipping price of 0.1 *liang* (for two porters) per *dan* and day. The 16,490 *dan*

<sup>104</sup> Such a sum is surely the result of a calculation, as for example, 3 *qian* for 2 persons.

<sup>105</sup> *Jinchuan junxu li'an* 1, fol. 3a.

<sup>106</sup> *Jinchuan junxu li'an* 2, fol. 180a.

<sup>107</sup> The distances between the districts and the three destinations Chengdu, Guanxian, and Ya'an vary considerably, and the *Jinchuan junxu li'an* 2, fol. 123a-137a, lists several possible routes of transport, and if the rice could be transported by waterway or overland, and if there were any alternatives. We therefore in each case decided to take the shortest route assuming that all rice of the southern prefectures was taken to Yazhou and all rice from prefectures located in the centre and the north of the Sichuan basin shipped to Guanxian.

shipped to Ludingqiao on the southern route therefore cost 19,877 *liang* (with 12 stations), the 16,490 *dan* shipped to the northern and western route cost 14,841 *liang* (with about 9 stations). From these points on, a price of 0.16 *liang* per *dan* and station for transport outside the country had to be paid, which results in a further 633,216 *liang* for the southern route (24 stations), and 184,688 *liang* for the northern and western route (7 stations). The cost for the transport of rice only during the first four months of the war was 870,200 *liang*, which was still quite cheap considering that these were the prices for transport fixed by the government authorities which later were to become much higher. At that point of time, the porters were still not given any rations, but had to buy their food from their daily wages. Yet the price must have increased quite quickly, because already at an early stage of the war the leading generals considered using private entrepreneurs to be commissioned for the transport of rice, and they did not charge much more than what the government had to pay for the state-organised transport anyway (see translation of the respective memorial below).

Therefore, we will at least include the cost for rations in our calculations, which results in 12,267 *liang* as pay for daily rations outside the country (10,223 *dan* of rice).<sup>108</sup> This would mean that a third of the rice was consumed by the porters, which seems somewhat high, as the 14,600 troops (including native auxiliary troops) serving in the period of QL 36/6 – 9 (within a 120-day period) theoretically consumed 26,000 *dan* of rice, so that only about 9,000 *dan* would have been left for consumption by labourers (porters and others working in the logistics stations). The amount of barley used to feed the native auxiliary troops and native labourers in the same period of time is not known because no total figures are given as for rice, flour and beans.

The running cost of the 31 logistics stations outside the country and the 42 stations inside the country (approximate figure, from Chengdu on) amounted to a further 31,863 *liang*, including 7,043 *liang* for daily rations, during the four months from QL 37/6 to QL 36/9. The average staff (*fushu* 夫書) per station was one head (*haoshu* 號書, being a state official of the lowest rank), nine assistants serving as couriers (*bufu* 步夫), 50 ‘stout men’ (*zhuangfu* 壯夫) to protect the logistics station against raids by the enemy as well as against bandits and thieves,<sup>109</sup> 6 granary accountants and grain measurers, and 1 interpreter, all of whom cost together 109.12 *liang* per month. This is a minimum figure, as the non-permanent stations had

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<sup>108</sup> Under the assumption that all rice was transported to the end of the routes, where the camps were located. Yet this is not quite true because the rice needed to feed the staff of the bases and the porters has to be subtracted, for which reason the amount of rice arriving in the stations near the frontier was less than the 16,490 *dan* taken as a basis for each of the two route-directions.

<sup>109</sup> The protection of the stations was also often taken over by regular troops, especially for the larger grain stations, where 200 to 300 troops worked as guard. *Jinchuan dang* QL 38/III/00014 (QL 38/7/3).

first to be erected by carpenters and blacksmiths (producing nails) and then to be operated by servants doing the work of feeding the horses, cleaning the storage rooms, maintaining the many items to be stored in the logistics stations, and so on. The listing of the staff in the logistics stations<sup>110</sup> shows that there was a permanent crew of between 5 and 13 persons in each of them. They were responsible for transmitting and delivering routine messages. The total work force in any single station could reach a figure of over 1,000 porters.

The porters carrying the Green Standard soldiers' baggage and material (*changfu* 長夫 'long-distance porters') numbering 3,960 had to be paid 2,970 *liang* when working for 15 days, which can be considered an adequate duration for the distance from the home garrison somewhere near Chengdu to the frontier (compare Table 3.20).

From the above reasons we come to the conclusion that the deployment of the first contingents of the war (6,200 Green Standard and 8,400 native auxiliary troops) during the period QL 36/6 – 9 needed at least 917,300 *liang* for the personnel being employed to transport rice and military equipment to the front. When extrapolating these data (15,000 troops, delivering 60,000 men-months, cost 0.9 million *liang*), we come to the result that the cost for the organisation of transport during the whole war cost about 58.6 million *liang* (at 15.3 *liang* per man-month). Since this sum almost corresponds to the total expenditure, it is obviously too high. The main error in this calculation is that not all of the rice was transported to the terminus of the supply lines of all routes. This will be taken into consideration in the next steps.

The regulations for the logistics and the employees working for it changed somewhat after the accounts were decided to be enclosed in the military expenditure files, from the end of QL 36 (1771) onwards.

The main difference was that from then on, the rice was not supplied from state granaries but was to be bought on the market, which drove the costs up. According to the old files, for each *dan* of rice, only 1.35 *liang* was to be paid, including an allowance for transport losses (*jiahao* 加耗). The husked rice could be bought directly from granaries (*niancang* 碾倉) throughout the prefectures and districts of the province of Sichuan, but the new files postulated that the rice for military supply should be bought only in Chengdu (*sheng* 省). Therefore all rice rations first had to be shipped to Chengdu. The *Jinchuan junxu li'an* includes a list of districts through which rice transports were arranged (see Map 4.4).<sup>111</sup> The price in Chengdu was originally not supposed to be higher than 1 *liang* per *dan*, which is cheaper than the prices

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<sup>110</sup> *Jinchuan junxu li'an* 2, fol. 91a-122b.

<sup>111</sup> *Jinchuan junxu li'an* 2, fol. 123-137.

paid in QL 36 (1771) and also lower than the government conversion rate of 1 *dan* : 1.2 *liang*. After that the price gradually rose, following the real market conditions, to 1.35 *liang* (before QL 38/7 [Aug 1773]), 1.75 *liang* and then to 1.95 *liang* (until QL 39/8 [Sep 1774]).<sup>112</sup> In the years QL 39 (1774) and QL 40 (1775) the rice stored in the granaries was used up before the new harvest, so that the price for rice in Chengdu increased substantially and the grain had to be shipped from other prefectures directly to the transport ‘terminals’ in Guanxian and Yazhou.

The following table (Table 3.43) lists the transport prices and the resulting rice prices for a handful of shipping stations: Chongqing 重慶, Luzhou, Xuzhou, and Jiading. The prescribed price of 0.07 *liang* per day or station can be verified from the data about the number of stations and transport costs per route. The prices for some routes include 0.02 *liang* more, probably for short route sections that could be covered in less than a day (Chongqing – Chengdu, Xuzhou – Yazhou, and Chongqing – Yazhou).<sup>113</sup>

<i>route</i>	<i>stations</i>	<i>transport cost [liang]</i>	<i>cost per day (station) [liang]</i>	<i>price per dan [liang] at the destination point</i>
Jiading – Chengdu	8	0.56	0.07	2.31
Xuzhou – Chengdu	14	0.98	0.07	2.73
Luzhou – Chengdu	18	1.26	0.077	3.01
Chongqing – Chengdu	25	1.624	0.06496	3.374
Jiading – Yazhou	3	0.21	0.07	1.96
Xuzhou – Yazhou	9	0.644	0.0715	2.394
Luzhou – Yazhou	13	0.91	0.07	2.66
Chongqing – Yazhou	18	1.274	0.071	3.024

□ 3.43 Table: Cost for transporting rice to Chengdu and Yazhou

The transport price of beans as provender (*liaodou* 料豆) for horses was the same as that of rice. Each *dan* of beans cost 0.8 *liang*, which was the official state price. The market price was higher, so that the leading generals often complained about market prices and proposed to increase the price fixed by the government authorities in order to have fewer problems when settling the accounts.

Concerning flour (*maimian* 麥麵) and unground grain (*maizi* 麥子; wheat and barley), there is a special calculation when determining the transport prices: Looking at the price, 1.5 *dan* of flour correspond to 1 *dan* of rice, which means that the transport cost of rice is 1.5 times as high as for the same volume of flour. The transport cost for each *dan* of flour should not exceed 0.8 *liang* (per day or station), which would analogously mean, no more than 0.12 *liang* per day for rice. Because one *dan* of flour is lighter than one *dan* of rice, the expenditure in Table 3.43 should be sufficient to cover all costs, even if the price of the flour itself was

<sup>112</sup> *Jinchuan junxu li'an* 2, fol. 73a.

<sup>113</sup> *Jinchuan junxu li'an* 2, fol. 73-74.



slightly higher. Concerning the weight of rice, there is one indication in the sources: 5 *sheng* of rice weigh 8 *jin* (in modern units: 5.175 litres of rice weigh 4.7744 kg, or 10 litres of rice weigh 9.226 kg). Each porter who was to carry 50 *jin* of weight according to the regulations, could therefore carry 29.84 kg in general, or 52.35 litres of rice, which made for a voluminous load.<sup>114</sup>

There is a very important statement in the *Jinchuan junxu li'an* which says that in the old files rice was exclusively moved by state-organised transport (*guanyun* 官運), while according to the new files after QL 38/6/29 (Aug 17, 1773) everything was transported by private entrepreneurs (*shangyun* 商運).<sup>115</sup> Yet already at a very early stage of the war, namely at the beginning of QL 37 (1772), the leading generals Wenfu, Artai and Agui suggested contracting private entrepreneurs for the transport of grain. This method had proved its usefulness during the first Jinchuan campaign, and it was apparently not much more costly to have entrepreneurs move the rice than to rely on coerced labourers, as the following document shows:

[...] In the files of the war against Jinchuan during the years QL 12 and 13 [1747 – 1748], we see that apart from the state-organised transport, entrepreneurs have been recruited (*zhao shang* 招商) in order to support the state-organised transport in places where the latter was not sufficient, so that there were actually no reasons to worry about any deficiencies in supply. Since Your servant [Wenfu] has been in charge, he has diligently researched and found out that the grain price is low and people therefore jump about for joy. Since several months until now (QL 37/2 (Mar 1772)) we have made use of labourers from among the people (*gubei minfu* 雇備民夫) to take care of the transport. Yet Sichuan is a very large province, and of the various prefectures and districts, some are located near, but others far away [from the war theatre]. And for the soldiers fighting on the three routes, tens of thousands of porters are used, especially since several thousand new troops have been dispatched and arrived from the provinces of Guizhou and Shaanxi, so that in each transport station the porters have to carry additional amounts of loads. Yet it is not possible to dispatch so many new porters at the same time from throughout the province [of Sichuan], and to complicate matters further, springtime has just begun, when the peasants have to work their fields [and are therefore indispensable in their home villages]. [The labour in the logistics stations can thus] only be fulfilled with great difficulties. Moreover, the logistics stations on all three routes, numbering between 10 and 13 [on each route], have to be supplied with daily provisions for the porters to be delivered by each station. The consequence is that from each *dan* delivered to the encampments not a small amount has to be deducted [to feed the porters].

Concerning the transport by private entrepreneurs, the transport costs might [in pure figures] be more expensive than the transport organised by the state. Yet for the entrepreneurial transport we do not have to procure any provisions, and compared with state-organised transport in what has to be paid daily [in rice

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<sup>114</sup> *Pingding Liang Jinchuan fanglüe* 85, fol. 7b-8a (QL 39/1/jiwei).

<sup>115</sup> *Jinchuan junxu li'an* 2, fol. 74b.

or provision pay], the overall expensiture is also not that much [i.e. not more than for entrepreneurial transport].

If we add privately organised transport to the [state-drafted] porters already transporting [the grain] from station to station, this would greatly benefit the people because the peasants would not be obstructed in their work; and it would verily be of great advantage to the provisions for the troops in the encampments.

Both sides, the people and the army, would therefore benefit [from such a method...]<sup>116</sup>

The total amount of rice moved to the camps in Jinchuan was 2,963,527 *dan* (including the 32,979 *dan* from the ‘barbarian affairs’ files).<sup>117</sup> It was distributed to the following routes inside (*kounei*) and outside (*kouwai*) the country:<sup>118</sup>

<i>route</i>	<i>old files</i> [dan]	<i>new files</i> [dan]	<i>sum</i> [dan]
western route			
--inside	100,885	293,275	394,160 (?)
--outside	276,411	241,852	518,263
<i>sum</i>	377,296	535,127	912,423
southern route			
--inside	319,883	432,631	752,514 (?)
--outside	144,056	43,336	187,392
<i>sum</i>	463,939	475,967	939,906
central route			
--inside	12,871	31,185	44,056
--outside	94,498	4,684	99,182
<i>sum</i>	107,369	35,869	143,238
northern route			
--inside	6,385	7,777	14,162
--outside	139,971	147,704	287,675
<i>sum</i>	146,356	155,481	301,837
new western route			
--outside	0	656,185	656,185
<i>sum</i>	0	656,185	656,185
<i>total sum</i>	1,094,960	1,858,629	<b>2,953,589</b>
--inside			1,204,892 (?)
--outside			1,748,697

□ 3.44 Table: Rice transported to the Jinchuan war theatre and the logistics stations on the way

The total sum as calculated from the particular statements showing how much rice was transported to what route is some 10,000 *dan* less than the alleged total sum (2,963,527 *dan*). A second complicated issue is the statement—in the *Jinchuan junxu li'an* text following the listing as reflected in Table 3.44—that 365,173 *dan* of rice were transported to logistics stations inside the country, and 2,598,353 *dan* to destinations (logistics stations and camps) outside the country, two figures which can be added to the sum of 2,963,526 *dan*, which is the same as the alleged total stated at the beginning of the detailed list in the regulations. Apart

<sup>116</sup> *Pingding Liang Jinchuan fanglüe* 21, fol. 14b-15b (QL 37/2/renchen). Similar arguments can be found in another memorial, recorded in 24, fol. 9b-9b (QL 37/3/jiazi).

<sup>117</sup> *Jinchuan junxu li'an: Zonglüe*, fol. 3b; 2, fol. 180a.

<sup>118</sup> *Jinchuan junxu li'an* 2, fol. 180a-181b. All units smaller than one *dan* have been neglected in this table.

from the difference of 10,000 *dan*, it is rather implausible that almost half of the sum (1,204,892 *dan*; resulting from summing up the 'inside' figures in the left and middle columns) should have been transported to logistics stations inside the country—which constitute not even one tenth of all stations. The most doubtful figures are that of the western route, on which more than one third of the rice is said to have been transported to stations inside the country, as well as the figure for the southern route. The southern route was very long and counted 16 stations inside regular districts and dependencies before leaving the country at Dajianlu (compare the maps in Appendix 2), yet it cannot be that 80 per cent of the grain were eaten by porters before arriving at Dajianlu. We will nevertheless stick to these figures, as similar relations for the destinations inside resp. outside the county are given for flour and beans (see Chapter 4.3.3.).

How expensive was it to transport rice to the various destinations? The Jinchuan regulations say that the porters had to buy or to fabricate the sacks (*koudai* 口袋) and were not given any additional pay for it.<sup>119</sup> Inside the country, the pay for the transport of 1 *dan* of rice per day was 0.1 *liang*, as stipulated in the new files. In the old files, the price for the transport to the western and northern route was 0.1 *liang*, to Ya'an 0.12 *liang*, and to Dajianlu 0.153846 (sic!); on the central route, 0.153 *liang* per *dan* and station. On the western route, the porters were also given 1 *sheng* of rice daily. The price for destinations outside the country was laid down in the new files regulations as 0.16 *liang* per *dan* daily, including the pay for rations (rate fixed by the government authorities: 0.012 *liang* for 1 *sheng* of rice). As opposed to the entrepreneurial transport, the *Jinchuan junxu li'an* does not say how much rice was transported to what destination. Though it only lists 13 stations outside the country with the per-*dan* price for the transport costs, this list is helpful for an approximate calculation in the following way: As all stations belong to a certain route, the known amount of rice transported to that route can be proportionally distributed between the different routes (40% to the western route, 22% to the southern route, 14% to the central route, and 21% to the northern route), and then equally between the stations located on that route. The quantities transported and brought to account in the old files (Table 3.44) include rice shipped by state-organised transport as well as rice transported by entrepreneurs. The only way to find out how much of it was transported by the state is to look at the quantities transported by entrepreneurs, as listed in Table 3.47 (total amount: 2,030,300 *dan*) and to subtract them from the ones mentioned in the old files, which is more (171.671 *dan*) than the total amount of rice

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<sup>119</sup> One sack cost 0.35 *liang*, which is not really cheap. Fabric to sew such sacks cost 0.15 *liang* per piece. *Jinchuan junxu li'an* 2, fol. 44b, 61a.

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registered in the new files (1,858,629 *dan*). The result is 923,289 *dan* of rice transported by labourers recruited by the state. Of this amount, 40.2 per cent were transported to destinations inside the country (at least, according to the figures in Table 3.44), and 59.8 per cent to destinations outside the country, in concrete figures: 371,035 *dan* to destinations inside, and 552,253 *dan* to destinations outside the country.

<i>destination</i>	<i>route</i>	<i>price [liang]</i>	<i>amount of rice [dan]</i> <i>on average</i>	<i>cost [liang]</i>
Wolongguan	western	2.14	116,537.1	249,389.7
Meno		5.5	116,537.1	640,954.8
Dajianlu	southern	1.8	24,294.1	43,729.4
Gada		3.24	24,294.1	78,712.9
Djanggu		4.2	24,294.1	102,035.2
Kyaya		4.68	24,294.1	113,696.4
Dandung		5.34	24,294.1	129,730.5
Muping	central	1	26,560.8	26,560.8
Yaokyi		1.96	26,560.8	52,059.1
Dawé		2.84	26,560.8	75,432.6
Dzagunao	northern	1.2	39,341.9	47,210.4
Byebeng		1.94	39,341.9	76,323.4
Somo		3.22	39,341.9	126,681.18
<i>sum</i>		Ø 3.1	552,253.2	1,762,516.33

□ 3.45 Table: State-organised transport of rice to destinations outside the country

At an average per-*dan* price of 3 *liang* to the point of destination, the state-organised transport of 552,253 *dan* of rice from Chengdu to destinations beyond the border cost the state 1,762,516 *liang*. Because some figures for the quantities of rice transported to destinations inside the country seem too high (see discussion above), the real expenditure for this kind of transport and destination must have been higher. The half a million *dan* of rice were bought in Chengdu, yet the prices given in Table 3.45 are so low that the grain price cannot have been included. Muping, for example, was a ten days' travel away from Chengdu, which results in exactly 1 *liang* of transport costs, with 0.1 *liang* as daily costs. Similar estimates can be made for the other border towns Dajianlu and Dzagunao. This means that the purchase price of rice has to be added, as all the rice was bought on the Chengdu market and not taken from state granaries. Although the Ministry of Revenue tried to control grain prices again and again, the prices which it accepted when the generals handed in their accounts—ranging between 1.35 and 1.75 *liang* per *dan*—were far below the real final price in Chengdu, when coming from destinations far away, like Chongqing (see Table 3.43). The fixed grain price in this table is 1.75 *liang*, to which amount the transport costs have to be added. The average per-*dan* price of the rice was therefore 2.68 *liang*,<sup>120</sup> which means that the supply of the rice transported by

<sup>120</sup> It is only possible to calculate with an average value, because it is not known how much rice was shipped from what prefecture or district.

state-recruited porters to destinations outside the country cost 1,480,038 *liang*. The purchase of the 371,036 *dan* of grain allegedly transported to destinations within the country cost another 994,376 *dan*. The last amount to be taken into account is that of rice transported to logistics stations within the country. Under the assumption that the rice was equally distributed among all logistics stations in question (19 on the southern route, 10 on the central route, 7 on the western route, and 12 on the northern route; all from Chengdu), and taking into consideration the proportions of rice distributed to destinations on the four different routes as stated in Table 3.44, the costs for the rice transported to destinations inside the country by state-organised transport add up to 461,629 *liang*.<sup>121</sup>

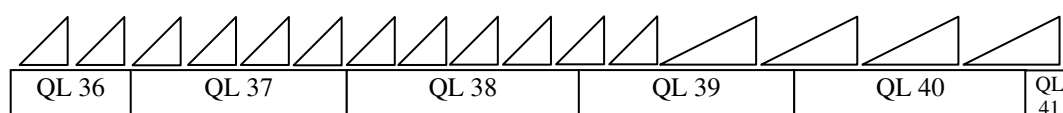
Although the regulations say that porters, except those working on the western route, were not to be given daily rations, the memorial cited above clearly indicates that those given them were of such an immense significance that they became the main argument when voting for private instead of state-organised transport. The transport costs of between 0.1 and 0.153 *liang* per day and *dan* of rice were therefore not the only factor to be taken into account. Since two porters were needed to transport one *dan* of rice additional costs of 0.024 *liang* per *dan* of rice have to be added for each day or each station (1.2 *fen* for one *sheng* of rice) when talking about the state-organised transport of grain. The same formula (see footnote) permits us to calculate how much rice had to be given to the labourers carrying the rice to different stations from Chengdu to the camps (up to QL 38/7 [Aug 1773]), with the result that 117,804 *dan* of rice had to be provided to feed the state-organised labourers, or, expressed in money, 141,365 *liang*. One of the greatest problems of state-organised transport was that the government could not endlessly exploit the labour-force of peasants—it had, according to the regulations, to replace (*huanban* 換班) the whole contingent every three months. Thus at a certain point of time, thousands of people had to be exchanged in situ, with the consequence that while the old contingents were still working, new contingents had to march to Jinchuan and to take over the work immediately in order not to cause any delays in the grain transport system. There is one example in the memorials in which Guilin complains that of the 11,800 new workers, only some 500 had have made their way to the southern route. Therefore, Wenshou in QL 39/2 (Mar 1774) suggested prolonging the duration of service from 3 months to 5 months.<sup>122</sup> If this system was correctly adopted, 11 replacements of personnel on service for three months should have taken place, and there should have been four periods during which the

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<sup>121</sup> According to the formula  $c(n) = \left(\frac{r}{n}d\right)(n + (n-1) + \dots + 1)$ , with  $c(n)$  being the costs for a route of  $n$  stations,  $r$  the quantity of rice transported, and  $d$  the daily transport price.

<sup>122</sup> *Pingding Liang Jinchuan fanglüe* 92, fol. 8b-9b (QL 39/3/xinwei).

personnel served five months (see Diagram 3.46). The service periods were adhered to strictly so that even at the end of the campaign people working in a logistics station being broken up had to wait in one of the nearest stations until the end of their service period before being allowed to go home.<sup>123</sup> On the other hand there was a regulation in the old precedents which said that the labourers were not to be given any additional family allowance when they had to stay longer than three (resp. five) months. In other words: after the new precedents became applicable, many *corvée* porters may have served longer than their actual service period would have required them to do.<sup>124</sup> It is not known if each of the four rounds (*ci* 次), during which peasants from Sichuan were recruited according to the tax registers, constituted one such period (one ‘triangle’ in the diagram).<sup>125</sup>



□ 3.46 Diagram: Replacement of labourers after 3, later 5, months, each triangle symbolizing a service period

It is known that 462,097 people worked as porters during the Jinchuan campaign, about 151,800 of whom were recruited according to the tax registers at the beginning of the campaign.<sup>126</sup> In each station, there were between 500 and more than 1000 porters, or 750 on average, which means that towards the end of the campaign, when a very high number of logistics stations was in operation, about 250,000 porters were permanently present in Jinchuan, more than twice the number of soldiers serving at the front. Yet this figure is so high that with view to the condition that porters had to be replaced every 5 months, the number of 462,000 recruited porters cannot possibly include porters hired by the private entrepreneurs.

With the assumption that the porters hired in the recruiting rounds were replaced after three months (before mid-QL 39 [1774]), we will be able to calculate how much those persons cost: For the working period of 90 days, and on their way to Jinchuan and back home (30 days, if from far away), they had to be given 182,160 *dan* of rice as rations (costing 218,592 *liang*), and 1,092,960 *liang* as labour pay (0.08 *liang* daily) outside the country, and 227,700 *liang* as pay on their way to Jinchuan and back.<sup>127</sup> For all 462,000 people engaged in state-organised

<sup>123</sup> *Jinchuan junxu li'an* 2, fol. 70b-71a.

<sup>124</sup> *Jinchuan junxu li'an* 2, fol. 68a.

<sup>125</sup> *Jinchuan junxu li'an* 2, fol. 71b-72a. Dai (2001), p. 49.

<sup>126</sup> *Jinchuan junxu li'an*: *Zonglüe*, fol. 3b; 2, fol. 185b.

<sup>127</sup> Compare regulations in *Hubu junxu zeli* 5, fol. 1a-2a.

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transport, the costs therefore theoretically added up to 4,617,756 *liang*, plus 2 *liang* of family allowance for each, which will make a total of 924,000 *liang*.

The cost for the other type of transport, undertaken by commissioned entrepreneurs, is likewise documented in the Jinchuan regulations, but somewhat better, as it is told how much rice was transported to what destination (for the particular locations, see Appendix 2). These data enable us to reconstruct the cost for entrepreneurial transport quite exactly.

<i>destination</i>	<i>route</i>	<i>price per dan [liang]</i>	<i>amount (rounded down) [dan]</i>	<i>cost [liang]</i>
Wolongguan	western	8	72,700	581,600
Xiangyangping		10	2,800	28,000
Žilung		11.5	46,600	535,900
Dawé		11.75	84,000	987,000
Ži'r		12.5	87,500	1,093,750
Ekshi		13	2,300	29,900
Menggu		13.5	38,300	517,050
Meno		14	39,600	554,400
Lamasi		15	3,300	49,500
Senggedzung		15	58,900	883,500
Mugom		16	12,400	198,400
Dzagunao	northern	5	74,300	371,500
Sengtogou (Tsengtogou)		12.745	4,400	56,078
Somo		12	22,800	273,600
Dzamashan		13.5	4,700	63,450
Djoktsai		13.5	97,600	1,317,600
Muyashan		15.25	13,700	208,925
Sunggang (Tsunggak)		14.5	16,400	237,800
Djoso		18.5	38,300	708,550
Gyaomugyao		20.5	1,200	24,600
Lingguan	central	4	300	1,200
Muping		4	27,800	111,200
Yaokyi		7.5	5,900	44,250
Dajianlu	southern	9.8	472,600	4,631,480
Djangu		19	97,600	1,854,400
Kyaya		20.818	7,800	162,380
Gyidi		19.2	17,200	330,240
Dandung		19.2	10,600	203,520
Gyaogyao		20.14	400	8,056
Kyudi	new	7	287,000	2,009,000
Sansungping	western	10	64,500	645,000
Sala		11	58,100	639,100
Dabandjao		11.5	144,800	1,665,200
Solobogu		12.5	110,200	1,377,500
Le'uwé		16.25	3,700	60,125
<i>sum</i>			2,030,300	22,463,754

□ 3.47 Table: Privately organised transport of rice to destinations outside the country

From Table 3.47 it becomes evident that the privately organised transport of rice to the encampments cost the Qing state roughly 22.5 million *liang*. The biggest advantage of this type of transport was that the organisers of the logistics did not have to supply rations for the

porters nor any other food like vegetables and meat, for the preparation of which the logistics officers had field kitchens (*pudian* 鋪店, *fanpu* 飯鋪, *wopu* 窩鋪) installed where the soldiers and porters could buy food and other commodities of all kinds. People hired by the entrepreneurs undertaking the transport did not have to be paid any monthly wages, nor any family allowances.

Yet the maintenance of the logistics stations was still in the hands of the government, and therefore we have to calculate the costs for the staff working in the 353 stations, whose crews had an average service duration of 39 months.<sup>128</sup> The monthly cost per crew were 109.12 *liang* on average, which makes for a total cost of 1,502,255 *liang* for the operation of the stations, including 332,060 *liang* for rice.

We will now have a look at a handful of stations and compare the price for state-organised transport and transport arranged by private entrepreneurs.

<i>station</i>	<i>per-dan price [liang], state-organised transport</i>	<i>per-dan price [liang], 'outsourced' transport</i>	<i>factor of virtual price increase</i>
Meno	5.5	14	2.5
Kyaya	4.7	20.8	4.4
Dandung	5.3	19.2	3.6
Yaokyi	1.9	7.5	3.9
Somo	3.2	12	3.8
Wolongguan	2.14	8	3.7
Dajianlu	1.8	9.8	5.4
Muping	1	4	4
Dzagunao	1.2	5	4.1

☐ 3.48 Table: Comparative costs of state-organised and private transport

The factor by which the transport price per *dan* increased when switching over from state-organised transport to 'outsourced' transport is about 4, which looks as if commissioning a private cargo entrepreneur was four times as expensive as coercing peasants to work for a pittance. At first sight this seems plausible, but, why then, did the leading generals vote for private transport with the argument that costs were almost the same? Firstly, the rice is included in the costs for the outsourced transport, which could be more than 2 *liang* per *dan*, as we have seen, from QL 38 (1773) on, but less, when the state bought this rice with its own prescribed prices, at 1.2 or 1.35 *liang* per *dan*. Secondly, the family allowances did not have to be paid for people working for an entrepreneur. Thirdly, while the state had its own standards when paying labour and allotting daily rations, it had to pay enough to make sure the peasants would not run away, which means that the original prices as paid during QL 36 (1771) cannot be taken as standard pay for the whole campaign.

<sup>128</sup> Estimation according to the list of the logistics station and respective date of setup.



When 0.05 *liang* were the daily pay (or transport cost) inside the country, and 0.08 *liang* outside,<sup>129</sup> the rice price in Dzagunao was already 2.692 *liang* per *dan* by official transport, and the price in Somo 5.268, when the rice price in Chengdu has been 1.35 *liang*.<sup>130</sup> Travelling to Somo, for example, took about one month, when carrying rice. This would mean that the daily expenses for the transport alone would be 0.13 *liang* for state-organised transport (with a rice price per *dan* of 1.35 *liang* at the point of destination), and daily expenses of 0.31 *liang* for the private transport (with a rice price of 2.67 *liang*). Yet the crucial point is that the state would not be willing to pay a price three or four times as high as the cost for the ‘normal’ method of using labour conscripts. The price for state-organised transport must have become much higher during QL 37 (1772) and QL 38 (1773), which becomes evident with the following regulation: The conscripts did not only receive a family allowance paid in one lump sum, but instead were given this amount monthly, in order to make them stay with their work.<sup>131</sup> Instead, as a once-and-for-all gratification of 2 *liang*, they were given 3 *liang* monthly. As this amount was calculated on a day-by-day basis, the labourers were entitled to an extra payment for every day on top of their stipulated service period. This means that two labour conscripts, for example, peasants from a prefecture far away from Jinchuan, were paid 30 *liang* together, 12 of which were just paid for their way to Chengdu and back. During their period of service to Somo, they were able to carry two and a half *dan* of rice (when walking all the way back). This means that the transport of one *dan* of rice cost 12 *liang* (in the worst case; and excluding costs for the rice itself), and even for people living near the border, the transport must have cost a lot more than 3.2 *liang* per *dan*, which was the price effective at the beginning of the campaign. They represent the direct costs of state-organised transport before the commanders totally switched over to ‘outsourced’ transport of rice. But surely the organisational consequences and their indirect costs also played an important role: recruiting peasants, guiding them to Jinchuan, supervising them, feeding them, paying them and finding new staff when dozens of peasants deserted—all these activities likewise consumed time and labour force. The consequence of these considerations is that the 933,227 *dan* of rice shipped by state-organised transport, were much more expensive than the regulations make out.

This is an important hint indicating that the sums officially required according to the regulations for war expense like the *Jinchuan junxu li'an* when settling accounts were often so far below those actually paid by the war logistics bureau (*junxuju*) that officials over and over

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<sup>129</sup> *Hubu junxu zeli* 5, fol. 1a-1b.

<sup>130</sup> This calculation does not include the family allowance for the two porters for the one *dan* of rice.

<sup>131</sup> *Jinchuan junxu li'an* 2, fol. 71a-b.

again complained of high prices for transport and goods to be bought on the open market. This went so far that they finally proved to the Ministry that it was no more costly, and even more efficient as far as the organisation was concerned, not to transport rice by state agencies but by haulage contractors.

If the privately organised transport of 2,030,300 *dan* of rice cost 22.46 million *liang*, the average transport price of 1 *dan* was 11.1 *liang*. If we take a price between this and the theoretical average price for state-organised transport (i. e. 3.1 *liang* per *dan*, according to Table 3.45), we arrive at an average price of 7.1 *liang* per *dan*, which would mean that the state-organised transport of rice cost 6.626 million *liang*.

One last approach to transport costs for rice shall be made on the basis of the man-months which the troops served in the camps. During the 5,396,906 man-months supplied by all types of troops throughout the campaign (compare Table 3.30), theoretically 1,619,071 *dan* of rice were consumed (by soldiers, not counting personal assistants; this is 54% of the total rice consumption), for which transport costs of between 11.3 million *liang* (mixed state/private) and 17.8 million *liang* (purely 'outsourced') accrued. When adding personal assistants, porters, labourers, and the many other employees in the field, the total sum of 38.6 million *liang*, which are said to be the total expenditure for grain transport (see Chapter 5.2.2.),<sup>132</sup> can well be reached.

Apart from rice many other commodities had to be carried to the frontier. Among the eatables were flour and beans—the latter mainly as provender for the pack horses and mules. 31,927 *dan* of flour had to be transported to the different routes, 42 per cent of which were offloaded in stations inside the border. Of beans, 79,302 *dan* were transported, of which a full 67 per cent were shipped to stations inside the country. This might be due to the fact that in many places because of the steep mountain paths horses or even mules could not be used. A calculation of the transport prices for those two commodities leads to a result of 705,171 *liang*, based on an average price of 7 *liang* per *dan* as determined above (for flour only 4.7 *liang*).

Other commodities to be transported, were, of course, weapons and military equipment (*junzhuang* 軍裝),<sup>133</sup> like tents and cooking pots, as well as material needed to produce fighting equipment like sulphur, nitre and charcoal for gunpowder, fuses for muskets and cannons, lead for bullets and brass and iron for casting cannons, but also mats (*dianxi* 墊蓆)

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<sup>132</sup> *Jinchuan junxu li'an* 2, fol. 178a.

<sup>133</sup> Contrary to the modern term, the word *junzhuang* does not only refer to the uniform, but to each and all equipment one soldier took with him when sent out for campaigning (often resumed under the two words *junzhuang xingli* 軍裝行李 'equipment and baggage'. Among the latter might also have been personal belongings).

for the storerooms of the logistics stations, and probably also for the army tents.<sup>134</sup> Considerable amounts of money had to be transported to the camps and the logistics stations, silver as well as copper cash.<sup>135</sup> If officers fell ill they were cured by medicine, which was to be procured only in Chengdu. Wounded soldiers had to be taken back to their home garrisons,<sup>136</sup> and killed or deceased officers were taken back home in their coffins by their personal assistants.<sup>137</sup> Prisoners had to be led away,<sup>138</sup> deserters had to be sniffed out and brought back for trial. A headman (*yachai futou* 押差夫頭)<sup>139</sup> had to supervise recruited peasants and native workmen on their way to their place of work and to keep them together to forestall desertion. Horses and mules had regularly to be bought in the village markets, as the mortality rate among pack animals was quite high (up to 40%). The military units also often bought sheep and oxen as a source of fresh meat. And last, but not least, thousands of messengers carried orders and reports from camp to camp and from station to station or even to the Capital, who also had to be paid, unless they were regular personal assistants of the army or civilian officials, who then at least were refunded their travel expenses (*panjiao* 盤腳, *panfei* 盤費, or *lufei* 路費).

Yet far more services were provided to the army: Carpenters (*mujiang* 木匠) had to set up the logistics stations and courier stations (*tangzhan* 塘站), stables (*mapeng* 馬棚, *wopeng* 窩棚), storerooms (*cangpeng* 倉棚, *cangfang* 倉房) and accommodation (*fupeng* 夫棚, *kepeng* 客棚, *pengfang* 棚房), and to build bridges over mountain gorges—sometimes in cooperation with stone cutters (*shijiang* 石匠).<sup>140</sup> Leather or timber boats had to be built by boatbuilders (*chuanjiang* 船匠), blacksmiths (*tiejiang*) had to produce nails and tools; while the Manchu units had professional iron smiths of their own, Green Banner units probably had to fall back on civilian professionals. Casters (*suiying paojiang* 隨營炮匠 ‘gun casters following the camp’, *tong-tiejiang* 銅鐵匠 ‘bronze- and iron-workmen’) operated the furnaces in which the brass and iron to cast cannons and cannonballs from were molten down,<sup>141</sup> and transporters (*tai pao renfu* 擡炮人夫) worked in the batteries bombarding the Jinchuan war-

<sup>134</sup> *Jinchuan junxu li'an* 2, fol. 66a.

<sup>135</sup> *Jinchuan junxu li'an* 2, fol. 65b.

<sup>136</sup> *Hubu junxu zeli* 6, fol. 6b-8a.

<sup>137</sup> *Hubu junxu zeli* 9, fol. 8b.

<sup>138</sup> *Hubu junxu zeli* 9, fol. 6b-7a.

<sup>139</sup> *Jinchuan junxu li'an* 2, fol. 69b.

<sup>140</sup> *Jinchuan junxu li'an* 2, fol. 69a.

<sup>141</sup> *Jinchuan junxu li'an* 2, fol. 67a-67b.

towers.<sup>142</sup> The fuel necessary to operate those furnaces was produced by charcoal burners (*tanchang renfu* 炭廠人夫).<sup>143</sup> Ferryman and boatmen (*dufu* 渡夫, *shuishou* 水手) had to care for a safe crossing of the two Jinchuan rivers and its affluents.<sup>144</sup> Veterinaries (*shouyi* 獸醫) and physicians (*yisheng* 醫生) had to cure the wounded and sick.<sup>145</sup> Painters (*huajiang* 畫匠) painted scenes and probably drew maps for the emperor and the state council. Paper makers (*zhijiang* 紙匠) and artisans mounting pictures or maps (*biaobeijiang* 裱褙匠) produced the necessary material for the painters or map drawers.<sup>146</sup> Tailors (*caifengjiang* 裁縫匠) repaired tents, made new clothing for the soldiers and probably tailored garments from the brocade brave soldiers were rewarded with. Clerks (*shuli*) from the civilian government dealt with the burden of paperwork.<sup>147</sup> And in winter it was even necessary for snow shovelers (*paoxuefu* 刨雪夫) to clear the mountain paths, as the Jinchuan region was famous for its heavy precipitations.<sup>148</sup> Grain measurers and watchmen for the stations have already been mentioned.<sup>149</sup> For native *corvée* porters, the so-called *ula* 烏拉, some special regulations were in force.<sup>150</sup>

Yet it is not possible to reconstruct the expenditure for most of those workmen or service providers, due to the lack of figures about the number of persons thus employed. We do not have the slightest idea how many physicians worked in the encampments, and despite the fact that there were clear prescriptions on how many nails each blacksmith had to produce during one working day there is no way to estimate how many of them served in the war theatre. All estimates in this direction can only give a very crude idea of the costs the civilian staff working for the army caused.

Although no calculations concerning the other services are possible, we can at least have a look at the different workmen and service providers and at how much they were paid, in order to have an idea of the value of labour in 18th century China (at least from the aspect of how

<sup>142</sup> *Jinchuan junxu li'an* 2, fol. 68b.

<sup>143</sup> *Jinchuan junxu li'an* 2, fol. 69b.

<sup>144</sup> *Jinchuan junxu li'an* 2, fol. 69a.

<sup>145</sup> *Jinchuan junxu li'an* 2, fol. 69a-69b, 85a. Some physicians are known by name, like Teng Hei 滕黑 and his son from Mayang 麻陽 in Sichuan. *Jinchuan dang* 38/IV/00297 (QL 38/12/13).

<sup>146</sup> *Jinchuan junxu li'an* 2, fol. 69a.

<sup>147</sup> *Jinchuan junxu li'an* 2, fol. 70a.

<sup>148</sup> *Jinchuan junxu li'an* 2, fol. 67b.

<sup>149</sup> *Jinchuan junxu li'an* 2, fol. 70a-70b, 71a.

<sup>150</sup> *Jinchuan junxu li'an* 2, fol. 65b.

### 3. THE COST OF STAFF

much the government was willing to pay), and to point out differences to the later final regulations in the *Junxu zeli*.<sup>151</sup>

<i>workmen or service providers</i>	<i>family allowance</i> [liang]	<i>monthly or daily (≅monthly) pay</i> (gongshi 工食) [liang]	<i>daily rations</i> (kouliang; sheng of rice or liang of silver; ≅monthly need [liang])	<i>remarks</i>
silver porters		0.1 (per 100 <i>li</i> /day, ≅3), where no stations are: 0.05 (≅1.5). <i>Kouwai</i> : 0.16 (small distances, ≅4.8) to 0.94 (large distances, ≅28.2), for 1 <i>ula</i> mule or 2 <i>ula</i> porters		Silver is normally carried in sheaths ( <i>qiao</i> 鞘) by porters from regular courier stations. Baskets and other material for transport are only provided from Chengdu on (worth 0.255 <i>liang</i> ). 2 porters carry 1,000 silver <i>liang</i> ; 1 horse carries 2,000 <i>liang</i> , with 0.15 <i>liang</i> transport allowance/day (Chengdu – Dajianlu 5 <i>liang</i> , Chengdu – Taoguan 3 <i>liang</i> ). Djandui precedents also state: 2 Chinese porters or native <i>ula</i> for 1,000 <i>liang</i> .
station porters	2. Monthly family allowance 3, paid per day.	<i>Kounei</i> 0.05 (≅1.5), <i>kouwai</i> 0.08 (≅2.4), no pay on days not engaged ( <i>kongri</i> )	1 <i>sheng</i> (≅0.36), on days of not engaged rations according to labour pay	Each porter carries 50 <i>jin</i> . Replacement every 5 months [only from QL 39 summer], no additional family allowance when exceeding the period (old precedents); on the march to Jinchuan <i>kounei</i> 0.02 daily, <i>kouwai</i> 1 <i>sheng</i> of rice. Old precedents: On days not engaged 1 <i>sheng</i> of rice or the respective local rice price in money. Same as for grain transport. 1 <i>dan</i> of grain is carried by 2 porters.
carrying pig iron or brass		downriver 0.012 per 100 <i>li</i> /day (≅0.36), upriver 0.02 (≅0.6)		
carrying military equipment		Runners ( <i>bianyuan</i> 弁員): <i>kounei</i> 0.05 for 70 <i>li</i> /day (≅1.5), soldiers: 0.03 (≅0.9), <i>kouwai</i> : <i>yancai</i> and <i>kouliang</i>		If troops have no supplementary soldiers ( <i>yuding</i> ), 80 porters per 100 troops are to be used, otherwise only 50 porters. Gansu and Shaanxi troops used horses, no porters.
carrying cannons	3	2	0.01 <i>liang</i> (≅0.3)	For each 1,000 <i>jin</i> , alternately porters from <i>kounei</i> and <i>kouwai</i> are used. The sums on the left were from the old precedents and only given to porters carrying large <i>jiujiue</i> cannons. According to the new precedents, supplementary army porters carry the cannons, highest number: 80 porters for 100 troops, or one porter for 50 <i>jin</i> of weight.
snow shovelers		0.05 (≅1.5), no pay on days not engaged	1 <i>sheng</i> (≅0.36)	Per station no more than 40, and only 10 days per month.
casting cannons	5	3, less family allowance	1 <i>sheng</i> (≅0.36)	1 <i>liang</i> to buy cotton clothes ( <i>mianyi</i> 棉衣); 1 porter carrying the equipment of 8 casters; soldiers casting cannons are not given any surplus pay on top of their <i>yancai</i> and <i>kouliang</i> . On the western route, casters were given <i>kounei</i> 0.01, <i>kouwai</i> 0.02. Yunnan precedents: baggage pay ( <i>xingzhuang</i> ) gratification 3 <i>liang</i> ,

<sup>151</sup> Data following *Jinchuan junxu li'an* 2, fol. 65a-70b, and *Hubu junxu zeli* 5, 6 and 9.

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<i>workmen or service providers</i>	<i>family allowance [liang]</i>	<i>monthly or daily (≅monthly) pay (gongshi 工食) [liang]</i>	<i>daily rations (kouliang; sheng of rice or liang of silver; ≅monthly need [liang])</i>	<i>remarks</i>
carpenters, stone cutters, blacksmiths, ferrymen, boatmen, boatbuilders, artisans mounting pictures/maps	3; natives not	2	0.01 (≅0.3), ferrymen and boatmen 1 <i>sheng</i> (≅0.36) According to <i>Junxu zeli</i> commentary: carpenters and blacksmiths 1 <i>sheng</i>	travel expenses daily <i>kounei</i> 0.06, <i>kouwai</i> 0.12, labour pay 0.05, provision 0.01 <i>liang</i> . Rations are given on the march to Jinchuan in <i>kounei</i> , a daily labour pay is given from <i>kouwai</i> on. No money for clothing. Brass and iron workers in camp foundries are allowed 1 assistant for 8 workers. For each worker, one porter carries the baggage.
ferrymen and boatmen	3	1.2	1 <i>sheng</i> (≅0.36)	On the march to the front daily <i>kounei</i> 0.06 <i>liang</i> , <i>kouwai</i> 0.04 plus 1 <i>sheng</i> of rice. The family is monthly paid an amount of 3 <i>dou</i> of rice, following the western campaigns precedents. Western campaigns precedents: monthly pay 6 <i>liang</i> of family allowance and 3 <i>liang</i> monthly pay, but no rations. Yunnan precedents: no family allowance.
carpenters, stone cutters, blacksmiths, boatbuilders, tailors, artisans mounting pictures/maps		2	1 <i>sheng</i> (≅0.36)	Workmen from other provinces are given baggage pay of 6 <i>liang</i> , local ones 3 – 5 <i>liang</i> , according to distance, on the march daily <i>kounei</i> 0.06 <i>liang</i> , <i>kouwai</i> only 1 <i>sheng</i> of rice. On the march to the front daily <i>kounei</i> 0.06 <i>liang</i> , <i>kouwai</i> plus 1 <i>sheng</i> of rice. The family is paid an amount of 3 <i>dou</i> of rice per month. Western campaigns precedents: No family allowance nor baggage pay. On the march to the front <i>kounei</i> 0.1 <i>liang</i> , no rations, <i>kouwai</i> 0.2, plus provision 0.83 <i>sheng</i> . Daily pay 0.2 (≅6) <i>liang</i> , provision 0.83 <i>sheng</i> . The family rations are considered as 50% of the monthly pay. Yunnan precedents: people from other provinces baggage pay 8 <i>liang</i> , natives 3 <i>liang</i> . On the march to the front <i>kounei</i> 0.06 <i>liang</i> , <i>kouwai</i> 1.2. Daily pay 0.05 (≅1.5) <i>liang</i> , provision 0.83 <i>sheng</i> .
physicians and painters/map drawers	5	3	0.083 <i>sheng</i> (≅0.249)	1 horse ( <i>kouwai</i> 2 horses?) or 2 porters (4 porters?) for equipment; western route physicians: 5 <i>liang</i> monthly, daily provision 0.02 <i>liang</i> for physician and personal assistant.
physicians	50	3	Monthly <i>yancai</i> 0.5	Packing pay ( <i>zhengzhuang</i> ) 30; one personal assistant. Western campaigns precedents: family allowance and packing pay 162 <i>liang</i> . Baggage pay 15; hired employees one personal assistant, others none. Yunnan precedents: scribes baggage pay 16 <i>liang</i> ; hired employees baggage pay 30 <i>liang</i> , paper-hangers 20 <i>liang</i> . Western campaigns precedents: scribes only family allowance 20 <i>liang</i> .
hired employees of government agencies ( <i>gongshi</i> 供事), scribes ( <i>shushi</i> 書識), painters and paper-makers	25	1.5 (hired employees); 2 (scribes, painters and paper-makers)	Monthly <i>yancai</i> 2 (hired employees), others: 0.83 <i>sheng</i> (≅0.249)	
supervising conscripts		1	1 <i>sheng</i> (≅0.36), on days not	1 supervisor per 30 conscripts

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<i>workmen or service providers</i>	<i>family allowance [liang]</i>	<i>monthly or daily (≈monthly) pay (gongshi 工食) [liang]</i>	<i>daily rations (kouliang; sheng of rice or liang of silver; ≈monthly need [liang])</i>	<i>remarks</i>
			engaged 0.01 <i>liang</i> (≈0.3)	
charcoal burners		0.08 (≈2.4), no pay on days not engaged	1 <i>sheng</i> (≈0.36)	Recruited from among the permanent station staff ( <i>changfu</i> )
secretaries of governors-general		4 (only old precedents)	0.01 (≈0.3)	6 per official; old precedents: 12 <i>liang</i> (monthly?) for office supplies. Western route: officials 2 secretaries, assistants ( <i>zuo-za</i> ) 1, monthly pay 3.6 <i>liang</i> , daily provision 0.01 <i>liang</i> . Persons in camps ( <i>sui ying</i> ) gratification 20 <i>liang</i> , monthly pay 4.8 <i>liang</i> . Yunnan precedents: gratification 16 <i>liang</i> , monthly pay 1.5 <i>liang</i> , daily provision 0.02 for official and personal assistant.
granary workers and grain measurers, runners, interpreters/translators		1	1 <i>sheng</i> (≈0.36), interpreters are not given rations. According to <i>Junxu zeli</i> commentary: granary workers and grain measurers 0.83 <i>sheng</i>	Each station 4 workers, 2 measurers, 1 runner (old precedents: interpreters possible); logistics stations for privately shipped rice only 2 workers and 1 measurer. Western campaigns precedents: monthly pay 1.8 <i>liang</i> , provision pay 0.01 <i>liang</i> daily.
granary workers and grain measurers	2	1.2	1 <i>sheng</i> (≈0.36)	On the march to the front daily <i>kounei</i> 0.06 <i>liang</i> , <i>kouwai</i> 0.04 plus 1 <i>sheng</i> of rice. The family is paid an amount of 2 <i>dou</i> of rice per month. Western campaigns precedents: daily pay 0.04 <i>liang</i> (≈1.2).

☐ 3.49 Table: A comparative analysis of accountancy prices for services in the Jinchuan campaigns and some other wars

Grey lines are regulations from the *Junxu zeli*, paragraphs highlighted in grey are quotes from other precedents, as contained in the *Jinchuan junxu li'an*.

All labour cost for workmen (*gongjiang* 工匠) had to be brought to account according to the precedents for construction work (*gongcheng zeli* 工程則例). The first interesting point is that for some labourers and workmen, the family allowance was actually—at least in the beginning of the campaign—not a gratification, but given on loan to be either deducted from the monthly pay or paid back later (cannon casters, station porters). This kind of procedure is similar to the baggage pay for soldiers, which was originally also only given on loan. The second interesting point is that workmen could also be recruited as *corvée* labourers (*jiangyi*) and were sent from Sichuan to the war theatre. Such persons probably worked in state-owned workshops supplied with iron, brass and other metals to cast bullets, cannons and cannonballs, and therefore the most logical method was to order state-employed workmen to accompany the metals to the front. But there were also many workmen simply hired from among the population (*gujiang* 雇匠 ‘hired workmen’). The materials will be discussed later in context

with the materials costs in Chapter 4. The commentary to the *Junxu zeli* is sometimes quite helpful to find out about regulations on items not recorded in the *Jinchuan junxu li'an*, yet there are some smaller items in connection with which the commentary contradicts the figures in the *Jinchuan* precedents, like the amount of daily rice rations.

What becomes evident from Table 3.49 is that the accounting for services was extremely complicated. The following points have to be observed:

- Was the personnel dispatched from or hired in Sichuan or in a different province? If hired in a different province, the regulations of that province were applicable, as far as the family allowance and any pay on the march to the destination are concerned (the latter only until the persons reached the border of the province of Sichuan).
- Was the personnel to be given any family allowances? If not, were there any other benefits for the family, like rice rations? Were the family allowances a once-and-for-all pay, or were they a regular, for instance, a monthly pay?
- On the march to the destination and back home: Were any wages paid during this time (because the personnel did not really perform any services during this period), and were any rations to be supplied? Would the personnel be given any wages or rations when crossing the border of 'China'? In many cases, on provincial territory (*kounei*) the personnel was given money to buy food with, and after crossing the border and entering territory beyond the border (*kouwai*), rice rations were given.
- Were the wages to be given on a daily or on a monthly basis? If the latter, could months also be paid partially, when the personnel worked for only part of a month?
- Was the personnel given any wages when not engaged (*kongxian zhi ri* 空閑之日, short: *kongri* 空日), i. e. for days when no concrete work had to be done?
- Were there any targets of labour performance (for instance, a daily distance to be covered, or the production of a minimum amount of objects)?
- Were there any limited service periods? Was it possible that such limits could be exceeded? What would be done if the replacement personnel did not arrive in time?
- Were there any limitations of how much workload (per month or in general) could be brought to account for one station (limited personnel: granary workers, grain measurers, runners, snow shovelers, couriers, guards) or for certain amounts of work (one porter for 50 *jin* or 0.5 *dan* of load, one blacksmith's daywork for 50 nails)?
- Was the personnel allowed to be assisted by servants, or could they dispose of an animal for transport? If so, was the respective personnel provided with money for servants and transport costs (e.g. hiring and feeding a mule)?



- Were there any surplus allowances for working material, as transport utensils, paper or protective clothing?
- Was there any extra pay for ‘occupational groups’ doing work unconnected with their occupation, for example, porters from a logistics stations recruited to work in the camp foundry, or soldiers transporting cannons, or civilian state employees directly working in the camps (*sui ying*; as a kind of danger money)?

From all these considerations it is interesting to see that in many fields the state did not only set up minimum labour targets, but was also eager to limit the amount of money which could be spent. An excellent example is the output of porters. Their prescribed load was 50 *jin*, which is about 29.8 kg, which had to be carried from one station to the other, where it was handed over to the next porter (hence called *gunyun* 滾運 ‘relay transport’). In the mountains, the distance between two stations was therefore not very large—the technical distance was exactly 30 *li* (14.4 km) from station to station, which is of course just a theoretical value. There are only very few examples in the stations listing, where exact distances are given, and some of these are quite short, some even down to 15 *li*, due to the territorial conditions. Yet on the southern route there are some stations of the ‘long distance’ route where native porters were working, ranging between 75 and 120 *li* (36 – 58 km). This transport system was therefore called *ula changyun* 烏拉長運 ‘long distance transport by native horses/mules’.<sup>152</sup> The measure of length *li* is therefore, unlike most others, not a fixed, but rather a relative unit. The later regulations of the *Junxu zeli* describe this approach of the Chinese mind to this kind of length distance in the following way:

‘Inside or outside the country, where mountain paths in steep and precipitous territory make it impossible to cover 100 *li* [within a day], the stations have to be set up at a distance of only several (dozen) *li*, the responsible Grand Minister shall arrange a temporary solution by setting up the stations according to the physical conditions of the territory in a distance of several *li*. This [arrangement] has to be reported and explained in a palace memorial, and accordingly to be done. Inside the country, the shortest distance shall be 70 *li*, outside the country 40 *li*, but not less. ([Commentary: ...] In Jinchuan the norm was fixed as 60 to 70 *li* inside the country and 30 to 40 *li* outside the country [...])’<sup>153</sup>

100 *li* was the distance which could be covered within one day on the flat (by carts or on horseback), 70 *li* could be covered within one day in difficult territory (by mules), and 40 *li* in mountainous terrain (by porters). Yet the Jinchuan case shows that even 40 *li* are just too long, when carrying a load of 30 kg on extremely precipitous ground. The phrase ‘but not less’ indicated that the state had set a minimum or target per day. The permanent repetition of

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<sup>152</sup> That the *ula* were indeed horses, can be seen in Tafel (1914), pp. 303, 427.

<sup>153</sup> *Hubu junxu zeli* 5, fol. 1b-2a.

the 50-*jin* load rule therefore is an indication of the government's claim to the people it paid. Yet on the other hand it is also an indication to the responsible official that he was not allowed to hire more porters who could probably carry a smaller load, but eventually could perform their task faster. For 100 *dan* of grain, for example, 200 man-days were necessary to bring it from one station to the next, and the expenditure for those was allowed to be brought to account, no more.

When comparing the wages and rations of the particular professional groups active in Jinchuan, it becomes clear that people with a higher output, in other words: people who worked harder than others were given a higher pay. Carpenters and blacksmiths, for example, were given smaller rations than ferrymen, who had, as the Jinchuan regulations clearly say, to be on call day and night. Physicians, painters, artisans mounting pictures or maps and secretaries were also fed less generously than others. Porters and workmen were given family allowances of 2 to 3 *liang*, workmen casting even received 5 *liang*, which reflects their status as specialists, just like physicians and painters or map drawers who were also given 5 *liang*. Workmen were given a monthly pay of 2 *liang*, porters could earn 2.4 *liang* and physicians 3 *liang*. These differences are not very large and show that porters, who worked very hard, were paid better than carpenters and blacksmiths, but not better than cannon casters, who received 3 *liang* per month (yet the family allowance of 5 *liang* was deducted from the monthly pay). One of the easiest tasks seems to have been that of the granary workers who were not given any family allowance and only 1 *liang* per month. Interpreters were not even given daily rice rations. The *Junxu zeli* later raised the status of physicians and granted them a family allowance of 50 *liang* and a monthly salt-and-vegetable pay of 0.5 *liang* (from which the physician himself and a personal assistant had to be fed) instead of rice amounting to 0.25 *liang*. Although the pure financial outlay for rations was still the same, the granting of packing pay and salt-and-vegetable money promotes the physicians from pure labourers to the status of quasi-state officials. Yet the large difference in pay and status may also be due to the fact that the physicians accompanying the troops had to be members of the Imperial Academy of Medicine (who were civilian officials), and came not from among the ordinary population. This procedure would also assure a better control of expenditure for medicine.

The real figure for the expenditure for labourers and workmen can only be established very roughly because in the general account as found in the *Jinchuan junxu li'an* the respective sums are included in different categories, like under the headings 'staff in logistics stations, hiring workmen and family allowances (*anshe zhanfu, guyong jiangyi, anjia yiwu* 安設站夫, 雇用匠役, 安家衣物)', amounting to 368,830 *liang*; 'horses and labourers in courier

stations (*tangzhan mapi fugong* 塘站馬匹夫工), amounting to 468,723 *liang*; the heading ‘transport of grain (*yunsong liangdan* 運送糧石), costing 38,633,984 *liang*; ‘transport of equipment (*banyun junfu yiliu paoliao* 辦運軍夫衣履炮料), costing 4,018,719 *liang*, and ‘pay for civilian officials, constructing roads and bridges and crafting boats (*chaiyuan zhiying, chuanwu gongliao, xiuli daoqiao*)’, amounting to 912,172 *liang*.<sup>154</sup> From those figures it is at least possible to see that the staff of the logistics stations, the workmen and the establishment of infrastructure and traffic was not very expensive. The largest amounts of money were disbursed for the transport of grain (making out 71 per cent of the total war expenditure) and of equipment (constituting 8 per cent of the total cost).

### 3.4. Extraordinary Allowances

#### 3.4.1. Rewards

The first type of extraordinary allowances (*te'en gongshang* 特恩功賞, short: *enshang* 恩賞) is represented by rewards for heroic fighting. There are only a few lines of regulations in the *Jinchuan junxu li'an* stating what kind of award and how much of it officers and common soldiers should be given. It was also prescribed which sums being spent for awards could be settled in the accounts. The prescribed regular sums for rewards were given according to monthly pay (*yue xiang* 月餉), for example, “[this and that unit] is to be rewarded with an additional one-month allowance of salt-and-vegetable pay (*yancai*)”. The sums for non-officer ranks were the following:<sup>155</sup>

<i>rank/type</i>	<i>sum [liang]</i>
reward: one month of rations money ( <i>qianliang</i> 錢糧)	
(Capital) <i>qianfeng</i> and <i>lingcui</i>	4
(Capital) cuirassiers ( <i>jiabing</i> )	3
provincial <i>qianfeng</i> and <i>lingcui</i>	3
provincial cuirassiers	2
provincial cavalrymen ( <i>mabing</i> )	2
provincial infantrymen ( <i>bubing</i> )	1.5
provincial guardsmen ( <i>shoubing</i> )	1
reward: one month of salt-and-vegetable pay ( <i>yancai</i> )	
<i>qianfeng</i> , <i>lingcui</i> , cuirassiers	1.5
cavalrymen, infantrymen, guardsmen,	0.9
recruits from the colonies ( <i>tunlian</i> ), i.e. native auxiliary troops <sup>a)</sup>	0.9
defectors ( <i>jiang fan</i> 降番)	half

□ 3.50 Table: Rewards for brave soldiers according to *Jinchuan junxu li'an*

<sup>a)</sup> For the recruits from the colonies, the regulations do not distinguish between money for rations and salt-and-vegetable pay.

<sup>154</sup> *Jinchuan junxu li'an* 2, fol. 177b-178a.

<sup>155</sup> *Jinchuan junxu li'an* 2, fol. 1a.

Common soldiers and ‘corporals’ were thus given an extra-pay not tied to the monthly pay. Yet Table 3.50 does not directly speak of Green Standard troops as opposed to Banner troops. The difference between those two types of troops was therefore not only the amount of the reward, but was also a terminological difference: While Capital and provincial Banner troops were paid an extra sum for rations (*qianliang*), Green Standard troops were given an extra payment for salt-and-vegetable (*yancai*). The officer ranks of *qianfeng*, the ‘corporals’ (*lingcui*) and cuirassiers could apparently either be given money for rations or salt-and-vegetable pay. Quite contrary to those regulations, there are documents showing that all types of troops and not only the Banner troops could be granted an extra *qianliang*.

This procedure to reward troops can also be seen from a list of rewards written down in the Jinchuan regulations,<sup>156</sup> where there are some examples like: the 200 Banner troops from Yunnan, 5,000 Guizhou troops and 6,000 troops from Shaan-Gan marching against Lesser Jinchuan were rewarded with one-month extra pay (*qianliang*). (QL 36 [s. 1. 37]/2)<sup>157</sup> During the winter, all troops on the western and southern route were granted an extra salt-and-vegetable payment (*yancai*) of one month. (QL 37/11/24) Extra payment could also be granted to individuals, like—as the emperor suggested—one month of salt-and-vegetable pay or half a monthly salary (*xiangyin*) for Hailancha and Wudai. (QL 38/6/24)

The normal way by which soldiers and officers were rewarded for bravery (apart from being granted money or a promotion), was a rank according to merit (*juncong* 軍功 ‘military merits’, in 6 grades: *toudeng* 頭等, *yideng* 一等, *erdeng* 二等, etc.). Merits were classified on proposal (*yixu* 議叙) on the basis of the relation of the own troops’ strength to that of the enemy.<sup>158</sup> Yet only with the compilation of the *Junxu zeli* this process became regularized or even institutionalized at all. Officers could be promoted, for example, by one grade, from 3b to 3a (*jia yi deng* 加一等) and were recorded in honorific registers for several generations (*jilu wu ci* 紀錄五次). Common soldiers were granted a certain amount of money,<sup>159</sup> but could also be given medals (*yinpai yi mian* 銀牌一面).<sup>160</sup> Everyone could obtain one or several medals (*gongpai* 功牌) of different classes (*toudeng gongpai* 頭等功牌 ‘prime class medal’, *yideng gongpai* 一等功牌 ‘1st class medal’, *erdeng gongpai* 二等功牌 ‘2nd class

<sup>156</sup> *Jinchuan junxu li'an* 1, fol. 30a-78a.

<sup>157</sup> The dates in this chapter only serve to identify the *Jinchuan junxu li'an* documents. For this reason no date conversion is provided.

<sup>158</sup> *Bingbu junxu zeli* 4, fol. 3b-4b.

<sup>159</sup> *Bingbu junxu zeli* 3, fol. 1a-1b.

<sup>160</sup> *Jinchuan dang* QL 39/1/00324 (QL 39/2/4).

medal’, etc.).<sup>161</sup> What neither the *Junxu zeli* nor the Eight Banner statutes (*Baqi tongzhi* 八旗通志) specify is the granting of the Manchu honorific title (*minghao* 名號) of ‘hero’ (*baturu* 巴圖魯). Unlike the posthumous titles of emperors, princes, and imperial consorts, there were apparently no fixed rules for *baturu* titles, but everyone granted such a designation had an individual title which could not be identical to that of any other person. Yet there are two cases of mass bestowals in the listing of rewards which could be seen as a hint that it was, nevertheless, possible that the *baturu* titles had a kind of ranking and could appear several times. In QL 40/5/15 the title of *lajite baturu* 拉濟特巴圖魯 was bestowed on the Solun *canling* Bali 巴里 and twelve other officers. In QL 40/12/23 the title of *zhianke baturu* 智安克巴圖魯 was bestowed on an unknown number of officials of the rank of *fujiang*, *qianfeng* and *canling* who had taken part in the conquest of a handful of castles. Owners of a *baturu* title could also be granted another title, when earning new merits, like the *xiaojixiao* officer Dinggurtu 定古爾圖, who was already a *wenjike baturu* 溫濟克巴圖魯, and was later granted the title of *chabuti baturu* 察布替巴圖魯 instead (or additionally) on QL 40/12/23. There were also many native auxiliary officers who were granted the title of a *baturu*. Officers, but sometimes also common soldiers, were rewarded with a sum of money when displaying extraordinary courage, in most cases together with a promotion in rank and the bestowal of a *baturu* title. Soldiers were normally only given money or an extra monthly pay. Promotions of common soldiers to higher ranks e. g. that of a ‘corporal’ or an officer (i.e. state official), never occurred, likewise not the bestowal of a *baturu* title on a soldier. Although some Chinese were granted the title of *baturu*, they were surely members of Banner troops and not of Green Standard troops, which means that a *baturu* title was exclusively a matter of the Banner elite (except the few cases, when native auxiliary officers were granted this title). In a few cases, personal assistants of Banner troops had shown such heroic conduct during battle that they were made real soldiers, concretely: cuirassiers (*jiabing*). (QL 38/r3/3, QL 40/1/no date, QL 40/9/4) There were also many promotions to higher officer ranks, some of them only in name, but with the promise that the bearers of the title could fill this post as soon as one fell vacant.

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<sup>161</sup> The medals are described in *Baqi tongzhi* 36, pp. 648-651. The text in the *Bingbu junxu zeli* goes: ‘Heroes surpassing the others (*chuzhong xiaoli zhe* 出衆效力者, having achieved prime class military merits, *toudeng jungong* 頭等軍功) are given one prime class medal and one third class medal (*sandeng gongpai* 三等功牌). Heroes having achieved first class military merits (*yideng jungong* 一等軍功) are given one first class medal (*yideng gongpai*),’ etc. About the concrete appearance and the fabrication of medals, including costs, see (Jiaqing 22) *Gongbu xuzeng zeli* 86.

Another common reward was the authorisation to wear a pheasant feather (*lanling dingdai* 藍翎頂戴) on top of the hat. There were many officers wearing a feather and the title of *baturu*. At the end of the war, some of the highest generals were rewarded with a two-eyed peacock feather (*shuangyan kongque ling* 雙眼孔雀翎) or even a red gemstone button to wear at the top of the hat (*hong baoshi maoding* 紅寶石帽頂). (QL 41/2/no date) Peacock feathers could also be presented to native allies, like the kings of Chosgyab, Djoktsai and Tsunggak (QL 38/8/13) or to native officers (QL 38/10/18).

Bestowing simple peacock plumes (*hualing* 花翎) was even more common but also imposed some problems because the respective rules only allowed heroes of battle being bestowed a such, and not persons of the staff in the rear zone. It was therefore intensely discussed if Qian Yun 錢鋈, administration commissioner (*buzhengshi*) of Sichuan and therefore head of the war logistics bureau, could be allowed to wear such a feather. The emperor eventually made an exception and granted him the right to wear such a feather.<sup>162</sup> Another example of such an exception in case of extraordinary merit is the case when a soldier did not die from his injuries suffered during a battle but from a disease not caused by battle. *Zongbing* Wang Wanbang, who had already been rewarded with a *hualing* feather for his bravery, was therefore allowed to be paid half the compensation sum as if he had died during battle. His son was granted an audience at the Ministry of War.<sup>163</sup> The existence of such a document shows that it was not common during that time that troops who had not died during battle, were given a compensation. Even after the compilation of the general rules for war expenditure, the *Junxu zeli*, there were still no guidelines how to deal with such a case.<sup>164</sup>

Yet rewards could also be cancelled, like the following case demonstrates: An officer was stripped of his rank and *baturu* title because he did not send relief troops. He was even ordered to pay back his reward of 100 *liang*, which was then to be divided between two other officers. (QL 39/7/4) But such demotions could also be revoked when things went better, as was the case after the reconquest of Lesser Jinchuan. (QL 38/12/3)

<sup>162</sup> *Jinchuan dang* QL 41/I/00089 (QL 41/1/13).

<sup>163</sup> *Jinchuan dang* QL 38/IV/00241 (QL 38/12/3); QL 40/III/00151 (QL 40/8/16).

<sup>164</sup> *Bingbu junxu zeli* 3, fol. 3a-3b, regulates that monthly advance payments (*duo zhi yuexiang* 多支月餉) were not to be paid back by the heirs, and that the latter should additionally also 'inherit' the monthly salary. The rule of granting half the compensation, as in the Wang Wanbang case, was actually only to be applied for troops captured and killed by the enemy when on an official mission. This was a new regulation. *Bingbu junxu zeli* 4, fol. 7b-8a; 5, fol. 3b-4a. For native auxiliary troops a new regulation demanded that persons dying from a disease during a campaign (*chuzheng binggu* 出征病故) were to be given a fixed amount of money as compensation, according to their rank. The amount was between a tenth (higher ranks) and a quarter (lower ranks) of the compensation paid out when somebody died during battle or from an injury. *Bingbu junxu zeli* 5, fol. 1b-2a.

The listing of rewards in the Jinchuan precedents is separated into two parts. The costs for the rewards of the first part had been settled until the end of the war, and the items not yet settled until that date had to be appended to the account, except the outlay for the soldiers from Beijing who were each rewarded with a special gratification of 150 *liang* and for those who had obtained brocade as a reward.<sup>165</sup> Concerning brocade, there are only two examples in the first part of the list, one in QL 40/8/2, when three native auxiliary officers were rewarded with brocade (*duanpi* 緞疋), and one in QL 38/2/12, when three officers were rewarded with two bolts of silk each. The second part contains one example when 2 bolts of ‘large brocade’ (*daduan* 大緞) were granted to Fukang'an. (QL 40/5/22) The *Jinchuan dang* collection contains a large amount of edicts concerned with promotions, rewards and reappointments.

A quite extraordinary mark of favour was the presentation of so-called lotus pouches manufactured for the imperial palace (*yuyong hebao* 御用荷包), which the emperor sent exclusively to his highest generals. In the documents of the second Jinchuan campaign, there are many other passages demonstrating that imperial lotus pouches were an important means to express in what high regard the emperor held his generals.<sup>166</sup> Lotus pouches had two different sizes, large and small, were given as one piece, in pairs, or in numbers up to four. They could also contain gems, jewels or precious metals (*shanhu* 珊瑚 ‘corals’, *qizhen babao* 七珍八寶 ‘seven pearls and eight jewels’, *jinding* 金錠 ‘gold ingots’, *yinding* 銀錠 ‘silver ingots’, *jinqian* 金錢 ‘gold coins’, *yinqian* 銀錢 ‘silver coins’).<sup>167</sup>

Common rewards to generals were also snuff bottles (*biyanping* 鼻烟瓶),<sup>168</sup> imperial court fabric (*shang yong chao yiliao* 上用朝衣料),<sup>169</sup> a Buddha head carved of a green gemstone (*lüsongshi fotou* 綠松石佛頭),<sup>170</sup> ‘Western’ clocks (*yangbiao* 洋表),<sup>171</sup> flint locks (*huolian* 火鏈, normally written 火鑷),<sup>172</sup> an imperially-made ink slab box in eleven parts, which were distributed to several generals (*yuzhi moke yi xia shiyi fen* 御製墨刻一匣十一分),<sup>173</sup> or fresh Lichee fruits (*xian lizhi* 鮮荔枝).<sup>174</sup>

<sup>165</sup> *Jinchuan junxu li'an* 1, fol. 54a.

<sup>166</sup> For example, *Pingding Liang Jinchuan fanglüe* 13, fol. 20a-20b (QL 36/12/gengyin); 80, fol. 7b-8a (QL 38/11/dingmao); 91, fol. 4a-4b (QL 39/2/renzi). For the types and production of lotus pouches, see (Jiaqing 22) *Gongbu xuzeng zeli* 94 and 102.

<sup>167</sup> *Jinchuan dang* QL 40/IV/00186 (no date), 00339 (no date).

<sup>168</sup> *Jinchuan dang* QL 37/IV/00380 (QL 37/12/20).

<sup>169</sup> *Jinchuan dang* QL 40/IV/00175 (QL 40/11/7).

<sup>170</sup> *Jinchuan dang* QL 40/IV/00058 (no date).

<sup>171</sup> *Jinchuan dang* QL 39/III/00046-47 (QL 39/7/8).

<sup>172</sup> *Jinchuan dang* QL 39/I/00288 (QL 39/2/29).

<sup>173</sup> *Jinchuan dang* QL 41/I/00263 (QL 41/2/[29]).

<sup>174</sup> *Jinchuan dang* QL 40/III/00069 (QL 40/7/24), 00078 (QL 40/7/26).

The highest of them were on some occasions given a black fox cap as used by the emperor (*yuyong heihuguan* 御用黑狐冠), like Agoi, Wenfu and Fengsheng'e, while Dong Tianbi was given a rider jacket of fox fur (*hupi magua* 狐皮馬褂).<sup>175</sup> Agoi was also given a robe decorated with four round pictures of dragons (*si tuan long bu gua* 四團龍補褂) and a gold-coloured honour chain (*jinhuang dai* 金黃帶, also to be seen in the figure).<sup>176</sup>

From the first part of the rewards list, it is only possible to reconstruct the costs for the bestowal of *baturu* titles, which amounts to about 10,000 *liang*.<sup>177</sup> Each time such a title was granted, the emperor also allowed to pay 100 *liang*, in very rare cases more, like Hailancha, who was given 300 *liang* for being promoted (*gai ci* 改賜) to *churhuoluoke baturu* 綽爾豁羅科巴圖魯, and Esente, who obtained 200 *liang* and the title of *morxuan baturu* 墨爾亘巴圖魯 in QL 39/7/30.

Other types of extraordinary rewards for soldiers were such everyday items as clothing or boots given to soldiers during the winter. (QL 37/5/23, QL 38/10/18) For all military equipment the respective regulations (*junqi zeli* 軍器則例) determine how long weapons and other equipment had to be used before they were considered to have paid for themselves. Troops normally serving in subtropical regions did of course not dispose of winter coats, indispensable in the harsh climate of the Jinchuan mountains, and therefore were equipped with them at no charge, at least in some cases. Other units, like those of Sichuan or Shaan-Gan, manufactured or bought their boots with money lent borrowed from the provincial treasury, and which had to be paid back either by deduction from the monthly pay, or when the campaign was over (see Chapter 4.4.2.).<sup>178</sup>

Extraordinary rewards were also given to the courier stations through which the messages of the two victories of Le'uwé and Gala'i were forwarded (QL 40/8/24, QL 41/2/dd). In the latter case, the managers of the 55 stations between the encampment and Chengdu were each given 5 *liang*, which alone adds up to 275 *liang*. The bounty promised to the person capturing the scoundrel Sonom and his barons was also extraordinarily high, although we neither know its amount nor if it was ever paid out. (QL 40/r10/23) The captured Jinchuan rebels and their families who were not executed or resettled to Beijing but given to native kings or the Ölöd

<sup>175</sup> *Jinchuan dang* QL 37/IV/00285 (QL 37/12/3), 00331 (QL 37/12/11), 00395 (QL 37/12/16). *Pingding Liang Jinchuan fanglüe* 44, fol. 3a (QL 37/12/guichou); 80, fol. 18a (QL 38/12/yisi); 81, fol. 12a (QL 38/12/jiaxu).

<sup>176</sup> *Jinchuan dang* QL 41/I/00040 (QL 41/1/7).

<sup>177</sup> It is not possible to state the exact figure because it is not clear if the present of 100 *liang* per person was only given to heroes granted the title of *baturu*, or also to other brave officers promoted in rank.

<sup>178</sup> *Pingding Liang Jinchuan fanglüe* 55, fol. 20b-21a (QL 38/3/bingyin).



troops as house slaves must also be seen as extraordinary rewards and are as such listed in the second part of the rewards list. (QL 40/2/20, QL 40/r10/23)

The most expensive indirect cost was caused by the promotion in ranks. Of those, the military promotions, for example, from *lanling shiwei* (rank 6a) to *sandeng shiwei* (rank 5a), were still cheap compared to the much costlier high-ranking promotions for the generals being promoted to Grand Ministers of the Imperial Household Department (*nei dachen*) or even granted hereditary titles, like 1st rank Duke (*toudeng gong* 頭等公) Agui, 1st rank Viscount (*yideng zi* 一等子) Fengsheng'e (up to then a duke) 1st rank Earl (*yideng bo* 一等伯) Mingliang, 1st rank Marquis (*yideng hou* 一等侯) Hailancha, 1st rank Barons (*yideng nan* 一等男) Esente and Kuilin, 3rd rank Marquis (*sandeng hou*) Helongwu (up to then a viscount), and 3rd rank Barons (*sandeng nan*) Fukang'an and Purpu. Grand Academician Yu Minzhong was made 1st rank Commandant of the Light Chariots (*qingche duwei*), which is the fourth-highest rank of non-imperial nobility. All those promotions resulted in an immense increase of annual income for those persons, which was, in many cases, handed down to sons and grandsons. There were even some posthumous promotions to ranks of nobility for some officers killed during the Mugom uprising in the summer of QL 38, for example Niu Tianbi, who was posthumously promoted to the rank of Commandant of Cavalry (*jiduwei*) and rewarded with the hereditary rank of Commandant of Fleet-as-Clouds Cavalry (*yunjiwei*), which was, of course, filled by his son.

### 3.4.2. Compensations for Killed and Wounded

The second type of extraordinary allowances are compensations for killed (*xushang* 卹賞) soldiers, civilian officials and labourers, or for persons who died from their wounds. At a time when medical care was not as good as today, a large part of the deceased soldiers did not die right on the battle field (*zhenwang*), but in the field hospital after suffering gangrene or other diseases incurred by improper or insufficient treatment of the wounds. Nevertheless there are many examples when officers survived musket bullet wounds (*qiang shang* 槍傷), probably because the Jinchuan rebels did not only use lead for their bullets, but also stones (*qiang shi* 槍石), the latter being possibly less lethal than metal bullets.

The Jinchuan regulations distinguish four categories according to which compensation is given:<sup>179</sup> civilian officials, Banner troops, Green Standard troops, and native auxiliary troops. This is the same pattern as later recorded in the *Junxu zeli* regulations, yet the Jinchuan

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<sup>179</sup> *Jinchuan junxu li'an* 2, fol. 1a-5b.

regulations also talk of a fifth group of people who could suffer wounds or death: the many civilians labouring for the army. For them the *Junxu zeli* does not contain any regulations.<sup>180</sup>

<i>rank/grade</i>	<i>grade of injury</i>	<i>compensation [liang]<sup>a)</sup></i>
<b>civilian officials</b>		
4th rank (like <i>dusi</i> ) from prefectures ( <i>daoyuan</i> , <i>zhifu</i> ) and the Capital		355 / 50
5a (like <i>shoubei</i> ), i.e. <i>tongzhi</i>		300 / 40
5b (like <i>shouyusuo qianzong</i> ), i.e. <i>zhizhou</i>		250 / 40
6a (like <i>qianzong</i> ), i.e. <i>tongpan</i>		200 / 40
7a (like <i>bazong</i> ), i.e. <i>zhixian</i>		150 / 40
assistants ( <i>zuoer</i> )		150 / 30
sub-official assistants ( <i>zazhi</i> )		(150) / 20
<b>Banner troops</b>		
<i>jiangjun</i> and <i>dutong</i>		1100 / 100
<i>fudutong</i>		900
<i>zongguan</i> , <i>yizhang</i> , 3rd rank <i>canling</i> , <i>zheng fu</i> <i>zongguan</i> , <i>yideng shiwei</i> , <i>xieling</i> , <i>qianfeng</i> <i>shiwei</i> , <i>zuoling</i> , <i>erdeng shiwei</i> , [4th] rank <i>canling</i> , <i>zhufang zongguan</i> , <i>fangyu</i> , <i>fucanling</i>		450
<i>yunjiwei</i>		400
acting ( <i>weishu</i> ) <i>canling</i> , <i>xiansan jiyanggin</i> , <i>zhufang fangyu</i>		350
<i>qianfengxiao</i> , <i>xiaojixiao</i> , <i>hujunxiao</i> , <i>qinjunxiao</i> , <i>lanling shiwei</i> , 6th rank officers		250
7th and 8th rank officers, <i>enjiwei</i>		220
<i>qianfeng cuiling</i> [=lingcui]		200 / 20
cuirassiers ( <i>jiabing</i> ) and unarmoured supplementary cavalymen ( <i>wei pijia e</i> <i>yuding</i> )		150 / 10
unarmoured gunners		130
unarmoured runners ( <i>tongshi</i> ) and personal assistants		100
army workmen ( <i>jiangyi</i> )		(100) / 5
	first grade injury	50
	second grade injury	40
	third grade injury	30
	fourth grade injury	20
	fifth grade injury	10
<b>Green standard troops</b>		
<i>tidu</i>		800
<i>zongbing</i>		700 / 100
<i>fujian</i>		600
<i>canjiang</i>		500 / 50
<i>youji</i>		400 / 40
<i>dusi</i>		350 / 40
<i>shoubei</i>		300 / 40
<i>shouyusuo qianzong</i>		200
<i>qianzong</i>		150 / 30
<i>bazong</i>		100 / 20
<i>waiwei</i>		100 / 15
cavalymen ( <i>mabing</i> ) and personal assistants		70 / 10
fighters ( <i>zhanbing</i> [viz. infantrymen ( <i>bubing</i> )] and guardsmen ( <i>shoubing</i> ))		50 / 5
supplementary soldiers ( <i>yuding</i> )		(50) / 4
	first grade injury	30
	second grade injury	25

<sup>180</sup> *Bingbu junxu zeli* 1, fol. 7b-8a; 3-5.

### 3. THE COST OF STAFF

third grade injury	20
fourth grade injury	15
fifth grade injury	10
<b>native auxiliary troops</b>	
3rd rank king (native officer), i.e. <i>tu canjiang</i> and <i>tu youji</i>	250
4th rank native officer, i.e. <i>tu dusi</i>	200
5th rank native officer, i.e. <i>tu shoubei</i>	150
6th rank native officer, i.e. <i>tu qianzong</i>	100
7th and 8th rank native officer, i.e. <i>tu bazong</i> and <i>tu waiwei</i>	50
native auxiliary soldier ( <i>tubing</i> )	25
first grade injury	15
second grade injury	12.5
third grade injury	10
fourth grade injury	7.5
fifth grade injury	5

□ 3.51 Table: Compensations for persons killed in action and compensations for wounds received during battle, according to the *Junxu zeli*

<sup>a)</sup> The sums after the stroke are transport allowances for the corpse ('bone money')

The sons or grandsons of the killed civilian officials inherited their posts. Soldiers reported missing and officially pronounced dead were given half the normal compensation. Jinchuan defectors fighting for the imperial army were given only half the compensations of the regular native auxiliary troops of allied kings. If any official or officer had no family or heirs, the government provided 2 *liang* for funeral expenditure. For some officials and troops, the Jinchuan precedents list sums of transport allowances (the so-called 'bone money', *haiyin* 骸銀) which were granted to transport the corpse and the luggage of the killed person back home. This money was meant to pay the porters of the coffin (*lingjiu* 靈柩)—ranging between 2 and 32—normally nobody else than the personal assistants, at least as far as the Banner troops are concerned. The remains (*guzhi* 骨殖) of Banner cuirassiers were carried by one person, that of officers by two. Civilian officials who had died from a disease were transported back by porters from the courier stations. It was also possible that the government directly provided horses and porters instead of granting the respective sum of money. The *Junxu zeli* gives more detailed instructions for this kind of funeral convoy, as well as regulations concerning the transfer of posts to sons and other heirs, yet the figures for compensations are the same (although more detailed for all types of Capital banner officers), which means that the precedents for those regulations were already time-honoured and did not present considerable differences during the many wars of the early Qing period. There are also some chapters in the *Junxu zeli* demanding a punishment for false reports of casualties, or compensations for people reported missing or people whose corpses could not be recovered.

Injuries were categorised into five different grades. From the suppression of the Hui rebellion in Gansu during QL 47 (1782) on, they were no longer to be categorised in five degrees, but only in three, a decision which later on was included in the *Junxu zeli*. For each different grade of injury a certain period for recreation was fixed, which is unfortunately not specified in the Jinchuan regulations. Yet from the *Junxu zeli* regulations it can be seen that the recreation periods reached from four to six months during which the wounded person was allowed to stay away from battle. If he was again wounded during or after the recreation period, the period began again, and because it is known that the Qing state was quite avaricious in many aspects, it is no surprise that compensations paid for injuries were to be subtracted from the funeral allowance to be paid out when a soldier died from his wounds a few months later. All wounded soldiers and officers could be taken back to their home garrison, for which purpose each officer was accompanied by 2 to 4 porters (according to the grade of injury), while soldiers were only supported by 2 porters or one porter for two soldiers, who was carrying the luggage of only lightly wounded persons. For two porters, one mule was to be used. During the recreation phase, as long as the suffering were staying in Chengdu, they were still given their salt-and-vegetable pay (*yancai*), but after leaving Chengdu, their status as fighting person ended, and therefore also the payment of salt-and-vegetable money. The native auxiliary troops were only given their daily provisions or the respective money (*kouliang*) on their way back home.

People working in logistics upon being wounded as a result of military actions received 4 *liang*, but only 2 *liang* when dying from a disease. This practice was still common in the accounts of the old files, but after the summer of QL 38 (1773), labourers were not given any compensations for injuries or death, presumably because the number of recruited labourers had shrunk drastically in favour of porters employed by private entrepreneurs and practically working at their own risk. As is known from the *Jinchuan junxu li'an* the government paid compensations with a height of 479 *liang* for all drowned labourers.<sup>181</sup> The heavy precipitations in Jinchuan made it inevitable that small creeks suddenly converted into rushing waters devouring wanderers on the narrow footpaths along the gorges, like Albert Tafel reports in his book *Meine Tibetreise*.<sup>182</sup>

How many people were killed, and how many were wounded? The introductory chapter (*zonglüe*) of the Jinchuan precedents speaks of 14,731 casualties in total (from Banner, Green Standard and native auxiliary troops), 908 of whom were civilian and military officials and

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<sup>181</sup> *Jinchuan junxu li'an* 2, fol. 187a.

<sup>182</sup> Tafel (1914), p. 417.

13,823 soldiers of all types. People ‘suffering wounds’ (*shou shang zhe* 受傷者) were more than 150,000. Yet this figure also includes the casualties from the campaign against the Muslims in Ush 烏什 (Uchturchan) in QL 30 (1765), the Myanmar campaigns in QL 31 – 34 (1766 – 1769), and the suppression of the Wang Lun rebellion in Linqing 臨清/Shandong in QL 39 (1774).<sup>183</sup> Even if we subtract 50,000 for the other campaigns, we do not know if this figure only concerns troops or also civilian officials and labourers, the latter being quite probable because otherwise almost all members of the troops would have suffered an injury. Yet we will follow the arguments of the Jinchuan precedents and calculate with a figure of 100,000 injured, civilian officials and military personnel taken together.

In the second part of the Jinchuan regulations, an appended listing of personnel killed contains figures higher than the one given in the introductory chapter.<sup>184</sup> According to this part, 686 Banner troops were killed, 15,244 Green Standard troops, and 3,290 native auxiliary soldiers. 5 people are listed as having died from some disease. The difference in these figures can be explained by two arguments: the first one, rather speculative, is that the figure of the introductory chapter only refers to the Green Standard soldiers killed (without officers), which adds up to 14,793 persons. The second argument is that the introductory chapter only speaks of people killed in action (*zhenwang*), while the later figures list all people killed in action and those who died later from an wounds received during battle (*zheng shang wang* 陣傷亡). These figures apparently do not include the officers and civilian officials killed during the Mugom uprising (as civilians are not included in this list), which add up to 10 Banner officers, 15 Green Standard officers, 2 native auxiliary officers, and 23 civilian officials. The listings of the Mugom casualties discussed in Chapter 3.2. mention 46 Banner officers and 25 Green Standard officers, plus 3,919 casualties of Green Standard troops and 97 of native auxiliary troops. It is not clear if the last two items are included in the figures of 15,244 and 3,290, but it is probable. Because it is known how many people of what military and civilian ranks were killed, it is possible to calculate the cost for compensation payments to their families and for the transport of the coffins and remains to the home garrison. Compensation for civilian officials added up to 6,120 *liang*, that for Banner troops to 129,000 *liang*, the cost for the Green Standard troops killed in action to 1,275,965 *liang*, and the expenditure for casualties among the native auxiliary troops to 87,000 *liang*, which makes for a sum total of about 1.5 million *liang*. The result shows a tendency which was to be expected after all we know: While the Banner troops killed amounted to only 4 per cent of all casualties, the funeral

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<sup>183</sup> *Jinchuan junxu li'an: Zonglüe*, fol. 3a-3b.

<sup>184</sup> *Jinchuan junxu li'an 2*, fol. 5b-7a.

and transport costs came to 9 per cent of the total cost. The relation for the native auxiliary troops is just the opposite with 17 per cent of persons killed only amounting to 6 per cent of the total costs. This is partly due to the fact that native auxiliary casualties were not entitled to any money for the transport back to their homes.

Because it is not known how many people from what type of personnel were wounded, and how severely, we redistribute the roughly 100,000 wounded according to the distribution of the killed (0.2% civilians, 4% Banner, 79% Green Standard, and 17% native auxiliary troops), and then equally distribute one fifth of them to the five degrees of wounds. Though the result will be only theoretical, it will at least supply an idea of how much such injury compensation could have cost. The Jinchuan precedents do not contain any concrete compensation sums for civilians being wounded, but the *Junxu zeli* also seems to include civilian personnel in the regulations for injury compensation,<sup>185</sup> according to which all personnel wounded in battle are to be given 50 *liang* for first degree injuries, and so on. This means that the highest sums for compensation as known in the Jinchuan precedents, became the norm from QL 49 (1784) on. Our tentative calculations for the injury compensation thus lead to the following sums: 3,690 *liang* for 151 injured civilians (with the same compensation sums as for Banner troops), 106,950 *liang* for 3,564 injured Banner troops (6% of the total costs), 1,583,900 *liang* for 79,193 Green Standard troops (85%), and 170,900 *liang* for 17,091 injured native auxiliary troops (9%), which results in an amount of 1.86 million *liang*. The real figure is a sum of 1,491,312 *liang* for all rewards and compensations altogether, which constitute only 3 per cent of the total war expenditure.<sup>186</sup>

### 3.5. Conclusion

When sent to war, all types of troops (Banner troops from the Capital, the north-eastern provinces, the other provinces, Green Standard troops, native auxiliary troops) received, just like the civilian officials from the central government in Beijing, a so-called baggage pay (*xingzhuangyin*), more or less based on the yearly salary of the respective service rank. Depending on the type of corps but also on where the unit was based this pay was given as a gratification (*shang*) or as a loan (*jie*). Like many other regulations this was only standardized step by step in the course of the second Jinchuan war, before the *Junxu zeli* established the final rules for accounting war expenditure. This also went for the monthly payments (salt-and-vegetable pay, *yancaiyin*) for the troops and the civilian officials to buy food from the camp

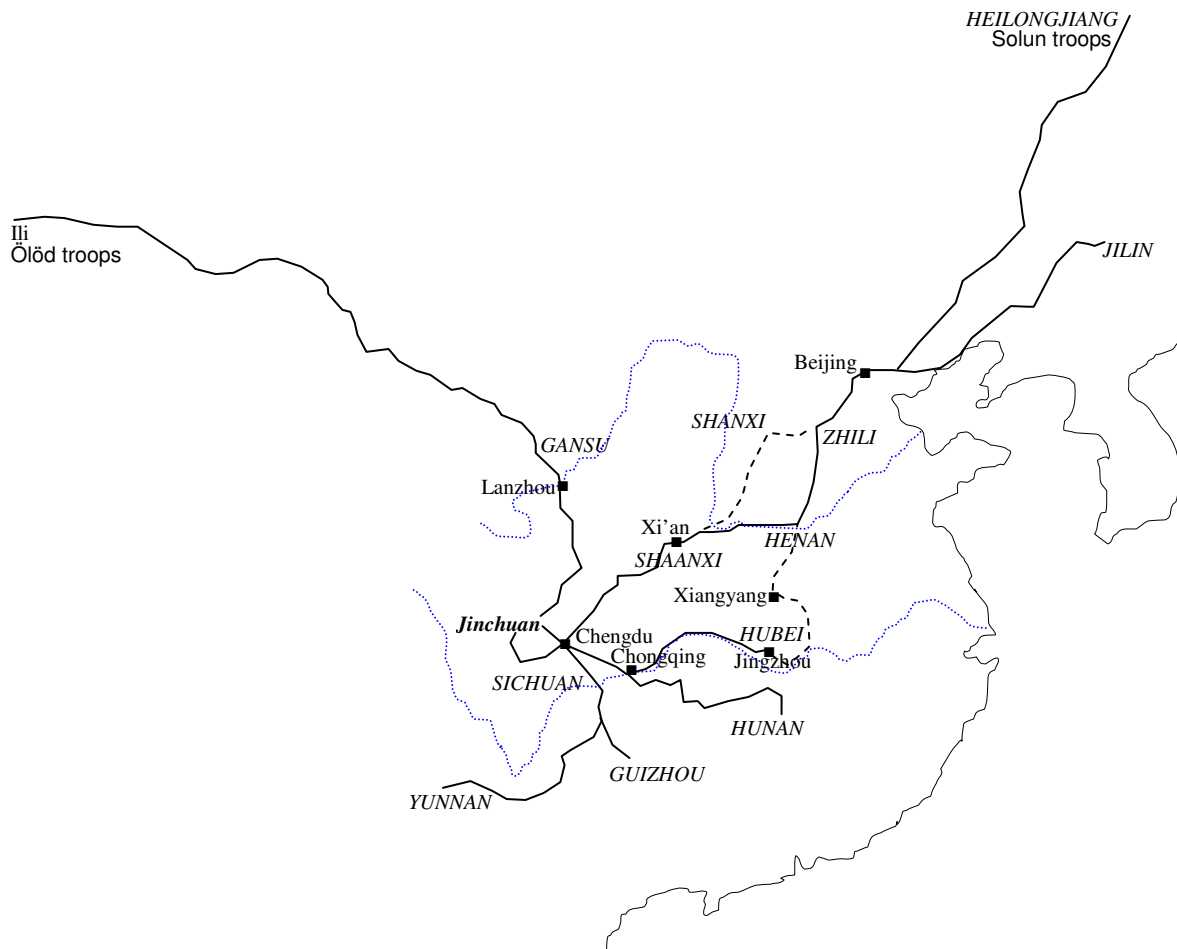
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<sup>185</sup> *Bingbu junxu zeli* 4, fol. 1a-2a.

<sup>186</sup> *Jinchuan junxu li'an* 2, fol. 177a-178b.

sutlers with. It was also paid to personal assistants (*genyi*) who worked as aides of the military and civilian officials. Apart from that everybody, combatant or not, was given a daily rice ration (*kouliang, bense*) or the equivalent in cash (*kouliangyin, zhese*) as he wished.

Of all the 140,000 troops taking part in the war 70 per cent belonged to the Green Standard troops and 8 per cent to Banner units, while 22 per cent were supplied by native kings. For the lot of them an expenditure of 2.3 million liang for baggage pay can be reconstructed, 17 per cent of which were allotted to the Banner troops, 77 per cent to the Green Standard troops and 6 per cent to the native auxiliaries.



□ 3.52 Map: Origin of the troops deployed to Jinchuan.  
Solid lines march to the war theatre, broken lines march back home.

The question of the personal assistants is closely related with the monthly money for upkeep (*yancai*), given that all civilian officials sent by the government received a lump sum which they also had to feed their orderlies with. The totality of military units used (according to reconstructed figures) 7.8 million *liang* for salt-and-vegetable pay and cost a further 1.9 million for daily food supplies (rice). As far as this was concerned, the Banner troops were given a slightly preferential treatment compared to the Green Standard troops and the native

auxiliary troops were put at a disadvantage, while the salt-and-vegetable pay was given all of them in equal shares. All units together consumed—according to reconstructed calculation—1.6 million *dan* of rice and the civilian officials 34,000 *dan*, with an official total value of over 2 million *liang*.

According to the regulations half a million *liang* for salt-and-vegetable pay had to be used for the 740 civilian officials—the vast majority of whom came from local government—employed for logistics duty. It is unknown how many of the district magistrates and prefects came from Sichuan and how many from other provinces. Neither do we know how many of those civilians had been waiting for an office (*houbu*) and were able to make the most of their employment in war logistics in order to be nominated when a vacancy was to be filled.

Similar calculations for the over 400,000 porters, labourers and workmen who had to serve in logistics (transport bases, courier stations), encampments, cannon foundries or at ferry points are unfortunately not possible. Table 3.49 shows the complexity of the rules and regulations that attributed (or not) wages, daily rations and money for food to all members of those varied groups while on their way to their place of action and back, or when they were there with nothing to do (*kongri*). This set of rules decided if they were entitled to family allowance (*anjiayin*) or not, if they received their daily rations in kind or money and also how much as well as how many of them; it laid down if they, where necessary, were allowed to hire personal assistants or beasts of burden at the public expense; how much they were paid inside (*kounei*) and outside the country (*kouwai*); it decided their workload etc.

Considering the wages paid workmen and carriers, one must not forget that the prices mentioned in the regulations for war expenditure were those that the war logistics bureau (*junxuju*) was allowed to bring to account and bore no relation whatsoever to market prices and real wages.

The total amount of rice, flour and beans consumed by the troops, the civilian officials, the personal assistants, porters, workmen and all the other persons employed as well as their beasts of burden had to be taken to the encampments resp. the logistics stations. At first the necessary bearers were recruited from the taxable households all over Sichuan on the basis of a *corvée*-tax or compulsory service duty (see Map 3.41). But when it turned out that due to the difficulties of terrain and the complicated organization the cost for the state-organized (*guanyun*) transport of grain was almost as high as that for privately organized (*shangyun*) transport by haulage contractors the task was passed on to the latter. At least part of the workmen were also recruited from the population. The detailed regulations concerning daily wages and daily rations for workmen and porters leaving their home district in order to move



on to the area where the war took place show that the government made an effort to reward them more or less justly for their work. There can be no question of the population having been drafted for unpaid forced labour—quite on the contrary the second Jinchuan war gave nearly half a million of workmen an opportunity to earn a regular income at least for a certain time.

As in all other fields differences were also made concerning rewards and compensations according to the kind of troop somebody belonged to or the rank or status as an official they held. Here as well no definite amount can be reconstructed, but based on many facets of concrete situations a rough picture can be sketched showing what rewards might have looked like. A much more concrete picture can be drawn as far as death casualties and wounded are concerned and a figure of around 1.5 million *liang* spent on compensation for deaths can be reconstructed, 6,000 of which for civilian victims. Of the compensation for military victims 85 per cent were apportioned to Green Standard troops, 9 per cent for Banner troops and 6 per cent for the native auxiliary troops. This means that the Banner troops were very generously indemnified, while the burial money for the native auxiliaries was rather meagre. In order to reconstruct the latter costs much trouble was taken find out the respective numbers of soldiers killed in action and to differentiate between the type of troop they belonged to and the position they had. The evaluation of the available lists of victims revealed that there was no considerable difference between the shares of dead compared to the proportions of the kind of troop they belonged to. Thus the assertion that the Banner troops kept safely to the third line while the native auxiliaries and the Green Standard troops were sent into slaughter as cannon fodder could not be substantiated. An exact analysis of rewards split up according to the type of troop in order to show if Banner troops were indeed given preferential treatment, is still to come. According to the present effort at reconstruction 1.8 million *liang* were spent on indemnification for the wounded.

Compared with the amounts spent (see Chapter 5.2.1.) it becomes clear that the calculated expenses for dead and wounded were far lower (a mere 1.5 million *liang*). The reason for this is probably to be found in the fact that the number of wounded was most likely much lower than the very rough figure of 100,000 mentioned in the *Jinchuan junxu li'an*. It has also repeatedly been found out that the figures and statements contained in that compendium are not always entirely reliable, due to occasionally occurring clerical errors.

When adding up the payments for baggage pay, salt-and-vegetable pay and the daily rations for the troops, the reconstructed figures amount to a total of 12 million *liang*, but in fact just 7.5 million *liang* were spent. The difference between the two figures may mainly be due to

two factors, the first of which being that the reconstruction had in the first place to be based on the accounting values according to the *Junxu zeli* which took effect after the second Jinchuan war and which in many cases were partly even lower during the war. The second factor could be the baggage pay which during the second Jinchuan war had to be paid back even by the Banner troops according to the then valid usage, while according to the *Junxu zeli* only the Green Standard troops had to pay back their baggage pay. Thus the real expenses for this item were somewhat lower than the calculated values.

What, however, becomes clear from the attempts at reconstruction, is that a unification of accounting rules and values was urgently required that had effect all over the empire. The publication of the respective corpus of laws, the *Junxu zeli*, did not only result in that unification, but also in an increase of the payments for baggage pay etc. handed out to the troops as well as of the expenses for bearers and workmen. The unification of rules and regulations for the expenditure in case of war after the second Jinchuan campaign and after the Taiwan campaign had the effect that wars ‘went up in price’. Some examples also showed that certain precedents from wars prior to the Jinchuan war allowed for higher expenses than those incurred during that war. Several exemplary calculations furthermore demonstrated that it was by no means wasteful to entrust the transport of grain to private enterprise, even though this made it—nominally—four times as expensive as when it was carried out by *corvée* labour. With bearers properly paid there was, on the basis of figures, next to no difference between the two types of transport, which is borne out by statements in memorials. The government also profited from that transfer to private transport in so far as it was less burdened with organizational details. The fact that it used private enterprise temporarily taking over government functions shows how flexibly and rationally organizational problems were dealt with.

## 4. The Cost of Horses, Food and Materials

### 4.1. The War Logistics Bureau(s)

It is high time to introduce the war logistics bureau (*junxuju* 軍需局) which had three tasks: the organisation of logistics, that of the courier service and that of accounting.

The Chinese term *junxu* means ‘military demand [during war]’. This signifies everything the troops needed when campaigning. Among those items is, of course, military equipment (*junzhuang*), which can be divided into two categories, namely materials for permanent use (weapons: muskets, lances, sabres, bows and arrows as well as utensils for the daily life like tents and cooking woks), and consumables (gunpowder, fuses, cannonballs, bullets). An intermediate position between those two can be attributed to the cannons and howitzers. Though meant for permanent use, due to the difficult topography of the Jinchuan area cannons had permanently to be melted down and recast on the spot because it was not possible to transport the larger pieces from one place to another without greatest difficulties. The permanent recasting of the pieces therefore led to an increasing impurity of the metal, making it useless for the purpose from a certain point of impurity on. Therefore iron and brass had permanently to be procured to cast new artillery pieces. Brass borrowed from the provincial mint had to be refunded to that administrative unit later.

The war logistics bureau had to care for an adequate infrastructure and to procure the equipment necessary to make the daily life of troops and military labourers more comfortable. Such items were tents and accommodation, but also pontoon bridges and boats, for which materials (nails, tools, oil, hemp, etc.) had to be made available. On the spot, everything could then be erected by hired workmen or the troops themselves. For the troops cooking woks and adequate clothing was no less important than weapons. Of all those things the war logistics bureau had to take care. When the troops left their garrisons and marched to the war theatre, and when they returned to their homelands after the campaign was over, the villages and cities they had to pass on their way were mobilized to provide enough horses, carts and food for the troops. The war logistics bureau thus had the right to interfere with the daily routine of magistrates and prefects and order them to do their best for the sake of the campaign.

Probably the most difficult task of the war logistics bureau was to provide rations for the troops and military labourers. For the grain—and, of course, all other equipment to be transported to the camps and the front—a huge logistics network had to be set up, which did

not only consist of the roads between the provincial capital Chengdu and the camps, but stretched out over all prefectures and districts from which troops, materials, rice, pack animals, porters and so on, were dispatched to the war theatre. This means that the logistics network in the end even spread as far as the garrisons in Ili in the remote west and Heilongjiang in the northeast.

The war logistics bureau was responsible for setting up logistics and courier stations (in most cases identical, but with different administration and staff), equipping these with materials, manpower and pack animals, and maintaining close contact with all provinces which in some way contributed to the war, be it that winter clothing was provided by a garrison in Guizhou or Hubei, private owners of mules in Shaanxi rented out their animals to the government, or the Capital Banner troops marched across four provinces to reach the war theatre beyond the western border of Sichuan.

All this did not only require an immense amount of red tape with many different governmental institutions requesting information and requiring material and manpower. The war logistics bureau had also to be informed about all questions of logistics and to be acquainted with all rules concerning war logistics. It had to know what was necessary and what not, in other words, what amount of money was allowed to be used for what purpose, and what was to be considered wastage and luxury. For this purpose the members of the war logistics bureau had to study carefully all documents from former wars dealing with logistics. In those files precedents had to be found in order to know how to handle each issue. In most cases the precedents in the archived files of the first Jinchuan war served as an orientation for the organisation of the second Jinchuan war (for example the question of the daily performance of a porter in high mountain areas, or the use of private carriers or hauliers to take the rice to the camps), but often precedents from other wars served to establish new courses of action in the present campaign, when those had proved more effective than that of the first Jinchuan campaign. But even then many ad-hoc solutions led to the creation of new precedences. In each case the war logistics bureau was consulted by the commanding generals and had to find a solution. The exact knowledge of all rules for logistics in organising as well as in accounting thus made the members of the war logistics bureau an indispensable tool for the generals which did not only command the war logistics bureau to transfer a number of troops from A to B and to organise more horses for all logistics stations, at the same time the bureau gave valuable advice to the generals.

The war logistics bureau, headed by the provincial administration commissioner (*buzhengshi*; also impersonally called 'the provincial treasury', *siku* 司庫 or *fanku* 藩庫) of Sichuan and

his staff, had close contacts to the local governments. The prefects and magistrates had to inform the bureau where there was still enough rice in the granaries, and how many porters could be summoned from among the local population. The number of porters to be dispatched was determined according to the tax yield of the district. And the local government had to think about how to pay the porters their labour subsidies (*bangtie* 幫貼, *jintie* 津貼). Along with the war logistics bureau, the sources very often mention the circuit intendants (*sidao*, *daotai*) as informants and advisors. Apparently the intendants were experts in the field of cooperation between several local government institutions and might have had a good overview of the resources in their area of jurisdiction. All provinces involved established a war logistics bureau which organised everything coming from their area. This was necessary because the war was to be organised by the province nearest to the war theatre or in whose territory the war took place, and the administrative staff of one province had no jurisdiction over any district within the borders of another province. Therefore the sources also mention the 'war logistics bureau of Yunnan' etc., although in most cases the term *junxuju* refers to that in the province of Sichuan.

With all its expertise the war logistics bureau was also clearly informed about how much money the government allowed to spend for what purpose. Therefore all accountings passed the war logistics bureau before being forwarded to the Ministry of Revenue. This was all the more the case because the bureau, staffed with members of the provincial financial administration, combined a lot of knowledge about financial matters. Since the war logistics bureau was centrally entrusted with accounting all numerical changes had to be communicated to the bureau immediately, like considerable troops movements from one route to another, setting up and dissolving of logistics or courier stations, changes in the number of workmen, porters or beasts of burden, but also the number of persons killed, wounded, rewarded and the number of officers and civilian officials being demoted in case of an offence. Before the commanding generals could apply for fresh funds with the Ministry of Revenue respectively the emperor, they had to be provided with the exact figures by the war logistics bureau. The war logistics bureau had to submit monthly accounts reporting the expenditure and the actual financial status of the war chest. It thus had not only to follow orders of the generals but had a high degree of responsibility, which is best seen in the fact

that at the end of the war governor-general Wenshou as the person responsible for the logistics, was named for an extraordinary reward.<sup>1</sup>

In this chapter it will be shown what material had to be transported to the front to keep the troops and their performance in good shape. In the first place that were horses getting the troops to the war theatre and beasts of burden carrying the military equipment; but also huge quantities of grain which were transported to the logistics stations and the camps; the third group of material are weapons and accessories; and the fourth place is occupied by equipment which made life in the camps possible and bearable, as well as infrastructural arrangements. Especially for the last few items, the *Jinchuan junxu li'an* contains a lot of technical details on amounts, measurements and prices which go far beyond the descriptions in the later war expenditures canon, the *Junxu zeli*. For this reason and because the data would otherwise be barely accessible, this section contains a lot of dry figures although those do not enable us to reconstruct the theoretical cost for items like tents, woks, bridges, storerooms, boats, and so on, which the Qing government had spent on the second Jinchuan war.

The attention to details (why did the government care for the exact length of the wooden staves of buckets?) proves that it was not only a question of cost but rather that of bureaucratic control which tried to convert war from a case of emergency to an administrative normal case for which each detail was meticulously regulated with the ambition that, if all rules were strictly observed, nothing could go wrong—at least not as far as organisation and accounting were concerned. The military aspect is a different story.

## 4.2. Horses and Mules

There were three kinds of horses which served in the Jinchuan campaign—and, of course, any other war of 18th century China. The first type of horses were transport horses (*tuoma* 馱馬) which were used to transport the soldiers' equipment to the front. They were either provided by the home garrisons of the deployed troops (*yingma* 營馬 'garrison horses'), or were hired or bought (*caimai ma* 采買馬 'purchased horses') from among the population of the region through which the troops marched. In mountainous regions mules (*luo* 騾) instead of horses were also often used as beasts of burden. During the western campaigns camels (*luotuo* 駱駝, short: *tuo* 駝) served to transport baggage and equipment. The *Junxu zeli* recommends

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<sup>1</sup> *Jinchuan dang* QL 41/1/00173 (QL 41/2/13).

primarily to make use of carts to transport military equipment, and only when carts could not be provided, horses or mules had to be made use of. In extremely rough mountains, like in the Jinchuan area, or where neither horses nor carts were available, porters had to be hired, and as those were the most expensive means of transport, human porters were the least favoured choice.<sup>2</sup>

The second type of horses were war horses (*zhanma* 戰馬) mainly belonging to the Banner troops, but also Green Standard troops were in possession of horses. The ratio between infantrymen and cavalymen in Green Standard units was about 3 : 2.<sup>3</sup> Unlike during the western campaigns, where the troops covered large distances in grassland and prairie, it was almost impossible to make use of cavalry to stage attacks on the enemy.<sup>4</sup> Even the highest Banner officer had to dismount from his horse in the face of the Jinchuan war towers, and in some places it was—at least at the beginning of the campaign—even prescribed not to allow Bannermen the use of horses in order to save costs.<sup>5</sup> This was not only because the terrain was most unsuitable for cavalymen, but the custom that officers rode while the common soldiers fought on foot, proved to be dangerous: The horsemen could easily be recognized as officers, and the Jinchuan rebels therefore preferably aimed at the officers.<sup>6</sup> On the march to the war theatre everybody, officer or common soldier, Banner or Green Standard, was entitled to a riding horse. Yet in one case, when the Banner troops from Jingzhou/Hubei marched to Sichuan, they abstained from using horses and marched on foot to Chengdu, for which reason they were rewarded with a full extra monthly salt-and-vegetable pay.<sup>7</sup>

The troops, of course, had to obtain compensation for this inconvenience, and were given a fixed amount of money, normally 6 *liang*, in exchange for their horses, personal assistants (*genyi*) only 0.2 *liang* (because they had to share one transport horse) according to the precedents from the Myanmar wars, and 0.1 *liang* during the second Jinchuan campaign.<sup>8</sup> What happened to the horses as long as the troops were in Jinchuan is not known, but we can

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<sup>2</sup> *Hubu junxu zeli* 5, fol. 1a.

<sup>3</sup> *Pingding Liang Jinchuan fanglüe* 13, fol. 17b-18a (QL 36/12/jichou).

<sup>4</sup> Lai (1984), p. 331, has detected one document referring to the use of war horses against the enemy after it had become evident that in some places the enemy did actually make use of horses for attacking the imperial troops. His assertion that a document in the *Jinchuan dang*, 40/III/00069 (QL 40/7/20), gives news of three places where the enemy pastured his horses, can not be substantiated.

<sup>5</sup> *Pingding Liang Jinchuan fanglüe* 10, fol. 14a-14b (QL 36/11/bingchen).

<sup>6</sup> *Pingding Liang Jinchuan fanglüe* 46, fol. 4a-4b (QL 36/12/gengchen).

<sup>7</sup> *Pingding Liang Jinchuan fanglüe* 96, fol. 5a-5b (QL 39/5/wuchen).

<sup>8</sup> *Jinchuan dang* QL 38/III/00285 (QL 38/7/29). The respective regulation in the *Hubu junxu zeli* 8, fol. 1b-2a, allows each officer to ride a horse (or at least to have one at his disposal) even in mountainous territory. Otherwise, for each horse a compensation of 6 *liang* would be paid. To the compensation for personal assistants, see *Pingding Liang Jinchuan fanglüe* 67, fol. 15b-16a (QL 38/7/wushen).

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hardly imagine that an officer was willing to later exchange his beloved stallion against an inferior animal which he did not know. This can only mean that the more expensive horses were cared for somewhere in a garrison at the foot of the mountains or were not used at all during a campaign. One document probably helps to give a solution to this question: When the Banner troops from the Capital arrived in Chengdu they were paid 15 *liang* from the 'horse fund' provided for such occasions (*majiayin* 馬價銀) to buy or to hire horses or mules to transport their equipment. For this purpose 500 long-distance mules (*changluo* 長騾) had to be made available from the nearby villages. Their own horses (*benshen zhi shuang ma* 本身之拴馬) apparently stayed in Chengdu.<sup>9</sup>

The horses used for travelling to the war theatre (*xingma* 行馬) were not identical with those used during battle, yet both types of riding horses (*qima* 騎馬) came from the home garrisons of the troops.

The third type of horses was used for communication, especially, to deliver reports and memorials which had to be sent to Beijing, but also to connect the different routes along which the troops advanced against the heartland of Jinchuan. Compared to modern armies which can rely on a wide range of means of communication, command in ancient times was restricted to horse couriers and this made it very difficult to establish communication lines over long distances. Despite all obstacles imposed by the mountainous terrain in Jinchuan, communication apparently worked quite well, which shows that the Qing commanders had a well-functioning staff at hand with a large amount of *aides-de-camp* and that the particular military units functioned as self-contained strategic units on the four routes advancing against Jinchuan, which were using a system of regular reports to and of orders from headquarters with the ability to cope with the tremendous traffic of messages.<sup>10</sup> A large number of courier stations were equipped with 'station horses' (*zhanma* 站馬), which carried couriers from place to place. Yet the topographical problem made it necessary that couriers often had to cover the distances on foot instead of on horseback. This would mean that the report of the fall of Le'uwé, which was delivered to Beijing within only eight days, probably needed half of this time to cross the mountains before reaching comfortable terrain in the district of Guanxian at the foot of the mountains. The horses for the stations were partly supplied by military garrisons, and partly bought.

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<sup>9</sup> *Pingding Liang Jinchuan fanglüe* 68, fol. 5b-6b (QL 38/7/renzi).

<sup>10</sup> An excellent book dealing with martial command structure is van Creveld (1985).

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#### 4.2.1. Horses for the Courier Service

There were a lot of messages to be delivered from one point to another during a military campaign. The emperor wanted to be informed about the state of affairs at the front, and the commanding generals waited for his orders and the decisions of central government agencies. Along the front encircling Greater Jinchuan the commanders of the different routes communicated with each other to decide when to attack and how. In order to transmit the huge amounts of messages throughout the war theatre and between the war theatre and the Capital (or even the summer seat of the emperor in Jehol/Manchuria), a network of courier stations was set up between Beijing and Jinchuan. There were, of course, the permanent courier stations (*yizhan* 驛站) in the many districts and prefectures of China which could be used by the messengers. In less important places, the courier stations were called mail posts (*dipu* 遞舖), but in all courier stations there was staff to take care of the transmission of information and to provide horses (*rima* 駟馬) for messengers and sedan chairs for high officials travelling. Veterinaries cared for the health of the horses, without which the transmission would be much slower when horses fell ill. In some places even boats were kept ready for forwarding the messages. In the northeastern provinces of the empire, oxen served as beasts of burden, for which reason some statements in the *Junxu zeli* can be found about this kind of animals.<sup>11</sup> Outside the Qing empire, in Turkistan (modern Xinjiang) and Tibet, but also along the road from Chengdu via Dajianlu to Tibet, temporary or permanent military stations (*juntai* 軍臺, *taizhan* 臺站) were to be found. These served to bridge the large distances between the courier stations in those regions, for which reason this type of station was also called ‘interstitial station’ (*yaozhan* 腰站). Near the war theatre, outside provincial territory where there were no permanent courier stations, temporary courier stations were established, which were called ‘outpost stations’ (*tangzhan* 塘站). The messengers were in many cases soldiers from the camps, for example, directly sent out by the general staff to deliver a message to Beijing. When they made use of horses from the camps, it was often not necessary to establish an extra courier station.<sup>12</sup> Of course, the messenger did not travel the whole way but handed over the message in a courier station, from where another person travelled the next leg and passed the letter on to the next courier. In the mountainous territory of Jinchuan, many of the *tangzhan* stations were not equipped with horses, but were so-called ‘pedestrian stations’ (*buzhan* 步站), as opposed to ‘equestrian stations’ (*mazhan* 馬站). Since the governor-general of Sichuan also took part in the war because it was his

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<sup>11</sup> *Hubu junxu zeli* 4, fol. 1b, 4b.

<sup>12</sup> *Pingding Liang Jinchuan fanglüe* 94, fol. 10a-10b (QL 39/4/dinghai).

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responsibility because the native kings belonged to his jurisdictional area, there was much mail concerning the province of Sichuan which had to be transmitted to the camp, where the governor-general was staying. The messengers received a mark of urgency (*huopiao* 火票) which was issued by the highest military commanders and civilian officials serving in the camps and which served not only as a patent for the courier, but also simply as an address destination card. Except messages, the courier stations also handled the transmission of important objects to be delivered (like for example the head of King Senggesang of Lesser Jinchuan) and organised the fast travel of important officials or the transport of war prisoners. All expenditure for couriers and travelling officials had to be paid from the budget of the stations. The accounting of the stations inside the country followed the normal regulations of the particular province (*benchu yizhan li* 本處驛站例),<sup>13</sup> that of stations outside the country being regulated by the precedents for war expenditure. The velocity of the document transmission could be considerable, as in many places express couriers (*you liubai li jiajin chi fa* 由六百里加緊馳發) covered up to 600 *li* per day, yet the most astonishing result was the report of the fall of Gala'i, which was handed over to the emperor after only eight days of travel, covering a distance of about 7,000 *li* (some 3,200 km).

During the first Jinchuan war, the most difficult stretch of the courier route (and of course, also for the troops from the north marching to the province of Sichuan) were the plank road viaducts (*zhandao* 棧道) in Shaanxi between Baoji 寶鷄 and Ningqiang 寧羌. The viaducts of the Qinling Range 秦嶺 were erected when there was no space along the rivers to construct a road, and could consist of either catwalks attached to the cliff, or of tunnels or galleries dug into the cliff side. In many parts on that road it was not possible to use mules or horses, not to speak of carts for transporting the baggage. This situation is also reflected in the comments to the *Junxu zeli* regulations, where it is said that horse owners were paid better 'inside viaduct territory' (*zhannei* 棧內) than in normal territory.<sup>14</sup> Furthermore, it was deliberated if only the officers should be allowed to ride horses in that area, while all common soldiers had to walk.<sup>15</sup>

When the emperor was outside the Capital, either in his summer residence in Jehol (Rehe 熱河), or elsewhere, the couriers had to travel to the emperor's actual residence, which could even be in Shandong, like in QL 13/2 (Jan – Feb 1749), when he tarried in Qufu 曲阜, the hometown of Confucius, or in QL 38/3 (Mar – Apr 1773), when he visited Tianjin. Between

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<sup>13</sup> *Bingbu junxu zeli* 2, fol. 1a.

<sup>14</sup> *Bingbu junxu zeli* 2, fol. 3a.

<sup>15</sup> *Pingding Liang Jinchuan fanglüe* 66, fol. 6b-8a (QL 38/7/gengzi).

Chengdu and the 'border' (running through the towns of Dajianlu, Muping, Taoguan, and Dzagu), there were no permanent courier stations, so that during the war temporary stations had to be established: a large station in Chengdu could provide 30 horses; from Chengdu to Wenchuan, 7 stations, and to Dajianlu 10 stations were set up. Outside the country (*kouwai*), 9 stations were available for the courier service between Taoguan and Wolongguan, and 10 between Dajianlu and Djanggu (see maps in Appendix 2). In all stations between Chengdu and the war theatre, 586 horses were needed. In the stations inside the country (*kounei*), in every second station two official scribes (*bithesi*) were installed to supervise the flux of documents, and in every tenth station, a prefect (*zhifu*) or circuit intendant (*daotai*) was responsible for the supervision of forwarding mail. During the second Jinchuan campaign, even provincial administration commissioners (*buzhengshi*) or surveillance commissioners (*anchashi*; both titles abbreviated as *fan-nie si*) were ordered to supervise the courier service within their province, i. e.: between Liangxiang and Jingxing 井陘, officials from the province of Zhili were responsible; between Pingding 平定 and Xiezhou 解州, officials from the province of Shanxi; between Tongguan 潼關 and Ningqiang officials from the province of Shaanxi; and from Guangyuan 廣元 onwards officials from the province of Sichuan. In QL 36/11 (Dec 1771) the emperor ordered the following persons to take care of the courier stations and to register minutely all movements of memorials and edicts passing through the respective territory: Li Ben 李本 and Li Shijie 李世傑 for Sichuan; Bi Yuan 畢沅 and Guo Fu 郭福 for Shaanxi; Zhu Gui 朱珪 and Huang Jian 黃檢 for Shanxi; and Yang Jingsu 楊景素 and Wang Xianxu 王顯緒 for Zhili.<sup>16</sup> One critical area, also for the troops marching from the Capital and the northeast to Chengdu, was that between Zhengding 正定 in Zhili and Jingxing at the border to Shanxi. For three stations between Gantao 甘桃 and Wanghu 王胡 (Yuci 榆次) within the territory of Shanxi, the responsible officials would have to take precautions to assemble a sufficient number of transport horses instead of carts, which were well available when directly entering Shanxi instead of passing via Henan. It was therefore decided to lead the troops through Henan instead of Shanxi, although the first route was 30 *li* longer than the latter.<sup>17</sup>

After the necessary measures were carried through the courier service was so perfect that the emperor ordered to reward all courier station managers and the troops forwarding the mail.<sup>18</sup>

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<sup>16</sup> *Jinchuan dang* QL 36/IV/00217 (QL 36/11/27), 00234 (QL 36/11/26).

<sup>17</sup> *Jinchuan dang* QL 36/IV/00303 (QL 36/12/10).

<sup>18</sup> *Jinchuan dang* QL 37/IV/00383 (QL 37/12/21).

During the first Jinchuan war the courier system was quite inadequate, so that delays and incorrect deliveries were quite frequent. The emperor therefore instructed Shuhede, Minister of Revenue, to improve the conditions for the courier service. After the amelioration of the situation in the courier stations where horses and staff had been lacking, it took only 13 days for a memorial to be sent from the headquarters to Beijing. During the second Jinchuan campaign the network of regular courier stations and interstitial courier stations was so dense that the transmission of mail posed fewer problems than before. Alone in the province of Shanxi, 23 regular stations were supported by 25 interstitial stations, which was much more than twice the amount existing during the first Jinchuan campaign.<sup>19</sup> In each courier station, three soldiers, including one officer, cared for the formalities, in every fourth station even a *qianzong* officer was on service. Later, the method to replace not only the horse, but also the rider, contributed to a higher velocity of the transmission. Near Pingding, the responsible magistrate had even the road conditions upgraded in order to shorten travelling time. For the twelve stations between Tongguan and Baoji in the province of Shaanxi, travelling offered no difficulties and there was no problem to hire additional horses from among the population. Yet especially for the fifteen stations of the sparsely populated area in the Qinling Range with its infamous plank road viaducts, not only speed was a problem, it was even difficult to hire horses or even people for service. The responsible officials therefore did not only everything to keep the viaducts in good repair, but provided boats which could be used when the viaducts along the rivers were flooded. From Guangyuan to Chengdu, nineteen stations served for the courier service, which was more than twice what had existed during the first Jinchuan campaign. The same increase in the number of courier stations can also be observed for the province of Shanxi, while the increase in the number of stations between the first and the second Jinchuan campaign in the province of Shaanxi was less evident—at least as far as the regular courier stations are concerned. In the Jinchuan area, the protracted war made it likewise necessary to set up a network of logistics and courier stations, which was much more sophisticated during the second Jinchuan campaign than during the first one. In most cases, logistics stations and courier stations were the same. The maps of Appendix 2 give an overview of the stations on the particular routes, and the date when the stations were established. Most of the courier stations were presumably identical to the logistics stations along which the rice and war materials were transported to the camps and the front.

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<sup>19</sup> The figures in this paragraph are taken from Lai (1984), pp. 303-306, who mainly uses documents in the archive of the State Council (*Junjichu dang* 軍機處檔).

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At the beginning of the second Jinchuan campaign 1,500 horses from Green Standard garrisons in Sichuan were sent to Jinchuan to be used for the courier service. Before QL 37/6 (Jun 1772) 1,361 horses served in Jinchuan, about 850 of which were used inside and about 580 outside the country. After that date, 1,934 horses were required, so that the total number of horses used in the Jinchuan region increased to 3,295.<sup>20</sup>

As the Jinchuan regulations contain a detailed list of the horses kept ready for the logistics and courier stations,<sup>21</sup> this type of horse will be discussed first. Although the number of station horses (*zhanma*) on the particular transport routes was quite constant, there were great differences among the stations especially on the northern and the southern route. On the western route, the number of purchased horses in each station was between 20 and 30; in the eastern part of the route, which was opened at the beginning of the war, there were also kept ready between 4 and 20 horses from the garrisons. For that part of the western route which covered the centre of Lesser Jinchuan (between Akamyā and Dzerdo 澤耳多, compare maps in Appendix 2), no numbers for garrison horses were prescribed, and for the new leg between Ži'r and Sala 撒拉 which was only opened in QL 39 (1774), there are no figures provided for horses at all. Yet as this route was one of the fastest tracks between the war theatre around the stronghold of Le'uwé and Chengdu, there is no reason to assume that there should not have been any horses at all—unless the terrain was so rough as to exclude the use of horses. But why, then, should this region have been selected as a logistics track? Yet as beans, staple fodder for horses and mules, had been transported to this route (see Chapter 4.8.), there must have been horses in that region. Concerning the new western route opened from the beginning of QL 39 (1774), for most of the stations a fixed number of horses is given: 16 horses bought on the market, and 10 provided by garrisons. On the northern route, the figures are quite incomplete and varying, yet a general tendency can be observed, at least for purchased horses, which is 4 horses in normal stations, and 8 in camps. The number of garrison horses was between 2 and 10. On the southern route, the figures are relatively complete and show that there were between 5 and 20 purchased horses, with most stations commanding 8, 15, or 20 purchased horses, and the same numbers of garrison horses. The sole areas where there were no station horses at all, are the central route and the western branch of the southern route. On the latter, transport of materials and obviously also communication, was undertaken by

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<sup>20</sup> Figures according to Lai (1984), p. 305. The figures in the *Jinchuan junxu li'an* are different, as will be shown below.

<sup>21</sup> *Jinchuan junxu li'an* 2, fol. 91a-122b.

natives using their own animals (*ula* 烏拉),<sup>22</sup> for the transport of goods and forwarding of mail on 'long distance' tracks (*changyun* 長運), which means they had to go through several stations before they could pass on their freight. The stations of the central route between Lingguan 靈關 and Ludingqiao were inadequate 'small stations' (*xiaozhan* 小站), without the prescribed courier horses. The *Jinchuan junxu li'an* list enumerates many stations for which no figures for horses to be kept ready are given. Yet this does not mean that there were no horses at all in those stations. At the beginning of the war, there were indeed no horses in the stations and only very few on the southern route. Chengdu provided 30 horses for the station within the city itself, the district of Xinjin 新津 sent 20 horses south to each station on the route to Luding (Lucheng 爐城), Pixian 郫縣 sent horses north to the route to Wenchuan, 20 horses for each station.<sup>23</sup>

The fixed price for horses bought within the province of Sichuan was 8 *liang*,<sup>24</sup> no more, in order not to spend too much, and no less, in order not to exploit the horse vendors or horse dealers. When a horse dropped dead (*daobi* 倒斃) it had immediately to be replaced, for no more than 8 *liang*. During the Djandui campaign and the first Jinchuan war, it was allowed to bring to account a horse price of up to 12 *liang*, during the Myanmar campaign even as much as 15 or 18 *liang*. The official horse price in Shaanxi and Gansu was between 8 and 10 *liang*. The price of 8 *liang* for a Sichuan horse had once been fixed by governor-general Artai, yet as the conditions worsened and the market price for horses in Chengdu rose, it was allowed to bring to account a price of over 8 *liang*, but only in an appended account (*fuxiao*), which was opened for disputable items. If there were not enough horses on the market, or if the purchased horses could not reach their destination in time, 1,500 garrison horses had to be dispatched and were distributed to all stations inside and outside the country. Before the horses reached the stations, runners (*bufu* 步夫) had to transmit the mail. When military garrisons from Sichuan had to dispatch horses or soldiers to the war theatre the responsible official, in this case the provincial military commander (*tidu*), had to keep an eye on the problem so as not to totally evacuate all garrisons from troops and horses. At the beginning of the war, of the 2,300 horses in the garrisons therefore only 1,500 were selected for use in courier stations. Nor were the garrison horses useless, as they could be used for the courier service, which prevented squandering fodder for idle horses left behind in the then under-

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<sup>22</sup> An *ula* could be a person as well as a mule. In the context of the second Jinchuan campaign, *ula* always means a beast of burden.

<sup>23</sup> *Jinchuan junxu li'an* 2, fol. 83b.

<sup>24</sup> *Jinchuan junxu li'an* 1, fol.31a; 2, fol. 83b.

staffed garrisons.<sup>25</sup> That the numbers of horses in the particular courier stations showed considerable differences can also be seen from a document in the official history of the war, where 16, 20, 30, or 40 were standard figures for courier horses per station.<sup>26</sup>

At the end of each of the five route listings (western, southern, central, northern, and new western) in the Jinchuan war expenditure precedents, the total number of horses to be provided on the respective routes is indicated: 1,327 horses on the western route, 798 horses on the new western route, 315 horses on the northern route, 1,711 horses on the southern route, and a mere 36 horses on the central route, a total of 4,187 horses on all routes. These figures serve to calculate the theoretical cost to buy horses in Jinchuan.<sup>27</sup>

Firstly, the ratio of horses bought and those provided by military garrisons has to be considered. It amounted to about 3 : 2 on average (although there are also some examples of a relation of 1 : 1 or 2 : 1). This would mean that 2,512 horses were bought, a calculation which comes very close to the real figure of 2,535.<sup>28</sup> Yet the mortality of the horses was quite high, a circumstance which can be seen in the instructions for the replacement of dead horses (*daoma* 倒馬). Inside the country, it was not allowed to write off more than 3 out of 10 horses per year, outside the country the maximum figure was no more than 4 out of 10.<sup>29</sup> The corpses of dead those horses had to be sold ('skin and bowels', *pizang* 皮臟) for 0.5 *liang*, which amount had to be used for the purchase of a new horse, for which an effective price of no more than 7.5 *liang* could be brought to account (8 minus 0.5 *liang*).<sup>30</sup> In the commentary to the *Junxu zeli* it is said that in the Jinchuan precedents it was allowed to depreciate 80 per cent of the value of a horse.<sup>31</sup> The rest had to be paid by other means, either by the responsible official himself, or from the provincial treasury. Based on these data it can be assumed that one third of all horses died, which is 1,392. It was therefore possible to bring 10,440 *liang* to account for the lost horses of the transport and courier stations between Chengdu and the war theatre, and 20,280 *liang* for purchased horses to replace them. It is not clear if the latter were sold on the market after the war. They may also have been used in the garrisons for peacetime service.

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<sup>25</sup> *Pingding Liang Jinchuan fanglüe* 36, fol. 14a-14b (QL 37/7/jiazi); 72, fol. 3b (QL 38/8/jimao).

<sup>26</sup> *Pingding Liang Jinchuan fanglüe* 81, fol. 13a-15a (QL 38/11/jiaxu).

<sup>27</sup> *Jinchuan junxu li'an* 2, fol. 95a, 102a, 111a, 120a, 122b. Lai (1984), p. 333, gives the total number of 3,294 horses for the courier stations, with 1,383 animals being provided by the garrisons, and the rest being purchased.

<sup>28</sup> *Jinchuan junxu li'an* 2, fol. 186a.

<sup>29</sup> The same had been valid during the Djandui campaign.

<sup>30</sup> This method was nothing specific of the Qing period military regulations, but was a very old prescription dating from the old kingdom of Qin empire (221-206 B.C.), as can be seen in the Shuihudi 睡虎地 bamboo slips, *Qinlü shiba zhong* 秦律十八種: *Jiuyuan lü* 廩苑律.

<sup>31</sup> *Hubu junxu zeli* 9, fol. 9a.

For each horse a daily amount of 0.6 *liang* was allowed to purchase fodder and hay (*gancao* 乾草). One groom (*mafu* 馬夫) or guide (*qianfu* 牽夫) had to look after two horses and was given a daily pay of 0.048 *liang*, except in a few places like Dajianlu, Dapengba 大烹壩 (fodder 0.12 *liang*, groom 0.096 *liang*) and some other stations in the country of Mingdjeng, which is described as ‘remote and barren’ (*manhuang* 蠻荒: Linkou 林口, Hualinping 化林坪, Ludingqiao, Židi (Gyidi?) 日[=吉]地, Shencun 沈村, Liuyang[tang] 柳楊塘; fodder 0.08 *liang*, groom 0.05 *liang*). On the western route the daily pay for horses and grooms was raised to the level of the southern route in QL 38/7 (Aug – Sep 1773). Hitherto, the daily pay was given according to the precedents of the first Jinchuan campaign, which proved to be insufficient under the actual conditions, i. e. the market prices for fodder and food were higher than some 30 years earlier. For the stations outside the country, the conditions were as follows: For each horse a daily pay of 0.02 *liang* was given and 5 *sheng* (5.2 litres) of beans (or rice, if beans were not at hand), and a monthly pay of 2 *liang* for grooms. In the precedents of the first Jinchuan campaign, grooms were also given a daily ration of 1 *sheng* of rice (about 1 litre). Other figures speak of 4 *sheng* of rice as fodder, with a daily expenditure of more than 0.6 *liang*.<sup>32</sup>

Outside the country it was common that horses had to be put out to pasture or to be given fresh grass instead of dried beans. This method would lower expenditure substantially. During the second Jinchuan campaign, the grooms (or the personal assistants of the soldiers) were to make fodder by themselves, a task consuming much time and labour, for which reason during the first Jinchuan campaign each station had two native cutters (*manfu* 蠻夫 ‘barbarian labourers’), who were given a daily ration of 1 *sheng* of flour and 0.8 *liang* (here: weight measure, corresponding to about 30 g) of tea leaves, as well as a monthly supply of lamb meat worth 0.05 *liang*. During the second Jinchuan campaign those cutters were not made use of any more.<sup>33</sup> Grass was normally cut by the private assistants (*genyi*) of the troops.

With more troops coming in the number of horses kept ready in the courier stations also rose considerably. The costs for the courier stations inside the country, which were permanent institutions, had to be defrayed from the regular land tax income of the particular districts. Because of the growing costs for maintenance the emperor granted a three months’ respite for the payment of tax, which meant it only had to be paid in the next spring. The costs for the fodder of the horses in the courier stations on the western and southern routes would be defrayed from the war chest (for horses hired or bought), and partially from the ‘fodder fund’

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<sup>32</sup> *Jinchuan dang* QL 40/III/00029 (QL 49/7/12).

<sup>33</sup> *Jinchuan junxu li’an* 2, fol. 85a.



of the garrison from which the horses were borrowed (*caoliaoyin* 草料銀). The money from the war chest was obviously paid out to the courier stations in three-month intervals. In contrast to beans, it was stressed, the hay had to be procured from the area around the stations and was not to be bought on the market.<sup>34</sup>

Apart from fodder the horses also needed bridle, tack and harness (*longjiang* 籠韉, also written {竹/彊}, *mazhang* 馬掌), for which a monthly amount of 0.34 to 0.446 *liang* was to be provided.<sup>35</sup> This statement in the Jinchuan precedents is probably an error, as there is no reason why this equipment should be replaced each month. It is rather more reasonable that this is a one-time or annual expense, yet the regulations for mules from Shaanxi calculate with similar logic:<sup>36</sup> Each courier station had to provide money for the animals to the tune of 0.003944 (*sic!*) *liang* daily. There is no statement exactly what purpose this was used for. The exact character of the number (broken down to a ten thousandth part of a *fen*) is the result of a calculation (1.42 : 360), which includes items like the building materials for stabling, fodder, probably a sickle to cut fodder, the required labour costs, and the costs to replace deteriorated materials. In other words, each horse was expected to cost annually a sum of no more than 1.42 *liang* for manger (*cao* 槽) and other various items,<sup>37</sup> according to the precedents for courier stations in Sichuan.<sup>38</sup> In the part of the regulations dealing with the Shaanxi mules, at least saddles are mentioned, which surprisingly played no part in the regulations for the stations of the logistics routes. For transporting objects, pack-saddles (*anti* 鞍屨) and ropes were necessary. A pack-frame (*tuojia* 馱架) cost 0.05 *liang* a piece, the hemp ropes for lashing (*jiasheng* 架繩) were measured by weight (8 *liang* of weight were necessary [300 g or 10.6 ounces]),<sup>39</sup> so that per *jin* of weight a cost of 0.03 *liang* was calculated. The equipment for those mules was relatively simple. Other statements concerning equipment for mules and animals which used a kind of pack-saddle at 0.6 to 0.8 *liang* per piece show that packing could also be much more expensive.<sup>40</sup> The pack-frame (*tuojia*) was surely a much simpler construction than a pack-saddle. A snaffle (*tiezhang* 鐵掌) had to cost no more than 0.0377 *liang*, and bridle and tack (*longjiang*) 0.0096 *liang* per piece and day (or 0.288 *liang* per

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<sup>34</sup> *Pingding Liang Jinchuan fanglüe* 39, fol. 16a-17a (QL 37/10/wuchen).

<sup>35</sup> *Jinchuan junxu li'an* 2, fol. 86a.

<sup>36</sup> *Jinchuan junxu li'an* 2, fol. 80a-81a.

<sup>37</sup> For more information of such equipment, see (Jiaqing 20) *Gongbu zeli* 95.

<sup>38</sup> *Jinchuan junxu li'an* 2, fol. 85b. There is a character written {金+算+卩}, which could be a popular variant for *lian* 鎌 (sickle).

<sup>39</sup> Yarn is, also in the West, measured by weight instead by length (modern international unit: tex), because of a different thickness of the material. The same is true for paper. For more information about the production and cost and materials of saddles, see also (Jiaqing 22) *Gongbu xuzeng zeli* 56.

<sup>40</sup> *Jinchuan junxu li'an* 2, fol. 31a; 2, fol. 56b.

month), which is a little bit less than the sum of 0.3 to 0.4 *liang* for the same item as stated above. According to the old precedents from the first Jinchuan war, two common soldiers were to serve when no horses were available or could not be used, who were given instead a compensation for transport horse and saddle (*anti*) of 8.6 *liang*, which means that the saddle was likewise rated at a price of 0.6 *liang*.<sup>41</sup>

In all logistics and courier stations between Chengdu and the war theatre, 4,187 horses had delivered 10,558 horse-months, when carefully considering the period of time that each of the stations was active. Those horses consumed fodder with a value of 6,334 *liang*, when neglecting the stations inside the country, for which a much higher daily price for fodder had to be paid, while outside the country, fodder was practically for free, at least in theory. In practice, it was quite difficult to put horses to pasture in the narrow valleys of the Jinchuan region, particularly in winter. The 2,093 grooms had to be paid 21,116 *liang*. For the horse equipment, about 4,223 *liang* had to be paid. These calculations lead to a theoretical total of 61,817 *liang*, to which some other items have to be added, like saddles, which might have cost several *liang* per piece, horseshoes, blankets, currycombs, and the costs for veterinaries. As one vet had to care for the horses of six stations, about 60 were needed for the 350 stations. Each of them received a family allowance of 3 *liang*, a monthly pay of 2 *liang*, and a daily ration of 1 *sheng* of rice (compare Chapter 3.3.). If all veterinaries worked for the whole period of the war (59 months), they should theoretically have cost 7,281 *liang*. Ten horses were to be kept inside a shed (*mapeng* 馬棚), which was erected by twelve persons. Yet as the people recruited to do this work came from among the ordinary station labourers and were paid according to the regulations for those, and because timber was not allowed to be brought to account, the only costs for such a stable or shed were probably the nails.

At the end of the war, when all troops were sent back home and the logistics stations were dissolved, the same procedure was used for the courier stations, of which a few were kept intact for a few more months. The horses of the stations dissolved were distributed to the courier stations still in use and then gradually led back, re-entering the province of Sichuan.<sup>42</sup>

Part of the question of the cost for horses during the war can be solved when looking at the final account in the *Jinchuan junxu li'an*: During the war the Qing troops and their supporters in logistics had made use of 2,535 horses purchased on the market and 1,500 borrowed from the garrisons. According to the official price of 8 *liang* per animal, the purchase of transport and courier horses must have cost 20,280 *liang*. All dead horses were replaced by purchased

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<sup>41</sup> *Pingding Liang Jinchuan fanglüe* 31, fol. 21a (QL 37/6/gengchen).

<sup>42</sup> *Pingding Liang Jinchuan fanglüe* 92, fol. 10a-10b (QL 39/3/xinwei); 134, fol. 8b (QL 41/3/jiachen).

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horses as soon as possible. Unfortunately the final account does not record the figure of dead horses. Inside the country (*kounei*) 1,437 horses were ‘stabled’ (*an 安*), on the western route (presumably outside the country) the figure was 1,315, on the southern route 1,066, and on the northern route a mere 217, resulting in 1,598 horses in service outside the country (*kouwai*). Horses captured from the enemy or contributed by one of the allied native petty kings are not taken into consideration in this account. During a triumphant return all purchased horses had to be ‘converted into money’ to be brought to account (*bian jia gui kuan 變價歸款*), i. e. to be sold on the market.<sup>43</sup>

#### 4.2.2. Some More Regulations Concerning the Courier Service

Not all stations were equipped with horses, though. Mail was then transmitted by runners, who were to be given a daily pay of 0.08 *liang* and a ration of 1 *sheng* of rice. Natives were instead given a sum of 0.0046 *liang* to buy tea leaves and lamb with, which is about a third of the value of 1 *sheng* of rice (0.012 *liang*). Their daily ration was normally not rice, but flour, of which the Tibetans made *tsampa*; rice was only used when no flour was available. In the precedents of the Djandui campaign and the first Jinchuan war, one *jin* of tea leaves had to cost 0.06 *liang*. The Tibetan workers were given 0.024 *liang* monthly, and ten people were given one sheep (or 0.05 *liang* per person), which had to be divided among them, resulting in 0.0016 *liang* of cost per person and day. Urgent mail had to be delivered by military staff. Each station obtained a monthly allowance of 1 *liang* for candles and paper, which were used by the registrar on station service (*haoshu*), who was paid 2 *liang* monthly inside the country, but not given any rice rations. Outside the country, it is said, this post was filled by a Green Standard soldier (*Hanbing 漢兵*), who was paid his normal salt-and-vegetable pay. Yet the list of the stations shows that also in stations outside the country, the courier service was managed by *haoshu* staff. Inside the country, it was allowed to hire horses in case of need. Horse and owner were given 0.15 *liang* per day, on days of non-engagement only 0.08 *liang*. Horses from military garrisons had to be cared for by their staff, while horses purchased on the market were always cared for by hired grooms. Inside the country, grooms had to reach the nearest large station (*dazhan 大站*) within one day, which means that they were recruited from nearby villages. Each horse was fed with hay (*caoliao 草料*) worth 0.05 *liang*, and each groom—guiding two horses—was given a daily pay of 0.05 *liang*. Outside the country, two shorter stages (*xiaozhan*) had to be covered per day, and each horse was given a bundle of

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<sup>43</sup> *Jinchuan junxu li'an* 2, fol. 186a.

hay, worth 0.02 *liang*, and 3 *sheng* of beans, while the grooms were paid 0.08 *liang* daily and given 1 *sheng* of rice each.

The transmission of mail had to be registered carefully in each station on arrival, and when departing, the daily expenditures had to be brought to account. This means that there was indeed a high amount of red tape in the courier stations, which explains why a full 1 *liang* of money had to be spent monthly on stationery. The bureaucratic regulations even went so far that, when a message or document was written by a commander and he sent a soldier to take it to the next station, it was not allowed that the soldier was given any allowance for fodder in the courier station: Only non-military horses could be given an allowance for fodder in the stations. Only in very urgent cases, when a military *corvée* labourer (*bingchai* 兵差) had to deliver mail with horses from camps, he was to be given 0.06 *liang* for the horse, and 0.024 *liang* pay for his work (*fugong* 夫工).<sup>44</sup>

#### 4.2.3. Riding and Pack-horses for the Troops

The next item to be discussed are the horses taking soldiers and civilian staff to the war theatre. In the Jinchuan precedents, information about those horses can be found in the chapter about salt-and-vegetable pay.<sup>45</sup> The horses, just like the baggage pay, had to be financed by the home garrison, but the money could be advanced from the province, to which it had to be paid back in three-monthly instalments.<sup>46</sup>

Banner officers, it is said, were allowed to ride one horse, which was fed with one bundle of hay (*kongcao* 空草 ‘[water-]empty grass’) inside the country, one bundle being worth 0.015 *liang*. Outside the country, horses were to be put to pasture and there was no additional allowance for beans or hay. Fodder (*magan* 馬乾 ‘horse-dry’) brought along from the home garrison, could be brought to account.<sup>47</sup> The Green Standard troops from Guizhou, bringing along their riding horses, were allowed to feed them 3 *sheng* (3.1 litres) of beans and one bundle of grass (*zhongcao* 重草 ‘heavy grass’) per day, weighing 7 *jin* (about 4.2 kilos). Inside the country, this fodder could be bought with a sum of 0.015 *liang*, outside the country with 0.02 *liang*.<sup>48</sup> According to the rules for the courier stations, each horse was to be given 4 *sheng* of rice per day worth 0.04 *liang*. This meant that each horse cost more than 0.8 *liang*

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<sup>44</sup> *Jinchuan junxu li'an* 2, fol. 87a-87b.

<sup>45</sup> *Jinchuan junxu li'an* 2, fol. 31a-32a, 34b.

<sup>46</sup> *Pingding Liang Jinchuan fanglüe* 40, fol. 12b-13a (QL 37/10/bingzi).

<sup>47</sup> *Jinchuan junxu li'an* 2, fol. 25b.

<sup>48</sup> *Jinchuan junxu li'an* 2, fol. 29b.

per day.<sup>49</sup> One document in the official history of the second Jinchuan war says that outside the country the Capital Banner officers were given between 1 and 6 horses, depending on their official rank, and between 6 and 20 long-distance porters (*changfu*). Each common Banner soldier was allowed to ride one horse and was supported by three porters. The personal assistants (*genyi*) of both officers and common soldiers were compensated with a pay of 6 *liang* for their horse, which means that they walked. This money had to be enough to hire porters to carry luggage and equipment.<sup>50</sup>

Green Standard officers were, according to the later rules of the *Junxu zeli*, not given any additional transport horses (*tuoma* 馱馬, sometimes erroneously written 駝馬). Soldiers were given one transport horse for two persons and personal assistants one horse for three persons. Each horse was equipped with a pack-saddle (*anti*), for which only 0.65 *liang* could be brought to account. In the precipitous terrain of Jinchuan, where it was not possible to use horses, porters had to carry the luggage, with 80 people carrying the equipment of 100 soldiers. If there were supplementary soldiers (*yuding*) in the unit—with an average figure of 30 supplementary troops for 100 regular troops—only 50 porters could be hired, and the supplementary troops had to carry the baggage. The horses of the personal assistants were to be replaced with a ratio of three porters for two horses, or one porter for two personal assistants.<sup>51</sup> These proportions are of great help to assess the weight of the load which the horses had to carry: As is known, one porter could be loaded with up to 50 *jin* (29.8 kilos), which means that one horse did not carry more than 75 *jin* (44.8 kilos) in normal terrain, in other words, 1.5 or 1.6 people carried the same load as one horse or mule. Yet there are also other relevant figures for the load of a horse, as will be seen below.

The Banner troops were much better off than the Green Standard troops. The Jinchuan precedents as recorded in the *Jinchuan junxu li'an*, as well as later the *Junxu zeli*, give detailed instructions as to how many riding horses and camels a Banner officer was allowed to have at his disposal. Yet these instructions are derived from the western campaigns, during which it was possible to make use of camels. Where camels could not be used or were not available, one camel could be replaced by two horses. In the beginning of the Jinchuan campaign, the character 駝 ‘camel’ in the precedence documents was interpreted as 馱 ‘transport horse’, for which reason the number of animals was not sufficient (only one horse instead of two horses replacing one camel). The same problem occurred for the transport of silver, when horses were replaced by mules, which are not able to carry the same load.<sup>52</sup>

rank	horses	camels (=horses)
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<sup>49</sup> *Pingding Liang Jinchuan fanglüe* 120, fol. 21b-22a (QL 40/7/dingsi).

<sup>50</sup> *Pingding Liang Jinchuan fanglüe* 67, fol. 4a-14b (QL 38/7/wushen).

<sup>51</sup> *Jinchuan junxu li'an* 2, fol. 31a.

<sup>52</sup> *Jinchuan junxu li'an* 2, fol. 31b-32a.

<i>jiangjun</i>	20	5 (10)
<i>fujiangjun</i> , Mongolian Prince	18	4 (8)
<i>canzan</i> , <i>dutong</i> , <i>tongling</i> , Mongolian <i>jun</i> Prince	16	4 (8)
<i>hujun tongling</i> , <i>fudutong</i> , Princeling ( <i>beizi</i> )	13	3 (6)
Mongolian <i>beile</i>	15	3 (6)
<i>zongguan</i> , <i>baturu lingbing shiwei</i>	12	2 (4)
<i>shidu</i> , <i>daxueshi</i> , <i>yingzong</i> , Mongolian Earl ( <i>gong</i> )	11	2 (4)
<i>hujun canling</i> , <i>toudeng shiwei</i> , <i>kongling baturu</i>	10	2 (4)
<i>fucanling</i> , <i>siguan galanda</i> , <i>fangyu</i> , <i>zhongshu</i> , <i>er-</i> , <i>sandeng shiwei</i> , <i>zuoling</i> , Mongolian <i>xieling taiji</i>	8	2 (4)
<i>jiyanggin</i>	6	2 (4)
<i>lanling qianfengxiao</i> , <i>hunjunxiao</i> , <i>bithesi</i> , <i>xiaojixiao</i> , imperial physician ( <i>yiguan</i> )	8 (s. l. 6)	1(2)
<i>xiansan daiyiji</i> , Mongolian <i>canling</i>	4	1 (2)
hired employees of government agencies ( <i>gongshi</i> )	2	--
Mongolian <i>xiaojixiao</i> , soldier <sup>a)</sup>	3,1/3	--
personal assistants ( <i>genyi</i> )	2/5	--

□ 4.1 Table: Riding and transport horses for Banner troops according to the Jinchuan junxu li'an

<sup>a)</sup> Three riding horses and one pack-horse for three. Likewise below: two pack-horses for five.

The interesting aspect of this listing is, compared to the *Junxu zeli*,<sup>53</sup> that civilian officials as well as (mostly Capital) Banner troops and non-Banner Mongolian troops are mixed together. This can have two reasons: Firstly, this list is a condensed listing of the regulations for Capital civilian officials, of Banner troops, and of non-Banner Mongolian troops. Secondly, the bureaucratisation during the western campaigns was not yet as thoroughly sophisticated as later, during the second Jinchuan campaign. The rich comments on this chapter of the *Junxu zeli* show that it was really necessary to fix exact regulations for each different official rank in order to reflect the status of the officers by the number of riding horses and pack-animals they were allowed to bring to account during a campaign, but also to prevent lower officers from bringing to account more riding horses than necessary. Neither the precedents of the western campaigns nor that of the Myanmar or the Jinchuan campaigns contain any regulations for Capital and north-eastern Banner troops, nor for native auxiliary troops. In contrast to the short Table 4.1, the *Junxu zeli* contains eight sub-chapters about transport horses for staff of each kind, which shows that bureaucratization had increased after the second Jinchuan campaign. The aim of these detailed regulations was to make it impossible to claim costs for superfluous transport or riding animals. For the Mongolian troops and the Capital Banner troops, the figures in the *Junxu zeli* are the same as in Table 4.1. The only missing part are the provincial Banner troops who on average were given one to two riding and pack-animals less than their colleagues in the Capital. All those horses were apparently hired on the market or bought, while the Green Standard officers had to use horses from their garrisons. Only 'corporals' (*waiwei*) and common soldiers were allowed to use extra pack-animals. The respective regulations in the *Junxu zeli* are based on the Jinchuan precedents, likewise the

<sup>53</sup> *Hubu junxu zeli* 4.

ratios for porters carrying the baggage in mountainous terrain. The equipment was to be carried by hired porters from the logistics stations, which were given a daily pay of 0.05 *liang*, but no rice rations. During the second Jinchuan campaign it was ordered from the beginning that all military equipment, as well as the bulky equipment of professional specialists, like physicians and painters/map drawers, was carried by porters, and not by horses or carts, at least from wherever the terrain became difficult.

The number of horses needed for transport can be assessed by one example: During the triumphant return (*kaixuan* 凱旋) of the troops in QL 41/1 (Feb – Mar 1776) 3,500 horses served to guide the troops from Chengdu back to Guangyuan at the border to Shaanxi, of which more than 1,000 were hired from private owners. For the transport of grain and military equipment, the province of Sichuan provided 2,000 horses and mules, and more than 7,000 animals were hired from owners in Shaanxi, and from the Yongchang garrison in Yunnan some 1,000 horses and mules which had been left over from the Myanmar campaign.<sup>54</sup> 2,000 other ‘stout’ horses (*zhuangjian ma* 壯健馬) came from garrisons in the province of Gansu, and 4,000 from Shaanxi, which were sent out to support the transport of military equipment along the plank road viaducts.<sup>55</sup> At the beginning of the campaign horses and mules had been collected from garrisons and had been bought on the market, ‘at a favourable price, and easy to get’ (*yi jian er yi de* 亦賤而易得).<sup>56</sup>

The last calculation involving persons will evaluate how much money had to be spent on the horses taking troops to the front and back. It shall be assumed that each type of troop made use of the exact number of horses as prescribed in the *Junxu zeli* regulations and that only horses were hired and not carts or porters. The average daily price for a horse was 0.2 *liang*, which is the value fixed in the *Junxu zeli* regulations,<sup>57</sup> yet only for days in service. When the owner of the horse was travelling from his home to the courier station and was waiting for the troops to arrive as well as on his way back home (days of non-engagement, *kongjian* or *konghui*), he was only given 0.01 *liang*, according to the precedents of the provinces Yunnan, Hubei, Hunan and Guizhou. In Sichuan, the price was lower: 0.08 *liang* on days of non-engagement, and 0.15 *liang* during days of service. In other provinces, like Henan, Shaanxi, Gansu, and Shanxi, the pay for the horse owner was higher but calculated according to 100 *li* (about 48 km) of way, and not per day. Assuming that a horse owner had to serve one day and that travelling and waiting took him four days, the costs for renting one horse (and actually

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<sup>54</sup> Figures from Lai (1984), p. 333.

<sup>55</sup> *Pingding Liang Jinchuan fanglüe* 67, fol. 6b-7a (QL 38/7/yisi).

<sup>56</sup> *Pingding Liang Jinchuan fanglüe* 13, fol. 26a (QL 36/12/gengyin).

<sup>57</sup> *Bingbu junxu zeli* 2, fol. 2b-3b.

one day of movement) accrued to 0.6 *liang*. For the duration of travelling from the home garrisons to Jinchuan, see Table 3.35.

The costs accruing for the transport of the Green Standard troops to the front, was therefore theoretically 1,730,389 *liang*, the biggest item being the large contingents from Shaanxi and Gansu with more than half a million *liang*. This sum does not include any costs for the horses of the Green Standard officers (except the ‘corporals’, *waiwei*) who had to care for their own horses. The costs for renting horses for all types of Banner troops theoretically accrued to 2,807,057 *liang*, a high sum, which does not only result from the long distances the Capital and northeastern Banner troops had to cover, but also from the right of the Banner officers to deduct the costs for renting horses from their expenditure.

According to the newly issued regulations of the *Junxu zeli*, native auxiliary troops were only allowed to bring to account riding and transport horses when dispatched to another province, which was not the case in the Jinchuan war. The costs for hiring horses to take the troops and their equipment to the war theatre and back therefore accrued to theoretically 4,537,446 *liang*. This sum is definitely too high, as it includes all kinds of troops, while it is known that at least some of the troops from Yunnan, Guizhou, Hunan and Hubei travelled part of the way by boat, which was much cheaper than hiring horses. Hiring a cart was also cheaper than hiring horses. Yet there were also some stretches of the way which could neither be covered by carts nor by horses, especially the viaducts in Shaanxi. The most erroneous assumption in this case is that all horses needed were hired. The documents show that a considerable part of the transport horses were provided by garrisons throughout the provinces, for example, more than two thirds of the horses needed in the province of Sichuan to take back the soldiers in QL 41 (1776), so that the costs for hiring horses to take the troops back to their home garrisons could probably have been as high as about one million *liang*.

A few more details about pack animals, their work, and how they were organised, can be found in documents. One soldier on average had to carry a load of thirty to forty *jin* (about 18 to 24 kilos), of which gunpowder, 200 bullets, fuses, his musket, and dagger already counted for more than 30 *jin*, plus rations for ten days (each day one *sheng* of rice, which corresponds to 1035 ml, with a total weight of about 9.5 kilos), which was itself more than 10 *jin*. The official history of the second Jinchuan war even provides an exact relation of 8 *jin* of weight (4.8 kilos) for a volume of 5 *sheng* (5.2 litres) of rice.<sup>58</sup> When adding tent and cooking woks to that weight, the burden for each individual soldier was probably more than 30 kilos.

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<sup>58</sup> *Pingding Liang Jinchuan fanglüe* 85, fol. 7b-8a (39/1/jiwei); 86, fol. 20a-20b (QL 39/1/re Shen).



Because a very high number of troops were sent to Sichuan at the same time also an extremely high amount of beasts of burden had to be organised for the transport of military equipment. According to the later regulations for war expenditure in the *Junxu zeli* the responsible magistrate through whose district the troops would pass had to check if any pack animals or were carts left in the courier stations or elsewhere in government-owned institutions before hiring vehicles and animals from the population.<sup>59</sup> If carts were hired, the owners were not only paid per day of work, but also according to weight. Per 130 *jin* of load the cart owners were to be paid 0.15 *liang* inside the country, 0.4 *liang* outside the country. It is not very clear from the respective commentaries to the *Junxu zeli* where the unit of 130 *jin* (about 78 kilos) comes from, but because there was apparently no discussion in the Ministry about this odd-numbered unit it must be assumed that all precedences had been calculating with that figure for a long time. Possibly this figure had since long ago been taken as the official load a pack animal was able to carry, and to facilitate calculation was also used when paying a cart owner. This is actually not very strange because in many instances equipment was reloaded from a mule to a cart and vice versa. The size of the carts transporting military equipment was of course very different and it therefore seemed to be the best mode to pay the cart owners per weight and not per cartload.<sup>60</sup> A large cart pulled by two horses could carry a higher load than a small cart with only one draft animal. But the two horses of the large cart would consume twice as much fodder as a single beast would do, and—as the respective commentary in the *Junxu zeli* suggests—the pay for the cart owner had to cover the fodder for the draft animals.

Large numbers of pack animals were often hired, like the many thousand mules from Shaanxi.<sup>61</sup> The reason for hiring mules instead of employing porters was that while two porters would be able to carry 5 *dou* of rice (52 litres), one single beast of burden would carry up to one *dan* (which is 10 *dou* and weighs about 160 *jin* [95 kilos]); and while the porters would only be able to cover the distance from one logistics station to the next per day, a mule could cover twice or three times that distance. Instead of relaying the load from station to station it proved to be much better to provide mules which covered a long distance without being exchanged ('long-distance mules', *changluo*, or 'long-distance horses', *changma* 長馬). They could either be bought or rented from private owners (called *minma* 民馬 'horses from

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<sup>59</sup> *Hubu junxu zeli* 5, fol. 2b-3b.

<sup>60</sup> This is different from the custom to discern between the two categories of 'larger' and 'smaller' boats and rooms when prescribing the war expenditure rules for hiring boats and quarters for officers. *Hubu junxu zeli* 5, fol. 5b-6a; 9, fol. 7b-8a; *Bingbu junxu zeli* 1, fol. 2a-7a.

<sup>61</sup> *Pingding Liang Jinchuan fangliie* 37, fol. 13b (QL 37/8/gengchen).

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the people'). Even when hiring or buying mules, this kind of transport was cheaper than employing porters and probably easier to handle.<sup>62</sup>

When hiring mules it could be difficult when the beasts had to be rendered back to their owners. Each animal was therefore marked with a small wooden plate probably hanging from its neck, indicating the name of the soldier(s) whose equipment the beasts were bearing, and the name of the owner (*luofu* 騾夫).<sup>63</sup> After delivering the silver from the Capital (*jingxiang* 京餉; originally being the fund for officials' salaries) 2,500 mules from Shaanxi were to be given back to their owners. There were also some 2,000 to 3,000 mules hired in various districts in the province of Sichuan because the harvest period had just begun, which would make it impossible to recruit porters from among the peasantry.<sup>64</sup> In order to cover the long distances of the western branch of the southern route which led through the territory of the kings of Mingdjeng, Chosgyab, and so on, the logistics officials hired or bought local beasts (*ula*) to carry rice and equipment. This type of horse or mule was mainly used for long distance transport (*changyun*). Only in case of urgency the long distance transport would be supplemented by relay transport from station to station (*anzhan gunyun* 按站滾運), either by persons (*fuyun* 夫運) or by mules (*luoyun* 騾運).<sup>65</sup>

For the mules rented from Shaanxi the *Jinchuan junxu li'an* contains special regulations. The animals were daily to be given 10 *jin* of hay, one Capital *sheng* (*jingsheng* 京升) of beans (*liaodou* 料豆) and two Capital *sheng* of bran (*maifu* 麥麩), which was all to be provided from the day the trek left its home district. As long as it was still in Shaanxi, this province had to advance the expense. When entering the territory of Sichuan, the latter province advanced the cost for the fodder which was now slightly changed: In Sichuan each animal was daily given 2 *sheng* of beans and 2 *sheng* of bran. The government had prescribed by what prices the fodder had to be brought to account: 0.75 *liang* for one *dan* of beans, but no more than 0.8 *liang*, while the fixed price for bran was 0.3 to 0.4 *liang* per *dan*. One bundle of hay could cost no more than 0.0015 *liang*. The animals had to be cared for in order to keep them in good condition, and therefore in each logistics station the mules were to be kept in a stable (*pengchang* 棚廠) over night.<sup>66</sup>

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<sup>62</sup> *Pingding Liang Jinchuan fanglüe* 37, fol. 17a-17b (QL 37/8/wuzi).

<sup>63</sup> *Pingding Liang Jinchuan fanglüe* 69, fol. 19a-19b (QL 38/7/gengshen).

<sup>64</sup> *Pingding Liang Jinchuan fanglüe* 105, fol. 8a-9b (QL 39/9/jiazi).

<sup>65</sup> *Pingding Liang Jinchuan fanglüe* 106, fol. 9a-11a (QL 39/9/xinwei).

<sup>66</sup> *Jinchuan junxu li'an* 2, fol. 80a-81a.

#### 4.2.4. Regulations for the Triumphant Return by Horse and by Boat

The *Junxu zeli* does not prescribe any particular regulations for the triumphant return (*kaixuan*) of the troops. Contrary to this situation, the Jinchuan regulations contain a lot of particular rules for the troops returning home, beginning with the luggage for each officer returning home by waterway, to the horses which were to be provided to the troops when returning home or hastening to the Capital (see Map 3.53).<sup>67</sup> The reason for regulations was not that the triumphant return played an important part for the troops (which it indeed did for the government when the Capital troops brought home the war-prisoners and the Banner units paraded before the emperor), but that the troops would travel back to their home garrisons as fast and inexpensively as possible. Only upon arrival of troops in their home garrison the government ceased to pay the expensive salt-and-vegetable money. The Ministry of Revenue was certainly not willing to spend more than really necessary on the transport horses of the victorious troops. It was even prescribed that an officer was not to take with him more than 100 *jin* (about 60 kilos) of luggage, a soldier a maximum of 25 *jin* (about 15 kilos) when travelling by boat, similar to the restrictions we know today from air travel. What happened if someone wanted to take more with him, is clear—while the Ministry of Revenue was willing to pay the transport fee for the above-mentioned amount of luggage (100 resp. 25 *jin*), the owner had to bear the transport cost for excess.<sup>68</sup>

The Banner troops (except those of Chengdu) and the civilian officials from the Capital were allowed to use the number of horses according to the precedents of the western campaigns (Table 4.1) and each day covered a distance of 2 courier stations. Troops to be received by the emperor in person in the Capital could ride one horse and were given 0.2 *liang* daily to support it. Troops returning home were aided by two porters and took with them the necessary amount of salt-and-vegetable pay before reaching Chengdu.

All troops to be welcomed by the emperor were given money to hire riding horses and pack-animals, while the troops directly returning home were not given any pay for riding horses, and it was not allowed to provide them with any pay to hire pack-horses or porters, but the commander had to organise porters for his troops. Troops from the Capital and those participating in the official welcome were given tallies (*kanhe* 勘合) to be presented at the courier stations and were paid 0.1 or 0.2 *qian* per day and 0.05 *qian* for each personal assistant. This pay was to be advanced from the Sichuan government for the way to the border of Sichuan (eleven days). The horses for the troops had to be prepared by the courier stations,

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<sup>67</sup> *Jinchuan junxu li'an* 2, fol. 34b-36a, 72a-72b.

<sup>68</sup> *Jinchuan junxu li'an* 2, fol. 35b, 72b.

and only if this source was depleted, private horses were hired. The salt-and-vegetable pay for the Banner troops likewise had to be advanced by the province of Sichuan. Troops having pack-animals but no riding horses at their disposal, were to use the pack-horses for riding and were given porters to transport their luggage, the latter being recruited from the courier stations. Only if no station porters were available new people were hired from among the population. The few Banner troops staying in the Jinchuan area and only returning later were not allowed to be paid any additional porters or horses and were not given salt-and-vegetable pay (as the war was over then), but had to return to their home garrison as fast as possible.

Each officer was only allowed one riding-horse. If this horse was hired, it had to cost no more than 0.15 *qian* per day, horses for ordinary soldiers no more than 0.1 *liang*. If soldiers and personal assistants wanted to exchange a riding horse for money, they were given 0.2 *liang*, for a prescribed pack-horse 0.1 *liang*.

For the Chengdu Banner troops, the salt-and-vegetable pay for ten days of travel had to be advanced by the camp the troops were leaving. Each day two smaller stations (*xiaozhan*) were to be covered, and each person was given a ration of 1 *sheng* of rice daily. Only troops with heavy equipment like cannons were allowed to hire additional porters. Some few higher generals were ordered to travel to the Capital to be received by the emperor.

Green Standard troops were paid salt-and-vegetable pay and were given daily rations on their way from the camps to Chengdu. After passing the border to Sichuan province, both were halved, except for the personal assistants. Higher officers were not given any rations, officers of *qianzong* rank and lower received a daily pay of 0.01 *liang*. Outside the country, which means, still within the mountains, a daily distance of 2 to 3 stations had to be covered. Officers and personal assistants with no horses or porters at their disposal could hire a porter at 0.05 *fen* a day. From Baxian 巴縣 (Chongqing) on the troops from Hubei and Hunan, as well as those from the Capital and the northeast, travelled by boat. The regulations for the Green Standard troops of each province were different, depending on their place of origin, as shown when discussing the deployment of the troops in Chapter 3.1. The troops of Guizhou and Yunnan were assisted by 50 porters for every 100 men, and only officers of *shoubei* rank and higher were not given salt-and-vegetable pay. From Chengdu, those troops marched to Leshan, from where the troops travelled by boat via Naxi 納谿 and Bijie 畢節. Soldiers from Shaanxi and Gansu were given 1.1 *liang* daily inside the country, *waiwei* officers only 0.9 *liang*. Each person could hire a transport animal—porters were not allowed. The troops of these two provinces travelled exclusively overland, the Shaanxi troops via Guanyuan at the

border between Sichuan and Shaanxi, and the Gansu troops via the Chaimen Pass 柴門關 in Longan prefecture.<sup>69</sup>

The regulations for water travel were similar to those for overland travel: both had to be carried out as fast as possible, for which purpose tallies were given which marked these troops as fast-travellers. From Chengdu to Baxian, ten riverine stations were called at, from Baxian to the border of Sichuan to Hubei, seven more stations. For each of those two stages the necessary money had to be provided, first in Chengdu, and then in Baxian. Officers of rank 6 and higher were allowed to rent their own boat, officers of rank lower than 6 had to share one boat for two people. Soldiers and personal assistants travelled with 7 to 8 persons per boat.

The main means to ensure a speedy travel during the triumphant return were three: firstly, tallies allowing the troops to be served faster in the courier stations. Secondly, the method to give them rations along with salt-and-vegetable pay in advance. For this purpose, the responsible officer calculated the amount of money and rice necessary to feed the troops between Chengdu and Guangyuan at the border to Shaanxi, and disbursed the required sum from the war chest. The comment on the *Jinchuan junxu li'an* regulations admits that there were many miscalculations during that time and therefore the responsible officers had to compensate any losses occurred through erroneous reckoning (overpay, *changzhi* 長支), and neighbouring provinces had to offset exactly the sums disbursed for each part of the way.<sup>70</sup> The third method was to halve the salt-and-vegetable pay which would automatically force the troops to speed up.

People wounded, or corpses taken back in the course of the triumphant return were paid the full sum as in the normal regulations for wounded taken back home.

In order to ensure a smooth procedure the preparations for the triumphant return began very early, just after the conquest of Le'uwé castle. It was determined along what routes which troops would return, how they were to be equipped with horses or compensated for not being able to use horses, and who would go to the Capital first.<sup>71</sup> Especially for the viaduct region in southern Shaanxi it was necessary to take precautions and to provide enough horses, mules, porters, fodder and rations. All in all, 70,000 troops had to be led back to their garrisons, while the number of the occupation forces was only determined later. The Yunnan and Guizhou troops would pass Dambadzung (i. e. Damba) and follow the central route to Yazhou where they boarded the boats for their return, as described above. The other 50,000 troops were to pass the western and northern routes. For the provisions outside the country (*kouwai*),

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<sup>69</sup> *Jinchuan junxu li'an* 2, fol. 34a-37b, 137a.

<sup>70</sup> *Jinchuan junxu li'an* 2, fol. 37b.

<sup>71</sup> *Jinchuan dang* QL 40/III/00273 (no date).

considerable quantities of rice had to be stored in the grain stations: 500 to 600 *dan* per station was estimated as sufficient.<sup>72</sup> Feeding the more than 10,000 Gansu troops marching through the barren northwestern prefectures of Sichuan would be quite expensive. Therefore it was—as far as possible—ordered that the grain stored in Maozhou should be used, amounting to 4,000 *dan* of rice and 8,400 *dan* of barley, as well as the 1,100 *dan* of rice from Songpan.<sup>73</sup> The rations for the barren regions in Gansu were to be advanced by the province of Sichuan and the respective sums later to be paid back by Gansu. For the troops from Shaanxi and Gansu 800 horses were estimated as sufficient for inside the province of Sichuan. But for the viaduct region of the Qinling range those would not be enough, so that 400 horses from the Xi'an garrison were to be sent, as well as 400 horses from Green Standard garrisons, to be equipped with riding saddles. A special envoy was dispatched to the border between Sichuan and Shaanxi to look after everything. For the stations inside Shaanxi 3,700 horses from Gansu had to be procured, 200 for each station, but only 100 per station in the viaduct region, as well as fodder, which was not easy to get there. Additionally, mules had to be hired to carry the luggage, and, where possible, carts. In the province of Shanxi 1,000 horses were considered to be sufficient, of which only 700 could be procured in the garrisons, while the rest had to be hired from private owners. For the latter, the owners had also to provide the fodder. The troops had to be divided into batches of 400 to 500 and to dwell in housings prepared well in advance.<sup>74</sup>

The first troops returning home after the surrender of Sonom were the expensive 1,400 Banner troops from Xi'an and the 1,700 Banner troops from Jingzhou, followed by the troops from Hunan and Guangzhou. It was first considered to make the Capital and northeastern troops return via Shaanxi because the way was much shorter. But the terrain in Henan was flat and there would be more horses and carts available.<sup>75</sup> For the high central government officials with their large entourage special provisions were to be made.

#### 4.2.5. War Horses

During the campaigns in Gansu and Dzungharia where the terrain is characterized by plains and grasslands, the use of cavalry quite naturally played a very important role in warfare. Yet in the mountains of Jinchuan horses could not be used at all so that the commanders abstained from using cavalry in battle, even if the elite Banner troops were cavalry units by definition,

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<sup>72</sup> *Jinchuan dang* QL 40/IV/00151-152 (QL 40/10/29).

<sup>73</sup> *Jinchuan dang* QL 40/IV/00249 (QL 40/12/3).

<sup>74</sup> *Jinchuan dang* QL 40/IV/00317-321 (QL 40/12/20).

<sup>75</sup> *Jinchuan dang* QL 41/I/00053 (QL 41/1/11), 00075-76 (QL 41/1/11), 00100 (QL 41/1/17).

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like the Scouting Brigade (*jianruiying*), or the vanguard companies (*qianfeng*). That cavalry units were virtually useless in the Jinchuan campaign had already been discussed during the first Jinchuan war when some members of the central government—not familiar with the extraordinary topographical conditions in Jinchuan—suggested using elite cavalry, with the consequence that in the second Jinchuan war nobody came up with the idea to deploy cavalry. There were only the horses used by officers for riding and the horses in the courier stations, and even for those animals it was not easy to graze in the narrow valleys of Jinchuan, and there was not enough grassland for foraging, so that it became essential to give the horses substitution fodder, one reason why beans played an important role among the foodstuff transported to Jinchuan. Hay was too bulky to be transported to the war area, although it constituted an integral part of the substitution feed for horses, mules and sheep when fresh grass was not available.

There was, nevertheless, at least one incident in which the Jinchuan enemy staged a cavalry attack on Qing units on QL 39/7/19 (Aug 25, 1774). The emperor therefore immediately ordered to provide 180 garrison horses to support the troops against hostile cavalry attacks. Yet the maintenance of those horses proved to be so expensive (with daily costs of 0.8 *liang* per animal) that it was soon decided to give up war horses.<sup>76</sup> There are several statements to be found in the documents which prove that the inhabitants of the native kingdoms of the west, like Derget, as well as the Jinchuan rebels, were in possession of horses and also rode horses during attacks.<sup>77</sup> Some of the natives more to the west were even more accustomed to riding than to walking, and therefore were of no great use when staging non-mounted attacks.<sup>78</sup> Horses were made use of by the imperial troops when trying to capture fleeing enemy chieftains, a matter of great importance for the future of Jinchuan, because the aim was to make it impossible for the Jinchuan barons and village heads to ever again rise against the Qing empire. For this purpose the generals had to buy horses for the Banner and Solun troops who had the task to catch all the enemy leaders.<sup>79</sup>

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<sup>76</sup> According to Lai (1984), p. 331.

<sup>77</sup> *Pingding Liang Jinchuan fanglüe* 59, fol. 5b-6a (QL 38/4/jiachen); 64, fol. 12a-12b (QL 38/6/bingchen); 100, fol. 7b-8a (QL 39/7/yiwei).

<sup>78</sup> *Pingding Liang Jinchuan fanglüe* 47, fol. 13a-14a (QL 38/1/jiawu).

<sup>79</sup> *Pingding Liang Jinchuan fanglüe* 100, fol. 8a-8b (QL 39/7/yiwei); 120, fol. 22a (QL 40/7/dingsi).

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### 4.3. Grain

#### 4.3.1. The Supply Lines

The *Jinchuan junxu li'an* contains a long list about the supply lines of grain within the province of Sichuan.<sup>80</sup> All districts which supplied rice to the army are listed and it is described along what routes the grain could be transported from the granaries in the prefectures and districts to the war theatre. From this list it can be seen that from all the important grain-producing regions rice was shipped to Chengdu, Guanxian and Yazhou. From some places in the north grain was also directly shipped to Dzagunao on the northern route (see Map 4.2). For the southern route, the grain was directly shipped to Yazhou, and not on to Chengdu. Along many routes it was possible to transport the grain by either waterway or overland (along the Minjiang 岷江, Tuojiang 沱江 and Dadu 大渡 rivers), and from a certain level of cost—or urgency—on it became more convenient or less expensive to transport it by road instead of by boat, especially when it came from the northeastern prefectures in Sichuan (with the districts of Yilong 儀隴, Yingshan 營山, Quxian 渠縣 and Dazhu 大竹). The rice originating from those prefectures therefore was not transported downstream along the Jialing 嘉陵 and Qujiang 渠江 rivers and then the Yangtse river up to Luzhou and Yibin 宜賓 from where it could be shipped upriver again to Chengdu and Yazhou. Instead, the grain was taken overland to Chengdu directly, from where it was shipped on to the transport bases in Yazhou (and on to Dajianlu) or Guanxian. From the transport bases in Guanxian, Dzagunao and Dajianlu the rice was transported along the logistics routes to the camps (to be consumed by the troops) and to the logistics stations (to be consumed by the porters working there). The logistics stations were therefore also called *liangzhan* 糧站 ‘grain stations’.

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<sup>80</sup> *Jinchuan junxu li'an* 2, fol. 123a-137a.





4.2 Map: The origin of grain shipped to Jinchuan and the respective traffic route.

Waterways in dotted lines, roads in solid lines; the dashed line to the left is the pre-1771 western border of Sichuan province, Jinchuan lying beyond the border.

Source: *Jinchuan junxu li'an* 2, fol. 123a-137a.

The modes of transport and the transport prices have already been discussed in detail above, thus here the consumption of rice and other grain (mainly flour and beans)<sup>81</sup> and the price for them will be focussed on.

### 4.3.2. The Origin of Rice and Other Grain

There are three sources explaining where the grain came from: the first one is the listing of shipment routes from the prefectures of origin in the province of Sichuan, as described above. The second source are statements in official documents which give evidence that all rice originated in the province of Sichuan. The third source are data about the rice kept in the provincial granary in Chengdu, collected by Pierre-Étienne Will and R. Bin Wong.

The routes describing the shipment of rice from the Sichuan prefectures to the war zone as seen in Map 4.2 may only have covered part of the grain transported to the camps in Jinchuan,

<sup>81</sup> According to Chinese classification beans belong to the ‘five grains’ (*wugu* 五穀: rice *dao* 稻, panicked millet *ji* 稷, glutinous millet *shu* 黍, wheat *mai* 麥, beans *dou* 豆).

while other quantities of rice transported from other provinces, like Hubei or Hunan, have been neglected in this listing.

Yet documents show that no rice was brought in from other provinces to feed the troops in Jinchuan. One document clearly states that Sichuan had produced enough rice over the last years so that there should have been absolutely no problem to obtain rice in the district granaries near Chengdu.<sup>82</sup> Because the harvest in the middle and lower Yangtse provinces had been excellent and those densely populated regions were not in need of grain supports from Sichuan. The emperor therefore strictly forbade exporting rice to other provinces, except for small-scale border trade from the prefecture of Kuizhou.<sup>83</sup> This measure would also help to stabilize the grain price in Sichuan. This export ban was only lifted after the fall of Le'uwé.<sup>84</sup>

Although it is known from the regulations and from documents that the Banner troops were better nourished than their colleagues from the Green Standard units because of their higher salt-and-vegetable pay, the quantities of rice were the same for both of them.<sup>85</sup> There also seemed to have been enough rice in the camps, and only when some units were cut off from their supplies by the enemy, or when at the beginning of the war the logistics routes were not yet fully established, soldiers, especially in winter, suffered from hunger. In one case, when rice was not sufficient, the responsible official only distributed half the ration due (0.401 *sheng* instead of 0.83 *sheng*), while the rest was paid out in 4 *fen* of silver, which at that time only sufficed to buy one single bun (*bobo* 餠餠). This procedure was an open violation of the common rules (*bu dei qiang wei zhe ji* 不得强為折給 'it is not allowed to force them to accept [silver] instead [of rice]'):<sup>86</sup> Never before had troops been obliged to accept money instead of their daily rations, a procedure only permissible when regular number of posts of private assistants in the garrisons were left vacant (*kongming* 空名), or for surplus military labourers. The responsible official accordingly received his sentence.<sup>87</sup>

That the governmental regulations for expenditure and for rice rations were based on a reasonable calculation and did not just follow the simple objective of saving money becomes clear when looking at one case where it was revealed that soldiers tried to eat less rice and to sell what rice they had saved to merchants or to the logistics stations. This came to light when

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<sup>82</sup> *Qingshilu: Gaozong shilu* 938, fol. 30b-32a (QL 38/7/yichou).

<sup>83</sup> *Jinchuan dang* 38/III/00045 (QL 38/7/8), 00059 (QL 38/7/9).

<sup>84</sup> *Jinchuan dang* QL 40/IV/00115-116 (QL 40/10/25).

<sup>85</sup> *Jinchuan dang* QL 38/IV/00061 (QL 38/10/10). The emperor asked why 0.83 *sheng* of rice is just sufficient to nourish a Bannerman, while the Green Standard soldiers are not able to consume this amount.

<sup>86</sup> *Hubu junxu zeli* 8, fol. 1b.

<sup>87</sup> *Jinchuan dang* QL 39/III/00309 (QL 39/9/15), 00323 (QL 39/9/21).

a ‘rice merchant’ (*mishang* 米商) named Tian Jiguo 田濟國 was arrested who did not carry any rice with him but instead more than 2,700 *liang* and four delivery tickets for rice (*mipiao* 米票), indicating how much rice he had to deliver at a fixed point. The officials assumed that this ‘evil-doing merchant’ (*jianshang* 奸商) had tried to purchase rice somewhere from logistics stations and camps (*xiang bingding mai hui shimi* 向兵丁買回食米 ‘buying back the soldiers’ rations’) instead of at Chengdu, saving himself considerable transport cost. The emperor, furious not only about this merchant, but rather about this kind of craftiness among the troops, argued that the amount of one *sheng* of rice (about 1 litre) per person and day was a reasonable amount to nourish a labouring person and to give him enough energy for fighting the ‘rebels’. According to this objective calculation it should not be possible for the Green Standard and the provincial Banner troops to have any surplus rations. If troops obtained more than one *sheng* of rice per day and person, this was to be shared with the personal assistants (*genyi, yuding*), and not to be hoarded to make a profit (*fei shi zhi kuanyu cunji* 非使之寬裕存積 ‘[We] do not want them to have so much that they can store it.’). If the soldiers had any surplus from their daily rations, this could only mean that they were given more than necessary, which was the fault of their superiors in the logistics. Any surplus in the camps should be stored for later, in case of a shortage. Tian Jiguo was executed to demonstrate how serious his profiteering (*zisi zili* 自私自利) was considered, and the generals were ordered to keep track of all merchants in the region trying to do the same.<sup>88</sup> For a moment it seemed even probable that a logistics official named Liu Zuceng 劉組曾 managing the rice supply had tried to gain profit from such a business, before it was found out that charges against him were unjustified.<sup>89</sup>

The misuse to sell surplus grain was already recognized during the first Jinchuan war when overseers of the logistics stations sold their surplus (*yinyu* 贏餘) to private hauliers to make a profit. Although no such case was known during the second Jinchuan war, the commanding generals recommended to check the stations and the merchants as a precaution against such misuse. The emperor also admitted that under the conditions found in Jinchuan it might well have been possible that there were several cases when grain was delivered to the wrong station, which automatically led to misappropriation.<sup>90</sup> In fact, there were also other cases of

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<sup>88</sup> *Pingding Liang Jinchuan fanglüe* 57, fol. 25b-26b (QL 38/r3/dinghai).

<sup>89</sup> *Jinchuan dang* 38/IV/00357 (QL 38/12/25).

<sup>90</sup> *Pingding Liang Jinchuan fanglüe* 59, fol. 13a-14a (QL 38/4/xinhai).

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private persons being arrested for dealing with government-issued delivery tickets (*piao*) in the wrong places.<sup>91</sup>

Two other examples shall be brought forward to highlight the misuse of grain. Two grain logistics labourers named Zhang Wenyao 張文耀 and Wang Jiayu 王佳玉 had illegally sold (*daomai* 盜賣) grain. In their station an amount of 8 *hu* of rice (actually not very much: it corresponds to a mere 414 litres) were missing, and their foreman (*futou* 夫頭), called Yang Guoxing 楊國興, ordered them to buy rice to compensate for the missing amount. Yet when delivering the rice they claimed to have spent more than they actually had. This was found out, and all three deserted.<sup>92</sup> A much more serious case was that of the labourers Du Chaozhen 杜潮珍, Liu Chaogui 劉潮貴 and Wang Deyu 王德裕 who sold 25 *hu* of grain (746 litres) by carving a faked official seal (*si ke qianji* 私刻鈐記). The responsible grain manager (*liangyuan* 糧員), prefect (*zhizhou*) Zhang Keming 張克明, soon discovered this abuse of authority and was rewarded by a position in which he would immediately be promoted to a prefecture in the province of Zhili in case of a vacancy, as he was lined up for such a position (*houbu Zhili zhou zhizhou* 候補直隸州知州). The responsible station manager (*zhanyuan* 站員), magistrate (*zhixian*) Yuan Wenmo 袁文漠 was not punished because he had the delinquents arrested immediately.<sup>93</sup>

Rice was not the only commodity the government had to keep an eye on. Weapons, of course, were smuggled into the hands of the enemy, and another essential victual: tea, a beverage which was an important source of vitamins for the poorly fed mountain dwellers. The generals therefore had to check strictly if there were any traders trying to smuggle tea from Sichuan to the villages of Jinchuan.<sup>94</sup>

In their study of the state granary system Will and Wong provide some data on the provincial state granaries.<sup>95</sup> From those data it can be seen that the quantities of rice stored in the main granary of the province of Sichuan over time can be represented by a parabolic curve which rose almost regularly from QL 20 (1755) on (1.7 million *dan*) to QL 50 (1785; 3.7 million *dan*). The figures from the first twenty years of the Qianlong reign vary considerably, and many data are missing. The great exception in this development is a sudden 'hole' in the stored rice quantities between the years QL 36 and 41 (1771 – 1776), which is exactly the

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<sup>91</sup> *Jinchuan dang* QL 40/III/00113 (QL 40/8/9).

<sup>92</sup> *Jinchuan dang* QL 40/IV/00035 (QL 40/10/17).

<sup>93</sup> *Jinchuan dang* QL 40/IV/00107-108 (QL 40/10/23).

<sup>94</sup> *Pingding Liang Jinchuan fanglüe* 40, fol. 2a-2b (QL 37/10/xinwei). *Jinchuan dang* QL 37/IV/00069 (QL 37/10/10).

<sup>95</sup> Will/Wong (1991), pp. 528-531.

period of the second Jinchuan war. An extrapolation of the parabolic graph makes it possible to calculate the amounts of rice ‘missing’ to fill the ideal graph (see Diagram 4.3, the area between the upper and the lower curve). This results in about 4.9 million *dan* of rice which in an ideal case could have been stored in the provincial granary, but instead went elsewhere. During the second Jinchuan war 2,963,527.701 *dan* of rice were consumed, which is even less than the ‘missing’ amount of rice. This shows that the state granaries in Sichuan were able to provide the total amount for the campaign and that no rice had to be imported from other provinces. This result could be supported by a study of the volumes of rice stored in the granaries of the neighbouring provinces during the same period, which should in an ideal case not reveal any substantial decrease of the stored volume during the war period, because no rice from other provinces entered Sichuan. Unfortunately it is exactly in that period of time that the data from other provinces are missing in the survey of Will and Wong. The rice was partly supplied from the state granaries (in case of state-organised transport) and partly bought on the market (in case of private transport, but also when the state granaries were empty).

Apart from rice the troops and labourers consumed 31,902.719 *dan* of flour (*mian* 麵, also written 麩; *maimian* 麥麩 ‘wheat flour’) and 79,302.7394 *dan* of beans (*dou* or *liaodou*).<sup>96</sup> Beans were needed to feed the horses, while the flour was mainly consumed by the native auxiliary troops and the native labourers (*ula*), and less by the imperial troops to make cakes (*bing'er* 餅餌) and rusk (*ganhou* 乾糍) with, which was easy to transport and thus an ideal diet on the march, also in the West. Flour was otherwise used as rations when the troops had to spend a period of time without any access to supplies. For this purpose the flour was roasted (*huimian* 灰麵, *chaomian*) for conservation.

For the enemy, too, a lack of food supplies meant that they were unable to fight. One method to starve the enemy was therefore either to trample down the grain in the fields, or to burn it. Harvest therefore offered an ideal chance to the Qing troops to attack the enemy when people had to leave their fortified villages to gather the autumn or spring grain (*chunmai* 春麥, *qiumai* 秋麥).<sup>97</sup>

#### 4.3.3. Expenditure for and Distribution of Rice and Other Food

The lists for the consumption of rice, flour and beans record details about the exact consumption on what logistics route. This matter and the question of transport has already been explained in detail in Chapter 3.3. The summary account of the *Jinchuan junxu li'an*

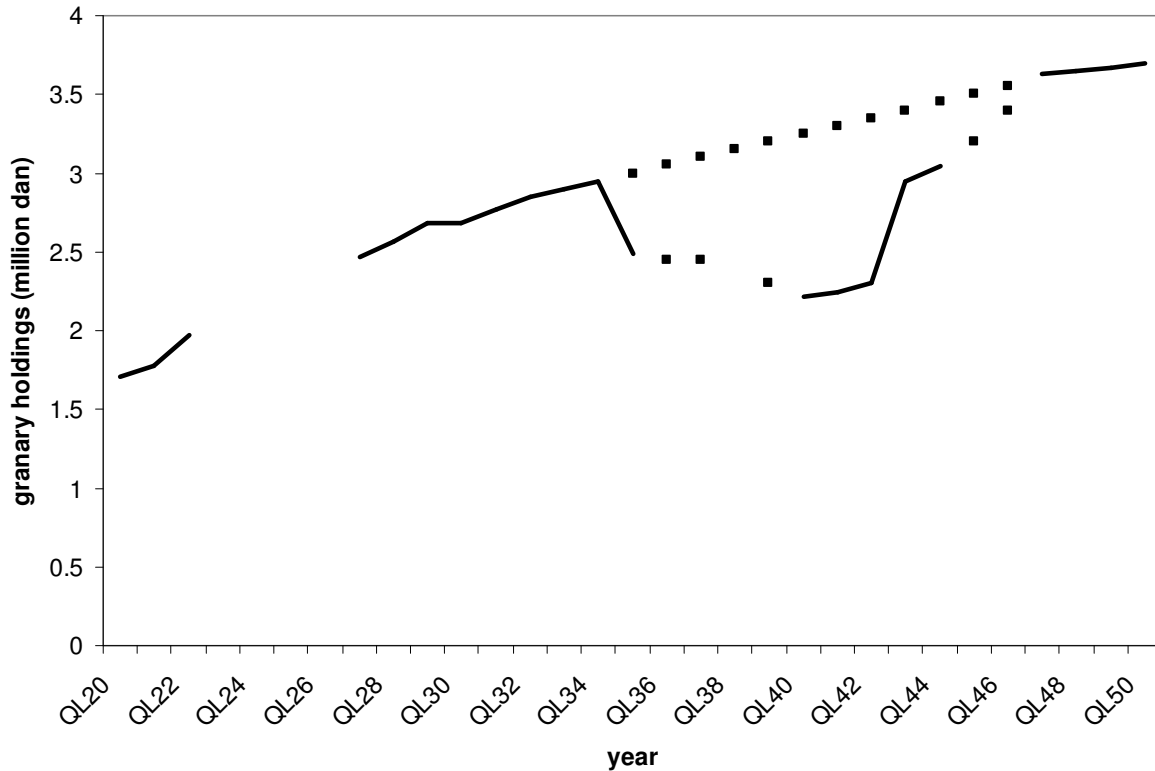
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<sup>96</sup> *Jinchuan junxu li'an* 2, fol. 180a, 182a, 183a.

<sup>97</sup> *Pingding Liang Jinchuan fangliie* 103, fol. 1a-1b (QL 39/8/gengyin).

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unfortunately only lists a total sum as expenses for the transport of rice (*yunsong liangdan* 運送糧石), without making a difference between the cost of materials and that for transport.<sup>98</sup> Therefore it might be an interesting attempt to separate those two items and to evaluate the cost of materials for rice, flour and beans.



4.3 Diagram: Civilian granary holdings of the provincial granary of Sichuan, QL 20 – 50 (1735 – 1785). The solid line are existant data, dots are extrapolations.

Source: Will/Wong (1991), pp. 528-531.

The ideal season for buying rice was, of course, autumn, when the harvest yields rushed onto the market and knocked down the price. Therefore it was common that the logistics managers bought as much rice as possible in the autumn, with the additional advantage that it could be taken to the logistics stations and the camps before the first snowfall blocked the roads. The rice was first shipped from the prefectures of origin to Chengdu, Guanxian, or Yazhou, where either the government took over the transport, or private transporters bought the rice on commission and had it transported to a defined destination. A market price of about 2 *liang* per *dan* was too high for the purchase of large amounts of rice, as the Ministry criticized.<sup>99</sup> But that a market price for rice of more than 2 *liang* per *dan* was quite normal can be seen in the calculation in Table 3.43 showing the grain prices in Chengdu and Yazhou. The rice was thus bought by the government in Chengdu and Yazhou either through logistics managers or

<sup>98</sup> *Jinchuan junxu li'an* 2, fol. 178a.

<sup>99</sup> *Pingding Liang Jinchuan fanglüe* 70, fol. 12b-13b (QL 38/7/xinyou).

private hauliers, and therefore the grain price at these two points has to be considered when calculating the cost of rice. For the sake of simplification it shall be assumed that the rice being transported to the northern, western and new western routes (1,870,445 *dan*) was bought in Chengdu (at an average price of 2.856 *liang* per *dan*), while the rice transported to the stations and camps on the southern and central route (1,083,144 *dan*) was bought in Yazhou (at an average price of 2.51 *liang* per *dan*). These conditions lead to a sum of 8,060,141 *liang* which was spent by the Qing government to buy rice. This is about one fifth of the total expenditure for the transport of grain (38.6 million *liang*). The daily consumption of rice by porters (not including the consumption by troops and civilian managing staff) along the three main logistics routes was more than 700 *dan*. For this reason it was suggested to use more roast flour and to hand out roast flour every fifth day instead of rice, in order to somewhat cut down the consumption of the latter.<sup>100</sup> Facing the alarming rice prices of 2.4 to 3.6 *liang* in Chengdu, 5 to 6 *liang* in Longan, Maozhou and Yazhou and up to 10 *liang* in Dajianlu, the logistics managers had indeed every reason to deliberate about a higher amount of the cheaper wheat and barley to be given to the troops instead of the expensive rice.<sup>101</sup>

The price of beans in Sichuan was almost the same as that of rice, because the production of beans in Sichuan was not very high.<sup>102</sup> Due to the price difference being so small and the rice so abundant, at least compared to beans, the horses were often fed more rice than beans, a practice which the Ministry of Revenue criticized as inappropriate. The price for beans was therefore adjusted to 0.7 or 0.8 *liang*,<sup>103</sup> while the official price of rice was kept between 1.35 *liang* and 1.85 *liang*, which is substantially lower than the real market prices. The difference can be explained with the fact that the price indicated is that of the place of origin (a net price), for example, in Chongqing in the far east of the province of Sichuan, not taking into account that the rice had to be transported to Chengdu and Yazhou, which led to a sharp increase in the gross price. The rice shipped to Chengdu, for example, cost 2.31 *liang* per *dan* when transported from Jiading (Leshan) and 3.374 *liang* per *dan* when originating in Chongqing in the far east, the transport cost amounting to 24 per cent (resp. 48 per cent) of the gross price (compare Table 3.27). While the state granaries stored rice as well as flour, the beans were exclusively bought on the private market. With the given price of 0.75 *liang* per *dan* on average the beans should have cost the government 59,477 *liang*. The transport costs for them were the same as those for rice.

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<sup>100</sup> *Jinchuan dang* QL 40/I/00113 (QL 40/2/8).

<sup>101</sup> *Jinchuan dang* QL 40/III/00139 (QL 40/8/12).

<sup>102</sup> *Jinchuan junxu li'an* 2, fol. 85a.

<sup>103</sup> *Jinchuan junxu li'an* 2, fol. 74a.

Flour was also transported not only by government-paid porters but also commissioned to private hauliers, as can be seen from documents. The price offered by private hauliers turned out to be even cheaper than the cost for buying and transporting the flour from Sichuan to the camps by government-hired porters.<sup>104</sup> The government price for flour and wheat grain (*maizi* 麥子) was 0.8 *liang* per *dan*.<sup>105</sup> For this kind of provision the government had consequently spent 25,522 *liang*. The transport costs for flour were different from those of rice: The transport costs of 1.5 *dan* of flour were the same as those for 1 *dan* of rice because flour is lighter than rice.

The price of barley (*qingke*), which was almost exclusively consumed by the native auxiliary troops, was 1.85 *liang* per *dan*. The barley was consequently only produced locally and bought in the garrison of Dajianlu.

There are only very few concrete figures concerning the cost of the food that the staff taking part in the second Jinchuan campaign had consumed. The provisions for the secretaries of the officials in the ad-hoc bureaus (*juyuan shuli* 局員書吏), which were paid out monthly (*yuefei fanshi* 月費飯食), had cost 79,444.1862 *liang*. The 2,897 sheep used for food had cost 2,607.3 *liang* with a price of 0.9 *liang* per animal, yet it is not known if this number of animals had really been bought because each sheep could be substituted by 1.5 *dou* of rice, a regulation also included in the *Junxu zeli*.<sup>106</sup> Sheep meat, along with ‘brandy’ (*shaojiu* 燒酒) was often given to the soldiers as a reward or stimulation for future battle.<sup>107</sup> The government provided the rice rations for the soldiers, but the salt-and-vegetable allowance was paid out in silver. This can be seen from the large amount of silver (more than 56,000 *liang*) which was lost during the battle of Mugom: It was much cheaper to transport the silver sheaths to the camps instead of large numbers of copper cash strings (*guan* 貫; to the silver sheaths, see Chapter 6.3.).<sup>108</sup> With the silver the troops could buy additional food, like vegetables or meat, but also tobacco, tea and liquor, in the numerous foodstalls or ‘market streets’ erected next to the camps. Countless sutlers flocked to these places to offer their merchandise (*sui ying maimai deng zhong shen duo* 隨營買賣等眾甚多), and there were also money-changers who changed the silver the government had given to the troops into copper cash, by means of

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<sup>104</sup> *Pingding Liang Jinchuan fanglüe* 79, fol. 15a-16a (QL 38/10/jiwei).

<sup>105</sup> *Jinchuan junxu li'an* 2, fol. 74b.

<sup>106</sup> *Jinchuan junxu li'an* 2, fol. 57b, 184a, 186b. *Hubu junxu zeli* 8, fol. 1a. The price of a sheep is also given as 0.5 *liang*, idem 2, fol. 85a, or as 0.7 *liang*, *Hubu junxu zeli* 7, fol. 1b. Two sheep corresponded to one monthly ration.

<sup>107</sup> *Jinchuan dang* QL 38/III/00509 (QL 38/9/14); QL 39/III/00177 (QL 39/8/6).

<sup>108</sup> 56,000 silver *liang* have a weight of 3,500 *jin*, or 2,090 kilos, while 56 million cash coins have a weight of 224,000 kilos, with an average weight of 4 grams per coin, according to Hartill (2003), p. 28.



which the personal assistants bought cabbages and Sichuanese peppers by. The emperor was not happy about the sale of liquor and tobacco which he esteemed unnecessary—instead, useful food like sheep should be taken to the camps: He did not want a repetition of a situation like during the western campaigns when the troops had eaten their horses when lacking food.<sup>109</sup> The market streets (*maimaijie* 買賣街) were also an ideal chance for the natives to steal food, but also to get access to places where gunpowder and bullets were stored.<sup>110</sup> Other, immoral means of entertainment were also to be found in the camps and the logistics stations: gambling and prostitution were often-seen means of dissipating one's salary.<sup>111</sup>

For the transport of 3,074,731 *dan* of grain to the logistics stations and the camps the government had spent 30,498,844 *liang*,<sup>112</sup> which means about 10 *liang* of transport cost per *dan* (a volume measure). Converted into a weight measure, according to the relations mentioned in this chapter, all grain together had a weight of 490,255,400 *jin*, which is about 292,682 metric tons of grain. This means that each *jin* of grain had cost 0.0622 *liang* for transport.

For the transport of military equipment to the war theatre the government had spent 4,018,719 *liang*.<sup>113</sup> Assuming the same transport price military equipment with a weight of 64,609,630 *jin* or 38,600 metric tons must have been transported to the war zone.

Of the 2,963,527 *dan* of rice transported to the logistics stations and the camps 2,552,588 *dan* were correctly brought to account as consumed. The military post (*xun*) of Changtang 昌塘汛 had contributed 19,069 *dan* of rice; there were furthermore 24,877 *dan* of contribution rice (*yigu* 義谷 [=穀]) and rice from the garrison in Xilu 西廬 (i.e. Dajianlu), which were not included in the regular accounts. The emperor would later dispense with the back payment for these quantities. An amount of 205,128 *dan* of rice was considered by the Ministry of Revenue as not correctly brought to account, like the rice lost during the Mugom incident and a volume of rice burnt when the grain managers did not take care, but also grain which was not properly dealt with. There were at least two incidents when grain burnt: In the camp of Dangga 當噶 over 2,000 *dan* were lost, for which general Agui was responsible. Yet because his men had captured more than 3,000 *dan* of grain and large amounts of gunpowder, muskets

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<sup>109</sup> *Jinchuan dang* QL 39/III/00301-303 (QL 39/9/14).

<sup>110</sup> *Jinchuan dang* QL 39/I/00400 (QL 39/3/28); QL 41/II/00067 (protocol).

<sup>111</sup> *Jinchuan dang* QL 40/IV/00187-190 (QL 40/11/10).

<sup>112</sup> *Jinchuan junxu li'an* 2, fol. 178a.

<sup>113</sup> *Ibid.*

and cannons from the enemy, the emperor pardoned Agui.<sup>114</sup> The grain station manager (*liangyuan*) Zhang Shilu 張世淥, whose carelessness had led to the burning of 400 to 500 *dan* of rice in a station in Ekshi, was not spared and lost his office.<sup>115</sup>

At the end of the war 121,862 *dan* of rice were left over and had to be stored in the military colonies (*tunfang* 屯防) established in the Jinchuan area. To reach the total sum of 2.9 million *dan*, some 40,000 *dan* are missing in these figures.

Of the 31,927 *dan* of flour transported to the war theatre only 29,358 *dan* were brought to account as consumed, while 2,073 *dan*, listed in the appended account (*fluxiao*), were not paid by the government because of some errors in the accounts, and were ordered to be paid from the private property of the responsible logistics managers. Later on the government dispensed (*enmian* 恩免) with the repayment in the framework of war expenditure and shifted the payment—still to be paid back (*kouhuan* 扣還) in shares (*fenpei* 分賠) by the officials in question—to another, civilian budget called ‘contributions to the public’ (*gongjuan* 公捐). When the war was over 470 *dan* of flour were left and had to be stored in the military colonies. In the case of the flour figures, only 26 *dan* are missing to the total figure of 31,927 *dan*.

Concerning the 79,302 *dan* of beans transported to the logistics stations, 69,240 *dan* were correctly brought to account, while 241 *dan* of beans were either lost in Mugom or burnt during a fire in a logistics granary. This quantity had to be recorded in an appended account and had to be paid out of the pocket of the officials responsible for this damage. Later on the emperor dispensed with the back payment. At the end of the war 9,821 *dan* of beans were left over.

If any quantity of grain from the officially declared remainder (*shicun* 實存) was consumed in the meantime, the responsible officials had to pay for it out of their pocket.<sup>116</sup>

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<sup>114</sup> *Jinchuan dang* 38/III/00448 (QL 38/9/1), 00453 (QL 38/9/1).

<sup>115</sup> *Jinchuan dang* 38/IV/00289 (QL 38/12/12), 00329 (QL 38/12/20), 00341 (QL 38/12/24).

<sup>116</sup> *Jinchuan junxu li'an* 2, fol. 180a-184a.

## 4.4. Military Equipment

### 4.4.1. Weaponry

#### Cannons

Cannons and howitzers (*pao* 炮, also written 砲 or 礮; the Chinese make no difference between cannon and howitzer) played a crucial role in defeating the Jinchuan rebels. Without artillery it would have been impossible to destroy the infamous war towers (*diao*) of the castles which were scattered all over the landscape of Greater and Lesser Jinchuan. The war towers were so effective that the batteries often had to barrage night and day before the fortifications were ready for an assault.<sup>117</sup> Yet to transport the heavy pieces to the batteries (*paotai*), or constructing the batteries proved far more difficult than anticipated. Even aiming the pieces at their targets was far from being straightforward, as can be seen in the special dispatch of a Jesuit geodesist, Félix de Rocha, who was sent to support the battery staff.

The artillery pieces were cast of iron or brass. There were only few military units that possessed artillery weapons at all, and the most important of these was the Firearms Brigade (*huoqiying*) in the Capital. Uniaxial mountings that were used for field artillery in Europe from the 16th century at latest and that allowed an enormous mobility of the artillery units were not totally unknown in China, but rather rare. Of the twenty-four types of cannon and howitzer presented in the picture volumes of the *Da-Qing huidian* 大清會典 ‘Collected statutes of the Great Qing’ only seven were mounted uniaxially, most others biaxially.<sup>118</sup> Most barrels (*paotong* 砲筒) were installed on square biaxial carriages (*paoche* 砲車) with four often very small wheels, like in Western naval artillery, that did not allow long-range moving and were solely made for defense purposes in fortifications.

For transport, European cannons were mounted on a long-tailed two-wheel carriage whose ‘tail’ was equipped with a ring connected with a special transport vehicle, the limber, which was drawn by horses. The limber carriage could also be used to transport ammunition, gunpowder, fuses and accessories for cleaning and maintaining the gun. From the available images of 18th century artillery in China in the *Da-Qing huidian tu* it does not become directly clear if there were any transport vehicles like the European limber carriage but it seems that cannons were directly drawn by horses or other draft animals harnessed immediately before the cannon (see Figures 4.4 to 4.7). If the cannon was seated biaxially on

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<sup>117</sup> Pingding Liang Jinchuan fanglüe 11, fol. 18a (QL 36/11/bingyin); 12, fol. 6b (QL 36/12/gengwu).

<sup>118</sup> *Da-Qing huidian tu* 98, [fol. 18-22]; 100, [fol. 3-25].

a chest-mount it was virtually impossible to move it along a curvy and steep mountain road. The cannons and howitzers cast in the camp foundries of the Jinchuan camps were therefore transported not with a carriage but by mules or man-power and only mounted on a base upon reaching the battery.

Light cannon types with a barrel weight of 100 *jin* (59 kilos) or so could be transported on the back of a mule or by two porters, but for heavier artillery the only possibility to move them forward was to melt them down (*ronghui* 熔燬, *huahui* 化毀) and to recast them near the front. Demountable mountain artillery was invented in Europe only at the beginning of the 19th century.<sup>119</sup> Although there were several types of cannon whose barrel consisted of pieces which could be screwed together, the small calibre made it virtually useless against the Jinchuan war towers.

All materials for cannons and equipment, from gun metal to cleaning shovels, had therefore to be procured in Chengdu and to be transported by porters or mules to the camps. Iron for cannonballs (*paozi* 炮子) and also for barrels—some barrels were totally made of iron, some had a brass coating over an iron corpus—was bought on the free market. Brass was procured in Chengdu from the offices that were in possession of brass or other copper alloys, namely the provincial mint (*qianju* 錢局) where the copper coins for the province of Sichuan were cast.<sup>120</sup> From the copper mines in Yunnan the whole country was provided with metal for casting coins, and therefore it went almost without saying that part of the metal transports could be deviated from Yunnan directly into the war region, without the detour through Chengdu. The practice to confiscate the brass destined for the provincial mint was so common that the *Jinchuan junxu li'an* contains a special paragraph dealing with these proceedings: ‘Concerning brass (*tong* 銅), the metal is directly assigned from the mines in Yunnan (*Dian tongchang* 滇銅廠), and for each amount [transported to Jinchuan] a particular memorandum has to be made.’<sup>121</sup>

The officers in charge thus borrowed the cannon brass from the coinage office and had to render this material back later when the campaign was over. A similar procedure took place for the lead that was used to cast the ammunition for muskets. But while it was in fact possible to return at least a part of the original brass borrowed for the cannons, the lead that had to be returned to the mints in Chengdu had to be found elsewhere, for example in the mines in the province of Guizhou. The iron used for the cannonballs was not worth being

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<sup>119</sup> Harding (1980), p. 190. Chartrand (2003), pp.36-37.

<sup>120</sup> *Pingding Liang Jinchuan fanglüe* 48, fol. 18a-19a (QL 38/1/xinhai). Coins in China were not minted but cast.

<sup>121</sup> *Jinchuan junxu li'an* 2, fol. 46a-46b.

reclaimed after battle. Contrary to brass and lead, iron was not procured from government agencies or state-owned workshops but from the free market (*shangtie* 商鐵 ‘merchant iron’).<sup>122</sup> A part of the iron left back in Jinchuan was later used by the troops in the military colonies to produce agricultural tools like hoes and ploughs.<sup>123</sup>

Like for all other items, porters carrying cannon brass were officially allowed to be packed with 50 *jin* (30 kilos), surely a net weight, and in order to assess how much one person should or could carry, the weight of baskets, racks, mats or other transport equipment therefore will have to be added to these 50 *jin*. Furthermore, unlike today when trade union contracts determine what amount of work a labourer is allowed to be charged with, there may have been many a case when a porter carried more than 50 *jin*. Field experiments concerning the performance of Roman soldiers demonstrated that a well-trained person was able to carry up to 50 kilos (about 100 *jin*), a weight made up of clothes, armament, weapons and field pack, when covering a daily distance of 20 km in normal terrain.<sup>124</sup>

When the materials necessary to cast the cannons arrived at the designated location the commanding officer had to determine an adequate place where a camp foundry (*suiying paoju* 遂營炮局 ‘cannon foundry following the camp’) was installed. Here the furnaces were erected in which the metal was melted down and the cannons, howitzers and cannonballs were cast. But casting was only part of the work. The casting moulds were made of clay and sand and therefore gave only a very crude shape to cannonballs and barrels. In a workshop it was possible to process all parts of a barrel correctly, especially the ‘soul’ inside the barrel, whose surface has to be as smooth as possible and to fit the size of the cannonballs exactly in order to let escape as little of the propellant gas as possible. In the Jinchuan mountains it was not possible to produce a high-quality soul in the artillery pieces. Therefore the barrels had to be cast as ready-to-use pieces without a rifled bore and the cannonballs to be adjusted to the concave diameter, and both—cannonballs and barrel—had to be made as smooth as possible. In regulations like the *Gongbu junqi zeli*, the Ministry of Works’ regulations for military equipment, and the *Da-Qing huidian tu* details can be found not only concerning the exact dimensions of the particular types of gun, but also about the weight of the projectiles and the amounts of gunpowder (*huoyao* 火藥, also *junhuo* 軍火) required. The quality of the guns cast under such conditions can thus not have been very high, the destructive force and the range of the cannons were below the standard of the guns produced in the normal state workshops in the provincial capitals or the garrisons. Among the materials needed for casting

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<sup>122</sup> *Jinchuan junxu li'an* 2, fol. 43.

<sup>123</sup> *Jinchuan dang* QL 40/IV/00356-358 (QL 40/12/28).

<sup>124</sup> Junkelmann (1986), pp. 196-200; 233-236.

cannons (see Table 4.10) tools like a drill head (*zuantou* 鑽頭) can be found, but in the same paragraph there is a hint that the barrels were cast with a hollow core (*paoxin* 炮心), without applying any drilling or rifling process, probably except boring the touchhole.<sup>125</sup>

When cannons and ammunition were ready they were transported to a battery platform that cannot have been very far from the furnaces—the cannons were cast on-site just because they were not easy to transport. It is not clear if the barrels were installed on a moveable mount but it might be that wheel-furnished mounts served to pull the guns to the batteries just for a short piece of way where the road or a path could be made broad and even enough for the purpose. The battery itself was surely protected by redoubts (*paozha* 炮柵) against shots and attacks of the rebels that would try to harass the gun crew while loading, cleaning and adjusting aligning. The dimensions of such a battery and its surrounding were enormous, as some figures prove: For one battery seven wooden redoubts had to be erected. Within the surroundings giving enough protection to the gunners and the other staff the battery was erected with a dimension of 6 to 7 *zhang* (about 20 metres).<sup>126</sup> As it is said that the cannon should fire down from the battery platform it must be assumed that the cited dimension corresponds to the height. Yet this would mean that the batteries were erected as a kind of ramp inclined along the slope of the hills just above the war towers. That the construction of such large platforms consumed time and manpower can be attested by several documents: Several thousand troops were used to erect wooden constructions and to pile up a battery platform.<sup>127</sup> For this purpose, trees were cut down to erect palisades for protection.<sup>128</sup> The batteries ideally had to reach at least the same ground level as the war towers.<sup>129</sup> The height of the batteries and also that of the normal barricades was necessary to have better aim at the rebels hiding in trenches. When the batteries were high enough the Jinchuan fighters would be easier to aim at. Other battery platforms were only two to three *zhang* high (about 8 metres),<sup>130</sup> or four to five *zhang* (about 14 metres).<sup>131</sup>

Because of the inferior quality of the barrels the range of fire cannot have been very impressive: '[We] had transported four large cannons directly before the castle to bombard

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<sup>125</sup> *Jinchuan junxu li'an* 2, fol. 64a.

<sup>126</sup> *Pingding Liang Jinchuan fanglüe* 63, fol. 4a (QL 38/6/yiyou).

<sup>127</sup> *Pingding Liang Jinchuan fanglüe* 19, fol. 13b-14a (QL 37/2/guiwei).

<sup>128</sup> *Pingding Liang Jinchuan fanglüe* 50, fol. 1b-2a (QL 38/2/bingyin).

<sup>129</sup> *Pingding Liang Jinchuan fanglüe* 51, fol. 17a (QL 38/2/jiashen); 57, fol. 24a-24b (QL 36/r3/yiyou).

<sup>130</sup> *Pingding Liang Jinchuan fanglüe* 58, fol. 8b-9a (QL 38/4/bingshen).

<sup>131</sup> *Pingding Liang Jinchuan fanglüe* 61, fol. 17a-17b (QL 38/6/dingyou).

it.<sup>132</sup> According to several statements it was only the distance of an arrowshot, or even less.<sup>133</sup>

The guns and howitzers proved most effective when placed above the target. This meant that the batteries often had to be erected on a mountain ridge and the cannons fired down on the war towers.<sup>134</sup> This made the transport of cannons even more difficult, but it also shows that the imperial gunners did either not know their job very well (what about wads fixing the charge?) or that the cannons cast in the mountains and the gunpowder were of really poor quality. Since cannons proved ineffective from QL 39 (1774) on howitzers (*chongtianpao* 衝天砲, see Figure 4.4) were made use of instead, whose highly inclined parabolic trajectory helped bombarding the towers and trenches from a steeper angle than when firing with cannons whose trajectory is less inclined.

There is another hint in the *Jinchuan junxu zeli* regulations that the quality of the guns was nothing to write home about: the melting furnaces of the camp foundry were not allowed to be set up too near the battery. Bursting gun barrels seem to have been such a commonplace incidence that the generals were careful to prevent too many soldiers or workers from being injured or killed by metal fragments. Once workers or porters had taken the cannonballs and gunpowder to the battery they had to leave immediately and go back to the foundry.<sup>135</sup> One can imagine that it was very tempting to have a look at the firing cannons and to watch them wreak havoc, but this curiosity could distract the crew and cause injuries or death to the spectators by either a bursting cannon or the Jinchuan rebels who may not have been able to harm or kill the gunners, but certainly the unprotected spectators nearby. The reports of the commanding generals vividly describe the danger that threatened anybody who tried to approach a Jinchuan war tower. While the assailant was barely protected by some rocks and could see nothing inside the tower, the defenders were invisible and well able to observe their attackers.

The imperial artillery in Jinchuan had a major problem: The cannons cast in the mountains regularly exploded and caused damage to equipment and people. Already six months after the beginning of the campaign it became evident that the brass provided by the war logistics bureau was of inferior quality because it contained too much slag (*kuangxing* 礦性) and that it was useless as gun metal.<sup>136</sup> Yet the need for cannons and howitzers was so urgent that the

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<sup>132</sup> *Pingding Liang Jinchuan fanglüe* 28, 7b-8a (QL 37/5/renyin).

<sup>133</sup> *Pingding Liang Jinchuan fanglüe* 52, fol. 1a (QL 38/3/gengyin); 54, fol. 16a (QL 38/3/jiwei).

<sup>134</sup> *Pingding Liang Jinchuan fanglüe* 21, fol. 5a (QL 37/2/guisi); 22, fol. 2b (QL 37/3/renyin), 12b-13a (QL 37/3/yisi); 48, fol. 10a (QL 38/1/bingwu).

<sup>135</sup> *Jinchuan junxu li'an* 2, fol. 43b-44b.

<sup>136</sup> *Pingding Liang Jinchuan fanglüe* 19, fol. 19a-19b (QL 37/1/guiwei).

commanding generals nevertheless ordered artillery pieces to be cast in the camp foundries. A full year later another reason was found why so many cannons burst: The casting process was done too hastily, and again because the material was not pure enough to be used for casting. Only when not the slightest impurity (*shayan* 砂眼) was to be seen, the material was suitable for casting. Therefore it was a better method to spend time in refining the metal than to cast the pieces prematurely and lose time through recasting the exploded cannons—and lose the lives of gunners and workmen to boot.<sup>137</sup> Half of the burst cannons was ‘as black as soot’ (*hei si meizha* 黑似煤渣), due to the very high amount of lead compounds (*qiansha* 鉛沙) contained in the material.<sup>138</sup> The third problem was maintenance, as the generals—who actually caused the problems themselves with their quest for fame and glory—described:

‘When a musket is fired several times in succession, the barrel is so hot that the musketeer has to wait for a while for it to cool down before he can go on firing. A cannon which is several hundred times as large as a musket will stay hot for a much longer time and it will be much more difficult to have it cooled down. When instantly loading anew without waiting for a while and abusing [the barrel] with [a further] ignition, it is hardly to avoid that the cannons explode or deform. This self-evident logic is something that all units on all routes should know and observe strictly when using artillery.’<sup>139</sup>

A well-trained gun crew is able to achieve a comparatively high velocity of firing. But even then after each shot the barrel has to be cleaned from smoke residues and unburned powder. After the cleaning process the new propellant charge has to be filled in, and fresh ammunition to be inserted. As will be seen, the enormous amount of oil that was used for the ammunition does not only protect the iron-made cannonballs from corrosion but can also serve to smoothen the inside of the barrel so that the cannonballs can be introduced much more easily. Furthermore, the oil will absorb gunpowder and facilitate cleaning. The cleaning and loading process will take a certain time, but the crew will also have the task to newly aim the cannon that was dislocated by the recoil during firing, probably the most time- and power-consuming part of the bombardment. This furthermore took place under dangerous conditions which gave the rebels a chance to shoot at the unprotected gunners. Under such conditions it was indispensable to protect the operating crew by marksmen that observed the enemy’s activities. The staff of the camp foundry was, as the *Jinchuan junxu li'an* postulates, to be recruited from the logistics stations. These persons did not only bring the material for the cannons—brass bars or rods or ‘crab shells’ (*xieke* 蟹殼) produced in Leshan<sup>140</sup> from Chengdu to Jinchuan but also had to transport the finished barrel along with the ammunition from the camp

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<sup>137</sup> *Pingding Liang Jinchuan fanglüe* 51, fol. 19a (Q 38/2/jiashen); 53, fol. 7a-7b (QL 38/3/jiachen).

<sup>138</sup> *Pingding Liang Jinchuan fanglüe* 57, fol. 1a (QL 38/r3/dingchou).

<sup>139</sup> *Pingding Liang Jinchuan fanglüe* 57, fol. 7b-8a (QL 38/r3/dingchou).

<sup>140</sup> *Pingding Liang Jinchuan fanglüe* 58, fol. 7a-7b (QL 38/4/xinmao).

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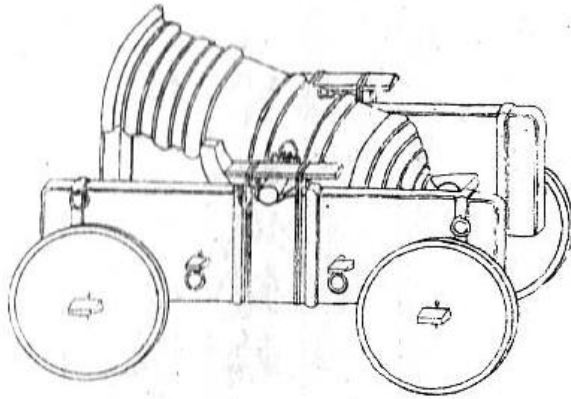


foundries to the battery and thus provided the gun crew with new supplies. It is not clear if they were also in charge of the gunpowder, but because the gunpowder is part of the indispensable military equipment and was provided by the provincial military garrisons, the logistics sources and paths were different from those of the cannon brass and iron, thus it might have been stored in different places. In memorials to the emperor, the gunpowder is always treated separately, and a shortage of gunpowder had to be dealt with by other means than a shortage of cannonballs or cannon brass.

Head of the camp foundry was a foreman or ‘engineer’ (*suiyingju zhangfu* 遂營局長夫) who had to supervise the cannon casting, which means that he was a skilled workman and an expert in metallurgy. The workers serving in the foundry and later transporting the guns and the cannonballs to the battery were allowed to walk back to the foundry without having a specified task to do (*huikong*) and were thus paid for a non-productive period. Therefore the *Jinchuan junxu li'an* determined that they were paid by day and not by way, like porters who were not given any pay when travelling back to their ‘parent’ logistics station. The foreman who as expert craftsmen was much more expensive than the unskilled labourers, was not allowed to go back to the foundry without doing productive work. If this regulation was not just made for principle, it becomes clear that the distance between the foundry and the battery must at least have been several *li*. One reason for this great distance might be that the locations of battery and foundry were not calculated according to the danger arising from bursting guns or from enemy snipers but rather on the one hand according to topography, in other words, there had to be a location convenient enough to establish a foundry as near the battery as possible, and on the other depending on the danger that the enemy might be able to make a counter-attack. Should the battery or some cannons be conquered by the enemy—which happened several times during the war—, at least the foundry should not fall into their hands. The greatest distance between the foundry and a battery was, as can be learned from the descriptions of the *Jinchuan junxu li'an*, up to ten stations, or day-travels, which seems possible when it was only a question of transporting cannonballs, but not, if a freshly cast cannon had to be pulled forward to the battery.<sup>141</sup> Nevertheless there was at least a long period of time during the first half of the war when the finished barrels had to be transported up to the top of mountain ridges to fire down on the enemy’s castles.

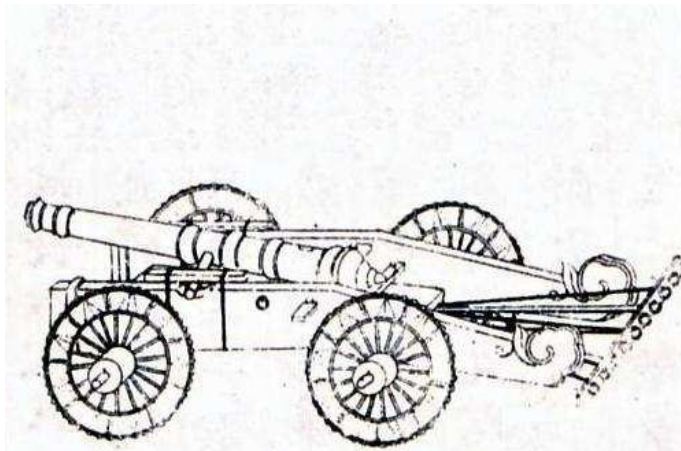
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<sup>141</sup> *Jinchuan junxu li'an* 2, fol. 44a-45b.



□ 4.4 Figure: A 'Heaven-assailing' howitzer (chongtianpao)  
Source: *Da-Qing huidian tu* 100, [fol. 10a].

衝  
天  
礮  
圖



□ 4.5 Figure: A 'great general of divine authority cannon' (shenwei da jiangjun pao)  
Source: *Da-Qing huidian tu* 100, [fol. 3a].

神  
威  
大  
將  
軍  
礮  
圖

Whenever the front advanced the battery had to be relocated too, and ideally the foundry should follow it in a corresponding distance. During long periods of the war, the front only advanced very slowly, and therefore the camp foundries often remained in the same place for months. When the battery was moved the commanding official had to decide which cannon could be pulled forward on its mount, and which cannons should be melted down, either because they were too heavy to be transported, because the mountain path

was too narrow or too steep, or because a cannon had become unusable. The responsibility for this decision was borne by the supervising general (*zongli dachen* 總理大臣), because the cannon brass was of high value and any loss would have to be refunded to the 'owner', in most cases the provincial mint in Chengdu. For this point compare the metal prices in Tables 4.10 and 4.12 – 4.15. The iron of the cannonballs was also recovered and transported to the new battery at the front. Two names of civilian officials supervising camp foundries have survived: Chen Fengzi 陳奉茲, magistrate (*zhizhou*) of Maozhou, and Yongling 永靈, who was a sub-prefectural magistrate (*tongpan*).<sup>142</sup>

The transport of the metals to the next camp foundry was undertaken by porters from Sichuan and by native people, each sharing the duty to equal parts in a *modus* by which each party should carry 1,000 *jin* (*fenbie qian jin nei wai yong fu* 分別千斤內外用夫).<sup>143</sup> This amount corresponds to about 20 porters. Which of these two groups should carry a third thousand *jin*

<sup>142</sup> *Pingding Liang Jinchuan fanglüe* 18, fol. 11b (QL 37/2/bingyin); 123, fol. 20a (QL 40/8/jiyou).

<sup>143</sup> *Jinchuan junxu li'an* 2, fol. 44a.

of the metal or fractions of it, is not clear. A regulation for the transport of cannons can also be found in the *Junxu zeli*, without it giving a better insight into the concrete meaning of the arrangements of metal transport recorded in the *Jinchuan junxu li'an*:

‘When cannons cast in the camp foundries have to be transported to the batteries, per 50 *jin* of weight one porter has to be used, if the road is even and thus the piece easy to transport. Where the road in mountainous terrain is too steep, one porter shall likewise be used per 50 *jin* of weight if the piece is lighter than 1,000 *jin*. If it is heavier, one porter has to be used per 15 *jin* [...].’<sup>144</sup>

Metal that is cast and recast several times will of course lose much of its original quality, and in order to regain the original pureness of the brass, the foreman had to add 8 or 9 *jin* of ‘pure’ brass to every 100 *jin* of remelted brass. If the brass had already been remelted and recast several times, or had, as during the catastrophe of Mugom, been buried in order to hide it from the enemy and was therefore heavily corroded, the foundry master had to add up to 16.375 *jin* (16 *jin* 6 *liang*) to every 100 *jin* of the corroded material.

#### The Dismantling of Cannons by Melting Down

‘The dismantling of cannons by melting down has not been an issue in the regulations for military equipment up to now. But the approved accounting files of Sichuan [i.e. from the Jinchuan wars] state that for every 100 *jin* of pure brass obtained by melting down 200 *jin* of charcoal (*mutan* 木炭) are necessary ([Commentary:] In the precedents for casting cannons 100 *jin* of coal [*meizha* 煤炸] and 25 *jin* of charcoal were used. Because outside the country no coal is produced, it was ordered to set up charcoal piles [*she chang shao tan* 設廠燒炭] nearby, and every 100 *jin* of coal have to be substituted by 200 *jin* of charcoal), 4 *jin* of clay sherds (*gangwazi* 缸瓦子; [Commentary:] In the precedents for casting cannons 10 *jin* of porcelain powder [*cimo* 磁末] were used), 18 *jin* of rice straw (*daocao* 稻草; [Commentary:] In the precedents for casting cannons 40 *jin* were used), 6 *jin* of white clay (*baitu* 白土), 24 *jin* of yellow clay (*huangtu* 黃土; [Commentary:] In the precedents for casting cannons 18 *jin* of crucibles [*qinggantu* 青坩土] were used and 40 *jin* of yellow clay). 3 ‘stout men’ (*zhuangfu* 壯夫) [do the work] ([Commentary:] In the precedents for casting cannons 6 workmen were employed, and three ‘stout men’). Now we [the members of the compilation team] suggest adopting the approved files concerning the dismantling of cannons of the Jinchuan accounting files as a rule, and, with regard to the material needed for casting cannons according to the established precedents, to reduce the respective amounts.’<sup>145</sup>

Only during the Myanmar campaigns and the two Jinchuan wars cannons had to be cast on site. Yet the conditions prevailing in the two provinces (Yunnan and Sichuan) and the size of the cannons and howitzers were so different that it was not possible to establish general rules for the casting and recasting of cannons and the casting of cannonballs, as well as for the prices and amounts of the necessary materials. This is also valid for other military materials,

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<sup>144</sup> *Hubu junxu zeli* 5, fol. 3b-4a.

<sup>145</sup> *Gongbu junxu zeli* 1, fol. 6b-7a.

like sulphur and nitre, which had to be dealt with according to the climatic situation and the current market prices in the different regions.<sup>146</sup>

When the war was over the metal was not simply left behind in the war theatre region. Especially brass was an alloy too precious to throw away, and it should not be forgotten that it belonged to the provincial mint and had to be returned to this institution. If nothing was lost it was theoretically possible to hand over the total amount of brass to the mint in Chengdu.

Iron—which was used to make cannonballs and other items like nails, cramps, tent pegs, but also woks—was a different case, as it was relatively cheap and much more expensive to transport it back to Chengdu than to write it off and leave it behind. This decision was at least valid for the newly conquered region of Jinchuan that was originally situated beyond the ‘borders’ of the province of Sichuan (*kouwai*). The *Jinchuan junxu li'an* determines that iron used within the borders of the province of Sichuan (*kounei*) should be brought back.<sup>147</sup>

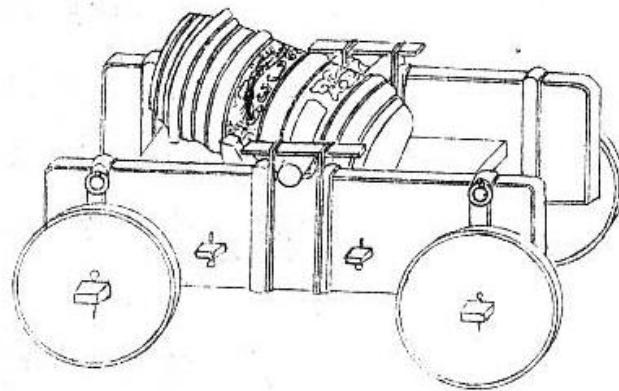
Each procedure and transfer of responsibility concerning the expensive brass had to be notified to the Ministry of Revenue. The commanding officers had to report when a camp foundry was established, when it moved, when it was too complicated to transport cannons in one piece so that

they had to be melted down, or when cannons had burst.

Officers were responsible for each single *jin* of brass and had to report time, place, amount and name to the higher offices

whenever anything happened with the metal.

For the outcome of the Jinchuan war the use of artillery was so important that a successful commander could be promoted or rewarded with a honorific title. Artai for example was granted the title of Grand Minister Assistant Commander (*sanzhi dachen*) for his having cast a large amount of cannons.



威遠將軍礮圖

□ 4.6 Figure: A ‘general of far-reaching authority’ howitzer (*weiyuan jiangjun pao*)

Source: *Da-Qing huidian tu* 98, [fol. 21a].

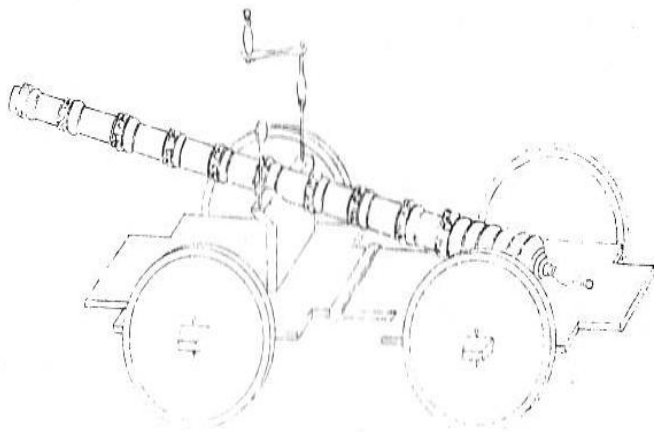
<sup>146</sup> *Gongbu junxu zeli* 1, fol. 1a-2b, 4a.

<sup>147</sup> *Jinchuan junxu li'an* 2, fol. 44b.

### Types and equipment

Only a few types of cannons or howitzers are mentioned in the sources. Most statements say ‘large cannons’ (*dapao* 大砲), sometimes indicating the weight or the calibre, like ‘a large brass cannon weighing 3,000 *jin* (1,791 kilos),’ ‘casting large cannons weighing 3,000 to 4,000 *jin*,’ ‘small cannons of only 6 – 700 (or 7 – 800) *jin* of weight (700 *jin* corresponding to 418 kilos), so that several hundred (*sic!*) pieces would be necessary to destroy a war-tower and to make it ready to be attacked,’<sup>148</sup> ‘casting a large cannon of more than 5,000 *jin* of weight (2,985 kilos),’ ‘cannonballs made of crude iron with a weight of 20 *jin* (12 kilos) were made,’ or ‘the 16-*jin*-calibre (9.6 kilos) cannons being cast’.

Other cannons were simply labelled by the material they were made of, namely iron (*tiepao*



□ 4.7 Figure: A cannon with ‘nine segments and ten parts’ (*jiujié shicheng pao*)

Source: *Da-Qing huidian tu* 100, [fol. 9a].

九  
節  
十  
成  
砲  
圖

鐵炮) or brass (*tongpao* 銅炮).

As most cannons were made of brass, the term ‘brass cannon’ only occurs very rarely, to distinguish them from iron cannons or other types of cannon. Cannons made exclusively of iron were not anymore common in China proper in the late 18th century and when the Qing armies were able to capture such type of

cannon they were considered to be of native origin, like a ‘small iron howitzer’ similar to the ‘howitzer of far-reaching authority’ (*weiyuanpao* 威遠炮; see Figure 4.6) of China,<sup>149</sup> which the imperial army in Jinchuan also made use of. In the storerooms of the rebels’ war towers the imperial army found two ‘hand-cannons’ (*shoupao* 手炮) shooting stone ammunition.<sup>150</sup> Of no great effect against the war towers was the nine-segment cannon (*jiujiépào* 九節炮; see Figure 4.7), which was therefore not often seen among the military equipment of the Qing artillery. Its advantage, nevertheless, was that it could be disassembled and so was easy to transport. It must have been part of the equipment of the Qing troops in Jinchuan because it is mentioned in the regulations of the *Jinchuan junxu zeli*.

<sup>148</sup> *Pingding Liang Jinchuan fanglüe* 16, fol. 14a-14b (QL 37/1/xinhai).

<sup>149</sup> *Pingding Liang Jinchuan fanglüe* 17, fol. 10b (QL 37/1/wuwu).

<sup>150</sup> *Pingding Liang Jinchuan fanglüe* 121, fol. 5a (QL 40/7/renxu).

Another standard cannon was the so-called ‘mountain-breaking howitzer’ (*pishanpao* 劈山炮), detailed descriptions of which are to be found in the Jinchuan regulations. There existed also a smaller version, the *pishan xiaopao* 劈山小炮.<sup>151</sup>

The most important cannons by far were the not fully standardized types which were cast near the camps according to need (*junqian zhujiu paowei* 軍前鑄就炮位). Those cannons were nevertheless given certain designations depending on the position of the commanding general who made use of them. The *Jinchuan junxu li'an* lists three titles which could be given to cannons: *Pingni shenwei da jiangjun* 平逆神威大將軍 ‘Great General of Divine Authority Appeasing the Disobedient’ (the respective cannon, see Figure 4.5), *shenyong da jiangjun* 神勇大將軍 ‘Great General of Divine Courageousness’, and *qifang jiangjun* 奇防將軍 ‘General of Extraordinary Defense’. Apart from them there were also the designations of Fourth General, Fifth General and Sixth General (*si jiangjun* 四將軍, *wu jiangjun* 五將軍, *liu jiangjun* 六將軍), which means that the first three were also termed cannons of the ‘First’, ‘Second’ and ‘Third General’.<sup>152</sup> The titles were probably old designations from the late Ming period, when those types of cannon were first brought into action by the Manchu rulers and generals. The cannons bearing those titles were accordingly called ‘cannons of the fourth general’ (*si jiangjun pao* 四將軍炮), etc., but the term ‘general’ was often omitted and the cannons were called ‘number-four cannon’ (*si hao pao* 四號炮). It is not said explicitly if the terms had anything to do with the size of the pieces, but it must be assumed according to the following findings: What can be known from the documents at hand is that at least the calibres of the ‘third general’ and the ‘fourth general’ cannons were different, because different cannonballs had to be used, the former weighing 10 *jin* (6 kilos), the latter 6.5 *jin* (3.8 kilos).<sup>153</sup> ‘Second general’ cannons were also made use of during the second Jinchuan campaign. When it is said that a general was ‘casting a number-three cannon’ it becomes clear that those types of cannon were more or less standardized, although no clear instructions can be found in the respective regulations of the Ministry of Works (*Gongbu zeli*, *Gongbu junqi zeli*), nor in the *Da-Qing huidian tu*. Concerning the size, another document certifies the fact that ‘number one’ and ‘number two’ cannons were larger than those of the smaller numbers, and could not be moved away by manpower but had to be dismantled and recast.<sup>154</sup>

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<sup>151</sup> *Pingding Liang Jinchuan fanglüe* 58, fol. 16a (QL 38/4/dingyou).

<sup>152</sup> *Jinchuan junxu li'an* 2, fol. 44b.

<sup>153</sup> *Pingding Liang Jinchuan fanglüe* 107, fol. 23b-24b (QL 39/10/guisi).

<sup>154</sup> *Pingding Liang Jinchuan fanglüe* 74, fol. 7a (QL 38/9/wuxu).

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In one memorial Wenfu asked the emperor to bestow such titles on the cannons he had cast, and the emperor responds to his general's plea with an edict determining that the 'largest cannons' (*touhao pao* 頭號砲) were to be called *pingni shenwei da jiangjun*, the second largest (*erhao pao* 二號砲) *shenwei da jiangjun*, and the pieces of size three and four *qigong jiangjun* 奇功將軍 'General of Extraordinary Ability'.<sup>155</sup>

One type of cannon that had not to be cast in the camp foundry was the 'Heaven-assailing howitzer' (*chongtianpao*), also called 'water-melon howitzer' (*xiguapao* 西瓜炮), which was exclusively used by the elite Banner units and for which special ammunition was brought from Beijing. It weighed between 300 and 380 *jin* (179 – 227 kilos).<sup>156</sup> The transport of moulds from Beijing had been organised by Amida 阿彌達.<sup>157</sup> There were also some *chongtian* howitzers, formerly transported to Yunnan for the Myanmar campaigns.<sup>158</sup>

In the following paragraphs the regulations in the *Jinchuan junxu li'an* shall be analysed in order to give an impression of what details the officials working in logistics and the officers making their accounts, had to deal with. Unfortunately only four types of cannon are described in the *Jinchuan* regulations, one of which (the *wujiapao*) is not even mentioned in the documents collected for the official history of the war, the *Pingding Liang jinchuan fanglüe*.

<i>type of cannon</i>	<i>piece weight [jin]</i>	<i>weight of equipment [jin]</i>	<i>total weight [jin]</i>	<i>porters needed</i>
large iron cannon ( <i>da tiepao</i> 大鐵砲)	600	200	800	16
nine-segment cannon ( <i>jiujiapao</i> 九節砲)	300	100	400	8
five-segment cannon ( <i>wujiapao</i> 五節砲)	200	100	300	6
'mountain-breaking howitzer' ( <i>pishanpao</i> 劈山砲)	125	74.875	200	4

□ 4.8 Table: Weights and transport conditions of some cannon types

In order to transport the ponderous iron cannon (*da tiepao* 大鐵砲) which—together with its mounting and equipment—weighed 800 *jin* (600 *jin* for the piece alone, corresponding to 358 kilos), 16 men were recruited each of whom had to carry 50 *jin*, the standard workload. The 'nine-segment cannon' (*jiujiapao*) weighed 300 *jin* (179 kilos), with equipment 400 *jin*. According to the standard workload, eight men would be needed to carry such a cannon. The 'five-segment cannon' (*wujiapao* 五節砲) cited in the *Jinchuan junxu li'an*, which cannot be

<sup>155</sup> *Jinchuan dang* QL 37/IV/00185 (QL 37/11/15).

<sup>156</sup> *Pingding Liang Jinchuan fanglüe* 98, fol. 9b (QL 39/6/guimao); 104, fol. 21b-22b (QL 39/9/dingsi).

<sup>157</sup> *Jinchuan dang* QL 39/III/00177 (QL 39/8/6).

<sup>158</sup> *Jinchuan dang* QL 41/I/00283 (QL 41/3/9).

found in any further documents, had a weight of 200 *jin* (119 kilos), with equipment 300 *jin*, and hence was carried by six men. Although the name of the ‘mountain-breaking howitzer’ (*pishanpao*) suggests that it might have been a very heavy piece, it was the lightest of the four models of artillery mentioned in the *Jinchuan junxu li’an*. This piece from the Manchu garrisons (*Manying* 滿營) only weighed 125 *jin* but was obviously more difficult to maintain and to operate, which can be seen from the large number of accessories listed below (Table 4.9). To transport one piece of this cannon type together with its equipment, weighing 74.875 *jin* (45 kilos), four men were needed.<sup>159</sup>

Although the *chongtian* howitzer is not mentioned in the regulations or the documents of the Jinchuan campaign it was a standard type of howitzer. It should be mentioned that the howitzers were not loaded with cannonballs, but with grenades. For these, no statements at all can be found in the archival or published documents on Jinchuan. A description of a grenade and the loading of a howitzer can be found in the *Da-Qing huidian tu*.<sup>160</sup>

The equipment of the ‘mountain-breaking howitzer’ was, as far as listed:<sup>161</sup>

<i>item</i>	<i>weight [jin]</i>
gun carriage ( <i>jia</i> 架)	28
adjusting or elevation tool ( <i>chaotian deng</i> 朝天{革+登})	8
muzzle ring (? probably a support for adjusting the barrel, <i>ba men lianhuan</i> 靶門連環)	23
cover with frame ( <i>bu jia tao</i> 布夾套)	2.125
oil cloth cover ( <i>you bu tao</i> 油布套)	3.375
leather pouch ( <i>pida</i> 皮搭)	4
leather flask ( <i>pi hulu</i> 皮葫蘆)	2.875
fuse rod ( <i>huogan</i> 火桿)	1
wiping and charging shovel ( <i>ban sao er mu gan</i> 半掃耳木杆, also called <i>chong gan sao er chanzi</i> {手+充}桿掃耳鏟子; short: <i>chongchan</i> {手+充}鏟); weight depending on the type of cannon	2, 10, 11, or 30
ignition powder flask ( <i>hongyao hulu</i> 烘藥葫蘆), weight with gunpowder: 2.375 <i>jin</i>	0.5
‘dragon support’ ( <i>longgang</i> 龍槓), only for large iron cannon	15
two adjusting bolts ( <i>qianjin</i> 千觔 [sic!]), only for large iron cannon	80

□ 4.9 Table: Equipment of the ‘mountain-breaking howitzer’ and other cannons, as indicated

Compared with western artillery this equipment is rather scarce. It needs further research if 18th century Chinese artillery made use of vent prickers, lifting gyns, barrel bungs, sponges and ram rods, so-called ‘worms’ to pick out residues, quoins for elevating the barrel, augers to increase the diameter of the vent, linstocks, portfire sticks, hand spikes or drag hooks to move the piece back after the recoil, and so on.

<sup>159</sup> *Jinchuan junxu li’an* 2, fol. 59a-59b.

<sup>160</sup> *Da-Qing huidian tu* 98, [fol. 21b].

<sup>161</sup> *Jinchuan junxu li’an* 2, fol. 58b-59a.



The logistics stations had to store all material required for casting iron cannons. The following articles that had to be procured in Chengdu on the market are listed with their respective official prices.<sup>162</sup>

<i>item</i>	<i>unit</i>	<i>price [liang]</i>
white clay ( <i>baitu</i> 白土)	1 <i>jin</i>	0.0025
clay pieces ( <i>gangwazi</i> 缸瓦子)	1 <i>jin</i>	0.002 – 0.003
straw ( <i>doucao</i> 稻草); old official price 0.1 <i>liang</i>	100 <i>jin</i>	0.04
large bamboo basket ( <i>da doukuang</i> 大斗筐), weight 10 <i>jin</i> ; old official price 0.15 <i>liang</i>	1 piece	0.105
basket or sieve ( <i>shiluo</i> 篩籬), weight 10 <i>jin</i> ; old official price 0.05 <i>liang</i>	1 piece	0.02
steel file ( <i>gangcuo</i> 鋼銼); old official price not known	1 piece	0.086
horse-tail sieve ( <i>maweiluo</i> 馬尾籬), weight 0.5 <i>jin</i> ; old official price not known	1 piece	0.033
fired bricks ( <i>huozhuan</i> 火磚), length 8 <i>cun</i> , width 4 <i>cun</i> , thickness 0.6 <i>cun</i> , weight 1.5 <i>jin</i> ; old official price 0.003 <i>liang</i>	1 piece	0.0013
charcoal ( <i>mutan</i> 木炭); old official price not known	1 <i>jin</i>	0.0025
salt ( <i>yan</i> 鹽); old official price 0.014 <i>liang</i>	1 <i>jin</i>	(cancelled)
vegetable oil ( <i>qingyou</i> 清油)	1 <i>jin</i>	0.03
bovine tallow torch ( <i>niuyouzhu</i> 牛油燭)	1 <i>jin</i>	0.02
cooling mat ( <i>liangxi</i> 涼蓆), weight 1.5 <i>jin</i> ; old official price 0.15 <i>liang</i>	1 piece	(cancelled)
winnowing sieve ( <i>boji</i> 簸箕), weight 2 <i>jin</i>	1 piece	0.04
waste basket ( <i>cuoji</i> 撮箕), weight 1 <i>jin</i>	1 piece	0.02
wooden calabash ( <i>mupiao</i> 木瓢), weight 1 <i>jin</i>	1 piece	0.008
broom ( <i>tiaozhou</i> 笤帚), weight 1 <i>jin</i>	1 piece	0.008
straw hat ( <i>caomao</i> 草帽)	1 piece	0.02
pipe with sandal-wood spiral ( <i>tanmu luosi tongguan</i> 檀木螺 絲筒管), weight 1.5 <i>jin</i> ; old official price 0.17 <i>liang</i>	1 piece	(cancelled)
hemp-(rope) ( <i>ma</i> 麻), 1) length 1.9 <i>zhang</i> , thickness 3 <i>cun</i> , weight 20 <i>jin</i> 2) length 3.56 <i>zhang</i> , thickness 1 <i>cun</i> , weight 1 <i>jin</i> 3) length 2.85 <i>zhang</i> , weight 3 <i>jin</i>	1) 1 <i>jin</i> 2) 3) 1 piece	1) 0.02 2) 0.03
iron wire ( <i>tiesi</i> 鐵絲); old official price 0.13 <i>liang</i>	1 <i>jin</i>	(cancelled)
water-proof paper (? <i>tulianzhi</i> 土連紙); 100 sheets, weight 0.5 <i>jin</i> ; old official price 0.05 <i>liang</i>	100 sheets	(cancelled)
palm fibres ( <i>zongpi</i> 棕皮)	1 <i>jin</i>	0.02
soft (or recycled?) steel ( <i>sugang</i> 蘇鋼)	1 <i>jin</i>	0.08
large grid ( <i>da luchi</i> 大爐齒), weight 15 <i>jin</i> ; old official price 0.05 <i>liang</i>	1 <i>jin</i>	(cancelled)
small grid ( <i>xiao luchi</i> ), weight 10 <i>jin</i> ; old official price 0.05 <i>liang</i>	1 piece	(cancelled)
chicken feathers ( <i>jimao</i> 雞毛)	1 <i>jin</i>	0.02
coal ( <i>meitan</i> 煤炭); old official price 0.148 <i>liang</i>	100 <i>jin</i>	0.09
large bellows ( <i>da fengxiang</i> 大風箱), weight 25 <i>jin</i>	1 piece	0.5
palm fibre brush ( <i>zongshua</i> 棕刷); old official price 0.03 <i>liang</i>	1 piece	(cancelled)
iron drill head ( <i>tie zuantou</i> 鐵鑽頭); old official price 0.05 <i>liang</i>	1 piece	(cancelled)
drilling pole ( <i>zuangan</i> 鑽桿); old official price 0.02 <i>liang</i>	1 piece	(cancelled)
beeswax ( <i>huangla</i> 黃臘 [=蠟]); old official price 0.32 <i>liang</i>	1 <i>jin</i>	(cancelled)
salpêtre ( <i>huoxiao</i> 火硝); old official price 0.05 <i>liang</i>	1 <i>jin</i>	(cancelled)

<sup>162</sup> *Jinchuan junxu li'an* 2, fol. 63a-64b.

4. THE COST OF HORSES, FOOD AND MATERIALS

copper sulphate, blue vitriol ( <i>danfan</i> 胆礬); old official price 0.05 <i>liang</i>	1 <i>jin</i>	(cancelled)
borax ( <i>pengsha</i> 硼砂); old official price 0.16 <i>liang</i>	1 <i>jin</i>	(cancelled)
water bucket ( <i>shuitong</i> 水桶), weight 10 <i>jin</i> ; old official price 0.2 <i>liang</i>	1 piece	(cancelled)
pig-iron ( <i>shengtie</i> 生鐵)	1 <i>jin</i>	0.015
slab of pig-iron ( <i>shengtie dun</i> 生鐵墩), weight 40 <i>jin</i>	1 piece	0.6
impure iron ( <i>maotie</i> 毛鐵)	1 <i>jin</i>	0.01
pure iron ( <i>shutie</i> 熟鐵)	1 <i>jin</i>	0.06
large hammer ( <i>da chui</i> 大錘), weight 5 <i>jin</i>	1 piece	
double-saw (? <i>erju</i> 二鋸), weight 0.25 <i>jin</i>	1 piece	
large iron 'gourd' ( <i>da tiepiao</i> 大鐵瓢), weight 0.375 <i>jin</i>	1 piece	
large saw-file ( <i>faju dacuo</i> 發鋸大銼), weight 0.375 <i>jin</i>	1 piece	
iron spade ( <i>tiexian</i> 鐵鋤), weight 0.25 <i>jin</i>	1 piece	
pig-iron nozzle ( <i>shengtie qizui</i> 生鐵氣嘴), weight 0.4375 <i>jin</i>	1 piece	
small axe ( <i>xiao fuzi</i> 小斧子), weight 3 <i>jin</i>	1 piece	
large iron wok ( <i>da tieguo</i> 大鐵鍋), weight 10 <i>jin</i>	1 piece	0.5
small iron wok ( <i>xiao tieguo</i> 小鐵鍋), weight 5 <i>jin</i>	1 piece	0.4
small wooden basin ( <i>xiao mupen</i> 小木盆), weight 5 <i>jin</i>	1 piece	0.05
large spade ( <i>da xian</i> 大鋤), weight 6 <i>jin</i>	1 piece	0.05
large wooden basin ( <i>da mupen</i> 大木盆)	1 piece	
'drag-drill' ( <i>chezuan</i> 扯鑽), weight with pole 0.0635 <i>jin</i>	1 piece	0.06
leather strip ( <i>pitiao</i> 皮條)	1 piece	0.01
lamp case made of bamboo strips ( <i>miezhu denglong</i> 蔑絲燈籠)	1 piece	0.05
large brush made of goat hair ( <i>da yangmao bi</i> 大羊毛筆)	1 piece	0.004
pine resin ( <i>songxiang</i> 松香)	1 <i>jin</i>	0.03
cowhide ( <i>niupi</i> 牛皮)	1 piece	0.5
cotton yarn ( <i>mianxian</i> 棉線); old official price 0.4 <i>liang</i>	1 <i>jin</i>	(cancelled)
leather paper ( <i>pizhi</i> 皮紙), weight 0.5 <i>jin</i> ; old official price 0.06 <i>liang</i>	100 sheets	(cancelled)

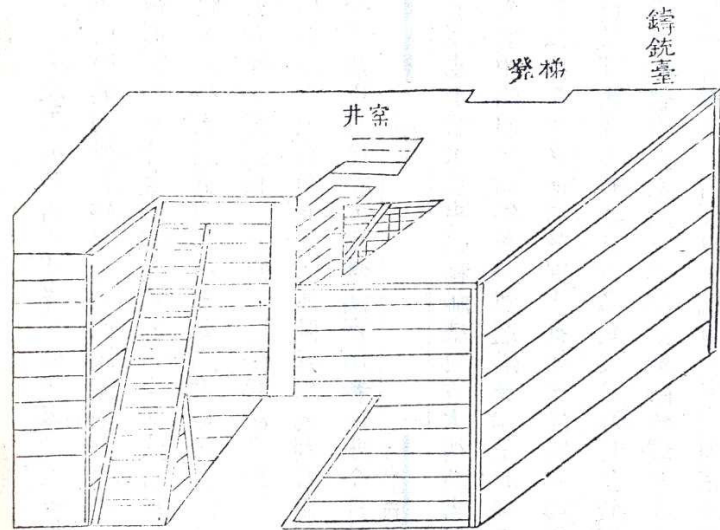
□ 4.10 Table: Official prices for utensils needed to cast cannons

For many items needed to cast cannons the Ministry of Revenue decreased the official purchase price from the first Jinchuan war ('old official price' in Table 4.3; 'the Ministry only allows [this and that amount which can be brought to account]' *bu [zhi] zhun* 部止准) or cancelled them (*shan qu* 刪去, or *quan shan* 全刪) from the list of items which could be bought from state funds, because they were either considered unnecessary (*wu yong* 無用), or because there were no respective precedents from the first Jinchuan war (*jiu li wu* 舊例無 'no [respective record] in the old rules'). In one case the Ministry decided not to pay for any claim brought forward for the purchase: water buckets could be made on the spot by the workers in the camp foundries and it was therefore not necessary to buy them ('In the cannon foundries there are workmen who can produce [the buckets]—why should they be organised [from the markets]?').

In the foundry the cannons were apparently cast in several parts which were then cast together to one piece. Craftsmen fabricated the casting moulds (*paomo* 炮模) and the core of the

cannon (*paoxin*), and cast rings of iron (*tiegu* 鐵箍) and strengthening rings of brass (? *wengu* 穩箍), as well as the reinforced breech of the piece (*yapao diban* 壓炮底板).<sup>163</sup> In a late Ming book on firearms, *Huogong qieyao* 火攻契要 ‘All important matters of gunfight’, a ‘casting terrace’ (*zhutai* 鑄臺) is shown and described (Figure 4.11). It was made of bricks and filled with earth.<sup>164</sup>

In the final account book the officials outline the exact numbers of large brass and iron cannons used during the war: 4 *tiancheng jiangjun pao* 天成將軍砲 ‘cannons of the general of celestial completion’; on the western route: 1 ‘great general cannon’ (*dajiang[pao]*), 7 large iron cannons, 2 ‘nine-segment cannons’, 98 ‘mountain-breaking cannons’, 161 brass cannons ‘cast in the camp foundries’; on the



□ 4.11 Figure: A ‘casting platform’ for casting cannons and howitzers

Source: *Huogong qieyao*, Plate 1.

central route: 2 iron cannons; on the southern route: 3 iron and brass cannons, 1 small brass cannon, 41 ‘mountain-breaking cannons’, and 117 iron cannons ‘cast in the camp foundries’. Although those figures make for a total of only 437, the *Jinchuan junxu li'an* speaks of 657 large cannons.<sup>165</sup>

The figures also contradict the general impression from the documents in the *Pingding Liang Jinchuan fanglüe* that iron cannons were not very common, compared to brass ones.

For all metal items needed in the camps 7,245,461 *jin* (4,325 metric tons) of ‘crude and refined brass and iron’ (*sheng-shu tong-tie* 生熟銅鐵) were used. It is possible to find out the exact amounts for brass and iron from the descriptions of the need of material on the particular routes. According to those data a sum of 7,256,607 *jin* accrues of which 6,865,170 *jin* (4,099 metric tons) were iron and 391,437 *jin* (234 metric tons) brass. Although it is not possible to attribute the metals needed to particular metal items, like woks, hooks, nails, cannons, and so on, it is possible to calculate the pure material value of the metals. The almost

<sup>163</sup> *Jinchuan junxu li'an* 2, fol. 64a.

<sup>164</sup> *Huogong qieyao* Figure 1; 1, fol. 5a-5b.

<sup>165</sup> *Jinchuan junxu li'an*: *Zonglüe*, fol. 3b; 2, fol. 185a.

7 million *jin* of iron thus cost the Qing state about 70,000 *liang*, with an average price of 0.01 *liang* per *jin* of crude iron (*maotie*), or 435,000 *jin* for refined iron (*shutie*) with a price of 0.06 *liang* per *jin*. Concerning the brass, all calculations have to be based on other sources than the *Jinchuan junxu li'an*: The *Gongbu junqi zeli* cites prices of 0.13 *liang* for crude brass (*shengtong* 生銅), 0.2 *liang* for ‘red refined brass’ (*hongshutong* 紅熟銅) and 0.15 *liang* for ‘yellow refined brass’ (*huangshutong* 黃熟銅).<sup>166</sup> While the former seems to have had a higher content of copper in the alloy, the latter seems to be more appropriate to what is brass. For the almost 400,000 *jin* of brass the government had spent 58.716 *liang* on the material. The price for ‘crude brass’ was thus, as can be seen from the data above as well as Tables 4.12 and 4.13, more than ten times that of ‘crude iron’.

For at least the large iron and brass cannons cast in the camp foundries, costs can be assessed according to data in the *Gongbu junqi zeli*, the Ministry of Works’ rules for military equipment.<sup>167</sup> While the amounts of materials were fixed, the prices have to be estimated from data in the *Jinchuan junxu li'an*:

<i>item</i>	<i>unit [jin]</i>	<i>price [liang]</i>	<i>relative amount needed for the production of refined iron, basis 100 jin [jin]</i>
scrap iron ( <i>huangtie</i> 荒鐵)	1	0.01	130
coal ( <i>meizha</i> 煤炸)	1	0.0005	260
flax fibres ( <i>jiongma</i> 纒麻)	1	0.026	2.6
charcoal ( <i>mutan</i> 木炭)	1	0.0025	39
pine resin ( <i>songxiang</i> 松香)	1	0.03	3.9
soot ( <i>yanzi</i> 烟子)	1	0.04	3.9
porcelain sand (kaolin?) ( <i>cimo</i> 磁末)	1	0.01	46.8
grey clay ( <i>qinggantū</i> 青坭土) <sup>a)</sup>	1	0.0025	65
yellow clay ( <i>huangtu</i> 黃土) <sup>a)</sup>	1	0.0025	130
labour cost <sup>b)</sup>	100		0.348
<b>total amount</b>	<b>100</b>	<b>3.1716</b>	

□ 4.12 Table: Official production cost for iron cannons

<sup>a)</sup> The price is that of white clay.

<sup>b)</sup> Per 100 *jin* of iron 4 work units (*gong* 工) of casters (*tiejiang* 鐵匠) and 2 sanders (*mojiang* 摸匠) and 6/5 stout man (*zhuangfu* 壯夫) had to be paid; according to the regulations for labour pay one work unit cost 0.05 *liang*, the ‘stout men’ 0.04 *liang* per person.

The casting of one large iron cannon with a weight of 600 *jin* would thus have cost the government about 20 *liang*, casting 117 iron cannons, as stated above, would result in an expenditure of 2,226 *liang*. The process of casting iron cannons was apparently quite simple compared to that of brass cannons, which might be due to the fact that brass cannons were a more recent development and thus technologically more advanced, which can be seen in the

<sup>166</sup> *Gongbu junqi zeli* 56, fol. 7a.

<sup>167</sup> *Gongbu junqi zeli* 25, fol. 7a-8a.

large number of different work to be done with the barrel being cast ready, from polishing to boring and decorating.<sup>168</sup>

<i>item</i>	<i>unit [jin]</i>	<i>price [liang]</i>	<i>relative amount for the production of refined brass, basis 100 jin [jin]</i>
crude brass ( <i>tong</i> 銅)	1	0.13	110
coal ( <i>meizha</i> 煤炸)	1	0.0005	100
charcoal ( <i>mutan</i> 木炭)	1	0.0025	65
pottery jars ( <i>shaguan</i> 砂罐; pieces) <sup>a)</sup>		0.05	5
millet straw ( <i>shujie</i> 秫秸) <sup>b)</sup>	1	0.0004	50
flax fibres ( <i>jiongma</i> 纛麻)	1	0.026	1.625
grey clay ( <i>qinggantū</i> 青坭土) <sup>c)</sup>	1	0.0025	18
yellow clay ( <i>huangtu</i> 黃土) <sup>c)</sup>	1	0.0025	40
rice straw ( <i>daocao</i> 稻草)	1	0.0004	40
pine resin ( <i>songxiang</i> 松香)	1	0.03	2.25
porcelain sand (kaolin?) ( <i>cimo</i> 磁末)	1	0.01	10
tung oil ( <i>tongyou</i> 桐油)	1	0.05	0.1125
soot ( <i>yanzi</i> 烟子)	1	0.04	1.625
adobe bricks ( <i>tupi</i> 土坯)		0	1
labour cost	100		1.28
<b>total amount</b>	<b>100</b>	<b>16.54</b>	

□ 4.13 Table: Official production cost for brass cannons

<sup>a)</sup> The price is estimated.

<sup>b)</sup> The price is that of straw.

<sup>c)</sup> The price is that of white clay.

The production cost for producing brass cannons was, according to the official price, 16.54 *liang* per 100 *jin* of metal. This is more than five times as expensive as when casting iron cannons, and can be explained by the much higher cost of materials for the metal and the exorbitantly high labour costs, being four times as much as that for iron cannons. To that price, for each cannon fabrication costs of 0.0015 *liang* and more have to be added for some decoration ('engraving the eyes', *da yan* 打眼), depending on the diameter of the respective piece. Provided all the 161 brass cannons had such a large size as stated at the beginning of this chapter, namely 3,000 *jin*, the costs for casting them would have totalled 798,882 *liang*, with a material consumption of 483,000 *jin* of brass, which is some 100,000 *jin* more than were used in fact. This means that not all cannons cast in the camp foundries were of such enormous size.

### Cannonballs

The production costs for fuses, bullets, cannonballs and gunpowder could not be determined exactly for each garrison throughout the empire. At least the prices for the workmen and the relations of the respective compounds (*gongjia*, *zuofa* 工價做法) were defined, but the material prices depended on the actual market prices of each district. The accounts therefore

<sup>168</sup> *Gongbu junqi zeli* 25, fol. 8a-10a, with material costs from *Gongbu junqi zeli* 56.

had to be made up according to the rules for military equipment (*junzhuang zeli* 軍裝則例), which described only relations, and no prices. The currently applicable prices had to be reported to the Ministry before making up the account.<sup>169</sup>

Prices for iron varied over a wide range, depending on the local market situation. The Ministry of Works therefore did not fix prices for settling accounts on iron. As crude iron or refined iron was bought from traders on the free market and not supplied by state agencies, its price was subject to fluctuations. Nevertheless the bureaucratic framework made it necessary for officials not to invent astronomical prices, and therefore rough directives for iron prices can be found in the *Jinchuan junxu li'an*:<sup>170</sup>

<i>item</i>	<i>price per jin [liang]</i>
crude iron ( <i>shengtie</i> 生鐵)	0.008 – 0.015
scrap iron ( <i>huangtie</i> 荒鐵)	0.005 – 0.015
impure iron ( <i>maotie</i> 毛鐵)	0.01
refined iron ( <i>shutie</i> 熟鐵)	0.03 – 0.06

□ 4.14 Table: Official prices for iron

It cannot be assumed that it was possible to erect technologically advanced furnaces for melting iron and brass in the high mountains. The furnaces in the camp foundries must have been of a very simple type that was just able to melt the iron and to cast crude cannonballs. The iron used for the cannonballs cannot have been of a very high quality and therefore an average price of 0.01 *liang* per *jin* of iron might have been adequate for the cannonballs.

The production cost—according to government prices—for cannonballs might have been the following:<sup>171</sup>

<i>item</i>	<i>unit [jin]</i>	<i>price [liang]</i>	<i>relative amount for the production of cannonballs, basis 100 jin of iron [jin]</i>
impure iron ( <i>maotie</i> 毛鐵)	1	0.01	125
coal ( <i>meizha</i> 煤炸)	1	0.0005	250
charcoal ( <i>tan</i> 炭)	1	0.0025	37.5
flax fibres ( <i>zhuma</i> 苧麻)	1	0.026	1.875
soot ( <i>yanzi</i> 烟子)	1	0.04	3.75
porcelain sand (kaolin?) ( <i>cimo</i> 磁末)	1	0.01	42.5
labour cost	30	0.05	(3.33)
<b>total amount</b>	<b>100</b>	<b>2.260</b>	

□ 4.15 Table: Official production cost for cannonballs

Labour cost for the production of cannonballs is not further specified in the *Jinchuan junxu li'an*. But as all necessary materials like coal, charcoal, soot etc. correlate with each other for the production of 100 *jin* of iron, it can be assumed that the given price of 0.05 *liang* ('one workload', *yi gong* 一工) also corresponded to the production of 100 *jin*, an amount for which an official was allowed to bring 2.26 *liang* to account. Only half of this amount was the

<sup>169</sup> *Jinchuan junxu li'an* 2, fol. 46a.

<sup>170</sup> *Jinchuan junxu li'an* 2, fol. 46a-46b, 64a-64b.

<sup>171</sup> *Jinchuan junxu li'an* 2, fol. 45b.

price for iron, a fifth was that for porcelain sand (kaolin?) for the moulds. It is hardly conceivable that even a material as simple as sand had to be transported from Chengdu or elsewhere into the high mountains. Surprisingly there is no information about the sizes of cannonballs as opposed to the different calibres of muskets (see below), although the calibres for the different standard types of cannons in 18th century China are known. Sources like the *Da-Qing huidian tu* provide exact data about the weight of cannonballs and the necessary amount of gunpowder for each type of cannon. It might be that as on-standard types of cannon were cast in the provisional camp foundries the engineers just produced an improvised type of cannon or howitzer (the ‘number-three’ type etc. mentioned above) which the cannonballs had to fit and were adjusted to the actual need. As the moulds were made on the spot, such a kind of improvisation was no problem, while for the musket bullets (*qianwan* 鉛丸), special iron or ‘stone’ moulds (*shi* 石, probably means earthenware) were standard equipment for musketeer units and could always be taken with them to cast new bullets whenever needed (see Figure 4.18a).

### Charcoal burning

During the war 536,546 *jin* (320 metric tons) of iron were cast into cannonballs.<sup>172</sup> According to the production costs calculated above their production cost the Qing state 12,126 *liang*. No values are indicated as to the 300 special cannonballs for the *chongtian* howitzers.

Because brass is rarely in totally pure condition, there is always the need to add a certain surplus amount (*haotong* 耗銅) of refined brass, normally 25 per cent (adding 0.25 to 1 *jin*) when working with crude brass, in order to obtain brass that is pure enough to work with (*zhengtong* 正銅 ‘correct brass’), similar to lead and iron. Just as in the listings for cannonballs and cannons details can be found about how much coal and charcoal was needed for the melting process of brass, and prices that could be used in the balance books. For the manufacture of iron tools an additional part of pure iron of 4.8 *liang* per *jin* (ca. 30%) was added to pig iron.<sup>173</sup> Concerning the fuel, the following data are available:

<i>item</i>	<i>amount</i>	<i>price</i> [ <i>liang</i> ]
<b>brass</b>		
coal ( <i>meizha</i> 煤炸)	12.5 <i>jin</i>	0.00625
charcoal ( <i>mutan</i> 木炭)	37.5 <i>jin</i>	0.09375
<b>total amount</b>		<b>0.1</b>
alternatively: charcoal	200 <i>jin</i>	0.04973
<b>iron</b>		

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<sup>172</sup> *Jinchuan junxu li'an* 2, fol. 185a.

<sup>173</sup> *Jinchuan junxu li'an* 2, fol. 48b-49b, 59a-59b. About the processing of metals, more information can be found in (Jiaqing 22) *Gongbu xuzeng zeli* 51-54.

coal ( <i>meizha</i> 煤炸)	300 <i>jin</i>	0.015
charcoal ( <i>mutan</i> 木炭)	12.5 <i>jin</i>	0.03215
<b>total amount</b>		<b>0.18215</b>

□ 4.16 Table: Fuel needed for smelting brass and iron

It can be seen that for iron processing the fuel almost exclusively used is coal, while for the melting of brass charcoal outweighs coal in a proportion of 3 : 1. For the production of 100 *jin* of iron cannonballs 250 *jin* of coal and 37 *jin* of charcoal were needed, that is about triple the amount of charcoal as compared to the charcoal consumption for the production of iron tools. These relations show that for the casting of the low-quality cannonballs lower temperatures were sufficient, which was also easier for the logistics organisation—charcoal could be produced locally while coal had to be shipped from elsewhere. Charcoal was much more expensive than mined coal, but transportation costs and the lower calorific value were not negligible. Therefore it was decided that for the casting of cannons per 100 *jin* of brass 200 *jin* of charcoal were to be used, which was five times as expensive as when using hard coal. For the melting process three people from the logistics stations were hired, during the melting and first founding one workman (*jiang*) who was no longer needed for the rest of the process. Eight more persons were used to collect fuel and to erect a charcoal kiln (*yao* 窑). Two charcoal burners (*shaofu* 燒夫) observed the carbonisation process (*shao tan* 燒炭). The kiln was opened after five days, yielding 450 to 460 *jin* (287 – 275 kilos) of charcoal. Originally charcoal porters who transported their load in baskets (*lou* 簍) received 0.0195 *liang* per day for a load of 60 *jin*. This remuneration was changed to 0.03 *liang* for a load of 50 *jin*, which meant a decisive improvement of their working conditions.<sup>174</sup> Regulations for charcoal kilns which were derived from the precedents from the second Jinchuan war are also included in the *Junxu zeli*. This source states that for an amount of 450 to 460 *jin* of charcoal several thousand *jin* of wood were necessary. Because the natural conditions and the available types of wood for fuel were different in each place, no concrete relation is recorded. The large staff needed for each kiln is justified by the large amount of wood to be collected and the important task to diligently observe the burning process around the clock. The regulations explicitly say that it was only allowed to bring costs for charcoal kilns to account if it was more expensive to provide mined coal from territory inside the provinces, than to burn charcoal on the spot.<sup>175</sup>

## Fuses

<sup>174</sup> *Jinchuan junxu li'an* 2, fol. 59a-59b, 69b.

<sup>175</sup> *Gongbu junxu zeli* 1, fol. 4a-5a.



Fuses were coiled up into ‘fuse discs’ (*huosheng pan* 火繩盤). Each piece was 3 *fen* thick (10 mm) and 1 *zhang* long (3.2 metres). Because there are no data available about the production of special musket fuses it can be assumed that the standard muskets, the ‘bird muskets’ *niaoqiang* 鳥槍, were already equipped with flintlocks and did not any more rely on the matchlocks which were very prone to moisture. During the production process (‘cooking’, *zhu* 煮) the weight of raw flax is reduced by one fourth.<sup>176</sup>

<i>item</i>	<i>unit</i>	<i>price [liang]</i>
raw flax ( <i>huangma</i> 荒麻); necessary: 4 <i>liang</i> for 1 disc	10 <i>liang</i>	0.012
labour cost	10 discs	0.024
<b>total</b>	<b>1 disc</b>	<b>0.0072</b>

□ 4.17 Table: Official production cost for fuses

The costs for a fuse disc were allowed to settle for 0.0072 *liang*. Another source, the *Junxu zeli*, gives information that in Sichuan also longer (2 *zhang*) and thinner (2 *fen*) fuses were produced that could be settled for 0.00455 *liang*. Fuses with a thickness of 2.5 *fen* had a government price of 0.005275 *liang*, and those with a thickness of 3 *fen* a price of 0.006 *liang*. The Yunnanese fuses were much cheaper than those from Sichuan because they were not made of flax but from the bark of a kind of tree (*langshu pi* 榔樹皮).<sup>177</sup>

Although the Ministry did not feel very comfortable with the fact that the material prices were different in each province according to local conditions and therefore rejected the account for a certain amount of fuses, it did in the end only cancel somewhat over 3 *liang* from a sum of 231.37 *liang* brought to the respective account. The 11,749,023 fuse discs used during the war could, according to the official production costs, have cost 84,593 *liang*.<sup>178</sup>

Concerning the fuses, the notoriously bad weather of Jinchuan had a devastating influence on the fire-power of both the Qing armies and their enemies, as the permanent rainfall thoroughly soaked fuses and gunpowder so that the troops were often not able to ignite their fire-arms. To solve this problem the troops covered gunpowder, fuses and arrows with clothing and mats to prevent them from dampness caused by the incessant rainfall.<sup>179</sup>

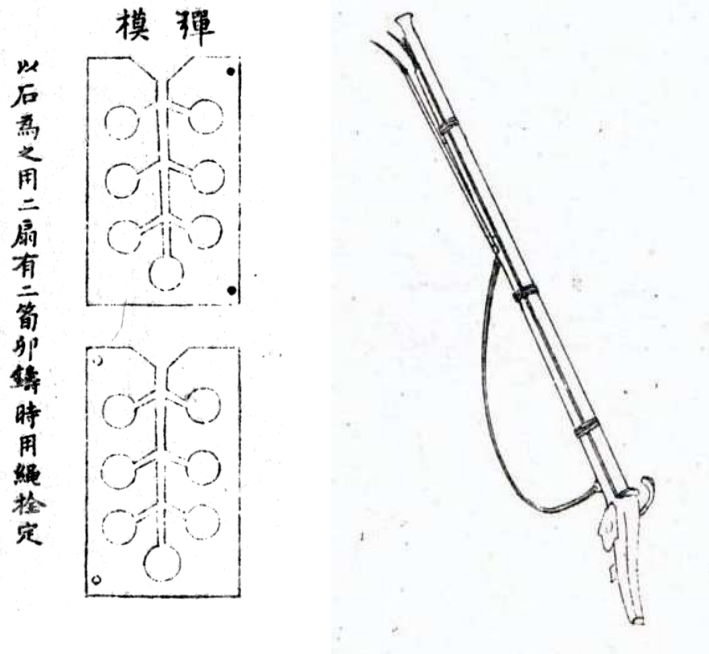
## Muskets and bullets

<sup>176</sup> *Jinchuan junxu li'an* 2, fol. 45b-46a. Additional information about the production of fuses can be found in (Qianlong 58) *Gongbu zeli* 26 and (Jiaqing 22) *Gongbu zeli* 32-33.

<sup>177</sup> *Gongbu junxu zeli* 1, 3b-4a.

<sup>178</sup> *Jinchuan junxu li'an* 2, fol. 184b.

<sup>179</sup> *Pingding Liang Jinchuan fanglüe* 9, fol. 2a-2b (QL 36/11/dingyou); 97, fol. 10b-11a (QL 39/6/gengyin); 100, fol. 3b (QL 39/7/jiwei).



□ 4.18a/b Figure: ‘Bird musket’ (niaoqiang; right) and casting mould for bullets (left)

Sources: *Shenqipu*, fol. 16a (left), *Da-Qing huidian tu* 99, [fol. 16a] (right).

The standard gun of the Qing troops was the so-called ‘bird musket’ (*niaoqiang*, see Figure 4.18b). The name might be derived from the bird-shaped appearance of the lock holding the fuse, or later, the flint (hence the old designation *niaozuichong* 鳥嘴銃 ‘bird beak musket’). The Chinese muskets were probably derived from an Indian or Persian type of musket or another type of musket from the Islamic world. A late Ming book on firearms, the *Shenqipu* 神器譜 ‘Miraculous

Weapons’, contains illustrations of ‘Roman’ muskets (*Lumi chung* 嚙密銃) and ‘Western’ muskets (*Xiyang chong* 西洋銃), and illustrations that show how musketeers from the respective countries charged and fired their weapons, quite similar to the illustrations in the musketry exercise book by Jacob de Gheyn (1565 – 1629).<sup>180</sup> Interestingly enough, the term ‘Roman’ means Western Asian, or Ottoman, as can be seen from the turban-wearing musketeer in the illustrations (see Figure 4.21). The main difference between the muskets shown in the *Shenqipu* and the ‘bird’ muskets of the high Qing period is the bipod (*cha* 叉) attached to the lower side of the barrel which helped to aim the 6 *jin* (3.6 kilos) heavy musket to the target, a device totally unknown in the West where the musketeers only used a portable support with a forked metal head during the 17th century, while the later muskets were light enough to be used without any support. The bipod, nonetheless, can be observed on 18th century Mughal muskets and it is therefore quite probable that the *niaoqiang* type musket used by the Qing troops was derived from the Islamic world and not from the West.<sup>181</sup>

Costs that accumulate when producing bullets for muskets could be settled as listed below:<sup>182</sup>

<i>item</i>	<i>unit</i> [jin]	<i>price</i> [liang]	<i>relative amount for the production of bullets, basis 100 jin of lead</i> [jin]
[crude] lead ([ <i>mao</i> ]qian 毛鉛)	1	0.035	112.5

<sup>180</sup> Republished by Kist (1999), Blackmore (2006).

<sup>181</sup> Compare the illustrations in Elgood (1995), p. 140.

<sup>182</sup> *Jinchuan junxu li'an* 2, fol. 45a-45b. See also, *Gongbu junxu zeli* 1, fol. 2b-3a.

4. THE COST OF HORSES, FOOD AND MATERIALS

charcoal ( <i>tan</i> 炭)	1	0.0025	50
vegetable oil ( <i>qingyou</i> 清油)	1	0.03	1
labour cost	640	0.05	
<b>total</b>	<b>100</b>	<b>4.1003</b>	

□ 4.19 Table: Official production cost for musket bullets

For the production of 100 *jin* of pure lead (*jingqian* 淨鉛) 112.5 *jin* of crude lead or work lead were necessary according to the rules in Sichuan. In Yunnan 1.1875 *jin* (0.709 kilos) of ‘crude lead’ (*haoqian* 耗鉛) were required. Just as for the melting process of formerly used brass or iron, it was not useful to make it undergo a complicated process of purification, but per 100 *jin* of ‘scrap lead’ 12.2 *jin* of refined lead were added in order to reduce the percentage of polluting substances.

Labour cost for the production of musket bullets can only be calculated as a statistical average of the volumes of material (640 *jin*). A worker was able to produce bullets of different calibres for different types of muskets. Within a certain time, presumably one day, a worker was able to cast the following quantities and sizes of bullets:<sup>183</sup>

weight of single bullet [qian]	quantity of bullets	total weight [jin]
16	450	720
8	1000	800
5	1300	650
4	1500	600
3	1800	540
2.8	1900	532
	(average)	640

□ 4.20 Table: Dispositions for casting musket bullets

The average *niaoqiang* muskets had even a bullet with a weight of only 1 *qian*.<sup>184</sup>

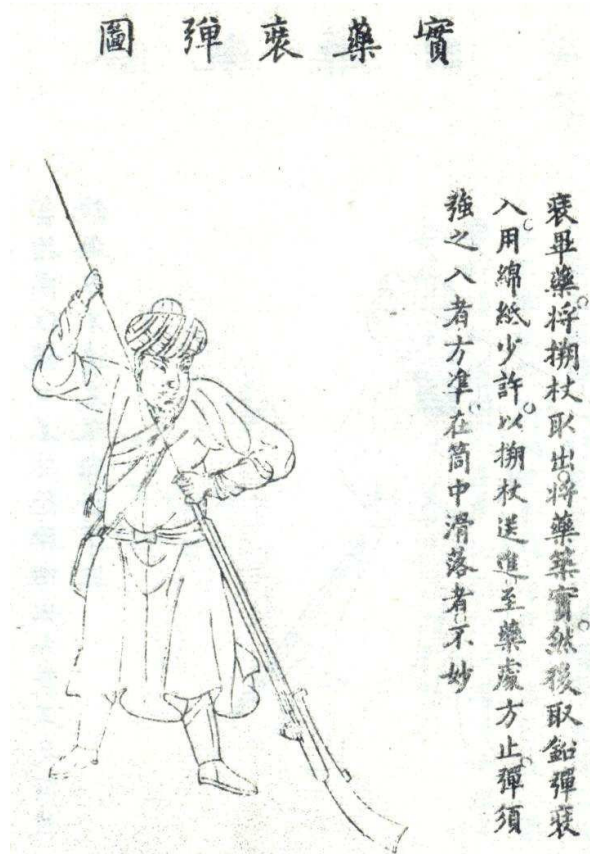
The production of 100 *jin* of 5-*qian* bullets cost only 4.1 *liang*. Labour costs were, compared to those for the production of gunpowder, very low: they only amounted to 0.2 per cent of the total costs (0.0078 *liang*), as opposed to 0.03 *liang* for oil, 0.125 *liang* for charcoal and almost 4 *liang* for the crude lead. The oil served to protect the bullets from water and corrosion and possibly made the loading operation smoother and faster.

As the *Junxu zeli* says, the bullets were made and kept ready in the garrisons, where labourers were charged with the task to produce the ammunition. In the camps it might likewise have been private assistants who cast the bullets. According to the precedents in Yunnan labour cost was to be paid to the casters, the ‘labourers of the workshop’ (*chang ben ren* 廠本人), the people smoothing the bullets (*yuanzheng ren* 圓整人), and for the charcoal burners. The

<sup>183</sup> *Jinchuan junxu li'an* 2, fol. 45a-45b; *Hubu junxu zeli* 1, fol. 2b-3b. Additional information on the production of bullets can also be found in (Qianlong 58) *Gongbu zeli* 26 and (Jiaqing 20) *Gongbu zeli* 32.

<sup>184</sup> *Da-Qing huidian tu* 99, [fol. 16a].

Yunnan garrisons made use of pure lead (*jingqian* 淨鉛) and the Sichuan garrisons used crude lead (*maoqian*), according to the Junxu zeli, which contradicts the rules recorded in the *Jinchuan junxu li'an*. This might be due to the fact that troops from many different provinces took part in the campaign and that for the account of war expenditure a standard between the different provincial rules had yet to be elaborated.



□ 4.21 Figure: Central Asian charging his musket  
Source: *Shenqipu*, fol. 17b.

The amount of lead for bullets was so immense that the troops soon ran out of raw material for casting their ammunition. Some 10,000 *jin* of lead (*heiqian* 黑鉛) produced in the mines or workshops near Yazhou were sufficient to support the army for a while.<sup>185</sup>

Yet in QL 38/10 (Nov – Dec 1773) Wenshou asked for 400,000 *jin* of lead to be sent from the mines in Zhazi 柞子 in the prefecture of Weining 威寧 in Guizhou. The lead from this mine had originally been earmarked for the mints in Hunan and Beijing.<sup>186</sup> Therefore the war chest in Sichuan must have paid back the corresponding sum of money to the provincial mint in Hunan and the mints in Beijing later.

The total consumption of lead for bullets was 2,525,086.089 *jin* (1,507 metric tons).<sup>187</sup>

With an average production cost of 4.1 *liang* per 100 *jin* of bullets the expenditure for lead bullets accrued to 103,529 *liang*. During the war 3,574 *niaoqiang* muskets were in use. Since they were considered to be durable equipment and possibly had to be cared for by the user for decades, they can not really be counted as war expenditure. Yet the fact that such a figure turns up in the account for the expenditure for the second Jinchuan war might be due to repair or replacement costs for 3,574 muskets having been paid by the government. At the beginning of the Qing period still only part of the troops were equipped with muskets, as the special titles of *niaoqiang jiyanggin* 鳥槍章京 ‘commander of the musketeers’ and *niaoqiang*

<sup>185</sup> *Pingding Liang Jinchuan fanglüe* 32, fol. 20b-2a (QL 37/6/yiyou).

<sup>186</sup> *Pingding Liang Jinchuan fanglüe* 79, fol. 3b-4a (QL 38/10/renzi).

<sup>187</sup> *Jinchuan junxu li'an* 2, fol. 184b. The text erroneously writes *qian paozi* ‘cannonballs of lead’. The original units are: 2,525,086 *jin* 14 *liang* 2 *qian* 4 *fen*. The last three digits correspond to 0.89 *jin*.

*hujunxiao* 鳥槍護軍校 ‘lieutenant of the musketeer guards brigade’ prove, which are mentioned in the *Pingding Liang Jinchuan fanglüe*. But at the end of the 18th century the musket must have become so widespread that at least all Banner troops were equipped with that weapon. Even for the Jinchuan rebels a musket was standard equipment in their fight against the otherwise superior army of the Qing empire.<sup>188</sup> This can also be seen from the lists of regulation equipment of the Green Standard garrisons discussed below. A further hint to the fact that Green Standard units were also regularly equipped with muskets is the description in the *Da-Qing huidian tu* stating that the gunstocks (*muchuang* 木牀) were painted with yellow lacquer for the Manchu and Mongol Banner units, black for the Chinese Banner units, and red for the Green Standard units.<sup>189</sup> Although many Banner units still bore names that hinted at exclusive elite units using muskets, like the *niaoqiang bubing* 鳥槍步軍 ‘infantry musketeers’ or the *niaoqiang xiaoji* 鳥槍驍騎 ‘cavalry musketeers’, these were old terms which did not reflect the real situation at the end of the 18th century.<sup>190</sup>

### Gunpowder

Together with simple listings of prices and amounts for the components of gunpowder, the *Jinchuan junxu li'an* also provides the logistics managers with a recipe of gunpowder. Large amounts of gunpowder were delivered from the garrisons in Chengdu, Xi'an but also from the capitals of other provinces. But the consumption of gunpowder was so high that the commanding generals permanently asked for new gunpowder that was normally to be produced in the garrisons. Why then the *Jinchuan junxu li'an* provides a relatively accurate recipe to produce gunpowder, is not clear. If commanders were in possession of this recipe the gunpowder could also be produced locally, in the worst case even by the enemy. There is nevertheless no hint in the documents that gives proof of gunpowder being produced locally by military experts among the Banner troops. The only reason why the *Jinchuan junxu li'an* gives an exact description of the components might be, as for all items mentioned in that collection, the question of accounting. The generals and the governor-general of Sichuan were not allowed to bring higher costs to their account books than those listed in the description.<sup>191</sup>

<i>item</i>	<i>unit [jin]</i>	<i>price [liang]</i>	<i>relative amount for the production of</i>
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<sup>188</sup> *Jinchuan dang* QL 37/IV/00474 (no date).

<sup>189</sup> *Da-Qing huidian tu* 99, [fol. 16a].

<sup>190</sup> To this question, compare the garrison listings in *Baqi tongzhi* 32-35, from which it becomes clear which units were equipped with muskets and cannons, as well as, for the Green Standard troops, Luo (1984), pp. 377-378.

<sup>191</sup> *Jinchuan junxu li'an* 2, fol. 45a. Regulations for the production of gunpowder can also be found in (Qianlong 58) *Gongbu zeli* 23-26 and (Jiaqing 20) *Gongbu zeli* 29-32.

			gunpowder, basis: 100 jin of nitre [jin]
crude nitre ( <i>maoxiao</i> 毛硝 or <i>huoxiao</i> 火硝)	1	0.0243	100
[crude] sulphur ( <i>[mao]huang</i> 毛磺)	1	0.029	0.125
willow charcoal ( <i>liutan</i> 柳炭)	1	0.0025	0.25
firewood ( <i>chai</i> 柴)	1	0.0005	120
labour cost ('treading' <i>ta huoyao</i> 踏火藥)	1	0.0057	
<b>total</b>	<b>100</b>	<b>3.0544</b>	

□ 4.22 Table: Official production cost for the manufacture of gunpowder

According to the price list as presented in the *Jinchuan junxu li'an* it was possible to manufacture 100 *jin* of gunpowder at a price of 3.0544 *liang*. Labour cost for the process was relatively high: they constitute more than one sixth (0.5716 *liang* for 100 *jin*) of the total cost. Prices for nitre (*huoxiao* 火硝) which was to be stored in the logistics stations range between 3.19 *liang* and 5 *liang*,<sup>192</sup> which means that the market prices for nitre varied within a wide range. There were also differences in the price of nitre among the provinces, for which reason the *Junxu zeli* did not fix an empire-wide official price.

The ingredients for 'cooking' (*ao* 熬 or *zhu*) gunpowder were also different, depending on the climatic conditions. The Ministry of Works fixed as a rule of thumb a ratio of 11.8 *liang* (here: weight measure, about 450 gr) of nitre, 2.1 *liang* of sulphur (about 75 gr) and 2.1 *liang* of willow charcoal per *jin* (or 16 *liang*) of gunpowder. Labour cost was not to be more than 0.0144 *liang* per *jin* of gunpowder. The price of 1 *jin* of nitre was to be no more than 0.0325 *liang*, that for sulphur 0.05 *liang*. While the Yunnan garrisons used pure nitre (*jingxiao* 淨硝) and pure sulphur (*jinghuang* 淨磺), the Sichuan garrisons only used 'crude' sulphur and nitre.<sup>193</sup> This statement can be supported by a document reporting that pure nitre and sulphur should be bought in Shaanxi because no pure raw material was available in Sichuan.<sup>194</sup> The precedents from the second Jinchuan war were the only regulations made for the production of gunpowder until the compilation of the *Junxu zeli* took place. Sulphur was often bought in Chongqing, for which a transport price of 0.626 *liang* per 100 *jin* was allowed to bring to account, as well as 0.06 *liang* of travel costs per day for an official (officer), and 0.04 for a common soldier. The whole round trip from the camp to Chongqing and back was not to take longer than 96 days.<sup>195</sup>

Gunpowder was produced and stored in the garrisons from where it was shipped to the war theatre as and when required. The province of Sichuan itself did not have large reserves of

<sup>192</sup> *Jinchuan junxu li'an* 2, fol. 62a.

<sup>193</sup> *Hubu junxu zeli* 1, fol. 1a-2b.

<sup>194</sup> *Pingding Liang Jinchuan fanglüe* 66, fol. 21a-21b (QL 38/7/guimao).

<sup>195</sup> *Jinchuan junxu li'an* 2, fol. 45a.

nitre. Due to the prolonged war in Jinchuan the gunpowder stored in the garrisons of the different troops was soon exhausted and therefore either more had to be produced to replenish the garrison stores or to be bought from other provinces not involved in the war. The governor-general of Shaan-Gan therefore dispatched a lower official to Hunan to purchase 200,000 *jin* of gunpowder to be taken to Xi'an to replenish the depots, and eventually to be transported on to Jinchuan.<sup>196</sup> In QL 37/6 (Jul 1772) Artai had repeatedly asked for additional gunpowder to be sent to Sichuan from other provinces.<sup>197</sup> All of the 200,000 *jin* of gunpowder kept ready in the Sichuan garrisons had been consumed, and therefore in QL 36/11 (Dec 1772; and apparently already in QL 36/8 [Sep 1771]) he had requested to support the war with 60 per cent of the gunpowder stored in the provinces of Hu-Guang (Hubei and Hunan), Shaanxi and Guizhou. Shaanxi sent 95,500, Guizhou 101,900, and Hu-Guang 20,000 *jin* of gunpowder as well as bullets for muskets. Since the nitre produced in the state-owned workshops in Sichuan (*changxiao* 廠硝 'workshop nitre') was not sufficient, Guizhou had helped out with 10,000 *jin* of nitre in QL 37/3 (Apr 1772). But not even this was enough, and Artai therefore asked for some more 10,000 *jin* of nitre to be sent from Yunnan, Shaanxi and Gansu. Lerjin 勒爾謹, governor-general of Shaan-Gan (gov. QL 37 – 41 [1772 – 1776]) consented to dispatch 10,000 *jin* of nitre from Shaanxi, as well as gunpowder from the garrison of Shaanxi containing the same quantity of nitre. The Shaanxi gunpowder was to be used to substitute gunpowder from Gansu, a province which at that time was not able to provide such large amounts of gunpowder. Things therefore became much more complicated than should be expected: not only did Sichuan have to pay back money to other provinces, but in some cases even a third party was involved which later would have to be compensated. In QL 37/6 (Jul 1772) Artai ordered a further support by 80,000 *jin* of gunpowder from Hu-Guang and 10,000 *jin* of nitre from Guizhou. The transport costs for those items had to be brought to account in the provinces concerned.<sup>198</sup> In case of shortage it could even be that the logistics managers suggested using deteriorated nitre (*zouxiao* 走硝) in order to save costs.<sup>199</sup> If such methods were common, is is no wonder why the guns were so ineffective.

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<sup>196</sup> *Pingding Liang Jinchuan fanglüe* 67, fol. 3a (QL 38/7/bingwu).

<sup>197</sup> *Pingding Liang Jinchuan fanglüe* 11, fol. 19a (QL 36/11/bingyin).

<sup>198</sup> *Pingding Liang Jinchuan fanglüe* 32, fol. 20b-21a (QL 37/6/yiyou).

<sup>199</sup> *Jinchuan dang* QL 39/IV/00059 (QL 39/11/1).

There were several places in the Jinchuan territory where sulphur (*liuhuang* 硫磺) and nitre could be produced, although only in small quantities. They were to be guarded in order to prevent the rebels from exploiting those sources.<sup>200</sup> The Lesser Jinchuan rebels also bought bullets and gunpowder from the other native kings, which could not be prevented, although the private trade of sulphur and nitre by Chinese and natives was strictly forbidden.<sup>201</sup> At least there was the expectation among the generals that after the final conquest of the two Jinchuans, sulphur and nitre sources could be exploited and used for the production of gunpowder for the post-war occupation troops. This would, when the gunpowder would be produced locally, save a lot of transport cost.<sup>202</sup> The leaders of the Jinchuan rebels even taxed their own population for gunpowder and collected 1 *jin* of nitre and 2 *liang* (or 0.125 *jin*) of sulphur from each household. This shows that every single fortified household in Jinchuan

was well-equipped with weapons and gunpowder and that those materials were readily available.<sup>203</sup>

According to the final account book in the *Jinchuan junxu li'an* the generals had used 4,271,475.6875 *jin* (2,550 tons) of gunpowder. With production costs of 3.0544 *liang* per 100 *jin*, the gunpowder must have cost the Qing state treasury 130.468 *liang*.<sup>204</sup>



□ 4.23 Figure: Different types of so-called 'plum-head arrows' (meizhenjian):

the princely type, the type for officers and common soldiers, an undesignated type, the flat head type (qi), and the Ölöd type (from left to right)

Source: *Da-Qing huidian tu* 96-97

## Arrows

<sup>200</sup> *Pingding Liang Jinchuan fanglüe* 32, fol. 21a-22a (QL 37/6/yiyou); 36, fol. 18b-19a (QL 37/8/jisi); 60, fol. 18b-19a (QL 38/5/bingzi); 62, fol. 14b (QL 38/6/bingwu).

<sup>201</sup> *Jinchuan dang* QL 40/1/00293 (QL 40/3/27).

<sup>202</sup> *Pingding Liang Jinchuan fanglüe* 48, fol. 15a-15b (QL 38/1/gengxu).

<sup>203</sup> *Pingding Liang Jinchuan fanglüe* 112, fol. 13a-13b (QL 40/1/gengwu).

<sup>204</sup> *Jinchuan junxu li'an: Zonglüe*, fol. 3b; 2, fol. 184a.



The most widespread type of arrow was the so-called ‘plum-head arrow’ (*meizhenjian* 梅針箭), also known as ‘eyebrow-head arrow’ (*meizhenjian* 眉針箭), a name derived from the slim shape of the arrowhead resembling an eyebrow.

The ‘eyebrow arrows’ (see Figure 4.23) were restricted for use by defined military units and were therefore brought along from the Capital. During the war the Banner units made use of 20,000 *meizhen* arrows.

Normal arrows were also used and in significantly higher quantities than this type of elite arrow: 478,500 normal in all.<sup>205</sup> Although the manufacturing requirements are described in the precedents of the Ministry of Works, no price can be determined from this source.<sup>206</sup> Yet the Jiaqing [JQ] 9 (1804) edition of the *Junqi zeli* gives a price of 0.035 *liang* for a normal arrow.<sup>207</sup> This would mean that for the production of roughly half a million of arrows 17,448 *liang* had to be paid.

#### Other weapons mentioned in the sources

The Qing troops used a lot of antiquated weapons the exact figure of which is only known for the short swords (*yaodao* 腰刀), namely 5,420 pieces,<sup>208</sup> probably because they were the traditional weapon of the Green Standard units. It is not explicitly stated if the given figure, as that for the muskets, was additionally produced during the war, but it must be assumed that during combat weapons were crushed or destroyed or got lost so that the particular units had to be equipped with new material to replace lost or broken equipment.

Spears (*changqiang* 長槍), lances (*changmao* 長矛), bows (*gong* 弓), and other weapons are rarely mentioned because they played only a role in close combat of which there are no reports in the official documents. The only exception are spectacular weapons like hand grenades (*huodan*) and ‘flame-throwers’ (*pentong*). The latter is described in Chapter 2. Concerning the hand grenades, there is a detailed description of the fabrication in the *Junxu zeli*.<sup>209</sup> According to this source, there existed no regulations for the production of hand grenades, except in Sichuan. A size-one (*touhao* 頭號) hand grenade was 3 *cun* (9 cm) thick and had a circumference of 9 *cun*, and 2.875 *jin* (1.7 kilos) of gunpowder were needed to fill it. Rockets (*huojian* 火箭) were also used, although they are only documented once.<sup>210</sup>

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<sup>205</sup> *Jinchuan junxu li'an* 2, fol. 185a.

<sup>206</sup> (Qianlong 14) *Gongbu zeli* 45-46.

<sup>207</sup> (Jiaqing 9) *Junqi zeli* 2, fol. 10a.

<sup>208</sup> *Jinchuan junxu li'an* 2, fol. 185a.

<sup>209</sup> *Gongbu junxu zeli* 1, fol. 7a-8a.

<sup>210</sup> *Pingding Liang Jinchuan fanglüe* 97, fol. 10b-11a (QL 39/11/gengyin). About the production of rockets, see (Jiaqing 20) *Gongbu zeli* 33 and *Gongbu junxu zeli* 1, fol. 6a.

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**Standard equipment of the troops**

The main source for the standard equipment of the Qing troops are the regulations for military equipment, the *Junqi zeli* 軍器則例. Just a few years after the issuing of the regulations for war expenditure, the *Junxu zeli*, a first kind of regulation for standard equipment was published, in QL 56 (1791), but was revised several times later.<sup>211</sup> Concerning the province of Sichuan, which shall be used here as an example, the chapter begins with an enumeration of the Green Standard garrisons (*yingzhi* 營制 ‘the system of garrisons’). Hereafter the regulations for the production and repair of military equipment are dealt with (*xiuzhi junqi zeli* 修製軍器則例) in several sub-chapters. The regulations were valid for all garrisons throughout the province.

The first sub-chapter defines periods of regular maintenance (*lixian xiuzhi* 立限修製). Cotton-lined helmets (*miankui* 綿盔), cotton-lined cuirasses or breastplates (*mianjia* 綿甲), uniform caps (*haomao* 號帽), uniform coats (*haopao* 號袍), and uniform tunics (*haogua* 號褂) were produced (*zhi* 製). They were intended for a life of 25 (armament) resp. 16 years (uniform) and had to be repaired (*xiu* 修) when half of this time was over. Tents and banners (large flags *dadu* 大纛, platoon standards *shizhangqi* 什長旗, commander’s red flags *duzhen hongqi* 督陣紅旗) were treated differently depending on their being stored in the garrisons (*cunying shanyan* 存營摻演) or used in outposts (*taicang fangshu* 臺藏防戍). In the latter case the life cycle was only half as long as when the equipment was stored and used in the garrisons: 25 years for banners, 16 years for simple tents, tents with frame, roofs and pavilions made of unlined material (*dan zhangfang* 單帳房, *dan bengzi* 單縳子, *dan lianzi* 單帘子, *dan liangpeng* 單涼篷) and 30 years for simple tents, tents with frame, roofs and pavilions made of lined material (*jia zhangfang* 夾帳房, *jia bengzi* 夾縳子, *jia lianzi* 夾帘子, *jia liangpeng* 夾涼篷). A very long life of 40 years was prescribed for tools and weapons like halberds (? *zanba laqiang* 攢靶拉鎗), two-handed swords (*shuangshou daidao* 雙手帶刀), short swords (*yaodao* 腰刀), muskets (*niaoqiang*), and spears (*changqiang* 長鎗).

The second sub-chapter deals with equipment requiring regular maintenance whenever necessary (*suishi xiuzhi* 隨時修製). In practice there seemed to be no difference between the maintenance of the above-mentioned objects and that of this category, because also here time limits were set within which the respective equipment had to be repaired, after which period

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<sup>211</sup> This edition has no chapter counting.

of time it could be written off. This was of great importance for cost control in the military budget. A cannon was expected to last a minimum of 30 years, and costs for repair could only be brought to account after that time when the piece had exploded on firing and had been repaired provisionally. After 15 years it was only allowed to bring to account repair costs if the muzzle had become too wide (*koumen kuanda* 口門寬大) to achieve an effective hit rate. The four types of cannon mentioned in the QL 56 (1791) *Junqi zeli* for the Sichuan Green Standard garrisons are the *weiyuanpao*, *pishanpao*, *zimupao* 子母炮 ‘children-and-mother cannon’, and *guoshanniao pao* 過山鳥炮 ‘bird-surpassing-the-mountains cannon’. For all other equipment, mostly to be used for the operation of artillery, different life cycles were prescribed, after which the costs for repair and new production were allowed to be brought to account, and which the Ministry of War would pay. They were gun mountings (*paojia* 砲架), gun cradles (*paochuang* 砲床), gun carriages (*paoche*),<sup>212</sup> gun packs (*paozhen* 砲枕), gun wheels (*paolun* 砲輪), gun poles (*paogan* 砲桿), gun brushes (*paoshuang* 砲刷), gun nippers (*paocha* 砲叉), gun barrels (*paochong* 砲銃), front post sights (? *paomenzhen* 砲門針), ignition rods (*huogan* 火桿), iron hammers (*tiechui* 鐵錘), leather pouches (*pi dalian* 皮搭連 [= 褡褳]),<sup>213</sup> gourds for gunpowder (*huoyao hulu* 火藥葫蘆), gourds for ignition powder (*hongyao hulu* 烘藥葫蘆), ‘nine-dragon bags’ (*jiulongdai* 九龍袋), gourds for bullets (*qianzi hulu* 鉛子葫蘆), ‘plum-blossom sticks’ (*meihuazhuang* 梅花樁), ropes to guide horses (*lanmashen* 攔馬繩), iron pegheads (*tie juetou* 鐵鑿頭), wooden pegs (*mujue* 木橛), iron hoes (*tiechu* 鐵鋤), hooks (*gouwei* 鉤尾), beam rods (*lianggan* 樑桿), brass gongs (*tongluo* 銅鑼), trombones (*dahao* 大號), war drums (*zhangu* 戰鼓), conches (*hailuo* 海螺), ‘leather toads’ (*pi hama* 皮蛤蟆), cannon covers (*bu paozhao* 布砲罩), flag cases (*bu qitao* 布旗套), sheaths (*qiaoke* 鞘殼), leather strips (*pitiao* 皮條), red ribbons (*hongying* 紅纓), wooden handles (*mubing* 木柄), bamboo rods (*zhugan* 竹桿), cane ropes (*tenggu* 籐籐 [= 籐]), and [hemp?] ropes (*sheng* 繩).

The next sub-chapter (*shouyu yingyong* 守禦應用) deals with equipment used for defence and emergencies (*jiuhuo* 救火). Equipment for such purposes was also allowed to be brought to account as depreciated after a fixed period of time. Those were mainly wooden constructions (*mujia* 木架, *mupai* 木牌, *mubang* 木梆, *mugun* 木棍) as well as hooks and

<sup>212</sup> About gun carriages and the wooden material for cannons, see also (Jiaqing 20) *Gongbu zeli* 34 and (Jiaqing 22) *Gongbu xuzeng zeli* 37-47.

<sup>213</sup> About the leather pouches, see (Jiaqing 22) *Gongbu xuzeng zeli* 105. For the fabrication and prices of leather items, see (Qianlong 14) *Gongbu zeli* 33-34.

halberds (*chang badao* 長靶刀, *goulianqiang* 鉤鑷鎗, *naogou* 撓鉤), but also ordinary weapons (bows and arrows), signal instruments (bells *lingdang* 鈴鐺, post standards *xunqi* 汛旗, flagpoles *qigan* 旗桿) and tools (bow cases *sadai* 撒袋, iron saws *tieju* 鐵鋸, iron hooks *tiegou* 鐵鉤, iron axes *tiefu* 鐵斧, hemp brushes *mashua* 麻刷), and lastly fire-fighting equipment (water buckets *shuitong* 水桶), and bamboo poles to carry buckets (*piandan* 扁担).

As already mentioned the troops took with them many important items from the garrison to the camps. This is equipment to be taken along when campaigning (*xingjun xiudai* 行軍攜帶). All those items could be brought to account as war expenditure: brass woks (*tongguo* 銅鍋), wok tripods (*guocheng* 鍋撐), iron fire tubes (*tie huotong* 鐵火筒), iron spades (*tiexian* 鐵鋤), iron axes (*tiefu* 鐵斧), iron scythes (*tielian* 鐵鎌), iron pegs (*tiejue* 鐵鍬), saddles for animals pulling cannons (*paoan* 砲鞍), saddles for beasts of burden (*tuohan* 馱鞍), ‘centipede’ trestles (*wugongjia* 蜈蚣架), ‘high frames’ (*gaojia* 高架), ‘wrap-bags’ (*chandai* 纏袋), and ‘eyebrow-head arrows’ (*meizhenjian* 梅[=眉]針箭).

A part of this was to be produced by the garrison and the individual soldiers and was not provided by or paid for by the government (*ying-bing zi bei* 營兵自備). The garrisons had to care for the larger military equipment of the individual soldiers and common equipment for the particular unit, namely gunstocks (*qiangba* 鎗靶), arrow shafts (*jianba* 箭靶), handles for hand cannons (? *paoba* 砲靶), bow limbs (*yinggong* 硬弓), cap knobs (*maoqiu* 帽毬), and drum mountings (*gujia* 鼓架), while the soldiers themselves had to produce and maintain their individual weapons and clothing, namely bows, arrows, bow cases, mud [protectors] (? *tuoni* 拖泥), *tiaoshao* 挑稍 (?), arrow covers (*jianzhao* 箭罩), protective trousers (*taoku* 套褲), shoulder bags (*dachuan* 搭膊), puttees (*chandai* 纏帶), and shoes (*qixie* {革+勾}鞋). None of these items were allowed to be brought to account as war expenditure.

A certain part of the equipment stored in the garrisons proved to be outdated and was therefore ordered not to be repaired or substituted in the future (*tingxiu cunzhu* 停修存貯). Among those items were iron helmets (*tiekui* 鐵盔), iron breastplates (*tiejia* 鐵甲), and war belts (*zhanyao* 戰腰). The following obsolete weapons should no more be kept in the garrison depots: *baizipao* 百子砲 ‘hundred-children cannons’, *dinggengpao* 定更砲 ‘rectifying cannons’, *hongyipao* 紅衣砲 ‘red-clothing cannons’, *matipao* 馬蹄砲 ‘horse-hoof cannons’, iron cannons (*tiepao* 鐵砲), small crude iron cannons (*shengtie xiaopao* 生

鐵小砲), iron cannons for defence (*shoucheng tiepao* 守城鐵砲), large brass cannons (*da tongpao*); sabres (*dadao* 大刀), machetes (*tiaodao* 挑刀), and chopping knives (*piandao* {扁 + 刀}).

In the JQ 9 (1804) edition of the *Junqi zeli* there does not seem to be a great difference in the rules for the basic equipment of the Sichuan garrisons.<sup>214</sup> Yet the JQ 21 (1816) edition went one step further and fixed the rules for military equipment for each garrison, or at least for a number of garrisons within one defined territory, presumably an inspection circuit (*dao*). Thus what has hitherto been defined as the rules valid for the entire province of Sichuan and the garrisons within its territory was not valid any more. The bureaucratization went so far as to define different rules for writing off military equipment in the Chengdu garrisons and the more 'rural' garrisons in other prefectures. Yet in fact, the differences between each of the local garrisons were so small that the question could be raised if the bureaucratic effort was really worth it.<sup>215</sup>

#### 4.4.2. Housing and Living

As could be seen in the foregoing chapter the government did not only regulate what weapons were allowed to be kept as standard military equipment, but it also determined what types of equipment for housing and living were to be used and were allowed to be brought to account. While tools like hammers, axes, spades and so on, were in most cases included into the regulations for equipment directly belonging to artillery, there are three other fields of great importance for the physical and mental well-being of the troops, namely cooking utensils (*luoguo* 鑼鍋), tents (*zhangfang* 帳房), and clothing. The interesting aspect of those items is that the regulations for war expenditure, the *Junxu zeli*, cite the precedents from Yunnan and Sichuan, i. e. the Myanmar and Jinchuan campaigns, as rules valid for the future.<sup>216</sup> The precedents declare that all equipment, from weapons to tents, woks, and tools, were to be produced according to the rules for the manufacture of military equipment (*junzhuang zuofa zeli* 軍裝做法則例) valid throughout the empire and issued by the Ministry of Works. The cost, nevertheless, had to be brought to account according to the precedents for the province concerned (*gai sheng wuliao jiazhi zeli* 該省物料價值則例). The *Gongbu junqi zeli* from the year Jiaqing 17 (1812) therefore lists the material prices for each province (from chapter [juan] 43 on), while the official prices and measurements in chapters 1 to 42 were valid for

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<sup>214</sup> (Jiaqing 9) *Junqi zeli* 24.

<sup>215</sup> (Jiaqing 21) *Junqi zeli* 14.

<sup>216</sup> *Gongbu junxu zeli* 1, fol. 5a-5b.

the whole empire. Only the cost for a very small number of items could not be declared as war expenditure.

### Cooking utensils

Theoretically all cooking utensils could, of course, be brought along with the troops that were taking the field. But the regulations of the *Jinchuan junxu li'an* are so detailed that it was possible to fabricate cooking woks from pig iron: height, weight, and diameter of different wok types are given in detail. Woks of different sizes might have been useful for transporting if they could be stacked one into the other, but the different sizes might also have to do with the different number of personal assistants that an officer had at his disposal and who were fed all together from one single pot of a field kitchen (*gulaschkanone*). The large ‘mutton wok’ (*yangguo* 羊鍋) for example was to be 1.5 *chi* (50 cm) high, had a diameter of 3 *chi*, a thickness of 5 *li* (1.6 mm) and a weight of 15 *jin* (9 kilos).<sup>217</sup>

Most woks were made of pig iron, and the only wok or cauldron made of copper or brass was intended for mutton stew. Mutton seems to have been an important source of meat, an observation supported by the exact prices for this animal (see Chapter 4.3.3.).<sup>218</sup>

<i>item</i>	<i>weight [jin]</i>	<i>unit</i>	<i>price [liang]</i>
pig iron for woks		1 <i>jin</i>	0.06
wok made of pig iron		1 <i>jin</i>	0.25
mutton pot made of copper ( <i>hongtong yangguo</i> 紅銅羊鍋)	15	1 piece	3.75
large copper wok ( <i>da tongguo</i> 大銅鍋)		1 piece	2.25
large [iron] wok for civilian officials from the Capital ( <i>chaiyuan</i> 差員)	8	1 piece	1.6
[iron] wok for civilian officials from the Capital, size 2	5	1 piece	1
[iron] wok ( <i>luoguo</i> 鑼鍋) size 2	8	1 piece	2
medium copper wok ( <i>zhong tongguo</i> 中銅鍋)		1 piece	1.8
[iron] wok size 3	5	1 piece	1.25
[iron] wok size 4	3	1 piece	0.75
tripod ( <i>guocheng</i> 鍋{金+掌=撐}) size 1 <sup>a)</sup>	7.5	1 set	0.35
tripod size 2	5	1 set	(1.25)
tripod size 3	4.5	1 set	(1.125)
tripod size 4	3	1 set	(0.075)

□ 4.24 Table: Official prices for cooking utensils

<sup>a)</sup> The actual units are 6 *jin* 15 *liang* 6 *qian*.

The woks hung from a tripod (*guocheng* 鍋撐) consisting of iron rods (*tietiao* 鐵條) of different length, depending on the size of the cauldron, for example, 9.3 *chi* (300 cm) for the size 1 wok, 7.7 *chi* (250 cm) for size 2, and so on. The assumption that in the *Jinchuan* campaign the *guocheng* was a tripod is supported by the statement for the weight of the pots,

<sup>217</sup> *Jinchuan junxu li'an* 2, fol. 48b.

<sup>218</sup> *Jinchuan junxu li'an* 2, fol. 48a-49b, 57a-57b, 64b.

which was counted ‘including loops and cover’ (*lian ban-gai* 連絆蓋). The loops might have served to hang up the pots. Contrary to that assumption, the *Gongbu junqi zeli* says that the *guocheng* had to have a height of 1.1 *chi* (35 cm) and a circumference of 3.7 *chi* (120 cm), and that it had three legs (*zhu* 柱).<sup>219</sup> This difference might have the following reasons: It was very convenient to use simple iron rods as a suspending device during a war, when the position had to be changed daily. Furthermore it might have been common that iron was, when produced fresh from the furnaces, cast into rods to be transported to the forges, and thus some kind of ‘raw material’ being at hand anyway, it could be used in this simple way without undergoing the time-consuming and costly work of forging the material into a ring with three feet. The latter method could probably have been used during peacetime, when the troops were in the garrisons and the garrison blacksmiths had enough time for this work, while during war, a much more practical method was welcome. Finally, the *Gongbu junqi zeli* from Jiaqing 17 (1812) is the result of a highly enforced bureaucratization of military matters, down to the measurements and prices of the last item, not only for the standard equipment in the garrisons, as could be seen in the last chapter, but also during wartime. Yet even when bureaucratization went so far in the early 19th century, it is not known if the blacksmiths’ work was allowed to be brought to account as war expenditure at that time or not, while the material for the *guocheng* surely was: The *Junxu zeli*, issued thirty years earlier than the *Gongbu junqi zeli*, regulates that the cost for the *guocheng* has to be brought to account according to the *Jinchuan junxu li’an*, which does not list any allowances for blacksmith work.

### Tents

Tents were of great importance not only because the troops, from the generals down to the personal servants, had to live in such, but the many different types of tents also displayed the status of the dweller. The most impressive dwelling mode was that in a Mongolian yurt (*Menggu bao* 蒙古包) which could be used by high officers. The aim of the practice to provide different ranks with different types of accommodation was not only to provide its dweller with a certain standard of living; it was also necessary for the attendants of an officer to find their place in a tent nearby, from lowly servants to *aides-de-camp* that were at their masters’ command. Higher officers and generals did not simply ‘dwell’ or ‘live’ in their tents giving protection against wind and weather, but their tent or yurt also served as command headquarters with permanent coming and going around the clock. To make the command

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<sup>219</sup> *Gongbu junqi zeli* 12, fol. 13a-13b.

headquarters more easily accessible, it was arranged in an open pavilion (*liangpeng* 涼棚), where the official could read and issue (*jiaoyue* 校閱) letters and orders. Moveable walls (*zhaoqiang* 照牆, called *lianzi* 帘子 in the *Gongbu junqi zeli*), presumably of cloth, provided protection from wind, sun and probably undesirable inquisitiveness around the yurt (compare Figure 4.30d).

The *Jinchuan junxu li'an* describes the particular types of tents in detail and illustrates how much and what type of fabric, what quantity and what kind of guy lines and rods were necessary and allowed to be used if paid by the government. There were also some types of tent which no prices were prescribed and were not assigned to a certain rank of official, like the large tent (*da zhuangfang* 大帳房). It should be noticed that the length measure *chi* which is normally about 32 cm long, was not in all cases valid for material. Textile material could be quantified with the 'tailor's foot' (*caiyichi* 裁衣尺) which was 35.5 cm long.

The appearance of the tents was by and largely similar, and for all types dimensions were fixed so that the same technique for erecting a tent could be used for each type, which was fastened to the ground with 8 iron pegs and 30 wooden pegs.<sup>220</sup>

When defining what type of tent with what equipment was appropriate to what rank of officer, the *Jinchuan junxu li'an* speaks of a yurt with a price of 30 *liang* instead of 66.873 *liang* mentioned at the beginning of the corresponding chapter. The higher price was valid at the beginning of the campaign but the originally devised eight types of tents were then reduced to two standard types (three with the 'cheap' yurt), which are listed at the end of the following table.<sup>221</sup>

<i>item</i>	<i>unit</i>	<i>price [liang]</i>
Mongolian yurt ( <i>Menggu bao</i> 蒙古包)	1 piece	66.873
large pavilion ( <i>liangpeng</i> 涼棚)	1 piece	28.863 – 30
moveable wall ( <i>zhaoqiang</i> 照牆)	1 piece	2.994
large ridge tent with frame, made of nine lengths of lined blue jewel-cloud [material] ( <i>jiufu xiangyun dai bengzi renzi da lan jia zhangfang</i> 九幅鑲雲帶綳子人字大藍夾帳房)	1 piece	30.827
large ridge tent with frame, made of nine lengths of lined blue jewel-cloud [material] ( <i>bafu xiangyun dai bengzi renzi da lan jia zhangfang</i> 八幅鑲雲帶綳子人字大藍夾帳房)	1 piece	26.875
tent, made of eight lengths of lined blue [material] ( <i>bafu lan jia zhangfang</i> 八幅藍夾帳房)	1 piece	16.694
tent, made of seven lengths of lined blue [material] ( <i>qifu lan jia zhangfang</i> 七幅藍夾帳房)	1 piece	12.317

<sup>220</sup> Sometimes the *Jinchuan junxu li'an* text confuses the character 鏃 (actually: pick, pickaxe) with the character 橛 (stake, pin, peg). For more information on the tents, the material and the production cost, see (Qianlong 58) *Gongbu zeli* 29, (Jiaqing 20) *Gongbu zeli* 35, and (Jiaqing 22) *Gongbu xuzeng zeli* 49-50.

<sup>221</sup> *Jinchuan junxu li'an* 2, fol. 50b-58a.



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tent, made of six lengths of lined blue [material] ( <i>liufu lan jia zhangfang</i> 六幅藍夾帳房)	1 piece	10.152
tent with frame, made of six lengths of unlined white [material] ( <i>liufu dai bengzi bai dan zhangfang</i> 六幅帶綳子白單帳房)	1 piece	10.904
tent, made of five lengths of lined blue [material] ( <i>wufu lan jia zhangfang</i> 五幅藍夾帳房)	1 piece	8.181
tent with frame, made of five lengths of unlined white [material] ( <i>wufu dai bengzi bai dan zhangfang</i> 五幅帶綳子白單帳房)	1 piece	7.297
iron tent peg ( <i>tiejue</i> 鐵鐮[橛])	1 piece	0.06
wooden tent peg ( <i>mujue</i> 木橛)	1 piece	0.001
<b>new prices:</b>		
Mongolian yurt	1 piece	30
tent, made of lined emerald-blue material ( <i>qingbu jia zhanfang</i> 青布夾帳房)	1 piece	9
tent, made of lined white material ( <i>baibu jia zhanfang</i> 白布夾帳房)	1 piece	6.5

□ 4.25 Table: Official prices for tents and yurts

The housing equipment of an officer and his attendants was as seen in Table 4.26, based on the new prices.<sup>222</sup> What makes expenditure even harder to understand is the different treatment of military and civilian officials. Civilian officials assuming tasks in logistics were assigned tents that were to be booked with a cheaper price than similar or equal tents for military officials. A blue-lined tent, for example, was to be rendered with 9.35 *liang*, compared to the military price of 10.4 *liang*. For a lined white tent a civil official was allowed to bring to account only 5.41 *liang*, a military officer 6.3 *liang*. Even the accounting procedures for pig-iron which the woks were made of were different for civilian and military staff: a civilian official could only claim 0.2 *liang* per *jin* of iron, a military official 0.25 *liang*—a quarter more. On the other hand civilian officials from the Capital were allowed to live in greater comfort than their military colleagues. While a military official of third rank 1 – 3 was assigned a yurt and one tent for his personal assistants (*genyi*), civilian officials of first rank could quarter their staff in four tents, officials of second and third rank in three. High officials from other provinces than Sichuan, like a visiting governor of Guizhou or an inspecting member of the State Council, could claim five tents for their entourage. The size of the tents was thus not too small—their dimensions were 1.4×1.55 *zhang* which corresponds to about 4.5×4.9 metres in which four or five people can easily live for a while. At this point it is interesting to remember how many personal assistants each rank of official was allowed to be waited on by. There was explicitly no difference made between Manchu, Banner Chinese or non-Banner Chinese.<sup>223</sup>

<sup>222</sup> *Jinchuan junxu li'an* 2, fol. 55b-57b.

<sup>223</sup> *Jinchuan junxu li'an* 2, fol. 56b. *Hubu junxu zeli* 2-3.

4. THE COST OF HORSES, FOOD AND MATERIALS

	<i>official rank 1 – 3</i>	<i>official rank 4 – 6</i>	<i>official rank 7 – 8</i>	<i>official rank 9</i>	<i>common troops and private assistants (per five persons)</i>
<i>pavilion</i>	pavilion 1 --iron pegs 10 --pegs 30				
<i>Yurt</i>	Mongolian yurt 1 --pegs 30		Mongolian yurt 1 --pegs 30		
<i>tent</i>	tent, made of blue lined material 1 --iron pegs 8 --pegs 30	tent, made of emerald-blue lined material with 'shuttle' (or rhombic) [pattern] ( <i>qingsuo jia</i> 青梭 夾帳房) 1 --iron pegs 8 --pegs 30	tent, made of emerald-blue lined material with 'shuttle' [pattern] 1 --iron pegs 8 --pegs 30	tent, made of blue lined material with shuttle [pattern] ( <i>lansuo jia</i> 藍梭 夾帳房) 1 --iron pegs 8 --pegs 30	tent, made of white lined material 1 --iron pegs 8 --pegs 30
<i>cooking utensils</i>	large copper wok 1 --tripod 1	large copper wok 1 --tripod 1	large copper wok 1 --tripod 1	medium copper wok 1 --tripod 1	medium copper wok 1 --tripod 1
<i>tools</i>					tool kit 1
<b><i>estimated total cost per equipment [liang]</i></b>	<b>62.533</b>	<b>43.04</b>	<b>13.01</b>	<b>12.35</b>	<b>8.89</b>

□ 4.26 Table: Different tents and equipment for different ranks

From the detailed descriptions of the logistics stations the price for different kinds of material necessary for sewing a tent is known. Originally the width of each length of material had to be 1 *chi* (32 cm) but the Ministry of Work later fixed a new basis width as being 1.4 *chi* (45 cm). It is not very clear if the use of two types of Guan Temple material (*Guanmiaobu* 關廟布 and 'blue-observing material' (*qingguanse bu* 青觀色布) had to be given up or not, especially because the the difference in price with other types of material was not very great and there was therefore no reason to save money on it, except saving the labour for the procurement of many different kinds of material. Prices for red felt varied between 0.00225 *liang* (Gansu) and 0.0075 *liang* (Sichuan) per *jin*.

<i>rank</i>	<i>personal assistants</i>
1	20
2	16
3	12
4	10
5	8
6	6
7	4
8	3
9	2

□ 4.27 Table: Number of personal assistants of each official rank

For the 'leather money' (*piqian* 皮錢, diameter 3 *cun* [10 cm]), in the *Gongbu junqi zeli* called *piyanqian* 皮眼錢 'leather-eye money', probably a character substitution for *piyan* 披簷

‘roof support’)<sup>224</sup> thin hemp guy lines with a weight of 1.25 *fen* (0.46 gr) were to be used. The so-called ‘leather money’ probably consisted of round pieces of leather that were used to reinforce the points of the material where the guy lines were fastened. Unfortunately the *Jinchuan junxu li'an* does not list a price for this item, but it cannot have been very cheap because it was cancelled and was to be replaced by so-called ‘bone sliders’ (*guhuazi* 骨滑子, probably thread eyelets), which were apparently cheaper than leather pieces.

<i>item</i>	<i>unit</i>	<i>price [liang]</i>
Guan Temple cloth ( <i>Guanmiaobu</i> 關廟布)	1 <i>zhang</i>	0.16
‘blue-observing cloth’ ( <i>qingguanse bu</i> 青觀色布)	1 <i>zhang</i>	0.2
white cloth ( <i>baibu</i> 白布); old price 0.14 <i>liang</i>	1 <i>zhang</i>	0.177
red cloth ( <i>hongbu</i> 紅布)	1 <i>zhang</i>	0.22
red felt ( <i>hongzhan</i> 紅毡)	1 <i>chi</i>	0.0225 – 0.075
‘bone slider’ ( <i>guhuazi</i> 骨滑子)	1 piece	0.002
purified tung oil ( <i>shu tongyou</i> 熟桐油); old price 0.07 <i>liang</i>	1 <i>jin</i>	0.06
hemp guy lines ( <i>maxian</i> 麻線); old price 0.16 <i>liang</i>	1 <i>jin</i>	0.06
wooden log ( <i>zhumu</i> 株木)	1 cubic <i>chi</i>	0.17
sandalwood log ( <i>tanmu</i> 檀木)	1 cubic <i>chi</i>	0.18
‘leather money’ for tents ( <i>piqian</i> 皮錢)	1 piece	
labour cost ( <i>jiangong</i> 匠工, necessary: 2 (before: 3))	1 unit	0.0035

□ 4.28 Table: Official prices for tent materials

As the tents had constantly to be repaired the most important objects for this occurrence were stored in the logistics stations. Calf leather as needed for the ‘leather money’ reinforcements, poles for structural support of the tents, or the extra equipment needed for the Mongolian yurt or adorned material for the tent roofs, were not kept in store and had to be procured from Chengdu or elsewhere.<sup>225</sup>

<i>item</i>	<i>amount</i>
tent roof adornment ( <i>ding shang xiang</i> 頂上鑲), decorated with small clouds ( <i>xiao yun</i> 小雲)	4
14 lengths of material	131.6 <i>zhang</i>
central tent poles ( <i>chengan</i> 襯[=襯]桿)	2
ridge pole ( <i>hengliang</i> 橫梁)	1
small poles ( <i>xiao chengan</i> ) with iron cap ( <i>tiebao</i> 鐵包)	12
shortening or fastening cords for three-step roof and roof adornment ( <i>sanjie ding</i> , <i>bianxiang fenggun</i> <i>sheng</i> 三節屋, 邊鑲縫滾繩)	1
guy lines ( <i>lanfengsheng</i> 欄風繩)	16
calf leather angles ( <i>niupijiao</i> 牛皮角)	4
‘bone sliders’ ( <i>guhuazi</i> 骨滑子)	68

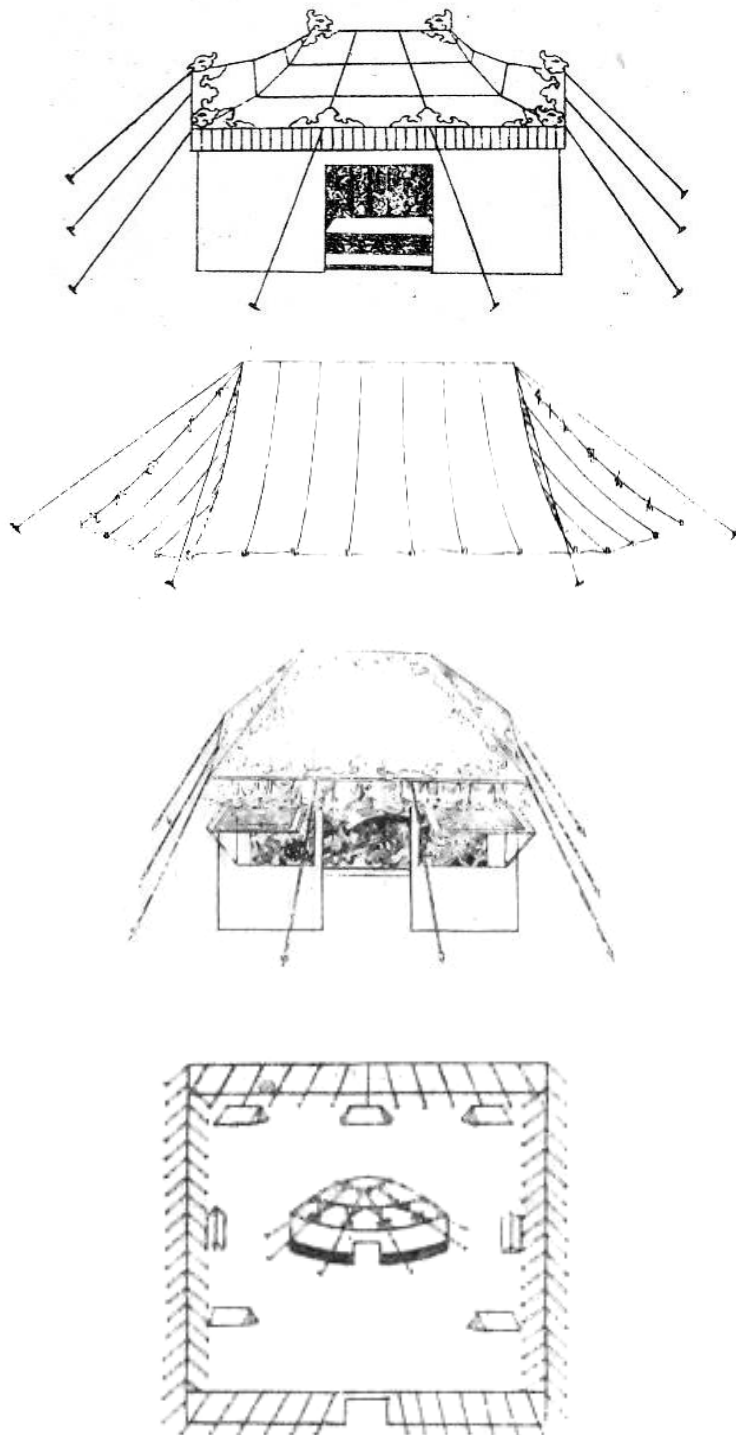
□ 4.29 Table: Parts of large tent

With a price of about 0.2 *liang* per *zhang* of material and when using 131 *zhang* the total price of a large tent (*da zhuangfang*) can be calculated as 25 *liang* (not including poles, guy lines, pegs, or any interior). The price listings in the Table 4.25 seem quite reasonable after

<sup>224</sup> *Gongbu junqi zeli* 37, fol. 2a.

<sup>225</sup> *Jinchuan junxu li'an* 2, fol. 62a-62b.

examining such a calculation. The complete materials needed to erect such a large tent (see Figure 4.30a) with a dimension of 1.55×1.4×1.3 *zhang* (4.9×4.5×4.2 metres) are listed in the following table.



□ 4.30a-d Figure: Imperial command tent, ridge tent of common soldiers, command pavilion, and yurt of an officer

Source: *Da-Qing huidian tu* 104, [fol. 2a]; 105, [fol. 3a, 4a, 5a].

All these parts can be seen in the figure of a yellow imperial command tent (*huangdi dayue huangwo* 皇帝大閱黃幄) in the *Da-Qing huidian tu*. In the same collection, a typical

standard tent for soldiers can be seen, as well as a pavilion and the yurt ('felt tent', *zhanzhang* 氊帳) of a high official.<sup>226</sup>

It could be assumed that ridge tents were cheaper than the elaborated tents of the commanders. But looking at the *Jinchuan junxu li'an* data for other types of tents it can be observed that the costs of material were not tremendously diverging.

A nine-web ridge tent was 1.6×0.9 *zhang* wide (5.1×2.9 metres). Both ends were directed to the outside in order to create more room, the ridge was reinforced, and 12 fixed ropes (*gengbandai* 綆絆帶) and 28 flexible (*ruanban* 軟絆) guy lines gave shape to the tent. According to the *Jinchuan junxu li'an* 6 poles supported the structure, while the *Da-Qing huidian tu* (compare Figure 4.30b) only speaks of 2 poles (*chengen* 橧根 resp. *zhu* 柱). Each web was 2.2 *zhang* long (7 metres), which corresponds to a length of the slanting part (the 'sides' or 'walls' of the tent) of about 1 *zhang* if the ends are folded inside to provide protection from wind and rain. Blue cloth (*lanbu* 藍布) was, according to the *Da-Qing huidian tu*, reserved for officers, whereas common soldiers dwelt in tents made of white cloth (*baibu* 白布). The following table explains the dimensions of each tent type and records the need for cloth. Of course, a tent with a square frame at the top needs more material than a ridge tent. The difference is up to one fourth, as can be seen in the example of the tent of eight webs.

<i>tent type</i>	<i>dimension (area)</i> [zhang]	<i>need of cloth</i> [zhang]
9 web	1.6×0.9	140.12
8 web	1.5×0.8	111.47
8 web without square frame ( <i>bengzi</i> 綑子)	(1.3×0.7)	78.52
7 web without frame	1.3×0.7	
6 web with frame	(1.2×0.6)	24.46
6 web without frame	1.2×0.6	
5 web with frame	(1.15×0.5)	13.31
5 web tent of unlined material ( <i>wufu dan zhangfang</i> 五幅單帳房)	1.45×0.5	19.96
5 web without frame	1.15×0.5	

□ 4.31 Table: Need of material for different types of tent

Of great interest is the Mongolian yurt although it was of course not one of the most common types of accommodation during the campaign. The total height was 9 *chi* (2.9 metres), the diameter was 1.23 *zhang* (3.9 metres), the wall was only 5.5 *chi* high (1.76 metres). The

<sup>226</sup> In two cases, the text and the illustrations in *Da-Qing huidian tu* 104, [fol. 2a]; 105, [fol. 3a, 4a, 5a] are not identical: While the text describes the yurt of an imperial prince (*wanggong* 王公), the illustration shows a yurt for the lower nobility and non-nobility officials; the illustration also shows the tent of a common soldier, while the text refers to the tent of an official.

circumference was 4.1 *zhang* (13.1 metres), the width (of the door?) 2 *chi* (about 0.6 metres). The door was covered with drapery (*lian* 帘), and the roof poles (*jiading* 夾頂) and walls (*jiawei* 夾圍), made of a folding grille or lattice wall (*baziqiang* 八字牆), were covered with four large pieces of red felt (*hongzhan* 紅毡).<sup>227</sup> A final cover was decorated with ‘nocturnal bats’ (*ye bianfu* 夜蝙蝠). The upper part was the crown wheel (*baoding* 寶頂, *heliangding* 荷蓮頂). All covering canvas was fastened with ropes or belts that were drawn once around the whole circumference of the yurt (*dan wei* 單圍). Further drapery was decorated with different patterns (*xiang* 鑲) like lotus leaves (*heye* 荷葉). The description of the Mongol yurt as presented in the *Jinchuan junxu li'an* is less suitable as a model for building such a dwelling and is rather meant to describe what kinds of material were permitted and might be included into the official accounts. The detailed instructions also include items like ropes or sewing thread, but do not pay much attention to the important construction elements like the folding grille, the lotus-shaped crown, or the poles forming the door lintel. Some of these parts were decorated with lacquer (*qi jiaban* 漆夾板) and could therefore not locally be replaced in an identical design in case of damage or loss. All other wooden parts could be replaced or repaired from local sources and by craftsmen of the army.<sup>228</sup>

<i>item</i>	<i>need</i>
sewing work ( <i>fenggong</i> 縫工)	19.5 units, or 1 unit for 10 <i>zhang</i>
nailing work for the roof ( <i>ding dingjiang</i> 頂錠匠)	2 units
leather work ( <i>pijiang</i> 皮匠)	5 units
canvas ( <i>bu</i> 布)	293.996 <i>zhang</i>
sewing thread ( <i>xian</i> 線)	2 <i>fen</i> (weight) per <i>zhang</i>
wooden poles ( <i>mugan</i> 木桿)	42 pieces, price: 0.18 <i>liang</i> per <i>chi</i>
wooden bars ( <i>bantiao</i> 板條)	78 pieces, one work unit for 16 square <i>chi</i>
leather thread ( <i>pixian</i> 皮絃)	26.94 <i>zhang</i>
supporting posts ( <i>mu chengan</i> 木襯桿) for the roof	4 pieces
door frames ( <i>menfang</i> 門方)	2 pieces
door wings ( <i>banmen</i> 板門)	2 pieces
beams or poles ( <i>gan</i> 杆)	2 pieces
curved woodblocks ( <i>qufang</i> 曲枋)	2 pieces
round plank for the floor ( <i>dizuo yuanban</i> 底坐圓板)	1 piece, one work unit for 20 square <i>chi</i>
iron hooks ( <i>tiegou</i> 鐵勾) for the supporting posts	4 pieces
‘leather money’ ( <i>piqian</i> 皮錢)	8 pieces
iron covering ( <i>tiepi</i> 鐵皮)	8 pieces
iron nails ( <i>tieding</i> 鐵釘)	4 pieces
iron cramps ( <i>tiecha</i> 鐵叉)	4 pieces, price: 4 <i>liang</i> per <i>jin</i> (?)
suspension (? <i>diaokou</i> 吊扣)	1 piece

<sup>227</sup> More information about the production and prices of felt material is to be found in (Qianlong 14) *Gongbu zeli* 31-32.

<sup>228</sup> *Jinchuan junxu li'an* 2, fol. 50b-51b.

'crow beaks' (hooks? <i>laoyazui</i> 老鴉嘴)	2 pieces
door nails ( <i>mending</i> 門釘)	4 pieces
nails for the door cover ( <i>menlianding</i> 門帘釘)	11 pieces
large palm fibre / felt mat for the floor (鋪地大棕毡)	1 piece
round red felt cover ( <i>hong tuanzhan</i> 紅團毡)	1 piece
cowhide for the crown wheel ( <i>baoding niupi</i> 寶頂牛皮)	1 piece
leather bags ( <i>pibao</i> 皮包)	2 pieces
leather bucket ( <i>pitong</i> 皮筒)	3 pieces
leather cover ( <i>pitao</i> 皮套)	1 piece
palm fibre mat ( <i>zongdan</i> 棕單)	1 (?) piece
hemp ropes ( <i>maxian</i> 麻線)	0.5 <i>jin</i>
oil brush ( <i>youshua</i> 油刷)	
[the rest is missing]	

□ 4.32 Table: Parts necessary for a Mongolian yurt

Considering the costs for individual parts of the tents in the listings above that mention a price of about 0.2 *liang* per *zhang* of cloth, the drapery of the yurt alone would cost about 60 *liang* which is almost the given total price of the yurt of 66.873 *liang*. The felt would cost about 2.3 *liang* if one *zhang* of it cost 0.05 *liang*, and of which 45 *zhang* are needed (for about 6 square *zhang* with a web width of 1.4 *chi*, as demanded). A further position in such a calculation is the sewing thread that alone would cost 6 *liang*. The description of materials needed for the construction of a yurt is not all-embracing: it is not known exactly how much felt is needed, and, for example, how many 'bone sliders' (*guhuazi*). The relatively high price of 4 *liang* for the iron cramps could include all the smaller components and single parts, because a price of iron nails is otherwise fixed with 0.06 *liang* per *jin*, which is only a fraction of the 4 *liang* mentioned here.

### Clothing

Surprisingly, the first caps and leatherware that were at the imperial units' disposal came from the subtropical province of Guizhou.<sup>229</sup> The reason for this is that the troops had to care for their own clothing which was fabricated in and to be paid for by the garrison and partly by the troops themselves. It was therefore actually not the responsibility of the war chest or the logistics bureau to care for winter clothing for the troops coming from the subtropical region. The Guizhou troops had to provide and to pay for it, while the war logistics bureau only had the task to take the clothes to the camps as fast as possible. As they were not to be returned to the garrisons in Guizhou when the war was terminated they had to be treated as a transfer from the books of the province of Guizhou to those of Sichuan. Later such ready-to-wear equipment was directly bought from traders.<sup>230</sup> Because the troops in Jichuan could not ride

<sup>229</sup> Pingding Liang Jinchuan fanglüe 9, fol. 15b-16a (QL 36/11/yisi).

<sup>230</sup> Jinchuan junxu li'an 2, fol. 43b.

but had to walk, the long tunics were quite uncomfortable when climbing the mountains. Therefore the generals ordered short riding coats with long sleeves and tails (*changxiu you yanjin magua* 長袖有掩襟馬褂) or normal riding jackets (*xunchang magua* 尋常馬褂) as war tunics (*zhanqun* 戰裙).<sup>231</sup> For the procurement of clothes, sabres, working tools and tents the home garrisons of the troops had to send a three-months' pay to Jinchuan, to be deducted from the pay of the troops. In the case of some Hubei troops it was deliberated if it was not unjust for the older contingents from Shaanxi, Gansu, Yunnan and Guizhou that fresh troops would be issued with new equipment. The emperor, considering that the other troops should not be put at a disadvantage because the governor-general of Hu-Guang was the only one asking to be permitted to transfer part of the troops' pay for the procurement of equipment, ordered to investigate if the troops of other provinces were also in need for new equipment.<sup>232</sup> Some two years earlier His Majesty had still be reluctant when it came to the question of replacing allegedly deteriorated equipment.<sup>233</sup> Yet the procurement of winter clothing for the Hubei troops was a regular task undertaken annually, as can be seen in the documents. In QL 39 (1774) winter clothing for 2,400 troops had been orderd in the third month, yet in the ninth month only 470 of them had arrived at destination. Therefore leather and cotton clothing had to be procured in Chengdu, for which transaction the war chest advanced the money of the current month, which later had to be paid back by the officials responsible for this delay. The 1,500 to 1,600 baskets containing clothing still due to arrive in Sichuan were not to be waited for, but the troops should advance part of their salary for buying or tailoring clothes. This was partly done by purchasing excess clothes from troops of other provinces, and partly by making clothes from material borrowed from Lucheng (Dajianlu). A similar procedure had been used to solve the clothes problem of the troops from Shaanxi and Gansu one year before. The clothes ordered in spring finally arrived in the tenth month, meaning that government money was wasted so that it asked the responsible logistics managers for compensation. One year later, this experience led to better results, so that the clothes were ordered in the first or second month of QL 40 (1775) and arrived in the ninth month. It was ordered that the clothes were to be sent to Solun troops in Jilin at the end of the war.<sup>234</sup>

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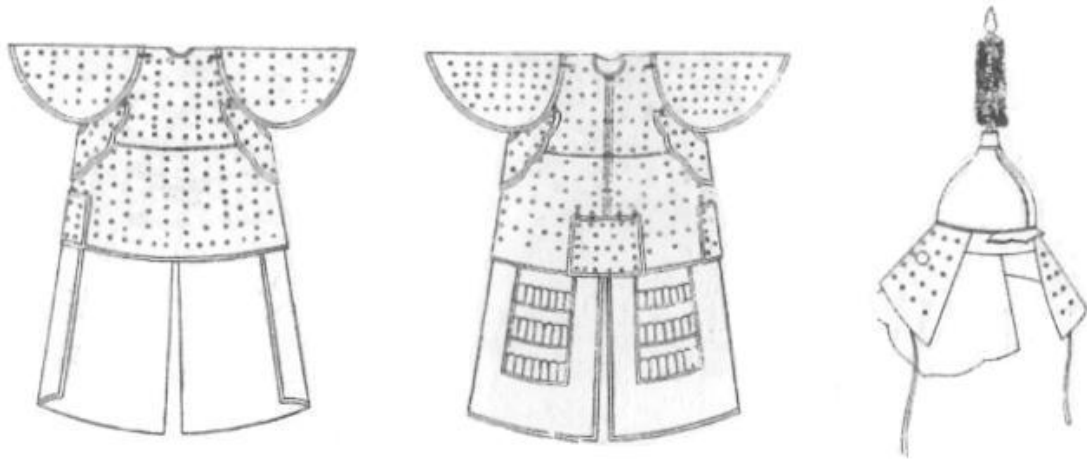
<sup>231</sup> *Jinchuan dang* 39/I/00037 (QL 39/1/12).

<sup>232</sup> *Jinchuan dang* QL 39/III/00233 (QL 39/8/28), 00317 (QL 39/9/21).

<sup>233</sup> *Jinchuan dang* QL 37/IV/00143 (QL 37/11/1).

<sup>234</sup> *Jinchuan dang* QL 39/IV/00173 (QL 39/11/24); QL 40/I/00195 (QL 40/2/28); QL 40/IV/00177 (QL 40/11/7).





□ 4.33 Figure: Uniform and helmet of a common soldier (bingding zhou 兵丁胄, bingding jia 兵丁甲)  
Source: *Da-Qing huidian tu* 93, [fol. 6a, 8a-8b].

Felt ware was organized from Ningyuan in the province of Gansu, or directly in Sichuan. Felt coats (*zhanzhe* 毡褶) and felt caps (*zhanmao* 毡帽) were delivered direct and should originally not cost more than 1.495 *liang*, but the price was reduced to about one third of this amount during the war.<sup>235</sup> If required, the uniforms (*haogua* 號褂; for the cavalrymen called *magua* 馬褂) could be tailored locally. The *Jinchuan junxu li'an* therefore describes the details for the various official pieces of material of which uniforms and capes consisted. At the end of each component list, a total price is given which also includes the cost for buttons, sewing thread and labour. There was only one size for uniforms, at least according to these regulations: The soldiers had to fit the uniform, not vice versa.

There is no total price given for the capes (*pajian* 披肩), but because the material is more refined and the tailoring process more laborious, a total price for this type of clothing can be estimated.<sup>236</sup>

<i>item</i>	<i>price [liang]</i>
cap ( <i>mao</i> 帽)	0.36
leatherwear ( <i>piyi</i> 皮衣)	1
felt coat ( <i>zhanzhe</i> 毡褶)	0.405
felt cap ( <i>zhanmao</i> 毡帽)	0.09
tunic ( <i>haogua</i> 號褂)	0.45348
cape ( <i>pajian</i> 披肩)	(0.6 – 0.7)

□ 4.34 Table: Official prices for clothing

Clothes were partly taken from the home garrisons (*suishen dan-jia yifu* 隨身單夾衣服 ‘simple and lined clothing taken with them’), and partly fabricated in Chengdu or elsewhere and sent to the camps. In one instance, when cotton clothing (*mianao* 棉襖, *mianpao* 棉袍)

<sup>235</sup> *Jinchuan junxu li'an* 2, fol. 47a.

<sup>236</sup> *Jinchuan junxu li'an* 2, fol. 47a-48a.

jackets were fabricated in Chengdu, the Hubei troops on the western route refused them as being ‘too shabby’ (*jiao wei lanlou* 較為褻褻).<sup>237</sup> Cotton trousers (*mianku* 棉褲) were as common as leather caps and leather jackets (*pimao* 皮帽, *pigua* 皮褂). Clothes and shoes (*yi-lü* 衣履) were partly also bought on the market in Chengdu or fabricated by private persons according to government specifications.<sup>238</sup> Clothes and boots for the troops from Hunan and Hubei, for example, were manufactured in the home garrisons, packed in 2,700 baskets and then sent to Chengdu.<sup>239</sup>

The cost for garments and boots had to be repaid by the soldiers and thus instalments were deducted from their pay. For these items the troops could neither claim back money as running expenses nor as war expenditure. Yet the harsh climate in the war theatre made it also necessary for the emperor to express his benevolence from time to time and to refrain from deducting the money from the soldiers’ pay.<sup>240</sup> These circumstances are also seen in the regulations for war expenditure where stipulations for undergarments and shoes or boots are missing, except the uniforms, capes and caps. It is nevertheless possible to know more about the price for such ‘private’ clothing: In one instance the government granted 2 *liang* for garments, while the cost for boots were to be deducted from the pay.<sup>241</sup>

A very important means of reward for the native troops was to give them precious fabric, like silk or brocade. This kind of reward was highly standardized and there was therefore the need to define prices for such clothing necessary for rewards (*shangxu* 賞需).<sup>242</sup> The prices were all valid for the amount of material needed to tailor one garment (*paotao* 袍套 ‘a garment set’).

<i>item (material for one garment)</i>	<i>price [liang]</i>
large-patterned satin ( <i>da moben duan</i> 大摹本緞); old price 9 <i>liang</i>	6.6
cloud satin ( <i>yunduan</i> 雲緞)	3.8
‘large satin’ with three stripes of gold ( <i>daduan sanpianjin</i> 大緞三片金)	3
Song brocade ( <i>Songjin</i> 宋錦)	1.5
ocean (or import?) satin ( <i>yangduan</i> 洋緞); old price 3.6 <i>liang</i>	2.4
palace satin ( <i>gongchou</i> 宮綢); old price 3.8 <i>liang</i>	2.2
Ning (Nanking?) silk ( <i>ningchou</i> 寧綢); old price 2.5 <i>liang</i>	1.6

<sup>237</sup> *Pingding Liang Jinchuan fanglüe* 106, fol. 27b-28a (QL 39/9/gengchen).

<sup>238</sup> *Pingding Liang Jinchuan fanglüe* 78, fol. 12b-13b (QL 38/10/dingwei); 128, fol. 9a-9b (QL 40/11/gengchen).

<sup>239</sup> *Pingding Liang Jinchuan fanglüe* 108, fol. 12b-13a (QL 39/10/xinchou).

<sup>240</sup> *Pingding Liang Jinchuan fanglüe* 55, fol. 20b-21a (QL 38/r3/bingyin).

<sup>241</sup> *Pingding Liang Jinchuan fanglüe* 9, fol. 15b-16a (QL 36/11/yisi). *Jinchuan dang* QL 37/IV/00171 (QL 37/11/9).

<sup>242</sup> *Jinchuan junxu li'an* 2, fol. 60a.

'Heavenly grandson brocade' ( <i>tiansunjin</i> 天孫錦); old price 1.7 <i>liang</i>	2.5
adornment satin ( <i>zhuanghuaduan</i> 粧花緞)	6
pomp satin ( <i>haodaduan</i> 好大緞)	6
palace dragon [brocade] ( <i>gongmang</i> ) 宮蟒	22
playing dragon [brocade] ( <i>ximang</i> 戲蟒)	10

□ 4.35 Table: Official prices for brocade for rewards

During the war the government had to procure 6,849 'packs' or sets (*bao* 包) of clothing and shoes (*yi-liu*), 3,000 leather coats (*pigua*), 34,000 felt caps (*zhanmao*), 1,600 uniforms (*haogua*) and 10,000 capes (*pijian*) for the native auxiliary troops.<sup>243</sup> According to the above-mentioned prices those clothes should have cost the Qing government at least 13,286 *liang* (not counting the 'clothing and shoes' asset, for which no price is given). Towards this expenditure a Jiangsu merchant had contributed 3,000 garments (see Chapter 6.2.).

### Medicine

All kinds of *materia medica* had to be procured in the province of Sichuan or elsewhere within the territory of the provinces (*kounei*), and it had to be reported clearly what purpose the medicine was bought for and by what official. Medicine was apparently only allowed to be used by officials, not by common troops. Even the precise amount of consumed medicine had to be reported and also, if some medicine was left over. The prices for medicine listed below demonstrate that some *materia medica* was so expensive that the government did not want to spend more than absolutely necessary, and remaining quantities could be sold or used otherwise. All official prices for medicine had to be the same as during the first Jinchuan campaign. If any medicine was needed for which there were no precedents from the first Jinchuan war, new prices had to be arranged according to the current market prices and the directions of the Ministry of Revenue, which in most cases cut 20 to 30 percent of the suggested price. When the account was sent to the Ministry, the latter consulted the Imperial Academy of Medicine (*taiyiyuan*) about an appropriate price. This procedure had been practiced for a long time, as the respective article in the *Junxu zeli* demonstrates.<sup>244</sup> In the regulations for *materia medica* the *Jinchuan junxu li'an* also lists some containers for medicine with the respective official price.<sup>245</sup>

<i>item</i>	<i>unit</i>	<i>price [liang]</i>
radix atractylodis macrocephalae ( <i>baizhu</i> 白朮)	1 <i>jin</i>	0.24
Chinese yam ( <i>shanyao</i> 山藥)	1 <i>jin</i>	0.2
residue pills ( <i>kuwan</i> 枯丸); market price 0.32 <i>liang</i>	1 <i>jin</i>	0.28
ginseng ( <i>renshen</i> 人參); market price 35 <i>liang</i>	1 <i>jin</i>	30

<sup>243</sup> *Jinchuan junxu li'an* 2, fol. 185b.

<sup>244</sup> *Hubu junxu zeli* 7, fol. 2a.

<sup>245</sup> *Jinchuan junxu li'an* 2, fol. 139b-140a.

<i>liang</i>		
pearls ( <i>zhenzhu</i> 珍珠); market price 4.8 <i>liang</i>	1 <i>jin</i>	4
bamboo basket ( <i>miebao</i> 篋包)	1 piece	0.03
hemp cord ( <i>masheng</i> 麻繩)	1 piece	0.01
palm fibre mat ( <i>zongdan</i> 棕單)	1 piece	0.12
large china flacon ( <i>da ciping</i> 大瓷瓶)	1 piece	
small china flacon ( <i>xiao ciping</i> 小瓷瓶)	1 piece	
waxed basket ( <i>zhulou</i> 燭篋); Yunnan price	1 piece	0.08
palm fibre box ( <i>zongxiang</i> 棕箱) with felt covering ( <i>baozhan</i> 包毡)	1 piece	
clamp boards ( <i>jiaban</i> 夾板) with hemp cords	1 set	0.05
palm fibre mat ( <i>zongdan</i> 棕單)	1 set	0.48

□ 4.36 Table: Official prices for medicine and transport equipment for materia medica

In each case, especially when consulting physicians, it was to be verified if services and objects were not too expensive. There was nevertheless some *materia medica* for which no prices were fixed during the second Jinchuan campaign: cinnamon (*rougui* 肉桂), bezoar (*niu Huang* 牛黃), Borneo camphor (*bingpian* 冰片), goldfoil (*jinbo* 金箔), mercury (*shuiyin* 水銀), croton (*badou* 巴豆), ‘seven-treasure wish-complying pills’ (*qibao ruyi dan* 七寶如意丹), and white arsenic for internal application (*neiyong pishuang* 內用砒霜).

For the procurement of medicine the government had to spend 4,685.013 *liang*.<sup>246</sup>

#### 4.5. Stationery

For stationery (*zhizhang zhu hong* 紙張燭紅 ‘paper, candles and seal paste’) as part of the war expenditure the government had spent 25,289.6 *liang*.<sup>247</sup> Those items had, according to the *Junxu zeli*, to be procured in the province responsible for the organisation of the war, during the second Jinchuan war in Dajianlu. For the price of those items the Ministry of Works was to be asked for approval.<sup>248</sup>

#### 4.6. Transport Tools

There was a huge need of transport materials by which all military equipment and the rice had to be taken to the camps and to the front. In most cases these materials were forwarded in a relay system from station to station. Yet it was also quite common for the goods to be transported not to leave a station immediately after arrival, but to be stored for some time in the stock rooms (*cangfang*) of the logistics stations. For this purpose, especially since grain

<sup>246</sup> *Jinchuan junxu li'an* 2, fol. 186a.

<sup>247</sup> *Jinchuan junxu li'an* 2, fol. 186b.

<sup>248</sup> *Hubu junxu zeli* 7, fol. 1b-2a. *Jinchuan junxu li'an* 2, fol. 140a.

had to be protected from ground moisture, the stock rooms were equipped with mats on the floor, on which the commodities and goods to be stored were placed. The mats (*pudianxi* 舖墊席) had to be replaced once a year. A regulation mat was 1.3 *zhang* long and 0.55 *zhang* wide (4.2×1.8 metres), while the surface of an average stock room measured 1.3×1.6 *zhang* (4.2×5.1 metres).<sup>249</sup>

When a military camp was transferred to another location or a new camp was established, workers first had to pile up an earth wall (*naqia* 挈卡) which was then studded with palisades. For this task the labourers used sacks (*koudai*) which had to be provided by the logistics stations after being bought in Chengdu. The official price for such a transport bag was 0.35 *liang* per piece.<sup>250</sup>

Rice was also transported in sacks which were to be manufactured permanently. It was far more laborious to make baskets than sacks that simply consisted of cloth trimmed and sewn together. One bag was allowed to be brought to account with a price of 0.15 *liang*. Yet later—from what point of time on, is not clear—the cost of material for sacks was included in the daily wages for the porters (see Chapter 3.3.). This means that the porters had to pay their carrying tools themselves.<sup>251</sup> The regulations in the *Junxu zeli* are somewhat more exact:

**The Production of Sacks**

‘Per 5 *dou* of rice [i. e. 51.75 litres] for military provisions one sack and one rope for tying has to be used. If [the cost for this material] is already covered by the transport surcharge (*jintie* 津貼; [see Chapter 6]) and [therefore] the government or the private transporters provide the sacks, there is no need that any additional sacks be produced [and the cost for those be brought to account]. If [the cost for material] is not yet covered by the transport surcharge, the government unconditionally has to provide the sacks. For the necessary materials, like cotton cloth, raw flax (*maoma* 毛麻), leather pieces (*pizhang* 皮張) etc., the local conditions have to be investigated and a price suggestion is to be submitted. Concerning the strings for closing the sacks and the labour and material cost for fabricating the sacks the market prices have to be considered and to be reported truthfully to the Ministry of Works for accounting and counter-checking. When the order is fulfilled the facts—reception [of the products] and the [clearance] report—have to be reported to the Ministry of Revenue which [accordingly] settles [the account]. ([Commentary:] In the files of the war expenditure of Gansu and Yunnan the transport sacks and the strings for closing the sacks were provided by the government and brought to account with the actual market prices. According to the Jinchuan files, it was not allowed to bring the cost of material [separately] to account in a palace memorial it being included in the the labour pay and the surcharge. We [the board of the compilers] now suggest to follow both [the regulations in] the original memorial from Sichuan [i.e. in the Jinchuan files,

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<sup>249</sup> *Jinchuan junxu li'an* 2, fol. 60a.

<sup>250</sup> *Jinchuan junxu li'an* 2, fol. 44b–45a.

<sup>251</sup> *Jinchuan junxu li'an* 2, fol. 61a.

as the basic guideline] as well as [the regulations] of the western and Yunnan [i. e. Myanmar campaigns] as a fixed rule.)<sup>252</sup>

Other items were to be transported in palm fibre mats (*zongshandan* 棕苦單 or *zongdan* 棕單) and oil mats (*youdan* 油單) to wrap goods during transport. The dimensions of both types were 4.5×4 *chi* (1.44×1.3 metres). The Ministry of Revenue would allow replacing each mat once a year. The total weight of a palm fibre mat, consisting of three layers, was 2.9375 *jin* (1.75 kilos), and it was not allowed to cost more than 0.11 *liang*, a price that had been reduced from the 0.19 *liang* customary during the first Jinchuan campaign. Oil mats even were reduced from 0.4 *liang* to the level of 0.11 *liang*. There are no data available about the production and composition of oil mats.<sup>253</sup> The mats were only used for the transport from one logistics station to the next and the porters had to bring them back when returning to their parent station.



□ 4.37a/b Figure: Porter carrying tea bricks near Dajianlu (left); men with oil baskets near Chengu (right)  
Source: Rockhill (1891), p. 87 (left); Bishop (1899), p. 344 (right).

For the transport of valuable or delicate objects, palmwood boxes (*zongxiang* 棕箱) were used. The *Jinchuan junxu li'an* records all details for the construction of such boxes, with side

<sup>252</sup> *Hubu junxu zeli* 9, fol. 8a-8b.

<sup>253</sup> *Jinchuan junxu li'an* 2, fol. 61b. Information about the production of palm fibre tools can be found in (QL 14) *Gongbu zeli* 29-30. Information about the production and prices for a lot of different transport items are to be found in (Jiaqing 22) *Gongbu xuzeng zeli* 55 and 102.

planks, bottom and lid. They had an iron lock (*tiesuo* 鐵鎖) and were waterproofed with oil paper (*youzhi* 油紙), ‘leather paper’ (*pizhi* 皮紙) and other types of protective layers (? *tuxizhi* 土細紙). Large and smaller boxes (with a minimal difference in size) could each be brought to account with 0.3 *liang*. The large box had a dimension of 2.4×2.6×1.4 *chi* (77×83×49 cm).<sup>254</sup>

Things to be kept away from moisture, like gunpowder, bullets, or clothes were transported in oil baskets (*youlou* 油簍). For small oil baskets, in which military equipment was transported, a price of 0.0922 *liang* was fixed. There were also oil baskets for water-drawing in the logistics stations, for which the exact dimensions were regulated. This type of basket was made of bamboo strips (*zhumie* 竹篾), paper, and tung oil and had a weight of 6.5 *jin* (3.88 kilos). The baskets could be replaced every six months at a price of no more than 0.08 *liang*. Baskets were also used for transporting charcoal to the camp foundries.<sup>255</sup>

Brass and iron were transported in tight bamboo baskets (*miebao* 篾包) that prevented any loss that might occur through leaking. Bullets for muskets and gunpowder were also transported in palm fibre mats.

Water was normally transported in water kegs or buckets (*shuitong* 水桶). These were necessary in the logistics stations to provide persons and animals passing through with water. In the military camps and in the camp foundries as well as in the batteries, water was likewise of the essence. The buckets or kegs could be made by the soldiers themselves or by the army craftsmen, for which purpose the *Jinchuan junxu li'an* provided exact data of the dimensions for the particular staves (*ban* 板) for the buckets. The wood was not to be bought in Sichuan and transported to the Jinchuan region, but to be provided or requisitioned locally, just like the timber for the ferry boats. There is, however, given a price for a water bucket (0.08 *liang*) that includes labour cost and the cost for a handle (*yueyalang* 月牙梁). In any case, the fact that a price is recorded in this place contradicts the general regulations that wood should be procured locally.<sup>256</sup>

Because the main objective of the logistics stations was the transport of rice, it was very important that scales, balances and differently-sized volume measures (*dou* 斗, *hu* 斛, and *sheng* 升) were kept there, as well as scissors for the manufacture of transport sacks.<sup>257</sup>

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<sup>254</sup> *Jinchuan junxu li'an* 2, fol. 60b-61a.

<sup>255</sup> *Jinchuan junxu li'an* 2, fol. 46a, 61b, 62a, 59b.

<sup>256</sup> *Jinchuan junxu li'an* 2, fol. 61b.

<sup>257</sup> *Jinchuan junxu li'an* 2, fol. 61a-61b.

Interestingly enough, nothing is said about needles or bodkins for the manufacture of tents, sacks and clothes.

<i>item</i>	<i>unit</i>	<i>price [liang]</i>
volume measure <i>hu</i> 斛	1 piece	0.35
volume measure <i>dou</i> 斗	1 piece	0.18
volume measure <i>sheng</i> 升	1 piece	0.08
balance ( <i>tianping</i> 天平) for 1,000 <i>liang</i> (62.5 <i>jin</i> )	1 piece	
beam balance for 100 <i>liang</i> (6.25 <i>jin</i> )	1 piece	
brass weights ( <i>huangshu tong fama</i> 黃熟銅砝碼; price per <i>jin</i> of metal: 0.3 <i>liang</i> , later reduced to 0.192 <i>liang</i> )	1 set	
steelyard ( <i>dengzi</i> 戥子)	1 piece	
scales ( <i>cheng</i> 稱)	1 piece	
scissors ( <i>jiajian</i> 夾剪)	1 piece	

□ 4.38 Table: Official prices for measures, weights, and tools

There is no indication if the logistics stations were allowed to bring to account any working tools, like axes, hammers and saws, but we must assume that they were at hand in the stations anyway, at least for making firewood. Probably the government did not pay separately for such tools which either had to be supplied by the logistics manager who was responsible for the respective station, or by the carpenters who had to build it. Among the military equipment, working tools are regularly mentioned as standard.<sup>258</sup>

#### 4.7. Infrastructure and Defense

A special chapter in the *Jinchuan junxu li'an* dedicated to construction work (*fangwu gongcheng* 房物工程)<sup>259</sup> records the regulations concerning the construction of storehouses, stockrooms, bridges, palisades, and boats.

If storerooms (*cangfang*) for the logistics stations were not ready to use when necessary, the responsible commanders were to rent war towers or houses. Their owners received a single payment for their rooms, depending on the size of the room and the duration of the rental period. For a small room the government paid 2 *liang*, or 3 *liang* when leased for a longer period of time. These regulations followed the custom of the Guizhou and Yunnan campaigns and are also recorded in the *Junxu zeli*, where the regulations follow precedents from the western campaigns.<sup>260</sup>

Mending a granary cost 4 *liang* in total, a simple storing shed (*cangpeng*) only 2 *liang*. All cost for work and material seem to have been included in these costs.

<sup>258</sup> *Jinchuan junxu li'an* 2, fol. 49a, 57a, 63a; *Gongbu junxu zeli* 1, fol. 5a-5b; *Gongbu junqi zeli* 33.

<sup>259</sup> *Jinchuan junxu li'an* 2, fol. 88a-90b.

<sup>260</sup> *Hubu junxu zeli* 9, fol. 7b-8a.



Pinewood for construction work (*songmu* 松木) was measured in heaps of 1 cubic *chi* (about 32 cm), with a weight of 30 *jin* (17.9 kilos). This wood was not allowed to be brought to account when cut outside the country (*kouwai*), which means that the government did not pay for timber but only for finished goods or the construction work from cutting trees to the carpenter's work. Within the state boundaries the price of wood was fixed according to the regulations of the Ministry of Works for trades (*gongcheng zeli* 工程則例). One cubic *chi* of cedar timber (*baimu* 栢木) for example had a price of 0.0347 *liang* in Wenchuan. Later, the Ministry of Works also fixed the prices for each kind of timber required for military equipment.<sup>261</sup>

Since the regulations did not allow wooden objects to be brought to account when produced outside the country, no prices can be found for boats or the material used to construct them. But a detailed description for the construction of such a ferry or boat can be found with clear specifications for the length of almost each plank, the hemp ropes and pitch for caulking needed. The standard size of such a boat was to be 3.5 *zhang* (11.2 metres), with three compartments (*cang* 艙) that could serve as storerooms, with a total length of 2.4 *zhang* (7.7 metres). The bottom width of a wooden boat was 0.88 *zhang* (2.8 metres). There were also no prices prescribed for the round leather boats (*pichuan* 皮船), only the dimensions, which are nevertheless interesting enough: The height of such a boat was 2.5 *chi* (0.8 metres), the diameter 1.59 *zhang* (5.1 metres). Six raw cowhides (with a size of 4.6×3.8 *chi*; 1.5×1.2 metres) were used to construct such a boat. The bottom was furnished with two layers of leather.<sup>262</sup> During the war 126 (wooden) boats, leather boats and rafts (*fa* 筏) had been constructed.<sup>263</sup> As leather boats could not carry heavy loads rafts and simple boats (*zhouji* 舟楫, *gangfa* 舡筏) built on the site served to ferry the troops over the rushing creeks and rivers.<sup>264</sup> Unfortunately, there are no rules for the construction of pontoon bridges (*fuqiao* 浮橋) which also served to cross rivers.<sup>265</sup>

For the erection of wooden fortifications (*mucheng bianqiang* 木城邊牆) stone layers (*qi* 砌) with a flat surface had to be buried in the ground with a depth of 3 to 4 *chi* (about 1.2 metres). Wooden stakes (*paimu* 排木) were then rammed into the earth to a depth of 2 *chi*. There were also fascines made of log bundles (*zamucheng* 紮木城) that were tied together with

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<sup>261</sup> *Jinchuan junxu li'an* 2, fol. 71b. *Gongbu junqi zeli* 56, fol. 19a-23b.

<sup>262</sup> *Jinchuan junxu li'an* 2, fol. 88a-89a, 90a.

<sup>263</sup> *Jinchuan junxu li'an* 2, fol. 186a.

<sup>264</sup> *Jinchuan dang* QL 36/III/00098 (QL 36/6/16).

<sup>265</sup> *Pingding Liang Jinchuan fanglüe* 131, fol. 11b (QL 41/1/jimao). *Jinchuan dang* QL 36/IV/00254 (QL 36/12/4); QL 41/I/00072 (QL 41/1/13).

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leatherstrips of a defined width and length. One cowhide could be cut into 38 leather strips. A wooden palisade (*muzha* 木柵) around the camps was to be made of wood logs with a diameter of 1 *chi* deep in the earth. Ten logs at a time were reinforced with wooden planks fastened transversally (*hengmu* 橫木) in 11 – 12 rows over the total height of 1.2 to 1.3 *zhang* (about 4 metres), to which 16 thin planks (*jianmu* 戔木) were added. For the construction of stone fortifications (*shicheng* 石城) rocks with a weight of 130 to 140 *jin* (about 80 kilos) and a dimension of 1 cubic *chi* should be used.

Clocktowers (*genglou* 更樓) in the camps were 1.5 to 1.6 *zhang* (about 5 metres) high, 0.4 *zhang* (1.3 metres) wide and 0.4 *zhang* deep. The stakes for them were rammed into the earth to a depth of 3 *chi* (106 cm).

For the construction of suspension bridges (*diaoqiao* 吊橋) the width of creeks and other waters had to be calculated, to which length 2 *chi* had to be added for either side of the bridgehead. The bridgeheads of strut bridges (*tiaoqiao* 挑橋) consisted of three, four or seven layers (*ceng* 層) of stones (?). For both bridgeheads an earthwork sub-structure (*dun* 墩) was to be made from which a 5 to 7 *chi* (about 2 metres) long pole protruded, depending on the size of the bridge.

In the *Junxu zeli* the regulations for construction work (roads, bridges, any stonework and earthwork) followed the rules for construction work (*gongcheng zuofa zeli* 工程做法則例).<sup>266</sup>

The costs for constructing bridges, boats and roads during the second Jinchuan war had accrued to 4,850.512 *liang*.<sup>267</sup>

#### 4.8. Zones of Activity

Because the two Jinchuans could not be conquered by a broad front rolling all over the country, four routes had to be established along which the troops marched to Jinchuan and were followed by the logistics staff. Along these routes, already mentioned several times, the attacks on the strongholds of the Jinchuan rebels were carried out. The direct and most important route was the so-called western route (*xilu*), leading from Guanxian into the heart of Lesser Jinchuan. The same destination was that of the so-called central route (*zhonglu*), leading from Yazhou to Lesser Jinchuan. This was the least frequented route because considering the overall picture it offered no advantages: it was much easier to transport all

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<sup>266</sup> *Gongbu junxu zeli* 1, fol. 9a-10b. There are also paragraphs about construction work in the (*Jiaqing* 20) *Gongbu zeli* 81-86.

<sup>267</sup> *Jinchuan junxu li'an* 2, fol. 186b.

equipment from Guanxian to the western or northern routes or from Yazhou to the southern route. Guanxian and Yazhou in turn were the two gateways to enter the mountains, thus all equipment was sent to those two *entrepôts*. The troops fighting against Greater Jinchuan were supplied by the northern route (*beilu*), leading from Guanxian through the territory of the allied native kings of Dzagunao, Somo, Djoktsai etc., and by the southern route (*nanlu*), leading from Yazhou via Dajianlu, and then likewise through the territory of allied natives, Mingdjeng, Gebshidza, and so on. At the end of QL 38 (1773) a new western route (*xin xilu*) was opened, leading from Guanxian via Dzagunao and then directly through the mountains to the troops encircling the stronghold of Le'uwé. The reason for this was that the transport on the new route was much cheaper than along the old western route.<sup>268</sup>

A look at the exact data showing how much material was taken to what logistics route clearly shows their importance as well as that of the main areas in which the imperial troops waged war. For rice as well as for beans and flour, the final account of the Jinchuan war lists the routes for which those grains were destined. A comparison of the proportions of these deliveries (see Table 4.40) reveals that only very little food was transported to the central route. Having been used for the conquest of Lesser Jinchuan this route was of no further use after this petty kingdom had been pacified in the autumn of QL 37 (1772, and then again in the autumn of QL 38 [1773]). About a third of the supplies went to the western and another third to the southern route which played the main role in attacking Lesser Jinchuan and then Greater Jinchuan during the first part of the war. To all these destinations, the amounts of the three staples were distributed equally. This cannot be said about the northern route, where the staple food was flour (38% of all flour went to the north) while rice apparently played a minor role (10% of all rice was transported to this destination). A reason for this may be seen in the higher proportion of native auxiliary troops in this part of the front who were supplied by the petty kingdoms located in that region. Furthermore, it was probably more convenient to transport the flour produced in northwestern Sichuan to this part of the war theatre, because the climatic conditions in regions like the prefectures Longan and Songpan, favoured the growing of wheat rather than rice. A third reason could be that there were more troops from Gansu and Shaanxi on the northern route, people more accustomed to eat noodles or other wheat products than those from the south. Yet the absolute figures show that all in all rice was the most important diet also on the northern route. Concerning the beans, which were almost exclusively fed to the horses, the western and southern route also played the most important role. Apart from the fact that mules could be used there they also had many more horses at

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<sup>268</sup> *Jinchuan dang* QL 39/1/00247 (QL 39/2/21).

their disposal than courier stations on the other routes. Logistics stations on the new western route disposed of much fewer horses than the two afore mentioned.

<i>route</i>	<i>rice [dan]</i>	<i>%</i>	<i>flour [dan]</i>	<i>%</i>	<i>beans [dan]</i>	<i>%</i>
<i>northern</i>	301,837	10	12,158	38	15,250	19
<i>western</i>	912,423	31	8,368	26	28,577	36
<i>new western</i>	656,185	22	3,090	10	6,140	8
<i>central</i>	143,238	5	569	2	200	0
<i>southern</i>	939,906	32	7,723	24	29,134	37
<i>total amount</i>						
<i>[dan]</i>	2,953,589		31,908		79,301 <sup>a)</sup>	

□ 4.39 Table: Distribution of staples to the logistics routes

<sup>a)</sup> Concerning the figures for beans there must be either an error in the total figure (89,301 *dan* instead of 79,301), or an error in the amounts transported inside the country (*kounei*). Unfortunately the *Jinchuan junxu li'an* gives no total figure (for comparison) for beans used during the second Jinchuan war in the introduction (*Zonglüe*), while it does provide a figure for beans consumed during the first Jinchuan war.

This situation is also represented by the list of courier station horses (see Chapter 4.2.). While only 36 horses were to be kept ready on the central route, the figure reads 1,327 for the western route and 1,711 on the southern route. The one exception is the large number of courier horses on the new western route, namely 798 (figures according to the regulations for the courier stations),<sup>269</sup> though only a small amount of beans was transported to this route. Similar relations can be observed in the distribution of porters along the four routes (the new western route is not listed separately but probably included in the data for the western route), with 191,185 working on the western route, 119,318 on the southern route, 105,721 on the northern route and only 35,873 on the short central route. A similar picture is presented by the figures for gunpowder consumption which was extremely high with 2,491,054 *jin* on the western route, 897,920 *jin* on the southern route, 714,902 *jin* on the northern route, as opposed to only 167,594 *jin* on the central route and by the relations of all other equipment and materials transported to and consumed on the different routes, like iron, fuses, bullets, and so on.<sup>270</sup> From these figures, shown in Table 4.39, it can be seen that about half of the equipment was taken to the western route and about a fourth each to the northern and southern routes, while the central route played almost no role in logistics.

<i>item</i>	<i>routes</i>				<i>total amount</i>
	<i>northern</i>	<i>western</i>	<i>central</i>	<i>southern</i>	
<i>gunpowder [jin]</i>	714,902	2,491,054	167,597	897,920	4,271,473
<i>%</i>	17	58	4	21	
<i>bullets [jin]</i>	399,971	1,391,408	197,543	535,163	2,524,085
<i>%</i>	16	55	8	21	
<i>fuses [discs]</i>	2,965,785	5,524,874	251,406	3,006,597	11,748,662
<i>%</i>	25	47	2	26	
<i>iron for cannonballs [jin]</i>	81,058	244,391	4,000	197,079	526,528 <sup>a)</sup>
<i>%</i>	15	46	1	37	

<sup>269</sup> *Jinchuan junxu li'an* 2, fol. 91a-122b.

<sup>270</sup> *Jinchuan junxu li'an* 2, fol. 184a-186a.

4. THE COST OF HORSES, FOOD AND MATERIALS

<i>brass and iron [jin]</i>	1,809,650	3,452,222	521,209	1,463,526	7,246,607 <sup>b)</sup>
%	25	48	7	20	
<i>labourers</i>	105,721	191,185	35,873	119,318	452,097 <sup>c)</sup>
%	23	42	8	26	
<i>horses (purchased)</i>	217	1,315		1,066	2,598 <sup>d)</sup>
%	8	51		41	

□ 4.40 Table: Distribution of war equipment, labourers and horses on the logistics routes

<sup>a)</sup> The total sum is said to be 536,546 *jin*, including a comparatively small amount of 2,600 *jin* of cannonballs used outside the country (*kouwai*), which were, according to the rules, not to be reclaimed after battle.

<sup>b)</sup> The total sum is said to be 7,245,431 *jin*.

<sup>c)</sup> The total sum is said to be 462,097. The difference is thus clearly due to a clerical error in the digits.

<sup>d)</sup> The total sum is said to be 2,535.

#### 4.9. Conclusion

The war logistics bureau (*junxuju*) of the province of Sichuan was an ad-hoc institution established during the period in which war activities took place with the task to manage all affairs of supplying the troops with war equipment and provisions, to look after the transmission of commands, memorials and imperial edicts, and for the organisation of all accounts handed over to the Ministry of Revenue. The officials being members of the war logistics bureau and their staff therefore had to have a detailed knowledge of all the rules necessary to manage the logistics affairs and to submit valid and acceptable accounts. Many of the rules for organising and accounting were derived from precedents of former wars, in the case of the second Jinchuan war those of the first Jinchuan war, the western campaigns and the Myanmar campaigns. In some instances there were either no such precedents or the regional conditions were so different that precedents were of no use making it necessary to find new definitions for the current campaign. Though for all new definitions or rules previous consultations with the Ministry of Revenue were required, the urgency of all cases (delivering rice, gunpowder or metals to cast artillery) made it necessary for the commanding generals to make decisions before obtaining the approval of the Ministry (*linshi zhuoliang banshi* 臨時酌量辦理 ‘to arrange things provisionally after careful consideration of the actual conditions’). When prices were involved, the common procedure was to bargain the lowest price possible (*zhao shizhi zhuojian dingjia* 照時值酌減定價) and to notify the Ministry of this price (*xian zi bao bu* 先咨報部) before submitting the account. The Ministry would then compare those prices and figures with the account and carry out a countercheck (*hedui* 核對). In such a situation well-meant decisions, the cost for which the Ministry later on was not ready to take over, could easily cost a loyal civil servant not only his position but also his private fortune (*jiachan* 家產). A case in point is that of the sub-prefectural magistrate (*tongpan*) Ji Guoxun 冀國勳 who was accused of having ‘wasted’ (*mifei* 糜費)

more than 75,000 *liang*. The investigation of the case in which extremely high-ranking civil servants were implied dragged on for several months. Though no agreement concerning the extent of guilt was reached and the whole affair could not be clarified satisfactorily, Ji Guoxun was spared capital punishment, because he had not acted in bad faith.<sup>271</sup>

One good example for the use of previous arrangements is the transport of rice by private entrepreneurs (*shang* ‘merchants’), who had already proved to be an ideal complement to transport by (more or less compulsively) hired peasants during the first Jinchuan war. The argument for transporting rice not by hired porters (*guanyun*, ‘governmental transport’), but to engage private merchants to supply the rice to the logistics stations and the camps (*shangyun*, ‘transport by private entrepreneurs’), therefore came up quite early in the course of the war.<sup>272</sup>

Other generals argued against the use of private merchants because they too would hire porters from among the people, who as well would have to master the mountain paths in Jinchuan, which would pose the same burden on the shoulders of the people as when the government dispatched corvée labourers from among the peasantry. But apparently there were so immense shortcomings in the governmental transport of rice, and an appropriate payment for the government-hired labourers would be much more expensive than paying private entrepreneurs (*shi fu yu shangyun* 實浮於商運).<sup>273</sup> Therefore it was decided to have the rice supplied by private entrepreneurs to an even greater extent. Those bought the rice in the granaries in Chengdu, Guanxian or Yazhou, to which places the grain from all over Sichuan had been shipped, and organized the transport to the destinations in the war zone. Although the private transport of grain during the first Jinchuan campaign thus played the role of a precedent to which the logistics managers of the second Jinchuan war adhered, there seem to have been no other cases in the Qianlong emperor’s wars in which likewise private entrepreneurs were relied on to supply the troops with grain. Although the private transport had some advantages, as its advocates pointed out, the emperor—as well as the members of the Ministry of Revenue, who had to control all war expenditure—were reluctant to use the two precedents of the Jinchuan wars as a basis for a general rule stating that in case problems arose with the logistics management the transport of grain could be generally transferred to private persons (*bu de zuan wei ding li* 不得纂為定例 ‘it shall not be allowed to fix this as a general rule’).<sup>274</sup> The two Jinchuan wars should remain exceptional because the topographic

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<sup>271</sup> *Jinchuan dang* QL 40/IV/00011-14 (QL 40/10/6), 00137-139 (QL 40/10/29), 00187-190 (QL 40/11/10), 00231-234 (QL 40/11/29), 00247-248 (QL 40/12/3), 00293 (QL 40/12/19), 00295 (no date), 00315 (QL 40/12/22).

<sup>272</sup> *Pingding Liang Jinchuan fanglüe* 21, fol. 14a-15b (QL 37/3/gengzi).

<sup>273</sup> *Pingding Liang Jinchuan fanglüe* 24, fol. 9a-10b (QL 37/3/jiazi).

<sup>274</sup> *Hubu junxu zeli* 5, fol. 1a-2a.

circumstances had led to the grain transport, when organised by the government being equally expensive as when organised by merchants.

But generally the precedents from former wars, especially the first Jinchuan war, were sufficient to justify the organisation of the logistics affairs. This became clearly evident in the organisation of the march of the troops from throughout the provinces to Jinchuan. While during the first Jinchuan war the road conditions especially in Shanxi and Shaanxi, as well as the organisation of transport animals in Zhili and Shaanxi, had been unsatisfactory, the experience from the past wars made it possible to arrange things so that concerning these two questions there were almost no shortcomings in the organisations during the second Jinchuan war. All troops, along with their equipment, left their garrisons on time and reached their camps without greater delays. To make this possible, not only about twice the amount of regular (*yizhan*) and temporary (*taizhan*) forwarding stations was established as during the first Jinchuan campaign; moreover, an excellent communications network was established between all levels of government starting from the announcement of the generals that new troops were needed to the subsequent order of the emperor to select the necessary staff from a defined region or province. When the number of troops and the time was known when they would leave their garrisons, the governors or governors-general, respectively the provincial administration commissioners (*buzhengshi*) as heads of the ad-hoc provincial war logistics bureaus, ordered the prefects and magistrates to arrange everything for the troops passing through their territory. The magistrates had to provide food and transport (carts, horses or mules) for the troops, which were, as far as possible, borrowed from nearby garrisons, or hired from private owners. In order not to harass the population too much, and in order to save money, the troops had to pass each district or prefecture as quickly as possible. Private owners of carts or beasts of burden were paid according to strict definitions, which distinguished between days of arrival (travelling to the place of action) or departure (travelling back home), days when transporting military equipment, and days when travelling back to the point of origin, where the carts or mules were loaded with the equipment of the next batch of troops, after one or two days of rest. Because it was not possible to arrange animals or carts for the transport of the equipment of more than 500 troops at once, each contingent marching to the war theatre was divided into batches of 300 to 500. The communication for the arrangement of the transport even crossed provincial borders, especially when it was necessary to provide additional mules for regions where their number was insufficient.

When everything was over, all costs were to be declared as war expenditure, which made again necessary intensive communication between the magistrates, who had to pay the cart-

owners in advance, the provincial treasurers, who had to pay back the expenditure—eventually by subtracting the due sums from the next tax yield to be collected from the districts, and the Ministry of Revenue, which had to check and to accept the accounts (or ‘bills’) handed in from the provinces. Because theoretically all war expenditure came from the virtual war chest in the province of Sichuan (which was in fact identical with the provincial treasury), which was responsible for organising the war, that province had to pay back the expenditure to the provinces organising the dispatch and the march of the troops. But as there were always financial transfers going on between one province and another, there must in fact have been complicated offsets of assets and liabilities between them. The nub of the matter is that the Ministry of Revenue had to decide if an account was correct or not, and to arrange that everything was booked in the correct files for war expenditure, which was pro forma paid by the Ministry.

The arrangement for the triumphant return was, based on all these experiences, even more sophisticated. Months before the last castle of Greater Jinchuan surrendered, everything had already been well-arranged for the return of the troops, so that the travel overland and by boat went extremely smoothly and fast.

Communication was another important aspect. The sheer number of documents surviving in different sources gives an insight into the huge amount of mail which went to and fro between one camp and another, as well as from the war theatre to the emperor, and back. For this an ad-hoc network of courier stations (*tangzhan*) had to be established in Jinchuan, quite apart from the logistics stations (*yunzhan*, also called *liangzhan* ‘grain stations’), each of which was equipped with horses and sufficient staff (from registrars to couriers and grooms) to forward mail as fast as possible. Only in a few places mail was forwarded by runners instead of horsemen. Inside the provinces the permanent network of courier stations (*yizhan*) served to transmit mail. The indispensable courier horses had to be looked after, and the government prescribed detailed rules how to feed and how to treat them: care had to be taken that as few horses as possible died from exhaustion. On the southern route even the allied native kings and their subjects (guiding so-called *ula*, which is the term for the Tibetan beasts of burden used as a type of *corvée* of the native population) were included into the courier service. The strict limitation of costs in all cases shows that the government had permanently to create a balance between effectiveness and its budget. Hay, for example, cheap as it was, was not allowed to be declared as war expenditure outside provincial territory. In order to save cost, as many horses as possible were to be borrowed from the local garrisons (*yingma* ‘garrison



horses'), and only when no garrison horses were left, could be bought on the market (*caimai ma* 'purchased horses') or hired from private owners (*gu minma* 'hired private horses').

The personal status of officers was expressed by the number of horses they were allowed. Yet frequently the mountainous terrain in Jinchuan made the use of riding horses impossible. In this case the officers had to dispense with all their horses apart from one, while common soldiers and personal assistants had none at all. For each horse an officer gave up the government paid him compensation, money which he could use to pay porters for each horse not used. Detailed regulations as to how many horses each type of military and civilian official or common soldiers of each type of force (Capital and provincial Banners, Mongols, Green Standard troops) was entitled to were only issued in the *Junxu zeli*, when the second Jinchuan war was over. In the Jinchuan war, all military equipment (*junzhuang*) and the baggage of specialists (physicians, cartographers) was taken to the camps on the shoulders of porters instead of the backs of mules and horses.

The three staples transported to the logistics stations and the camps were rice, flour and beans, the latter serving as fodder for the transport animals, while the flour was mainly consumed by native auxiliary troops and the Gansu and Shaanxi troops on the northern route, but also served to bake rusk to supply the troops for a few days in the field. The rice was transported overland or by boat to the two gateway districts of Guanxian and Yazhou. A part of the rice came from state granaries (where it had to be husked first), yet an indefinite part had also to be bought on the free market. In order to take advantage of the lower prices just after the harvest the war logistics managers bought larger amounts of grain in autumn. The regular harvests in Sichuan were so abundant that it was not necessary to import rice from other provinces, which was a very exceptional situation in the Qianlong wars: For all other wars the rice had come from a number of provinces. Yet the large need for military supply made it necessary to impose a ban on rice exports to Hubei in order to keep the grain prices in Sichuan at a tolerable level. The export of rice to the middle Yangtse region was very common in the eastern districts of Sichuan, for which it was cheaper to ship the rice downriver instead of transporting it overland to the provincial granary in Chengdu. The amount of rice to which each person was entitled had been fixed according to experience (1 *sheng* or 0.83 *sheng*) and it was expected that all of it was consumed, although some troops or logistics stations tried to save some rice and sell it to private entrepreneurs roaming around through the camps and along the logistics routes. To buy rice this way instead of in Chengdu enabled them to save transport costs. The huge extension of the logistics network sometimes

led to errors in the transport system, from which some persons in the logistics station profited by selling the surplus rice which had unexpectedly arrived in their station.

Cannons and howitzers played a decisive role in crushing the Jinchuan strongholds. Due to the topographic conditions it was not possible to bring up artillery from the garrisons, so the pieces had to be cast in camp foundries (*paoju*) set up at some distance from the batteries (*paotai*) which bombarded the war towers. Casting cannons under such conditions was no easy task, the more so as the the brass was not of the necessary pureness. Especially in the first half of the war, therefore, bursting cannons were an often-seen incident. Only when the commanding generals ordered to pay more attention to the purification of the brass during the melting process, the quality improved. Although there existed some standard types of cannons and howitzers (*chongtianpao*, *pishanpao*, *weiyuan jiangjun pao*, *jiujiapao*) the artillery pieces were cast according to need, iron as well as brass cannons and howitzers with weights up to 3,000 or even 5,000 *jin*. To aim the howitzers the gunners had to rely on the expertise of a Jesuit geodesist, who was officially ordered to survey Jinchuan. Not only the iron and brass for the cannons was transported to the war zone—brass was in most cases borrowed from the provincial mint—but also all other equipment necessary to erect furnaces and to build the moulds, like clay, sand, and so on. For the cannons, as well as for the iron cannonballs (in some cases being shells), the logistics managers decided to have charcoal produced locally instead of buying hard coal on provincial territory, because the former was much cheaper. The precedents from the Jinchuan war are therefore the only existing regulations for charcoal as war expenditure. Brass being expensive it was to be refunded to the institutions it belonged to, while the much cheaper iron was allowed to be left behind on the battlefields, because it would have been more expensive to transport it back to Chengdu than to write it off. The occupation troops in the military colonies (*tuntian*) were allowed to make use of this iron to make agricultural tools.

For the cannons, as well as for the widespread *niaoqiang* muskets with flintlock, gunpowder had to be procured in large amounts. Disc-shaped fuses were used for the cannons, and for the musket bullets lead had to be bought by the logistics managers. Many of those items could be procured from garrisons in various provinces, while gunpowder could also be produced locally, when nitre and sulphure were at hand. Because of the considerably different climatic and natural conditions in each province there were neither fixed rules for the production process and the production cost of this equipment, nor were they laid down for the later war expenditures canon.

Not all parts of the necessary equipment a garrison disposed of could be declared as war expenditure, and some of the equipment was not paid for by the government at all. Especially the weapons were considered as durable equipment, and there were prescribed periods after which the government would pay repair or replacement costs. Regulations for the standard equipment of the garrisons were only made after the second Jinchuan war and later became ever more bureaucratic, with detailed regulations for each garrison throughout the country. During the 1770s, military equipment was still subjected to temporary regulations, and the *Jinchuan junxu li'an* therefore lists the prices and measurements for all military equipment which could be declared as war expenditure, from cooking woks, tents and uniforms to *materia medica* and transport material like sacks, baskets, mats and coffers. Even for the infrastructural and defence equipment, like bridges, boats, clock towers and palisades, dimensions and the required amount of labour were prescribed. A very interesting point is that uniforms, clothes and boots were traditionally not provided by the government but to be made by the garrisons and the soldiers themselves. It was therefore not allowed to declare them as war expenditure. The troops of Hubei, for example, annually sent a quarter of their pay to Jinchuan in settlement of their clothes and boots. Tents likewise, as durable equipment, had a government-fixed lifetime and could therefore not be declared as war expenditure. Yet in some cases the emperor granted an exception from this rule, for which reason the *Jinchuan junxu li'an* also contains a number of prices and exact rules for the dimensions of tents. These were nevertheless reduced to two standard types during the war. Tents were only allowed to be used by imperial troops and not by native auxiliaries or military labourers. Only in very exceptional cases without an infrastructure behind a quickly advancing front the emperor allowed that kind of staff to use imperial tents. The emperor, always eager to achieve standardization, did not want one part of the troops being preferred to others, and only allowed new equipment to be sent to a division when the others were also cared for.

For many items exact figures about the cost and the regional distribution have been preserved. They make it possible to see what logistics routes were more important than others. In the case of the northern and the western route, this situation is reflected by the modern roads following exactly along those routes. Yet other routes have totally lost their importance and were only opened temporarily to supply the troops, namely the new western and the western branch of the southern route, as well as the central route which today ends in the northern part of Baoxing county without crossing the mountains to Xiaojin county.

The machinery of logistics worked so automatically that it had to be stopped by an imperial edict after the surrender of Sonom in the first month of QL 41 (1776), and the war logistics

bureau had to decide what to do with the remaining materials not used, like iron, fuses, gunpowder, bullets, and so on. The major part of them was taken back to nearby garrisons. The brass had to be refunded to the provincial mint, as far as it had been borrowed from there. Even horses and porters were by order gradually led back until all the troops (except the 6,500 occupation troops) and the the material had left the pacified region.<sup>275</sup>

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<sup>275</sup> *Jinchuan dang* QL 41/1/00015-23 (QL 41/1/3).

## 5. Expenditure—What Was the Money Spent on?

In the two preceding chapters each particular item has been investigated the Qing government had spent money on during the second Jinchuan campaign, and it has been tried to assess how much each of those items had cost. It was not possible to evaluate the theoretical costs for each single item, because too many data are lacking, or because it is too complicated to reconstruct how much money was needed for certain purposes. It is known, for example, what amount of money was necessary (or ordered to be sufficient) to construct one bridge over a mountain creek, but not how many bridges were needed to prepare the way for the troops and the logistics staff. It is also known how much rice was transported along the new western route, but not how much of it was transported to what point along that route, which makes it impossible to calculate the exact transport costs. The final account in the *Jinchuan junxu li'an* does not provide much help in solving this question, as the overall expenditure is not classified in detail but only in rather general fields of spending (see Table 5.2). Yet compared to other wars of 18th century China the details of the documents presented in this book are a great help to understand for what purposes money was spent. In this chapter the fields of spending in total will be dealt with, and certain problems will be highlighted which arose during rendering of accounts in the Ministry of Revenue, especially concerning money which private persons (officials charged with incorrect accounting) still owed to the government. A few examples will explain how the government dealt with such problems. In the second part of this chapter the problem will be scrutinized it meant for the commanding generals and the officials of the war logistics bureau (*junxuju*) to calculate in advance how much money would be needed within the next months, and how to deal with the sums available in the war chest. But before referring to the actual accounting of the war expenditure, the traditional Chinese method of accounting shall be explained.

### 5.1. Accounting Methods and Regulations

Although bookkeeping was a method developed for the commercial sphere, it is certainly adequate to deal with the finances of a state and its institutions. In Europe the double-entry bookkeeping was used since the 14th century AD, in China it became common during the Song period (960 – 1279), with the same background as in Europe: it was a method to deal

with the growing needs of an economy based on money and not to lose track of income, expenditure, debts and the balance of cash.

Since the Chinese bookkeeping uses four different entries, the so-called ‘four columns’, the accounting method is called that of the ‘four-column clearance books’ (*sizhu qingce* 四柱清冊). The four columns are the ‘old’ holdings (*jiuguan* 舊管) at the beginning of the period under report, the income or revenue (*xinshou* 新收), the expenditure (*kaichu* 開除), and what was left over (the balance, *shicun* 實存) at the end of the period under report. The balance of the current period under report will be carried forward to the next period under report as old assets.

The composition of the individual positions depend of course on the type of business: outgoings can be liabilities against which can be set goods or services made use of on the side of receipts. In the same way receipts can be debts of a customer incurred by borrowing or not yet having paid goods. Against this may be set the outgoings of a businessman who supplies goods or gives a loan. Under this premise the two entries ‘existing stock’ (or inventory, *jiuguan*) and ‘fresh receipts’ (*xinshou*) are comparable to the entry side (*zichan* 資產, assets) of the western-style double entry bookkeeping with expenses (or ‘outgoings’) and remaining stock representing the debit side (*fuzhai* 負債). The respective sums must be identical, while the balance of proceeds and outgoings must correspond to that of inventory and fresh stock. Thus the four ‘columns’ can be used in a balance sheet (*zichan fuzhai biao* 資產負債表) which will not look like the classical left-and-right presentation but which could nevertheless be compared to the Anglo-American ledger-type journal with the two ‘sheets’ shown one below the other. In other words the entries under ‘inventory’ correspond to the financial statement of the respective accounting periods, with the entries under ‘proceeds’ and ‘expenses’ of the western system corresponding to a profit-and-loss account or statement of earnings (*sunyiji biao* 損益計表). Thus the annual surplus respectively the annual net loss correspond to the ‘fresh stock’ (*shicun*) which will be carried over to the following year as net earnings or net loss, as the case may be.

The use of the *sizhu qingce* method was therefore also a standard method for accounting in the sphere of state finance. The ‘Regulations for war expenditure’, the *Junxu zeli*, therefore contains a paragraph dealing with the accounting method:<sup>1</sup>

**Rules for the Arrangement of Accounting**

‘When presenting memorials to settle military expenditure, [the following points have to be observed]:

Detailed maps have to be drawn in advance, which give information about the place names and mutual

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<sup>1</sup> *Hubu junxu zeli* 9, fol. 10a-10b.

distances of each of the logistics stations (*taizhan*) to be erected inside and outside the country (*kounei*, *kouwai*), the location of the large encampments, the date when logistics stations will be relocated, closed or at which place is a confluence [of routes] (*zonghui* 總匯), and if there are any routes to bypass [certain topological obstacles] (*pangtong raojing* 旁通繞徑). These maps are to be handed in to the Ministry [of Revenue], [together with] a data book (*ce* 冊), which then will serve as basic information when checking the accurateness of the accounts. When setting up an account, the first sum of silver sent to the war chest has to be declared as new income (*xinshou*) of the first accounting period (*chu'an* 初案); the next assets are the expenditures (*kaichu*), and then the leftovers (*shicun*). The ‘leftovers’ of the first account will be carried forward as the ‘old’ holdings (*jiuguan*) to the next account. The [new income] and [new] expenses have to be integrated into the calculation and are relayed on from each account to the next, listed according to cost groups (*fenmen bielei* 分門別類), to await being settled in the next routine memorial.

Concerning the expenditure for rice, everything has to be cleared in one single specific account (*benan* 本案), in which all the amounts of rice received and all the amounts used have to be listed, and it is not allowed to bring forward the balance or the holdings, in order to avoid confusion.

In cases of overspending (*changzhi* 長支) or borrowing (*jiezhi* 借支) in the accountings, or if the Ministry does not accept the account, with the request to deduct the particular sums in the account and the demand that the responsible officials shall compensate the overspent sums, everything has to be compensated and finished in accordance with the specific account (*benan*), and it has to be declared that the sum has been paid back to match the original amount. It is not allowed to create a separate, new account and to forward anything.

This all has to be done so that at the end of the campaign [all documents will be used to compile] the general account (*huizong* 彙總) including all sums of money and rice received and used. [The general account] includes a separate analysis [of all items] approved [by the Ministry], the amounts deducted because they have to be claimed back [from the responsible officials], and the figures of silver and rice consequently received as compensation [for wrong accounting]. It also includes the left-overs of silver of the last account (*weian* 尾案), and is then submitted as a report to be checked [a last time]. ([Commentary:] Unmodified, according to older precedents.)

From these regulations for accounting (*banli baoxiao zhangcheng* 辦理報銷章程) it can be learnt that accounting was highly standardized and that the commanding generals were under the obligation to make use of this type of accounting when settling their expenditures. Unfortunately there is nothing written about the question under what headings the particular expenditures (*fenmen bielei*) had to be brought to account, but from the composition of the *Junxu zeli* and the chapters of the *Jinchuan junxu li'an* it can be seen that it was necessary to itemize certain entries for which money had been spent. Other entries than those inofficially prescribed were not allowed. The prescriptions in the regulations for accounting demonstrate how the Ministry of Revenue checked if an account was drawn up accurately: All figures had to be sent in to the Ministry as soon as they were known. The text translated above only concerns logistics routes, but the same must have been valid for the numbers of soldiers and

horses, the amounts of gunpowder, and so on. The Ministry was to be reported all figures down to the smallest details and memorialized these to the emperor. Otherwise the Ministry (indirectly talking through the imperial edicts) could not have known such minute details, for example how much rice 2,000 troops would consume and how much time they would need to march to a destination with the help of a certain number of porters and pack animals. The particular headings under which running expenditures could be brought to account are not prescribed in detail—yet one very important item is specifically mentioned in the rules for accounting: the rice. Grain, flour and beans for fodder had to be brought to account separately, for two reasons. Firstly, rice and fodder were such important items that the army would not be able to fight if men and beasts were not sufficiently. Yet while materials like weapons, gunpowder, cooking woks and tents were made according to prescribed prices, which enabled the Ministry of Revenue to exactly determine how much money would be spent for a certain amount of those items, rice and flour were subject to the market forces and could not be controlled by the government. For this reason, the costs could not be predetermined by government agencies. Instead, rice, flour and beans were to be measured according to their volume, and not according to their price. Only for smaller quantities of rice, for example, when officials had to pay back a certain quantity of rice, this was converted into money according to the current market price. But for the rendering of accounts, only the volumes were of importance, and because rice and fodder were measured in different units from the other items, a separate account was necessary. The second reason is that it was expected that, once an exact calculation had been made, no rice was to be left over. 2,000 troops and their personal assistants, for example, consumed exactly so and so much rice per day, no less and no more. Transport costs for grain were, as has been seen, quite high, and therefore it was expected that the logistics managers ordered only the exactly needed quantity of rice. Especially in the first year of the war it was often the case that troops went hungry because the logistics routes could not fast enough be established behind the advancing army, or because there were other problems with the transport, like a shortage of porters or snow blocking the roads, and so on. But there are also many examples that show that the soldiers were given sufficient rice to store it and even sell it to merchants who were hired to provide rice. Other merchants bought up rice left over in the transport stations. Both examples show that there were indeed cases that rice was left over, and because it was not allowed (or because there was no obligation) to itemize it as ‘leftovers’ (i. e. the balance) for the next accounting period, a lot of misuse was possible with leftovers of grain.



The ‘four columns’ accounting method was quite old and the procedures described in the *Junxu zeli* regulations therefore were well known at the time of the second Jinchuan campaign. One example shall highlight the way the ‘four columns’ method was used: On QL 39/1/13 (Feb 23, 1774) the governor-general of Sichuan reported the military expenditures of the past month. Old assets (*jiuguan*) of 1,934,590 *liang* were increased by a transfer (*xinshou*) of 2,847,460 *liang* and diminished by an expenditure of a mere 534,390 *liang*, which made for a balance (*shicun*) of 4,347,660 *liang*.<sup>2</sup>

## 5.2. The Final Accounting of the Second Jinchuan Campaign

The introductory survey (*zonglüe*) of the *Jinchuan junxu li'an* gives a general idea about the costs: Fuheng reported that the government had spent 7,604,800 *liang* of silver, 767,200 *dan* of rice, and 20,260 *dan* of flour, as well as 7,440 *dan* of beans for fodder on the first Jinchuan war. Everything was managed according to the experiences from the preceding campaign against Bangun 班滾, the king of Djandui, in QL 10 (1745). The compilers then name the figures of the soldiers dispatched at the beginning of the second Jinchuan campaign, when everything was still managed according to the rules for barbarian affairs (*yiwu shili*; compare Chapter 3). A few more sentences about the war and its outcome are followed by important figures: For the war, the government had to allocate 61.6 million *liang* from the state treasury (*guotang* 國帑), 55.5 of which were really spent. There were furthermore 3.8 million *liang* of tax abatements (*huomian* 豁免). The number of dispatched soldiers and staff is then dealt with, details of which are to be found in Chapter 3 of this book. The troops and labourers needed 2,963,500 *dan* of rice, the troops consumed 4,271,400 *jin* of gunpowder, and more than 3 million *jin* of lead and iron for bullets and cannonballs. 650 iron cannons were cast, and more than 4,000 horses served in the courier stations (exclusively in the war area; compare Table 5.7). The costs for everything, including that for further items like the construction of bridges, the building of boats and roads, as well as manufacturing every kind of tools, the imperial rewards for heroic troops and compensations for killed and injured soldiers, were ‘ten times as high as those of the former [i.e. the first Jinchuan] campaign’ (*jiao qian yong tang, ji yi shi bei* 較前用帑, 既已十倍), and therefore it took a lot of time for the governor-general and the responsible civilian officials dispatched to Jinchuan to arrange the definitive final account for the Jinchuan war. All was done according to the preceding cases of the first Jinchuan war, the Myanmar campaigns and the western campaigns, for which the

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<sup>2</sup> *Junjichu lufu zouzhe*, reel 35, no. 306.

governor of Gansu had been responsible. The final account comprised 47 chapters (*tiao* 條) with 870 issues (*an* 案). After a final check by the Ministry of Revenue the account was closed in QL 50 (1785). It is divided into the old files (*jiuan*), covering the expenditures before QL 38/7/1 (Aug 18, 1773), and the new files (*xin'an*), covering the expenditures after that date. The date was chosen because it was the watershed of the war, when the Qing army was utterly defeated in the uprising of Mugom in the summer of QL 38 (1773).

### 5.2.1. The Total Costs of the Second Jinchuan Campaign Disputed

Statements about the total costs of the Qianlong emperor's campaigns are quite misleading and sometimes vastly differ from each other. Chen Feng has collected such statements and has discussed the differences between them.<sup>3</sup>

According to the *Qingshigao* 清史稿, the official history of the Qing period, the costs for the second Jinchuan campaign added up to 'more than 70 million *liang*'.<sup>4</sup> This is of course a very rough figure and exceeds the real amount by ten million. In the same source the first Jinchuan war is listed with a sum of 'more than 20 million *liang*' as total costs, which is even almost three times the real expenditure. One reason for the size of this figure is the fact that it does not only contain the real expenditure for the war, but also tax abatements and contributions set aside for the relief of flood victims in southern China. The sum of 'more than 20 million *liang*' mentioned is of course much too high and is absolutely incorrect when talking about military expenditure.<sup>5</sup> A second reason for the size of this figure is that it contains large sums of money which never arrived in the war chest because the war was finished unexpectedly with the surrender of the Shaloben. Chen even talks of a slip of the brush, stating the figure should read '10' instead of '20' million *liang*.

The Qing dynasty's official chronicle of its wars, the *Shengwuji* 聖武記, likewise gives a figure of 'more than 70 million *liang*' as costs for the the second Jinchuan campaign. The *Qingshigao* figure is surely taken from this source, of which we have already several times seen that it is not necessary reliable but rather served to glorify fame and fortune of the Manchu rulers.<sup>6</sup>

Zhao Yi's 趙翼 *Yanpu zaji* 簷曝雜記 ('Miscellaneous notes from the Sunning on the Eaves [Studio]'), gives a figure of 7.75 million *liang* for the first Jinchuan war and 63.7 million *liang* for the second Jinchuan campaign. The figures are derived from the calculations by

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<sup>3</sup> Chen (1992), p. 261.

<sup>4</sup> *Qingshigao* 125, p. 3709.

<sup>5</sup> The figures also can be found in Zhuang (1987), p. 128.

<sup>6</sup> *Shengwuji* 11, fol. 4a, 7b.

Zhang Huzhuang 章湖莊, an official of the Ministry of Revenue, and are therefore much more reliable than the roughly guessed statements by the official gushing.<sup>7</sup> Both figures can be confirmed by the data given in the *Jinchuan junxu li'an*.

Chen Feng provides figures from a fourth source, the *Sichuan buzheng lu* 四川布政錄 'Records of the provincial administration commissioners of Sichuan', a book which is a rarity and only exists as a manuscript. Unfortunately Chen does not say where he obtained access to that document so that his statements cannot be verified. Yet the figures are quite convincing and very close to the real figures as known from the *Jinchuan junxu li'an*: for the first Jinchuan war, 7,604,844 *liang* are said to have been spent, and 59,822,760 *liang* for the second Jinchuan war. In the figure of 59 million *liang*, the following sums are included: 2,832,300 *liang* of tax abatements, the prices for 2,963,500 *dan* of rice and 111,200 *dan* of beans, as well as 395,800 *liang* still to be paid by debtors from among the officialdom. These figures are also very close to those indicated in the *Jinchuan junxu li'an*. The official history of the war, the *Pingding Liang Jinchuan fanglüe*, only gives very crude figures, like: 'We sent one hundred thousand troops into battle and spent seventy million *liang*,' 'We don't care for the seventy million *liang* spent to subdue the rebels,' or 'The expenditure was at least 70 million *liang*.'<sup>8</sup> The figure of some 70 million *liang* was known just when the war came to an end and is therefore not based on an exact calculation, which in the end showed that the war had been less expensive, at least concerning the direct costs.

While the figures concerning the expenditure for the first Jinchuan campaign, the Taiwan campaign (1786 – 1788) and the White Lotus war (1796 – 1804) have to be critically checked, there seems to be no greater problem with the costs for the second Jinchuan war. It is known and undisputed that the government provided more than 60 million *liang*, not all of which was spent, but only somewhat over 50 million *liang*.

### 5.2.2. The Total Costs in Detail

According to the general account (*dazong* 大總) in the *Jinchuan junxu li'an*, the Ministry of Revenue allocated more than 61.6 million *liang*, in fifteen instalments (*shiwu ci* 十五次).<sup>9</sup> This sum is repeated somewhat more in detail in the general accounting at the end of the

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<sup>7</sup> *Yanpu zaji* 6: *Junxu ge shu* 軍需各數.

<sup>8</sup> *Pingding Liang Jinchuan fanglüe* 133, fol. 19a (QL 41/3/guimao), 28a-28b (QL 41/3/yisi); 134, fol. 1a (QL 41/3/jiayin).

<sup>9</sup> *Jinchuan junxu li'an* 2, fol. 177a.

*Jinchuan junxu li'an*: The Ministry received 61,731,754.935 *liang*.<sup>10</sup> Where the money did come from, will be discussed in Chapter 6 of this book.

The expenditure is itemized according to two criteria. The first one shows which of the three chronological types of file the expenditure belonged to; the second listing is according to the cost groups, or the purpose of the expenditures.

<i>type of file (chronological)</i>	<i>sum [liang]</i>
barbarian affairs ( <i>yiwu</i> , 5 items) and old files ( <i>jiuan</i> , 399 items)	15,834,623.9145
new files ( <i>xin'an</i> , 467 items)	36,750,348.2135
additional expenditure ( <i>buxiao</i> 補銷, 6 items)	931,625.6683
first expenditure not included in other parts of the account ( <i>wei ru anci nei xianxiao</i> 未入案次內先銷)	724.1150
'subsequent expenditure', i.e. back payment by officials owing money to the state ( <i>xuxiao</i> 續銷) [the last two categories comprising 17 items]	2,703.3190
<b>total (<i>zheng-xu-bu xiao</i> 正續補銷, 877 items)</b>	<b>53,520,025.2403</b>

□ 5.1 Table: Expenditure for the second Jinchuan war according to archival criteria

From this list it can be seen that about 30 per cent of the total expenditure was incurred during the first half of the war, while the second half of the war, from summer QL 38 (1773), consumed almost 70 per cent of the total costs of more than 53 million *liang*. A very small amount of 724 *liang* spent at the beginning of the campaign was not entered into the regular account, but cleared separately. A further 2,700 *liang* were brought to account long after the war was ended.

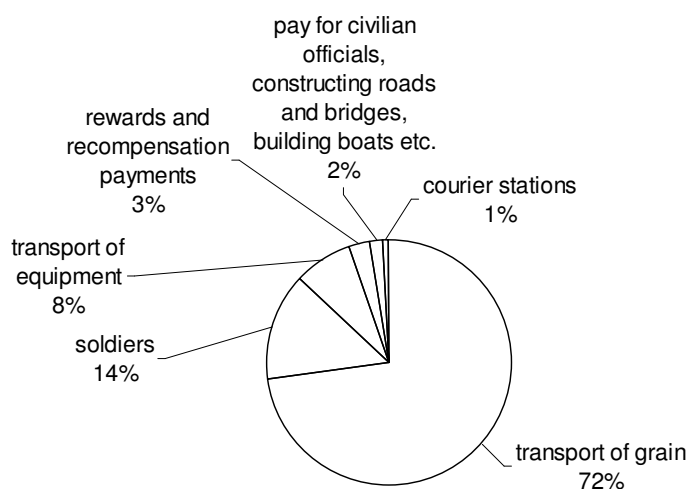
<i>cost groups</i>	<i>sum [liang]</i>
war-time pay for soldiers ( <i>ying fu guanbing</i> 應付官兵, 247 items)	7,543,010.8830
rewards and compensations ( <i>enshang xushang</i> 恩賞卹賞, 86 items)	1,491,312.2690
staff in logistics stations ( <i>anshe zhanfu</i> 安設站夫), hiring workmen ( <i>guyong jiangyi</i> 雇 用匠役) and family allowances ( <i>anjia yiwu</i> 安家衣物, 24 items)	368,830.5130
horses and labourers in courier stations ( <i>tangzhan mapi fugong</i> 塘站馬匹夫工, 48 items)	468,723.2050
transport of grain ( <i>yunsong liangdan</i> 運送糧石, 233 items)	38,633,984.3045
transport of equipment ( <i>banyun junfu yili paoliao</i> 辦運軍夫衣履炮料, 145 items)	4,018,719.2118
pay for civilian officials ( <i>chaiyuan zhiying</i> 差員支應), constructing roads and bridges ( <i>xiuli qiaodao</i> 修理橋道) and crafting boats etc. ( <i>chuanwu gongliao</i> 船物工料, 89 items)	912,172.5455
<b>total:</b>	<b>53,436,752.9300</b>
difference to sum above:	83,272.3000

□ 5.2 Table: Expenditure for the second Jinchuan war according to cost groups

It is really surprising that the highest costs did not accrue for paying the officers and the civilian officials dispatched to support the logistics. The 7.5 million *liang* for the baggage pay and the provisions of the soldiers only constitute 14 per cent of the total costs, and even the 1.5 million *liang* for compensations and the rewards for them only amount to 3 per cent of the

<sup>10</sup> *Jinchuan junxu li'an* 2, fol. 177b-178a.

53 million *liang* spent on the war. The staff in the logistics stations, the courier stations, and the workmen needed all over the war theatre, were paid so little that even including the family allowances (*anjiayin*), all this personnel did not require more than 0.84 million *liang*. The most expensive item was indeed the transport of grain to the logistics stations and the encampments, which required more than 38 million *liang*, or 72 per cent of the total costs. This sum includes the costs for the grain. The military equipment, of which only clothing and shoes are mentioned here, as well as the material needed for the cannons (i.e. iron, brass, gunpowder, etc.), was transported to the camps for an amount of no less than 4 million *liang*, or 8 per cent of the total costs. What exactly the 145 items (*an* 案) of equipment are, and if the price of the iron is included in the figures, cannot be found out because none of the items are detailed in the account. The synopsis of the expenditure for civilian officials under a chapter including costs for repair work and the necessary material, seems rather unusual. Thus it is a pity that it is not possible to find out more about the interesting question how much the civilian officials cost the government. Possibly among them were a lot of officials on probation (*shiyong* 試用) who were not paid regularly.



□ 5.3 Diagram: Composition of total expenditures for the second Jinchuan war

When comparing the sum of Table 5.1 with that of Table 5.2 we come to the conclusion that 83,272 *liang* are missing. This is probably the money spent at the beginning of the campaign, when the barbarian affairs regulations were still in force: The *Jinchuan junxu li'an* says that the items included in Table 5.2 do not contain the expenditure from the 'barbarian affairs' (*yiwu bu ji* 夷務不計).<sup>11</sup> It is hard to say if this amount of money was sufficient to support

<sup>11</sup> *Jinchuan junxu li'an* 2, fol. 178a.

10,000 troops for four months, but it is not likely, since in that case only about 2 *liang* would have been left per person and month.

The *Jinchuan junxu li'an* goes on listing the contents of the appended account (*fuxiao* 附銷). This account deals with sums which had been spent unduly and which were brought to account relatively late, when part of the money had been paid back by the responsible officials (*xushou* 續收 ‘subsequent income’). The officials had made up for their expenses with 415,712.8 *liang*, and the emperor magnanimously renounced (*enmian* 恩免) the missing 2,415,567.0135 *liang*. Some of the officials had died in the meantime, and some of them were simply insolvent. The emperor also waived another 986,954.9867 *liang*, which could not be paid back by merchants whose porters had run away with the grain (*fu tao mi shi* 夫逃米失). In those cases either the entrepreneurs or their families were bankrupt and unable to replace the loss. Nevertheless the emperor ordered to pursue (*zhuijiao* 追繳) them as far as possible and to try to gain back the lost money wherever possible. A third group of persons owing money to the state were civilians unable to pay the *jintie* surcharge by which normally the transport expenditure for the tax silver or tax grain was financed, which was in fact nothing else than a special kind of tax levied on the field-and-poll tax. The peasants had therefore borrowed money from the provincial treasury which was to be paid back in instalments over a period of three years, beginning with the end of the war. When the final account was rendered, 1,543,814.3478 *liang* were still missing, and the emperor renounced the payment of this sum.<sup>12</sup>

The emperor also ordered to waive some money missing from conversion procedures with contribution rice (*yigu*). The logistics stations inside the country were actually to be provided with contribution rice (on the contribution system, see Chapter 6.2), but at the beginning of the campaign, when there was not yet enough contribution rice to feed all the staff in the stations, grain destined for the camps was used instead. Of course, the price for this grain had to be paid back to the Ministry of Revenue, which was in charge of the contributions. Part of the money had already been paid back and received (*xushou* 續收) when the final account for the war was compiled, but 13,789.774 *liang* were still missing. The emperor then decided to relinquish that money.

A similar case was the lead borrowed from the provincial mint and other state-owned workshops (*changqian* 廠鉛 ‘workshop lead’) to the value of 23,963.239 *liang*. In this case no repayment was requested.

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<sup>12</sup> *Jinchuan junxu li'an* 2, fol. 178b.

Other provinces had provided the money for baggage pay and the purchase of horses. For those items, Sichuan province—responsible for the military expenditures in Jinchuan—brought to account expenditures amounting to 291,379.475288 *liang* (*sic!* for the particular currency units, see Appendix 4). This sum had to be paid back to the provinces which had provided the respective sums. Sichuan province itself paid 162,922 *liang* as baggage pay to the troops marching to Jinchuan. Furthermore, loans to civilian and military officials from all types of troops and to merchants working in the logistics line, amounted to 150,935.102112 *liang*. These loans, as well as the baggage pay, was not to be paid back, while other loans amounting to 58.831 *liang* and granted for baggage pay, the purchase of horses and the return transport of wounded soldiers as well as corpses of Banner soldiers, were to be paid back in instalments after 3 to 10 years. This procedure is in contradiction of the later rule that the Banner troops did not have to pay back their baggage pay (compare Chapter 3.1.).

A last item waived was a sum of 33,339.475 *liang*, left over from the purchase of additional husked grain from some granaries (*niandong cangliang* 碾動倉糧) with a value of 680,070.2008 *liang*.

Adding up all those items, for which the emperor did not insist on the repayment of money due, the Ministry of Revenue came to the conclusion that the total cost of the war was 59,822,760.08 *liang*.

<i>item</i>	<i>amount [liang]</i>	<i>remittance</i>
money owed by taxpayers (non-payment of <i>jintie</i> surcharge)	1,543,814	yes
money owed by state officials (incorrect accounting; see Table 5.5)	2,415,567	yes
money owed by merchants (non-delivery of grain)	986,954	yes
money owed to the Contribution Bureau (borrowing rice, see Chapter 6.2)	13,789	yes
money owed to the provincial mint (borrowing lead)	23,963	yes
money owed by Sichuan to other provinces (pay for soldiers, money for horses)	291,379	yes
money owed by soldiers to Sichuan (loans for <i>xingzhuang</i> )	162,922	yes
money owed by soldiers and merchants to Sichuan (loans)	150,935	yes
money owed by Banner troops (loans for <i>xingzhuang</i> , horses, transport of wounded and killed)	58,831	no
money owed to granaries (purchase of additional grain)	33,339	no
<b>total:</b>	<b>5,681,493</b>	
<b>to be paid back:</b>		<b>92,170</b>

□ 5.4 Table: Remissions of payment still owed to the war chest in QL 44 (1779)

In quite a number of cases more expenses than admissible were included in the account or expenses that were, according to rules based on the precedents of previous wars, not allowed to be included. The *Junzu zeli* reports a case in point: a group of military officials hired sedan

chairs and boats for themselves, instead of riding or using the boats made ready for all.<sup>13</sup> The *Jinchuan junxu li'an* contains a long list of all disputable items which were considered as inadmissible or exaggerated.<sup>14</sup> Since not all details can be discussed here, some examples shall be highlighted and a list of all cases provided. This list will add to our knowledge not only about the problems state officials could meet encounter when acting in office, but also touch the question of corruption. In most cases it will be seen that it is not possible to talk of corruption in the sense of 'misappropriation of goods',<sup>15</sup> but that officials were permanently obliged to perform a balancing act between fulfilling their duties as well as possible and what scope the rules left them. No document talks about corruption, yet it was nevertheless normal that all sums due had to be paid back to the government by several involved persons (*fen pei* 分賠) or one individual person (*zhuanpei* 專賠) to achieve a fair reconciliation between the responsible officials and the Ministry of Revenue.

<i>overspending for...</i>	<i>amount [liang, decimals omitted]</i>	<i>amount of rice [dan, decimals omitted]</i>
silk and medals as presents to soldiers	76,606	
porters working unduly inside the camps	46,492	813
transport cost	70,509	
scribes and labourers	21,450	9,367
salt-and-vegetable pay for personal assistants, labourers for construction work, transport cost for grain and sulphur, family allowances for workers in gunpowder workshops and for boatmen	41,283	
fodder for courier horses, pay and rice for soldiers in courier stations	211,794	17,752
cash for the march to the war theatre	2,624	
	343,469	
horses in courier stations	281,300	5,803
tents and woks for auxiliary troops	93,562	
purchase of buns filled with lamb or beef, and ginger tea	126,725	
workers in the camp foundry	88,068	12,155
porters for silver sheaths	2,325	3,350
labour pay for transporting goods	85,807	
labour pay for the transport of military equipment	176,632	22,814
labourers and auxiliary troops in logistics stations and the protection of a suspension bridge	10,514	1,664
expenditure for the triumphant return	515,219	10,090
pay for lamas reciting sutras	15,517	1,008
pay for porters	95,742	7,370
fodder for courier horses	1,434	
horses in the courier stations	535,509	
pay for porters replacing a lack in riding and transport horses for the troops	38,979	3,520
labourers and foremen	37,720	
loss of money to be paid back after the Mugom catastrophe	9,409	

<sup>13</sup> *Hubu junxu zeli: Xuzuan* 續纂 1a-5b.

<sup>14</sup> *Jinchuan junxu li'an* 2, fol. 143a-171b.

<sup>15</sup> *Britannica, Micropedia* (1991 [15th ed.]), vol. 4, p. 469.



5. EXPENDITURE — WHAT WAS THE MONEY SPENT ON?

compensation for the production of military equipment by Sichuan garrisons	120,631	
<b>total (to be paid back):</b>	<b>(2,620,596)</b>	<b>(74,382)</b>
	<b>3,049,320</b>	<b>95,706</b>

□ 5.5 Table: Improper accounts

The addition of all respective sums shows that an amount of 3,049,320 *liang* of silver and 95,706 *dan* of grain must be considered as dubious. The Ministry decided that 2,620,596 *liang* of the dubious sums listed in Table 5.5, had to be paid back by persons sharing the risk (*fenpei*), and a further 211,795 *liang* by individuals (*zhuanpei*). Of this sum, 144,446 *liang* were paid back when the final account was compiled, while 2,687,944 *liang* were still due for payment.

Concerning the grain the Ministry asked for repayment of the cost for 74,382 *dan* of rice by persons sharing the risk and a remainder of 17,753 *dan* by individuals. Nothing is known about the success of the request.

When in QL 44 (1779) 90 per cent of the money owed to the government by civilian and military officials was still due, it is no surprise that the documents included in the *Jinchuan junxu li'an* also contain a lot of dispute about how to gain this money back. From the discussion it can be seen that in many cases the persons obliged to pay were either bankrupt (*jiachan jinjue* 家產盡絕) or had died in the meantime, so that the government had to write off those sums.<sup>16</sup> Of the 257,522 *liang* still owed to the government in QL 44 (1779), an amount of 222,442 *liang* was to be paid back, whereas the Ministry suggested to the emperor to waive the remaining 35,078 *liang* due by lower officials who were unable to pay back the sum.<sup>17</sup> Wherever possible, the money owed to the government had to be deducted from the *yangliang* salary (the anti-corruption pay) of the debtors.

<i>debtor</i>	<i>debt</i> [liang, decimals omitted]	<i>still due after deduction from yangliang salary</i>	<i>further procedure</i>
officials on duty in Sichuan	93,243	48,783	to be collected from each individual before a prescribed date
officials on duty in other provinces	40,168	37,580	to be collected from the particular provinces
high officers off duty because of official matters ( <i>yuan shi</i> 緣事)	74,866	71,297	to be collected from the particular provinces
high officers already dead ( <i>ji gu</i> 已故)	71,923	64,782	to be collected from the particular provinces
persons killed or deceased because of an injury	10,400	10,400	to be waived
lower officials off duty because of official matters	7,140	6,790	to be waived
lower officials already dead	10,531	10,399	to be waived
demoted and disciplined officials being	7,826	7,548	to be waived

<sup>16</sup> *Jinchuan junxu li'an* 2, fol. 160b-171b, 187a-208b.

<sup>17</sup> *Jinchuan junxu li'an* 2, fol. 199b.

bankrupt		
	<b>total:</b>	<b>316,097</b>
	<b>to be paid back:</b>	<b>222,442</b>
□ 5.6 Table: Money still owed by state officials in QL 44 (1779)		

A truly typical case of the debate if an account was justified or not, is the following:

A sum of about 93,000 *liang* was brought to account for tents and cooking woks for imperial soldiers, auxiliary soldiers and labourers. The argument of the officials claiming this sum was that the labour costs for making tents and other kinds of living equipment had doubled since the years of QL 12 – 13 (1747 – 1748, the years of the first Jinchuan campaign), so that the prices of the precedence cases from that period could not serve as a basis for the time more than twenty years later. Yet those cases and the accounting at that time did not allow that tents were brought to account, which were made for native auxiliaries and for hired personnel. On the other hand, the auxiliary troops and the other personnel had to follow the imperial troops to the front line, where the weather was really bad during the winter, and it would hardly be possible to let them dwell outside in wind and snow. Therefore the Ministry had decided that the costs for producing tents for those kind of troops should be deducted from their pay. Yet the problem was that the responsible native king had never sent their pay so that there was nothing to be deducted from. The servicemen meanwhile had to follow the newly advancing frontline, where so far no logistics stations had been established after the quickly advancing army had passed. Because the logistics staff had to liaise with the army as soon as possible, there was not even time for them to erect sheds or other accommodation, which meant that they had to make do with tents. A third reason why the responsible officers had stated the tents in their account, was that during the battle of Mugom many tents had been lost to the enemy. The Ministry nevertheless only accepted those reasons in part and rejected the account. As the responsible officials had already requested further woks and tents after the Mugom catastrophe, the Ministry accepted that case was urgent and therefore allowed the item to be appended to the general account as a matter of compensation (*ru yu fenpei xiang xia* 入於分賠項下) concerning money which had to be paid back (*guikuan* 歸款).<sup>18</sup>

The only case where misappropriation might be found is that of two persons called Ji Guoxun (a case already mentioned in Chapter 4.3) and Wang Lizhu 王立柱. They were demoted, and Fulehun, who investigated the case, found out that they had to pay back 48,022 *liang* of silver and 933 *dan* of grain to the government, and furthermore transport costs of 11,691 and 1,321 *liang* respectively as compensation for claiming too much in their accounting. Including a further amount of rice (530 *dan*), both owed the government 70,509 *liang* (only 69,907 of

<sup>18</sup> *Jinchuan junxu li'an* 2, fol. 148b-149b.

which can be tracked from the documents in the *Jinchuan junxu li'an*), but were unable to pay back the sum because both were bankrupt. The emperor then ordered that their superiors, Ebao and Yan Xishen 顏希深, were made accountable for 70 per cent of the sum, or 32,359 *liang* (which represents only about 70 per cent of 48,000 *liang*, and not of the total sum of 70,000), while Fulehun and Wenshou had to compensate the other 30 per cent, given here as 13,968 *liang*. The four of them had already paid the 46,227 *liang* asked from them, about half of which was ready money and the other half the price for the 1,463 *dan* of rice.<sup>19</sup>

It can be learnt from this case that even for a higher official it could turn out to be dangerous not to take a closer look at what his subordinates did and how they did it. The income of the four generals was high enough to pay that sum, but they must have considered it a severe punishment.

A last example may highlight this problem: It was not allowed to give silk or medals to the troops as a kind of reward, but only to give them more meat to improve their diet, especially in the shape of buns (*bobo* 饅頭), filled with meat. In one case the Ministry allowed to bring to account such kinds of extra diet, for which labour costs of 37,567 *liang* could be declared. The other expenditures for silk and medals, which accrued to 76,665 *liang*, were partly to be paid back by Wenfu, Fengsheng'e, Sebtengbarzhur, Fude, Song Yuanjun, Hailancha, Esente, and Wudai, who had apparently been responsible for this part of the expenditures. They had to split (*gongtan* 公攤) among each other the costs of 62,788 *liang* (each of them paying an identical share), to be paid back to the Ministry. Their superiors Agui, Mingliang, Shuchang, Fukang'an, and Helongwu, had to pay back only 'half of the sum' they would have held accountable for, which is 5,244 *liang* (in one case falsely written 5,644), of which each one had to pay their share (*fenpei*). The other 'half' had to be paid by the officials directly entrusted with the expenditures (*chengban ge guan* 承辦各官). A fourth group of officers, Liu Bingtian, Ebao, Guilin, and Wenshou, had to share among each other a sum of 3,337 *liang* to be paid back to the Ministry. It was left to them to decide which of them was going to pay what sum (*zixing anzhao quanshu peihuan* 自行按照全數賠還).<sup>20</sup>

During the battle of Mugom a lot of money had been lost to the enemy, which had to be reimbursed by the responsible officials. Yet many officials had lost their lives during this incident, including high commander Wenfu, so that of the lost 56,000 *liang*, but at least 24 sheaths of silver,<sup>21</sup> each of them containing 1,000 *liang*, only 9,409 could be paid back by

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<sup>19</sup> *Jinchuan junxu li'an* 2, fol. 143b-144b.

<sup>20</sup> *Jinchuan junxu li'an* 2, fol. 142a-142b.

<sup>21</sup> *Jinchuan dang* QL 41/II/00127 (no date), 00135 (no date).

those held liable for the disaster. At the end of the war the generals assumed that Sonom had taken the silver to Gala'i, where the troops combed the ruins in search for the money. Yet even dreams of rediscovering the silver hidden under the sleeping room of the rebel leader were shattered. If Sonom did not possess any wealth, the silver must have been stolen, as some suggested, by his evil mother and aunt, Atsang and Atsing.<sup>22</sup>

<i>item</i>	<i>amount</i>
sheep (convertible into 0.15 <i>dan</i> of rice)	2,897
cows (convertible into 6 sheep); this is only the number of cows recorded among the miscellaneous items, the rest has to be found among the main account ( <i>zheng kaixiao</i> 正開銷), which is lost.	13
gunpowder ( <i>huoyao</i> ); details available	4,271,475.625 <i>jin</i>
cannonballs of lead (viz. iron; <i>qian paozi</i> 鉛砲子); details available	2,525,086.875 <i>jin</i>
fuses ( <i>huosheng</i> ); details available	11,749,023 discs
large cannonballs of crude and processed iron ( <i>sheng- shu tie da paozi</i> 生熟鐵大砲子); details available	536,546 <i>jin</i>
large brass or iron cannons ( <i>da tong-tie pao</i> 大銅鐵 砲); details available	657
muskets ( <i>niaoqiang</i> )	3,574
sabres ( <i>yaodao</i> )	5,420
arrows ( <i>jian</i> )	478,500
'plum-head' arrows from the Capital ( <i>Jing lai meizhen jian</i> 京來梅針箭)	20,000
crude and processed brass and iron ( <i>sheng-shu tong- tie</i> 生熟銅鐵); details available	7,245,431 <i>jin</i>
clothes and shoes ( <i>yi-lü</i> )	6,849 packages ( <i>bao</i> 包)
leather clothing ( <i>pigua</i> )	3,000
felt caps ( <i>zhanmao</i> )	34,000
uniforms ( <i>haogua</i> )	1,800
capes ( <i>pajian</i> ) for native auxiliary troops	10,000
additional cuirasses contributed from Jiangsu ( <i>Jiangnan juan zhi bujia</i> 江南捐製補甲)	3,000
porters ( <i>gufu</i> 雇夫); details available	462,097
horses bought ( <i>maima</i> ), details available	2,535
horses borrowed from garrisons ( <i>jie yingma</i> 借營馬), details available	1,500
boats and rafts made from wood and leather ( <i>zao mu- pi chuan-fa</i> 造木皮船筏), details available	126
surcharge ( <i>pingyu</i> 平餘)	134,759.3712

□ 5.7 Table: Amounts of miscellaneous items needed during the second Jinchuan campaign

In cases when the *Jinchuan junxu li'an* supplies more details about the geographical allocation on the particular item, the note 'details available' is added.

As could be seen above, more money was allocated than necessary (namely 61 million *liang*, only 53 of which had been spent), so that there was a remainder (*shicun yin*) of 1,908,993.954 *liang*. Yet the greatest part of this sum was earmarked for issues concerning the border defence: 600,000 *liang* were to be used as pay for the garrisoned troops (*bingxiang*

<sup>22</sup> *Jinchuan dang* QL 41/1/00230 (QL 41/2/20), 00261 (QL 41/2/29).

兵餉), 300,000 *liang* were stored in Dajianlu to protect the border garrisons in the south covering the road to Tibet, and 700,000 *liang* were budgeted for the provisional border defence (*xianfang* 先防). As for this project a total restructuring of the Jinchuan area was needed it was of the essence to keep ready the necessary amount of money. Thus only 308,900 *liang* were really left over.<sup>23</sup>

Yet there must have been some more remaining money. This can be seen in QL 41 (1776), when a sum of 250,000 *liang* was assigned from Xi'an/Shaanxi to the province of Gansu where natural disasters had caused a need for higher reconstruction funds. The money left over after the termination of the campaign (said to be 3 million *liang*) was thus not totally sent back to the Ministry of Revenue or to other provinces, but remained in the large and important western garrison of Xi'an, probably in readiness for further military expenditures in case of need.<sup>24</sup> Part of the money stored in Xi'an might also have been repayments Sichuan had to hand over to Shaanxi, because the Xi'an garrison had provided weapons, gunpowder or other payments to the war chest in Chengdu.

There is another document supporting our assumption that more money was left over from the Jinchuan war: In QL 41/4 (Mai – Jun 1776), 300,000 *liang* were sent to Guizhou from neighbouring provinces at least part of which came from the money left over from the Jinchuan war (*sheng junxu yinliang* 剩軍需銀兩).<sup>25</sup>

From the final account included in the *Jinchuan junxu li'an* a lot can be learnt about the expenditures for miscellaneous items (*zakuan* 雜款).<sup>26</sup> Among them the accounts for rice, flour and beans are the most detailed and include the respective amount of foodstuffs and fodder transported along each one of the four logistics routes. Unfortunately such data are not available for all items, so that it is not possible to reconstruct exactly how much money was spent for all particular items subsumed under the titles found in Table 5.7. Where this is feasible, it is mentioned in the table. A reconstruction—where possible—has been made in Chapter 4.

From the income gained through the *pingyu* surcharge (see Chapter 6), the following items were paid:<sup>27</sup>

<i>item</i>	<i>sum [in liang, decimals omitted]</i>
rewards for native kings after the war	11,970
medicine	4,785
stationery	25,289
monthly expenditures for secretaries ( <i>shuli</i> )	79,444
escorting prisoners	8,041

<sup>23</sup> *Jinchuan junxu li'an* 2, fol. 180a.

<sup>24</sup> *Qingshilu: Gaozong shilu* 1009, fol. 12a-12b (QL 41/5/26); 1011, fol. 1a-2b (QL 41/6/16).

<sup>25</sup> *Qingshilu: Gaozong shilu* 1006, fol. 14a-14b (QL 41/4/8).

<sup>26</sup> *Jinchuan junxu li'an* 2, fol. 180a-187a.

<sup>27</sup> *Jinchuan junxu li'an* 2, fol. 186a-187a.

construction of bridges and roads, boatbuilding	4,850
indemnities for drowned labourers	479
<b>sum:</b>	<b>134,858</b>

□ 5.8 Table: Items paid for by the pingyu surcharge

The money to finance all those items was not sufficient, thus the *pingyu* surcharge was continued until QL 49 (1784).

In an edict, the emperor resumed the financial issues of the second Jinchuan war:<sup>28</sup>

<i>entry</i>	<i>amount [in liang, decimals omitted]</i>
money permanently kept ready for military expenditures ( <i>jiuguan</i> )	1,100,000
money provided by the Ministry [of Revenue] and contributions ( <i>xinshou</i> )	61,607,350
repayments by state officials (incorrect accounting [ <i>xushou</i> ])	613,754
<b>total income:</b>	<b>63,321,104</b>
expenditures ( <i>kaichu</i> , correct accounting)	53,240,476
money waived on imperial order	5,294,028
repayments to other provinces	4,485,925
<b>total expenditures:</b>	<b>63,020,431</b>
balance ( <i>shicum</i> )	300,672

□ 5.9 Table: Overview of the general account for the second Jinchuan war

The figures in this edict differ slightly from the statements found in the declarations before. The balance, for example, is given here as being 300,672 *liang*, while it was heard before that the balance amounted to 308,900 *liang*; the expenditure is said to have been 53,240,476 *liang*, while somewhat before we have heard of 53,436,752 *liang*, not including the expenditure incurred during the ‘barbarian affairs’ period at the beginning of the campaign. The accumulated value of the war chest is said to have been 62,741,554 *liang* (see Table 6.1), but here a sum of 63,321,104 *liang* can be found. One reason for the differences might be that grain, flour and fodder were counted separately and in the absolute volume units of *dan*, instead of converting them into the silver currency *liang*, a procedure which could lead to strongly diverging results, depending on the respective market price of the grain. The account reports an amount of 3,074,796 *dan* of grain, flour and beans shipped to the war theatre, and 3,058,909 of which were correctly brought to account. The balance was a mere 15,887 *dan* of food and fodder (compare Chapter 4.3).

As can be seen it is hard to reconstruct the particular entries in the final account of the war, because no single document is exact enough to show in what way the respective sums materialize. Yet even without knowing how they originated, it can be learnt how complicated it was to compile such a document as the final account for a military campaign that lasted more than four years, involved a dozen provinces and countless governmental and non-governmental actors. The entries in Table 5.9 also show how such an account was to be drawn

<sup>28</sup> *Jinchuan junxu li'an* 2, fol. 187a-188b.

up. There was a permanent budget available in the border provinces which served to support troops for a few months. Because this was far from being sufficient to finance the whole war, the Ministry of Revenue and other governmental agencies, as well as private contributors, had to transfer considerable amounts of money to the provincial treasury of Sichuan, where it was budgeted for the war chest. Each single item of expenditure had to be presented to the Ministry of Revenue, which checked if the expense was justified, or if there were instances of wastage or extravagance. The criteria for accounting were preceding cases from former wars, and especially the first Jinchuan campaign, during which the local circumstances were sometimes different from those in the Dzungaria wars (no horses could be used in the mountains; transport conditions were much more difficult; in winter, snow shovelers and adequate clothing were necessary). Yet the experience of the second Jinchuan war and the problems arising when checking the accounts also contributed to the decisions which lead to the compilation of the ‘Regulations for war expenditure’ (*Junxu zeli*), which began immediately after the termination of the second Jinchuan campaign. Most accounts were justified, but there were a lot of incorrect accounts, and in those cases the responsible officials had to refund the money out of their own pockets. In practice, the money was deduced from their annual salary. Because the money wrongly brought to account had already been paid by the responsible officials, these sums must be counted as expenditures, but at the same time as income of the war chest, because they had to be refunded. There were a lot of financial items which the emperor graciously allowed to be written off, as could be seen in detail above. The last entry to be mentioned is the money that had to be sent back to other provinces having provided money to the province of Sichuan. In the first instance, this money was the baggage pay for the troops coming from other provinces, but it also covered other equipment like clothes, gunpowder, and arrows. The provinces were not expected to foot the bill for those items themselves, but were entitled to claim the money back from the war chest in Chengdu, respectively the Ministry of Revenue: In the *résumé* rendered in Table 5.9 the Ministry is mentioned as the sole large governmental contributor of the war finance, and not any of the provinces.

### **5.2.3. Some Thoughts on Current Expenses During the War**

Of great interest for the war expenditure are the monthly accounts of the provincial treasurer in Sichuan. Although it is often not clearly stated that the provincial treasury in general was kept separate from the war chest it is nevertheless clear that the treasury of the province of Sichuan had a ‘normal’ income and ‘normal’ expenditure that were strictly meant for day-to-

day business and had nothing whatever to do with the Jinchuan war. Statements about the actual financial situation of the war chest exclusively refer to the expenditure for the Jinchuan campaign and are not in the least connected with routine expenditure like salaries for officials, operative costs for the administration, maintenance of roads, dykes, bridges and temples, and so on. Even the basic salary of the soldiers fighting in Jinchuan is considered routine expenditure and cannot be included in the war expenditure—with the exception of baggage pay and daily provisions in the field. To separate this different budgets the war logistics bureau had been established.

Only few accounts of the war chest are preserved in the *Qingshilu* or the *Pingding Liang Jinchuan fangliè* but there are some monthly accounts to be found among the memorial copies of the State Council (*Junjichu lufu zouzhe*)<sup>29</sup> in the Number One Historical Archives. Almost all monthly statements about military expenditure (*junxu yuefei* 軍需月費) before QL 39 (1774) are missing, and some data in between as well, but for the present research those data can be extrapolated.

<i>month (e=extrapolation)</i>	<i>expenditure</i> [liang]	<i>incoming money</i> [liang]	<i>cash on hand</i> [liang]
QL 36...	0.377		
QL 38/4...	0.544		
QL 38/9	0.624		
QL 38/10...	2.159		
QL 38/12	0.534		4.353
QL 39/1	1.223	6.692	5.468
QL 39/2	1.166	6.288	5.122
QL 39/3	1.553	5.723	4.369
QL 39/4	1.249	4.369	3.124
QL 39/5	1.115	3.124	2.005
QL 39/6	0.924	4.210	1.289
QL 39/7(?) <sup>a)</sup>	1.068		1.462
QL 39/8	1.477		1.437
QL 39/9	2.325	5.828	1.759
QL 39/10	2.353	8.170	756
QL 39/11	1.643	2.275	631
QL 39/12	1.986	4.942	485
QL 40/1	1.616	8.110	1.616
QL 40/2	1.877	5.768	2.690
QL 40/3	0.957	3.897	2.693
QL 40/4	1.770	6.770	4.244
QL 40/5	1.416		3.081
QL 40/6	1.094		3.080
QL 40/7	1.166		3.085
QL 40/8 (e)	1.166		3.090
QL 40/9	0.545	1.987	3.085
QL 40/10	1.166	4.253	3.080
QL 40/i10 (e)	1.000		3.086
QL 40/11 (e)	0.900		3.000
QL 40/12 (e)	0.800		2.800
QL 41/1	0.650	6.712	2.635
QL 41/2	0.267	10.769	2.427

<sup>29</sup> *Junjichu lufu zouzhe*, reels 35 and 590.

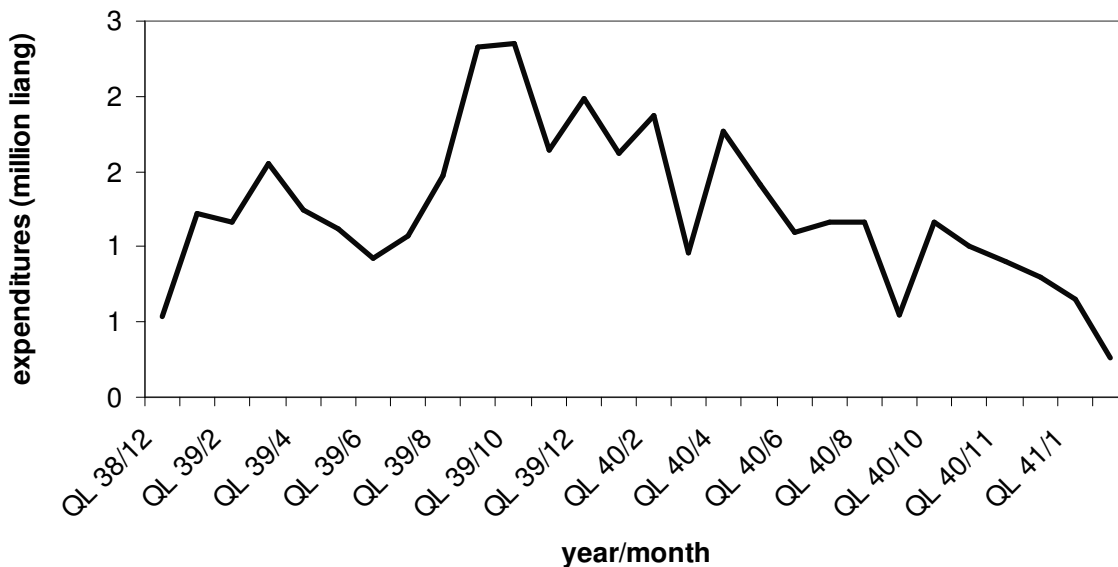


total (QL 38/12 – 41/2): **35.006**

□ 5.10 Table: Monthly expenditure for the second Jinchuan war

<sup>a)</sup> The document only refers to the year QL 39, not the month.

With a total sum of 35.006 million *liang* for the months between QL 38/12 (Jan 1774) and the end of the war in QL 41/2 (Mar 1776; the isolated data for QL 38 [1773] are not included) the average monthly expenditure according to the data in the memorial copies of the State Council were 1.25 million *liang*. At the beginning of the war in QL 36 (1771), when there were still fewer than 20,000 soldiers in Jinchuan the expenditure ran to only 0.377 million *liang* until the eleventh month of that year.<sup>30</sup> Other documents clarify the monthly expenditure of the year QL 38 as ranging from ‘several ten-thousand *liang*’<sup>31</sup> or ‘more than one million *liang*’<sup>32</sup> to the exorbitantly exaggerated sum of 2.159 million *liang* at the end of QL 38.<sup>33</sup> In the same document the emperor, being concerned about this enormous expenditure, gives two examples of what the monthly expenditure should run to: 0.98 million *liang* had once been fixed by the government authorities as the rate of expenditure for such a huge mass of troops, and a normal average sum for so many soldiers should be about one million *liang*.<sup>34</sup> This roughly corresponds to the data found in the document copies from the State Council.



□ 5.11 Diagram: Monthly expenditure for the war between QL 38/12 to 41/2 (Jan 1774 – Mar 1776)

Fulehun and Wenshou, who alone during that month spent 1.504 million *liang* on the transport of rice, flour and beans, explained that spending such a large sum was due to the fact

<sup>30</sup> *Qingshilu: Gaozong shilu* 896, fol. 30 (QL 36/11/15).

<sup>31</sup> *Qingshilu: Gaozong shilu* 939, fol. 12 ff. (QL 38/7/16).

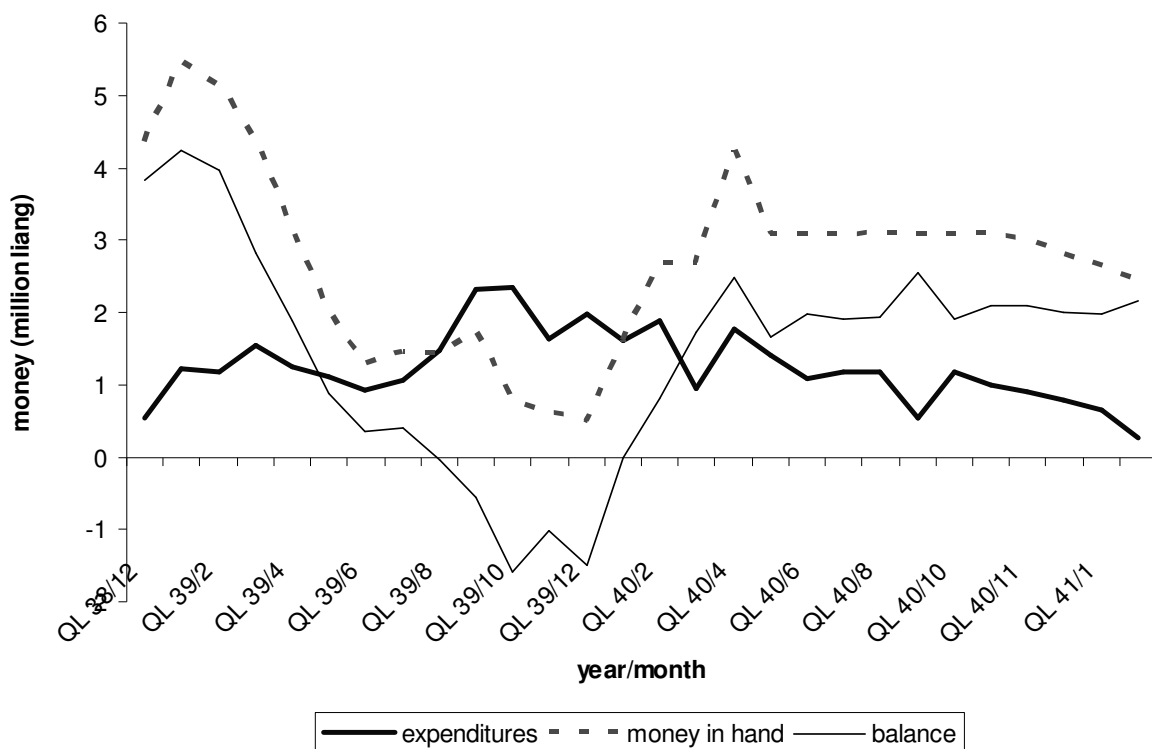
<sup>32</sup> *Qingshilu: Gaozong shilu* 941, fol. 31 (QL 38/10/24).

<sup>33</sup> *Qingshilu: Gaozong shilu* 946, fol. 14 f. (QL 38/11/10). *Jinchuan dang* QL 38/IV/00157-160 (QL 38/11/10).

<sup>34</sup> Also documented in *Pingding Liang Jinchuan fanglüe* 41, fol. 8a (QL 37/10/wuzi); 79, fol. 7b (QL /12/dingsi).

that winter was approaching and that it would be difficult to provide enough grain to the troops when the logistics routes were blocked by snow and ice. This—as they informed the emperor—could clearly be seen when looking at the sums for the other items, which were of the normal level. They tried to appease him with the evidence that the war chest in Chengdu still contained 4.093 million *liang*, which would be enough for four further months, and that moreover contributions from the Liang-Huai region, Zhejiang, Shandong and Changlu were coming in bit by bit (concerning the contributions, see Chapter 6.2). Therefore there was, they said, no need to be worried about the money in the war chest not being sufficient.

With an average monthly sum for expenditure of 1.25 million *liang*—as calculated from the data in the table—the whole war, lasting 71 months, would have cost about 88.765 million *liang*, about 44 per cent more than the sum contained in the statements of the *Jinchuan junxu li'an* according to which a sum of 61.6 million *liang* was provided to the war chest. But there were of course some months during which significantly less than one million *liang* was spent, especially in the first year of the war.



5.12 Diagram: Expenditure vs. money in hand

A second peak in the monthly expenditure can be found exactly one year later, in QL 39/9 (Oct 1774). Also in this instance it is possible that the generals, knowing full well that there would surely be transport problems during the winter months when the mountain roads were impracticable, provided for supply for their troops in good time and bought large amounts of rice in advance that would then be stored in the logistics stations near the camps.

There is also the possibility that costs were not always spread evenly and the generals responsible for logistics bought rice, gunpowder and bullets, paying the hauliers when they had enough ready money and had lower expenditure when the money dispatched to Sichuan did not arrive punctually. Thus the extremely high expenditure of 2.159 million *liang* during the month of QL 38/10 (Nov 1773) is contrasted with the expenditure of two months later, which only amounts to 0.53439 million *liang*.<sup>35</sup>

That the war logistics bureau of the army did not waste the money in hand can be seen in the clearing documents from the State Council copies which show that even in times of higher expenditure there were always some million *liang* left. These amounts are indicated by a thin line in Diagram 5.12 ('balance'). It is interesting to see that the emperor criticised the generals for overspending in the last quarter of QL 38 (1773) although there is plenty of money left in the war chest. During that year the war was practically financed by the contributions of rich merchants. Only when this money ran out in the first half of QL 39 (1774) the emperor started to finance the war from the state treasury directly again. But because of extremely high spending in the same year, with a peak in QL 39/9 and 10 (Oct – Nov 1774), the money transferred to the war chest in QL 39 had almost no effect and could not prevent that the generals almost totally ran out of money in QL 39/12 (Jan 1775), with even a negative balance between QL 39/10 and 12 (Nov 1774 – Jan 1775). Only with the help of repeated transfers of large sums during QL 40 (1775) the war chest could be balanced so that the incoming money met or surpassed the expenditure (for the incoming money, see Chapter 6).

When most of the territory had been reconquered and only the two strongholds Le'uwé and Gala'i withstood the cannons of the Qing army, the expenditure diminished considerably. Even in the second half of QL 40 (1775) the emperor still pumped money into the war machine (for *shanhou* 'reconstruction' purposes), while the expenditure drastically dropped from QL 40/9 (Oct 1775). Thus it is no wonder that money was left over after the surrender of the Jinchuan rebels. The relevant document among the State Council copies talks of a balance of 2.427 million *liang* in QL 41/2 (Mar 1776).<sup>36</sup>

Several statements in the documents indicate until when the money in the war chest would—according to estimation—be sufficient:

'We can estimate that this sum [5 million *liang*] will be sufficient until the sixth or seventh month of this year.'<sup>37</sup>

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<sup>35</sup> *Junjichu lufu zouzhe*, reel 35, no. 306.

<sup>36</sup> *Junjichu lufu zouzhe*, reel 35, no. 991.

<sup>37</sup> *Qingshilu: Gaozong shilu* 930, fol. 3b (QL 38/i3/renxu). *Pingding Liang Jinchuan fanglüe* 55, fol. 11b (QL 38/i3/renxu).

‘The 24 million *liang* already sent in several instalments for the military supply will be sufficient until the tenth month.’<sup>38</sup>

‘The 29 million *liang* that have been sent by now will be sufficient until the fourth or fifth month of next year.’<sup>39</sup>

‘From the contributions transported to Sichuan we can obtain 10 million *liang*, which means that we have now enough money for all of next year.’<sup>40</sup>

‘The 9 million *liang* that have been sent in two instalments will be sufficient for several months.’<sup>41</sup>

‘The 9 million *liang* that have been sent in two instalments will probably be sufficient until the fourth or fifth month.’<sup>42</sup>

From these data we are also able to estimate the monthly expenditure for the military machine ranging from 10 million *liang* for a whole year to 9 million *liang* for five months, which means a monthly expenditure of between 0.8 and 1.8 million *liang*, values that fit well into the range of expenditure discussed above.

### 5.3. Conclusion

Although the direct expenditure in the end only amounted to 53 million *liang*, the government provided in total 61 million *liang* (Table 5.9). Of this sum, more than 70 per cent served to buy and transport the grain consumed by the 120,000 troops and the 400,000 labourers involved in the campaign, and to ship it to the logistics stations and the camps. 8 per cent of the expenditure were spent to transport military equipment to the front, like gunpowder and metals for bullets and cannonballs. 14 per cent served to pay the troops, and a further 3 per cent of the total sum were needed to pay rewards for the brave and compensations for the injured and the killed (compare Table 5.2 and Diagram 5.3). During the war about 3 million *liang* were falsely brought to account and had to be repaid by the responsible officials (Table 5.5). Yet because many of them proved later unable to do so, the emperor allowed to dispense with roughly 0.2 million *liang* (Table 5.6). He also dispensed with about 5 million *liang* still due to be paid to other government agencies by either governmental or private agents (Table 5.4). The monthly expenditure for the war machine came to about 1 million *liang*, a sum that sometimes was exceeded because in autumn the commanders bought enough rice in advance

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<sup>38</sup> *Qingshilu: Gaozong shilu* 934, fol. 16a-16b (QL 38/5/xinwei). *Pingding Liang Jinchuan fanglüe* 60, fol. 10b (QL 38/5/xinwei).

<sup>39</sup> *Qingshilu: Gaozong shilu* 936, fol. 5b (QL 38/6/xinmao). *Pingding Liang Jinchuan fanglüe* 61, fol. 7b-8b (QL 38/6/xinmao).

<sup>40</sup> *Qingshilu: Gaozong shilu* 949, fol. 12b (QL 38/12/jiachen). *Pingding Liang Jinchuan fanglüe* 84, fol. 10a (QL 38/12/jiachen).

<sup>41</sup> *Pingding Liang Jinchuan fanglüe* 111, fol. 20a-20b (QL 39/12/jihai).

<sup>42</sup> *Qingshilu: Gaozong shilu* 974, fol. 15b (QL 40/1/yimao). *Pingding Liang Jinchuan fanglüe* 111, fol. 32a (QL 40/1/jiyou).

to store during the winter months, when access to the mountainous Jinchuan region was difficult. Because of such circumstances, and because the logistics aspects of the procurement of money played an important role, income and expenditure of the war chest show considerable variations over time (Diagram 5.12) and sometimes even lead to a shortness of money.

While it is quite clear from the matter itself for what purposes the money had been spent, it is far less clear what sources it came from. This problem will be discussed in the next chapter.



## 6. Income—Who Defrayed the Costs for the Campaign?

In Chapter 3 and 4 all different items have been described the Qing government spent money on during the second Jinchuan campaign. For quite a few of them it was even possible to estimate the sums the generals had to spend. In the previous chapter the real costs of the campaign have been presented according to the rendering of accounts for the war. In this chapter it will be shown where the money came from that was allowed to be spent for the Qianlong emperor's most expensive war: The main sources were, of course, the treasury of the central government and those of the provincial governments. But almost ten per cent of the money was provided by private persons through the so-called *juanshu* contributions. For both monetary sources data will be compared, from 'official' sources like the *Qingshilu* collection, and from the final accounting of the war cost in the *Jinchuan junxu li'an*. The mechanisms behind this fund raising will be explained in detail, as well as the interesting question how the money found its way to Sichuan. And also the question will be touched if the second Jinchuan campaign was really extraordinarily expensive and a war for which the Qing government had to squeeze out all pecuniary resources or even had to invent new methods of fundraising.

At the end of the *Jinchuan junxu li'an* a general accounting for the whole campaign is to be found,<sup>1</sup> rendered according to the rules for accounting described in Chapter 5.1.

The total sum in the books of the Ministry of Revenue was more than 64,109,800 *liang*. 1.1 million of this originated in the shape of regular and miscellaneous taxes (*zheng-za qianliang* 正雜錢糧) in the provincial treasury (*siku* 司庫) of Sichuan; the same amount was spent from among the finances in hand held ready for military expenditure (*junxu beizhu* 軍需備貯) in the treasury of the Songpan and Dajianlu garrisons;<sup>2</sup> 250,000 *liang* came from the treasury of the circuit(s) (*daoku* 道庫);<sup>3</sup> and more than 59,800 *liang* were provided from the tea taxes (*chaxi* 茶息) collected in Sichuan.<sup>4</sup>

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<sup>1</sup> *Jinchuan junxu li'an* 2, fol. 177a-187a.

<sup>2</sup> Songpan is situated north of the Jinchuan area, Dajianlu to the south. Both were important garrison posts protecting major roads: Songpan the one from Sichuan to the province of Gansu, and Dajianlu that to Tibet. Why both garrisons possessed such large sums of money, is not really clear. Probably those funds had been allocated to the two frontier garrisons to be instantly ready for troops suppressing rebellious mountain tribes. A part of that money came surely from the tributes paid by the subservient native kings.

<sup>3</sup> The *Jinchuan junxu li'an* does not speak of any particular circuit, yet the region west and northwest of Chengdu was administered by the Cheng-Mian-Long-Mao 成縣龍茂 circuit, which comprised the prefectures of Chengdu, Mianzhou, Longan, and Maozhou, while the south and southwest of Chengdu, like

6. INCOME — WHO DEFRAIDED THE COSTS FOR THE CAMPAIGN?

The treasury of the Ministry of Revenue itself provided 29 million *liang*; another 25.5 million *liang* were made available by various provinces (other than Sichuan); and 5.6 million *liang* were disbursed by salt merchants as contributions (*juanshu* 捐輸; see Chapter 6.2.), at least until the end of QL 38/10 (Dec 1773), when the contribution campaign for the Jinchuan war was ended.

<i>origin</i>	<i>sum [million liang]</i>
<b>Sichuan</b>	
provincial treasury	1.1000
military budget of the garrisons in Songpan and Dajianlu	1.1000
circuit treasury/treasuries	0.2500
tea taxes	0.0598
<i>sub-total</i>	2.5098
<b>Ministry of Revenue</b>	<b>29.0000</b>
<b>various provinces and salt administration units (see Chapter 6.1.)</b>	
Guangxi	1.2000
Guangdong	1.8000
Shandong	0.8000
Shanxi	0.9000
Hubei	1.6000
Hunan	3.1000
Shaanxi	2.5000
Henan	3.6000
Jiangsu	3.8100
Anhui	2.3000
Liang-Huai	3.4000
Zhejiang	0.4900
<i>sub-total</i>	25.5000
<b>salt merchants (see Chapter 6.2.)</b>	
(Liang-)Huai <sup>a)</sup>	4-2=2.0000
(Chang-)Lu	0,9000
Zhe(jiang)	1.0000
Shanxi	1.1000
Guangdong	0.2000
Guangxi	0.4000
<i>sub-total</i>	5.6000
<b>Miscellaneous</b>	
	<i>sum [liang]</i>
booty from Gala'i	5,869.000
additional transport taxes from Zhejiang	7,350.000
repayments in exchange for rice	118,525.760
various repayments	9.375
<i>sub-total</i>	131,754.135
<b>total sum</b>	<b>62,741,554.1</b>

☐ 6.1 Table: Origin of the money disbursed for the second Jinchuan campaign

<sup>a)</sup> Of the promised 4 million *liang*, only 2 million were paid until QL 38/10 (Dec 1773).

According to these statements, a total sum of 62.6 million *liang* was the 'income' (*shouyin* 收銀) of the Ministry of Revenue. Compared to the 64 million *liang* mentioned above, some 1.5 million *liang* are missing. At least part of this sum can be discovered a few pages further on,

the prefectures of Qiongzhou, Yazhou, Meizhou and Jiading, were under the jurisdiction of the Jianchang 建昌 circuit. The respective money probably came from both those circuits, or even from other circuits in the province of Sichuan. The circuit treasuries contained the salary for the military. Compare Huang (1999), p. 335.

<sup>4</sup> See also *Jinchuan dang* QL 36/III/00025 (QL 36/8/8).



where it says that the booty of Gala'i, including some valuable silver objects, was worth 5,869 *liang*. The Qing troops regularly looted the conquered monasteries and had to make lists of the objects found (*kaili qingdang* 開列清單).<sup>5</sup>

Another 7,350 *liang* were collected from the province of Zhejiang in the form of transport surcharges for silver transport (*suixiang buping yin* 隨餉補平銀). A sum of 118,525.76 *liang* were repaid by the war logistics bureau (*junxuju*), which first had spent this sum to pay labourers but later switched over from money to rice portions because this payment was meant for a period of non-productivity (*huikong*, see Chapter 3.3.). A minuscule sum of 9.375 *liang* came from various repayments (*zakuan shouhui* 雜款收回). These various sums (amounting to 131,754.135 *liang*), added to the 62.6 million *liang* directly paid out by government agencies and salt entrepreneurs, made for a total income of the war chest of 62,741,554.1 *liang*. The account book of the *Jinchuan junxu li'an*, nevertheless, only gives a total sum of 61,731,754.935 *liang*—about exactly one million *liang* short of the sum total of all sources of income.<sup>6</sup> It is not possible to trace the origin of this error; possibly during the compilation of the *Jinchuan junxu li'an* some figures had been incorrectly copied or one of the entries for the sub-total (as seen in Table 6.1, for example salt merchants and particular provinces) was left out.

A rather interesting source of money was the *pingyu* 平餘 tax, which for a long time had served to finance part of the income of state officials, before it became a regular fund to finance their *yanglian* pay (see Chapter 3.1.; for example, an annual *yanglian* salary, in this case called *yangshan* 養贍, of three *liang* per official was to be paid from the *pingyu* tax in the provincial treasury).<sup>7</sup> It was added as a surplus tax to the normal tax and constituted between 0.6 per cent and 2.5 per cent of the basic land tax. In this respect, it is similar to the 'meltage loss surcharge' (*huohao xianyu* 火耗羨餘, short: *haoxian* 耗羨) or the 'labour surcharge' (*jintie* 津貼, literally 'lubrication attachment'), which had to be paid in addition to the basic tax for funding labour subsidies paid to the persons transporting tax grain or tax silver to the Capital.

<sup>5</sup> *Jinchuan dang* QL 36/III/00099 (QL 36/9/20), like Buddha figures (*foxiang* 佛像) and other valuable objects found in the castles of Greater and Lesser Jinchuan. The native auxiliary troops usually were allowed to plunder the less valuable objects, like grain and cattle, in order to reward them for their willingness to fight against their neighbours. The booty of the castle of Senggedzung, for example, consisted of weapons (muskets, cannons, swords, spears), gunpowder, bullets, cattle (sheep, cows), grain and other eatables. *Jinchuan dang* QL 37/IV/00283 (QL 37/12/3). It was even custom to seize the private property of some of the rebel leaders, like the case of Damba Wodzar 丹巴沃祿爾 whose property of 156 *liang* was confiscated by the imperial troops. *Jinchuan dang* QL 41/II/00043 (no date).

<sup>6</sup> *Jinchuan junxu li'an* 2, fol. 177b-178a.

<sup>7</sup> *Pingding Liang Jinchuan fanglüe* 54, fol. 6b (QL 38/3/xinhai).

During the Jinchuan war, the *pingyu* tax had the following effect: The regular part of the military budget (*zhengxiang* 正項) served to finance the most expensive item, like paying the baggage pay of the soldiers (*xingzhuang*) and their monthly salt-and-vegetable pay (*yancai*) as well as costs for transporting grain and military equipment and the maintenance of transport and courier stations. Smaller items (*zakuan* 雜款), like the construction of roads and bridges, building sheds and stables, medicine, and all kinds of material for bureaucratic needs (stationery), were to be paid from the money coming in through the *pingyu* tax. Yet the problem was that in Sichuan it was not common to use this kind of tax for funding wars, as was usual during the western campaigns in the province of Gansu. Therefore governor-general Wenshou suggested using of the *pingyu* tax to finance the war in Sichuan, too. In Gansu the procedure was to collect the tax and to use it for financing one per cent of all military expenditures, but this amount seemed too high, so that Wenshou suggested another procedure: half a per cent of the expenditure for all items were to be used to finance the ‘miscellaneous items’ (*mei bai liang kou pingyuyin wu qian* 每百兩扣平餘銀五錢). This part of the budget was then called *yuping* 餘平 ‘[money going via] the surplus balance’, while the main funds were called *kuping* 庫平 ‘[money going via] the balance of the treasury’. It was earmarked for the miscellaneous items (*shiwu* 什物) of the military expenditures as well as for payments to private transport entrepreneurs (*shang yong jiaojia* 商用腳價). The decision to finance those items by the *pingyu* tax was made on QL 37/11/12 (Dec 6, 1772), but it could hardly have been the case that all expenditures for the private transport entrepreneurs (amounting to probably 25 million *liang*) could have been financed by the *pingyu* tax from the province of Gansu, and therefore an additional paragraph in the *Jinchuan junxu li'an* says that it only served to finance the additional clothing for the soldiers in winter, the pay for labourers (*fu jia* 夫價, not further specified), the construction of roads and bridges, and to buy horses for the stations. Yet even for financing all those matters the income of the Sichuan *pingyu* taxation was insufficient.<sup>8</sup> The final account gives the figure of 134,759 *liang*, and there it is stated that the *pingyu* surcharge was only siphoned off from the transport costs for the grain and for the purchase of other equipment and horses.<sup>9</sup> The same statement can be found in the *Junxu zeli*, the general regulations for accounting for military expenditures, where it is said that the *pingyu* cannot be deducted from the baggage pay or the

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<sup>8</sup> *Jinchuan junxu li'an* 2, fol. 138r-139r.

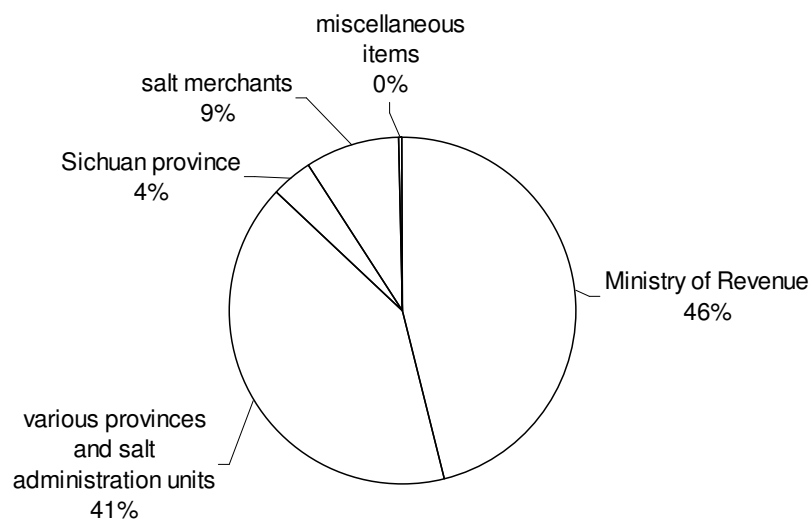
<sup>9</sup> *Jinchuan junxu li'an* 2, fol. 186r.

salt-and-vegetable pay, but only from expenditure incurred for the purchase of equipment or from the grain transported by private entrepreneurs.<sup>10</sup>

The *pingyu* surcharge was also imposed on the rice transported to the camps, where it was common that in the grain stations of the logistics routes the responsible grain official (*liangyuan* 糧員) did not only surcharge a transport loss (*tianbu zhehao* 添補折耗) of one *sheng* per *dan* of rice (a tenth), but another *sheng* of rice to finance the construction of roads and to feed labourers. This second surcharge had to be brought to account as *pingyu* surcharge, and to be kept separate from the main account.<sup>11</sup> How much income the generals had obtained by levying the *pingyu* surcharge and for which purposes it was spent, has been demonstrated in Table 5.8.

As a résumé it has to be concluded that according to the data given in the *Jinchuan junxu li'an*, the Ministry of Revenue or the central government financed 46 per cent of all military expenditures. 40 per cent were contributed by various provinces and salt administration units; if the province of Sichuan is included, which spent 4 per cent of all the expenditure, the provincial governments had spent about the same share as the central government. Almost 9 per cent of the total expenditure was financed by rich entrepreneurs through their contributions (compare Diagram 6.2).

We will now have a closer look at the particular sources of income by which the expensive second Jinchuan war was financed.



□ 6.2 Diagram: Shares of the particular contributors financing the second Jinchuan campaign, according to the account in the *Jinchuan junxu li'an*

<sup>10</sup> *Hubu junxu zeli* 9, fol. 9v-10r.

<sup>11</sup> *Pingding Liang Jinchuan fanglüe* 101, fol. 6b (QL 40/7/jisi).

## 6.1. Contributions by the State

### 6.1.1. Central and Provincial Governments

The responsibility for financing a war like the Jinchuan campaign was shared by different administrative levels of the government. This can best be seen with the financial transactions between the central government and its sub-divisions—in the first instance the Ministry of Revenue—and the local governments in the provinces. The largest burden in the field of organisation of course rested on the shoulders of the province of Sichuan which was not only the place from where all troops and the objects they required had to be taken towards the mountains: the governor-general of Sichuan also played a crucial role in the command structure and the administration commissioner (*buzhengshi*) took care of the logistics and accounting. Almost all the rice consumed by soldiers, labourers and porters came from Sichuan, which can clearly be seen when looking at the quantities of rice stored in the provincial granary (see Chapter 4.2.). One fifth of all soldiers also came from the province of Sichuan province, but many more from Shaanxi and Gansu, a considerable number also from Guizhou, Hunan and Hubei (see Chapter 3.1.). The military equipment that those provincial troops took with them to Jinchuan, gunpowder and bullets used during the war, and the baggage money (*xingzhuang*) paid to them when leaving their home garrisons had to be advanced in their place of origin, before being paid out by the war chest (if it was not borrowed by the troops). Current expenditure, like the rice consumed in Jinchuan (*kouliang*) and the pay for provisions, the so-called salt-and-vegetable pay (*yancai*), as well as the pay for local auxiliaries, hired porters and mules, were directly settled by the war chest.

Nevertheless, at the beginning of the campaign a considerable part of the war chest was fed by the provincial treasury of Sichuan. Only when it ran out of money—and this was soon the case, because Sichuan was not a rich province—, new funds were transferred from the Ministry of Revenue or from other provinces. In many cases and especially in the first phase of the war the emperor ordered the Ministry of Revenue to investigate how much money could be forked out from the provincial treasuries. Apparently the finances of the central state treasury in the Ministry of Revenue were not to be touched as far as possible. For example, instead of being paid by the Ministry of Revenue the sum of 3 million *liang* to be sent to Sichuan as the first financial support by the central government on QL 36/11/15 (Dec 20, 1771) was composed from various taxes that had been levied in different provinces.

Table 6.3 will give an overview of the sums contributed by the central government to the war chest in Sichuan. Although the *Pingding Liang Jinchuan fanglüe*, the official history of the

war, does not report all transfers, we are by means of other documents (with few exceptions and some doubts) nevertheless able to construct an appropriate overview of a great part of the fifteen transfers from the treasury of the Ministry of Revenue or from the budgets of various provinces. In some documents, sub-totals are given. They are very helpful for the reconstruction of transfers, because those sums allow to check if an amount in-between is missing in the documents, as e. g. in the year's span between QL 38/6 (Jul – Aug 1773) and QL 39/5 (Jun – Jul 1774). This gives a chance to confirm the monthly expenditure of somewhat over 1 million *liang* (see Chapter 5.2.3.) which the commanding generals had to spend and were allowed to spend, according to the seize of the forces standing in Jinchuan. The 3 million *liang* disbursed on QL 37/10/27 (Nov 21, 1772), for example, were sufficient to feed the soldiers and keep their weapons going until QL 38/1/4 (Jan 26, 1773), i. e. for about two months. The 5 million *liang* dispatched on QL 39/5/6 (May 14, 1774) were sufficient for the three months until the beginning of QL 39/9 (Oct 1774), and the 3 million *liang* transferred on QL 40/9/29 (Oct 23, 1775) were sufficient to feed the army for the next two months.

Already in mid-QL 39 (1774) the commanding generals thought about reconstruction (*shanhou*) after the war and considered the costs for building roads, bridges and establishing administrative facilities when calculating their financial needs for the next months.<sup>12</sup> But reconstruction was not their only concern when thinking about the situation when the war would be finished. A triumphant return to the home garrisons would also be of great importance, not only for feasting and as a reward for the troops but also to express the victory of the emperor over the disobedient rebels. There are two hints at a triumphant return in QL 39—which in the end had to wait for one more year until it took place.<sup>13</sup> After the first Jinchuan war and the experience that the Jinchuan kings would not stay quiet and peaceful under the administrative conditions that had been hitherto applied (the *jimi* 'loose rain system'), quite early in the course of the second Jinchuan war the decision was made that in future the territories of the local kings could only be pacified when garrisoning troops in Jinchuan.<sup>14</sup> Thus each of the imperial commands ordering the transfer of money to Sichuan during the year QL 40 (1775) took the future development into consideration.

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<sup>12</sup> *Qingshilu: Gaozong shilu* 958, fol. 4b-6b (QL 39/5/dingsi), 10a (QL 39/5/jiwei).

<sup>13</sup> *Qingshilu: Gaozong shilu* 966, fol. 26b-27b (QL 39/9/dingsi); 971, fol. 20a-20b (QL 39/11/rengshen).

<sup>14</sup> *Qingshilu: Gaozong shilu* 1004, fol. 35b-37a (QL 41/3/guiwei).

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6. INCOME — WHO DEFRAIDED THE COSTS FOR THE CAMPAIGN?

The following table and the documents from which it is derived say much more about the procedure of disbursing money than it seems to do at first sight.

<i>date</i> <sup>a)</sup>	<i>origin</i>	<i>amount [liang]</i>	<i>intermediate sum [liang]</i>
QL 36/11/15	various provinces near Sichuan:	3,000,000	
	Hubei	300,000	
	Hunan	300,000	
	Guangdong	600,000	
	Guangdong salt tax	600,000	
	Guangxi salt tax	1,200,000	
QL 37/1/15			3,000,000
QL 37/2/27	(Ministry of Revenue)	3,000,000	
QL 37/4/25, QL 37/5/8, QL 37/5/22, QL 37/6/24 <sup>b)</sup>			6,000,000
QL 37/6/24	Hu-Guang	2,000,000	
QL 37/7/15	Ministry of Revenue	1,000,000	
QL 37/10/4, idem <i>Jinchuan dang</i>			9,000,000
QL 37/10/4	various provinces near Sichuan	2,000,000	
QL 37/10/27, <i>Jinchuan dang</i> QL 37/10/29	(Ministry of Revenue) <sup>c)</sup>	3,000,000	
QL 37/10/27, QL 37/11/12, <i>Jinchuan dang</i> QL 37/12/13			14,000,000
QL 38/1/4	Ministry of Revenue	5,000,000	
QL 38/3/3			19,000,000
QL 38/3/3 <sup>d)</sup>	various provinces:	5,000,000	
	Henan	900,000	
	Anhui	900,000	
	Jiangsu	1,250,000	
	Jiangning land-taxes	260,000	
	Hubei	100,000	
	Hunan	500,000	
	Liang-Huai salt tax	600,000	
	Zhejiang salt tax	490,000	
QL 38/5/9, QL 38/5/13			24,000,000
QL 38/5/13	Ministry of Revenue	5,000,000	
QL 38/6/3, QL 38/8/21, <i>Jinchuan dang</i> QL 38/7/20			29,000,000
(No respective document)	(contributions) <sup>e)</sup>	(5,000,000)	
QL 39/5/6			34,000,000
QL 39/5/6	various provinces	5,000,000	
<i>Jinchuan dang</i> QL 39/7/20			>39,000,000
QL 39/9/7 <sup>f)</sup> , <i>Jinchuan dang</i> QL 39/9/27	Ministry of Revenue	4,000,000	
QL 39/11/23, idem <i>Jinchuan dang</i> , and QL 39/12/17	Ministry of Revenue	5,000,000	

QL 40/1/22, idem <i>Jinchuan dang</i>	Ministry of Revenue and provinces Jiangxi, Guangdong and Gansu <sup>e)</sup>	5,000,000 3,370,000	
	Ministry	1,630,000	
QL 40/2/21 <sup>h)</sup> , <i>Jinchuan dang</i> QL 40/2/9			>40,000,000
QL 40/5/26	Ministry of Revenue	5,000,000	
QL 40/9/29 <sup>i)</sup>	Ministry of Revenue and provinces:	3,000,000	
	Henan	500,000	
	Shandong	500,000	
	Shanxi	800,000	
	Ministry	1,200,000	
QL 40/11/24	Ministry of Revenue	3,000,000	
	<i>total sum</i>	64.000.000	

□ 6.3 Table: Monetary transfers to Sichuan, according to Qingshilu data (if not indicated otherwise)

<sup>a)</sup> Date of issue of the respective document as recorded in *Qingshilu*.

<sup>b)</sup> The sentence in most of these documents, '*liang ci bo [...] liang 兩次撥...兩*', means 'the silver *liang* being sent in two portions', as it is later often said '*jie ci 節次*—in several portions.' The same is valid for the 9 million *liang* cited in the documents dated at the end of QL 39 that consist of two entries, one of 5 million *liang* and another of 4 million *liang*.

<sup>c)</sup> It is only said that he Ministry, accepting the request for 3 million *liang*, will take care of the dispatch of this sum in several portions (*bo fen qi jie wang 撥分解往*).

<sup>d)</sup> Details according to *Pingding Liang Jinchuan fanglüe* 55.

<sup>e)</sup> There is no document proving that the missing 5 million *liang* (to reach the sub-total of 39 million. *liang*) were disbursed from the ministerial or provincial treasuries. Between mid-QL 38 and mid-QL39 no large sums were dispatched to Sichuan apart from the contributions by salt merchants (see Chapter 6.2.).

<sup>f)</sup> According to QL 39/12/20, QL 39/12/26 and QL 40/1/7. There is a document dated QL 39/9/7 that simply orders that 2 to 3 m. *liang* be dispatched. In the end 4 m. *liang* were sent in the 9th month, as the documents of the 12th month state.

<sup>g)</sup> According to *Junjichu lufu zouzhe*, reel 35, no. 613. The balance could have been paid by the Ministry of Revenue.

<sup>h)</sup> *Junjichu lufu zouzhe*, reel 590, no. 2461. The sum given in this document should be much higher. The author probably refers to money that had already arrived in Sichuan and which could still be less than 50 million *liang*.

<sup>i)</sup> Details according to *Junjichu lufu zhouzhe*, reel 35, no. 792.

The first amount are the 3 million *liang* disbursed on QL 36/11/15 (Dec 20, 1771), for which the Ministry of Revenue had made a proposal as to what province was to provide the respective smaller amount of money to be sent to the destination in Sichuan. A large part of the sum came from the salt taxes in the provinces of Guangxi and Guangdong. According to the *Huangchao wenxian tongkao* 皇朝文獻通考 'General history of institutions and critical examination of documents and studies of Our August Dynasty' the official annual salt tax rate of the two provinces was about 47,000 *liang* each.<sup>15</sup> When both provinces had to pay a sum that was the twelve-fold or even the twenty-five-fold of that rate we learn much about the difference between those official tax rate and the real taxes levied. The province of Guangdong additionally had to pay 600,000 *liang* from its salt tax income—which constitutes half the annual land-tax rate as listed in the *Huangchao wenxian tongkao*, and a fourth of the real land-tax income of the province, according to Yeh-chien Wang.<sup>16</sup> The two provinces of Hubei and Hunan with their mid-range tax income only had to supply half that sum, i. e. 300,000 *liang*.

<sup>15</sup> *Huangchao wenxian tongkao* 40: *Guoyong* 國用 2, p. 5525-5528.

<sup>16</sup> Wang (1973), Table 27.

The second case where we learn about the origin of the money sent to Sichuan is a document dated QL 38/13/3 (Apr 24, 1773). Again, some provinces like Henan, Anhui, Jiangsu, Hunan and Hubei had to send part of their land-tax income to Sichuan, the largest sum of 1.25 million *liang* being paid by the rich province of Jiangsu whose official land-tax rate was somewhat more than 3 million *liang* annually according to the *Huangchao wenxian kongkao*, while the real land-tax income was about 8.5 million *liang*, according to Yeh-chien Wang's estimations. A very interesting asset indeed is the land-tax from Jiangning 江寧, the modern Nanjing 南京, and provincial capital of Jiangsu. The land-tax of that capital prefecture was apparently treated differently than that of other prefectures of Jiangsu. The sum to be paid by that prefecture for the money transfer in question was one fifth of the sum, which the whole province of Jiangsu had to pay. Even the relatively poor province of Anhui had to disburse 900,000 *liang*, which is about half the total annual tax rate of that province of nearly 1.8 million *liang*. And again, the salt tax income of some provinces was so abundant that Zhejiang province and the regions under the Liang-Huai salt administration (located in the northern part of Jiangsu) had to disburse about half a million *liang* each.

On QL 37/6/24 (Jul 24, 1772) the money coming from the two provinces of Hubei and Hunan (under the jurisdiction of the governor-general of the twin-province of Hu-Guang) seemed to be so lavish that they were able to disburse 2 million *liang* for the war.<sup>17</sup>

For the 3 million *liang* transferred in QL 40/9 (Oct 1775, exact date of respective edict not known) details about the origin of this sum can be found in a memorial among the State Council copies (*Junjichu lufu zhoushe*) which states that of the 3 million *liang*—whose purpose is defined as reconstruction (*shanhou*) fund—more than one third came from the Ministry itself while the rest was paid by the provinces Henan, Shandong and Shanxi.<sup>18</sup>

While these documents reveal what amounts of money came from what province, there are other sums having come from various provinces about which there is no concrete statement as to their exact origin, nor what types of source (land-tax, salt-tax or probably tolls?) were used to finance the war. Although the richest provinces being best able to pay the largest sums for the war were located in the eastern parts of Qing China, the government tried to create a balance when imposing the duty to support Sichuan province. In two documents it is therefore said that the 2 (resp. 3) million *liang* to be sent were to come from the provinces located near Sichuan (*jiujin shengfen* 就近省分).<sup>19</sup> This means that that money came from the provinces of Shaanxi, Shanxi, Hubei, Hunan, Guizhou and/or Yunnan. Because Hubei and Hunan had

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<sup>17</sup> *Qingshilu: Gaozong shilu* 911, fol. 21a (QL 37/6/wuzi).

<sup>18</sup> *Junjichu lufu zhoushe*, reel 35, no. 792.

<sup>19</sup> *Qingshilu: Gaozong shilu* 896, fol. 30a-30b (QL 36/11/xinhai); 918, fol. 8a (QL 37/10/yichou).

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already contributed considerable sums in the foregoing year and the following spring, those two provinces might this time not have been among those contributing to the 2 million *liang*, which may probably also be true for Yunnan and Guizhou, because those two provinces were quite poor and barely able to supply so much money to the war chest, especially after the province of Yunnan had to organise the Myanmar campaigns a short time ago.

At least for part of the other sums sent to the war chest in Sichuan the origin can be known, yet without that further details about the concrete sums. The 4 million *liang*, for example, dispatched on order of QL 39/9/27 (Oct 31, 1774) were to be provided from among the provinces of Henan, Shanxi, ‘Hedong’ 河東 (Jiangsu), Anhui, Jiangxi, Hubei, Hunan, and Guangdong. The money from Hunan left the provincial treasury on 10/13 (Nov 16, 1774), that of Hubei on 10/15 (Nov 18, 1774), and the money from Henan on 10/20 (Nov 23, 1774). The last sum had not yet reached the treasury of the province of Sichuan one month later (11/21, i.e. Dec 23, 1774). If these sums constituted the total sum of 4 million *liang*, or if there were other sums sent from any of the other provinces mentioned above, is not known.<sup>20</sup>

In QL 39/5 (Jun 1774) the emperor ordered that 5 million *liang* be provided for the war, and the Ministry of Revenue had the task to select provinces ‘where money is left’ (*cunliu* 存留), and to organise the transfer of those sums to Sichuan.<sup>21</sup> In this case, there is no statement as to what provinces had in the end to transfer their taxes to Chengdu.

In the last year of the war the respective imperial edicts ordered in three cases that the money had to come from the treasury of the Ministry of Revenue, but with the request that the Ministry should ‘follow the precedents of the years before’ (*zhao qian sui zhi li* 照前歲之例) and assign the provincial governors to select trustworthy personnel, who were to take care of the transport. Although in this phase of the war the largest part of the war funds was provided by the central government, the provinces had to take over the costs for the transport of the money. Provinces that had hitherto not been involved, like Zhili, also contributed smaller amounts towards the costs for the transport of money, the rations for the troops passing through and the staff of the courier service (see Chapter 4.2.).

Concerning the other financial transactions, it is stated in many cases that all of the money was disbursed from the treasury of the Ministry of Revenue. This was the case especially in the last year of the war, when it is said in the documents that the money came ‘from within the treasury of the ministry’ (*buku nei* 部庫內) or that the funds were ‘money of the treasury of the Ministry’ (*buku yin* 部庫銀). The same is true for the monetary transfers on QL 37/7/5

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<sup>20</sup> *Jinchuan dang* 39/III/00339 (QL 39/9/29); QL 39/IV/00217-218 (QL 39/12/17), 00231 (QL 39/12/19).

<sup>21</sup> *Qingshilu: Gaozong shilu* 958, fol. 10a (QL 39/5/jiwei).

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(Aug 3, 1772) and QL 38/5/13 (Jul 2, 1773) definitely made directly from the treasury of the Ministry of Revenue. The 3 million *liang* disbursed by the imperial order dated QL 37/2/27 (Mar 30, 1772)—which is only the second largest sum especially earmarked for the troops in Jinchuan—were surely also supplied by the treasury of the Ministry of Revenue. A document relating to this is quite long and contains the emperor’s reflection about the actual state finances.<sup>22</sup> While the treasury of the Ministry of Revenue at the beginning of the Qianlong reign only held 33 to 34 million *liang*, as the emperor writes, it now held 78 million *liang*, only less than one million of which had to be sent (back) to the provinces annually for various purposes, so that during the past ten years or so it had been possible amass to more than ten million *liang*. While twenty years earlier the Imperial Household Department (*neiwufu*) had to support the Ministry of Revenue with money, expenditure now was somewhat reduced with the result that the Imperial Household Department (here also titled *taifu* 太府) was able to transfer money to the Ministry. Thus there would absolutely be no need to issue a ‘call for contributions’ by rich entrepreneurs. It is not clear if the Imperial Household Department did in the end transfer money to the Ministry of Revenue, but as this would have been a matter of great importance, one could expect to find another imperial decree about this issue. But even if money had been transferred to the Ministry, there would still have been enough left in the treasury of the Ministry to disburse such a sum. The generally good condition of the state treasury is also referred to in a document dated QL 37/1/15 (Feb 18, 1772) where it is said that ‘the treasury of the Ministry of Revenue holds 80 million *liang*, and each time there is too much money in the treasury We [the emperor] think that it is a pity.’ The government should make use of the money which the empire produced. ‘This large sum (i.e., the 80 million *liang*) is more than one and half as much as We had stored in the treasury at the beginning of the Qianlong reign.’<sup>23</sup> Another document dated QL 38/5/9 (Jun 28, 1773) says that there were still more than 70 million *liang* in the treasury of the Ministry.<sup>24</sup> But in the same document the sentence ‘*fuku chongying* 府庫充盈—the treasury of the Department (?) is full to the brim,’ again leaves the reader in doubt which treasury the emperor refers to. A similar sentence crops up a few months later: ‘*fucang chongying* 府藏充盈—the treasure chamber of the Department (?) is full to the brim,’<sup>25</sup> and more than one year later, ‘*guojia tangcang chongying* 國家帑藏充盈—the treasuries of the state are full.’<sup>26</sup> Possibly all these terms are

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<sup>22</sup> *Qingshilu: Gaozong shilu* 920, fol. 23a-25b (QL 37/11/guimao).

<sup>23</sup> *Qingshilu: Gaozong shilu* 900, fol. 31b-32b (QL 37/1/xinhai).

<sup>24</sup> *Qingshilu: Gaozong shilu* 934, fol. 9b-10b (QL 38/5/dingmao).

<sup>25</sup> *Qingshilu: Gaozong shilu* 941, fol. 20b-21a (QL 38/8/dingwei).

<sup>26</sup> *Qingshilu: Gaozong shilu* 974, fol. 14a-16a (QL 40/1/yimao).

part of a pure manner of speaking and the word *fu* is to be considered a general term for everything that has to do with the state ('the government'). This would not enable us to differentiate clearly between the two budgets of the Ministry of Revenue and that of the Imperial Household Department. The problem of financial transactions on the highest level of the government is still awaiting further research. For simplicity's sake it shall therefore be assumed that the 3 million *liang* disbursed according to the imperial order dated QL 37/2/27 (Mar 30, 1772) came from the Ministry of Revenue. In his book about the Imperial Household Department Preston M. Torbert describes its relationship to the Ministry of Revenue during the Qianlong reign as follows: In the first twenty years or so of the Qianlong reign the Department largely obtained money from the Ministry, while from the 1760s on (QL 30s) funds were transferred from the Household Department to the Ministry.<sup>27</sup> We can therefore assume that the Ministry of Revenue in most cases nominally paid for the costs of the second Jinchuan war, while the money in fact came from the funds of the Imperial Household Department. How much it was, however, we do not know.

There are two sums of money where it cannot be known which it can not be known where exactly it comes from because the respective documents leave the reader in doubt if and how much money was really dispatched. These are the respective imperial edicts dated QL 39/12/20 (Jan 21, 1775) and QL 40/2/9 (Mar 10, 1775). The first document is an edict to the State Council, which says:

'We have already ordered to transfer another 5 million *liang* from the treasury of the Ministry of Revenue, which accounts, together with the money disbursed in the 9th month, to 9 million *liang*. [...The Jinchuan rebels are showing fierce resistance and therefore it must be assumed that the war will still go on for a certain time...] We order Wenshou [governor-general of Sichuan] to find out for how many months the 9 million *liang* will be sufficient, and if there is still need in some places for further money; We order Wenshou to find out and to report to the throne. If still money is needed We will then order a further disbursement.'<sup>28</sup>

4 million *liang* had apparently been dispatched in the course of the 9th month, as can be learnt from this document (there is only a proposal dated QL 39/9/7 [Oct 11, 1774] to send 2 – 3 million *liang*), and another 5 million *liang* in between, which must be the money mentioned in the *Qingshilu* document dated QL 39/11/23 (Dec 25, 1774). The exact date when it was decided to disburse 4 million *liang*, is not recorded in the *Qingshilu*, yet the respective document in the *Jinchuan dang* was issued on QL 39/9/27 (Oct 31, 1774). This shows that in some cases the Ministry of Revenue was allowed to act on its own behalf without waiting for

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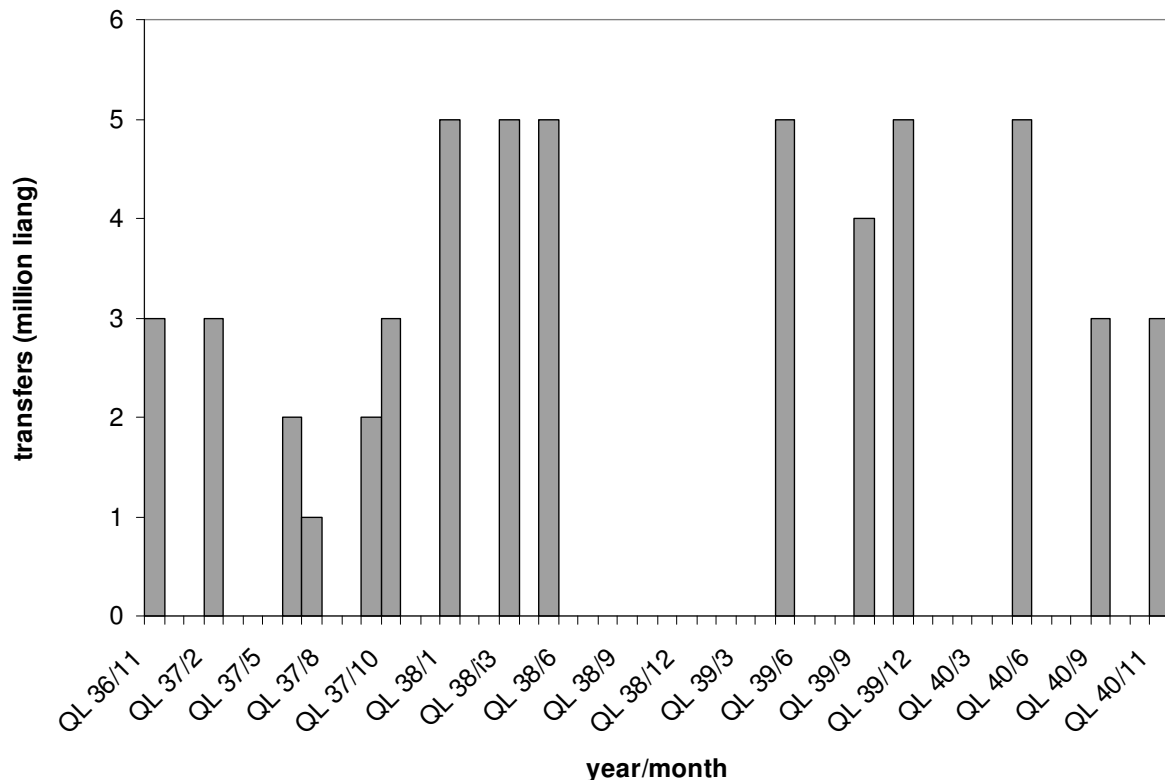
<sup>27</sup> Torbert (1977), pp. 127 ff.

<sup>28</sup> *Qingshilu: Gaozong shilu* 973, fol. 8b-9b (QL 39/12/jihai).

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the confirmation of the emperor, a freedom that is also seen when the emperor simply said that the Ministry should decide where the money was to be taken from.

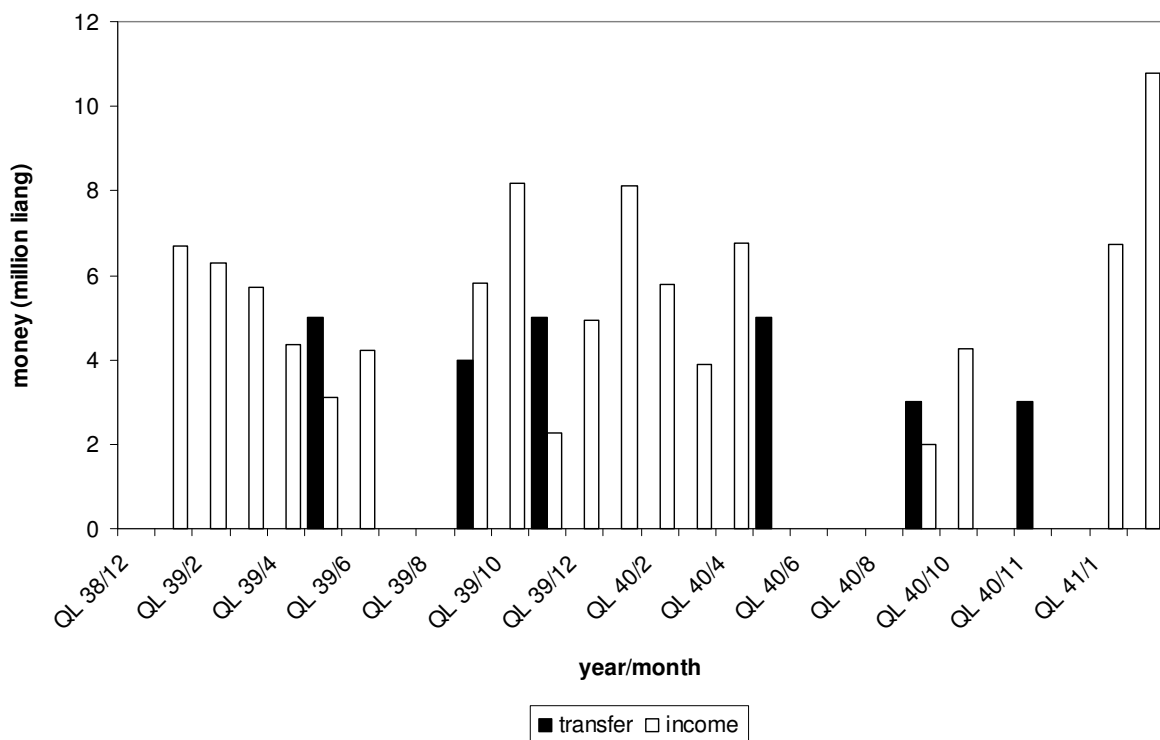
The second document that does not reveal if money was sent or not, was issued at the beginning of the 2nd month of QL 40 (Mar 1775) and less than twenty days after 5 million *liang* had been disbursed from the treasury of the Ministry. Wenshou said that these 5 million would be sufficient until the 9th month. Nevertheless more money would be helpful, and therefore the emperor ordered the commanding generals to calculate exactly how much they would need, and if there was a further need of funds, another 5 million *liang* could be disbursed to support the army. The next load of money was only dispatched at the end of the 5th month, which means that it was high time to fill the war chest again.



□ 6.4 Diagram: Monetary transfers from other provinces or salt administration zones to the province of Sichuan

Diagram 6.4 demonstrates how much money was sent to Sichuan at what time, and it can be seen that there are almost exact intervals between most of the transfers. Irregularities are especially seen in mid-QL 37 (1772) when it was still not apparent that the war would continue for such a long time and the central government tried to avoid larger transfers. The two sums sent during that period are therefore quite small, once 2 million *liang*, and another 1 million *liang* shortly afterwards, when it became clear that the money made available would definitely not be sufficient. The second irregularity is the large gap between QL 38/5 (Jun – Jul 1773) and QL 39/5 (Jun 1774), when the war was financed by contributions (*juanshu*; see

Chapter 6.2.) and not directly from the treasuries of the central government or the provinces. In the last third of the war, a third, minor irregularity can be observed: The transfers took place in more or less regular intervals of 3 to 4 months; the only exception being the transfer of QL 39/11 (Dec 1774), and going back to the problem of the document dated QL 40/2/9 (Mar 10, 1775). Possibly the five million *liang* mentioned there do not represent the money finally dispatched in QL 40/5 (Jun 1775) but a sum in-between, in the 2nd month of QL 40. Concerning this question, it would also be worth to compare Diagram 6.5, where a further financial transfer in QL 40/2 or 3 (Mar – Apr 1775) would explain the income peak of QL 40/4 (May 1775).



□ 6.5 Diagram: Financial transfers as part of the war chest income

To solve this problem, we could once again look at the accountancy reports in the State Council copies that declare income, expenditure (often in detail, like ‘for funerals, for provisions, for porters, and for iron and nitre’) and the money left over in the war chest at the end of each month. A fourth sum is the real amount of money (*shi cun yin* 實存銀) left over in the account at the end of the month—these data were used for the balance in Table 5.10.

Since the money had to be transported from Beijing or the other provinces to Sichuan, it always took a certain time to reach its destination. Governor-general Wenshou therefore reported that ‘of the [5 million *liang* of] money from the Capital (*jingxiang*; actually from the officials’ salary fund) dispatched on QL 40/1/20 [s. 1. 22; Feb 21, 1775] 1.5 million *liang* have

arrived by now [QL 40/2/9; Mar 10, 1775], and the rest is still due to arrive bit by bit.<sup>29</sup> If we subtract the time for the transmission of the documents from Beijing to Jinchuan and back (the couriers were ordered to cover 600 *li* a day) there would only stay a few days left for the transport of the money. Yet the regulations of the *Jinchuan junxu li'an* contain a short chapter which especially deals with the transport of silver. A distance of 100 *li* had to be covered in one day, which means that it took about 40 days to transport the money from Beijing to Chengdu (somewhat more than 2,000 km).

Half a year before that, on QL 39/9/7 (Oct 11, 1774), Wenshou had already reported that 3.7 million *liang* were still due and should completely arrive until the 11th month. The dispatch of this amount had begun after the imperial order dated QL 39/5/6 (Jun 14, 1774), which means that large portions of the 5 million *liang* ordered in the 5th month only arrived in the 11th month, half a year later. Under those conditions it is understandable that the generals in Jinchuan were permanently worried that they would run out of money and therefore asked for fresh financial support well ahead of time. This dilemma can also be seen when comparing the incoming money from the war chest with the financial transactions. If there is any relationship at all, we can see that the effects of financial support are only visible two to three months later. The most impressive retarding effect is the one at the end of the war when more than 10 million *liang* were reported as being the income of the war chest. This money was definitely used for 'reconstruction' in the whole area and can therefore not be considered as unnecessarily transferred.

Even if all these considerations lead to the conclusion that possibly a further dispatch of 5 million *liang* may have taken place in QL 40/2 or 40/3 (Mar – Apr 1775) the documents show no evidence of such a transfer. A further 5 million *liang* would also widely exceed the sum of 61.6 million *liang* that is cited as the total direct contributions by the state treasury—unless the 5 million *liang* of *juanshu* contributions are subtracted which are included in the calculation of Table 6.3 as contributions by the rich merchants. But the first reason speaking against a further payment of 5 million *liang* to Sichuan during that period is that is not documented. The second argument against the 5 million *liang* transfer is the statement in the *Jinchuan junxu li'an* that there were all in all only fifteen 'instalments', i.e. transfers, by which the money was transferred from the Ministry of Revenue or from the provinces to Sichuan, and not sixteen, as would have been when counting a separate transfer for the 5 million.<sup>30</sup>

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<sup>29</sup> *Qingshilu: Gaozong shilu* 976, fol. 16a-17a (QL 40/2/dinghai).

<sup>30</sup> *Jinchuan junxu li'an* 2, fol. 177a.

A great part of the income of the war chest was of course not the monetary transfers coming from the Ministry of Revenue or external provinces. The annual tax income of the land-tax of the province of Sichuan itself was about only 878,000 *liang*,<sup>31</sup> and at least part of that sum, normally to be handed in to the central government's treasury, could therefore stay in Sichuan in order to finance the war. Miscellaneous taxes and the tea tax in Sichuan were also able to contribute at least a quarter of a million *liang* annually.<sup>32</sup> Madeleine Zelin has investigated data from the *Da-Qing huidian* which show that 70 per cent of the tax income of the province of Sichuan stayed in the province and were not sent to the central government. This is partly due to the relatively low land-tax level of that province.<sup>33</sup>

To make things even more complicated, documents contradict each other: While the imperial order dated QL 40/9/29 (Oct 23, 1775)<sup>34</sup> explicitly says that the 3 million *liang* to be transferred will come from the treasury of the Ministry of Revenue, other documents<sup>35</sup> show that only part of the money was procured by the Ministry, and the rest was paid by some provinces. The same is valid for the 5 million *liang* dispatched according to the imperial order dated QL 40/1/22 (Feb 21, 1775).<sup>36</sup>

<i>Paid by</i>	<i>Sum [million liang]</i>
Ministry of Revenue	36.83
Various provinces (origin unknown)	7.00
Guangdong	2.32
Hu-Guang	2.00
Jiangsu	1.51
Henan	1.40
Guangxi	1.20
Jiangxi	1.12
Gansu	1.12
Anhui	0.90
Hunan	0.80
Shanxi	0.80
Shandong	0.50
Liang-Huai salt administration	0.60
Zhejiang salt administration	0.49
Hubei	0.40
<i>total sum</i>	59.00

□ 6.6 Table: Distribution of cost sharing according to imperial edicts (compare Table 6.1)

In the end it is clear from the standpoint of logistics that it was more reasonable to transport the money directly from any southern province to its destination in Sichuan instead of via the Ministry, because the money which the Ministry disposed of originated in the provinces, as they delivered their tax income to the central government. From this situation it can be learnt that the emperor avoided to debit the purse of the central government, although it was bulging—as we have seen—and there was ‘no need to be stingy’ (*bu jinxi* 不靳惜), as the Qianlong emperor frequently repeated.

Looking at the data from Table 6.3—and that is the information reflected in the official documents—in order to get a picture of the share of costs for the second Jinchuan war, we

<sup>31</sup> Wang (1973), Table 27.

<sup>32</sup> Compare *Huangchao wenxian tongkao* 40: *Guoyong* 2, p. 5525-5228.

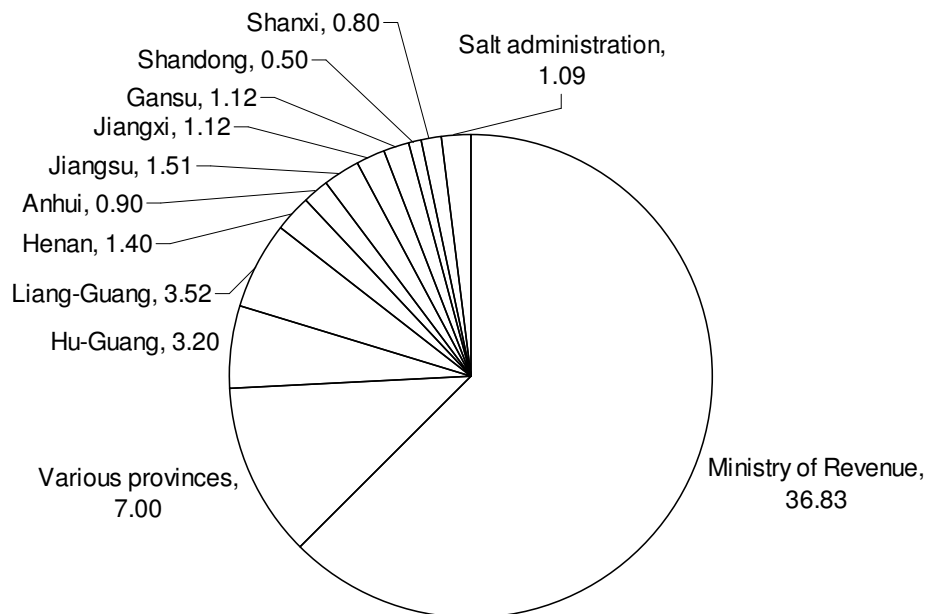
<sup>33</sup> Zelin (1984), pp. 27 f.

<sup>34</sup> *Qingshilu: Gaozong shilu* 991, fol. 30a (QL 40/9/jiaxu).

<sup>35</sup> *Junjichu lufu zhoushe*, reel 35, no. 792.

<sup>36</sup> The 3.37 million *liang* were paid by Jiangxi, Guangdong and Gansu and are here simply equally divided in Table 6.6.

come to the conclusion seen in Table 6.6. Presented in form of a pie chart (Diagram 6.7) the data clearly show that the costs were quite evenly distributed among the provinces and other units of administration, like the salt administration zones. Although we do not possess all data for the ‘various provinces’, which means that some relatively large ‘pieces’ cannot be attributed to a certain province, those for the provincial data we have are all more or less of the same size. Apparently the Ministry of Revenue has paid about two thirds of the total costs, but because we have learnt that even a considerable part of items listed as ‘paid from the treasury of the Ministry’ were in fact paid by the provinces, it must be assumed that probably another third of the large ‘piece’ of the cake was part of the provincial contributions. Its exact size cannot be determined from the data in the edicts and memorials and surely also depends on the period of time: In the first third of the war there were several financial transactions totally paid by the provinces; during QL 38 (1773) the war was financed by the contributions of rich salt merchants (see Chapter 6.2.), and in the last third of the war the money came from the budget of the Ministry and from the provinces. Probably it is just the two data from the year QL 40 (1775) that can hint at how large the contribution of the Ministry was, compared with that of the provinces: Of 5 million *liang* (dispatched on QL 40/1/22 [Feb 21, 1775]) the Ministry paid 1.63 million, that is 32%, and of 3 million *liang* (dispatched on QL 40/9/29 [Oct 23, 1775]) the Ministry paid 1.2 million, or 40%. If we assume that these proportions reflect the distribution of the total share of costs, the result as seen in Diagram 6.7 is not far away from such a relation (at least as based on the *Qingshilu* data).



□ 6.7 Diagram: Relative contributions by various administrative instances (million liang), according to imperial edicts (compare Diagram 6.2)

For a better overview the two provinces Guangdong and Guangxi are grouped as Liang-Guang, and Hubei and Hunan are grouped as Hu-Guang.



The above considerations are based on the data provided by imperial edicts included in the *Qingshilu* and the *Pingding Liang Jinchuan fanglüe*. Yet the account book of the *Jinchuan junxu li'an* renders figures different from those, sometimes with considerable differences (see Table 6.8). Assuming the correctness of the official accounting figures in the *Jinchuan junxu li'an* it can be seen that official collections of documents, as the imperial edicts in the *Qingshilu*, are not really a reliable source when it comes to figures of money or personnel. The reason for this is that the imperial edicts are often simple commands to the government agencies to take action in a certain direction. In many cases, as has been seen, it was the Ministry of Revenue rather than the emperor who decided about what action to take in a given situation. Yet the imperial commands as a documentary source have a decisive advantage, although the figures are not really exact and often differ by millions concerning sums of money transferred from province to province or (when dealing with troops) by thousands: While the amounts mentioned in the *Jinchuan junxu li'an* are absolute sums reflecting the final situation of the finances in a kind of balance sheet, the imperial edicts are dated and therefore provide an insight into the chronological sequence of the particular monetary transfers. The data of the edicts are defective compared to the general accountancy in the *Jinchuan junxu li'an*, yet without trying to detect the particular sums in the imperial edicts, it would not have been possible at all to reconstruct any pattern of financing the war over the course of time.

<i>province</i>	<i>sums [million liang] according to imperial edicts</i>	<i>sums [million liang] according to Jinchuan junxu li'an</i>
Guangxi	1.200	1.200
Guangdong	2.885	1.800
Shandong	0.500	0.800
Shanxi	0.800	0.900
Hubei (part of Hu-Guang) <sup>a)</sup>	0.4+1=1.400	1.600
Hunan (part of Hu-Guang) <sup>a)</sup>	0.8+1=1.800	3.100
Shaanxi		2.500
Henan	1.400	3.600
Jiangsu	1.510	3.810
Anhui	0.900	2.300
Liang-Huai	0.600	3.400
Zhejiang	0.490	0.490
<i>total sum</i>	13.485	25.500

□ 6.8 Table: Comparison of remittances from various provinces according to different sources

<sup>a)</sup> It is known that the twin-provinces Hu-Guang together delivered 2 million *liang*, which here are for the sake of simplicity equally attributed to the two provinces.

Although some sums are exactly or roughly identical, like that for Guangxi, Shandong, Shanxi, Hubei, and the Zhejiang salt administration, the provinces of Hunan, Henan, Jiangsu, Anhui and the Liang-Huai salt administration in fact delivered much higher amounts than is reflected in the imperial edicts recorded in the *Qingshilu*. Concerning the province of Shaanxi, there are not even documents of this kind available. On the other hand the sum of money

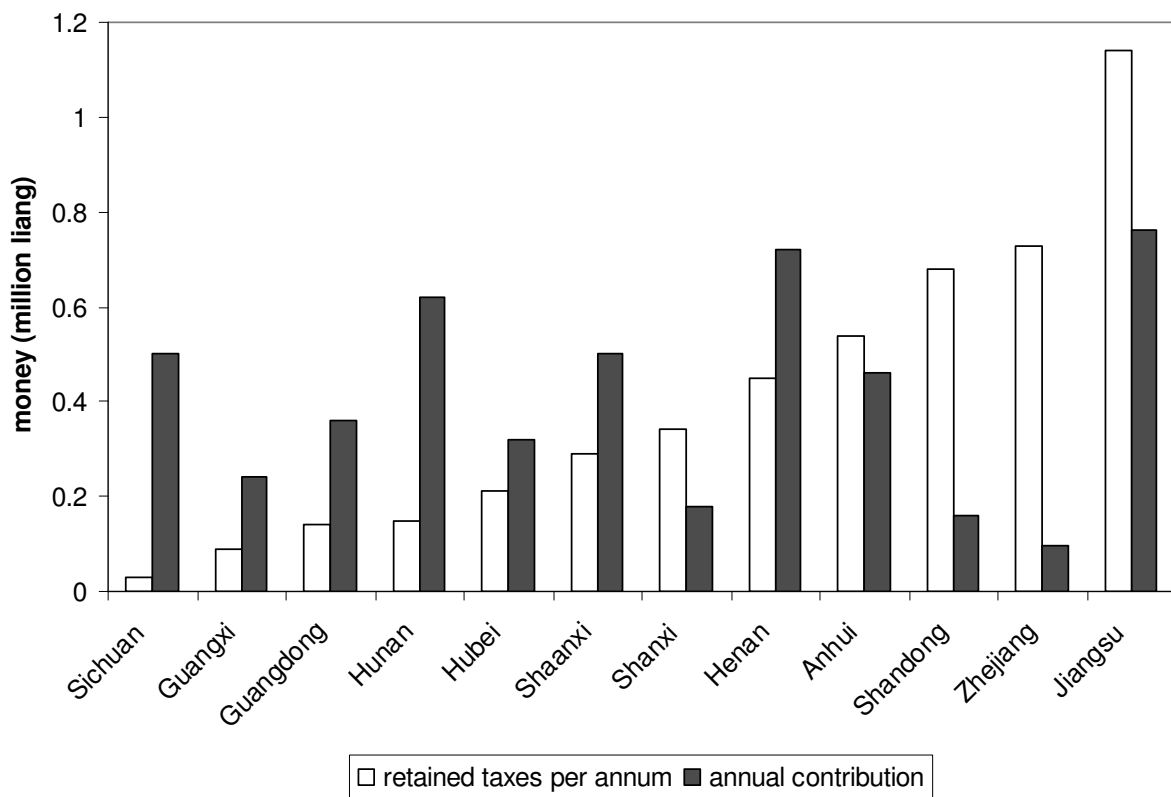
provided by the province of Guangdong seems to be much higher in the *Qingshilu* edicts than the province in fact supplied. The reason for this might be, as in the case of the entrepreneurs and their contributions (see Chapter 6.2.), that the war was finished before the particular sums could be sent to Sichuan. The reasons for the sums being higher in the *Jinchuan junxu li'an* account book could be either that edicts concerning the transfer of sums from the provinces of Hunan, Henan, Jiangsu and Anhui were not recorded in the *Qingshilu* collection, or that the monetary transfers as reflected in the imperial edicts were carried out on an extraordinary basis, while other transfers were made through a different method, for example, by routine transfer via the Ministry of Revenue or directly from province to province, which did not require any special edicts by the emperor. The autonomy of the Ministry of Revenue in financial matters can permanently be observed during the war, when problems occurred for the solution of which no case of precedence could provide a guideline. All decisions over any expenditure would have to be assessed by the Ministry of Revenue and were approved by the emperor only years later, when the *Junxu zeli*, the rules for military expenditures, was compiled. A last reason for discrepancies in the figures might be that it is sometimes not clear if a sum of money came from the provincial treasury (for example, Guangdong or Zhejiang), or from salt administration units whose main seat was located in that province. Documents might simply cite the name of the province without making clear that the respective sum was not provided by the provincial treasury, but came from the treasury of the salt administration commission or the circuit administration, which was not answerable to the provincial governors but to the censorate. Thomas A. Metzger has shown that the salt administration zones, overlapping with the territorial jurisdiction of the provinces and prefectures, were far from having a clearly regulated administrative structure, and were instead rather horizontally incorporated into the local government structure without being subordinated to a provincial governor.<sup>37</sup>

As a result of these investigations it can be said that the Ministry of Revenue paid almost half of the contributions from outside Sichuan, while the difference to a sum of about 57 million *liang* was contributed by various provinces, with the more affluent of, like Jiangsu, Henan, Hunan, Shaanxi, paying larger sums than remoter or poorer provinces like Shandong, Shanxi, Guangxi and Hubei. The province of Sichuan itself contributed only 2.5 million *liang* to the war chest, due to its low level of land-tax income. This appropriate distribution of the financial burden shows that the Qing government was well aware of the differences in the financial strength of the several parts of the empire and therefore did its best to impose dues

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<sup>37</sup> Metzger (1973), pp. 223 f.

suiting to the possibilities of each contributor. More than 3 million *liang* were also contributed by different agencies of the salt administration in the lower Yangtse region (Zhejiang, Liang-Huai) which transferred their income from the state-owned salt monopoly to Sichuan. All provinces dispatching financial aid to Sichuan disbursed these sums from their tax income. In some cases it is known that the salt *gabelle* constituted a great part of the province's revenue that could be used for purposes of that kind. Another special fund were the land-taxes of certain administrative areas, like Jiangning. It is furthermore possible that part of the costs taken charge of by the Ministry of Revenue was disbursed from the treasury of the Imperial Household Department, but there is no accessible document so far to prove such a transfer.



6.9 Diagram: Comparison between retained taxes and annual contributions by the provinces to the second Jinchuan war

Two conditions facilitated the emperor's decision to support the generals in Sichuan with large sums coming directly from the state treasury in the centre as well as the provinces. Firstly, decades of prosperity had had filled the treasury of the Ministry of Revenue and the Imperial Household Department to such a degree that the emperor several times stressed that there was no need to be too economical, on the contrary: to hold on to the money would mean to deprive the people of its abilities and expectations—in other words, once the taxes are paid, the money should be used. Secondly, the war against the few thousands of rebellious tribes in

the mountains took too long to give up,<sup>38</sup> and therefore it was especially in the last year of the campaign that the emperor no longer disputed the costs and willingly ordered to dispatch money in ever larger sums. For a long period of the war, 5 million *liang* had become a kind of standard sum to be transferred to Sichuan. The emperor even ceased to decide in person what source the money should be disbursed from, instead he simply ordered the Ministry of Revenue to think about that problem. From the documents in the year QL 40 (1775) we gain the impression that orders to transfer money to Sichuan had become a kind of routine.

### 6.1.2. The Local Governments

Nothing is more complicated than to assess how much the local governments—provincial, prefectural or those of the circuits and districts—contributed to the military expenditures of the Jinchuan war. Of course the transfers made by other provinces to Sichuan have to be counted among this category. The money was not transferred via the treasury of the Ministry of Revenue, but came directly from the other provinces. It was in fact taken to Sichuan by escorted convoys, the regulations and procedures for which will be highlighted in Chapter 6.3. A sum of 25 million *liang* thus found its way from throughout the provinces to the war chest in Chengdu, including taxes from the salt administration zones. This money had its origin mainly in the land tax of the particular provinces, a part of which could stay always in the province of origin and had not to be delivered to Beijing. Yet the sums transferred to Sichuan were used for the war and thus could not be used for other purposes, e. g. for local infrastructure. Each year over a period of almost five years the provinces therefore had to go without 5 million *liang*, which means almost half a million *liang* per year and province. A comparison of the tax volume, the amount of retained taxes and the contribution which each of the provinces had to make to the war is highly interesting (see Diagram 6.9).<sup>39</sup> There is a more or less clear correlation between the total tax volume and the retained taxes, expressed by the fact that the higher the total income through land taxes, the higher the amount of retained taxes. The taxes retained in the particular provinces vary between 11 (Shanxi) and 70 per cent (Sichuan) of the land tax revenue (or rather: the land tax rate), but mostly range around 20 per cent, which means that most provinces were allowed to keep about 20 per cent of their land tax income. Nevertheless, there is no coherent interrelation between the land tax or the retained tax volumes and the contributions the provinces had to make to the war chest in Sichuan. In order to obtain significant conclusions, the provincial contributions of Table

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<sup>38</sup> *Jinchuan dang* QL 37/III/00144 (QL 37/11/1).

<sup>39</sup> The figures of the tax volumes and retained taxes are taken from Zelin (1984), p. 28, based on the figures of the year 1685.

6.1 have been divided by 5, for each year of the second Jinchuan war (which actually continued for only four years and nine months). What can be seen from such a comparison is that the criterion to squeeze money out of the provinces was apparently not the regular financial situation. While some 'rich' provinces like Zhejiang paid almost nothing (if not considering the tax income from the salt zone), poor provinces like Hunan and Shaanxi paid proportionally much more. The most eye-catching circumstance is that provinces retaining quite a low amount of land taxes in their provincial treasuries (Guangxi, Guangdong, Hunan) had to contribute money to the second Jinchuan war which amounted to more than double, in one case even almost four times (Hunan) the amount which the respective provinces were allowed to retain from their land-tax revenue. Even the province of Shaanxi which dispatched a huge number of troops to Jinchuan and therefore had to carry the burden of organising their march to Sichuan, had to pay a huge sum compared to its tax income. The province of Shaanxi furthermore had to organise the courier service and had at the same time the problem of the plank road viaducts (*zhandao*) in the Qinling Range.

The annual contribution of the province of Hunan was even almost as high as its annual land tax rate (0.62 million out of 0.64 million *liang*). This goes to show that the provincial contributions to the war chest cannot possibly have come from the retained taxes but must have been paid from the total tax income. This at the same time means that in the next year there would be less money or none at all sent to the treasury of the Ministry of Revenue, in other words: During the war the tax income of the state was far lower than normal. Other provinces were still able to hand over their taxes regularly, like Zhejiang, Shandong, Anhui or Shanxi, to say nothing of Zhili and Fujian, which did not have to pay any contributions to the war chest at all. Zhili at least had, like Shaanxi and Shanxi, the duty to organise the march of large contingents of troops to the front and back and to organise the courier service. What counts even more is that some of the provinces paying the highest percentage of their income for the war effort also dispatched large contingents of troops to the front: Shaanxi, Hunan, and Hubei. The province of Guizhou with its extremely low land tax income did not have to provide any financial contributions, just like the province of Yunnan. Yet both sent out many thousands of troops, for which the baggage pay had to be found. Let us not forget the historical background of that region: only a short time ago the imperial troops had tried to invade northern Myanmar from there, and for the organisation of that campaign, the province

of Yunnan had been responsible, although it had not contributed financially to the 13 million liang which the Myanmar campaigns had cost.<sup>40</sup>

Another case has to be mentioned: the province of Sichuan itself, which contributed more than 2.5 million *liang* to the war. But the annually retained tax of Sichuan was just about one tenth of the money to be paid to the war chest. This could only be done if either the central government waived taxes to a large degree, or if the province of Sichuan paid off those debts to the central government over a long period of time, probably by raising some minor additional taxes which normally served to finance the bureaucracy of the local government, for example the *jintie* surcharge which served to finance the subsidies for governmental labourers.

The largest part of the money sent to Sichuan arrived in time, and it was almost entirely consumed by the war machine. There was nevertheless a sum of 4,485,925 *liang* which the province of Sichuan did have to pay back to other provinces.<sup>41</sup> It partly consisted of the baggage pay for troops sent to Sichuan. Because the baggage pay had to be raised by the home garrison, which could later on claim that sum back from the province responsible for the war chest, it is no surprise that the province of Sichuan had to pay back a large sum of money to the provinces which had sent troops to join the Jinchuan campaign. The same is valid for all other items financed in advance by other provinces: gunpowder, weapons, clothing, beasts of burden, and so on. There is only scarce evidence of such occurrences, so that a detailed listing of the money transfers from Sichuan back to other provinces can not be established. Some transfers of military equipment are highlighted in Chapter 4.4. The final account in the *Jinchuan junxu li'an* at least gives exact data about provincial transfers of gunpowder, which consequently had to be paid back by the province of Sichuan to the provinces of origin:<sup>42</sup>

Shaanxi provided 564,600 *jin* of gunpowder (costing 17,220 *liang*), Shanxi 150,000 *jin* (costing 4,575 *liang*), Guizhou 497,000 *jin* (costing 15,159 *liang*), the provinces of Hu-Guang (Hubei and Hunan) 941,000 *jin* (costing 28,701 *liang*), and Yunnan 126,000 *jin* (costing 3,843 *liang*). Hubei furthermore provided 200,000 *jin* of nitre (costing 6,500 *liang*), and Guizhou 620,000 *jin* (costing 20,150 *liang*). For the costs of gunpowder, see Table 4.25; as price for nitre, 0.0325 *liang* was taken as a factor because other provinces used the more expensive pure nitre.

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<sup>40</sup> Figure according to Lai (1984), p. 426. The real costs of the Myanmar campaign cannot be assessed because it was not officially ended and therefore no general account has been drawn up.

<sup>41</sup> *Jinchuan junxu li'an* 2, fol. 188a.

<sup>42</sup> *Jinchuan junxu li'an* 2, fol. 184a.

For the transport of baggage and military equipment the provinces of Shaanxi and Yunnan had lent horses and mules to Sichuan, which for reasons related to the climate had always problems to provide enough transport animals. In QL 36/12 (Jan 1772) the Banner troops from Yongchang/Yunnan took with them 800 horses and 200 mules.<sup>43</sup> In QL 37/8 (Sep 1772) 4,000 mules had to be bought in the province of Shaanxi to transport the equipment to Chengdu.<sup>44</sup> Yet this was not the only case, as a document from a few days later shows that Shaanxi had already sent 7 – 8,000 mules to Jinchuan. A further lot of 4,000 mules (a few sentences later, the author of the memorial speaks of 5,000 animals) were bought in Shaanxi in the summer of QL 38 (1773).<sup>45</sup> Such transactions were sometimes even handled spontaneously. Thus the same document declares that 1,500 pack horses from Hubei were to stay in Chengdu rather than being sent back.

Because of the hard winters in the Jinchuan mountains high-quality ‘outdoor equipment’ for both the troops and the labourers was needed. Yet while the labourers were simply given extra pay to enable them to purchase better clothing, the troops sent to Sichuan had to be cared for by the government. The Guizhou troops, for example, who had been dispatched in the autumn of QL 36 (1771), had to be provided with winter clothes and shoes, for which they were lent money from the provincial treasury. The money had to be paid back from their salary after their return.<sup>46</sup> The same was valid for the Shaanxi and Gansu troops sent to Jinchuan.<sup>47</sup> Their clothes were manufactured in Shaanxi and then sent to Jinchuan, which was quite a complicated procedure.<sup>48</sup> Later the necessary clothing and boots were manufactured or bought in Chengdu and sent to the encampments. Yet it is not said how much the troops of the particular non-Sichuan garrisons had to pay back as costs for this equipment, or if the costs were to be paid back by their home province. Possibly the winter equipment was at that time already part of the standard equipment, so that it was regularly paid for by the provinces and not deducted from the income of the soldiers.<sup>49</sup> In many cases the boots and winter clothing were even fabricated by the soldiers themselves and shipped to Sichuan by the garrison, some garrisons fabricated the clothes for their staff with money belonging to the garrison, and some units had the clothes and boots fabricated or bought in Chengdu. The money then had to be transferred to the war chest in Sichuan.<sup>50</sup>

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<sup>43</sup> *Pingding Liang Jinchuan fanglüe* 13, fol. 26a-26b (QL 36/12/gengyin). Those troops were actually Capital garrison troops which were still standing in Yunnan after the Myanmar campaign was called off. The horses and mules therefore belonged to those troops and did not originate in Yunnan.

<sup>44</sup> *Pingding Liang Jinchuan fanglüe* 37, fol. 13b (QL 37/8/gengchen), 17a-17b (QL 37/8/wuzi).

<sup>45</sup> *Pingding Liang Jinchuan fanglüe* 67, fol. 5b (QL 38/7/bingwu); 70, fol. 9b-12b (QL 38/7/xinyou).

<sup>46</sup> *Pingding Liang Jinchuan fanglüe* 9, fol. 16a (QL 36/11/yisi).

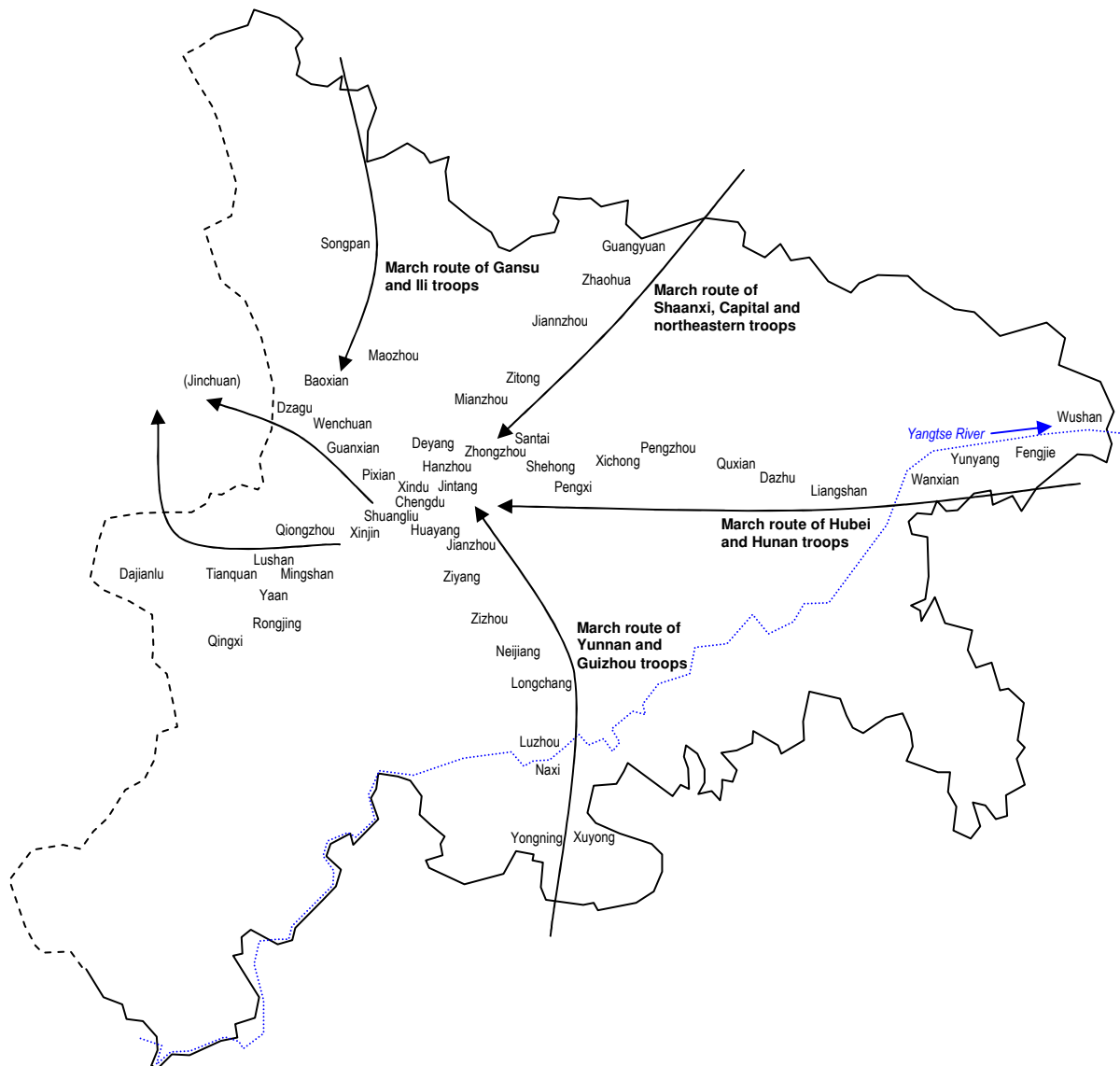
<sup>47</sup> *Pingding Liang Jinchuan fanglüe* 55, fol. 20b (QL 37/r3/bingyin).

<sup>48</sup> *Pingding Liang Jinchuan fanglüe* 35, fol. 12b-13a (QL 37/7/guimao).

<sup>49</sup> *Pingding Liang Jinchuan fanglüe* 128, fol. 10b (QL 40/11/gengchen).

<sup>50</sup> *Pingding Liang Jinchuan fanglüe* 106, fol. 27a (QL 39/9/gengchen).

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6.10 Map: Districts in Sichuan province affected by troops marching through; for all those districts, tax abatements were granted (Jianshou=簡州, Jiannzhou=劍州)

Of great importance for the Qianlong Emperor's self-perception is his image of a benevolent ruler who was broadminded to the filial and loyal, especially the people (*liuyan* 閭閻 'the gates of the living quarters'), although he was quite harsh towards disobedient state officials and rebels like the Jinchuan kings. He knew quite well that he could not overdraw the monetary potentials of his subjects and that he had to be benevolent to those whose territory the imperial troops kept infringing on. Therefore the emperor proclaimed several tax abatements for those districts in Sichuan which troops from everywhere had passed through. The first tax abatement during the war took place in QL 37/1 (Feb 1772). A year ago there had already been a postponement of tax collection alternating between several districts (*lun mian zheng fu* 輪免正[=徵]賦) and it was ordered that the miscellaneous and grain taxes (*zaliang ge xiang* 雜糧各項) of the Sichuan residents and the tributes of the 'barbarians' (*fan* 番) would uniformly be collected only one year later. Yet since six months before people of



Sichuan had been recruited for logistics service, the emperor wanted to demonstrate his benevolence and therefore ordered the governor-general, although the labourers were paid rations and labour pay (*kouliang, jiaojia*), to consider a second general extension of the tax collection (*zai xing xianyu huanzheng* 再行先予緩徵) after the end of the war.<sup>51</sup>

Yet only half a year later it seemed better to immediately apply a policy of tax respite because the intensification of the war made it necessary to take the load off the the population of Sichuan in a nearer period of time. Artai, at that time acting governor-general of Sichuan, was therefore ordered to arrange a procedure for tax abatements and tax extensions to relieve the population.<sup>52</sup>

Again half a year later, just before the first occupation of Lesser Jinchuan, the emperor ordered to postpone the tax collection of 50 prefectures and districts where troops had passed through (see Map 6.10), from QL 38 (1773) until the year QL 39 (1774). 90 further prefectures and districts which did not have to sustain the passage of troops, but whose inhabitants had to provide labourers, were allowed to pay their taxes from QL 37 (1772) two years later, in QL 39 (see Map 3.41). Inhabitants of territories outside the border ('barbarians', *fanmin* 番民) through which troops had passed, were likewise allowed to pay their 'taxes for barbarians' (*yifu* 夷賦) and tributes (grain, horses) one year later than normally.<sup>53</sup>

Another six months later, after the catastrophe of Mugom, when large contingents of elite troops from the Capital and the northeast were dispatched to the front, the emperor again postponed the tax collection of those districts, through which troops had passed, until the year QL 39. And now, for the first time during the war, the emperor even included other provinces into his tax postponement programme. Affected districts in Shaanxi and Gansu, which had already obtained the favour to pay their taxes later, were now allowed to pay taxes a full year later, if 50 per cent of the collected taxes had been extended; 80 per cent were to be postponed for those districts, which had before been allowed to postpone 40 per cent; and the districts, which hitherto were allowed to pay 30 per cent of their taxes later, were now allowed to be spared 60 per cent for the current year because the population had to provide service to the troops and to lend out carts and beasts of burden. The affected districts in Zhili and Henan

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<sup>51</sup> *Qingshilu: Gaozong shilu* 900, fol. 3a-3b (QL 37/1/wuxu).

<sup>52</sup> *Qingshilu: Gaozong shilu* 910, fol. 8b-9a (QL 37/6/renshen). *Pingding Liang Jinchuan fanglüe* 30, fol. 15b-16a (QL 37/6/renshen).

<sup>53</sup> *Qingshilu: Gaozong shilu* 924, fol. 3b-5b (QL 38/1/renchen).

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were granted a tax extension of 50 per cent.<sup>54</sup> A few months later 11 more districts on the march route were granted a tax extension of 60 per cent.<sup>55</sup>

Later on, the logical consequence of the benevolent methods hitherto applied was to convert the tax extension into tax abatement. Therefore, the emperor ordered the governor-general of Sichuan to check what number of labourers the districts that had been granted a tax extension until that date had provided. Those having provided a large number of labour conscripts (*chaiwu* 差務) were to be granted a total tax abatement (*quanxing juanmian* 全行蠲免) instead of the tax extensions, and those with a smaller number of labour conscripts provided an abatement of 50 per cent on their extended taxes (*juanmian yi ban* 蠲免一半), or a smaller percentage. The rest of the money had to be paid without any concessions (*ru shu wan na* 如數完納).<sup>56</sup> Fulehun and Wenshou thereupon suggested the following procedure for 90 districts:<sup>57</sup>

number of districts	extended tax from QL 37	extended tax from QL 38	tax from QL 39
23		abatement	abatement 50 per cent
23	abatement	abatement 50 per cent	abatement 50 per cent
4		abatement 50 per cent	
56	abatement		abatement 50 per cent
34	when 30 per cent extended: abatement when 50 or 70 per cent extended: abatement of 30 per cent		abatement 30 per cent

A short time later, a similar plan was developed for a number of other locations in Sichuan, including the territories of the native *tusi* kings who paid their tributes ('barbarian tax', and horses) to the Qing court:<sup>58</sup>

number/type of districts/name of native kingdom	levy of QL 37	levy of QL 38	levy of QL 39	levy of QL 40
Mingdjeng, Dunggu 董卜	(tribute horses) abatement	abatement	(tax and tribute horses) abatement 50 per cent	
Dzagu, 2 districts		abatement	abatement 50 per cent	
9	abatement 30 per cent		abatement 30 per cent	
5			abatement 50 per cent	
colonies in 8 districts; 'the 9 native kings'			(tax and tribute horses) abatement 30 per cent	
Chosgyab, Gebshidza,				(tribute horses) abatement

<sup>54</sup> *Qingshilu: Gaozong shilu* 937, fol. 25b-27a (QL 38/6/renzi). *Pingding Liang Jinchuan fanglüe* 63, fol. 20b-21a (QL 38/6/xinhai).

<sup>55</sup> *Jinchuan dang* QL 38/III/00459 (QL 38/9/3).

<sup>56</sup> *Qingshilu: Gaozong shilu* 967, fol. 41b-42b (QL 39/9/yihai). *Jinchuan dang* 39/III/00331 (QL 39/9/25); QL 39/IV/00005 (QL 39/11/6).

<sup>57</sup> *Qingshilu: Gaozong shilu* 970, fol. 8b-9b (QL 39/11/bingchen). *Pingding Liang Jinchuan fanglüe* 109, fol. 17b-18a (QL 39/11/bingchen). *Jinchuan dang* QL 39/IV/00089 (QL 39/11/7).

<sup>58</sup> *Qingshilu: Gaozong shilu* 973, fol. 1b-2b (QL 39/12/yiwei). *Pingding Liang Jinchuan fanglüe* 111, fol. 13b-14b (QL 39/12/bingwu). *Jinchuan dang* QL 39/IV/00207 (QL 39/12/16).

Batang

Even after the end of the war, tax abatements indirectly affected the income of the state treasury, because the Empress Dowager toured to Queli 闕里, the home town of Confucius, to report the imperial success.<sup>59</sup>

For the year QL 40, the taxes in many districts should likewise be alleviated, yet there were also some districts for which the abatements were transformed into a less preferential treatment:<sup>60</sup>

<i>number of districts</i>	<i>extended taxes from QL 40</i>
23	abatement
17	abatement 70 per cent
18	abatement of 70 per cent transformed into total abatement
23	abatement of 70 per cent transformed into 50 per cent
25	abatement of 50 per cent transformed into total abatement
34	abatement of 50 per cent transformed into 30 per cent
tributes of the 'barbarians'	total abatement

From the last document, as well as from the one issued on QL 38/1/2 (Jan 24, 1773) it is possible to calculate how much money the treasury of the province and the Ministry of Revenue lost. With the help of the land tax rate cited in the *Sichuan tongzhi*, the particular amounts can be found out. For the group of 50 prefectures and districts mentioned in the edict dated QL 38/1 (Jan 1773), 252,531 *liang* were missing for one year of tax abatements. For the second group of districts, which were less affected by troops crossing the territory, an amount of 401,629 *liang* was missing annually, when waiving all land taxes.<sup>61</sup> In the *Sichuan tongzhi* chapter about tax abatements (*juanzhen* 蠲賑) the edicts are reproduced which are also contained in the *Qingshilu* collection. No further information, like the total sum of tax deficits during the war, can be found.<sup>62</sup> Yet the descriptions in the imperial edicts permit to guess that roughly 1.5 million *liang* of taxes were waived because of the second Jinchuan war. To this sum we must add the general tax extensions (*pujuan* 普蠲) of the years QL 35 (1770) and QL 42 (1777). In QL 42 it was decided to totally waive the levy of Sichuan province of the year *wuxu* (QL 43 [1778]). In QL 35 the tax extensions or tax abatements had cost the state treasury 668,400 *liang* in Sichuan, while the tax abatement issued in QL 42 was effected in three steps for different regions of Sichuan during the years *xinhai* (1791), *renzi* (1792) and *guichou* (1793), and cost the state treasury 692,300 *liang*.<sup>63</sup>

<sup>59</sup> *Qingshilu: Gaozong shilu* 1002, fol. 22a-22b (QL 41/2/xinhai); 1004, fol. 9b-10a (QL 41/3/dingchou); 1004, fol. 22a-23a (QL 41/3/xinsi); 1004, fol. 29b-30a (QL 41/3/xinsi).

<sup>60</sup> *Qingshilu: Gaozong shilu* 1005, fol. 6b-8b (QL 41/3/xinmao). *Pingding Liang Jinchuan fanglüe* 134, fol. 1a-3a (QL 41/3/jiayin).

<sup>61</sup> (Jiaqing) *Sichuan tongzhi* 63, fol. 3a-38b. Data from QL 18.

<sup>62</sup> (Jiaqing) *Sichuan tongzhi* 73, fol. 34a-40b.

<sup>63</sup> (Jiaqing) *Sichuan tongzhi* 73, fol. 32b-34a. *Qingshilu: Gaozong shilu* 1025, fol. 43b-44a (QL 42/1/yiwei).

## 6.2. Contributions by Merchants

### 6.2.1. The *juanna* / *juanshu* System

An important source of income for the Qing state treasury were contributions (*juan* 捐) by state officials or rich merchants and entrepreneurs.<sup>64</sup> There were two different types of contribution, depending on the purpose and on the formalities.

The first type was a rice contribution by members of the gentry or state officials, who wanted in return for their donation to obtain a grant for the state college under the Directorate of Education (*guozijian* 國子監; often for their sons) and by this way to be able to rise to a minor state office. This was also the earliest use of the contributions to obtain a grant or an office, and for the Ming and Qing governments, it was also the simplest way to feed a college. The donated rice was therefore called ‘contribution rice’ (*juanmi* 捐米); the donors obtaining such a grant were called ‘contribution students’ (*gongsheng* 貢生) or ‘contributors according to the rules [for contributions]’ (*ligong* 例貢); and the transaction was called ‘contributing to an academy’ (*gong jian* 貢監) or ‘buying [a grant for] an academy through contributions’ (*juan jian* 捐監). Later on, officials actually occupying a position could buy an option for a higher ranking office. A district magistrate (*zhixian*) for example could purchase the option for the position of a prefect (*zhizhou*). This kind of contribution was originally paid in rice, but later in money, and was called *juanna* 捐納.

The second type of contribution, called *juanshu* 捐輸, was made by rich merchants and entrepreneurs, but also by office holders. While the *juanna* contributions could be paid at any time, the *juanshu* contributions had to be proclaimed in a ‘call for contributions’ (*kaijuan* 開捐). This method was introduced as a means of finance during times of hardship, chiefly during a war, but also when flooding and droughts caused a decline in tax revenue and the state had to provide disaster relief (*zhenwu* 賑務, *zhenghuang* 拯荒) to the afflicted region. A third reason to proclaim a *juanshu* contribution campaign was when large river conservancy works (*hegong* 河工) were necessary, which were very costly. This kind of contribution was mostly paid in rice to support either the campaigning troops or the people in distress, but could also be paid in money. Rich merchants or office holders were suchlike cases expected to contribute (in the shape of rice) and were in turn rewarded with an option to obtain an office, although occupying a governmental post probably was not a desirable option for a

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<sup>64</sup> Elisabeth Kaske has made some important studies on this topic, see Kaske (2008).

merchant who was not likely to give up his flourishing business. It was rather something for officials who already held a secure post and wanted to climb the ladder of success somewhat faster, or for the second generation in a merchants' dynasty, or for the sons of a state official. Because the *juanshu* contributions were devised for a particular purpose and were only to be presented within a pre-defined bracket of time, they were called 'rules for temporary affairs' (*zanshi shili* 暫時事例).

The government even laid down prices of such office licences. The licence for a circuit intendant (*daoyuan*) for example cost 16,400 *liang*, that for a prefect (*zhifu*) 13,200 *liang*, and that for a district magistrate (*zhixian*) 4,620 *liang*. For the first time offices were officially sold through a *juanshu* campaign in the course of the early Kangxi reign (KX 13 [1674]) when the government was in dire need of money to finance the war against the Three Feudatories. During the Qianlong reign it became quite common that in the sphere of civilian offices options for posts up to circuit intendant could be purchased, in the military sphere up to the rank of assistant regional commander (*canjiang*). It was even admissible to purchase an option for offices in the central government up to the post of a director of a ministerial agency (*langzhong*).<sup>65</sup> The purchase of options for military posts became sanctioned at the beginning of the Yongzheng reign.<sup>66</sup> At the beginning of the Qing era the possibility to buy one's way into office also offered the possibility to fill vacant posts, should the regular state examinations not supply a sufficient number of candidates to provide staff for the quickly growing beaurocracy.

A special regulation of the assessment of the contribution provided that, when contributing rice, the government did not only count the market price of the donated grain (which ranged between 5 and 12 *liang* per *dan* of rice), but very generously calculated up to 25 *liang* per *dan* of rice.<sup>67</sup> This factor had been fixed during the first Jinchuan war but was later criticized by the emperor as being too generous.<sup>68</sup> The original proposal of the Sichuan governor Jishan was to value each *dan* of rice with 30 *liang*, which was up to six times the market price of grain, and the 25-fold of the official price for grain (1.2 *liang* per *dan*). The emperor therefore

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<sup>65</sup> Figures according to Xu (1968), pp. 43-45. See also Lai (1984), pp. 377-381; Lu (1999), p. 75; Yang (1999), p. 38; Kaske (2008); Chen (1992), p. 327.

<sup>66</sup> Liang/Liu (1996). I was not able to find out the exact date stating when military offices had been purchased for the first time (presumably by lower-ranking officers aspiring to a higher rank). Cases in point are military candidates asking to be promoted to a rank after delivering a contribution: Holders of the military *jinshi* degree (a degree conferred after passing the military examinations) were promoted to the rank of *shoubei*, holders of the *ju[ren]* degree to that of *qianzong*. *Qingshilu: Shizong shilu* 5, fol. 3b-5a (YZ 1/3/xinsi). Yet there is a document showing that already during the Shunzhi period (1644-1661) Banner troops from generals down to common soldiers were obliged to contribute for disaster relief. It is not known if they were later rewarded with promotions. *Qingshilu: Shizu shilu* 89, fol. 9a (SZ 12/2/jisi).

<sup>67</sup> *Qingshigao* 112, p. 3235.

<sup>68</sup> *Jinchuan dang* QL 37/IV/00184 (QL 37/11/12).

harshly criticized this method—although he finally accepted the conversion factor of 25 *liang*. His scepticism turned out to be justified when after the end of the war it was discovered that many officials had chosen to have their rations (*kouliang*, see Chapter 3.1.2.) paid in rice instead of money. The officials then stored the rice in order to donate it during a contribution campaign, which would save them a lot of money because the value of each *dan* of rice would then increase at least sixfold.<sup>69</sup> Thus, if a contributor provided 1,000 *dan* of rice (with a value of between 500 and 1,200 *liang*) he could obtain a licence worth 25,000 *liang*. In other words, when selling the option for the post of a district magistrate, the government did not obtain rice with a market value of 4,620 *liang*, as the statutes for the *juanshu* contributions had fixed, but of only about 185 *liang*. Zhang Guangsi, governor-general of Sichuan, therefore suggested discontinuing this procedure.

From the Kangxi reign on this method of collecting money became a permanent tool for feeding the state treasury, and because the ‘donors’ were rewarded with the prospect of obtaining an office, it can be termed an officially sanctioned possibility of buying one’s way into office. During the Qianlong reign the practice to announce *juanshu* contributions became more regular, and in the 19th century it constituted an important part of the state income, with all the pros and cons. In QL 19 (1754), for example, the sum in the treasury of the Ministry of Revenue was some 14 million *liang*, almost 40 per cent of which came from *juan* contributions.<sup>70</sup> In 1850 the regular purchase of offices through the *juanshu* system was officially sanctioned, which means that the temporary *juanshu* system and the permanent *juanna* system had merged.<sup>71</sup>

Rank (*ji* 級) licences had already been granted in the earliest times in cases when people had in an extraordinary way contributed to the welfare and the economic prosperity, as in the case of the *corvée* labour during the erection of the city wall of Chang'an in the early Western Han era,<sup>72</sup> or as an expression of the emperor’s benevolence.

The formalities of a petition to contribute money (or rather rice instead) were exactly defined during the Qianlong reign. As will be seen, officials and merchants had to present collective petitions that were then processed by the Ministries of Revenue and of Personnel, which knew how many posts were vacant.<sup>73</sup> The response to the proclamation of a contribution campaign was often very enthusiastic because it provided an extremely good opportunity to obtain a

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<sup>69</sup> *Qingshilu: Gaozong shilu* 309, fol. 57b-59b (QL 13/2/jiashen). *Jinchuan dang* QL 37/IV/00184 (QL 37/11/12).

<sup>70</sup> Quoted in Lu (1999).

<sup>71</sup> Compare the article of Mao (1996).

<sup>72</sup> See for example, *Hanshu* 2, p. 91; 3, p. 96; 4, p. 108.

<sup>73</sup> *Qingshigao* 112, p. 3242.

rank licence or a real office without undergoing the prescribed formalities of participating in the notoriously difficult state exams.

Guidelines or statutes (*zhangcheng* 章程) for the procedures of *juanshu* contributions were developed based on the experiences of the many cases of the early Qing period. Here are a few examples of precedence statutes for wartime contributions:

- KX 13 (1674) *Jiangxi, Fujian, Hu-Guang shili* 江西福建湖廣事例 ‘Rules from Jiangxi, Fujian and Hu-Guang’ (war against Wu Sangui)
- KX 34 (1695) *Juanshu liangcao shili* 捐輸糧草事例 ‘Rules for the contribution of grain and fodder’ (the war against Galdan)
- KX 54 (1715) *Xibei junxu shili* 西北軍需事例 ‘Rules for the logistics of the northwestern [campaigns]’
- KX 61 (1722) *Junqian yunmi shili* 軍前運米事例 ‘Rules for grain transport to the front’ (Taiwan campaign)
- YZ 2 (1724) *Artai yunmi shili* 阿爾泰運米事例 ‘Artai’s rules for grain transport’ (Qinghai campaign)
- YZ 12 (1734) *Hubu yuchou liangyun shili* 戶部豫籌糧運事例 ‘Rules for the transport of grain, as arranged by the Ministry of Revenue’ (Miao rebellions)
- QL 13 (1748) *Jinchuan yunmi shili* 金川運米事例 ‘Rules for the transport of grain to Jinchuan’ (first Jinchuan campaign)
- QL 39 (1774) *Chuan yun shili* 川運事例 ‘Rules for the [grain] transport in Sichuan’ (second Jinchuan campaign)
- JQ 3 (1798) *Chuan-Chu shanhou choubei shili* 川楚善後籌備事例 ‘Rules for arranging the reconstruction in Sichuan und Hunan’ (White Lotus rebellion)

The contribution guidelines for war periods were modelled on those for civilian matters, like the *Xinjiang zhenli* 新江賑例 ‘New rules for the relief of the [victims] of the Yangtse [inundations]’ of QL 11 (1746) or the *Yugong shili* 豫工事例 ‘Rules for the [river conservancy] works in Henan’ of QL 25 (1761).

The contents of the regulations in such precedents prescribed that the responsible official (in most cases a governor or governor-general) had to hand in a memorial via the Ministry of Revenue in which he was requested to describe exactly what project the contributions was to be used for (river conservancy, disaster relief, war), in what area the contribution campaign was to be conducted (within the respective prefectures, within the province, or even throughout the empire). It was also to be fixed how much money was to be collected in the defined area, and within which frame of time (a ‘term’, *mao* 卯) the money had to be contributed. The governor had furthermore to define exactly what ranks could be bought and what actual posts or licences could be obtained. During the contribution campaign proclaimed to obtain funds for the *Siku quanshu* project, for example, after a long time arose once more the opportunity to purchase the option for the post of a circuit intendant and a prefect. And finally, the applicant (i. e. the governor) had to determine the prices for the rank licences and the conversion rate for the goods provided (like 25 *liang* for 1 *dan* of rice).

When the contributors handed over their money (respectively a receipt that they had bought a certain amount of rice) to the Contributions Bureau (*juannafang* 捐納房) of the Ministry of Revenue they were given an acknowledgement (a process called *shangdui* 上兌 ‘presenting in exchange’) stating how much they had contributed and what post or title was going to be their ‘reward’. As will soon be seen, in some cases the contributors had not even fulfilled their obligations yet to pay rice or hand in money, especially when merchant associations were forced to pay contributions. Once in possession of the acknowledgement, the contributors had to apply to the Ministry of Personnel where they registered at the Quality Examination Office (*quanxusi* 銓敘司) in order to obtain the qualification as ‘a person waiting for a vacancy’ (*houbu* 候補). The Ministry of Personnel then fixed a period during which the applicant could be selected by drawing lots (*cheqian* 掣籤, *qianche* 籤掣, *chouqian* 抽籤) in order to be dispatched (*fenfa* 分發) to a certain province or a certain department of the central government where he had to wait for a vacancy. He was thus assigned a position in a virtual queue (*banci* 班次). It was, however, possible by means of an additional payment (*jiajuan* 加捐) to be moved forward in the waiting line. This method was called ‘flowering’ (*huayang* 花樣), an expression which today has also the connotation of ‘trickery’.<sup>74</sup> The terms for positions in the ‘queue’ were *xuanyong* 選用 ‘selected for appointment’, *xianyong* 先用 ‘first to be appointed’, and *jiyong* 即用 ‘to be appointed immediately’. When a post became vacant (*shique* 實缺), a *jiyong* candidate would be the first to occupy it. It was also possible to buy a shorter waiting time, e. g. through participating in the monthly (*danyue quanxuan* 單月銓選) or bimonthly (*shuangyue quanxuan* 雙月銓選) assessments or allotments by the Ministry, or both (*bu lun dan-shuang yue quanxuan* 不論單雙月銓選). The idea of the lottery was to prevent officials from being appointed to regions where they had social connections, which would enable them to carry out their official duties with improper means. Yet for the contributors there was an exception, and applicants having participated in a *juanshu* campaign were in a position to preselect places or offices they would like to be appointed to (*zhi fen* 指分, *zhi sheng* 指省). The title of contributors waiting for a vacant post was, just like that of those who had passed the regular state examinations, preceded by

<sup>74</sup> The *Huangchao jingshi wenbian* 17: *Lizheng* 吏政 3: Gu Cong 顧琮: *Qing fen fan jian zhong ming qi shu* 請分繁簡重名器疏, gives a striking example of this method: ‘Without any post (*baiding* 白丁) in the morning, you will be waiting for a magistrate’s post in the evening after having paid 1,700 *liang*. Paying a further 1,000 *liang* will make you a first-grade candidate, and with a third 1,000 *liang*, you will be immediately appointed [to a vacancy]. This means that for a mere 3,700 *liang* you can buy a small district.’



the term *houbu* ‘waiting for a vacancy’, like *houbu zhixian* 候補知縣 ‘a district magistrate waiting for a post to fall vacant’.

Apart from obtaining an office or being promoted to a higher office (*juan sheng* 捐陞 ‘to buy a promotion’), there were also other options for sale by a *juanshu* contribution: It was possible to opt for a different province or district of service (*gai juan* 改捐 ‘to buy a relocation’) or to buy a lower office (*jiang juan* 降捐 ‘to buy a move down’). A very important choice was the option to repurchase (*juan fu* 捐復) an office, a grade, a licence or a peacock feather which had been lost through a demotion. With a *juanshu* contribution it was also possible to bypass any kind of formalities (*juan mian* 捐免) on the way to obtaining an office by the regular method, like offices on probation (*shiyong* 試用), recommendations (*baoju* 保舉), presenting credentials (*tougong* 投供), regular transfer after three years (*huibi* 迴避), an official appointment (*shishou* 實授), inspections (*yankan* 驗看), presentations at the court (*yinjian* 引見), etc. Other people opted for honorific items, like a peacock feather worn as a hat decoration (*dingdai* 頂帶), which was normally only granted for extraordinary merits, or an official laudatory document in the shape of tablets (*jingdian* 旌典, *bian'e* 匾額), a hereditary rank for the parents (*fengdian* 封典), or imperial praise by being mentioned in the ranking of meritorious officials (*jilu* 記錄), which normally only included officials who had shown extraordinary performances, or a promotion in the official rank (*jiaji* 加級, for example, from 5b to 5a).

For non-officials not wanting to obtain an office, particularly merchants, there was the possibility to be given nominal (‘vain’) titles for offices (*xuxian* 虛銜 or *zhixian* 職銜; without the option to be appointed to a real post), to be allowed to use a hereditary rank for their parents (*fengdian*), and to acquire an academic title (*gongjian*).

The conditions to obtain all those privileges could be changed over time, as demonstrated by an example from the second Jinchuan war:

In the last months of the war the civilian officials looking after the transport of brass and lead were so busy that their number became insufficient to administer the task to provide the troops with enough metal. The reason for this was that the responsible provinces, Guizhou and Yunnan, were only allowed to dispatch (*fenfa*) eight civilian officials (including appointees waiting for a vacancy) for this task. Therefore Vice Minister (*shilang*) Gao Pu 高樸 of the Ministry of Revenue made the suggestion that people having contributed money (or rice) with the option to obtain the post of a district magistrate (*zhixian*) in the provinces of

Yunnan and Guizhou should be allowed to be dispatched to take over tasks in the metal logistics. If they did a good job, they should be instantly appointed to a vacant post in the provinces they desired to go to without having to wait for a fixed duration and without undergoing further examinations or drawing of lots. The original regulations of the *Chuanyun shili*, the ‘Rules for the transport of [contribution grain] to Sichuan’, stipulated that it should not be possible to dispatch applicants for a post as a result of an additional payment allowing them to bypass the ‘queue’ by allotting them a certain post directly. Yet the situation in the logistics was so urgent that additional contributions were permitted. People being assigned to a post in Yunnan and Guizhou were to take over their duties in the logistics immediately without having to wait another year (*bu ju nian xian* 不拘年限).<sup>75</sup>

While for most state officials the *juanshu* contributions provided an excellent opportunity for social (and eventually financial) advancement, they had also a very negative aspect for contributors who were forced to donate their money, first and foremost the prosperous merchant associations. That for them the *juanshu* contributions were nothing but an irregular and unofficial tax in a procedure called *baoxiao* 報效 ‘to announce an offering’ can also be seen in the fact that special contribution rates existed for certain regions. In YZ 10 (1732) the Changlu 長蘆 merchants (Changlu, located near Tianjin, was a salt administration region) for the first time contributed 100,000 *liang* to the imperial military expenditures and from then on, whenever there was a greater military expedition, the salt merchants of Changlu, Shandong, of the Huai region, and of the Liang-Zhe region contributed large sums at a certain rate according to their estimated wealth (see Table 6.14 below). During the second Jinchuan war, in QL 38 (1773), the Huai salt merchants contributed 4 million *liang*, the (Liang-)Zhe salt merchants 1 million *liang*, the Changlu salt merchants 600,000 *liang*, and the (Shan)-Dong merchants 300,000 *liang* (official figures).<sup>76</sup> Yet apart from the extraordinary contributions during wars (the ‘donations’), there were also ‘regular [project-related] contributions’ (*xunchang juanshu* 尋常捐輸; not to be mistaken for *juanna* contributions, which did not require a proclamation) for relief or river conservancy works, which likewise could amount to more than 1 million *liang* for the Huai merchants and up to several 100,000 *liang* for the other salt merchants.

Although the *juanshu* campaigns thus provided a lot of possibilities for social and financial advancement (*chushen* 出身 ‘to excel in person’), it is a fact, especially for the salt

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<sup>75</sup> *Qingshilu: Gaozong shilu* 989, fol. 26a-26b (QL 40/8/jiachen); 991, fol. 26b-27a (QL 40/9/gengwu).

<sup>76</sup> Figures according to *Zhongguo yanzheng yange shi: Changlu*, p. 42.

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merchants and the bankers in Shanxi, that the campaigns also served to fleece them, as will be seen.

### 6.2.2. Contributions During the Second Jinchuan Campaign

That in the course of the second Jinchuan war the donators did indeed obtain posts in the government and were not simply fobbed off with vain office titles, can be observed in several documents from the second Jinchuan war. A man named Xu Ding 徐鼎, having just acquired (*xinjuan* 新捐) an office of the 9th rank, was ordered to fulfil the duty of document copyist (*shanban zouzhe* 繕辦奏摺).<sup>77</sup> A very interesting case is that of a group of contributors who were friends or relatives and who desired to be promoted as one group: Gong Yigu 龔貽穀 (having bought the licence of registrar in the financial administration of the province, *buzhengsi jingli*), Zhou Zhi 周植 and Zhang Yihe 張一鶴 (licence of secretary, *limu*), Lu Chengrui 盧成瑞, Wang Erchi 王爾熾 and Zhang Xinjing 張心敬 (licence of a 9b rank office), as well as Zhou Jingfu 周景福 (not commissioned yet, *wei ru liu* 未入流), asked to be given the opportunity to serve in logistics without remuneration (*zi bei fu liu ying ting chai* 自備斧留營聽差). In case they did a good job they could obtain a post.<sup>78</sup> Similar enquiries can be found in which persons having purchased one of the lowest official ranks asked to be given a chance to prove their ability in the chosen office. Should they be transferred to a vacant post they would be rewarded with an official salary.<sup>79</sup>

Some documents have been preserved that give insight into the contributions of groups of wealthy persons for the second Jinchuan campaign. Because the rhetoric of the court and the procedures of that kind of contributions are of great interest, the respective documents shall be presented here in total:

‘Edict, according to the palace memorial of Li Zhiying 李質穎 [salt supervisor of Liang-Huai QL 35 – 40 (1770 – 1775)]<sup>80</sup> who reported that the [salt] wholesalers (*gangshang* 綱商) Jiang Guangda 江廣達 and Cheng Qiande 程謙德 from the Liang-Huai region who have enjoyed greatest benefits and [therefore] approach [the government] in a petition expressing their desire now, as Our armies are straightly suppressing Jinchuan, to contribute 4 million *liang* in order to support the military needs by their humble donation.

Since there is a war on in Jinchuan We have already several times provided money [to the province of Sichuan] with a total amount of more than 29 million *liang* for military needs that were paid in total by

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<sup>77</sup> *Qingshilu: Gaozong shilu* 975, fol. 18b-19a (QL 40/1/jiaxu).

<sup>78</sup> *Jinchuan dang* QL 39/IV/00189 (QL 39/12/9).

<sup>79</sup> *Jinchuan dang* QL 40/III/00159 (QL 40/8/18); QL 41/I/00103 (QL 41/1/17).

<sup>80</sup> *Qingguoshi: Dachen cibian* 大臣次編 22, pp. 683 ff.

the treasury of the Ministry [of Revenue] or from the treasuries of neighbouring provinces. Now the treasuries of the government (*fucang* 府藏) are full enough so that We can rely on government finances and there is actually no need for contributions ( *yuan wu jie hu zhu juan* 原無藉乎助捐). Yet if We consider that those merchants with their abundant donation of money for provisions beseech us so urgently to contribute to the public with a lot of funds to be used as provisions for the army, and if We see their loyal and faithful minds We cannot but look down and comply with their wishes.

Therefore We order that Li Zhiying shall investigate clearly how much each of the merchants contributes and establish a ranking (*ding deng* 定等) to be transmitted to the respective ministry that has to discuss an extraordinary classification for rewarding them (*congyou yixu* 從優議敘) according to the precedent ‘to contribute gladly out of love for the good’ (*zhao hao shan le shi zhi li* 照好善樂施之例). The original memorial shall be sent to the Ministry of Revenue for counter-checking and archiving.’<sup>81</sup>

‘Edict to the State Council, according to the palace memorial of Li Zhiying who reported that the [salt] wholesalers Jiang Guangda and Cheng Qiande from the Liang-Huai in a petition expressed their desire to contribute 4 million *liang* in order to support the military needs by their humble donation.

We have already issued an edict responding positively to their request, to hand over [the data] to the respective ministry that has to discuss an extraordinary classification for rewarding them, according to the precedent ‘to contribute gladly out of love for the good’. Yet this case is an affair not only of Jiang Guangda and Cheng Qiande, whose names appear in the petition, but of a whole group of merchants that wish to donate. It should therefore be carefully explored how large the particular sums are that each of the merchants has donated to the public, in order to rank them fairly according to their sum (*yi ding luxu zhi qingzhong* 以定錄敘之輕重) to achieve justness. We therefore order that Li Zhiying shall investigate clearly the amount of money each one of the merchants has contributed, and classify them accordingly into three ranks (*san deng* 三等), and submit a ledger (*ce* 冊) to the Ministry to make a discussion on a classification for rewarding them individually (*fenbie yixu* 分別議敘) more easy. An account has also to be made (*kaidan* 開單) about the determined ranks (*ding dengci* 定等次), and to be submitted altogether in a palace memorial.’<sup>82</sup>

‘Edict to the State Council: Because of an earlier palace memorial of Li Zhiying who reported that the [salt] wholesalers from the Liang-Huai region in a petition expressed their desire to contribute 4 million *liang* in order to support the military needs by their humble donation, We have already issued an edict to hand over [the data] to the ministry that has to discuss an extraordinary classification for rewarding them, according to the precedent ‘to contribute gladly out of love for the good’, and We have also issued an edict that Li Zhiying shall investigate clearly the amount of money each one of the merchants has contributed, and classify them into different ranks, and submit a ledger (*ce* 冊) to the Ministry. Now Li Zhiying has presented a memorial in response, with the proposal to wait until the sums lend out [to them] from the treasury (*suo jie ku xiang* 所借庫項) are paid back in total before submitting [the data to the ministry], to make a report for a classification.

[We consider the suggestion of] this palace memorial to be inappropriate because although those merchants, when transporting [staples] out of the borders, make use of funds borrowed from the

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<sup>81</sup> *Qingshilu: Gaozong shilu* 941, fol. 20b-21a (QL 38/8/dingwei).

<sup>82</sup> *Qingshilu: Gaozong shilu* 941, fol. 21b-22a (QL 38/8/dingwei).

government (*zan jie guan xiang* 暫借官項), this happens because of their faithfulness that incites them to contribute to the public, and for which they are immediately to be rewarded (*ying ji yu luxu* 應即予錄敘) to express Our generosity. If We waited until the respective sums have been paid back in total before all is reported this could take more than four years, which is much too late, and it might be that the one or the other merchant would be unable to pay back his debt because he has become bankrupt. This is not a procedure by which We can incite their earnest wishes to support the public. As concerns the money those merchants contribute, each one will have to declare equally the sum he is willing to present so that everything can be assessed and [the data] collected. We order Li Zhiying to immediately investigate clearly those sums and accordingly rank each person (*an shu fen deng* 案數分等), and to report this [to the Ministry] with the request to [discuss a classification to] reward them. He has also to produce an account about the individually determined ranks (*ding deng cha*), and to hand over these altogether in a palace memorial. This [edict] shall be handed over to him so that he knows.<sup>83</sup>

‘The Ministry of Revenue recommends, responding to the palace memorial of Sanbao 三寶, governor of Zhejiang and salt supervisor, who had reported that the merchants He Yonghe 何永和 et al. desire to contribute 1 million *liang* for the military supply. The [money] shall be shipped with the help of a credit (*xian xing jie yun* 先行借運) from the provincial and the salt revenue treasury (*fan-yan er ku* 藩鹽二庫), and [the whole sum] be divided into instalments which will be totally paid back after five years (*fen zuo wu nian wan jiao* 分作五年完繳). He also reported that the request of the merchants comes out of utmost sincerity and they do not dare to look upward with the expectation to be considered for any reward.

We [have already] issued an edict that the affair should be handled as proposed. Yet although He Yonghe etc. say that their request comes out of utmost sincerity and they do not dare to look upward with the expectation to be considered for any reward, We think that because they have responded with such burning enthusiasm to contribute to the public and to express their deep wishes for recompensation [for what the government had done for them], that it is quite appropriate to show Our benevolence to all consistently. We therefore order Sanbao to investigate clearly how much each of the merchants has contributed and to determine their ranks individually (*ding deng cha*), to be handed over to the Ministry that has to discuss a classification for rewarding them.<sup>84</sup>

‘Next edict, according to the palace memorial of Xining 西寧 [salt supervisor of Changlu]<sup>85</sup> who reported that the merchants Yang Yongyu 楊永裕 et al. have submitted a petition with the request that now, when our large army is suppressing Jinchuan, the merchants did not yet have an opportunity to make a contribution as a concerted requital [for their economic situation] from their sincerest wishes, but that all merchants from Changlu now desire to contribute 600,000 *liang*, and the merchants from Shandong desire to contribute 300,000 *liang*, in order to support the military camps with their minuscule donation as a reward to the troops.

With all these merchants expressing such a burning enthusiasm and cordial and serious desire to contribute to the public We cannot but answer their request positively. We furthermore order that the

<sup>83</sup> *Qingshilu: Gaozong shilu* 943, fol. 22b-23b (QL 38/9/dingchou).

<sup>84</sup> *Qingshilu: Gaozong shilu* 943, fol. 31b (QL 38/9/gengchen).

<sup>85</sup> According to several statements in the *Qingshilu: Gaozong shilu* (e. g. 942, fol. 7a-8a [QL 38/9/gengshen]; 955, fol. 6b [QL 39/3/yihai]). There is no biography of Xining in the *Qingguoshi*.

respective salt supervisor shall investigate the sums each of the merchants contributes, and to establish a ranking to be provided to the respective ministry that has to discuss a classification for rewarding them individually, according to the precedents. The original memorial, with the respective appendix, shall be sent to the Ministry of Revenue for archiving.’<sup>86</sup>

‘Edict according to the palace memorial by Bayansan 巴延三 [acting governor of Shanxi QL 38 (1773)]<sup>87</sup> who reported of the petition by the members of the gentry (*shenshi* 紳士) Meng Ying 孟瀛 et al. from the prefecture of Taiyuan 太原 and other places who for generations rose up to prosperity and profited from the general peace and now have heard that there are obstructions against civilisation in Jinchuan, and therefore, as a common expression of their gratitude, desire to display their genuine feelings and to donate transport capital (*yun ben* 運本) of 1.1 million *liang*. It was conjointly decided that Guo Jichuan 郭繼傳 and 29 other persons might render themselves to Sichuan, accompanied each by three or four merchant partners (*huoshang* 夥商) to take over the transport.

Since we undertake martial affairs in Jinchuan all [financial matters] for the campaign were taken over by the treasury of the Ministry [of Revenue] or by the treasuries of neighbouring provinces [i. e., other provinces than Sichuan], and there is actually no need for contributions. Yet earlier, merchants from the Liang-Huai region, from Zhejiang and Changlu cordially asked [for allowance] to donate contribution money for the provisions of the army. Their desire was so earnestly that We for once accepted and issued an edict to rank them according to their merits. Now the various members of the gentry from Shanxi likewise loyally and sincerely are supplicating in a petition to be allowed to contribute to the public, and We see their loyal and faithful minds, We cannot but consistently classify and rank them. Yet as there are among them persons who not only dispense capital but even render themselves to Sichuan to take over the transport, We are obliged to record this as a double effort, and they have to be especially rewarded and ranked in extraordinary positions (*luxu zi yi congyou* 其錄敘自宜從優). Although there is a group of them providing transport capital and hiring merchants to take over the travel, there are also some only rendering themselves to Sichuan [without hiring additional transport entrepreneurs], and therefore there must be differences which have to be revealed through suitable recompense. We order that the responsible governor shall investigate this clearly and send [his report] to the Ministry.’<sup>88</sup>

‘Next edict according to the palace memorial of Li Shiyao 李侍堯 [governor-general of Liang-Guang QL 32 – 42 (1767 – 1777)] who reported that Wu Qingyue 吳青岳 and other salt merchants (*yanbu shangren* 鹽埠商人) from the Liang-Guang region who, facing the near termination of the suppression of the Jinchuan rebels by our large army, but living far across the mountains (*Lingbiao* 嶺表),<sup>89</sup> earnestly and sincerely wish to make a contribution of 200,000 *liang* as a concerted requital [for their economic situation] which has to be sent to the military camps as a display of their genuine feelings. Since We undertake martial affairs in Jinchuan all military expenditures were taken over by the treasury of the Ministry [of Revenue], and there is actually no need for contributions. Yet earlier, merchants from

<sup>86</sup> *Qingshilu: Gaozong shilu* 944, fol. 15a-15b (QL 38/10/yichou). Also documented in *Jinchuan dang* QL 38/IV/00035 (QL 38/10/4).

<sup>87</sup> *Qingguoshi, Dachen zhengbian*, 175, pp. 255 ff.

<sup>88</sup> *Qingshilu: Gaozong shilu* 944, fol. 18b-19b (QL 38/10/gengyin). Also documented in *Jinchuan dang* QL 38/IV/00041 (QL 38/10/6).

<sup>89</sup> Lingnan 嶺南, Lingwai 嶺外, or Lingbiao are old names for the region of Guangdong and Guangxi.

the Liang-Huai region and from Zhejiang cordially asked [for allowance to donate] to the public. At that time we have responded positively to their request. Now that the merchants from the Liang-Guang region altogether show their loyal and faithful minds, We also cannot but allow them [to make contributions] in this case. We therefore order Li Shiyao to investigate clearly how much each of the merchants contributes and to transmit [these data] to the respective ministry to discuss a classification according to the precedent 'to contribute gladly out of love for the good'. The original memorial shall be sent to the Ministry of Revenue for counter-checking and archiving.'<sup>90</sup>

'Next edict, according to the palace memorial by Li Shiyao who reported that now that there are military affairs in Sichuan, the merchants Li Niande 李念德 et al. from Guangxi earnestly requested the permission to contribute 200,000 *liang* according to the precedent of [Guang]dong, and the merchants trading overseas (*yangshang* 洋商) Pan Zhencheng 潘振承 et al. ask [for permission] to contribute 20,000 *liang* according to the precedent of the wholesale salt merchants (*bushang* 埠商) of the two provinces [Guangdong and Guangxi] to contribute to the military expenditure with their minuscule donation.

Since all these merchants express such a burning enthusiasm and a serious desire to contribute to the public, We cannot but answer their request positively. We order the respective governor-general to compile a ranked listing with the names of all merchants and the sums they have contributed that can be provided to the Ministry for a classification to reward each individually according to the precedents. The original memorial shall be sent to the Ministry of Revenue to be counter-checked and archived.'<sup>91</sup>

'We had issued an Edict to Bayansan who had reported that members of the gentry from Shanxi contribute money for military supply at an amount of 1.1 million *liang* for which We have ordered Bayansan to investigate clearly the different ranks (*deng cha*) and to open an account to be handed over altogether to the ministry that had to discuss a classification of them. It was then after discussion suggested in a palace memorial by the respective ministry to wait until the sum has arrived in Sichuan before going on with the procedure. Yesterday Wenshou [governor-general of Hu-Guang QL 38 – 41 (1773 – 1776)] has reported in a palace memorial that the whole sum has arrived in the provincial treasury of Sichuan where it is kept.

Those members of the gentry from Shanxi have expressed a burning enthusiasm and their sincerest minds and took over the transport so quickly and in person which is [an extraordinary] contribution to the public. We order the respective ministry to investigate the sums they have contributed and then immediately discuss an individual classification, in order to express Our generous reward.'<sup>92</sup>

'Edict according to the palace memorial of Agui et al. who reported that the native queen (*tufu*) Djorma 卓爾瑪 of Somo 梭磨 and her son, the native king (*tusi*) Sdamba 斯丹巴, have sent a relatively large number of auxiliary troops compared to the other local feudatories since there is war in Sichuan. For this reason We once had conferred the title of 'Wise-Obedient' (*xianshun* 賢順) to the queen, and a peacock-feather decoration (*hualing*) to her son. They now have, in the face of imminent victory, submitted a petition [to Agui] that they would present five hundred cows, one thousand baskets of wine, and five hundred loads of *tsampa* with the request to send these to the military camps to serve

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<sup>90</sup> *Qingshilu: Gaozong shilu* 948, fol. 27b-28a (QL 38/12/wuxu).

<sup>91</sup> *Qingshilu: Gaozong shilu* 949, fol. 18b (QL 38/12/dingwei).

<sup>92</sup> *Qingshilu: Gaozong shilu* 956, fol. 8b-9a (QL 39/4/wuzi).

honestly as a reward to the [the troops]. Seeing their sincerest loyalty, it should be appropriate to accept the wine and the other articles [i. e. the food], but to send back the cattle and to generously reward the queen, the king and their followers.

Djorma, native queen of Somo and her son, 'native king second-class pacification commissioner' (*anfu tusi* 安撫土司) Sdamba, are truly showing respectful obedience, and We therefore order to bestow graciously the title of first-class pacification commissioner (*xuanwei*) on Sdamba to express appreciation of his meritorious efforts.'<sup>93</sup>

The last story is somewhat differently reported in the *Pingding Liang Jinchuan fangliie*:<sup>94</sup> A thousand people, young and old, were needed to transport the donations to the camps as a kind of reward (*kaoshang* 犒賞) and to feast victorious troops. The cows were rounded up after they had already been distributed among the soldiers, and were sent back in total. All neighbouring kings had already been promoted from second-class pacification commissioner (*anfushi*) to first-class pacification commissioner (*xuanwei*), and therefore Agui and Fengsheng'e proposed to promote also the native King Sdamba in order to reward him, a proposal that was immediately accepted by the emperor.

The above documents show that the largest sums were donated or rather contributed by rich merchants who presented their 'requests' as a group of which one or two leaders are named. It was especially rich salt merchants of Changlu, with connections in the whole province of Zhili and in Shandong, or of the Liang-Huai region (northern Jiangsu, Anhui), who had to suffer under the permanent contributions for the wars of the Qianlong emperor, but also merchants in Guangdong and Guangxi, some of them engaging in overseas trade. In Shanxi there existed a group of the local gentry with enough money for compulsory contribution. This group surely had contacts with merchants and commissioned them to undertake the transport to Sichuan, a procedure called *baoyun* 報運 'to announce a transport'.<sup>95</sup> Very interesting indeed is the contribution of one native kingdom who contributed local food instead of money or rice. The *tsampa* was naturally only eaten by native auxiliaries and not by the Chinese or the Banner troops.

Money was in fact the original currency donated by the contributors, but because the main reason for contributions was the purchase of rice to feed the army, the example of the Shanxi gentry clearly demonstrates that it was not money that was transported to Jinchuan, but commodities. Yet because the emperor strictly forbade to import rice from other provinces to Sichuan (see Chapter 4.3.), the Shanxi merchants must have taken their money with them and bought the rice in Chengdu or other prefectures in Sichuan (although the rice prices might

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<sup>93</sup> *Qingshilu: Gaozong shilu* 996, fol. 6b-7a (QL 40/11/dingchou).

<sup>94</sup> *Pingding Liang Jinchuan fangliie* 128, fol. 3b-4a (QL 40/11/dingchou).

<sup>95</sup> *Jinchuan dang* QL 38/III/00547 (QL 38/9/27).



have risen there because of the higher need of rice to feed the troops) to transport it to the camps in the Jinchuan area. For the government side it was important and of great help that the donators did not only contribute money or rice, but also undertook the task of transporting the rice to the doors of the military camps, thus virtually taking over functions normally carried out by the government. From locations in Sichuan it should not have been a problem to transport rice to the Jinchuan area, but when merchants or other groups of well-to-do persons from distant provinces answered the ‘call for contributions’ and donated money, it seemed to be normal that they transported it to Sichuan and only there bought rice in Chengdu, Guanxian or Yazhou. Governor-general Fulehun therefore asked if the contributions by merchants from other provinces could not be handled by paying money instead of rice to the ministry (*qing zai bu juan zhe se* 請在部捐折色) which would only be ‘converted’ into rice when the merchants arrived in Sichuan.<sup>96</sup>

Because of their considerable size the ‘donations’ by merchant associations are especially mentioned in memorials and had to pass through certain bureaucratic institutions before being processed. The governmental authority responsible for the administration of the salt merchants was a salt supervisor (*yanzhengshi* 鹽政使) who officially received the permission which he forwarded to the emperor. It seemed to be of great importance that the Ministry of Revenue and especially the Contributions Bureau created a ranking of each person and the respective sum of money contributed. Nearly all the documents quoted above contain imperial orders to create detailed rankings of all persons that had contributed to the donation, and not simply to take the whole sum and to use it. This sort of often repeated imperial instruction is not just a kind of perfectionism but shows that the *juan* was above all really seen as a kind of tax whose payment had to be registered exactly. Second place took the consideration that the *juan* contribution served to assess a precise merit that had to be rewarded adequately; in other words: it was necessary to check how much somebody had paid or promised to pay in order to be able to be listed among the applicants for a reward (a rank licence, the option to obtain an office, or whatever). Therefore the emperor asked in several instances for detailed reports about the necessarily different financial performance of each member of the contributors’ group.

Although the petitions by the merchants on the surface look like voluntary donations of the rich, the state systematically tried to exploit new sources for the financing of its expensive undertakings. The petition of the Shanxi gentry that was handed in to the court as a memorial by governor Bayansan, has a past history. At the end of the summer in QL 38 (1773) the

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<sup>96</sup> *Qingshilu: Gaozong shilu* 946, fol. 10b-11a (QL 38/11/xinyou).

emperor, when summing up how much money he has already sent to Sichuan, either directly from the treasury of the Ministry of Revenue, or from the neighbouring provinces, comes up with a sum of about 10 million *liang*, enough to continue the war until the beginning of the next year or even until summer QL 39 (1774). The problem of providing finances is here connected with the problem of logistics. Bottlenecks in the transport of provisions and war material have already been solved by entrusting the transport to entrepreneurs who hired porters and cared for the transport to the doors of the military camps. The entrepreneurs would then charge the state with the costs for material and transport. This way the generals would know how expensive it was to supply the army and would be able to calculate the financial needs for the following year. The most suitable group of merchants or rich people (*yin shang* 殷商, *fu min* 富民) that could undertake such a transport were wealthy families from Shanxi (*Jin sheng yinshi zhi hu* 晉省殷實之戶) that were obviously known for their capital (*ziben* 贖本) which could stand the state in good stead. Fulehun and Wenshou were ordered to think about a possibility of making use of the money of the bankers in Shanxi, and the provincial governor Bayansan was told to more or less openly attract investments by offering to reward donators with licences for offices (*zhixian*) of a higher rank or to put them on top of the list for the assessment (*banci jiuquan* 班次就銓).<sup>97</sup>

The petition of the Shanxi members of the gentry is therefore not a result of their free will to provide the state with a large sum for a war in the Sichuan *hinterland* but rather something enforced by the government as a kind of taxation of the rich Shanxi business people. Although there are not many documents left about these contributions, there is a hint in one document that also members of the gentry (here called *shimin* 士民) in other provinces (*qi yu ge sheng* 其餘各省) were able to disburse money as contributions with which they bought rice and had it transported to assigned logistics stations.<sup>98</sup> The financial performance of each contributor was assessed according to the transport prices—more closely situated logistics stations were of course cheaper than those far in the high mountains. The war logistics bureau had then to find out the best transport routes for those contributors.

From the above documents it does not become clear what concrete rewards each of the merchants could receive. The first step to assess how much a ‘gift in return’ should be was to propose a ranking (*yi xu*) or to create a record of ranking (*lu xu*)—handed over to the ministry in the shape of a ledger or a data book (*ce*)—that made clear differences as to how much money each of the contributors had donated. This ranking was to be carried out by the

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<sup>97</sup> *Qingshilu: Gaozong shilu* 938, fol. 30b-32a (QL 38/7/yichou).

<sup>98</sup> *Qingshilu: Gaozong shilu* 943, fol. 6b-7b (QL 38/9/guiyou).

provincial governors or the salt supervisors and to be handed over to the Ministry of Revenue that would then know exactly the amount of the contributions of each person. The Ministry would then suggest in return what kind of ‘excellent reward’ (*jia jiang* 嘉獎) he would be able to obtain. It was pure politeness of the Zhejiang merchants that they at first did not want to be considered in a ranking list—of course they expected a reward, even if their payment was going to be handed over in instalments over a period of five years.

Although the *juan* system was already in use during the Kangxi reign and was employed during the first Jinchuan campaign, the emperor, answering the ‘requests’ of the donators, largely explained that the state actually did not need any help by loyal and faithful subjects but because there were precedents asking for an equal treatment of similar cases, and because the donators ‘beseached Us so enthusiastically and urgently’ the emperor finally accepted the donation. There is one sentence in the documents above that reveals that the state treasury and the provincial treasuries had still plenty of money, an assumption that seems to be borne out by the similar statement that ‘the treasuries in all prefectures are full enough’. This might only have been rhetoric, as the commanding generals of the Jinchuan campaign several times made estimations until how long the money would last, the answer to which was in most cases no more than six months. The emperor’s concern was in fact to use as little ‘outside’ money as possible and instead to exploit all sources of the state founded on a regular basis. Therefore *juanshu* contributions should only be used sparingly and when the government was in a state of distress. A good example that the emperor was also able to decline ‘petitions’ for a contribution campaign is a memorial presented in QL 41/10 (Nov 1776), when the Jinchuan war was already over. There was no further need to rely on contributions by rich merchants or state officials because the treasury of the Ministry of Revenue held more than 60 million *liang*, and there were millions of *liang* left over in the war chest. The responsible official, salt supervisor Iling'a 伊齡阿, was reprimanded for his precipitate ‘fund raising’.<sup>99</sup> Yet even during the war, the emperor tried everything to avoid contribution campaigns. In QL 37/11 (Dec 1772) governor-general Wenshou suggested proclaiming a contribution campaign in Sichuan and was reprimanded by the emperor.<sup>100</sup> At that time the conquest of Lesser Jinchuan made good headway and the war soon seemed to come to an end. The second reason was that the transport of grain to the camps was more and more entrusted to private entrepreneurs (*shangyun*), and it did not seem appropriate to the emperor to establish two different types of transport by private people (*yi shi liang qi* 一事兩岐 ‘one thing, two

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<sup>99</sup> *Qingshilu: Gaozong shilu* 1018, fol. 21a-22b (QL 41/10/guichou).

<sup>100</sup> *Jinchuan dang* 37/IV/00183 (QL 37/11/12).

methods'), one of which would be the contributors taking their contributions in the form of rice directly to the war theatre. But the situation was totally different after the catastrophe of Mugom in the summer of QL 38 (1773), and therefore the emperor allowed to 'open' contribution rounds in the province of Sichuan.<sup>101</sup> The emperor's scepticism about the efficiency of such a direct delivery of rice from contributors to the border was absolutely justified: it was soon reported that contributors did not deliver the rice or supplied rice of inferior quality.<sup>102</sup>

The worst case of contributions in Sichuan was when Artai and his entourage had extorted money from merchants or landlords under the pretext of contributions (hence termed *lejuan* 勒捐 'extorted contributions') and with the purpose to finance their luxury spending.<sup>103</sup>

The official imperial edicts only record the larger contributions from merchants or merchant associations. Less important contributions, which were presented within a much smaller framework, are seldom documented. Yet two documents can be found mentioning contributions made during the years of the second Jinchuan war:

An unknown amount of rice (*bense*) had been contributed in Sichuan from an unknown source. Of course, this rice could directly brought to the camps and was not to be converted into silver (*zhese*) via the Ministry of Revenue.<sup>104</sup> Concerning contributions in kind submitted in Sichuan, the government just decided to transfer contributions actually submitted to to academic institutions to the war chest to feed the army.<sup>105</sup> In the district of Yongchuan 永川 10,000 *liang* of contributions were collected for repair work of the city moat (*chengyuan* 城垣). As so many people had been recruited to serve as *corvée* military labourers they could not be recruited for the repair work. Half of the moat had been repaired, and the rest of the work thus had to be postponed until after the war.<sup>106</sup> A group of members of the gentry from Gongxian 珙縣 lead by Tan Ying 譚瀛 had contributed 8,390 *liang* to repair the city wall (*cheng*). This sum should instead be allocated to the provincial treasury (*siku*), probably with the intention to use it for other purposes, e. g. to finance the war.<sup>107</sup>

At least part of the money transferred to Sichuan also came from regular smaller contributions in different provinces, but we do not exactly know what they amounted to and in what areas

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<sup>101</sup> *Jinchuan dang* QL 38/III/00547 (QL 38/9/27).

<sup>102</sup> *Jinchuan dang* QL 38/IV/00047-48 (QL 38/10/7).

<sup>103</sup> A case reported in *Jinchuan dang* QL 38/IV/00271 (QL 38/12/11), which must have taken place before the war. It was only detected in connection with Artai's bad performance during the war and his subsequent dismissal.

<sup>104</sup> *Jinchuan dang* QL 38/IV/00047 (QL 38/10/7).

<sup>105</sup> *Jinchuan dang* QL 38/III/00060 (QL 38/7/9).

<sup>106</sup> *Qingshilu: Gaozong shilu* 955, fol. 27a (QL 39/3/renwu).

<sup>107</sup> *Qingshilu: Gaozong shilu* 996, fol. 39b-40a (QL 40/11/bingxu).

the contributions had been presented. The war logistics bureau directed the respective rice contributions to fixed destinations, and the rice had to be taken there within a certain time, which could be checked by a kind of delivery note (*zhaopiao*). The contributors were to be rewarded according to the amount of rice they had donated and the costs for the transport, which could be very different, depending what camp the grain had to be shipped to.<sup>108</sup>

Lai Fushun has detected two other documents reporting contributions.<sup>109</sup> One is a small donation of 3,000 rider jackets (*jin magua*) by a textile manufacturer in Suzhou named Shu Wen 舒文. Another source speaks of only 2,000 rider jackets and war tunics (*zhanqun*), fabricated like the standard cotton coats of the army (*mianjia*) which were to be sent to Sichuan in the following spring.<sup>110</sup> A third source renders the figure of ‘a contribution of 3,000 manufactured additional coats’ (*juan zhi bujia* 捐製補甲).<sup>111</sup> The other case are 100,000 *liang* provided by Xu Anyu 許安裕 and other salt merchants (*buyanshang* 埠鹽商) in Jiangxi. The contribution by the Zhejiang merchants (*jiashang* 甲商) He Yonghe etc. from Hangzhou 杭州, Jiaying 嘉興, Shaoxing 紹興 and Songjiang 松江 is cited by Lai with a very late date, QL 39/2/26 (Apr 6, 1774). The two documents concerning He and Xu add to our information as to how the money was provided by the merchants. As we have learned, the contributions from the merchants were not presented voluntarily, but were enforced. For that reason the merchants were often just not able to pay such large sums. Therefore they were given a credit by the government, and the money they were obliged to pay was advanced by the government. In the case of He and the Liang-Zhe merchants, the provincial treasury advanced 800,000 *liang* and the circuit treasury 200,000 *liang*, two sums that immediately were to be sent to Sichuan by seven high local officials. The merchants themselves were given five years to pay back this loan before being listed and ranked in the Ministries. This case is just the opposite of the Liang-Huai merchants (see above) who were allowed to be ranked in the files for the Ministry even before the sum had been paid back in full to the government. The merchants of Jiangxi around Xu Anyu did likewise not have enough money and suggested to pay first 20,000 and to borrow the rest from the circuit treasury. Yet the emperor answered that this was not necessary, which means that the money was not paid in full but only to a small proportion.

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<sup>108</sup> *Qingshilu: Gaozong shilu* 943, fol. 6b-7b (QL 38/9/guiyou).

<sup>109</sup> Lai (1984), pp. 418-421.

<sup>110</sup> *Jinchuan dang* 38/IV/00315 (QL 38/12/16).

<sup>111</sup> *Jinchuan junxu li'an* 2, fol. 185b.

Although it does not seem possible to assess how many contributions were made by locals to care for their own neighbours, it is possible to sum up the large contributions cited above in order to have an insight into the proportion by which the second Jinchuan war was financed by compulsory contributions that on the surface pretend to be a voluntary share of the population in the financing of the war but which in fact are nothing but a tax increase shifting the load from the average population to the rich or those considered rich. The contributions are resumed in the following table:

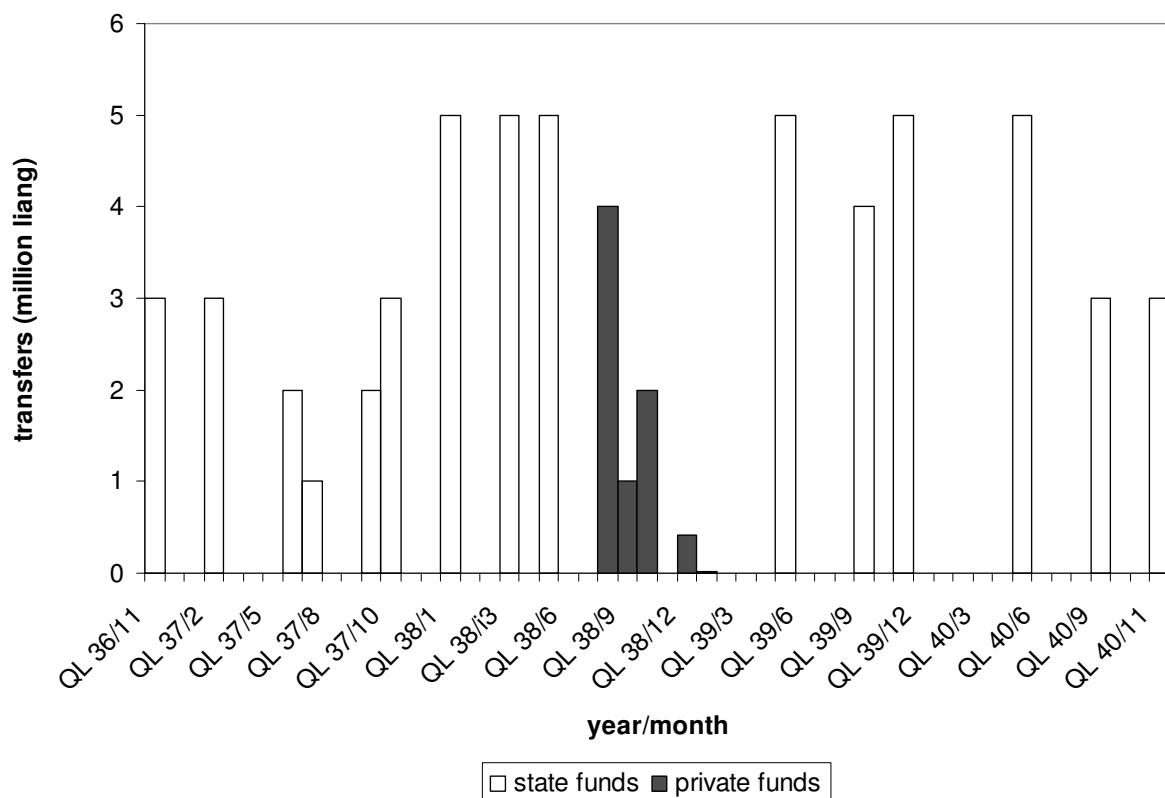
<i>date</i> <sup>a)</sup>	<i>contributors</i>	<i>contributed sum</i> [liang]
QL 38/8/21	salt merchants from Liang-Huai	4,000,000
QL 38/9/17	[salt] wholesalers from Zhejiang	1,000,000
QL 38/10/4	salt merchants from Changlu	600,000
QL 38/10/4	salt merchants from Shandong	300,000
QL 38/10/5	members of the gentry from Shanxi	1,100,000
QL 38/12/14	salt merchants from Liang-Guang	200,000
QL 38/12/23	merchants from Guangxi	220,000
QL 39/1/28	salt merchants from Jiangxi	20,000
<b>total:</b>		<b>7,440,000</b>

□ 6.11 Table: Contributions for the second Jinchuan war according to Qingshilu edicts

<sup>a)</sup> Date of issue of the respective document.

A graph of these data shows that the contributions provided by the rich merchant associations exactly filled the financial gap between QL 38/5 (Jun – Jul 1773) and 39/5 (Jun – Jul 1774), when the state did not transfer money from the household of the Ministry of Revenue or the provincial treasuries to the war chest in Sichuan (Diagram 6.12). The white bars show the direct transfers by the state, the black ones the contributions of the merchant associations. What can also be observed is the declining amount of money coming from this source. This may have three different reasons. The first one might have been that the emperor—although opening a new source of income for the state—was reluctant to exploit this source in a way that could lead to resistance by the merchant associations or simply to the exhaustion of their purse, as later in the 19th century really was the case with the Changlu merchants who had too often served as a cash cow for the state when it was short of money. The second reason could also have to do with the caution of the emperor not to overburden certain groups of the population directly, but much more likely has to do with the fact that the war did not end, so that the state had to return to direct funding when it became clear that the contributions alone would not be sufficient to finance the martial activities of more than 100,000 men and their logistics supporters. Therefore the first new direct financial transfer in QL 39/5 (Jun 1774) was a very high one of 5 million *liang*. The third reason why the contributions by merchant associations decreased in the course of the six months of the contribution campaign becomes

clear when looking at the donors. The highest sums came from the salt merchants in the rich region of the Liang-Huai and Liang-Zhe administration areas, and from the rich landowner-entrepreneurs of Shanxi. All the other contributions came from minor sources in provinces not much known for their salt business or any other important business activities. A document of QL 37/2 (Mar 1772) also says that, for example, in Sichuan there were no rich merchants that could take over the business of transporting rice to the logistics stations and the camps.<sup>112</sup> The large contributions by rich merchant associations therefore were a mere interlude in the gross revenue the Jinchuan War was financed with.



6.12 Diagram: The contributions as alternative financial funds

The contributors themselves are often known by name, or at least by the name of a representative. Some of them, being important members of the merchant associations, are often referred to in official contemporary documents. He Yonghe is several times mentioned in the *Qingshilu* when he as head of the Zhejiang salt merchants presented contributions, as in QL 47/10 (Nov 1782) when the merchants contributed 800,000 *liang* for the river conservancy works in Hunan.<sup>113</sup> Jiang Guangda as officially accepted representative (*zongshang* 總商) of the Liang-Huai salt merchants was also a very important person with

<sup>112</sup> *Pingding Liang Jinchuan fanglüe* 21, fol. 21a (QL 37/3/gengzi).

<sup>113</sup> *Qingshilu: Gaozong shilu* 1166, fol. 23a-23b (QL 47/10/yihai).

whom the government often had to do. The Suzhou textile manufacturer Shu Wen is also documented in the *Suzhou tongzhi*,<sup>114</sup> as well as the salt merchant Xu Anyu in a local gazetteer of Jiangxi.<sup>115</sup>

All in all more than 7 million *liang* were contributed by private persons for the financing of the Jinchuan war. Together with some smaller sums that might have been collected (without being officially documented), or the equivalent monetary value of objects (rice etc.) donated for the army, the total might amount to 10 million *liang* contributed by private persons. A document in the *Pingding Liang Jinchuan fanglüe* validates this assumption:

‘From the Sichuan transport contribution campaign (*Chuan yun kaijuan* 川運開捐) We have furthermore obtained 10 million *liang*, which is more enough for the whole of next year.’<sup>116</sup>

‘From the Sichuan transport contribution campaign We have furthermore obtained no less than 10 million *liang*, which is more enough to cover the war expenditure [for a while].’<sup>117</sup>

‘There as furthermore been the suggestion and an ensuing edict to open a contribution campaign which altogether yielded sufficient funds to finance the war for another one or two years.’<sup>118</sup>

Yet those statements seem to contradict other records speaking of only six million *liang* being provided by ‘entrepreneurs’ (*shang juan yi you liubai wan* 商捐已有六百萬).<sup>119</sup> While the latter are quite well documented in edicts, the missing four million *liang* might have originated from among the officialdom of both the local and the central government, which contributed not in the framework of the temporary ‘calls for contributions’ (*kaijuan*) but as regular *juanna* contributions being redirected towards the war chest of Sichuan instead of to other government institutions, like the Imperial Academy.

Here again it becomes clear that it always took several months from the beginning of a monetary transfer until the date when the whole sum had reached its destination. 10 million *liang* represent more one sixth of what the government had officially furnished for the war. Most contributions had been made before the date of the document quoted above (end of QL 38 [1773]) and the large sums in Table 6.11 are therefore surely included in that sum, but we can also be sure that many smaller contributions were made, about which no official documents have survived. Looking at the many examples of *juanshu* contributions for smaller local works we may conclude that not only one sixth of the direct costs for the military supply could have been provided by private persons, but also that a great part of the reconstruction

<sup>114</sup> (Tongzhi) *Suzhou fuzhi* 22: *Gongshu* 公署 2.

<sup>115</sup> (Kangxi) *Jiangxi tongzhi* 145: *Yiwen* 藝文.

<sup>116</sup> *Qingshilu: Gaozong shilu* 949, fol. 12b (QL 38/12/jiachen). *Pingding Liang Jinchuan fanglüe* 84, fol. 10a (QL 38/12/jiachen).

<sup>117</sup> *Jinchuan dang* QL 40/I/00007 (QL 40/1/7).

<sup>118</sup> *Jinchuan dang* QL 38/IV/00031 (QL 38/10/4).

<sup>119</sup> *Ibid.*



costs in the province of Sichuan were not raised by the state, but by private persons of places where the war directly or indirectly had contributed to the deterioration of the infrastructure, especially the districts where large contingents had marched through (see Map 6.10).

The *Jinchuan junxu li'an* provides the *de facto* data for the accounting of the total costs at the end of the second part of this book. Concerning the *juanshu* contributions the following information can be found:<sup>120</sup>

<i>contributors</i>	<i>sum [in liang]</i>
merchants from [Liang-]Huai	4,000,000 (received only 2 million)
merchants from [Liang-]Zhe	1,000,000
merchants from [Chang-]Lu	900,000
merchants from Shanxi	1,100,000
[merchants] from Guangdong	200,000
[merchants] from Guangxi	400,000
<b>total:</b>	<b>5,600,000</b>

□ 6.13 Table: Actual contributions by merchants according to the *Jinchuan junxu li'an* (compare Table 6.11)

If this information is correct, only 5.6 million *liang* were paid instead of the 7.44 million mentioned in the edicts, and only half of the total sum 10 million as calculated from the statements in edicts. The reason for this is that of the 4 million *liang* contributed by the Liang-Huai merchants, only half was paid. In the respective edicts translated above it can be seen that there were problems concerning the payment of this large sum. It had been Li Zhiying's proposal to hold the rewards for the merchants until the whole sum had been paid, but the Emperor feared that some of the merchants would then not continue to pay their promised contribution. He had furthermore given his word to bestow some titles on them or to grant them other rewards, and the 'benevolent' Qianlong emperor did not want to break his word. The above account shows clearly that until the end of the war only half of the sum of 4 million *liang* was paid. It is not known if the remainder reached the state treasury at a later time.

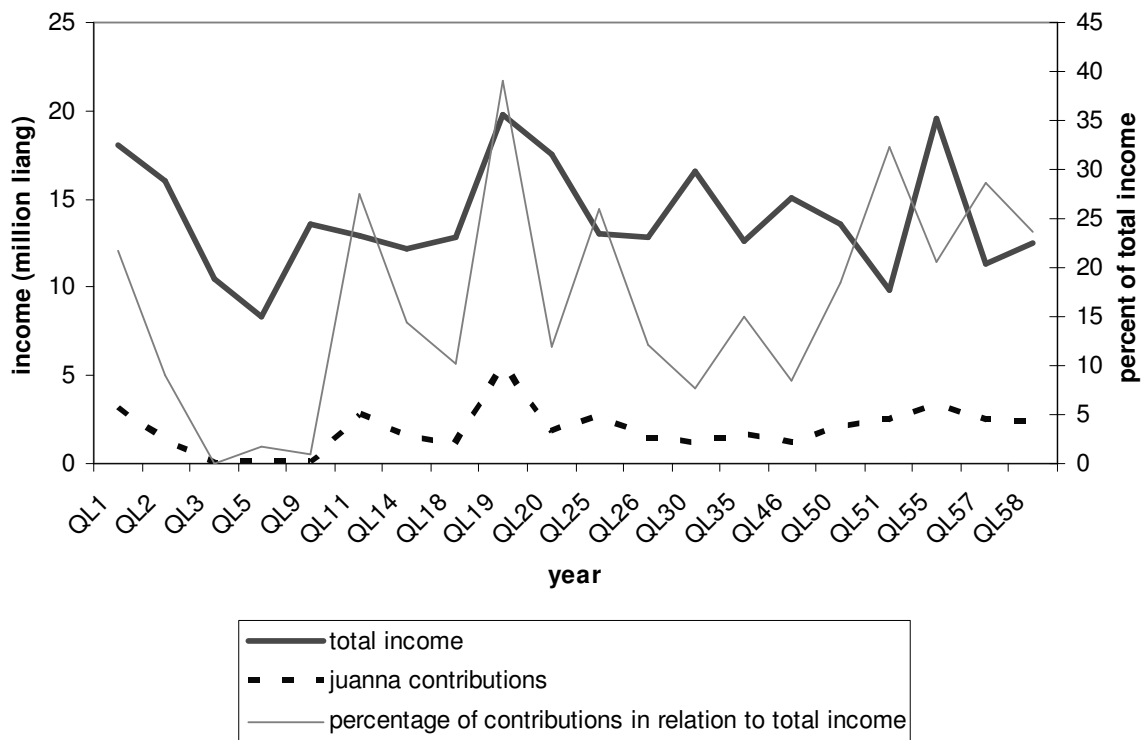
The money from Liang-Zhe and Shanxi as documented in the account book of the *Jinchuan junxu li'an* corresponds to the sums mentioned in the edicts. But while the sums contributed by the merchants of Changlu (0.9 million instead of the documented 0.6 million) and Guangxi (0.4 million instead of the documented 0.22 million) are higher than mentioned in the imperial edicts, the money from the Shandong and Jiangxi salt merchants is totally missing in the *Jinchuan junxu li'an* account. The money from Shandong is surely included in the Changlu sum, which was common practice, as will be seen below.<sup>121</sup> Yet while in the imperial edicts

<sup>120</sup> *Jinchuan junxu li'an* 2, fol. 177a-177b.

<sup>121</sup> *Zhongguo yanzheng yange shi: Changlu*, p. 42.

the two provinces of Guangxi and Guangdong together contributed 0.2 million *liang* and a further 0.22 million *liang* came from Guangxi, the sum for Guangxi given in the *Jinchuan junxu li'an* is 0.4 million *liang*, which means that the contributors of this region contributed much more, probably because only the contributions by the largest merchant associations are documented in the imperial edicts, while the contributions by office-holders or individual merchants are not mentioned in the edicts.

A very interesting point is that the early Republican Salt Administration Bureau (*yanwushu* 鹽務署) uses the figures as represented in the edicts, while the *Jinchuan junxu li'an* calculated with other factors—the most important difference being the 4 million *liang* extorted from the Liang-Huai salt merchants, of which only 2 million had reached the war chest (compare Tables 6.11, 6.13 and 6.15). The figures used in such analyses are therefore not to be taken at face value: Even if the contributors announced to present a certain sum it was by no means sure that the state treasury ever obtained this money.



□ 6.14 Diagram: Percentage of juanna contributions in relation to the total income of the Ministry of Revenue during the Qianlong reign

### 6.2.3. Comparative Analysis

A final question is if contributions during the second Jinchuan war were higher than normal. ‘Calls for contribution’ were often made, especially when certain regions suffered from natural disasters. It was therefore no exception that the emperor proclaimed a contribution

campaign when the state was in need for financial aid by rich merchants. But it is possible that the contributions of the years QL 38 – 39 (1773 – 1774) were, due to an extraordinary war, higher than in the beforegoing and following years in order to support the military logistics.

In his history of the *lijin* 釐金 tax Luo Yudong has presented a set of data concerning the income of the Ministry of Revenue<sup>122</sup> from which it is possible to derive the percentage of regular contributions (*juanna*) in relation to the total income of the Ministry:

In Diagram 6.14 it can be observed that during the Qianlong reign (as far as data are available) there were several peaks when contributions constituted a larger part of the income of the treasury of the Ministry of Revenue. This was the case during the years QL 1, 11, 19, 25, 51 and 57. During the years of the Jinchuan war between QL 36 (1771) and QL 41 (1776), there is no conclusive rise in contributions, only a smaller peak in the share of the total income that can be explained by falling revenues during that period (with many data in-between being missing). The average annual amount of contributions was 1.93 million *liang*, the average percentage of the *juanna* contributions in relation to the total income of the Ministry amounted to 16.5 per cent. Compared to the average income by the regular *juanna* contributions the 5 million *liang* contributed as *juanshu* during the second Jinchuan war were not an exceptionally high amount. The reason for this missing peak might be that most contributions of larger sums were not paid out as an aggregate but divided into several instalments probably paid separately by each individual contributor and over a long period of time, as could be seen in one document, sometimes over periods of several years. Once again looking at the sum of the contributions during the whole Qianlong era we can reach the conclusion that in the first third of his reign the emperor did not rely on regular *juanna* contributions to bolster the state finances, but only started to use *juanna* contributions quite extensively in the second third of his reign. But from the second half of the Qianlong reign the amount of the *juanna* contributions shows considerable stability and rises only slowly towards the end of the 18th century, but then constitutes about one fourth of the income of the Ministry of Revenue. Between QL 28 (1763) and QL 48 (1783) there is a period of about twenty years when the absolute amount of the *juanna* contributions was quite low and its importance as a fundamental part of the Ministry's income was relatively low (about 10 per cent). Just in that period of time some important wars were fought, among them the second

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<sup>122</sup> Luo (1936). For the discovery of those data I am indebted to Elisabeth Kaske. The *lijin* tax (in the West also known as *likin*) was introduced in 1853 to finance the suppression of the Taiping (1850-1864) and Nian rebellions (1851-1868). It was levied with between 2 and 10 per cent on transit goods as a kind of internal customs fee. After the defeat of the Taiping the tax was retained as an important source of income for the Qing government.

Jinchuan war. Only from the beginning of the 19th century on *juanna* contributions played an import role in financing the state treasury.

Much more important in the context of the wars the Qianlong emperor fought are the irregular *juanshu* contributions collected following a call for contributions. We will first use the figures given by the Salt Administration Bureau, which reflect the contributions of the most important salt regions, and then go on to slightly different figures to compare those with the total costs of the particular wars.

<i>campaigns (in chronological order)</i>	<i>Liang-Huai</i>	<i>Liang-Zhe</i>	<i>Changlu</i>	<i>Shandong</i>	<i>total</i>
1st Jinchuan	1	0.1	0.2		<b>1.3</b>
northwestern QL 20	1				<b>1</b>
northwestern QL 21	1			0.2	<b>1.2</b>
2nd Jinchuan	4	1	0.6	0.3	<b>5.9</b>
Taiwan	2	0.6		0.5	<b>3.1</b>
Gurkha	4	1		0.5	<b>5.5</b>
White Lotus	8	2.2		1	<b>11.5</b>

□ 6.15 Table: Contributions of the salt merchants to the Qianlong campaigns (figures in million liang)

Figures according to *Zhongguo yanzheng yange shi: Changlu*, p. 42.

What we can see from these absolute figures is that the amount of money contributed by salt merchants during the Qianlong emperor's campaigns was quite modest in the first half of his reign and that only from the second Jinchuan campaign on they were fleeced rigorously. The standard ratio of '1 million *liang* per campaign' (the above-mentioned 'regular contributions', *xunchang juanshu*), as the Salt Administration Bureau says, was inflated to almost 6 million *liang* for the second Jinchuan campaign, and for the short and far less spectacular Gurkha campaign the salt merchants contributed 5.5 million *liang*. Yet most striking is the extremely high amount extorted from the Liang-Huai merchants to finance the campaign against the White Lotus rebels from the late Qianlong to the early Jiaqing reigns.

<i>campaigns (in chronological order)</i>	<i>total costs [million liang]<sup>a)</sup></i>	<i>contributions [million liang]</i>	<i>percentage of contributions in relation to total costs</i>
1st Jinchuan	10.0	1.6	16.0
northwestern campaigns	35.0	2.4	6.9
Myanmar	13.2	1.0	7.6
2nd Jinchuan	62.7	6.5	10.4
Taiwan	9.0	3.7	41.1
1st and 2nd Gurkha	9.3	6.1	65.6
White Lotus	200	17.3	8.6

□ 6.16 Table: Contributions by (salt) merchants to the Qianlong wars in relation to total costs

Source: Chen (1992), pp. 261, 332-334, and Lai (1984), pp. 426-430.

<sup>a)</sup> Not expenditure, but money provided to the war chest.

Looking at what degree the salt merchants helped to finance the Qianlong emperor's wars, two things stand out: The earlier campaigns (first Jinchuan, northwestern campaigns, the

Myanmar campaigns) were ‘cheaper’ than the later wars, and the proportion to which the salt merchants supported the financing of the war were lower (from 7 to 16 per cent). The later wars (second Jinchuan, Taiwan, Gurkha campaigns) were much costlier, and the salt merchants had to contribute a higher toll to the financing of those wars (from 10 to 66 per cent). Yet during the second Jinchuan campaign, the most expensive war of the Qianlong emperor, the salt merchants were only forced to finance 10 per cent of the war, while during the first Jinchuan war, 16 per cent of the costs came from contributions. The most eye-catching case, of course, is the second Gurkha campaign, which was to two thirds financed by contributions, a tendency which anticipates the situation of the Jiaqing reign, during which rich merchants had to contribute to a much higher degree to the financing of wars. Yet even here, we find exceptions: During the suppression of the White Lotus rebellion, which cost 200 million *liang*, the salt merchants ‘only’ had to shell out 8.6 per cent (17.3 million *liang*) of the total cost.

There can be no doubt that during the Qianlong reign the burden of contributions imposed on the salt merchants increased substantially. It is therefore interesting to make this tendency more evident by statistics. When comparing the sums of money the salt merchants contributed to the financing of the wars during the first 180 years of the Qing period, we come to the following result:<sup>123</sup>

<i>reign period</i>	<i>duration of reign [years]</i>	<i>contributions per reign period [million liang]</i>	<i>average annual contribution [liang]</i>
Shunzhi 1644 – 1661	18	0.30	16,700
Kangxi 1662 – 1722	61	0.65	10,700
Yongzheng 1723 – 1735	13	0.38	29,200
Qianlong 1736 – 1795	60	23.30	388,300
Jiaqing 1796 – 1820	25	18.76	750,400

□ 6.17 Table: Contributions of salt merchants to wars 1644 to 1820

Source: Chen (1992), pp. 332-334.

These figures show that the salt merchants were not yet pressed so hard at the beginning of the Qing period. This is quite evident when looking at the figures of the long Kangxi reign, during which—despite intensive fighting against the Three Feudatories—the salt merchants contributed far less (only 10,700 *liang* annually) compared to other periods: The wars of the relatively short Yongzheng reign consumed almost three times as much income from contributions by the salt merchants than those during the Kangxi reign. Yet only in the course of the Qianlong reign the contributions supplied by the salt merchants played a significant

<sup>123</sup> Figures according to Chen (1992), pp. 332-334. Figures for the contributions of the Liang-Huai salt merchants for KX 13 (1674) are not available. Yet if comparing the contributions of other years around that time, it can be estimated that they were between 100,000 and 300,000 *liang*. The last figure was used for the calculations of percentages.

role in the financing of wars and became a regular financial source to pay for them. This development is gradually intensified during the subsequent Jiaqing reign, during which the absolute sum of contributions was lower than during the Qianlong reign. But while the Qianlong emperor had the salt merchants only financed 1.6% of his war budget, the Yongzheng emperor annually squeezed almost twice that out of the merchants and made them pay for 4% of his war expenditure.<sup>124</sup>

When comparing the annual war expenditure of the Qianlong reign with that of other reigns of the early and high Qing period (or the first 170 years of the dynasty) a surprising result can be found out:<sup>125</sup> Although the Qianlong wars appear to have been rather costly when looked at separately, the Qianlong emperor was not the one who spent much more for his wars than his ancestors and his heir, the Jiaqing emperor. With a mere 150 million *liang* his war expenditure takes only middle place, while the Kangxi and the Jiaqing emperor spent much more for their campaigns. When considering the duration of the respective reign periods the Qianlong emperor even turns out to be the one who annually spent less for wars than any of the other emperors, namely 2.5 million *liang* per annum, while those who spent most on wars were the Shunzhi, the Yongzheng, and the Jiaqing emperors. Neither in total nor in relation to annual spending did the Qianlong emperor squander more money for waging war than any other Qing emperor.

<i>period of reign</i>	<i>duration of reign [years]</i>	<i>war expenditure [million liang]</i>	<i>expenditure per year [million liang]</i>
Shunzhi, 1664 – 1661	18	100	5.6
Kangxi, 1662 – 1722	61	200	3.3
Yongzheng, 1723 – 1735	13	60	4.6
Qianlong, 1736 – 1795	60	150	2.5
Jiaqing, 1796 – 1820	25	180	7.2
	<b>total 177</b>	<b>total 690</b>	<b>Ø 3.9</b>

☐ 6.18 Table: Annual war expenditure during the early and high Qing period  
Source: Chen (1992), pp. 10, 239-276.

### 6.3. The Transport of Silver

The money sent to Sichuan either from the treasury of the Ministry of Revenue, from the various provincial treasuries, or from the hands of entrepreneurs, was not going via a bank account or a similar facility making it possible to instantly transfer money to a distant place where the sum is immediately made available by a corresponding bank. Instead, the silver was physically transported from Beijing or the various provinces to Sichuan. There were special

<sup>124</sup> Figures according to Chen (1992), pp. 332-334.

<sup>125</sup> Figures according to Chen (1992), pp. 10, 239-276.

cases or ‘sheaths’ (*qiao* 鞘) in which the silver was packed and which were transported by a heavily protected convoy. According to the regulations, such a sheath package contained one thousand *liang* of silver bullion, with an actual weight of 62.5 *jin* (37.3 kg).

A precious item like silver bullion could only be placed into the hands of trustworthy people, and therefore each province sending money had carefully to select their own reliable officers who ensured a safe transport. On QL 39/2/30 (Apr 10, 1774) the acting Left Vice Minister of the Ministry of Revenue, Gao Pu, asked for a better protection of the silver transports and proposed that sums over 100,000 *liang* were to be guarded at least by an assistant brigade commander (*shoubei*) or, better, by a brigade commander (*youji*), each of them at the head of several hundred soldiers.<sup>126</sup> To look after such a transport was an everyday task of the military garrisons in the provinces.<sup>127</sup> The dimensions of such an enterprise were indeed considerable: The transport of 100,000 *liang* of silver required 50 mules or horses that were led, as Gao Pu complains, by too many people (*renfu* 人夫), a large part of whom were labour conscripts (*yi* 役) who did not really care for that job. Chen Huizu 陳輝祖, acting governor-general of Hu-Guang (Hubei, Hunan), on the other hand had great trust in his military personnel and advocated that also a company commander (*qianzong*) or even a squad leader (*bazong*) could be entrusted with a transport of more than 100,000 *liang* silver.<sup>128</sup>

It had not always been the rule that the province of origin alone was responsible for the transport. In the case of money sent from the two provinces of Hu-Guang on QL 37/6/24 (Jul 24, 1772), personnel from Sichuan was to be dispatched to Wuhan 武漢 or Changsha 長沙 to take charge of the money and to transport it to Chengdu. The selection of trustworthy transport officials was probably also undertaken by the Sichuan officials. In all other cases, personnel from the place of origin—as far as we know—cared for the transport.

There is just one case when money went missing (*shi yin* 失銀) during the whole long war.<sup>129</sup> On QL 39/3/18 (Apr 28, 1774) it was reported that one sheath of silver was missing in a smaller transport on the new western route.

The regulations for military expenditures, the *Junxu zeli*, which were issued in QL 49 (1784), contain a specific chapter dealing with the transport of silver bullion from the treasury of the ministry to the point of destination.<sup>130</sup>

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<sup>126</sup> *Qingshilu: Gaozong shilu* 953, fol. 20b-21a (QL 39/2/guichou).

<sup>127</sup> Luo (1984), p. 252.

<sup>128</sup> *Qingshilu: Gaozong shilu* 981, fol. 25a-25b (QL 40/4/bingwu).

<sup>129</sup> *Qingshilu: Gaozong shilu* 956, fol. 18a-18b (QL 39/4/guisi).

<sup>130</sup> *Hubu junxu zeli* 5, fol. 4a-5b.

**Porterage for the Transport of Pay for the Army**

‘Each time when silver sheaths (*qiao*) containing pay for the army have to be transported, first all transport vehicles or porters assigned [to the regular courier stations] per quota, have to be used. Only when those are not sufficient, it is allowed to hire carts or porters from among the population. [The normal daily distance] between the stations inside and outside the country (*kounei, kouwai*) is 100 *li*. For a load of two sheaths, a cart [owner] is given 0.15 *liang* [per station or day] inside the country, and 0.4 *liang* outside the country. ([Commentary:] In the old precedents of the western campaigns, inside the country 0.15 *liang* had to be paid per 100 *li* for two sheaths, outside the country 0.498 *liang* were given. This was to be reduced in QL 35 [1770] to 0.4 *liang* outside the country, yet inside the country the original quota was adhered to, which can still be considered as fair. Now it is suggested to deal according to this reduced sum.)

In mountainous areas, where carts cannot be made use of and horses and mules have to be hired, for each animal carrying a load of 2 sheaths 0.3 *liang* are allowed, both inside and outside the country. ([Commentary:] In the old precedents of [the first] Jinchuan [war], for two sheaths 0.15 *liang* were given inside the country, while the porterage for outside the country was not yet fixed. Now it is suggested to deal according to the transport precedents of the military expenditures in Yunnan [i.e. for the Myanmar campaigns], which allowed, by imperial grace, a porterage of 0.3 *liang* for 2,000 *liang* [of silver, or two sheaths], corresponding [in weight] to 1 metropolitan *dan* [*jingdan* 京石] of grain.)

Where bridges are rare and paths so steep that horses or mules can hardly proceed, porters shall be hired who each carry 1 sheath of silver. Inside the country they shall be given a porterage (*gongjiayin* 工價銀) of 0.05 *liang* per station [or day] and a rice ration of 1 *sheng*; outside the country a porterage of 0.08 *liang* and a [daily] ration of 1 *sheng* of rice. ([Commentary:] This [regulation] follows the Jinchuan precedents. It can be found out that according to the Jinchuan precedents, porters carrying pay for the army were not only paid a regular porterage, but also—instead of rice— pay for daily provisions when walking back [to their home station; *huikong*], which was 0.05 *liang* inside the country, and 0.08 *liang* outside the country. This was an extraordinary gratification, which should not be continued in the future as a permanent precedent. When the pay for the army has to be delivered very urgently and the standard price for the porterage is insufficient to cover the cost for food [for the porters], the responsible Great Minister [in charge] is to investigate the actual situation and present a palace memorial, explaining how to deal with the situation.)

In very rough and mountainous territory, either inside or outside the country, if it is not possible to cover 100 *li* [in one day], and if the stations therefore have to be set up at a distance of several [dozen] *li*, the responsible Great Minister has, for the moment being, to evaluate the actual topographical situation and present a palace memorial explaining at what distances the transport stations have best to be set up, with a minimum of no less than 70 *li* of distance inside the country, and a minimum of no less than 40 *li* of distance for stations outside the country. ([Commentary:] According to the old precedents of the western campaigns, the stations had a distance of 100 *li*, while in the precedents of Jinchuan, transport stations had a distance of 60 to 70 *li* inside the country, and 30 to 40 *li* outside the country. Now it is suggested to determine, according to the precedents of the western campaigns, that the transport stations shall have a standard distance of only 100 *li*, and that the actual distance shall be fixed according to the situation on the spot. In very rough and mountainous territory, where it is not possible to cover a distance of 100 *li* [in



one day], it shall be admissible that the distance is fixed according to the circumstances, yet [the responsible Grand Minister] has to present a palace memorial explaining how to deal with the situation.) When [money] is disbursed from the treasury of the Ministry of Revenue, the province of Zhili has to send an especially dispatched grand official from a circuit or a prefecture (*dao-fu dayuan* 道府大員) who, together with a secretary (*siyuan* 司員) dispatched by the Ministry, checks the weighing and packing of the silver sheaths. When they reach the district Da[xing] 大興 or Wan[ping] 宛平, carts have to be kept ready to be loaded with the money to be transported. An experienced official from [one of the] sub-prefectures [around the Capital] (*tingyuan* 廳員) is to be dispatched who holds himself ready at the first logistics station to accomplish the first handing over [from the metropolitan prefecture to the province of Zhili]. For each subsequent station, the governor-general (*du* 督) selects and dispatches one member of the circuit administration (*daoyuan* 道員) and one Banner regimental vice commander (*fucan[ling]* 副參[領]), who both supervise the transport, and he also selects and dispatches one brigade commander and vice brigade commander (*you-du* 遊都) from the prefectures or sub-prefectures [on the way] to protect the transport with their troops from station to station. This way, the silver is relayed on until it reaches the treasury (*fanku*) in the province of destination. For each handing over, the time has to be reported to the Ministry of Revenue, when the silver has entered or left the respective territory ([Commentary:] Before QL 39 [1774], all silver being disbursed from the Ministry of Revenue [to be transported to another province], had been accompanied by a secretary from the Ministry (*siguan bithesi* 司官筆帖式), who took over responsibility on the long way to the destination. When the money was finally handed over to the province of destination, it was repeatedly found out that on the way some sheaths had gone missing. For this reason, the Ministry of Revenue suggested in QL 39 that the governor-general of Zhili, [who was the first one] to take over the money, had to select and dispatch a grand official from the circuit or a prefecture, and that the Ministry of Revenue should dispatch a trustworthy secretary, who both had to meet at the [Ministerial] treasury in order to supervise the handing over of the silver sheaths and bring them on the way. [The rest of the text of the memorial suggesting the further procedures is identical to the regulations eventually promulgated, as cited above.] It is therefore not necessary for the Ministry of Revenue to dispatch any Ministerial secretary to supervise the transport on his way, etc. This procedure has from then on been respectfully followed, as can be seen from the archives. Now we [the compilation team of the *Junxu zeli*] recommend taking over the suggestion from this memorial by the Ministry to establish it [as a regulation for the future].)

The regulations in the *Jinchuan junxu li'an* provide some additional information, as the *Junxu zeli* regulations almost exclusively deal with the situation in the Capital and not with that on the way.<sup>131</sup>

When transporting silver ingots, each 1,000 *liang* were to be stowed in a sheath, and, as the regulations say, by no means in a basket (*baolou* 包篋) or other containers. Nevertheless, statements in the same paragraph can be found that openly contradict this regulation and clearly talk of the use of baskets for the transport of contribution silver (*juanyin* 捐銀). The

<sup>131</sup> *Jinchuan junxu li'an* 2, fol. 65a-65b.

prescribed sheath is transported by two porters from the regular courier stations (*yi*) of the districts and prefectures. Silver was much too precious to leave it in the hands of porters hired on the free labour market. Only in urgent cases, when there were not porters enough in the transport or courier stations, porters could be hired and were to be paid according to the regulations for hired workers. Especially in cases like these the responsible official had to keep an exact account of the number of labourers, the distance they covered, and the amount they were paid. For a distance of 100 *li*, which is a normal one-day march, on their way to Chengdu, each person was to be given 0.1 *liang* of pay. In regions, where no regular transport or courier stations existed, the portage had to be given according to time instead of distance, and was to amount to 0.05 *fen* per day, which means that in such a case the normal distance covered in one day was about 50 *li*.

When merchants or other people delivered contributions during contribution campaigns, the money had to be transported according to the above regulations from the province of origin to that of Sichuan. The money was then drawn from the account of the province of origin and transferred via the account of the Ministry of Revenue to the account of the province of Sichuan from where it was immediately paid out to the war chest. For this procedure the province of Sichuan had to draw an account. Each 1,000 *liang* of contribution money had to be transported in baskets (*baolou*) or wrappings of cloth (*bupi* 布疋), which were tied up with ropes (*shengsuo* 繩索). This material had to be brought to account for no more than 0.25 *liang*. Instead of porters, pack animals could be used, each of which transported 2,000 *liang* of silver. A daily ration of 0.15 *liang* should be paid per animal. The costs were, for example, from Chengdu to Ludingqiao 5 *liang*, to Taoguan and Dzagunao 3 *liang*, which was actually a little bit more than allowed by the precedences. Alternatively, but especially in precipitous territory outside the provinces, where these animals could not be used, native *corvée* animals (*ula*) could be hired or alternatively two native porters instead of one horse. These animals were used for the long western branch of the southern route (compare Chapter 4.2.). For them, a pay of 0.94 *liang* was given for long distances (*dazhan*) and 0.16 *liang* for short distances (*xiao taizhan*). Native porters were paid the same as station porters. A longer commentary on this passage makes it clear that outside the country, ‘one thousand’ *liang* instead of ‘two thousand’ had to be read in some places, with the consequence that animals had to carry 1,000 *liang* of silver and persons only 500 *liang*. This resulted in much higher costs for portage than actually allowed for, because for each 1,000 *liang*, two persons had to be paid instead of only one porter. Yet under such conditions, each person would still have to carry a load of 18 kilos. The Ministry of Revenue later demanded back those wrongly allocated expenditures.

#### 6.4. Conclusion

The money which financed the Jinchuan campaign came from different sources. About half of it (46%) was directly paid the central government. It is not possible to differentiate if the finances were disbursed from the treasury of the Ministry of Revenue or from that of the Imperial Household Department but from some sources it seems plausible that the latter bore at least part of the costs. Almost the same amount (41%) was paid by different provinces throughout the country. While the final account of the *Jinchuan junxu li'an* only provides final figures, imperial edicts help to reconstruct not only the periodicity of the payments transferred to the war chest, but also the modus operandi by which the Ministry of Revenue quite autonomously decided from where the money had to be transferred. The regular expenditures of the war chest are reflected in likewise almost regular financial transfers, especially in the last third of the war. During the second third of the war an alternative financial source was tapped: the *juanshu* contributions, which came mainly from rich merchant associations. When comparing different sources it becomes evident that the contributions taken from the (salt) merchant associations mainly served for short-time funding and were not sufficient to support an expensive war like the Jinchuan campaign for longer than half a year. The salt merchants thus financed nine per cent of the war expenditures, yet a substantial part of the respective money was pre-financed by the local government. Other expenditures had also to be pre-financed by local governments, especially the baggage pay of the soldiers coming from other provinces, but also the money for gunpowder, metal for bullets and cannonballs, clothing and pack animals. In such cases, local money transfers had to be undertaken, especially from Sichuan to the provinces of origin. Money had also to be transferred from Sichuan, the location of the war chest, to the provinces which organised the deployment of troops and the transport of military equipment to Sichuan. In areas that were crossed by the troops, but also in most other districts in Sichuan, where the local population was recruited for military labour, the emperor several times announced tax abatements. The escorted transport of money was organised in an excellent way, for which reason only negligible amounts of money were lost. When comparing the costs of the second Jinchuan campaign with the other wars of the Qianlong reign, the conclusion can be drawn that although the absolute sum of expenditures was higher for the second Jinchuan war compared to other wars of the early and high Qing period, the proportion of the contributions among the total costs of the war were not as high as

that for other wars of the Qianlong reign. It was only during the second half of the 18th century that contributions became more and more important for war financing.

It could also be seen that the Qianlong emperor on annual average spent no more for war activities than his father and grand-father had done. He was thus not more 'belligerent' or inclined to expensive wars than his predecessors.

## 7. The Consequences of an Expensive War

### 7.1. The Qianlong Emperor's Financial Policy

It is undisputable that China at the beginning of the 19th century was caught by a financial crisis which was the result of developments already on the horizon when the Qianlong emperor acceded to the throne in 1735. The difference between idealism and financial politics in practice has been pointed at in a short paragraph written by Prince Zhaolian 昭槿:

‘His Majesty emphasized the importance of acting economically in his personal expenditure and reasoned about each kind of material resources [for the imperial belongings]. When acceding to the throne, he ordered for example that it should be prohibited to apply gold and silver decorations on the streets and markets [run by the government]. Embroideries from Jiang[su] and Zhe[jiang] were forbidden [to the imperial household staff] and had to be replaced by imprinted fabric. The Imperial Kitchen (*yushanfang* 御膳房) disposed of 50 [*liang*] of silver (*jin* 金) per day, and the emperor several times cut its budget with the result that the annual expenditure [for the kitchen] was only slightly more than 20,000 *liang*. Although recently the attendants lamented about the money not being sufficient, their pleas [for more funds] went unheard. Yet when large sums were meant to be spent for the sake of the people the emperor did not mind if the money he broadmindedly allotted was available or not. The wars in the west and in Jinchuan, for example, cost more than 100 million *liang*. For the construction work of dykes and dams he spent 1 billion. In the years *bingyin* (1746), *dingyou* (1777) and *yimao* (1795) he three times proclaimed an empire-wide tax abatement (*pujuan* 普蠲), and in the years *xinmao* (1771), *gengxu* (1790) and *bingchen* (1796) there were four occasions when he waived the delivery of tribute tax grain in five provinces. Each time this amounted to a billion, yet his Majesty never merritted to the stingy [for such concerns].’<sup>1</sup>

The first statement, that the emperor could sometimes be very nit-picking, as well as the second conclusion, that he willingly spent large sums if he knew or thought it would be beneficial to the people and the empire, can be substantiated by the observations made in the last chapters of this study. Especially when dealing with individual items in the accounts the Ministry (and the emperor) often considered expenditure as being too high, and the account was returned for emendation. The money overspent was then to be reimbursed from the private property of the liable officials. This might also have been the reason why the kitchen staff complained about tightness of funds. Prince Zhaolian observed that especially at the beginning of his reign the Qianlong emperor held frugality in high esteem and therefore

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<sup>1</sup> *Xiaoting zalu* 1, p. 17. In the text, an odd sum of 100,004,000 *liang* is mentioned, which is here translated as ‘100 million’. It is also not clear which unit of account is to be fitting to the sum of ‘a billion’.

proved to be a worthy successor of his father and grandfather. For a few generations civil service had virtually been trained to treat the funds allotted to their budget economically, and it therefore had become commonplace to check on each penny spent when setting up the accounts. Yet unlike his father and grandfather the Qianlong emperor did not practise a very personal government in general and left his officials to do their work within the bureaucratic machinery. According to legalist thought this machinery would, once set into motion, work on its own accord and without too much interference by the emperor. This philosophy was also reflected in the intensive legislative activity of the high-Qing emperors. They tried to establish rules for all practical and theoretical cases which could then be applied. The law canons were compiled by the responsible offices and ministries according to existing precedents after which the emperor had to do no more than to give them his blessing. In the Jinchuan war the financing was a case in point for the independent executive function of the governmental administration units. The emperor did no more than issue an edict ordering to make available a certain amount of funds for the war chest. In most cases the Ministry of Revenue and its sub-agencies had the task to decide where the money would be provided from. The emperor himself did not care for the implementation but left the decision to his expert officials in the central government. The same was valid for warfare: Formerly the Kangxi emperor had in person taken part in battling the Dzungars, but the Qianlong emperor had to rely on correct reports from the war theatre, which did not only cost much time but also income, job and even the lives of many a high official when the emperor was not properly informed about the real facts at the front. The Qianlong emperor showed a less personal government style than his predecessors due to the distance he kept between himself and his officials and was thus more inclined towards the state theory of legalism. On the other hand he had the aspiration to embody the true ruler as described in the philosophy of Mengzi who taught that a ruler will only be able to create a prospering state if he is able to attract immigrants by a rule based on clemency and bounteousness. Therefore the Qianlong emperor's edicts reiterate sentences like: 'The people shall not be affected to a degree that it does not even realize there is a war on.'<sup>2</sup> Or: 'The people in the streets and lanes have displayed such a high degree of willingness to support the government that they shall now be given recompenses.', and the like.

Reduction or remission of taxes is a good policy but only if used moderately. It seems that the Qianlong emperor did not calculate in advance what the tax deficits would amount to when empire-wide tax remissions were applied, and what their long-term repercussions on the state

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<sup>2</sup> *Jinchuan dang* QL 36/IV/00336 (QL 36/12/15).

finances would be. The Ministry of Revenue did apparently not oppose the emperor's plans, while some members of the State Council did, as is known from the memorials described below.

Looking at the expenditure for the second Jinchuan war it seems that the emperor adhered to his ideal to personify the Confucian ruler. In the beginning he was still quite economical, tried to keep cost as low as possible and had only smaller sums coming from the provinces transferred. After two years it was tried to open a second financial source by proclaiming the contribution campaign. From the third year on the emperor finally burdened the provinces less and was more willing to regularly dispatch considerable sums to the war chest in order to finish the war and to ease the financial burden on provinces and the people. To do the latter, a series of tax abatements was launched. An argument regularly brought forward was that the state treasury was 'full to the brim'. Even after the first months of the campaign, when it had become clear that the war would be very expensive,<sup>3</sup> the public purse was not spared.

Objectives once defined, it seems, were esteemed worth spending a lot of money on to be reached. Such were, for example, large-scale dyke building projects or the pacification of notorious trouble spots. But this does not mean that the emperor was a wastrel. On the contrary: There are a lot of cases that the emperor wanted to know exactly how overspending had come about and immediately dismissed officials found to squander funds.

'When We [the Emperor] lay plans for the large framework of military affairs We do not care for the money from the state treasury (*duan bu xiao aixi tangxiang* 斷不宵愛惜帑項) [spent for this purpose], but Wenshou as the [accountable] governor-general has carefully to check all items of the war expenditure and has to look upon it that nothing is misappropriated (*bu ke ling qi shao you maofu* 不可令其稍有冒浮).'<sup>4</sup>

'Yet everything has to be checked according to the truth, and it shall not be allowed that the slightest amount is wasted (*bu ke shi sihao fumao xumi* 不可使絲毫浮冒虛糜).'<sup>5</sup>

'It cannot be that the smaller items [like the cost for porters carrying goods in the new logistics stations] are disputed in detail while larger items are dealt with negligently (*bu gu da ju* 不顧大局). There is already expenditure of more than 20 million *liang*, so that one only has to see to it that it is used appropriately and not misapplied by the officials (*bu wei guanli qinshi* 不為官吏侵蝕).'<sup>6</sup>

But on the other hand one can also read:

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<sup>3</sup> *Jinchuan dang* QL 36/IV/00398 (QL 36/12/28).

<sup>4</sup> *Jinchuan dang* QL 37/IV/00136 (QL 37/10/29).

<sup>5</sup> *Jinchuan dang* QL 37/IV/00144 (QL 37/11/1).

<sup>6</sup> *Jinchuan dang* QL 38/IV/00383 (QL 38/12/28).

‘Until now 14 million *liang* have been transferred [to Sichuan]. Now the state treasury is full so that We will be able to achieve advantage in the long run when investing now (*yi lao yong yi* 一勞永逸) a further 10 to 20 million. Therefore it is not opportune to be stingy (*zong wu suo jinxi* 摠無所靳惜).’<sup>7</sup>

‘Since the war against Jinchuan has been on We have spent nearly 20 million *liang*, and the sum just transferred from the stored funds, amounts to another 10 million. If the generals now make use of all their abilities to annihilate Jinchuan and to bring this affair to an end, there is no reason to be stingy (*yi suo bu xi* 亦所不惜), even if We spend another 10 or 20 million.’<sup>8</sup>

‘There has furthermore been a discussion with an ensuing edict to open a contribution campaign which altogether yielded sufficient funds to finance the war for another one or two years. Even if We disburse a further 20 or 30 million, the state treasury will still be full. Our thoughts are completely focusing on the conquest of Jinchuan, and it by no means worth worrying about how much We spent (*duan bu jinxi duo fei* 斷不靳惜多費)—provided the problem with Jinchuan is eliminated once and for all!’<sup>9</sup>

The money contained in the state treasury amounted to about 60 million *liang*.<sup>10</sup> This figure is also substantiated in edicts in which a sum of 60 to 70 million *liang* is mentioned as the sum ‘filling’ (*chongying* 充盈) the state treasury to the brim.<sup>11</sup>

Most items of war expenditure could easily be checked and approved or refused by the Ministry of Revenue because exact precedents or regulations existed. This even applied to expenditure spent on privately organised issues like the transport of rice or war equipment which was to a great extent undertaken by merchants. Yet for some issues there were no exact regulations saying what they were allowed to cost the government. These were in the first instance rewards or incentives for the troops to increase their motivation to engage in battle. It was exactly these advance rewards that imposed unpredictable costs on the war chest, while there must have been certain funds reserved for rewards paid out after heroic actions. While the emperor permitted himself to grant highest awards to his generals, as can be seen in the extraordinary distinctions bestowed on Fuheng when he was made commander after the fall of Zhang Guangsi and Neqin, he did not allow his generals to distribute rewards to their troops at their own discretion, unless they paid them out of their own pockets. When the mighty General Nian Gengyao (1679 – 1726) had once paid out rewards to his officers from his own money<sup>12</sup> the Kangxi emperor had not bothered about the high amount of that kind of reward. But when it came to state-owned funds a different stance was taken: Grand Minister Consultant Fude 富德, after paying out too high an amount of money (more than 10,000

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<sup>7</sup> *Jinchuan dang* QL 37/IV/00348 (QL 37/12/13).

<sup>8</sup> *Jinchuan dang* QL 38/III/00320 (QL 38/8/6).

<sup>9</sup> *Jinchuan dang* QL 38/IV/00031 (QL 38/10/4).

<sup>10</sup> Huang (1999), p. 313. Torbert (1977), p. 129.

<sup>11</sup> *Qingshilu: Gaozong shilu* 1261, fol. 9b-11a (QL 51/r7/gengyin).

<sup>12</sup> Dai (2009(1)), p. 11 (page number of the unpublished abstract).

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*liang*) to motivate his troops, he was removed from office and executed.<sup>13</sup> The Qianlong emperor himself made extravagant presents to his generals, especially in the second half of the Jinchuan war, mainly in the shape of lotus pouches (*hebao* 荷包). While regulations for the rewards for common soldiers and officers existed, as has been seen in Chapter 3.4, especially promotions in rank, the bestowal of a *baturu* title, or one month's extra salt-and-vegetable pay, generals (and the native auxiliary troops) being virtually 'nonunion', as one would say today, could be given rewards by the emperor which were outside the influence of the war logistics bureau or the Ministry of Revenue. It seems quite plausible that presents given by the emperor to his generals and the promotions in rank for the highest generals were not paid for by the Ministry but came from the treasury of the Imperial Household Department (*neiwufu*), the emperor's Privy Purse. Bearers of imperial hereditary titles as well as of non-imperial hereditary titles received an appanage paid by the imperial household. The same was valid for the presents the emperor made to his generals, which can be seen in the formula 'as used by the emperor' (*yuyong* 御用) or 'made by the emperor' (*yuzhi* 御製). The presents were thus objects actually fabricated for use in the imperial palace, the cost for which was accordingly paid by the Imperial Household. The close relation between the treasury of the Ministry and that of the Household Department has been mentioned already. The Privy Purse of the emperor met the expenses which the Ministry was not liable to pay according to the existing regulations. Just as Nian Gengyao had paid the rewards for his troops from his private purse, the emperor rewarded his generals by opening his own.

The *Junxu zeli*, and of course the precedents upon which it was based, did likewise not envisage expenditure for state banquets, triumphal parades or the semi-religious victory celebration. The one hundred paintings of heroic generals and officers exhibited in the Ziguang Hall (and they are only those for the second Jinchuan war, while for some of his other wars the Qianlong emperor had also ordered such portraits to be painted), the copperplate engravings depicting important battles which were produced in France,<sup>14</sup> the steles with the imperial odes erected in the Capital and in Jinchuan, the construction of new Gelugpa temples where before Bön monasteries had stood, the resettling of Jinchuan families to places north of Beijing: Who paid for all this? It seems quite probable that for most of these activities and objects the funds were not provided by the treasury of the Ministry but by the Imperial Household Department. For the Sun King of France as well as for the Qianlong

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<sup>13</sup> *Jinchuan dang* QL 41/I/00285-286 (QL 41/3/10), 00289 (QL 41/3/4), 00355 (QL 41/3/27); QL 41/II/00009 (QL 41/4/2), 00013 (no date), 00039 (QL 41/4/10), 00055 (QL 41/4/17). *Qingguoshi: Dacheng zhengbian* 189, pp. 408-409.

<sup>14</sup> See, for example, Zhang (2000).

emperor the identity between the ruler as a person and the state was indeed very high ('L'État, c'est moi.'). The emperor was the state, and therefore part of the money paid for the state's sake came from his Privy Purse. Possibly even much more than the above-mentioned items were paid for from the chest of the *neiwufu*: The argument that the state treasury was full and that there was ample money was reiterated time and again after the second Jinchuan war. The 60 million *liang* paid for the war had by no means brought the state finances into a precarious situation. The regular tax income of the empire, as well as the income of the Imperial Household, were sufficient to replenish the state treasury, or least the treasury of the central government. The financial situation of the provinces may have been different. Further research will be needed to find out if this was detrimental to the provincial government which had to move money 'upwards'.

Concerning the financial situation in the central government's treasury, some documents will now be examined carefully.

About six months after the end of the war the officials drew up the final account and checked all accounts put before them. A part of these accounts had to be returned for resubmission with smaller sums, as the regulations did not allow such high expenses. What had been overpaid was then to be reimbursed (*zhuipei* 追賠) by the responsible officials, which was normally done by subtracting the sums due from their *yanglian* pay of which their salary mainly consisted. In other cases only part of the sums due had to be paid by the officials themselves (*fenpei* 分賠), with the remainder taken from the budget of the office or from other persons held responsible. A document mentions an overspent sum of 11 million *liang* to be paid back to the government. The officials entrusted with the arrangement of the final account suggested that the governors and prefects of the whole empire might be held responsible and should contribute to the repayment with part of their *yanglian* salary. This way ten years would be needed to to pay back the 11 million entered as expenditure without justification. This point will be dealt with later when discussing the financial politics of the Qianlong emperor. In this case the emperor refused the proposal as inappropriate. If there had been any misappropriation by officials involved in the war and war logistics, the prefects of Sichuan or even those of the whole empire could not be made liable for reimbursing that sum. What first seems to be a totally absurd suggestion from the side of the central government emerges as a common method to raise funds which had been in use since the Kangxi reign, but saw its heyday during the Qianlong reign. Yet in this case the emperor, still aware that the idea of *yanglian* pay was to forestall corruption and that lower or no *yanglian* pay would inevitably provoke corruption, chose a different method: He was both broad-minded to the

people and to his officials. After all, so his argument went, 11 million *liang*, represented no more than one fifth of the total sum of 60 million spent on the war. The state treasury being full there was no need to pass the liability for payment on to the local officials. When his grandfather, the Kangxi emperor, had undertaken his southern inspection tour a deficit of 2 million had accrued as well, which likewise had been paid by the state treasury. And in that case, he said, it would surely have been possible to find out individual officials on duty liable for the payment.<sup>15</sup> In the end he had waived debts amounting to 2 million *liang*, as has been discussed in Chapter 5.2.

In the following years there were many projects with view to whose cost the emperor stressed the fact that there was enough money in the state treasury and thus there was no need to be stingy about projects only costing ‘peanuts’. The city walls of some towns in the province of Shengjing (Fengtian, modern Liaoning), for example, were ordered to be raised to more than 1 *zhang* (3.2 m). In important things like these the government could not be too economical.<sup>16</sup> The same applied to the construction of walls of hitherto unfortified district towns on the newly reconquered island of Taiwan, for which the government willingly spent 1 million *liang*.<sup>17</sup> Building dykes and keeping them in good repair was likewise something that the government could hardly be thrifty about when it was a question of spending a few hundred thousand *liang*.<sup>18</sup>

Emergency aid was an issue costing the government a great deal. In one case the leading officials in the central government had refused the request of a local official asking for a further 600,000 *liang*, with the argument that the central government had already provided 700,000 *liang*. If further funds were needed the money should be disbursed by the respective provincial treasury or from the horse funds of the Banner garrison at Jingzhou. Yet the emperor disagreed with his ministers. Where the people’s well-being was concerned the government could not be stingy. The 600,000 *liang* in question represented, as he said, only one hundredth of the money in the state treasury, which accordingly at that time must have contained 60 million *liang*.<sup>19</sup>

The increase in the number of troops in the provinces of Shaanxi and Gansu—which had to mobilise troops whenever there were problems in the west—was seen by the emperor as a matter of high priority, even after the second Jinchuan war was just ended and one would have thought that the high expenditure for it would have asked for a breathing space in

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<sup>15</sup> *Qingshilu: Gaozong shilu* 1017, fol. 6b-10a (QL 41/9/dinghai).

<sup>16</sup> *Qingshilu: Gaozong shilu* 1069, fol. 6a-7a (QL 43/10/jiaxu).

<sup>17</sup> *Qingshilu: Gaozong shilu* 1273, fol. 17a-18a (QL 52/1/gengyin).

<sup>18</sup> *Qingshilu: Gaozong shilu* 1182, fol. 14a-15b (QL 48/6/dingmao).

<sup>19</sup> *Qingshilu: Gaozong shilu* 1074, fol. 4b-5b (QL 44/1/wuzi).

military spending. Yet the high importance of this matter made it necessary to provide the higher cost for those troops, especially the extra payment for weddings and funerals (*hongbai shangxu* 紅白賞恤), directly from the state treasury and not from other funds.<sup>20</sup> The emperor's argument that war in difficult territory was naturally costly was also brought forward during the campaign to pacify Annam. Miasmatic swamplands caused disease and led to the death of many soldiers, probably costing the state as much as 30 million *liang* for that campaign, as the emperor estimated. Yet the 60 million in the state treasury would enable the empire to wage such a war without financial difficulties, as he argued.<sup>21</sup>

Quite famous is the emperor's criticism of Sun Shiyi's 孫士毅 (QL 60 – JQ 1 [1795 – 1796] temporary governor-general of Sichuan) suggestion to salvage 3,000 *liang* of silver discovered in a river within his jurisdiction. The emperor answered that it was appropriate to salvage the silver if it was state-owned money drowned in that place. Yet if the silver was privately owned or if it was natural silver sand or the like, it should be a matter of the common people to dive for the metal. Seeing that the treasury was full to the brim it would be wastage to invest government-owned money to salvage a few pennies.<sup>22</sup>

An imperial project of high importance were the emperor's inspection tours to the lower Yangtse region during one of which an official suggested collecting contributions from the local circuit intendants, who could pay part of their *yanglian* salary. The emperor dismissed this suggestion because an inspection tour was a matter of the state which thus had to be financed by the state one hundred percent, and not with the help of private persons.<sup>23</sup>

The following document says a great deal about the Qianlong emperor's perception of state finances:

'A further edict, in reaction to a response palace memorial submitted by Grand Secretary Duke Agui dealing with the additional expenditure for the anti-corruption pay (*yanglian*) of military officials after increasing the number of troops by filling hitherto vacant posts (*tiaobu shie* 挑補實額). Agui says that state expenditure has increased substantially and nearly unaware so that it is not opportune that the high annual spendings continue [in this way]. The higher expenditure [after filling the vacancies] will cost the state an additional 3 million *liang* annually, with the result that over the next twenty years 70 million *liang* will have to be spent. He suggests [the following practice concerning] the reducing of the military salaries by the anti-corruption pay, which has been decided after discussion: For the provinces of Yunnan, Guizhou, Sichuan, Fujian and Guangdong, [the garrisons of] which control the borders [of the empire], it has to be investigated clearly by how many soldiers the troops have to be increased. Except for these provinces and for the provinces of Shaanxi and Gansu, in which the number of troops has already been

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<sup>20</sup> *Qingshilu: Gaozong shilu* 1138, fol. 26a-26b (QL 46/8/renwu).

<sup>21</sup> *Qingshilu: Gaozong shilu* 1305, fol. 26a-27a (QL 53/5/gengyin).

<sup>22</sup> *Qingshilu: Gaozong shilu* 1470, fol. 14a-15a (QL 60/2/bingchen).

<sup>23</sup> *Qingshilu: Gaozong shilu* 1069, fol. 13a-14a (QL 43/10/bingzi).

increased by 15,700, it is not necessary to increase the number of troops in all other provinces, which belong to the [not endangered] heart of the empire. He further asks if his suggestion could be handed over to the Grand Ministers of the State Council that shall meet for discussion with the respective Ministry.

[We answer that] concerning the finances of the state it is necessary to balance income and expenditure (*liang ru wei chu* 量入為出), yet nourishing the military to protect the people is a matter of great importance since oldest times and for which it is not appropriate squabbling too much about funds. Agui's palace memorial about the three vaults of the Ministry of Finance (*sanku* 三庫)<sup>24</sup> contains [the arguments that were valid] during the Kangxi and Yongzheng reigns, when a complete scheme of income and expenditure was drawn up with an exact calculation. This is what higher state officials do when managing the state. Yet We are of the opinion that imperial money is something that has to circulate everywhere and that wealth has to be distributed among the people. This sacred instruction is very enlightened. Rather than accumulating it at the top [i. e. to leave it unused in the state treasury or to use it for paying officialdom] it is much better to spread it on the bottom [i. e. among the population], because the slightest amount [of money] allocated to the officialdom must first be taken away from the people. This is easy to understand.

When We acceded to the throne the reserves of the Ministry of Revenue was 30 million *liang*. In the past forty years We have looked up gratefully to Heaven for admirable support and therefore experienced rich years with fruitful harvests, and abounding wealth and revenue. Money was so plenteous that during this time We have three times proclaimed empire-wide tax cuts and twice waived the delivery of tax grain. There was also emergency aid throughout the provinces befallen by natural disasters, and the expenditure for the military campaigns in the new territories [in the west] and against Jinchuan. On all this We have spent millions and millions and nonetheless taxes have never been increased. We have likewise not been in need of dishonest methods, as formerly the emperors Han Wudi 漢武帝 (r. 140 – 87 BC) or Tang Dezong 唐德宗 (r. 780 – 804) who used the policies of Sang Hongyang 桑宏羊 (152 – 80 BC) and Pei Yanling 裴延齡 (728 – 796) respectively,<sup>25</sup> and the state treasury is nevertheless full to the brim. The treasury of the Ministry of Revenue at present contains 70 million *liang*.

Under such circumstances, why should We agree to be sparingly? Even if We spend another 3 million, only a total of 40 million *liang* will be spent on this matter [i. e. the increase of troop strength] until the year when We shall retire in the sixtieth year of the Qianlong reign. When adding the annual income to this, there will be more money in the state treasury than during the time when We acceded to the throne. What is the use of pedantically calculating? In former years, when Haiwang 海望 was in charge of the Ministry of Revenue [1735 – 1745], he never mentioned the exact figures of the reserves as if he was afraid that unauthorized persons came to know [how much money was in the treasury]. At that time We

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<sup>24</sup> The three storehouses were the vaults of the Ministry of Revenue, one for silver (*yinku* 銀庫), one for piece goods (*duanxuku* 緞疋庫) and one for miscellaneous items (*yanliaoku* 顏料庫), each supervised by a director (*langzhong* 郎中) and the three of them collectively overseen by a Grand Minister of the Imperial Household Department (*guanku dachen* 管庫大臣).

<sup>25</sup> Sang Hongyang succeeded in increasing the public revenue by introducing the state monopoly on the production and sale of salt and iron. The criticism of his methods in this document is perhaps aimed at his law making possible the purchase of offices. Loewe (2000), pp. 462-463. Pei Yanling, though totally incompetent, was Minister of Revenue, and was criticised for transferring funds from the Left Central Treasury to the six sub-treasuries the emperor could freely dispose of. Zhao/Zhao (2002), p. 1222.

[alone] thought this is not correct. The state is something that belongs to the public, and the income and expenditure [of the Ministry] are regular affairs that deserve to be allotted to the public. What is the use of concealing those figures to the people? This is like trying to prevent the flowers from blooming when their season has come. To keep back the money in the treasury of the Imperial Household when the Ministry of Revenue asks for a transfer was even a greater foolishness [of Haiwang]!

Concerning the treasury of the Imperial Household Department it was still the rule at the beginning of the Qianlong reign that the Grand Ministers of the Imperial Household Department in their palace memorials suggested transferring money from the Ministry to the Department. Nowadays however the expenditure [of the Department] has been reduced and misappropriation has been done away with, so that it is not further necessary to submit a palace memorial with the request to transfer [money from the Ministry] as it is the case that, rather the other way around, each year millions of *liang* are ordered to be transferred from the Imperial Household Department to the Ministry of Revenue. How can it be that [Our ministers] worry about the annual expenditure being too high? [...]<sup>26</sup>

A few years later the emperor, in the same tenor, stressed again that there had been far less money in the state treasury at the time he acceded to the throne, and although he had spent so much on emergency aid and for wars, had several times cut taxes and spent ‘over 10 million *liang*’ of disaster relief for southern China (Jiangnan 江南), more than 70 million *liang* had accumulated in the treasury of the Ministry of Revenue.<sup>27</sup>

About 5 million *liang* had been the income of the state through the contribution campaign (*juanshu*) carried out during the second Jinchuan war. When the war was over higher contributions to the central government by rich merchants were only accepted when their financial burden was eased in some other way. Merchants from the Liang-Huai region, for example, delivering 1 million *liang* of contributions to the Imperial Household Department, were rewarded with a tax remission of 1.6 million *liang* on their profit surpluses (*yuli* 餘利). The funds from this contribution were not transferred to the treasury of the Imperial Household Department but the emperor ordered to allot this money to the home prefecture or to use it within the province for the construction of dykes.<sup>28</sup> It was especially the provinces and the local government which permanently suffered financial shortcomings. Prince Zhaolian, for example, says that after the Jinchuan war the provincial treasury of Sichuan was depleted (*fuku kongjie* 府庫空竭), but he does not attribute the high expenditure to military spending but to the squandering by Fukang'an (d. 1796), Prince Wenxiang 文襄王. Only by

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<sup>26</sup> *Qingshilu: Gaozong shilu* 1141, fol. 21b-24b (QL 46/9/dingmao).

<sup>27</sup> *Qingshilu: Gaozong shilu* 1261, fol. 9b-13a (QL 51/r7/gengyin).

<sup>28</sup> *Qingshilu: Gaozong shilu* 1210, fol. 18a-18b (QL 49/7/guihai).

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exercising strict austerity the new governor-general was able to put the finances of the province on an even keel.<sup>29</sup>

During the last years of the Qianlong reign Grand Secretary-Minister Yin Zhuangtu 尹壯圖, who had a long experience as a censor, suggested checking minutely the accounts of the provincial treasurers because in many provinces the treasuries were empty (*kuikong* 虧空). Yet the emperor, priding himself that he had never dispatched a member of the State Council for checking the provincial treasuries, sent out Yin Zhuangtu himself, together with Qincheng 慶成, Vice Minister of Revenue, to check if the rumours of empty provincial treasuries could be substantiated. As it turned out everything was in the best of orders and nothing had changed since the Kangxi reign, neither in the provincial treasuries nor in the state granaries throughout the provinces, and accordingly the respective provincial administration commissioners (*buzhengshi*) responsible for the treasury were rewarded for their dutiful work.<sup>30</sup>

The state finances therefore seemed to be at their best, and it was neither necessary to raise taxes nor to summon the rich entrepreneurs to deliver contributions as during the war—at least not on the national level. Li Shijie 李世傑 for example, governor-general of Liang-Jiang (Jiangsu, Anhui and Jiangxi, QL 51 – 52 [1786 – 1787]), suggested to proclaim a contribution campaign when the Yellow River had flooded a vast region along the Grand Canal, to provide funds for emergency relief and reconstruction. The emperor, as was to be expected, refused to do so, this time with the argument that the sales of offices *per se* was not good politics, (*na zi shou guan ben fei shan zheng* 納貲授官本非善政), but also with the comment that during the ten years since the end of the second Jinchuan war no contribution campaign had been carried out, at least not such a large one. In Chapter 6.2 it has been seen that also later wars were financed by contributions. There was, as the emperor stressed, enough money in the state treasury. Furthermore, there were actually no offices or licences available to be granted to the donators, the more as there were still persons who had donated during the Jinchuan war without yet having obtained office or licence (*shang you wei jing quan yong zhe* 尚有未經銓用者). These persons had to be served first before additional candidates for offices or licences could be accepted, because otherwise new donators would have to wait ‘till they went grey’ before their turn came (*zhi haoshou bude yi deng shiji* 至皓首不得一登仕籍). Too many contributors becoming officials (*zilang* 貲郎 ‘capital

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<sup>29</sup> *Xiaoting zalu* 4, p. 105. Fukang'an during his reign as governor of Sichuan and Guangdong-Guangxi did misappropriate government funds to such a high degree that he is often compared with Heshen.

<sup>30</sup> *Qingshilu: Gaozong shilu* 1371, fol. 25b-27a (QL 56/1/yisi).

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officials') would obstruct the way for regular candidates passing the state examinations.<sup>31</sup> Concerning the contributions, the emperor expressed his general fear for the human quality of the contributors. Regular, permanent contributions (*juanna*) delivered to the Directorate of Education should be presented in person by the contributors, and it should not be possible to send a representative (*qian ren dai juan* 倩人代捐). Contributors should be members of respectable families.<sup>32</sup>

A few years before abdicating the Qianlong emperor proclaimed a kind of 'fiscal testament', stressing anew that all money collected as taxes actually belonged to the people and should be used for their sake. Only through such a policy would it be possible for the dynasty to last forever. With view to the contributions he said that for twenty years no more contribution campaigns had been carried out. The state treasury was nevertheless full and there were enough regular candidates qualified to fill vacant posts. He explicitly warned his eventual successors against contribution campaigns, although he himself had used this means several times in order to raise funds for wars and the construction of dykes, dams and canals. 'If ever again there should be [a minister] suggesting to raise funds through a contribution campaign with the argument that it will be of outstanding profit (*li* 利) [for the government], this person shall be reprimanded and his suggestion not be accepted.' Only the regular *juanna* contributions shall be adhered to because they have proved their value since ancient times. Those were 'the great guidelines and the great law: to make use of [talented] persons and to love the people' (*yong ren ai min zhi dajing dafa* 用人愛民之大經大法).<sup>33</sup>

The image the Qianlong emperor has left of himself, his empire and his reign shows him to have been a very self-complacent person. He has succeeded in doubling the financial reserves without resorting to any extraordinary means. He also exercised commendable restraint when it came to raising funds by contributions, and in his 'fiscal testament' he almost seems to be sorry to have made use of this method at all. He was also able to exert very bounteous tax politics and in a position to waive the taxes of the whole empire several times. Like the population, the state income seemed to have increased naturally during his long reign: The budget of the Ministry of Revenue, the treasury of the Imperial Household Department, and the provincial treasuries were full, even if he spent millions and millions for disaster relief, the construction of dykes, or for wars. This image of his finances is exactly parallel to the emperor's self-portrayal in other spheres of government. He described himself as the ruler of

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<sup>31</sup> *Qingshilu: Gaozong shilu* 1261, fol. 9b-13a (QL 51/r7/gengyin).

<sup>32</sup> *Qingshilu: Gaozong shilu* 1305, fol. 26a-27a (QL 53/5/gengyin). The document cites the case of a seal counterfeiter.

<sup>33</sup> *Qingshilu: Gaozong shilu* 1441, fol. 3a-5a (QL 58/11/yiyou).

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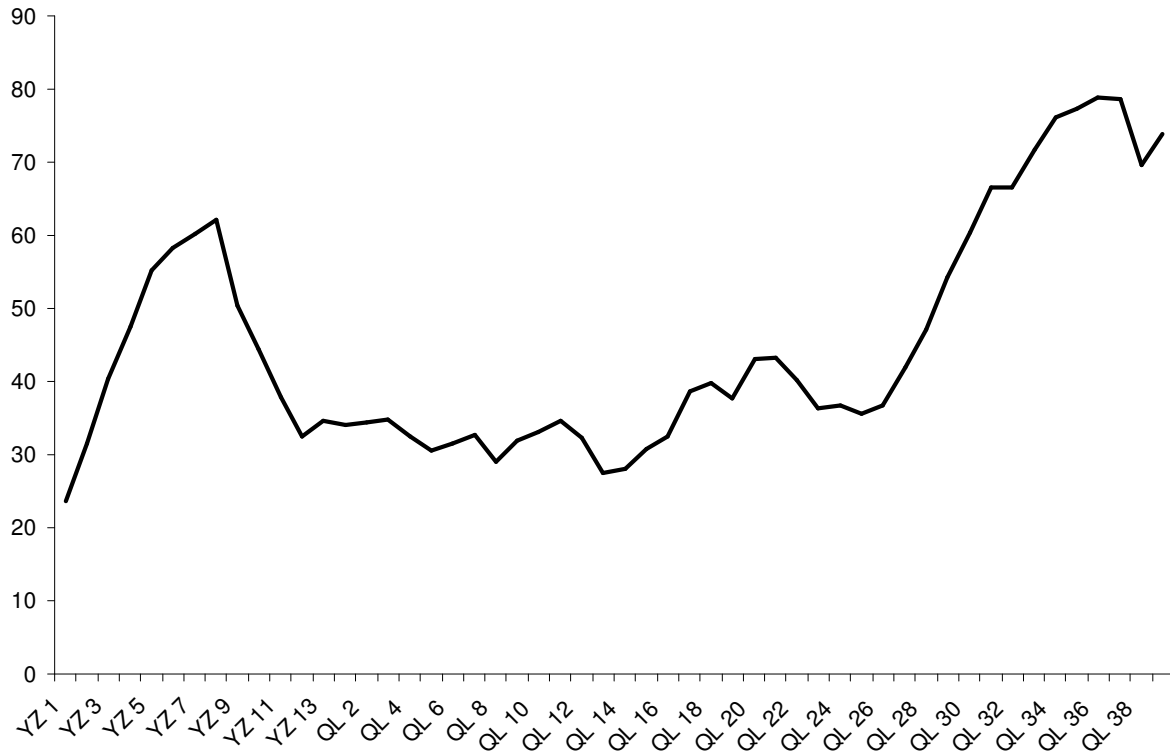
the world's largest empire to whom all neighbouring states at the periphery were subservient. Within his realm he was the undisputed overlord of all peoples, races and religions, for whom he acted as the all-embracing patron, governing all and penetrating everything and rendering happy all his subjects by his boundless benevolence. As a personification of the polar star and the wheel of the Buddhist teaching he would hold together the whole world which he had harmoniously assembled in all respects (including the state finances). After his death the world will, once regulated and then set into motion make its perfect way for ever and ever.

## 7.2. The Financial Situation of the Empire

But let us return to reality. The 60 to 70 million *liang* the emperor speaks of were the reserves of the Ministry of Revenue. There is one source providing the real figures of this monetary balance, a short 'brush record' (*biji*) type book written by the Mongol Faššan (Chinese transcription Fashishan 法式善) called *Taolu zalu* 陶廬雜錄 'Miscellaneous notes from the Potter's Hut'. Unfortunately the figures are only supplied until the year QL 39 (1774) so that a possible impact of the second Jinchuan war on the balance of the Ministry cannot be observed (after all we have learned there is still the question if there was any impact at all). Diagram 7.1 shows the balance or silver reserves (*shizaiyin* 實在銀) from the year YZ 1 (1723) until QL 39 (1774). In contrast to the edicts discussed above it cannot be seen that there was a lot a considerably higher amount of money during the Qianlong reign as compared to what existed during the reign of his father, the Yongzheng emperor. There was indeed a great deal of money 'in store' already during the Yongzheng reign, which decreased to a level of about 35 million *liang* on average during the first 30 years of the Qianlong reign. Only from QL 30 (1765) on there was more money left over than before, leading to the conclusion that the emperor from that time on spent less than before, in other words: money was saved, and not wasted.<sup>34</sup> If any war had an impact on the fiscal reserves this could have been—but this is far from certain—the first Jinchuan war (in QL 13 – 14 [1748 – 1749]) or the war against the Muslims in Kashgar and Yarkand in QL 24 (1759).

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<sup>34</sup> *Taolu zalu* 1, pp. 24-26.



7.1. Diagram: Balance of the Ministry of Revenue 1723 – 1774 (figures in million liang)

Source: *Taozu zalu* 1, pp. 24-26.

The financial problems of the Qing state in the second half of the 18th century were not that the state treasury ran out of money. The fault lay rather in that too much money was spent on non-productive items which would benefit neither the state economy nor the state treasury in the long run. Typical for this kind of financial policy was that the administration had not learned from its problems until the late 19th century, when it was too late. Part of this expenditure were, for example, the large sums spent on the standing army thought to protect the empire within and against enemies from outside. Right after the second Jinchuan war, for example, the garrisons in Shaanxi and Gansu were increased by 13,000 troops, and those in the Capital by 5,000.

The reasons for the decline of the Qing at the end of the Qianlong reign have been discussed by many scholars, and it would be superfluous to reiterate them here. But some points should be highlighted nevertheless within the frame of the present research. It has been mentioned several times that the central government was pitiless to officials who presented wrong accounts and who were accused of having falsified figures to enrich themselves. In those cases the private property of the persons charged was confiscated, or, when dealing with smaller sums, the amount due was subtracted from their salary. From top-level officials in the provinces down to common soldiers the government showed no mercy and claimed back money owed even years after the Jinchuan war was finished. The sum of 3.5 million *liang*

which after the war had to be paid back to the government by officials of all ranks, and which was graciously waived by the emperor, amounted to five per cent of the total cost. This shows the proportion of the private debts of officials to the state. In the previous sub-chapter, too, it has been mentioned to what extent the emperor had financed his activities by his officials, which means that he bled his officials white instead of financing state activities from the state treasury. In this respect the Qianlong emperor was a ruthless legalist: broad-minded to the population, he mercilessly suppressed his officials. It is easy to guess the outcome of such a policy. If the state did not pay out the greater part of the salary, namely the *yanglian* pay (the anti-corruption pay), or claimed it back, the official concerned would automatically look for other sources for an adequate income. An extreme example was the misappropriation of contribution money (*juanna*) by officials in the province in Gansu, which was revealed in QL 46 (1781). According to established scholarship the bad example given by officials in the central government played an important role in the widespread corruption that was rife during the late Qianlong reign.<sup>35</sup> While officials in the local government, from governors-general down to magistrates, were punished severely for all misdoings or alleged misdoings, members of the central government could misappropriate large funds of money with impunity. The most famous example of corruption, prodigality and favouritism in the Capital is the case of Heshen 和珅 (1750 – 1799) who, as a protégé of the emperor, was even able to dominate the government. And Heshen was not the only one during the long Qianlong reign, there were, apart from Neqin, Fuheng, Yu Minzhong, Agui (who at least was a very competent official) and Fukang'an.

Arbitrariness and injustice alienated all his officials from their master, the emperor. It has been seen how Fuheng was honoured with the highest privileges during the first Jinchuan war, even before earning his laurels: The emperor in person helped him on his horse and had him accompanied with the imperial banner to the outer districts of Beijing. What pompous state rituals were organised to welcome the victors of the second Jinchuan war in the Capital! What high honours rained down upon the victorious generals who were made dukes and marquesses! On the other hand the many lower officials must be seen who were stripped off their ranks and had to do their duty in the supply lines without any salary, only because they had 'misappropriated' smaller sums of money. Not all of them could hope to be reinstated into their former position and to be entered again into the government's payroll because of 'good conduct'. The documents of the *Jichuan dang* contain many cases in point. High officials could fall victim to the emperor's search for a scapegoat, like Artai, who was forced to

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<sup>35</sup> Xiao (1963), Vol. 2, p. 217.

commit suicide,<sup>36</sup> but most of them were lower-ranking officials. Come to think of it—was this not also a method of the Qianlong emperor to reduce the costs of the war?

The increase of corruption among the military, especially after the second Jinchuan war, was also due to the reform undertaken by the Qianlong emperor in 1781 who ordered to fill posts which hitherto had been left vacant (*kong'e* 空額 ‘unfilled ranks’). The money allotted to those posts could be used by the other troops (*shi'e* 實額 ‘really [filled] ranks’). The reform had the effect that on the one hand the fighting power of the troops rose because now a garrison of nominally 2,000 men had really a strength of 2,000 men, but on the other hand there was less money left for each man, meaning less income and the need to look for other ways to cover expenditure. As has been seen, it was the duty of each individual soldier to care for his weapons and his clothes (Chapter 4.4). Another part of the reform was the ending of a government allowance which had helped the troops to engage in commercial activities to raise their income. This allowance, called *yingyun shengxi* 營運生息 (‘generating profits through entrepreneurial operation’), had been introduced in 1729 and was now given up, a fact which aggravated the new financial shortage of money among the troops throughout the empire.<sup>37</sup> Filling the vacant posts meant an increase of the fighting force by 60,000 troops, without it costing the government a penny more in theory. But we have seen above that this in reality resulted in an extra annual cost of 3 million *liang*. Yet at the same time the emperor extended the *yanglian* (the anti-corruption pay) to the officials of the Green Standard troops, which meant that state expenditure rose by 2 million *liang* annually.<sup>38</sup>

While the troops regularly participating in campaigns had enough possibilities to increase their income through the march-and-baggage pay, the salt-and-vegetable pay they received monthly, and the many ad-hoc rewards they could obtain, the troops in the eastern provinces had no such opportunities. They also had no fighting experience, no veterans and were therefore less motivated to be involved in action in case of a conflict. During the second Jinchuan war the ad-hoc rewards (*shanghao* 賞號 or *shangxu*) had cost the state about 1 million *liang*.<sup>39</sup> Such a large sum shows that those kinds of reward could not be justified as an incentive—they were nothing but lavishness by which the troops tried to enrich themselves. Therefore the emperor said, when ordering the compilation of the rules for war expenditure, the *Junxu zeli*:

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<sup>36</sup> *Qingguoshi: Dachen zhengbian* 147, pp. 924-925.

<sup>37</sup> See Dai (2005).

<sup>38</sup> More about this problem can be found in Dai (2009(1)).

<sup>39</sup> The total expenditure for rewards and compensations was 1,491,312 *liang*.

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‘The precedents for military expenditure from all provinces will be checked and rules will be fixed so that every [province] has something to adhere to [in the future] and it does not result in complications. This will also be something that must be called for in peacetime, in order to be ready to fend off misfortune [i.e. war]. Let us look, for example, at the ad-hoc rewards paid out in Sichuan [during the Jinchuan campaign] which were totally superfluous. [The normal case is the following:] For those of the officials and their staff following the army (*sui zheng yuan-bian* 隨征員弁) displaying all their abilities and achieving merit, it is ordered that the credits of all of them have to be checked by the responsible generals and commanders, [that they were] categorised as having achieved extraordinary merit (*chaodeng* 超等), primary merit (*toudeng* 頭等), or second-class merit (*erdeng* 二等), and that [these lists] be handed over to the Ministry [of War], which then proposes appropriate rewards (*shang* 賞) and rankings (*xu* 敘) for each individual (*fenbie yi shang yi xu* 分別議賞議敘). Common troops etc. are also normally given an extra pay of one monthly [salt-and-vegetable pay], and those among them who surpass the others in bravery, are promoted to a [better] position and are furthermore rewarded with a *baturu* title and can also be conferred a peacock feather (*hualing* 花翎) or a pheasant feather (*lanling* 藍翎). By these measures We stimulate those with a martial spirit which is really sufficient to the utmost! What is the use of any further ad-hoc rewards in the camps? From now on, this practice is to be discontinued!’<sup>40</sup>

With these words the emperor meant that troops were only to be given rewards when they had really achieved merits justifying such a reward. The rewards, for example, paid out by Fude near the end of the war, had no concrete justification and were presented as an incentive for the final assault, but could be—and were—interpreted as unjustified enrichment. Fude therefore had to bear the cost of these expenses from his private property, and was executed. It would surely be exaggerated to say that the second Jinchuan war ruined the state treasury or was the first step in that direction. It was rather the case that due to an inadequate financial administration corruption and self-enrichment had become rampant throughout the whole bureaucracy in the course of the second half of the Qianlong reign. Corruption was partly the consequence of the officials being underpaid, especially in local government, whose members on the one hand faced the problem that they had to find the money necessary to cover their expenses (Scylla), while on the other hand there was the permanent danger of being dismissed and punished for incompetence and misappropriation (Charybdis). It was far from certain that the state ship would be able to navigate through such dangerous straits. The officials in the central government followed the example of the emperor, who kept speaking of a full state treasury and at every opportunity displayed the lavishness and prodigality which was the trademark of his rule. Thus the expensive Jinchuan war rather expressed the circumstances of its time than moulding them.

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<sup>40</sup> *Junxu zeli*: [Preface], fol. 1a-2a (edict QL 41/4/6).

### 7.3. The Province of Sichuan after the War

According to Zhou Xun 周詢 the province of Sichuan disposed of a tax income (*ku cun ping yin* 庫存平銀) of 1.8 million *liang*.<sup>41</sup> Setting this sum against the population numbering about 20 million during the Qianlong reign, the annual tax burden per head was no more than 0.1 *liang*. At the beginning of the Qing period, nevertheless, as Madeleine Zelin demonstrates, the province of Sichuan had to deliver a rate of only 41,996 *liang* in tax.<sup>42</sup> This means that firstly the tax income of the province during the first 100 or 150 years of the dynasty increased enormously, and secondly that—as already stated in Chapter 6.1.—there could be considerable discrepancies between the rates of assessment and the real tax income.

The annual tax income of the province was composed of the combined field-and-poll tax (*diding* 地丁) amounting to 680,000 *liang*,<sup>43</sup> of the meltage loss surcharge (*yi-wu huohao* 一五火耗), levied at a rate of 15 per cent on the field-and-poll tax and amounting to 110,000 *liang*, customs (*guanshui* 關稅) and miscellaneous taxes (*zashui* 雜稅) of 100,000 *liang*, the land transfer tax (*qishui* 契稅) of 70,000 *liang*, and the salt tax (*yanshui* 鹽稅) with 800,000 *liang*. From the 1.8 million *liang* of income 480,000 *liang* were annually sent to the Capital to be used for officials' salaries (hence called *jingxiang* 'Capital salary'); 130,000 *liang* were spent as salaries for officials in the province itself, including the *yanglian* salary (the anti-corruption pay) of the civilian staff; 1.2 million *liang* were the cost of the military in the province of Sichuan, most of which was spent on the salaries of the staff and for the horses (*magan*). Setting off the income against the expenditure, it can be seen that virtually nothing was left, let's say, for investment in infrastructure. The money sent to the Capital, made its way in four three-monthly instalments of 120,000 *liang* each. The absence of capital was made even more perceptible as the money was not remitted via a bank account or a kind of bill of exchange (*piaobang* 票幫)—which only became the common method in the late 19th century—but transported physically as silver ingots (*shengyin* 生銀) to Beijing, protected by escorts provided by local government (compare Chapter 6.3).

Since the regular military spending gradually increased from the end of the Qianlong reign the provincial government was looking for new sources of income to cover this new expenditure. From the Guangxu reign (1875 – 1908) onwards a special kind of files was opened in order to make sure that or rather to control if this new income of the provincial treasury was really

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<sup>41</sup> *Shuhai congfan* 1, fol. 27a.

<sup>42</sup> Zelin (1984), p. 28.

<sup>43</sup> Wang (1973), Table 27, estimates 659,000 *liang*.

assigned to the military budget and nothing else. The new methods for obtaining a higher tax income were a rise in the field-and-poll tax and the *jintie* transport surcharge, or simply a higher amount to be paid for offices or rank licences that could be bought (*juanna*). Concerning the latter, the government applied a higher pressure to officials to take part in the regular contributions for various purposes (*tanjuan zakuan* 攤捐雜款), like repairing city walls, constructing dykes or relieving the population at times of a poor harvest. Another method was to raise the *lijin* tax, the salt tax or land transfer tax.<sup>44</sup>

Yet all those measures were implemented very much later and within the framework of general reform in the second half of the 19th century. They were no consequence of the high cost of the second Jinchuan war but were only brought into being when the general financial situation of the empire became destabilised.

The great need of labour during the second Jinchuan war at first had a positive effect on the population of the province: For a certain time the problem of roaming bandits, members of the so-called *guolu* (*guolu liufei* 嚙嚙流匪, also called *guoluzi* or *guofei*) who had been a threat to public safety from the early 18th century onward seemed to be solved. Members of the *guolu* went to Jinchuan and found work in the supply lines carrying rice and other goods from one logistics station to the other. At least during the first two years of the campaign there were no greater problems with roaming bandits in Sichuan, and when some of them were still discovered by accident (*ou you cun liu* 偶有存留), commissioner of justice (*niesi*) Gu Guangxu 顧光旭 would exterminate them.<sup>45</sup>

But there are other documents that tell a different story. When it had to be decided what troops could be dispatched to the front it was necessary to deliberate what districts could be left without military protection. In many prefectures and districts of Sichuan it was necessary to maintain a certain amount of troops to keep down the *guolu* bandits. But it was likewise not possible to empty the garrisons of Guizhou because in that province there was always the danger that the unruly Miao tribes would stage a rebellion.<sup>46</sup> Especially during the second half of the campaign the homeless and jobless *guofei* bandits found out that the supply lines of the imperial troops did not only offer an opportunity to earn money but that it was much easier to obtain goods without working. Thus the bandits started robbing logistics stations stealing rice, gunpowder, bullets, and so on. Even silver transports were at risk.<sup>47</sup> At first the authorities seemed surprised that the bandits were not natives but 'brigands from within the

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<sup>44</sup> *Shuhai congtao* 1, fol. 27a-28b.

<sup>45</sup> *Pingding Liang Jinchuan fanglüe* 55, fol. 11a-11b (QL 38/r3/renxu).

<sup>46</sup> *Pingding Liang Jinchuan fanglüe* 52, fol. 7b-9b (QL 38/3/guisi).

<sup>47</sup> *Pingding Liang Jinchuan fanglüe* 114, fol. 16a-16b (QL 40/2/jiachen).

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empire' (*neidi jianmin* 內地奸民) who were identified as members of the *guolu*. Because the *guolu* did not hesitate to make use of force and even severely wounded an official, captured bandits were immediately executed, the more as they were not arrested on imperial territory where it would have been necessary to make them undergo a trial.<sup>48</sup> The homeless bandits even brought with them their families which shows that greater social problems were developing in Sichuan and the neighbouring provinces which led to the uprooting of entire communities.<sup>49</sup> Further reports not to be found among the official history of the second Jinchuan war demonstrate that theft and robbery were frequent incidents in logistics stations.<sup>50</sup> The greatest part of the *guolu* did not come from Sichuan but from Hubei, Hunan, Shanxi, Guangdong, and even from the coastal province of Fujian. Within two months, for example, 3,000 people had migrated to Sichuan. In the beginning the governments of these provinces tried to rely on a concerted action among each other by sending them back to their homelands. The Sichuan government ordered to check if persons coming to Sichuan really had families and an income, and only to those it should be allowed to settle on Sichuan territory.<sup>51</sup> In order to forestall unchecked immigration into the Sichuan border region and to prevent the *guolu* leaders from recruiting followers it was ordered to set up better registers for the population in the villages in the border regions, organising them in village militia (*baojia* 保甲) with a militia head (*kezhang* 客長) who was responsible for the household register of his village. Unregistered persons would then easily be recognised because they were not given a mark to be attached to the door of their dwellings (*menpai* 門牌).<sup>52</sup> But this method was soon given up and the immigrants were generally classified as *guolu* who should be exterminated in the same way as members of millenarian sects (*xiejiao*) or the 'bandit chief' (*qiuxiong* 酋凶) of Greater Jinchuan, the *Shaloben*. Yet the latter had to be subdued first before the task could be undertaken to 'destroy the *guolu* root and branch' (*jin jue gen zhu* 盡絕根株).<sup>53</sup> To do this regular troops from the garrisons combed through the hill regions in which the *guolu* dwelled and recruited their followers. It was estimated after the first Jinchuan war that the problem with the *guolu* could be solved within one or two years, which indeed seemed to be possible because in the 1750s a large amount of those people found a job in the mines opened during that time, like the copper mine in Laodonggou 老洞溝 in the district of Leshan.<sup>54</sup> Yet their

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<sup>48</sup> *Jinchuan dang* QL 40/III/00025 (QL 40/7/7).

<sup>49</sup> *Jinchuan dang* QL 40/III/00041 (QL 40/7/17).

<sup>50</sup> *Jinchuan dang* QL 40/IV/00289 (QL 40/12/17); 00329 (QL 40/12/26).

<sup>51</sup> *Qingshilu: Gaozong shilu* 251, fol. 6a-6b (QL 10/10/wuwu).

<sup>52</sup> *Ibid.*

<sup>53</sup> *Qingshilu: Gaozong shilu* 289, fol. 46a (QL 12/4/jichou); 354, fol. 25b-26b (QL 14/12/dinghai).

<sup>54</sup> *Qingshilu: Gaozong shilu* 369, fol. 27b-28b (QL 15/7/gengwu); 389, fol. 1b-2a (QL 16/5/guichou).

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numbers were too large to be absorbed in total. The more aggressive among them were equipped with firearms making it possible to defy the imperial troops in skirmishes. Therefore they could not any longer be termed ‘bandits’ (*daozei* 盜賊) endangering public security but were labelled ‘rebels’ (*panni* 叛逆) challenging the government, who could be punished much more severely than the former.<sup>55</sup> *Guolu* arrested by the troops therefore were also treated as rebels and were made slaves of the Ölöd Mongols in the far west, in Ili. Their character as rebels even led to a comparison with Wang Lun in the province of Shandong in QL 39 (1774).<sup>56</sup> He had, by the way, been a preacher of millenarian teachings (the ‘Pure Water Sect’, *qingshuijiao* 清水教), similar to the White Lotus rebels. The *guolu* leaders nevertheless did not develop political programmes, nor did they try to proclaim a dynasty as many other rebels did, although at least some of them preached religious teachings and were thus clearly connected with the millenarian pseudo-Buddhist White Lotus sect roaming the borderland of the provinces of Hubei, Hunan, Guizhou and Sichuan.<sup>57</sup> These circumstances crystallised just during the second Jinchuan war, when Wenshou took over the post of governor-general of Sichuan. As such he had the duty to suppress the rebellion, together with his colleagues in the neighbouring provinces. The movement had spread to the whole region and even reached districts in the province of Shaanxi, but posed a particularly serious problem in eastern Sichuan and western Hubei.

Yet contrary to expectations the half-million of porters made redundant after the end of the war did not swell the numbers of the *guolu* bandits. As a matter of fact the problem of the *guolu* is rarely mentioned in the years after QL 41 (1776). Only five years later, in QL 46 (1781), the *guolu* rebels became a serious problem for the government in Sichuan. Before, their groups had comprised a dozen people or so but now they formed mobs of more than a hundred and thus were able to loot villages and even to fight back against government troops. Their leaders wore the caps of government officials, were carried in sedan-chairs and rode horses.<sup>58</sup> All efforts of the local government to check the influx of immigrants and to suppress the movement had next to no effect. The emperor therefore looking for a scapegoat, found him, as was to be expected, in Wenshou, who was banished to Ili. Instead of developing a better method to solve the problem or to quell the uprising the government only half-heartedly reacted to the challenge. This kind of hollow yet rhetorically bombastic politics found its probably most significant expression in the idea to replace the character 國 (the *guo*

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<sup>55</sup> *Qingshilu: Gaozong shilu* 955, fol. 6b-7b (QL 39/3/yihai).

<sup>56</sup> *Qingshilu: Gaozong shilu* 1136, fol. 13b-14b (QL 46/7/bingwu).

<sup>57</sup> *Qingshilu: Gaozong shilu* 977, fol. 23a-23b (QL 40/2/dingwei).

<sup>58</sup> *Qingshilu: Gaozong shilu* 1139, fol. 18b-20a (QL 46/8/xinmao).

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of *guolu*) with the character {口+囙} (read *hu*) because the former bore too much similarity to the character and word *guo* 國 ‘state, nation’ (or even ‘dynasty’). From then on, the *guolu* became *hulu* in the official documents.<sup>59</sup> The emperor’s order to change character and spelling of the movement’s name can be understood from one viewpoint: The *guolu* leaders cut off their queues (*bianzi* 辮子; better known as the Chinese ‘pigtailed’), a sign of the Chinese being subjects of the queue-wearing Manchus. Their movement was therefore not only the result of poverty and supported by a religion classified as heretic, but at the same time anti-Manchu and therefore to be suppressed ruthlessly.<sup>60</sup>

Yet this did not solve the social problem. The White Lotus movement, of which the *guolu* became a part, dominated the whole region, and only in 1796, after the abdication of the Qianlong emperor and the downfall of the Heshen clique the Qing government decided to fight them in a regular war. The White Lotus war was the longest and most expensive war the Qing emperors fought until the end of the Jiaqing reign. The expenditure for this war revealed the decay of the old military, political and social systems.

It is probably not quite correct to say that the end of the second Jinchuan war led to a higher rate of unemployment in the province of Sichuan,<sup>61</sup> with the only solution for the jobless to form bandit groups with leaders preaching religious beliefs to mobilise and motivate their followers. It should rather be seen from the other side, namely that the long Jinchuan war (which was not the only one of those decades) in the first instance helped the land- and jobless to obtain an opportunity to earn money. Seen from this point of view the military activities of the Qianlong emperor offered a short-time solution for the problem of the increasing population of the 18th century. From the observations described above it becomes nevertheless clear that the empty garrisons in the provincial territory deprived the local government of an important tool to suppress banditry. In other words: The second Jinchuan war was, of course, not the reason for the high population growth and the subsequent problem of unemployment, but it contributed to the deterioration of internal security because the troops from the garrisons could not fight against the bandits but instead were campaigning in the wilderness beyond the imperial borders. Programmes for job creation implying important government investments as e. g. in the building and construction trade are of modern origin and are mainly based on industrial activities as in President F. D. Roosevelt’s New Deal

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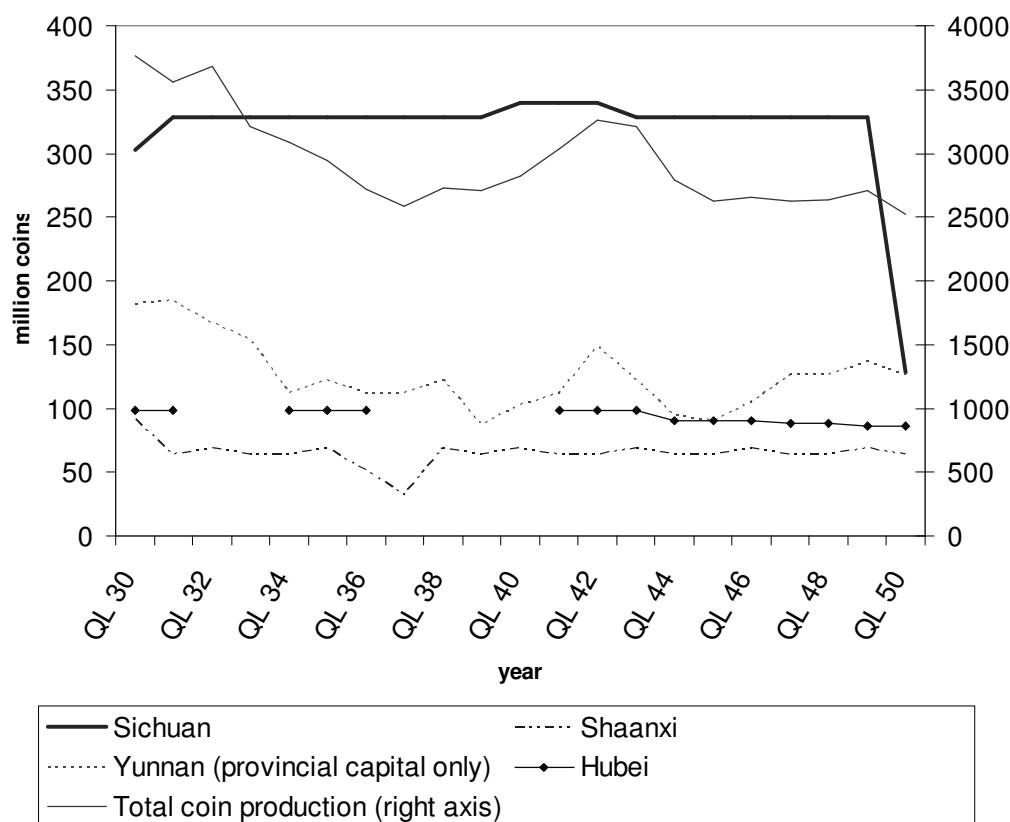
<sup>59</sup> *Qingshilu: Gaozong shilu* 1305, fol. 12b (QL 53/5/wuyin). The word *hulu* sounds like ‘gourd’ (葫蘆) or ‘barbarian captives’ (胡虜); yet the character {口+囙} has also the connotation of ‘barbarian’ and ‘dewlap of a cow’; the meaning of the latter is actually nothing else than the original character, meaning ‘the sound of swallowing’. Compare *Hanyu da zidian*, Vol. 1, pp. 641, 676.

<sup>60</sup> *Qingshilu: Gaozong shilu* 1139, fol. 20a-20b (QL 46/8/xinmao).

<sup>61</sup> Xiao (1963), Vol. 2, p. 297.

programmes. To reproach the Qianlong government that it was concerned with war and the fight against banditry instead of planning a large-scale programme of job creation would mean to apply standards of the present to the past.

When a government is in financial distress a simple method to ease the payment of debts is to issue more money. It might therefore be assumed that the Qing government throughout the country, or at least in one province or the other had more coins minted in order to facilitate payment of the troops or the purchase of food. A set of figures for coinage throughout the empire has been collected by Werner Burger. The respective figures have been transformed into Diagram 7.2. An increase in the total coin production in the years QL 40 to QL 44 might indicate that the state issued more copper money to be able to repay its debts faster. But firstly, the government did not have any debts (see Chapter 7.6), and secondly, any debts made by or owed to the government would have to be paid in silver, and not in copper cash. The rise in the total coin production can therefore mainly be traced back to the rise in the mint casting made in the provincial capital of Yunnan, which had other reasons than creating a higher (and artificial) liquidity for the government. Other provinces involved through dispatching large contingents of troops, like Shaanxi and Hubei, likewise did not issue more coins, because they, too, had to pay out silver to their troops to fund the march-and-baggage pay, and not copper coins. In Hubei the amount of coins issued even decreased marginally during that period. The only slight, but still clearly visible, increase in coin production occurred in the province of Sichuan. This slight increase of no more than 3 per cent which only occurred during the years QL 40 to 42 (1771 – 1773) might have had to do with higher prices for commodities as a result of the higher demand during the war. But the small proportion by which coin production was raised and the short duration show that price increases in effect during the war dropped to a normal level when it was over and that they had no substantial long-term impact on local price structures.

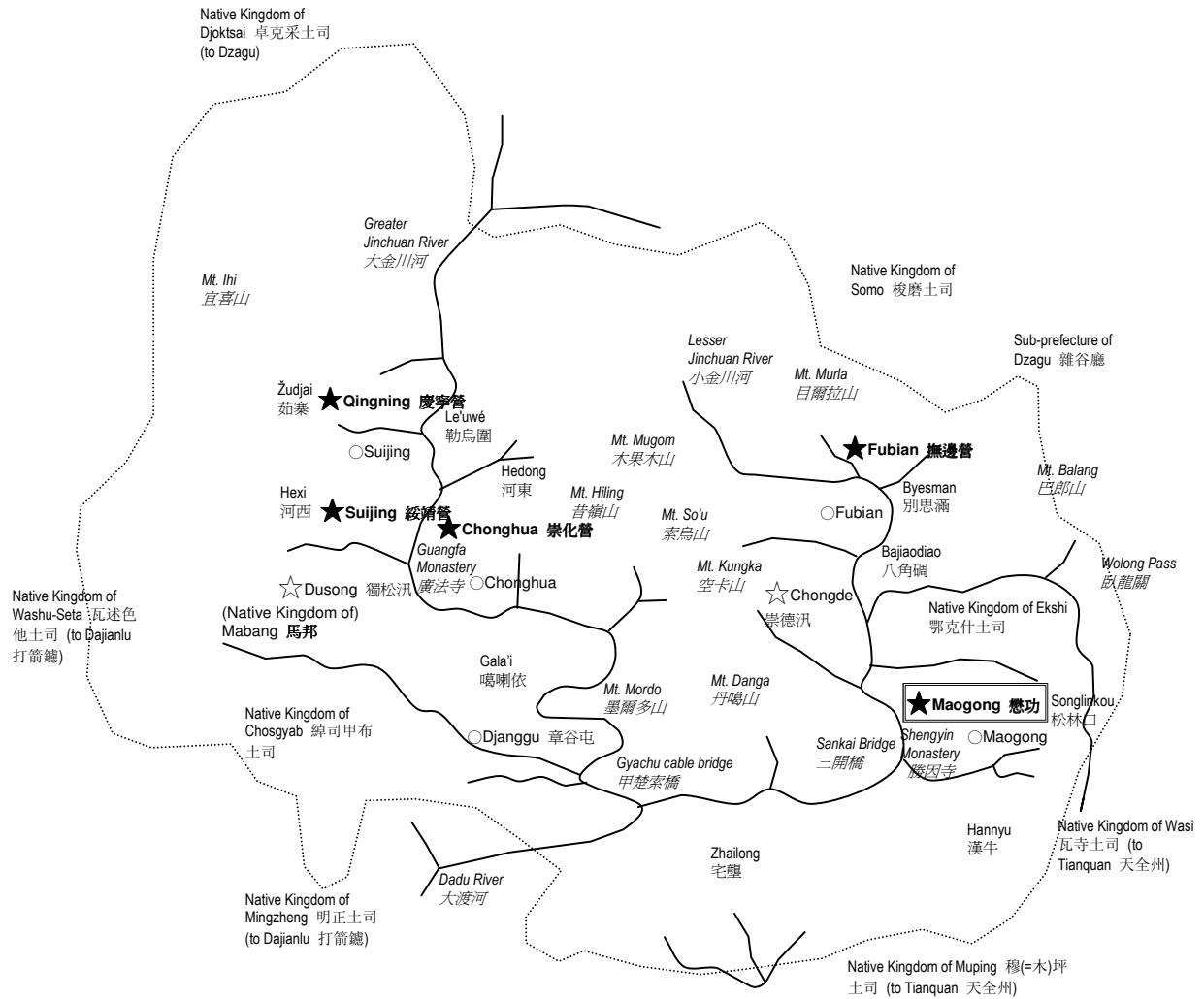


7.2 Diagram: Copper coin production QL 30 – QL 50 (1765 – 1785) of the empire and the provinces concerned

Source: Werner Burger, not yet published.

#### 7.4. The Sub-prefecture of Maogong

Chinese authors mainly stress the positive effects of the integration of the region of Jinchuan into the normal administration of Sichuan. The ‘normalisation’ (*guiliu* 歸流) of administration put an end to the ‘absolutist’ reign of the local kings and native barons who from now on could not any longer exploit their subjects by compulsory labour like the *ula* service mentioned several times. Instead, a Chinese official administered the sub-prefecture of Maogong (the seat of administration being located in the former village of Meno, respectively the modern town of Xiaojin). The authority of the central government in Beijing over the border region was thereby strengthened: The local autonomy in a tribute system of ‘loose reins’ was replaced by direct administration. The economic potentials of the region were released; literacy was promoted and the cultural level enhanced. This Marxist viewpoint (especially that concerning economy and social freedom) produces the same arguments as put forward for the modern liberation of Tibet from feudal despoty.



7.3 Map: The military colony sub-prefecture (tunwu ting 屯務廳) of Maogong. Garrisons (ying) are marked with a black star ★, military posts (xun) with a white star ☆, military colonies (tun) with a white circle ○.

Source: *Da-Qing yitong zhi* 423, fol. 1b-2a.

The conversion of the kingdoms of Jinchuan into a sub-prefecture (*ting*)—and not a prefecture (*zhou*) with districts—not only shows that Maogong was a less important border region of the empire (all sub-prefectures [better: second-class prefectures] were located in economically less developed regions and were normally directly administered by the provincial government as *zhili ting* 直隸廳) it is also a demonstration that it had to be observed with a higher attentiveness by the military administration. This can be seen in the large amount of garrisons (*ying* 營), military posts (*xun* 汛) and military colonies (*tun* 屯) dotting the landscape of the region (see Map 7.3). Nowhere else in the border regions was the network of garrisons as dense as in Maogong. Not even in Xinjiang, the notorious trouble spot in the far west, military colonies were established such a concentration. In the south-western border regions, in

Yunnan, Guizhou and Sichuan, no military colonies were established at all, except in the former Jinchuan area.

The five military colonies of Maogong (former Meno), Fubian (former Dimda), Djanggu, Chonghua (near Gala'i) and Suijing (near Le'uwé) were first administered by a rank 8 administration assistant (*zuo-za*), later by an aspiring magistrate (*houbu zhouxian*). That gave them the chance to prove their worth on this remote post. If they did a good job in administering the colonists and were able to deliver the taxes once every three years they could be rewarded with a position geared to their career level. There were exact regulations for this, as Zhou Xun tells in his book *Shuhai congtan* 蜀海叢談 'Collected notes about the ocean-[vast affairs] in Shu [i. e. Sichuan]', which was published in 1948. Candidates who had passed the state examination before taking office in Maogong could, after successful performance, move up in the line of aspirants waiting for a vacancy. A person waiting for the post of a sub-prefectural magistrate (*tongzhi*), for example, was promoted to appointee for the post of a prefect (*zhifu*); an aspirant district magistrate (*zhouxian* 州縣, i. e. *zhou zhixian*) was promoted to an aspirant for the post of a sub-prefectural magistrate. Three years of lacklustre service in remote and dreary Maogong could therefore be worth it, especially because the candidates did not have to work unpaid but obtained a regular salary, including the *yanglian* pay, and furthermore some emolument for expenditure incurred in the administration (*gongfei* 公費) of the area.<sup>62</sup>

The population living in the five colonies was classified according to five categories: First, soldiers with a family (*juanbing* 眷兵); second, soldiers without family (*danbing* 單兵); third, settlers or colonists (*tunmin* 屯民) 'voluntarily' coming to the barren region to be allotted a field for cultivation. The fourth category were called 'recruits from the colonies' (*tunlian* 屯練), mainly coming from Dzagu, who had participated in the war (see Chapter 3.1) and were now rewarded with a small estate in the conquered territory. The fifth category consisted of people from Jinchuan who had submitted during the war (*toucheng xianghua fanren* 投誠嚮化番人). Each family was allotted arable fields with a size of 30 *mu* (1.84 ha), unmarried soldiers were given half of that. The tax per *mu* was no more than 0.72 *sheng* annually. With a total cultivated area of 175,500 *mu* (10,800 ha) the sub-prefecture of Maogong delivered an annual tax of 1,290 *dan* of dry field crops.<sup>63</sup> According to other data the cultivated area of Maogong, including that of the administration units of Hannyu, Bajiaodiao and Zhailongtun 宅壘屯 was only 29,805 *mu* (1,800 ha), with an annual tax rate

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<sup>62</sup> *Shuhai congtan* 2, fol. 1a-1b.

<sup>63</sup> *Ibid.*

of 295.2 *dan* of ‘grain’ (*liang* 糧), which did not consist of rice but of wheat, barley, buckwheat and beans.<sup>64</sup> For this reason the tax grain was not shipped to Chengdu or another state granary (e. g. in Yazhou) but served to cover local needs. The tax revenue amounted to 0.98 *sheng* per *mu*, in the first case to 0.73.

The following figures indicate the total population of the sub-prefecture of Maogong around 1800 :

<i>colony</i>	<i>soldiers with family</i> [households]	<i>single soldiers</i> [individuals]	<i>Chinese settlers</i> [households]	<i>native settlers</i> [households]	<i>Jinchuan people</i> [households]
Maogong	70	507	432 (433)	50	233 (470)
Djangu	27	77	197 (197)	62	381 (302)
Chonghua	46	467	546 (943)	42	653
Suijing	34	828	938 (2,462)	16	601
Fubian	72	468	254 (254)	0	691 (511)
<i>total</i>	249	2,347	2,367 (4,289)	170	2,559 (1,283)

□ 7.4 Table: Population of the five military colonies in Maogong

Source: *Shuhai congfan* 2, fol. 2a-3a. Figures in brackets according to (Jiaqing) *Sichuan tongzhi* 65, fol. 35b-37b.

The local gazetteer (Jiaqing) *Sichuan tongzhi* lists only slightly different figures for the Chinese colonists who came to settle in Maogong during the first decades after the war (*luxu ancha min* 陸續安插民), yet for Suijing and Chonghua it only provides total figures for colonists, without distinguishing between Chinese and natives.<sup>65</sup>

At the beginning of the war the emperor had hesitated a long time before deciding to station occupation troops in the region. He feared that once the occupation troops would have left Jinchuan, the rebels would rise again. For the Qianlong administration the most convenient solution was to finally put the plan into practice that had often been proposed during the past decades: To convert the *tusi*-dom into a normal administration unit.<sup>66</sup> Exactly this had happened a few years earlier (QL 17 [1752]) with Dzagunao, which could therefore serve as a precedent of a sub-prefecture administering colonies (although the colonies were soon given up there). Another precedent was Xinjiang in the remote west with its old combination of occupation troops and colonists.<sup>67</sup> The decision to establish military colonies, where colonial troops (*tunbing* 屯兵) worked the fields and cared for security (*qie geng qie shou* 且耕且守) was made in autumn QL 38 (1773), after Lesser Jinchuan had been reconquered.<sup>68</sup>

The officials calculated that 4,000 to 6,500 occupation troops and the cost for the annual inspection tour of the general of Chengdu would set the state back by 70 – 80,000 *liang* each

<sup>64</sup> (Jiaqing) *Sichuan tongzhi* 63, fol. 37b.

<sup>65</sup> (Jiaqing) *Sichuan tongzhi* 65, fol. 35b-37b.

<sup>66</sup> *Jinchuan dang* QL 37/IV/00148-149 (QL 37/11/2).

<sup>67</sup> *Jinchuan dang* QL 40/III/00213 (QL 40/8/26). The first emperor to establish military colonies in the west was Han Wudi (r. 141-87 BCE).

<sup>68</sup> *Jinchuan dang* QL 39/I/00332 (QL 39/3/7).

year. To provide this sum necessary for the peace of the empire, the military spending in the eastern provinces could be cut. For those provinces, located on the ocean shore, there would be no danger from outside anyway (as people still thought at that time!). Yet the emperor, anxious about the security of the empire's heartland, refused to adopt this solution. Instead, he claimed, the officials had to develop a different cost plan without increasing costs at all. Only after no solution was found the emperor accepted the plan to increase the expenditure of the province of Sichuan. Because he had already spent 70 million *liang* on the war anyway, a further annual 70,000 *liang* would not make that much difference for the imperial treasury.<sup>69</sup> The new sub-prefecture of Maogong was therefore not even self-financing, though this was originally the reason for the existence for the creation of those colonies.

Apart from a limited amount of farmland and medical herbs there was nothing during that time the sub-prefecture could offer. Even the reports that there was gold in Maogong (it could not be an accident that the river Jinchuan was called 'Gold Stream') and the subsequent hopes of some officials to gain something that was of economic worth for the empire were frustrated by the emperor's fear that scum (*jianmin* 奸民) would flock to the region if prospecting and opening of mines was allowed.<sup>70</sup> In a protocol a native from Jinchuan confirmed that there was no gold in the region and that even the silver processed by expert silversmiths came from Tibet and was bought in Dajianlu.<sup>71</sup> Only in the late 19th century and the early Republican period private persons were allowed to open mines, like the enterprise Chuo-Kai kuangwu gongsi 綽凱礦務公司 (Ores Chuo-Kai Ltd.) producing gold, which was founded by Zhou Shanzhi 周善之 and Yin Tianxing 尹天星 from Shanxi in Juni 1913.<sup>72</sup> Here things came full circle, for in the year QL 38 (1773) merchants from Shanxi had assisted the state through paying contributions and supplying rice to the military camps. And at the same time another wheel comes full circle: Although Jinchuan/Maogong was a 'military colony sub-prefecture' until the end of the empire in 1911, in practice it had become a normal prefecture long before, with Chinese settlers, Chinese shops, Chinese temples and Chinese houses. The formerly native villages had been replaced by Chinese towns, as Western travellers at the beginning of the 20th century observed.<sup>73</sup> The policy of *gaitu guiliu*, to make Jinchuan a 'normal' part of the empire, or, to put it in modern terms, the *hanization* of the region, apparently seemed to have been a success. Yet in 1935 the region was again separated from the empire, this time as

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<sup>69</sup> *Jinchuan dang* QL 41/I/00312-327 (QL 41/3/12); 00337 (QL 41/3/15).

<sup>70</sup> *Jinchuan dang* QL 41/I/00186 (QL 41/2/13).

<sup>71</sup> *Jinchuan dang* QL 41/II/00123 (protocol).

<sup>72</sup> *Jinchuanxian zhi*, pp. 65-66, 565-566. The name of the company consists of two place names.

<sup>73</sup> Compare Tafel (1923), Teichmann (1922).



part of the new province of Xikang 西康, which was only dissolved in 1955.<sup>74</sup> Also in the spring of 2008 the region north of the old Jinchuan, Ngawa Tibetan Autonomous Prefecture, proved to be a sensitive spot of the empire, which still strives for uni(formi)ty and internal quiescence.

### 7.5. Changes in Accounting Procedures

When compiling the final account of the second Jinchuan war the officials regularly had to deal with cases when expenditure was claimed for which no precedents existed and therefore no rule was valid as to how much an object or a service was allowed to cost when paying government prices. There were also lots of cases when precedents from earlier wars were cleared with other figures than in the Jinchuan wars.

The enormous complexity of the general accounting (as demonstrated in Chapters 3 to 5) resulted in difficult investigations and debates lasting for years before the final account could be settled. As this situation was foreseeable the emperor had already in QL 41/4 (May – Jun 1776), immediately after the end of the war, ordered to compile a generally applicable canon for war expenditure.<sup>75</sup> This edict had not only been caused by the Jinchuan war but also by the military campaign against the rebel Wang Lun. Some officials had brought to account cost as war expenditure although quelling such a rebellion was to be defined as a constabulary campaign (*bu zei* 捕賊 ‘arresting bandits’), because it happened inside the country (*kounei*). The compilation of such a canon was indeed extremely complex because too many precedents had to be taken into consideration and rules had to be established for cases not having occurred until that date. Therefore the canon, the *Junxu zeli*, was only finished eight years later, in QL 49/2 (Feb – Mar 1784), and had to wait another year for its final approval in QL 50/2 (Mar – Apr 1785). But the practical experience of the following years showed that there were permanent violations of the newly promulgated laws, like the case of an official who first indulged in using a sedan-chair and then a private boat which he wanted to be paid for by public expenses.<sup>76</sup>

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<sup>74</sup> The first suggestions to create such a province were made in 1911. Yet already in 1906 a Grand Minister, an *amban*, took residence in Batang not far from the modern border of Tibet. This high official had the task to dissolve the last existing *tusi*-doms of that region, in order to strengthen the direct administration and thereby counteract the British aspirations to dominate Tibet. *Ba-Shu wenhua yu xibu Sichuan kaifa*, pp. 190-205.

<sup>75</sup> *Hubu junxu zeli*: [Preface], fol. 1a-2a. A first edict concerning the fixing of ‘ever-lasting’ (*yongyuan* 永遠) statutes was issued earlier. *Pingding Liang Jinchuan fanglüe* 133, fol. 23b (QL 41/3/guimao).

<sup>76</sup> *Hubu junxu zeli*: *Xuzuan*, fol. 1-5 (edict QL 53/7/29).

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Although the emperor's arguments to create such a canon for war expenditure were mainly that in the course of the Jinchuan war much money had been spent on ad-hoc rewards (*shanghao*) he also thought of creating a general law code (*zeli*) for all wars instead of further relying on precedent collections only made for one single campaign (*shili*). For the compilation of the *Junxu zeli* all precedent collections were investigated, mainly that of the western campaigns (*xichui* 西陲), that of the Myanmar campaigns and that of the two Jinchuan wars. The evaluation process is described in detail in the preface of the *Junxu zeli*. Sometimes the compilers chose one precedent regulation out of three possibilities, which from then on became universally valid, sometimes the average out of the precedent values was taken. Other regulations were simply retained from older precedents (when only one precedent rule existed), and other regulations were added, where no precedent rule existed at all. Each decision is justified in a commentary to the main text of the canon, which makes it possible to learn a lot about the precedents as well, even where the precedent rules have been lost. These comparisons between the precedent rules of the three campaign groups show that the second Jinchuan campaign had not in all respects been more expensive than the other wars. Also in this regard, the image of the Jinchuan war as an extremely costly military campaign cannot be upheld. Some examples will substantiate this assertion: The officers of the local auxiliary troops received 6 *liang* of march-and-baggage pay during the Myanmar campaigns, but in Jinchuan only 3 *liang*. The compilers of the *Junxu zeli* decided to adopt the higher value.<sup>77</sup> Physicians and map drawers taking part in the Jinchuan wars were given a family allowance (*anjiayin*) of no more than 5 *liang*, scribes were not given any family allowance or baggage pay at all, while in the Myanmar campaigns scribes received a baggage pay of 16 *liang* and in the western campaigns a family allowance of 20 *liang*. Physicians had even been granted a pay of 162 *liang* during the western campaigns!<sup>78</sup> Ferryman and boatmen were given 2 *liang* of monthly pay during the Jinchuan wars, but 3 *liang* and on top a monthly rice ration for their families during the western campaigns.<sup>79</sup> During the western campaign, the conversion rate for rice for the staff had been 8 *liang* per *dan* of grain, in Jinchuan—although the rice price in Sichuan had increased substantially—no more than 6 *liang*.<sup>80</sup>

In cases where the Jinchuan precedents were more expensive, this was not always due to the government squandering more money, but there were cases when it accepted to take over some cost which would otherwise have burdened the officials. A dead horse, for example, had

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<sup>77</sup> *Hubu junxu zeli* 1, fol. 4b-5a.

<sup>78</sup> *Hubu junxu zeli* 6, fol. 1a-1b.

<sup>79</sup> *Hubu junxu zeli* 6, fol. 1b-2a.

<sup>80</sup> *Hubu junxu zeli* 8, fol. 1b.

to be compensated in full by the responsible official during the western campaign, but in Jinchuan the government took over 80 per cent of the cost.<sup>81</sup> The *pingyu* surcharge, levied on all transported items except the troops' salary and monthly pay, and which financed rewards, stationery, medicine, prisoner escorts, the construction of roads, etc., was one per cent during the western and Myanmar campaigns, but only half a per cent during the Jinchuan campaigns.<sup>82</sup> The war chest thus had to allocate more money for those miscellaneous items. There is one important respect in which the Jinchuan campaigns were more expensive than the others and the final canon for war expenditure, the *Junxu zeli*, namely the salt-and-vegetable pay for the Green Standard troops.<sup>83</sup> This contradicts the emperor's statement in his edicts concerning the *Junxu zeli*, in which he stressed that the army had to be prepared any time, even when in peace (*bing gu bu ke yi ri bu bei* 兵固不可一日不備). Cuts in the pay troops receive during a war is bound to lower their motivation. Here may lie the main fault of the Qianlong emperor in his military politics: He supported quantity instead of quality. The outcome of this was not only that the cost increased by his setting up a larger amount of troops throughout the empire, but because of his trying to cut costs the governors-general had to rely on less trained (like the village militia [*yongxiang* 勇鄉] used to check the White Lotus rebels) and less motivated troops (less monthly pay during the war and no opportunity any more to obtain ad-hoc rewards). The defeat of the Chinese military during the Opium war was virtually bound to happen. Not even the Banner officers and the many civilian officials taking part in a campaign would then be of much help because they, too, were conscious that with cost being cut there would be fewer opportunities for flexibility in the organisation of logistics, as the case of Ji Guoxun has shown, who had demonstrated the will to do a good job but was instead dismissed and punished because he had spent too much. It was surely no good policy to permanently harp on about the amounts of money in the state treasury and on the other side cut cost everywhere with the argument of standardisation.

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<sup>81</sup> *Hubu junxu zeli* 9, fol. 8b-9a.

<sup>82</sup> *Hubu junxu zeli* 9, fol. 9b-10a.

<sup>83</sup> *Hubu junxu zeli* 3.

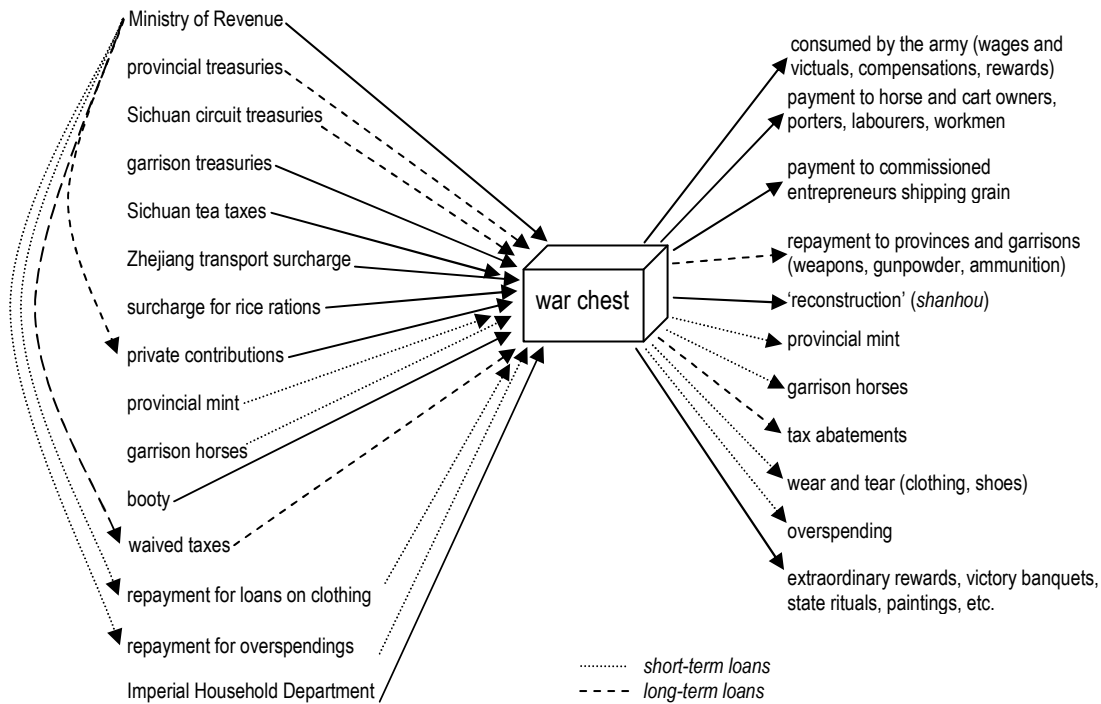
### 7.6. War Finance in International Perspective

How did the Qianlong government finance the second Jinchuan war? Almost everything had been paid by different government agencies, either directly by the Ministry of Revenue or by the Imperial Household Department transferring money to the Ministry, or by different provinces remitting money (*in specie!*) to the province of Sichuan, where the war chest was located. For part of the money originating in the provinces it is known what funds were tapped, either certain specialized tax revenues, like tea taxes or transport surcharges (*jintie*), or the general tax revenue of the province or administration circuits, or military garrisons. A considerable amount of money could only be provided by intra-governmental loans. The provincial treasuries and the circuit treasuries thus lent money to the central government (the Ministry of Revenue, which nominally paid for everything except horses, rewards, recompenses and weapons) which would actually have to be paid back to those agencies later on or to be subtracted from the taxes to be annually transferred to the central government's treasury. It is not known if this ever happened, but those sums must at least be considered as long-term loans provided by the local government to the central government. Another kind of short-term loans directly returned after the end of the war was the brass provided by the provincial mint to cast artillery pieces, and the many horses provided by the provincial military garrisons for the transport of the troops and their equipment to the front and back. So far the debts of the central government owed to the local administration.

Yet debt also incurred in the opposite direction: The central government allowed for a deferral or even a waiver of tax payment for a lot of districts all over the country, but especially in the province of Sichuan. Another type of borrowing from the government's funds was the march-and-baggage pay given as a loan to the troops to be paid back later. The same sort of advancing money from the government's side occurred in the case of officials overdrawing their military budget. In many cases the respective officials had to make restitution of the overcharged sums, but in some cases the government waived their debts. Yet the most interesting case is that of the private entrepreneurs or officials providing funds during the contribution campaign. As we have seen, many of them were unable to pay such large sums and could not but borrow the money due for contribution from government agencies.

It seems therefore that the Chinese government in the late 18th century financed its wars almost exclusively from its own funds without borrowing from private institutions (compare Diagram 7.5). Yet although the war expenditure was nominally to be met by the three Ministries of Finance, of War, and of Works, a large part of the cost was in fact passed on to

the provincial and sub-provincial governments, and even down to the garrisons and the individual soldiers having to find the money for their weapons, their clothing, and even the expenses for the burdensome march to the front and back. Some officials, military as well as civilian, were asked to pay for overspending or—even worse—that of their subordinates. A government financing wars totally by government funds without borrowing from private sources had no chance but to cut costs wherever possible. Compared to the western world, therefore, the wars of the early and high Qing period cannot have been too expensive as they were financed by the state treasury alone. Historians and contemporaries therefore also did not lament about the high cost of the wars but about the high cost of the standing army during peacetime: The Qianlong emperor was criticized for increasing the troops' strength, not for waging unaffordable wars.



□ 7.5 Diagram: Flow of funds into and out of the war chest

This very different approach to war finance will therefore be briefly contrasted with two examples of an expensive European war fought around the same time: the Seven Years' War (1756 – 1763). It is all the more comparable with the large campaigns of the Qing emperors as there were similar problems in logistics for shipping troops to the war theatre in the new world and to supply them from Europe. This war cost Great Britain about £ 8 million per year, nearly 40 per cent of which was financed by creating debt. In order to raise that sort of money Navy bills were issued and, after at first having been exerted in the markets for short-

term securities, transferred to the long-term markets. In spite of such a pressure on the financial markets those transactions had almost no effect on the markets for mercantile credit and the British economy in total. This can be explained by the high amount (7 to 15 per cent of the public debt) of foreign, in particular Dutch, funds being invested in the British financial market, as well as the role continental farmers played in the supply of rations and the manpower other nations contributed to man the British fleet: Capital, labour and materials were largely supplied from abroad instead from within the country.<sup>84</sup> To the French government, the war had cost almost 200 million livres tournois annually for ‘affaires extraordinaires’, 60 per cent of which were financed by credits, 30 per cent by tax increases and 5 per cent by people buying their way into office (compare the *juanshu* contributions in China). The France of Louis XV, as is often assumed with view to the French Revolution which eventually was only less than three decades away, did not finance her wars to an extremely high proportion by tax increases. For fear that the financial market would not allow for a higher rate of government bonds the taxes were only increased after the cost of the war went far beyond what had been assumed.<sup>85</sup>

‘Nourishing virtue’ and ‘nourishing the military’ were the two most important political tools of the Qing government, and in this respect they followed all dynasties in China before them (although not even all of them held the military in high esteem, like the ‘civilian’ Song). On the other hand imperial Chinese governments despised that group of professionals with whose help its financial options would have been much more varied: merchants, entrepreneurs and bankers.

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<sup>84</sup> Compare Neal (1977).

<sup>85</sup> Compare Riley (1986), pp. 132-161.

## Appendix 1: Civilian and Military Titles and Administrative Terms

Note: As far as possible, titles are translated according to Hucker (1985). If not recorded in Hucker, Brunnert/Hagelstrom's (1910) translations are accepted and indicated as such (B/H). For titles neither recorded in Hucker nor in B/H, my own translations are given, in square brackets []. This list does not only refer to the titles used in the present research, but contains all terms mentioned in the *Junxu zeli* regulations.

### 1. General terms and prefixes

品	<i>pin</i>	rank (1 to 9)
等	<i>deng</i>	rank or one of two classes below a rank; grade in general
級	<i>ji</i>	class (two subcategories of each rank: <i>zheng</i> 正 'a' and <i>cong</i> 從 'b')
候補	<i>houbu</i>	expectant appointee (waiting for a vacancy)
額外	<i>ewai</i>	supernumerary
空額	<i>kong'e</i>	empty ranks
署	<i>shu</i>	acting
委	<i>wei</i>	appointed

### 2. Titles of nobility and high-ranking commanders

王	<i>wang</i>	Prince
公, 侯, 伯, 子, 男	<i>gong, hou, bo, zi, nan</i>	Duke, Marquis, Earl, Viscount, Baron (each being subdivided into three grades: <i>yideng</i> 一等, <i>erdeng</i> 二等, <i>sandeng</i> 三等)
額駙	<i>efu</i>	Husband of an imperial noblewoman

#### Imperial hereditary nobility (*jueyin* 爵蔭)

和碩親王	<i>hoshi* qinwang</i>	Imperial Prince (highest rank) *Hucker recommends <i>heshi</i> , B/H <i>heshe</i> , Hanyu da cidian <i>heshuo</i>
多羅郡王	<i>doro junwang</i>	Commandery Prince (2nd highest)
多羅貝勒	<i>doro beile</i>	Prince of the Blood of the third degree
固山貝子	<i>gūsa beise</i>	Banner Prince
奉恩鎮國公	<i>feng'en zhenguo gong</i>	Defender Duke by Grace (B/H: 5th highest)
奉恩輔國公	<i>feng'en fuguo gong</i>	Bulwark Duke by Grace (B/H: 6th highest)
不入八分鎮國公	<i>buru bafen zhenguo gong</i>	Defender Duke not encroaching on the eight privileges (B/H: 7th highest)
不入八分輔國公	<i>buru bafen fuguo gong</i>	Bulwark Duke not encroaching on the eight privileges (B/H: 8th highest)
鎮國將軍	<i>zhenguo jiangjun</i>	Defender-general of the State (B/H: 9th highest)
輔國將軍	<i>fuguo jiangjun</i>	Bulwark-general of the State (B/H: 10th highest)
奉國將軍	<i>fengguo jiangjun</i>	Supporter-general of the State (B/H: 12th highest)
奉恩將軍	<i>feng'en jiangjun</i>	General by Grace (lowest)

#### Non-imperial hereditary nobility:

公…男	<i>gong to nan</i>	(1-5 of the 9 ranks of non-imperial hereditary nobility)
輕車都尉	<i>qingche duwei</i>	Commandant of Light Chariots (6th highest, [rank 3])
騎都尉	<i>jiduwei</i>	Commandant of Cavalry (7th highest, [rank 4])
雲騎尉	<i>yunjiwei</i>	Commandant of Fleet-as-Clouds Cavalry (8th highest; rank 5)
恩騎尉	<i>enjiwei</i>	Commandant of Cavalry by Grace (lowest; from 1750 on conferred on sons and grandsons of non-hereditary nobles who died in battle)

#### Ad-hoc titles for campaigning

領隊大臣	<i>lingdui dachen</i>	(B/H) Commandant of the Forces
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經略大臣	<i>jinglüe dachen</i>	Grand Minister Commander, ad-hoc leader of Green Standard troops on campaign
經略大將軍 大將軍	<i>jinglüe da jiangjun</i> <i>da jiangjun</i>	[Commissioner General-in-chief], same as <i>jinglüe dachen</i> General-in-chief (mostly with prefix, like <i>dingbian</i> 定邊 ‘pacifying the borderlands’)
參贊大臣	<i>canzan dachen</i>	Grand Minister Consultant, assisting commanders during a campaign
散秩大臣	<i>sanzhi dachen</i>	Grand Minister assistant commander of imperial guardsmen ( <i>shiwei</i> ) (rank 2b)

### 3. Titles of Capital Banner troops

#### Units and garrisons

(親軍)侍衛	<i>(qinjun) shiwei</i>	imperial (body)-guard
禁軍	<i>jinjun</i>	Imperial Palace Guard
圓明園營	<i>Yuanmingyuan ying</i>	Garden of Total Clarity Brigade
火器營	<i>huoqiying</i>	Firearms Brigade
健銳營	<i>jianruiying</i>	Scouting Brigade
鑾儀衛	<i>luanyiwei</i>	Imperial Procession Guard
前鋒營	<i>qianfengying</i>	Vanguard Brigade
護軍營	<i>hujunying</i>	Guards Brigade

#### Officers

都統	<i>dutong</i>	commander-in-chief (of a Banner; rank 1b)
統領	<i>tongling</i>	commander-general (of a brigade of the inner Banners, not belonging to the imperial bodyguards; rank 2a)
鑾儀使	<i>luanyishi</i>	commissioner of the Imperial Procession Guard (2a)
冠軍使	<i>guanjunshi</i>	[military commissioner] (e. g. of the Imperial Equipage, 3a)
總管	<i>zongguan</i>	supervisor-in-chief (rank 3a)
章京	<i>jiyanggin</i>	commander (of units of different levels)
雲麾使	<i>yunhuishi</i>	[commissioner of the cloud-like flags guard]
侍衛	<i>shiwei</i>	imperial guardsman
御前侍衛	<i>yuqian shiwei</i>	palace guardsman
乾清門侍衛	<i>Qianqingmen shiwei</i>	B/H: guard at the Gate of Celestial Purity
巴圖魯侍衛	<i>baturu shiwei</i>	[heroic guard]
領隊侍衛	<i>lingdui shiwei</i>	[guard commandant]
頭等侍衛	<i>toudeng shiwei</i>	B/H: first rank guard (rank 3a)
二等侍衛	<i>erdeng shiwei</i>	B/H: second rank guard (rank 4a)
三等侍衛	<i>sandeng shiwei</i>	B/H: third rank guard (rank 5a)
三等護衛	<i>sandeng huwei</i>	[third rank guardsman of the Guards brigade] (rank 5)
四等侍衛	<i>sideng shiwei</i>	[fourth rank guard] (rank 5b?)
治儀正	<i>zhiyizheng</i>	assistant director of the Imperial procession guard (5a)
藍翎侍衛	<i>lanling shiwei</i>	junior guardsman (B/H: Blue plume [guardsman]; rank 6a)
前鋒侍衛	<i>qianfeng shiwei</i>	[guardsman of the Vanguard Brigade]
總統	<i>zongtong</i>	commander-general (head of an elite unit, like <i>hujunying</i> , <i>qianfengying</i> , <i>huoqiying</i> , <i>jianruiying</i> )
營總	<i>yingzong</i>	brigade commandant (rank 3a)
翼長	<i>yizhang</i>	wing commander (rank 3a)
(正)參領	<i>(zheng-)canling</i>	regimental commander (e.g. <i>hujun canling</i> ; rank 3a)
副參領	<i>fucanling</i>	[vice regimental commander]
防禦	<i>fangyu</i>	platoon commander (rank 5a)
親軍校	<i>qinjunxiao</i>	lieutenant of the Imperial Bodyguard (rank 6a)
前鋒校	<i>qianfengxiao</i>	lieutenant of the Vanguard brigade (rank 6a)
護軍校	<i>hujunxiao</i>	lieutenant of the Guards brigade (rank 6a)
驍騎校	<i>xiaojixiao</i>	lieutenant of the Courageous guard (rank 6a)
副前鋒校	<i>fu qianfengxiao</i>	[sub-lieutenant of the Vanguard brigade]



執纛人	<i>zhidaoren</i>	(banner holder)
步軍尉	<i>bujunwei</i>	commandant of infantry

Sergeants, corporals (non-commissioned officers)

領催	<i>lingcui</i>	B/H: corporal/sergeant
翎長	<i>lingzhang</i>	[sergeant], same as <i>lingcui</i> (?)
拜唐阿	<i>baitangga</i>	[attendant]

Common soldiers

馬兵	<i>mabing</i>	[cavalrist]
馬甲	<i>majia</i>	[armoured cavalrist] (B/H: private 1st class)
步甲	<i>bujia</i>	[armoured infantrist]
炮手	<i>paoshou</i>	[gunner]
披甲	<i>pijia</i>	[unarmoured soldier]
跟役	<i>genyi</i>	[private assistant, orderly, batman (for all types of troops, but also for civilian officials dispatched to the front)]

**4. Titles of provincial Banner troops (*zhufang bing* 駐防兵)**

Officers

將軍	<i>jiangjun</i>	(provincial Banner-) general
副都統	<i>fudutong</i>	vice commander-in-chief (of a Banner; rank 2a)
副將軍	<i>fujiangjun</i>	vice general (same as <i>fudutong</i> )
協領	<i>xieling</i>	assistant commandant (rank 3b)
城守尉	<i>chengshouwei</i>	garrison commandant (rank 3a)
防守尉	<i>fangshouwei</i>	post commandant (rank 4a)
佐領	<i>zuoling</i>	company commander (rank 4a)
防禦	<i>fangyu</i>	platoon commander (rank 5a)
驍騎校	<i>xiaojixiao</i>	lieutenant (rank 7-8)

Sergeants, corporals (non-commissioned officers)

前鋒	<i>qianfeng</i>	B/H: sergeant
領催	<i>lingcui</i>	B/H: corporal/sergeant

Common soldiers

驍騎	<i>xiaoji</i>	[cavalryman] (B/H: private)
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**5. Titles of Mongolian banner troops**

親王	<i>qinwang</i>	imperial prince
郡王	<i>junwang</i>	commandery prince
貝勒	<i>beile</i>	<i>beile</i> prince
貝子	<i>beise</i>	<i>beise</i> prince
扎薩克台吉	<i>jasagh tayiji</i>	B/H: <i>dzassak</i> , banner chieftain
台吉	<i>tayiji</i>	B/H: <i>daiji</i> , hereditary noble
協理台吉	<i>xieli tayiji</i>	B/H: administrator <i>daiji</i>
管旗章京	<i>guanqi janggin</i>	B/H: banner adjutant
副管旗章京	<i>fu guanqi janggin</i>	B/H: deputy banner adjutant
閑散台吉	<i>xiansan tayiji</i>	unassigned banner <i>daiji</i>
閑散章京	<i>xiansan janggin</i>	[unassigned banner adjutant]

**6. Titles of Green Standard troops (*luying bing* 綠營兵)**

Officers

提督	<i>tidu</i>	provincial military commander (rank 1b)
總兵	<i>zongbing</i>	regional commander (rank 2a)
副將	<i>fujiang</i>	regional vice commander (rank 2b)

參將	<i>canjiang</i>	assistant regional commander (rank 3a)
游擊	<i>youji</i>	brigade commander (rank 3b)
都司	<i>dusi</i>	brigade vice commander (rank 4a)
守備	<i>shoubei</i>	assistant brigade commander (rank 5b)
守禦所千總	<i>shouyusuo qianzong</i>	assistant gate commandant
千總	<i>qianzong</i>	company commander (rank 6a)
把總	<i>bazong</i>	squad leader (rank 7a)

Sergeants, corporals (non-commissioned officers)

外委	<i>waiwei</i>	detached ( <i>qianzong</i> 8a, <i>bazong</i> 9a)
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Common soldiers

步兵	<i>bubing</i>	[infantrist]
守兵	<i>shoubing</i>	[guardsman]
新募兵	<i>xinmubing</i>	[new recruit]
餘兵	<i>yubing</i>	[supplementary soldiers]
鄉勇	<i>xiangyong</i>	township company, militia

7. Titles of native administrators and native auxiliary troops

宣慰使(or 司)	<i>xuanweishi</i> (or <i>-si</i> )	[first-class] pacification commissioner (rank 3b)
安撫使(or 司)	<i>anfushi</i> (or <i>-si</i> )	[second-class] pacification commissioner (rank 5b)
指揮使	<i>zhihuishi</i>	commander (rank 3a)
土司	<i>tusi</i>	[native king (lord or chieftain)]
土舍	<i>tushe</i>	[native baron]
土目	<i>tumu</i>	[native baronet]
土弁	<i>tubian</i>	[general term for a low-ranking native officer]
the titles of low-ranking officers are the same as for Green Standard troops, with the prefix <i>tu</i> 'native'		
土兵	<i>tubing</i>	native common soldier

8. Titles of civilian members of the central government

General terms and ranks

衙門	<i>yamen</i>	yamen (bureau, office)
京堂	<i>jingtang</i>	B/H: (high officials in the central government)
小京官	<i>xiaojingguan</i>	(small) Capital official
京員	<i>jingyuan</i>	Capital official
筆帖式	<i>bithesi</i> (Manjurian)	clerk (7-9), also in military units

Grand Secretariat (*neige* 內閣)

內閣侍讀學士	<i>neige shidu xueshi</i>	Grand Secretariat academician reader-in-waiting (4b)
內閣學士	<i>neige xueshi</i>	Academician of the Grand Secretariat (2b)
內閣侍讀	<i>neige shidu</i>	Grand Secretariat reader-in-waiting (6a)
讀侍	<i>dushi=shidu</i>	
內閣中書	<i>neige zhongshu</i>	secretary (7b) in the Grand Secretariat
內閣典籍	<i>neige dianji</i>	certification clerk of the Grand Secretariat (7a)

State Council (*junjichu* 軍機處)

軍機大臣	<i>junji dachen</i>	Grand Minister of the State Council
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Hanlin Academy (*hanlinyuan* 翰林院) and Directorate of Education (*guozijian* 國子監) and academic degrees

大學士	<i>daxueshi</i>	Grand Secretary (1a)
庶吉士	<i>shujishi</i>	Hanlin bachelor
翰林院典簿	<i>Hanlinyuan dianbu</i>	archivist in the Hanlin Academy (7-8)
翰林院待詔	<i>Hanlinyuan daizhao</i>	editorial assistant (9b) of the Hanlin Academy
翰林院孔目	<i>Hanlinyuan kongmu</i>	clerk of the Hanlin Academy

國子監監丞	<i>Guozijian jiancheng</i>	[assistant in the Directorate of Education]
國子監博士	<i>Guozijian boshi</i>	erudite in the Directorate of Education
國子監典簿	<i>Guozijian dianbu</i>	archivist in the Directorate of Education
滿司業	<i>Man siye</i>	Manchu director of studies (6a)
漢司業	<i>Han siye</i>	Chinese director of studies (6a)
助教	<i>zhujiao</i>	instructor in the Directorate of Education (7b-8b)
學正、學錄典籍(簿)	<i>xuezheng, xuelu dianji (=dianbu?)</i>	certification clerk/archivist (?) of the 1st and 3rd class instructors of the Directorate of Education
祭酒侍	<i>jijiushi</i>	libationer of the Imperial Academy (4b)
讀學士	<i>duxueshi</i>	education-supervising commissioner (provincial education commissioner)
侍講學士	<i>shijiang xueshi</i>	academician expositor-in-waiting (4b)
蔭監	<i>yinjian</i>	student by inheritance
學習蔭監	<i>xuexi yinjian</i>	(student) apprentice by inheritance (9)
進士	<i>jinshi</i>	Metropolitan graduate
舉人	<i>juren</i>	provincial graduate
貢生	<i>gongsheng</i>	tribute student, studying in the Directorate of Education
Ministry ( <i>bu</i> , <i>buyuan</i> 部院)		
尚書	<i>shangshu</i>	minister (1b)
侍郎	<i>shilang</i>	vice minister (2a)
郎中	<i>langzhong</i>	director of a ministerial bureau (5a)
員外郎	<i>yuanwailang</i>	vice director of a ministerial bureau (6a)
主事	<i>zhushi</i>	secretary in ministerial bureau (6a)
Censorate ( <i>duchayuan</i> 都察院)		
都察院左都御史	<i>duchayuan zuo duyushi</i>	left Censor-in-chief (2a)
副都御史	<i>fu duyushi</i>	vice censor-in-chief (3a)
監察御史	<i>jiancha yushi</i>	investigating censor (7a)
六科給事中	<i>like jishizhong</i>	supervising censor (5a) of the Six Offices of Scrutiny
都事	<i>dushi</i>	office manager in the censorate (6a-7b)
給事中	<i>jishizhong</i>	supervising censor (5a)
Household of the Heir Apparent ( <i>zhanshifu</i> 詹事府), the princely establishments ( <i>wangfu</i> 王府) and the Court of the Imperial Clan ( <i>zongrenfu</i> 宗人府)		
內大臣	<i>neidachen</i>	Grand Minister of the Imperial Household Department
詹事	<i>zhanshi</i>	senior supervisor of the household of the Heir Apparent (3a)
少詹事	<i>shaozhanshi</i>	junior supervisor of the household of the Heir Apparent (4a)
詹事府主簿	<i>zhanshifu zhubu</i>	recorder in the household administration of the Heir Apparent (7b)
詹事府庶子侍	<i>zhanshifu shuzishi</i>	mentor of the Heir Apparent (5a)
詹事府中允	<i>zhanshifu zhongyun</i>	companion for the Heir Apparent (6a)
詹事府贊善司	<i>zhanshifu zanshansi</i>	admonisher of the Heir Apparent (6b)
王府長史	<i>wangfu zhangshi</i>	administrator of a princely establishment
王府司儀長	<i>wangfu siyizhang</i>	director of ceremonials of a princely establishment (4a)
王府典儀	<i>wangfu dianyi</i>	manager of ceremonies of a princely establishment (4b)
宗人府府丞	<i>zongrenfu fucheng</i>	(B/H: Vice director) of the Court of the Imperial Clan (3a)
Directorate of Astronomy ( <i>qintianjian</i> 欽天監)		
欽天監監正	<i>qintianjian jianzheng</i>	director (5a) of the Directorate of Astronomy
欽天監監副	<i>qintianjian jianfu</i>	[vice director]
天文生	<i>tianwensheng</i>	[astronomer]
Imperial Academy of Medicine ( <i>taiyiyuan</i> 太醫院)		
太醫院院使	<i>Taiyiyuan yuanshu</i>	commissioner (5b) of the Imperial Academy of Medicine

太醫院院判	<i>Taiyiyuan yuanpan</i>	administrative assistant of the ... (6a)
太醫院御醫	<i>Taiyiyuan yuyi</i>	imperial physician from the ... (7a)
太醫院御醫吏目	<i>Taiyiyuan yuyi limu</i>	medical secretary of the ... (8-9)
醫官	<i>yiguan</i>	imperial physician, also in military units
Court of Imperial Sacrifices ( <i>taichangsi</i> 太常寺)		
太常寺卿	<i>Taichangsi qing</i>	chief-minister of the Court of the Imperial Sacrifices (3a)
太常寺少卿	<i>Taichangsi shaoqing</i>	vice minister of the ... (4)
太常寺博士	<i>Taichangsi boshi</i>	erudite of the ...
太常寺寺丞	<i>Taichangsi shicheng</i>	[assistant in the ...]
太常寺典簿	<i>Taichangsi dianbu</i>	[archivist of the ...]
太常寺贊禮郎、祀祭、署奉祀	<i>Taichangsi zanlilang, jisi, shu fengji</i>	ceremonial assistants of the ... (9a)
Court of the Imperial Entertainments ( <i>guanglusi</i> 光祿寺) and the Imperial Stud ( <i>taipusi</i> 太僕寺)		
光祿寺卿	<i>Guanglusi qing</i>	chief minister of the Court of the Imperial Entertainments
光祿寺少卿	<i>Guanglusi shaoqing</i>	vice minister ... (5)
光祿寺署正典簿	<i>Guanglusi shuzheng dianbu</i>	[acting chief archivist ...]
太僕寺卿	<i>Taipusi qing</i>	chief minister of the Court of the Imperial Stud (3b)
太僕寺少卿	<i>Taipushi shaoqing</i>	vice minister of the ... (4)
Court of Judicial Review ( <i>dalisi</i> 大理寺)		
大理寺卿	<i>Dalisi qing</i>	chief minister of the Court of Judicial Review (3a)
大理寺少卿	<i>Dalisi shaoqing</i>	vice minister of the ... (4)
大理寺寺丞	<i>Dalisi sicheng</i>	[assistant in the ...]
評事	<i>pingshi</i>	case reviewer of the ... (7a)
Court of State Ceremonial ( <i>honglusi</i> 鴻臚寺)		
鴻臚寺卿	<i>Honglusi qing</i>	chief minister of the Court of State Ceremonial (4a)
鴻臚寺少卿	<i>Honglusi shaoqing</i>	vice minister of the ... (5)
鴻臚寺鳴贊、主簿、序班	<i>Honglusi mingzan, zhubu, xuban</i>	herald, recorder, and usher of the ... (9b)
Office of Transmission ( <i>tongzhengsi</i> 通政司)		
通政使	<i>tongzhengshi</i>	commissioner of the Office of Transmission (3a)
通政司副使	<i>tongzhengsi fushi</i>	vice commissioner of the ... (4a)
通政司參議	<i>tongzhengsi canyi</i>	assistant transmission commissioner of the ... (5a)
通政司經歷	<i>tongzhengsi jingli</i>	registrar of the ...
minor posts		
檢討	<i>jiantao</i>	examining editor (7b)
照磨	<i>zhaomo</i>	record keeper of capital [and provincial] agencies (8-9)
吏目	<i>limu</i>	medical secretary (8-9)/chief of police
書識	<i>shushi</i>	B/H: writer
書吏	<i>shuli</i>	clerk
貼寫	<i>tiexie</i>	scribe
經歷	<i>jingli</i>	registrar
業修撰	<i>yexiuzhuan</i>	[compiler in the Historiography Institute]
編修	<i>bianxiu</i>	junior compiler in the Historiography Institute (7a)
<b>9. Titles of civilian members of the provincial and local governments</b>		
省	<i>sheng</i>	province
道	<i>dao</i>	circuit
府	<i>fu</i>	prefecture
廳	<i>ting</i>	sub-prefecture
縣	<i>xian</i>	district

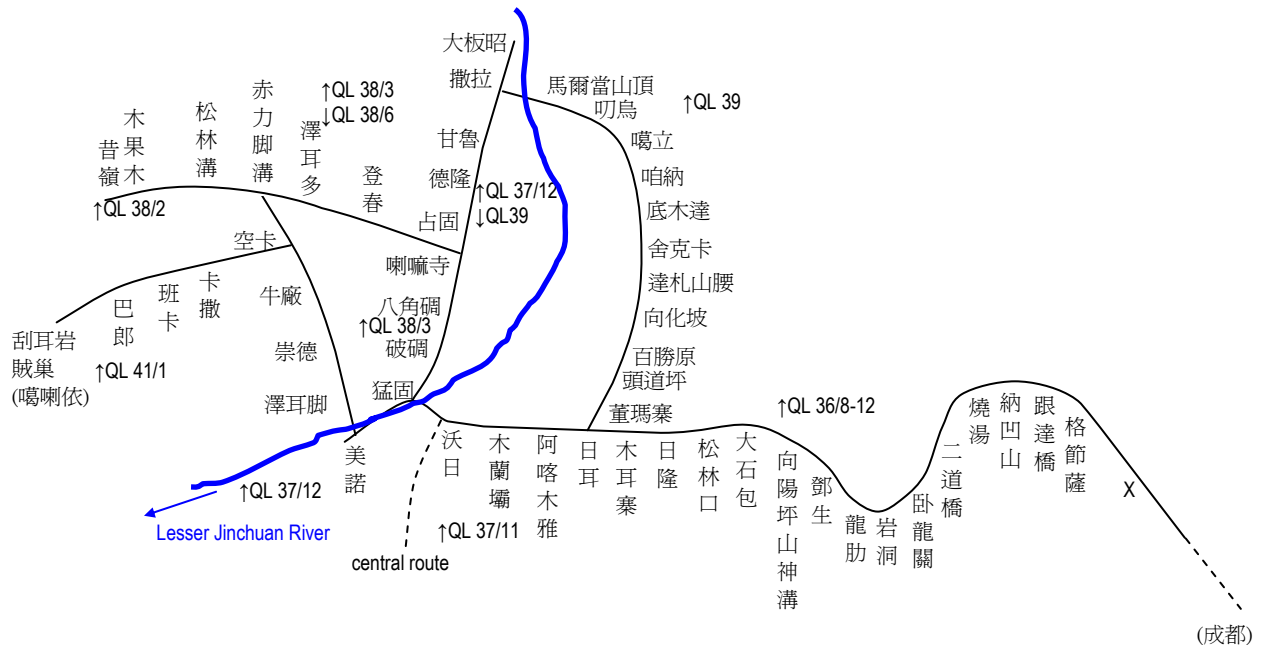
府尹	<i>fuyin</i>	B/H: prefect of the metropolitan prefecture (3a)
順天府府丞	<i>Shuntianfu fucheng</i>	vice prefect of Shuntian prefecture
督撫	<i>du-fu</i>	governor-general and governor
總督	<i>zongdu</i>	governor-general (2a)
巡撫	<i>xunfu</i>	provincial governor (2b)
藩臬	<i>fan-nie</i>	provincial administration commissioner and provincial surveillance commissioner
布政使	<i>buzhengshi</i>	administration commissioner (financial commissioner or treasurer)
按察使	<i>anchashi</i>	surveillance commissioner (judicial commissioner)
司庫	<i>siku</i>	provincial treasury
藩庫	<i>fanku</i>	provincial treasury
司員	<i>siyuan</i>	circuit intendant
司道	<i>sidao</i>	circuit intendant
道府	<i>daofu</i>	circuit intendant (=daotai 道臺)
道員	<i>daoyuan</i>	circuit intendant
知府	<i>zhifu</i>	prefect (4b)
同知	<i>tongzhi</i>	subprefectural magistrate (5a)
知州	<i>zhizhou</i>	department magistrate (5b)
通判	<i>tongpan</i>	(B/H: assistant) subprefectural magistrate <i>ting</i> (6a)
州同	<i>zhoutong</i>	department vice magistrate (6b)
知縣	<i>zhixian</i>	district magistrate (7a)
州判	<i>zhoupan</i>	assistant department magistrate (7b)
縣丞	<i>xiancheng</i>	B/H: assistant district magistrate (8a)
佐雜	<i>zuo-za</i>	assistant (8-9)
巡檢	<i>xunjian</i>	police officer (9b)
典史	<i>dianshi</i>	district jailor
號書	<i>haoshu</i>	[head of courier station]



Transcription of place names (Chinese names and terms in *italics*):

(main route from east to centre)	商角山 <i>Shanggyao Shan</i>	木池 Muchi
雜谷 Dzagu	述克乍 Shukdja	二臺子 <i>Ertai zi</i>
樸頭 <i>Putou</i>	直固山 <i>Djigu Shan</i>	泥峙岡 <i>Nidji Gang</i>
二道坪 <i>Erdaoping</i>	大馬直 <i>Damadji</i>	立旺 Lawang
甲別 Gyabye	凱祝溝 <i>Kaidju Gou</i>	甲索 Gyaso
楸底 Kyudi	安朋寨 <i>Ampeng Zhai</i>	宜喜 Ihi
達思滿 Dasman	佈達爾 Budar	達爾圖 Dartu
嗎喏 Maže	僧鐸 Sengto	得楞 Delang
大郎壩 <i>Dalangba</i>	草木多 Tsaomudo	俄坡 Opo
耳吉利 <i>Žigyili</i>	黃草坡 <i>Huangcaopo</i>	壬噶 <i>Ženga</i>
塔耳壩 <i>Tarba</i>	襍馬山 <i>Dzama Shan</i>	黃草坪 <i>Huangcaoping</i>
博和上壩 <i>Boho Shangba</i>	薈草坪 <i>Youcaoping</i>	帶石 Daishi
哈爾巴 Harba	三叉口 <i>Sanchaikou</i>	拉壩沙河 <i>Labangshahe (Labang Shahe)</i>
赤獅溝 <i>Chishi Gou</i>	木丫山 <i>Muya Shan</i>	基木斯丹當噶 <i>Gyimsdandangga</i>
直路 Djilu ( <i>Zhilu</i> )	腊角溝 <i>Lagyao Gou</i>	薩薩谷 Sasagu
梭磨 Somo	夢筆山 <i>Mengbi Shan</i>	沙爾泥 Sharni
乾羊溝 <i>Ganyang Gou</i>	色木多 Semdo	茹寨 <i>Žudjai (Žu Zhai)</i>
馬浪橋 <i>Malang Qiao</i>	薩爾赤 Sarchi	木克耳 Muker
卓克采 Djoktsai	雪山根 <i>Xueshangen</i>	日思滿 <i>Žisman</i>
八兒康 Barkang	布拉咱斯丹 <i>Buladzasdan</i>	扎烏古 <i>Dja'ugu</i>
松崗 Sunggang	後山坪 <i>Houshanping</i>	黃土坪 <i>Huangtuping</i>
改北窩 <i>Gaibeiwō</i>	卡立葉 <i>Kyalaye</i>	巴站(巴占) <i>Badjan</i>
補底闊播 <i>Budikobo</i>	曾頭溝 <i>Tsengto Gou</i>	阿爾古 Argu
陡柔 Hižo	噶而鹿角 <i>Garlugyao</i>	牛廠 <i>Niuchang</i>
甲角 Gyagyao	登格山梁 <i>Dengge Shanliang</i>	格則爾 Gedzer
撒喇山 <i>Sala Shan</i>	甲嘴 Gyadzui	甲雜寨 <i>Gyaza Zhai</i>
丹壩 Damba	格江 <i>Gegyao (Gejiang)</i>	雙礪 <i>Shuangdiao</i>
二麥壤 <i>Ermaizang</i>	阿立 Ala	獨松 <i>Dusung (Dusong)</i>
周叟 Djoso	(from centre to south)	雍中喇嘛寺 <i>Yungdjung Lamasi</i>
(branches from east to centre)	木腊角 <i>Mulagyao</i>	巴布琅谷 <i>Babulanggu</i>
新橋 <i>Xinqiao</i>	擇里呀噶 <i>Dzeliyawa</i>	得式梯 <i>Deshiti</i>
乾羊子 <i>Ganyangzi</i>	日旁 <i>Žipang</i>	勒吉爾博 <i>Legyirbo</i>
別蚌 Byebeng	樂浦 Lepu	
東草坡 <i>Dongcaopo</i>	角木交 <i>Gyamgyao</i>	

The Western Route (*xilu* 西路)





Transcription of place names (Chinese names and terms in *italics*):

(from east to centre)

格節薩 Gegyesa  
 跟達橋 Genda *Qiao*  
 納凹山 Na'ao *Shan*  
 燒湯 Shaotang  
 二道橋 Erdaoqiao  
 卧龍關 Wolongguan  
 岩洞 Yandong  
 龍肋 Lungle  
 鄧生 Dengsheng  
 向陽坪 Xiangyangping  
 山神溝 Shanshengou  
 大石包 Dashibao  
 松林口 Songlinkou  
 日隆 Žilong  
 木耳寨 Mur Zhai  
 日耳 Žir  
 阿喀木雅 Akamya  
 木蘭壩 Mulamba  
 沃日 Woži  
 美諾 Meno

(from centre to north)

猛固 Menggu  
 破碛 Podiao  
 八角碛 Bajiaodiao  
 喇嘛寺 Lamasi  
 占固 Djanggu  
 德隆 Delung (*Delong*)  
 甘魯 Ganlu  
 撒拉 Sala  
 大板昭 Dabandjao

(from centre to west)

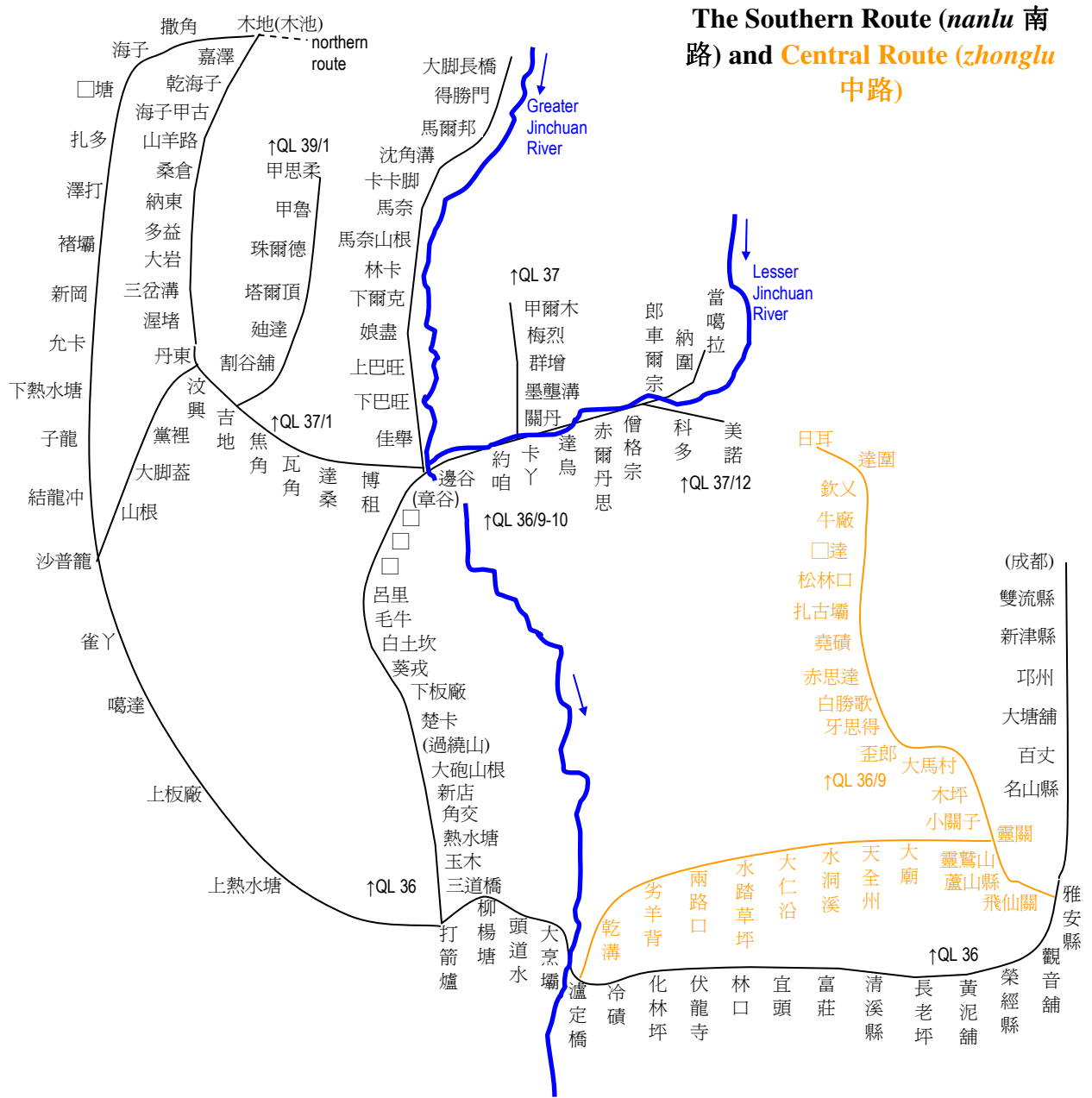
澤耳脚 Dzergyao  
 崇德 Chongde  
 牛廠 Niuchang  
 空卡 Kungkya  
 卡撒 Kyasa  
 班卡 Bankya  
 巴郎 Balang  
 刮耳岩 Kuoryai (i. e. Gala'i)

登春 Dengchun

澤耳多 Dzerdo  
 赤力脚溝 Chiligyao *Gou*  
 松林溝 Songlingou  
 木果木 Mugom  
 昔嶺 Hiling

(new route to the north)

董瑪寨 Dungma *Zhai*  
 頭道坪 Toudaoping  
 百勝原 Baishengyuan  
 向化坡 Xianghuapo  
 達札山腰 Dajia Shanyao  
 舍克卡 Shekekya  
 底木達 Dimda  
 咱納 Dzana  
 噶立 Gala  
 叨烏 Dau'u  
 馬爾當山頂 Mardang *Shanding*



Transcription of place names (Chinese names and terms in *italics*):

(eastern branch of the Southern Route)

成都 *Chengdu*  
 雙流縣 *Shuangliu Xian*  
 新津縣 *Xinjin Xian*  
 邛州 *Qiongzhou*  
 大塘舖 *Datangpu*  
 百丈 *Baizhang*  
 名山縣 *Mingshan Xian*  
 雅安縣 *Ya'an Xian*  
 觀音舖 *Guanyinpu*  
 榮經縣 *Rongjing Xian*  
 黃泥舖 *Huangnipu*  
 長老坪 *Changlaoping*  
 清溪縣 *Qingxi Xian*  
 富莊 *Fuzhuang*  
 宜頭 *Yitou*  
 林口 *Linkou*  
 伏龍寺 *Fulongsi*  
 化林坪 *Hualinping*  
 冷磧 *Lengkyi*  
 瀘定橋 *Ludingqiao*  
 大烹壩 *Dapengba*  
 頭道水 *Toudaoshui*  
 柳楊塘 *Liuyangtang*  
 打箭爐 *Dajianlu*

(main branch of the Central Route)

飛仙關 *Feixianguan*  
 蘆山縣 *Lushan Xian*  
 靈鷲山 *Lingjiushan*  
 靈關 *Lingguan*  
 小關子 *Xiaoguanzi*  
 木坪 *Muping (Muping)*  
 大馬村 *Damacun*  
 歪郎 *Wailang*  
 牙思得 *Yasde*  
 白勝歌 *Baishengge*  
 赤思達 *Chisda*  
 堯磧 *Yaokyi*  
 扎古壩 *Zhaguba*  
 松林口 *Songlinkou*  
 □達 *XXda*  
 牛廠 *Niuchang*  
 欽叉 *Tchin'i (欽叉 Tchincha?)*  
 達圍 *Dawé*  
 日耳 *Zi'r*

(southern branch of the Central Route)

大廟 *Damiao*  
 天全州 *Qianquan Zhou*  
 水洞溪 *Shuidongxi*

大仁沿 *Darenyan*  
 水踏草坪 *Shuita caoping*  
 兩路口 *Lianglukou*  
 劣羊背 *Lieyangbei*  
 乾溝 *Gangou*

(long distance track from Dajianlu to the north)

上熱水塘 *Shang Reshuitang*  
 上板廠 *Shangbanchang*  
 噶達 *Gada*  
 雀丫 *Kyüya (Queya)*  
 沙普籠 *Shapulung*  
 結龍冲 *Gyelungchung*  
 子龍 *Dzilung*  
 下熱水塘 *Xia Reshuitang*  
 允卡 *Ünkya*  
 新岡 *Hingang (Xingang)*  
 褚壩 *Chuba*  
 澤打 *Dzeda*  
 扎多 *Djado*  
 □塘 *XX Tang*  
 海子 *Haizi*  
 撒角 *Sagyao*  
 木地 (i. e. 木池) *Muchi*

山根 *Shangen*  
 大脚蓋 *Dagyaogai*  
 黨裡 *Dangli*  
 丹東 *Dandung*  
 渥堵 *Wodu*  
 三岔溝 *Sanchagou*  
 大岩 *Dayan*  
 多益 *Do'i*  
 納東 *Nadung*  
 桑倉 *Sangtsang*  
 山羊路 *Shanyanglu*  
 海子甲古 *Haizi Gyagu*  
 乾海子 *Ganhaizi*  
 嘉澤 *Gyadze*

(from Dajianlu to Djanggu)

三道橋 *Sandaoqiao*  
 玉木 *Ümu*  
 熱水塘 *Reshuitang*  
 角交 *Gyaogyao*  
 新店 *Xindian*  
 大砲山根 *Dapao shangen*  
 (過繞山 'bypassing the peak')  
 楚卡 *Chukya*  
 下板廠 *Xiabanchang*  
 葵戎 *Kueizung*  
 白土坎 *Baitukuai*

毛牛 *Maoniü*

呂里 *Lüli*

□ (several stations whose name is not known)

章谷 *Djanggu*

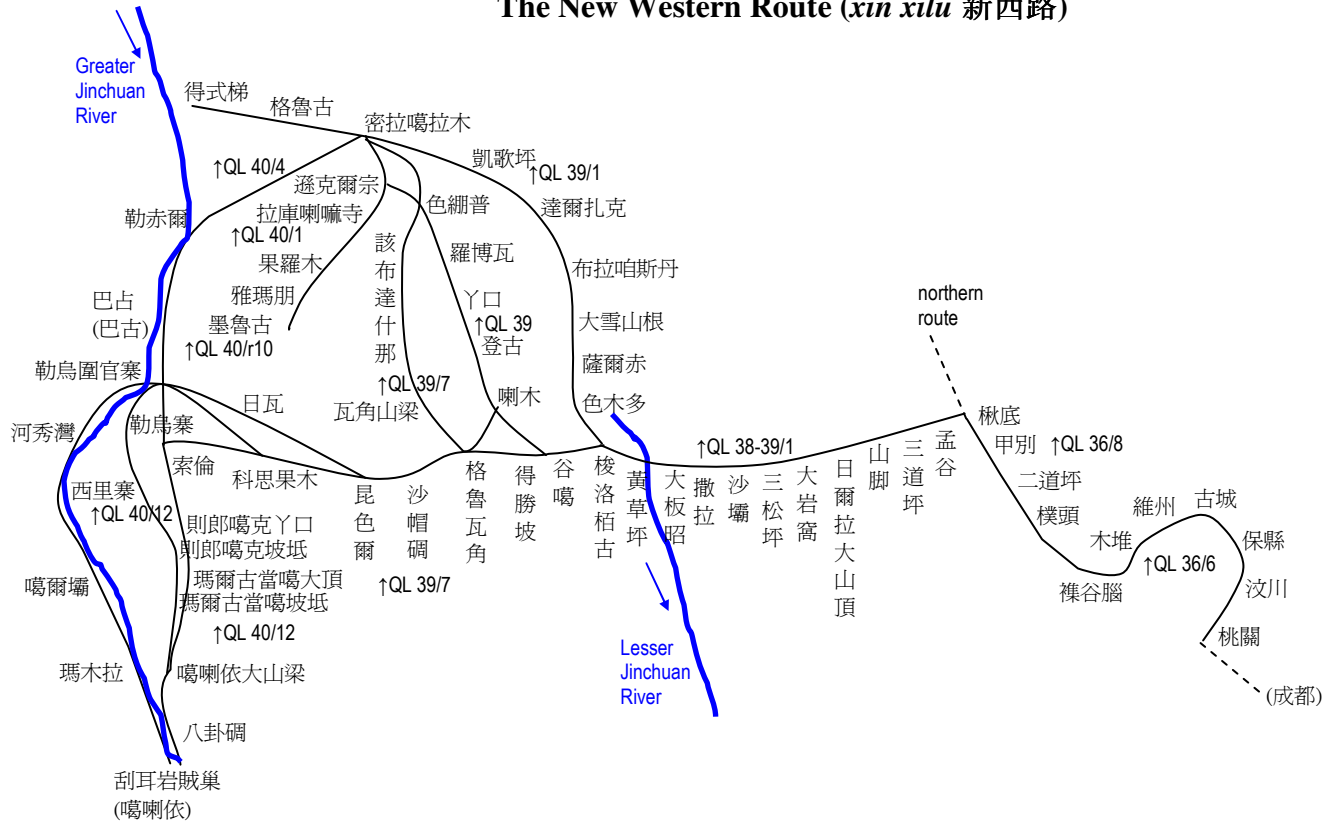
(from Djanggu to Lesser Jinchuan)

邊谷 *Byengu (Biangu)*  
 約咱 *Yödza*  
 卡丫 *Kyaya*  
 達烏 *Da'u*  
 赤爾丹思 *Chirdansi*  
 僧格宗 *Senggedzung*  
 科多 *Kedo*  
 美諾 *Meno*  
 關丹 *Guandan*  
 墨壘溝 *Molung Gou*  
 群增 *Kyüntseng*  
 梅烈 *Meilie*  
 甲爾木 *Gyarmu (Gyam)*  
 郎車爾宗 *Langcherdzung*  
 納圍 *Nawé*  
 當噶拉 *Danggala*

(from Djanggu to the west and north)

博租 *Bodzu*  
 達桑 *Dasang*  
 瓦角 *Wagyao*  
 焦角 *Gyaogyao*  
 吉地 *Gyidi*  
 汶興 *Wenhing*  
 割谷舖 *Gegu Pu (Gegupu)*  
 迪達 *Dida*  
 塔爾頂 *Tarding (Tar Ding)*  
 珠爾德 *Djurde*  
 甲魯 *Gyalu*  
 甲思柔 *Gyaszo*  
 佳舉 *Gyagyü*  
 下巴旺 *Xia Bawang*  
 上巴旺 *Shang Bawang*  
 娘盡 *Nyanggyin*  
 下爾克 *Hiarke*  
 林卡 *Linkya*  
 馬奈山根 *Manai Shangen*  
 馬奈 *Manai*  
 卡卡脚 *Kyakyagyao*  
 沈角溝 *Shengyao Gou (Shenjaogou)*  
 馬爾邦 *Marbang*  
 得勝門 *Deshengmen*  
 大脚長橋 *Dajiao Changqiao*

The New Western Route (*xin xilu* 新西路)



Transcription of place names (Chinese names and terms in *italics*):

(from Chengdu to Dabandjao)

桃關 *Taoguan*  
 汶川 *Wenchuan*  
 保縣 *Baoxian*  
 古城 *Gucheng*  
 維州 *Weizhou*  
 木堆 *Mudui*  
 襍谷腦 *Dzagunao*  
 樸頭 *Putou*  
 二道坪 *Erdaoping*  
 甲別 *Gyabye*  
 楸底 *Kyudi*  
 孟谷 *Menggu*  
 三道坪 *Sandaoping*  
 山脚 *Shanjiao*  
 日爾拉大山頂 *Zirla Dashanding*  
 大岩窩 *Dayanwo*  
 三松坪 *Sansongping*  
 沙壩 *Shaba*  
 撒拉 *Sala*  
 大板昭 *Dabandjao*

(branch to the west)

黃草坪 *Huangcaoping*  
 梭洛栢古 *Solobogu*

谷噶 *Guga*  
 得勝坡 *Deshengpo*  
 格魯瓦角 *Gelwagyao*  
 沙帽碉 *Shamao Diao*  
 昆色爾 *Kunser*  
 科思果木 *Kesgom*  
 索倫 *Solun*  
 勒烏寨 *Le'u Zhai*  
 則郎噶克丫口 *Dzelanggak Yakou*  
 則郎噶克坡坻 *Dzelanggak Pochi*  
 瑪爾古當噶大頂 *Margudangga Dading*  
 瑪爾古當噶坡坻 *Mardudangga Pochi*  
 噶喇依大山梁 *Gala'i Dashanliang*  
 八卦碉 *Bajiaodiao*  
 河秀灣 *Hexiuwan*  
 西里寨 *Hili Zhai*  
 噶爾壩 *Garba*  
 瑪木拉 *Mamla*  
 刮耳岩賊巢(噶喇依) *Kuoryai Zeichao (Gala'i)*

(northern branches)

色木多 *Semdo*

薩爾赤 *Sarchi*  
 大雪山根 *Daxueshengen*  
 布拉咱斯丹 *Buladzasdan*  
 達爾扎克 *Dardjak*  
 凱歌坪 *Kaige Ping*  
 密拉噶拉木 *Milagalam*  
 格魯古 *Gelgu*  
 得式梯 *Deshiti*  
 喇木 *Lamu*  
 登古 *Denggu*  
 丫口 *Yakou*  
 羅博瓦 *Lobowa*  
 色綳普 *Sepengpu*  
 瓦角山梁 *Wagyao Shanliang*  
 該布達什那 *Gaibudashino*  
 遜克爾宗 *Hünkerdzung*  
 拉庫喇嘛寺 *Laku Lamasi*  
 果羅木 *Golom*  
 雅瑪朋 *Yamapeng*  
 墨魯古 *Molugu*  
 勒赤爾 *Lechir*  
 巴占(巴占) *Badjan*  
 勒烏圍官寨 *Le'uwé Guanzhai*

### Appendix 3: Governors and Governors-general of the Province of Sichuan (only in the period concerned)

<i>governor-general (zongdu)</i>		<i>governor (xunfu)</i>	
Chalang'a 查郎阿, <i>zongdu</i> of Chuan-Shaan	QL 1/1 - 3/5	Yang Bi 楊秘	YZ 13/1 - QL 1/4
Emida 鄂彌達	3/5 - 5/3	Wang Shijun 王士俊 (acting)	1/4 - 1/6
Yin Jishan 尹繼善	5/3 - 7/9	Yang Bi	1/6 - 4/6
Martai 馬爾泰	7/9 - 8/5	Fang Xian 方顯	4/6 - 5/7
Qingfu 慶復	8/5 - 12/3	Shuose 碩色	5/7 - 8/r4
Zhang Guangsi 張廣泗	12/3 - 12/12 - 13/9	Jishan 紀山	8/r4 - 13/8
Huang Tinggui 黃廷桂 (acting)	12/12 - 13/9	Bandi 班第 (acting)	13/8 - 13/9
Furdan 傅爾丹 (temporary)	13/9 - 13/11	Echang 鄂昌	13/9 - 13/11
Celang 策楞, <i>zongdu</i> of Sichuan	13/11 - 18/5	Celang in personal union; Bandi representing	13/11 - 14/1
Huang Tinggui	18/5 - 20/6	Bandi	14/1 - 18/9
Kaitai 開泰	20/6 - 24/7	--	--
Kaitai, <i>zongdu</i> of Chuan-Shaan	24/7 - 25/12	--	--
Kaitai, <i>zongdu</i> of Sichuan	25/12 - 28/6	--	--
Artai 阿爾泰	28/6 - 29/3	--	--
Agui 阿桂 (acting)	29/3 - 29/6	--	--
Artai	29/6 - 35/10	--	--
Defu 德福 (acting)	35/10 - 36/8	--	--
Artai	36/8 - 36/9	--	--
Wenshou 文綬	36/9 - 36/10	--	--
Guilin 桂林	36/11 - 37/5	--	--
Artai (acting)	37/5 - 37/6	--	--
Wenshou	37/6 - 37/12	--	--
Liu Bingtian 劉秉恬	37/12 - 38/6	--	--
Fulehun 富勒渾	38/6 - 41/2	--	--
Wenshou	41/2 - 46/8	--	--

Appendix 4: Weights and Measures<sup>1</sup>

## Weight units

1 jin = 596.8 g	兩	錢	分	厘	毫	絲	忽(微)	撮
兩 <i>liang</i>	1	0.1	0.01	0.001	0.0001	10 <sup>-5</sup>	10 <sup>-6</sup>	10 <sup>-7</sup>
錢 <i>qian</i>	10	1	0.1	0.01	0.001	0.0001	10 <sup>-5</sup>	10 <sup>-6</sup>
分 <i>fen</i>	100	10	1	0.1	0.01	0.001	0.0001	10 <sup>-5</sup>
厘 <i>li</i>	1,000	100	10	1	0.1	0.01	0.001	0.0001
毫 <i>hao</i>	10,000	1,000	100	10	1	0.1	0.01	0.001
絲 <i>si</i>	100,000	10,000	1,000	100	10	1	0.1	0.01
忽 <i>cong</i> (微 <i>wei</i> )	10 <sup>6</sup>	100,000	10,000	1,000	100	10	1	0.1
撮 <i>cuo</i>	10 <sup>7</sup>	10 <sup>6</sup>	100,000	10,000	1,000	100	10	1

兩 <i>liang</i>	斤 <i>jin</i>
1	0.0625
2	0.125
3	0.1875
4	0.25

兩 <i>liang</i>	斤 <i>jin</i>
5	0.3125
6	0.375
7	0.4375
8	0.5

兩 <i>liang</i>	斤 <i>jin</i>
9	0.5625
10	0.625
11	0.6875
12	0.75

兩 <i>liang</i>	斤 <i>jin</i>
13	0.8125
14	0.875
15	0.9375
16	1

1 *qian* = 0.1 *liang* = 0.00625 *jin*

## Volume units

1 sheng = 1035 ml	石	斛	斗	升	合	勺(抄)	撮
石 <i>dan</i>	1	0.5	0.1	0.01	0.001	0.0001	10 <sup>-6</sup>
斛 <i>hu</i>	2	1	0.5	0.05	0.005	0.0005	10 <sup>-5</sup>
斗 <i>dou</i>	10	5	1	0.1	0.01	0.001	0.0001
升 <i>sheng</i>	100	50	10	1	0.1	0.01	0.001
合 <i>ge</i>	1,000	500	100	10	1	0.1	0.01
勺 <i>shao</i> (抄 <i>chao</i> )	10,000	5,000	1,000	100	10	1	0.1
撮 <i>cuo</i>	100,000	50,000	10,000	1,000	100	10	1

## Length units

1 *li* = 480 m

1 *mu* = 614.4 m<sup>2</sup>

1 chi = 32 cm	丈	尺	寸	分	厘(微)
丈 <i>zhang</i>	1	0.1	0.01	0.001	0.0001
尺 <i>chi</i>	10	1	0.1	0.01	0.001
寸 <i>cun</i>	100	10	1	0.1	0.01
分 <i>fen</i>	1000	100	10	1	0.1
厘 <i>li</i> (微 <i>wei</i> )	10,000	1000	100	100	1

<sup>1</sup> Source: Qiu/Qiu/Yang (2001), p. 447.





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