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3 *Kupiao* and the Accounting System of the Imperial Household Workshops

Yijun Wang and Kyoungjin Bae

Abstract

Focusing on *kupiao*, a rudimentary document of accounting, this chapter explores the accounting system of the Imperial Workshops in Qing China. Spurred by a series of institutional reforms, a complex budgeting and auditing system developed at the Imperial Workshops during the eighteenth century. As the records of day-to-day transactions between various Works and other departments, *kupiao* instantiated the operation of production and finance as a correlated system. Tracing the paper trails of *kupiao*, therefore, we locate the manufacturing processes of the Workshops at the intersection of artisanal collaboration and the administrative cycles of budgeting and audits in which various bureaus participated. By comparing the accounting systems of the Imperial Workshops and the Qing state, moreover, we argue that the former modelled after the *zouxiao* system of the state. Both systems shared as their principles rigorous accountability and the pursuit of checks and balances.

Keywords: *kupiao*, accounting system, Imperial Workshops, budget, audit, *zouxiao* system

Maiban kupiao 買辦庫票 (hereafter *kupiao*), loosely translatable as requisition tickets, was a genre of accounting documents produced by the Imperial Workshops (*Zaobanchu* 造辦處) during the Qing. It first appeared in the 28th year of the Kangxi reign (1689) and lasted at least until the 25th year of the Jiaqing reign (1821).¹ *Kupiao* was the fundamental constituent of the

1 The last collection of *kupiao* in the First Archive appeared in December of the 25th year under Jiaqing's reign (1821). See 'Zaxiang maiban kupiao zanling piao 雜項買辦庫票暫領票

Imperial Workshop accounting system. For each activity in which cost and goods were transferred between different storage facilities, different specialized ateliers or works (*zuo* 作), and between the workshops and the market, one of these standardized tickets had to be filled out.² Similar to memoranda, these small ‘paper tools’ captured the day-to-day transactions in materials, money, and labour – the *fuel* that made the palace machine work. Every month, these tickets were bound into a semi-journal that became the basis for a higher level of accounting.³ A study of *kupiao* thus provides an extraordinary opportunity to explore the multitiered accounting system of the Imperial Workshops.

This chapter examines the role of *kupiao* within the Imperial Workshops and investigates its multifaceted significance in the following sequence: first, it analyses the information held in individual *kupiao* within the context of the bureaucratic system of material and monetary transactions that produced it. *Kupiao* reflected an increasing complexity in the accounting system over the course of the 18th century with rising concerns about estimation, budgeting, and actual expenditure in the management of diverse projects. The chapter then discusses higher-level accounting processes in which such concerns were institutionalized into concepts of budget and actual expenditure, as well as regular cross-departmental audits achieved through mid-century reforms. Following the trajectory of a specific project recorded in *kupiao*, the third section takes an in-depth look at financial and manufacturing organs of the Imperial Workshops. The case study shows that cross-departmental collaboration happened not only within the manufacturing loops but also across accounting and administrative spheres. The last section compares the accounting system of the Imperial Workshops and the fiscal system of the Qing state, concluding that the former was linked seamlessly to the latter financially and administratively.

In so doing, this chapter weaves together two correlated spheres of the palace machine: the manufacturing of physical objects and the corresponding mechanism of accounting. Putting *kupiao* at the centre, it construes the

(Tickets of Budget Disbursement on Miscellaneous Items), year 1821, *Gongzhong gechu dang'an* 宮中各處檔案 (Documents of the Palace Archives), no. 2252 (The First Historical Archives of China, Beijing).

2 *Kupiao* are approximately 17.94 centimetres wide and 21.79 centimetres long. For archiving they were bound into volumes whose covers are 26.41 centimetres wide and 28.9 centimetres long.

3 The order of tickets was not strictly chronological. For example, the *kupiao* of the 8th month of the 46th year of the Qianlong reign were not bound in date order. See the *Qing gong Nei wufu Zaobanchu dang'an zonghui* 清宮內務府造辦處檔案總匯, edited by Chinese University of Hong Kong and The First Historical Archives of China (Beijing: Renmin chubanshe, 2005) vol. 45, 193-5.

two spheres as two ‘resistant bodies’ operating by common motive forces toward efficient production.⁴ Such a tendency was increasingly palpable during the 18th century despite the increasingly extravagant expenditure made at the Imperial Workshops. In the sphere of manufacture, *kupiao* inform us about not just financial transactions but also the division of labour among works, the mobilization of in-house and recruited artisans, and the outsourcing of tasks. They reveal an open system that connected the palace workshops with state warehouses and the market. In the accounting sphere, *kupiao* embody both the logic of accounting and its historicity within the overwrought processes of financial reasoning at the Imperial Workshops. It was the prospection, estimation, budgeting and compensation recorded in *kupiao* that made the complex and oft-prolonged production cycles accountable and sustainable at the court. The intersection between manufacture and accounting reveals a system of checks and balances through which many bureaus and works contributed to the goal of efficient and sustainable resource management.

Kupiao and the Financial Organ of the Imperial Workshops

In the 12th month of the 28th year of the Kangxi reign (1689), the Imperial Workshops established a system of ‘red tickets’ (*hongpiao* 紅票) in order to ‘certify and verify the receipt of materials’.⁵ These ‘red tickets’ were the beginning of *kupiao*. Although records show that *kupiao* were produced until at least the early 19th century, extant *kupiao* and related archival documents on palace accounting are fragmentary. Still, thousands of them (roughly from 1735 to 1741 as well as from 1782) are reproduced in facsimile in the *Qing gong Neiwufu Zaobanchu dang’an zonghui* 清宮內務府造辦處檔案總匯 (Archives of the Imperial Workshops of the Imperial Household Department), upon which this chapter is primarily based.⁶

4 Franz Reuleaux defines a machine as ‘a combination of resistant bodies so arranged that by their means the mechanical forces of nature can be compelled to do work accompanied by certain determinate motions’. See Franz Reuleaux, *The Kinematics of Machinery: Outlines of a Theory of Machines*, trans. and ed. Alexander B.W. Kennedy (New York: Dover Publications, 1963), 35.

5 *Qinding Zongguan Neiwufu xianxing zeli er zhong* 欽定總管內務府現行則例二種, rep. in *Gugong zhenben congkan* 故宮珍本叢刊, vol. 306-310 (Haikou: Hainan chubanshe, 2000), vol. 4 (309), 291.

6 *Kupiao* first appeared in the 11th year of the Yongzheng era (1733) and appeared intermittently in 1735, 1736, 1739, 1741, 1743 and 1782. The records from 1735-36 are the most expansive and detailed of all of these. In 1736 alone, around 1,160 pieces of *kupiao* were stored in the published archives.

Figure 3.1 *Kupiao* issued in 1736

Source: *Qing gong Neiwufu Zaobanchu dang'an zonghui*, vol. 7, 295

The format of *kupiao* consisted of three parts: a preprinted form in red, handwritten contents in black ink, and stamps and other auditorial marks that were added later. A *kupiao* was issued by filling out the preprinted form with information such as date, occasion of issuance, amount of money or materials disbursed, and signature of the issuer. In the ticket, the information was visually divided into three sections and a heading (Figure 3.1).

The document begins in the far right columns with the name of the requisitioning works, along with an initial date of commission, occasion, and the amount of raw materials and/or silver requisitioned, together revealing the reason for issuance. In the far left, two columns of preprinted characters functioned as a receipt of issuance. Here the issuer wrote down the ticket's issuing date, the name of recipient, and his own signature. The middle section provided information about subsequent disbursement. Under another – often later – date, it would identify that the noted – or sometimes a different – recipient had actually 'received' (*ling* 領) the stated amount of supply. This section ended with yet another set of one or more

clerical signatures. Finally, the heading, with the preprinted character 'zi 字', assigned each ticket a filing number drawn from two numerical systems – Chinese numerals and that of the *Thousand Character Classic* (Qianziwen 千字文), a distinctive system in which every character was given a unique numeral value between 1 and 1,000. For instance, the number of the *kupiao* in Figure 3.1 is 106 of *huang* 黃 ('yellow', i.e. the fourth character in the *Thousand Character Classic*). In the sequence of time, this *kupiao* was issued to the Wood Works (*Muzuo* 木作) for a task commissioned on the 17th day of the 1st month of the 1st year of the Qianlong reign (28 February 1736). The works had requisitioned variously-sized pieces of red sandalwood and some coarse calico in order to make a stand for an ancient bronze bell. As a receipt, the filled-in text on the left reads: 'In accordance with the amount requested, our vault disbursed the material to Shuanzhu 拴住. Issued by Bashisan 八十三 of the Document House (*Dangzifang* 檔子房) on the 10th day of the 4th month in the 1st year of the Qianlong reign (20 May 1736).⁷ Finally, in different handwriting, the middle section states: 'On the 11th day of the 6th month (19 July 1736), Deng Lianfang 鄧連芳 received two *chi* 尺 of coarse calico, issued by Guanbao 官保 (Manchu: Guwanboo) and Maqing'a 馬清阿. The stock of red sandalwood at the beginning of this year was thirty-nine *jin* 斤 (catties) and two *liang* 兩 (taels). Of those, seven taels and five *qian* 錢 were consumed [in order to fulfil this request].⁸

Following the spatial order from right to left to centre, in other words, one can trace the sequence by which the *kupiao* activated a series of financial actions. A clerk named Bashisan at the Document House first wrote the requisition order and issued this *kupiao* to Shuanzhu. About two months later, Deng Lianfang took this ticket to Guanbao and Maqing'a to receive the stated materials. The sequence reveals an intricate bureaucratic network within and beyond the Imperial Workshops concerning financial administration. Although the office is not specified here, the material was probably provided by the Treasury of the Imperial Workshops (*Qianliangku* 錢糧庫).⁹ Established in 1722 within the Imperial Workshops, the Treasury

7 *Qing gong Neiwufu Zaobanchu dang'an zonghui*, vol. 7, 295.

8 Only *kupiao* related to the precious timbers such as red sandalwood or *huali* 花梨 wood have had the additional information about balance after consumption. *Chi* 尺 is a unit of length which is approximately 35.5 cm or 14 inches; *liang* 兩 is a unit of weight. One *liang* (tael) was approximately 36.9 grams, and was equivalent to 10 *qian* 錢, 100 *fen* 分, and 1,000 *li* 釐. Above tael, there were units such as *jin* 斤 (catty; 16 *liang*) and *shi* 石 (100 *jin*).

9 *Qianliangku* literally means 'the storage of money and grain'. The term *qianliang* (food and grain) first emerged in the Tang dynasty (618-907) to refer to tax and military expenditure. See the imperial edict from Xianzong Emperor of the Tang Dynasty 唐宪宗 né Li Chun 李淳

supplied the workshops with silver cash and raw materials.¹⁰ Administered by the Imperial Workshops, it was in effect funded by the Six Vaults (*Liuku* 六庫) of the Grand Storage Office (*Guangchusi* 廣儲司). When there were insufficient resources at the Six Vaults, it reached out to the vaults of the Board of Revenue (*Hubu* 戶部) and the Board of Work (*Gongbu* 工部) to refill its stock.¹¹ Taken from each work to the Treasury of the Imperial Workshops, *kupiao* were traded for the requested materials and likely archived there afterwards.

This shows that financial administration at the Imperial Workshops went through the joint activities of two bureaus. First, the Document House issued a *kupiao* for each transaction; then, the actual material was claimed using this ticket at the Treasury.¹² According to historian Wu Zhaoqing, the Document House was in charge of transmitting and archiving imperial memorials and the correspondence between the Imperial Workshops and other bureaus of the Imperial Household Department.¹³ Yet, as Figure 3.1 demonstrates, the remit of the Document House was not limited to archiving administrative documents but extended to the operation of the Treasury through the issuing of *kupiao*.¹⁴ The Document House prepared the preprinted ticket forms at the beginning of each month. A *kupiao* issued on the 1st day of the 3rd month of the 11th year under the Yongzheng reign

(778-820), 'Ping Liu Pi zhao' 平劉辟詔, in *Tang da zhao ling ji* 唐大詔令集, ed. Song Minquiu 宋敏求 (1019-1079), *juan* 124, 665 (Beijing: Zhonghua shuju, 2008). The usage of *qianliang* to refer to taxation might be due to the introduction of the double taxation system, in which the tax levied in money. In archives in the Yuan Dynasty (1271-1368), *qianliang* was used to refer to land taxes, tariffs, grain stocks and wages for soldiers and bureaucrats. See Pan Jie 潘潔, *Heishuicheng chutu qianliang wenshu zhuanji yanjiu* 黑水城出土錢糧文書專題研究 (Yinchuan: Ningxia renmin chubanshe, 2013). In the Ming and Qing dynasties, *qianliang* was used to refer to a wide range of things including taxes, wages, military and government expenditure. In the Imperial Workshops, the *Qianliangku* was used to store silver cash and raw materials for the workshop, therefore, we translate it as 'Treasury of the Imperial Workshops' or brief as 'Treasury'.¹⁰ *Qinding Zongguan Neiwufu xianxing zeli er zhong*, vol. 4 (309), 296. Also, see Wu Zhaoqing 吳兆清, 'Qingdai zaobanchu de jigou he jiangyi' 清代造辦處的機構和匠役, *Lishi dang'an* 歷史檔案, no. 4 (1991): 81.

¹¹ *Zongguan Neiwufu xianxing tiaoli: Guangchusi* 總管內務府現行條例: 廣儲司, in *Jindai Zhongguo shiliao congkan* 近代中國史料叢刊 (Taipei: Wenhai chubanshe, 1972), 43; *Da Qing huidian zeli* (Qianlong ban) 大清會典則例 (乾隆版), edited by Imperial Household Department (Beijing: Wuyingdian, 1764), *juan* 159, 25a.

¹² The Document House was called Dangfang or Dangzifang. It appears in the *kupiao* of the Yongzheng and Qianlong periods.

¹³ Wu Zhaoqing, 'Qingdai zaobanchu de jigou he jiangyi', 82.

¹⁴ It is not clear which administrative tier '*benku* 本庫' in Figure 3.1 belonged to, but it is plausible that *benku*, which literally means 'this storage', refers to the Treasury of the Imperial Workshops.

(14 April 1733), for instance, states that the Document House purchased two kinds of papers ‘in order to print and write notices and *kupiao*’ within the bureau.¹⁵ Such orders recurred regularly from the Yongzheng to the early Qianlong periods. Another *kupiao* issued on the 1st day of the 6th month (9 July) of 1736 shows that the Document House and the Treasury shared budgets for stationery items. Issued to the Document House, the ticket disbursed money to this bureau and the Treasury to purchase ‘*jinbuhuan* 金不換’ brushes (literally, brushes ‘more valuable than gold’, a common name for scholarly stationery), fragrant ink and cinnabar in order to print and write *kupiao*, notices, monthly reports (*yuezhe* 月摺) and the base archives (*bendi dangan* 本底檔案).¹⁶ This shows that the Treasury of the Imperial Workshops and the Document House, which were the makers, issuers and final recipients of *kupiao*, also issued and filed *kupiao* to themselves.

Kupiao reflected not just the financial bureaucracy of the Imperial Workshops but also an increasing complexity in their financial planning. In the first year of the Qianlong reign (1735), *kupiao* were differentiated into five categories identifiable by the heading written above the printed frame on each ticket. Tickets with no heading reflected an initial estimation of raw materials and silver cash to be disbursed from the Treasury in order to carry out a project (see Figure 3.1). Those labelled ‘purchase’ (*mai* 買) recorded an estimate of materials to be purchased from the market; those called ‘preliminary budget’ (*zan* 暫 or *zanling* 暫領) referred to the preliminary cost of a project in its early stage; those labelled ‘balance disbursement’ (*zhaoling* 找領) noted the reconciled cost of the project during its execution, and ‘receipt of balance’ tickets (*jiaohui can* 交回殘) indicated the balance of raw materials or cash returned to the vault after a project was completed.¹⁷

These five headings divided *kupiao* into two kinds of organization. On the one hand, the blank and ‘purchase’ tickets – which make up the majority of existing *kupiao* – concerned the source of materials, that is, either the Treasury of the Imperial Workshops or the market. As such, they differentiated the internal and external sources of requisition. In these tickets, while internal disbursements were calculated as stock, market acquisitions were calculated in silver cash. It is noticeable that, even though purchased goods were classified as ‘purchase’ tickets, the purchase of labour from the market was classified as blank tickets. Despite this difference, wages for hired

15 *Qing gong Neiwufu Zaobanchu dang'an zonghui*, vol. 6, 56.

16 *Ibid.*, vol. 7, 445.

17 For examples of these type of tickets see *Qing gong Neiwufu Zaobanchu dang'an zonghui*, vol. 7, 339, 330, and 370 respectively.

workers were still calculated in silver, which suggests a dual status of silver in the accounting system as both stock and currency. In addition, *kupiao* of this kind reflected divergent channels of material circulation the palace was interlocked with. Materials obtained through the imperial tributes were released from the Treasury. Red sandalwood and *huali* wood 花梨木, Korean papers, textiles from the three Imperial Textile Manufactories (*Zhizaoju* 織造局), and precious metals were such tributary goods frequently found in *kupiao*. Yet a wider variety of materials and project-specific temporary labour were purchased from the market.

The other three headings, on the other hand, belonged to a different type of organization concerning work processes. They referred to a system of checks and balances in order to rationalize budgets and optimize the cost of production. Projects that produced such tickets often had complex procedures and took longer than others. The sequence of accounting for such projects included preliminary and subsidiary budgeting ('preliminary budget'), additional cash and resource disbursements to cover outstanding expenses that occurred during execution ('balance disbursement'), and a final cost reconciliation ('receipt of balance').

The concurrence of two organizing systems thus alludes to an embryonic stage of *kupiao* accounting in the first few years of the Qianlong period. In the 8th year of his reign (1743), the monthly filing of *kupiao* shifted its focus almost solely onto discerning the internal and external sources ('purchase' and blank) of disbursements. During this period, the presence of procedural *kupiao* diminished from 8.8% or 95 *kupiao* of the total of 1,074 in the first year to a meagre 1.15% or 6 out of 521. This does not mean that procedural *kupiao* were discarded; rather, it seems that they were bound into different ledgers. Although the lack of *kupiao* in the published archives after 1743 makes it difficult to reach a conclusive view, procedural *kupiao* from 1782 are found under the title 'Tickets of Actual Use' (*shiyong piao* 實用票).¹⁸ Some unpublished *kupiao* of this sort issued during the Jiaqing reign (1796-1820) were bound under yet another title, 'Tickets of Budget Disbursements' (*zanling piao* 暫領票).¹⁹ This shows that the *kupiao* headings functioned as practical indices – rather than a closed system of classification – for compiling different kinds of ledgers.

At the same time, the multiple steps of financial management revealed in the classification of *kupiao* indicate that these tickets were more than just

18 *Qing gong Neiwufu Zaobanchu dang'an zonghui*, vol. 45, 193-5.

19 See 'Zaxiang maiban kupiao', year 1821, *Gongzhong gechu dang'an*, no. 2252 (The First Historical Archives of China, Beijing).

ad-hoc memoranda. They show how the overarching accounting system of the Imperial Workshops was coterminous with that of other bureaus under the Imperial Household Department. According to the regulations of the Grand Storage Office issued in the 10th year of the Qianlong reign (1745), for instance, after receiving materials from the Six Vaults, the Imperial Workshops were required to submit to the Grand Storage Office an inventory of received items at the end of each month. The Grand Storage Office then compared the inventory from the Imperial Workshops with that from the Six Vaults, created its own inventory and sent it to the Imperial Workshops for reference. The Imperial Workshops returned the inventory upon confirming that there was no discrepancy with its own records.²⁰ Lateral checks of this kind were intended to ensure the proper management of resources. As the last section of the chapter discusses in depth, many of the accounting activities at the Imperial Workshops were incorporated into the accounting activities of the Grand Storage Office and its Six Vaults and, by extension, into the accounting activities of the Imperial Household Department itself.

The Accounting System of the Imperial Workshops and Its Reform

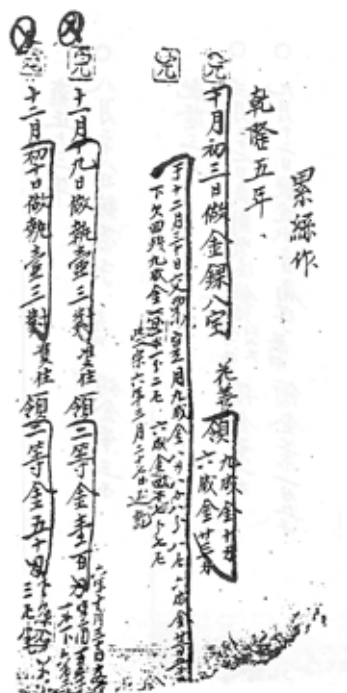
The Imperial Workshop's accounting system evolved with *kupiao*. During the early years of the Qianlong reign, several journals and ledgers existed in addition to *kupiao*. They included the 'Budgetary Ledgers of Gold in Each Work' (*Linian gezuo zanling jindang* 歷年各作暫領金檔), 'Budgetary Ledgers of Silver in Each Work' (*Linian gezuo zanling yindang* 歷年各作暫領銀檔), 'Annual Ledgers of Storage' (*Shouzhu qingce* 收貯清冊) and 'Annual Ledgers of Receipt' (*Xingqu qingce* 行取清冊).²¹ The 'Annual Ledgers of Storage' and 'Annual Ledgers of Receipt' were inventory ledgers in the form of an end-of-year balance resulted from all transactions in cash and material. These annual ledgers used a four-column balancing system (*sizhu jiesuan* 四柱結算) – a longstanding accounting system since the Song dynasty²² – which comprised a beginning balance (*jiucun* 舊存), new receipts (*xinjin* 新進), actual use (*shiyong* 實用), and ending balance (*xiacun* 下存).

20 *Zongguan Neiwufu xianxing tiaoli: Guangchusi*, 43.

21 For examples of *Linian gezuo zanling jindang* and *Linian gezuo zanling yindang*, see *Qing gong Neiwufu Zaobanchu dang'an zonghui*, vol. 12, 1-19. For examples of *Shouzhu qingce* and *Xingqu qingce*, see *Qing gong Neiwufu Zaobanchu dang'an zonghui*, vol. 7, 572-644.

22 Lin Jun, 'Chinese Double-Entry Bookkeeping before the Nineteenth Century', *The Accounting Historians Journal*, vol. 19, no. 2 (Dec. 1992): 108.

Figure 3.2 *Budgetary Ledgers of Gold in Each Works of 1740*



Source: *Qing gong Neiwufu Zaobanchu dang'an zonghui*, vol. 12, 3

The budgetary ledgers of gold and silver were special ledgers created to record the closely monitored transfer of precious metals into various works.²³ Each entry in these ledgers recorded a commission. The date of commission and the amount of gold or silver sent to each work were recorded in large characters (Figure 3.2).²⁴ To the left of these characters there was a note written in smaller characters that specified the date of completion, the amount of actual consumption in gold or silver, and the balance returned to the Treasury. In Figure 3.2, for instance, the note on a commission for the Filigree Works (*Leisi zuo* 累絲作) reads, 'on the 13th day of the 12th month (15 February 1741), [the Filigree Work] submitted a ticket that states the consumption of eight taels eight *qian* eight *fen* of gold of the ninth degree ...'²⁵ The 'ticket (*piao* 票)' here refers to a *kupiao*,

23 On the influx into and the administration of precious metals at the Qing imperial court, see Chapter Five in this volume.

24 *Qing gong Neiwufu Zaobanchu dang'an zonghui*, vol. 12, 3.

25 *Ibid.*

by which one can infer that the ledgers of gold and silver were created based on *kupiao*. In addition, on top of each entry, there is a stamp mark indicating 'complete' (*wan* 完) or an 'X.' These marks might have been added during reviews or audits after a commission was completed. They hint at the intervention of auditing in the bookkeeping process: only after all the transactional and corresponding *kupiao* had been returned, collected and transcribed into ledgers could a commission be sealed as 'complete' in accounting terms.

In the 20th year of the Qianlong reign (1755), a series of reforms took place in the Imperial Workshops' accounting system that brought about a more coherent form of financial management. During the 3rd month, the emperor issued an edict that stated:

Consolidate the 30-plus works at the Imperial Workshops into five based on the affinities between the vaults they use. Each of the [five] works should appoint a stock keeper, a project head and a deputy project manager to supervise tasks and the management of cash and materials. They should audit each other. ... Let the new works take over the ongoing tasks from the previous works and requisition materials such as gold, silver, copper, iron, tin, lead, gold and silver leaves, rims of satin and various kinds of silk, silk and woollen threads, felt blankets, mats, wood, paper, pigments, jade, and agate, ivory, walrus ivory (*qiujiào* 鯨角), tortoiseshell, beeswax, chiselling sand (*baosha* 寶砂), borax, brocade ribbons, silk thread ribbons, yellow and white waxes, sandalwood sticks, rice glue, risk husks, coal, firewood and *hunao* 胡腦 [probably a type of herb similar to *longnao* 龍腦 or Borneo camphor] from the guarding officials of the Treasury of the Imperial Workshops, Six Vaults of the Grand Storage Office, the Inner Department of Works (*Yingzaosi* 營造司), the Imperial Armoury (*Wubeiyuan* 武備院), the Bureau of Weaving and Dying (*Zhiranju* 織染局), the Imperial Rice Growing Estates (*Daotianchang* 稻田廠), the Imperial Dispensary (*Yaofang* 藥房) and the Boards of Revenue and Work. As for the Three Textile Manufactories, send lateral communications and requisition by transferring the material.²⁶

The five merged units of works were not a conclusive result of the reform, since sources show that three years after this order (1757) the works were

26 Although not specified in this passage, as shown earlier, it was the Treasury of the Imperial Workshops that administered and accounted for all requisitions directed outside the Imperial Workshops. *Qinding Zongguan Neiwufu xianxing zeli er zhong*, vol. 4 (309), 295-6.

regrouped into fifteen units altogether.²⁷ As can be gleaned from the order, it was financial accounting rather than actual production that was being merged here. By simplifying the accounting channels and consolidating the administration based on resources, the new workshop system intended to achieve more efficiency and accountability across multilateral flows of cash and materials. In light of this goal, the merged works became independent accounting units that produced individual ledgers. Sources show that, at least from the 1760s on, budget disbursement ledgers (*zanling dang* 暫領檔) were created for each merged unit of works. Inventorying each combined work's receipt of silver and materials for itemized tasks, these new ledgers stood between *kupiao* and the annual ledgers. The *Archives of the Imperial Workshops* include such work ledgers from the years of 1769 and 1775/6. The Works of Wood Varnish, Carving and Lathe-turning produced a budget disbursement ledger in 1761; the Works of Guangdong Woodwork, Casing and Mounting produced one in 1764; the Works of Gold, Jade, Inlay, Ivory and Inkstone made one in 1763; and the rest of the works, including Studio of the Ornamental Sceptre (*Ruyiguan* 如意館), Clock Works, Armoire Works and Glass Works also began to make budgetary ledgers from around 1760.²⁸ While it is unclear how long this bookkeeping practice lasted, the works undoubtedly remained as independent accounting units at least during the mid-Qianlong reign.

The structure of these ledgers was similar to the aforementioned four-column ledgers for gold and silver. Entries were made from right to left in the order of date, project name, and the amount of cash and materials received. Auditorial marks were added above each vertical line, with either a circle or the character *cha* 查 (meaning 'inspected'). The obvious difference between the pre-1755 gold and silver ledgers and these workshop ledgers is the focus of accounting: whereas the former focused on material, the latter focused on merged works as organizational units. By turning works into accountable units, the new accounting system strived to obtain a greater degree of financial transparency at every stage of production.

The accounting reform was not limited to reorganizing the works. In tandem with the bureaucratic reform, a novel and more sophisticated concept of accounting emerged to achieve, above all, a clear distinction between 'budget disbursement' (*zanling* 暫領) and 'actual use' (*shiyong* 實用). While

27 Although the regulation was created in 1755, it was not until 1757 that the newly merged works were reflected in the archives. See *Qing gong Neiwufu Zaobanchu dang'an zonghui*, vol. 23.

28 For more information, see *Qing gong Neiwufu Zaobanchu dang'an zonghui*, vol. 33, 10-117; vol. 39, 1-26; vol. 40, 1-15.

the concept of budget (*zanling*) had already appeared in the gold and silver ledgers, the juxtaposition of budget and actual use elevated the accounting system to a whole new level, since separating the estimated cost during planning from the actual expenditure incurred during execution meant that inventory management became more transparent and legible for inspection.

The separation of budget and actual use was carried out at every step in the accounting process. On a basic level, as mentioned in the previous section, this brought a change to the organization of *kupiao*. Whereas they had been chronologically bound into monthly reports in the early 18th century, they were now classified and archived into two separate journals, entitled 'Tickets of Budget Disbursements' and 'Tickets of Actual Use'.²⁹ Based on these journals, on a more strategic level, the new regulations mandated that the Treasury submit and archive an inventory that specified actual expenditures and returned balances from the budget at the end of each month. This 'Manuscript of Use and Balance' (*Shixiao gaojian* 實銷稿件) recorded the total expenditure of every project in cash, stock and wages, together with notes on the methods of work and the breakdowns of material estimates. At the level of execution, these budgets functioned as a guiding principle for planning and reviewing. For all big projects, the Audit Bureau (*Chahefang* 查核房) had to provide estimates (*yuegu* 約估) for market acquisitions and wages, based on the manufacturing method and measurements of specific products. Upon the completion of a project, the same bureau inspected the work period, expenditure and balance in order to 'avoid any abuse [of money and resources]' within the Imperial Workshops.³⁰

Furthermore, the reconceptualization of accounting rationale and practice went hand-in-hand with the increasing bureaucratization of financial administration. The Audit Bureau, established in 1748, accumulated accounting documents and reviewed new budgets in reference to previous case histories. It functioned as a gatekeeper for the Imperial Workshops, for no work could initiate a project before it approved the budget. In addition, an Archiving Bureau (*Huigaochu* 彙稿處) was founded in 1755³¹ and became

29 For examples of 'Tickets of Actual Use' see *Qing gong Neiwufu Zaobanchu dang'an zonghui*, vol. 45, 193-5; for 'Tickets of Budget Disbursements', see the one issued in the year 1821 and kept in the First Historical Archives of China, Beijing, under no. 2252 of *Gongzhong gechu dang'an*.

30 *Qinding Zongguan Neiwufu xianxing zeli er zhong*, vol. 4 (309), 296-7.

31 The Archiving Bureau was also called *Huizongfang* 匯總房 or *Huizongchu* 匯總處. Wu Zhaoqing has discussed the relationship between the *Huigaochu* (Archiving Bureau) and *Benfang* (Archiving House), pointing out that the Archiving House existed before the Archiving Bureau

responsible for collecting all documents of transactions in the Imperial Workshops after they had passed audits from the Audit Bureau.³² Now the Treasury had to provide the Archiving Bureau with two types of ledgers each month – one classified by different works and the other by commissions.³³ After the Archiving Bureau received all the paperwork, a subordinate office called the Archiving House (*Benfang* 本房) produced monthly reports of actual expenditure. At the end of every year, the Treasury's annual registers were also archived at the Archive House.³⁴

The increasing complexity of administrative routines and the increasing frequency of crosschecking between various bureaus enhanced the accountability of journals and ledgers. An example taken from an annual stock ledger called *Ledger of Actual Use, Budget Disbursement and Current Balance* (*Shiyong zanling xiancundang* 實用暫領現存檔) embodies the metrics of the reformed accounting system produced by the interaction between the 'budget' and the 'actual use' (Figure 3.3).³⁵

The section shown in Figure 3.3 is taken from an account of the transactions between the Treasury and various works in Korean Summer Textiles (*gaoli xiabu* 高麗夏布) during the twelve months of the 59th year of Qianlong (1794). It comprises a beginning balance (*jiucun* 舊存), budget disbursement (*zanling* 暫領), additional budget disbursement (*tian* 添), actual use (*shiyong* 實用), resulting balance from budget (*xiao* 銷), current (monthly) balance (*xiancun* 現存), and actual remaining (monthly) balance (*xiacun* 下存). This breakdown allows the reader to grasp the estimated monthly outflow, current stock, as well as the entire volume of materials transferred to various works. As evident from the title, the account juxtaposes two separate yet correlated disbursements: the budgetary and the actual. These two categories were not just conceptually distinguished, but they were visually divided: labels related to budget ('budget disbursement', 'additional budget disbursement' and 'returned balance from budget') begin at the top of each column, while the labels indicating actual use ('actual use', 'beginning balance', 'current balance' and 'actual remaining balance') are written in indented lines.

was founded. When the Archiving Bureau was established in 1755, the Archiving House became a subordinate department of the Archiving Bureau. See Wu Zhaoqing, 'Qingdai zaobanchu de jigou he jiangyi', 80.

32 *Qinding Zongguan Neiwufu xianxing zeli er zhong*, vol. 4 (309), 297.

33 The first type of ledger recorded the budget disbursement, actual use and the returned balance of materials at each work at the end of each month. The second type contained the title of each commission and its actual cost.

34 Wu Zhaoqing, 'Qingdai zaobanchu de jigou he jiangyi', 81.

35 *Qing gong Neiwufu Zaobanchu dang'an zonghui*, vol. 55, 233.

Figure 3.3 Accounts for Korean Summer Textiles in the Ledger of Actual Use, Budget Disbursement and Current Balance in 1794



Source: *Qing gong Neiwufu Zaobanchu dang'an zonghui*, vol. 55, 235

The budget disbursement of each month (*zanling*) was calculated by adding the first and additional disbursements (first *zanling* and subsequent *tian*) and subtracting the resulting balances (*xiao*). In the first month, the current balance (182,485 *zhang*) resulted from simply deducting the budget disbursement (804,190 *zhang*) from the beginning balance (986,675 *zhang*). The subsequent current balances were calculated by subtracting additional budget disbursements (*tian*) and the actual amount of consumed materials (*shiyong*) from the previous month's current balance, and adding to it, if any, the amount of remaining materials from the previous total budget (*xiao*). For instance, the current balance of Korean summer textiles in the 3rd month (148,025 *zhang*) was obtained by subtracting from the current balance of the 2nd month (157,485 *zhang*) an additional budget disbursement (9,46 *zhang*) and the actual amount of use (26,1 *zhang*), then adding to it the returned balance (26,1 *zhang*). Finally, the actual remaining balance was obtained by subtracting actual uses from the beginning balance. This meant that the actual remaining balance did not appear every month, because an actual use figure could only be calculated once a project was completed and all the necessary documents had been returned and reviewed. Thus, in this example, the first actual remaining balance appeared in the 3rd month after the works that had requisitioned the textiles reported their actual use.

The formula in the Ledger of Actual Use, Budget Disbursement and Current Balance, therefore, was as follows:

'beginning balance' 舊存
 – latest accumulated 'budget disbursement' 暫領 (increasing because of additional budget disbursements' 添 or reducing because of 'returned balances' 銷)
 – accumulated 'actual use' 實用
 = 'current balance' 現存

'beginning balance' 舊存
 – 'actual use' 實用
 = 'actual remaining balance' 下存

This accounting algorithm kept track of multiple expenditure channels across all of the workshops. Whereas the current balance reflected the amount of stock in the Treasury, the actual remaining balance indicated the total amount of materials available within the entire Imperial Workshops. Moreover, the difference between the budget disbursement and the actual use allowed auditors to map the lapse between a plan being submitted and a plan being executed, and to establish reasonable budgets by commanding a comprehensive overview of the stock available at the Treasury and all of the works. The *Ledger of Actual Use, Budget Disbursement and Current Balance* thus captured the dynamic state of resources across stock, budget and use, and it kept abreast of diverse interwoven trajectories of resource managements within the entire institution.

What was the ultimate goal of mid-century reforms that took place in both the financial and bureaucratic arenas? The dual assessment of budgetary estimation and actual expenditure was meant not only to keep track of present and future stock but also to rationalize plans and expenditures in the manufacturing process. The latter, to some extent, was a bigger concern. Sources show that there were lapses in the actual receipt of budgeted materials after the declared dates of commission. The policy announced in the 4th year of the Yongzheng reign (1727) stated that, if the requested materials were in stock, a work should collect from the vault the amount of preliminary budget within six days after a project started; metals and textiles should be collected within ten days.³⁶ This suggests that actual receipts might have taken longer than the stated period, causing difficulties

36 *Zongguan Neiwufu xianxing tiaoli: Guangchusi*, 36.

in stock management. The policy thus attempted to preclude discrepancies between a plan and its execution.

All of these reforms underscore an important attribute of the Imperial Workshop accounting system – its efforts to achieve an optimal inventory management. The goal of its accounting system was not profit maximization but cost minimization. While materials held in the Imperial Workshops could potentially become sellable assets – which many did after their initial lustre as imperial resources had faded – for accounting purposes they were considered non-capitalized assets for internal consumption. The purpose of accounting was therefore to closely monitor and regulate the organization of vault stock in order to fulfil both present and future productions successfully. Moreover, through auditing routines enforced across different accounting sectors, the system strived to reduce the risks of embezzlement and other corruption, while foregrounding an ideal of micromanagement over complex manufacturing processes.

The Paper Trails of Cross-Departmental Production: Processes and Characteristics

Having outlined the processes and purposes of an accounting system embodied by *kupiao*, this essay will turn to examine the mechanism of the interwoven processes of finance and manufacture at the Imperial Workshops by tracing an actual project recorded in *kupiao*. As mentioned above, *kupiao* show that the Imperial Workshops were not merely an assemblage of artisans but a complex system in which various components each played their role within an architecture of checks and balances. Tracing how a commission advanced through different works and produced various paperwork at different administrative and accounting units provides an insight into how artisans from different works and clerks at administrative bureaus collaborated to complete a project, as well as the way in which *kupiao* as paper tools enabled various bureaus and works to act in concert.

On the 2nd day of the 1st month in the 1st year of Qianlong's reign (13 February 1736), the warehousemen (*siku* 司庫) Changbao 常保 and Liu Shanjiu 劉山久 submitted a commission to the Project Management Bureau (*Huojifang* 活計房). The commission had come from the emperor and been orally transmitted to the Imperial Workshops by the eunuch supervisor-in-chief (*zonguan taijian* 總管太監) Liu Cangzhou 劉滄州, the supervisory eunuch (*shouling taijian* 首領太監) Wang Shougui 王守

貴, and a eunuch called Mao Tuan 毛團. The content of the commission was as follows:

[The emperor] ordered [the Imperial Workshops] to make fifty pewter bowls painted with golden dragons in size one. Twenty of these bowls should be paired with stands and covers decorated with copper filigrees. [The emperor also ordered to make] ninety pewter bowls painted with golden dragons in size two. Sixty of them should be paired with stands and copper filigree covers.³⁷

Since gold painting would have been done in the Southern Workshop (*Nanchang* 南廠), it appears that, after registering the commission at the Project Management Bureau, the tasks were immediately divided and transferred to the Southern Workshop and to the Copper Works (*Tongzuo* 銅作), which produced the actual pewter bodies for the bowls. These works would each have estimated the amount of materials and labour necessary to complete the tasks, and the preliminary budget made by them was probably reviewed by the Calculation and Archive Bureau (*Suandangfang* 算檔房).³⁸ For this particular project, it took 101 days for the budget to be assessed and approved. On the 14th day of the 4th month (24 May), Bashisan from the Archiving House issued two *kupiao* – one per work – that laid out all the budgetary details. On the *kupiao* for the Southern Workshop (Figure 3.4), Bashisan wrote:

On the 2nd day of the 1st month (13 February 1736), in order to fulfil the imperial commission and to make 50 pewter bowls painted gold in size one, 90 bowls in size two, 20 stands in size one, 60 stands in size two, 120 railings (*bianlan* 邊欄) in size one, 300 decorated railings in size two, 100 copper wire covers in size one and 240 copper wire covers in size two, the Southern Workshop needs two taels and five *qian* of cottonseed oil, 160 *gong* 工 of oiling, 53 *gong* of lacquering, and 21.5 *gong* of gold painting. Every *gong* costs one tael and eight *qian* of silver, [so it amounts to] 42 taels five *qian* eight *fen* and eight *li* in total.

37 *Qing gong Neiwufu Zaobanchu dang'an zonghui*, vol. 7, 52-3.

38 'Suandangfang' appears in *kupiao* as the bureau which 'examines and audits projects' (*chadui huoji* 查對活計), see *Qing gong Neiwufu Zaobanchu dang'an zonghui*, vol. 7, 321, 340, 414. Wu Zhaoqing contends that it was the Audit Bureau which conducted the calculations, see Wu Zhaoqing, 'Qingdai zaobanchu de jigou he jiangyi', 80. However, as mentioned above, the Audit Bureau was not established until 1748, so it is possible that the Calculation and Archive Bureau performed a similar role prior to the creation of the Audit Bureau.

Figure 3.4 *Kupiao* issued to the Southern Workshop in 1736



Source: *Qing gong Neiwufu Zaobanchu dang'an zonghui*, vol. 7, 303

Bashisan collated the estimated cost of materials and wages in order to lacquer the pewter bowls and issued it on a *kupiao* sent to the warehouseman Liu Shanjiu and a clerk at the Imperial Household Department named Laoge 老格.³⁹ Labour was measured by *gong* 工, a theoretical unit of the amount of work one skilled artisan could complete within a day.⁴⁰ Later on

39 Laoge was a bannerman, most likely a *booi*, serving the Imperial Household Department. He became Tang Ying's 唐英 assistant in the 6th year of the Qianlong reign (1741) and engaged in the imperial porcelain production. See Yiling's 伊齡阿 court memorial on QL 33/11/27 (4 Jan. 1769), *zou'an*, no. 03-0126-072: 'Zou ming xiezao Laoge jibing qing hui qi shi 奏明協造老格疾病請回旗事' (The First Historical Archives of China, Beijing).

40 According to the regulations, a whole day's work by an artisan who had completed his apprenticeship could be counted as one *gong*. A whole day's work by an artisan who had received two years of apprenticeship was only half a *gong*. An artisan who had only undergone one year of training would have to work for three days to receive one *gong*. See *Zongguan Neiwufu xianxing tiaoli: Guangchusi*, 45.

that same day, Liu Shanjiu and Puhui 溥惠 took the *kupiao* to the Treasury in order to receive the cash and materials. At the Treasury, clerk Guanbao authorized the release and filled in the middle section of the *kupiao* in rather sloppy handwriting: 'Today Liu Shanjiu and Puhui received 42 taels, five *qian*, eight *fen*, and eight *li* of silver, issued by Guanbao. In addition, [they received] two taels and five *qian* of cottonseed oil'.⁴¹ Guanbao might have recalculated the sum of required labour and appended the total number of '236 and three-fifths *gong*' in small characters next to the total amount of silver originally written by Bashisan. He then stamped the numbers to authenticate the amount of disbursement made to Liu Shanjiu and Puhui and signed the bottom of the ticket.⁴² This recalculation of the total sum and Guanbao's signature show that the practice of checks and balances did not just occur in auditing but was already in place at the budgeting stage. Every transaction had to be examined and confirmed by a responsible person who then signed it for accountability and, later on, for archiving.

That same day, Bashisan wrote another *kupiao* for the Copper Works' requisition of 377 catties, four taels and seven *qian* of tin, and 251 catties, fifteen taels, and one *qian* of lead to produce 150 pewter offering bowls. The ticket was issued to Liudazi 六達子 and Zhang Si 張四. The middle section of the ticket remains empty, but the signature on the ticket indicates that it was also Guanbao who distributed the material (see Figure 3.5).⁴³

According to the records kept in the *Huoji qingdang* 活計清檔 (Inventories of Commissions), this project ended on the 25th day of the 12th month (25 January 1737), about a year after the commission had originally been received.⁴⁴ Upon completing the project, the Archiving House collected all the transactional documents in order to produce monthly reports on actual expenditure, which it submitted to higher accounting units,

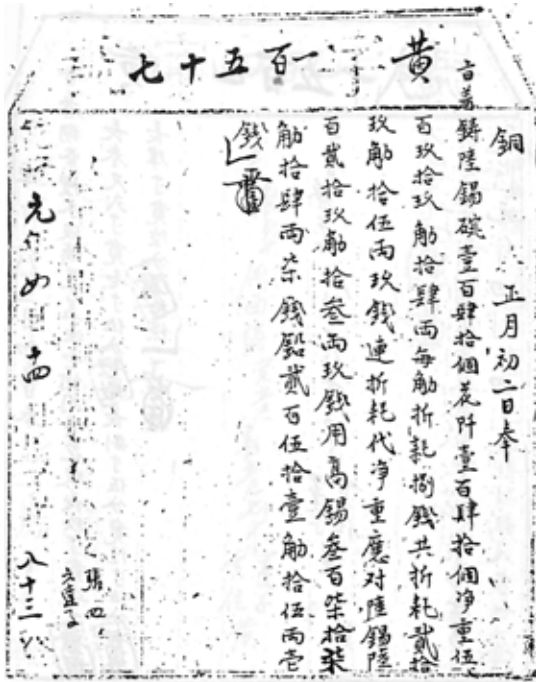
41 *Qing gong Neiwufu Zaobanchu dang'an zonghui*, vol. 7, 303.

42 The signature is neither Manchu or Chinese. It is likely to be a special mark called a *huaya* 花押. This kind of mark often appeared on reports in the Imperial Household Department next to the clerks' Manchu or Chinese signatures. For an example of this, see *zou'an*, no. 05-08-002-000174-0035: 'Wei xingqu zuocheng Yuanmingyuan deng chu tong xi huoji xuyong meitan muchai deng xiang shi 為行取成做圓明園等處銅錫活計需用煤炭木柴等項事' (The First Historical Archives of China, Beijing).

43 *Qing gong Neiwufu Zaobanchu dang'an zonghui*, vol. 7, 306. Although the two tickets related to one project were issued by the same person on the same day, they had different ticket numbers. This might be because the two *kupiao* were received and archived at different time.

44 *Huoji qingdang* was a genre of *huoji dang* 活計檔 which recorded the inventories of completed commissions.

Figure 3.5 *Kupiao* issued to the Copper Workshop in 1736



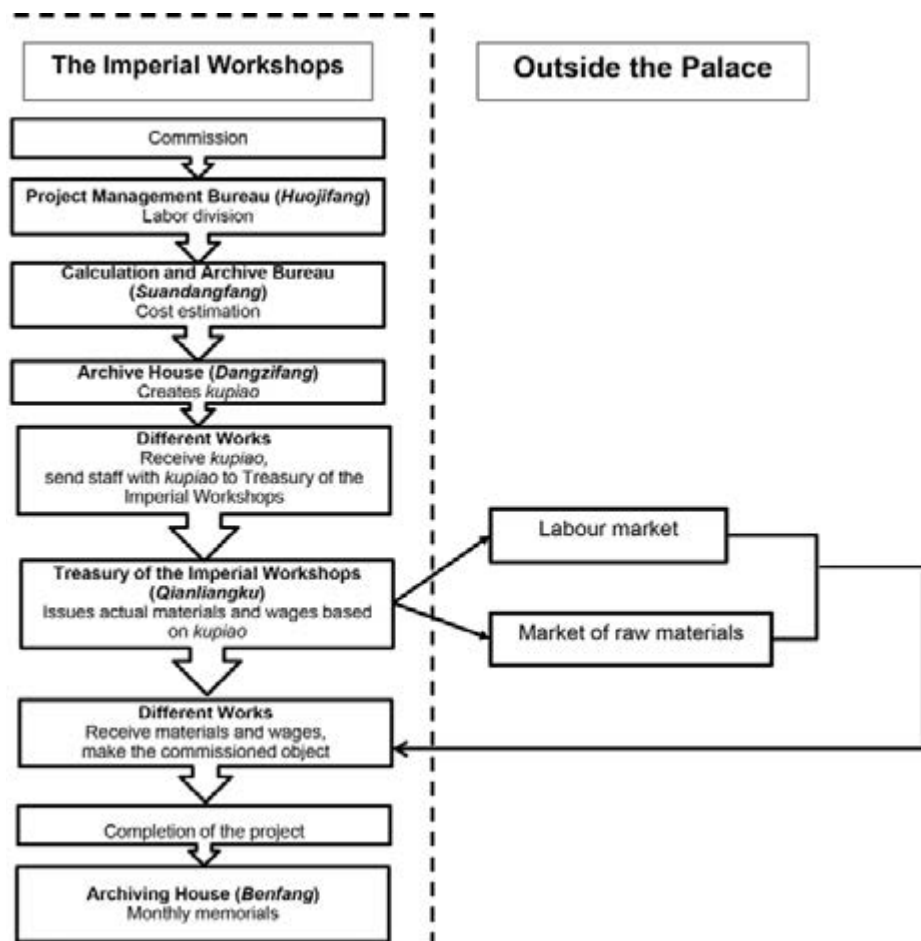
Source: *Qing gong Neiwufu Zaobanchu dang'an zonghui*, vol. 7, 306

likely the Headquarters of the Imperial Household Department (*Neiwufutang* 內務府堂).⁴⁵ Based on the documents examined above, the process through which the Imperial Workshops finished a commission can be broken down to the steps shown in Chart 3.1.

As Chart 3.1 shows, it was not just different works that collaborated in this process to complete a commission, but various administrative and accounting sectors – such as the Project Management Bureau, the Document House, the Calculation and Archive Bureau, the Archiving House, and the Treasury of the Imperial Workshops – also played an indispensable role in assigning tasks, dividing labour, creating *kupiao*, calculating budgets, and providing the funding and resources. If the works and artisans were the actual manufacturing components of the machine, the administrative and accounting sectors regulating and supplying them were analogous to the

45 The Archiving House was established no later than the 1st year of the Qianlong reign (1736). Until it was incorporated into the Archiving Bureau in around 1750 it operated as an independent office. See *Qing gong Neiwufu Zaobanchu dang'an zonghui*, vol. 7, 445.

Chart 3.1 Workflow of a commission at the Imperial Workshops from assignment to archiving



joints, hinges and screws that connected these components and enabled their operation. Through them, a pipeline of fuel – funding, materials, and human labour – was constructed for the operation of machine.

The content of *kupiao* was not limited to internal transactions in the palace. It also bridged the Imperial Workshops and the external market. As demonstrated by the *kupiao* with ‘purchase’ headings mentioned earlier, the Imperial Workshops procured a wide range of materials directly from the market. Frequently purchased items included various stationery goods such as brushes and ink, and raw materials such as pigments, wax, lacquer, glue, and

nails.⁴⁶ The large volume of acquisition indicates that the Imperial Workshops relied heavily upon the local market for production, while the diversity of goods suggests that there was a mature market of raw materials in Beijing.

Furthermore, *kupiao* reveal that the palace often outsourced casual work to the labour market outside the palace. For instance, in the project discussed in Figure 3.4, the Southern Workshop hired oilers, gold painters, and lacquerers from outside.⁴⁷ In contrast to the 'provisioned artisans' (*shixiangjiang* 食餉匠) who received fixed monthly stipends, these temporary artisans were paid according to the amount of work (*gong*) they did.⁴⁸ *Kupiao* show that all casual workers (including ivory carvers, carpenters, lacquerers, masons and jade carvers) were paid at the same rate of one *qian* and eight *fen* of silver per *gong*, regardless of their specialities.⁴⁹

Tapping the resources and workforce available outside the palace had certain benefits. Flexible outsourcing reduced the cost of production since the palace did not have to support a large number of artisans permanently. It also reduced the financial burden of the internal vault as the palace did not have to prepare every kind of raw material. The local material and labour markets were thus indispensable for the palace production. The Imperial Workshops were not a closed, autonomous system, but they were linked to the broader networks of commerce and labour in the capital city and beyond.

While Chart 3.1 represents the basic workflow that emerged during the first half of the eighteenth century, Chart 3.2 portrays the more complex and segmented trajectory of the paper trail that emerged after the 1755 accounting reforms mentioned in the previous section. Here, the newly added steps show how the accounting process continued even after a commission had been completed. The most noticeable change is that the Treasury now

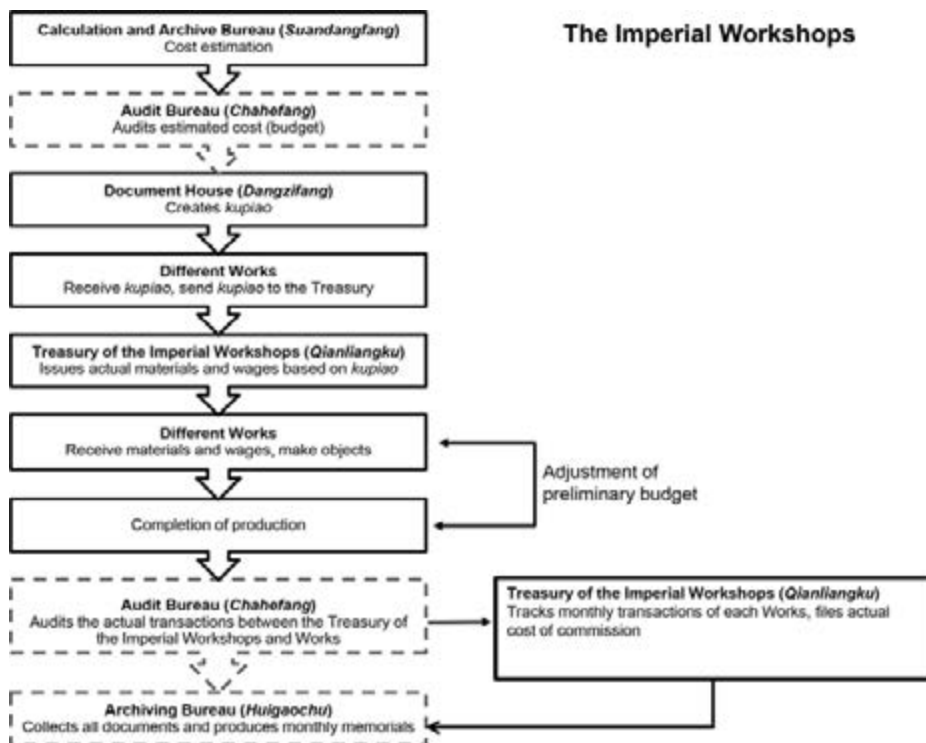
46 For the purchase of *jinbuhuan* brushes and ink, see *Qing gong Neiwufu Zaobanchu dang'an zonghui*, vol. 7, 336; pigments: vol. 7, 337; different kinds of wax: vol. 7, 338; different kinds of glue such as *yujiao* 魚膠 (fish glue) and *guangjiao* 廣膠 (Cantonese glue): vol. 7, 338, 342; different-sized nails: vol. 7, 362.

47 *Ibid.*, vol. 7, 303.

48 For a discussion of 'provision artisans' and other different types of artisans hired in the Imperial Workshop, see Chi Jo-hsin 嵇若昕, 'Qing zhong houqi (1821-1911) Neiwufu Zaobanchu nanjiang jiqi xianguan wenti 清中後期 (1821-1911) 內務府造辦處南匠及其相關問題', in *Gugong xueshu jikan* 故宮學術集刊, 32:2 (2015): 63-89. Wu Zhaoqing, 'Qingdai zaobanchu de jigou he jiangyi', 81. Wei Qingyuan 韋慶遠, 'Qingdai neiwufu jiangyi he yuyong shougongye 清代內務府匠役和手工業', in *Ming Qing shi xu xi* 明清史續析 (Guangzhou: Guangdong Renmin chubanshe, 2006), 359-379. On labour relations in the Qing palace, see Chapter One in this volume.

49 For information about outsourcing ivory artisans, see *Qing gong Neiwufu Zaobanchu dang'an zonghui*, vol. 7, 388, 447, 499, 502, 504; carpenters: vol. 7, 384, 473, 502; masons: vol. 7, 464; jade carvers: vol. 7, 464. Based on this, we speculate that 'one *qian* and eight *fen* of silver' was more or less the going rate for casual labour.

Chart 3.2 Workflow after the 1755 accounting system reform



bore plural administrative roles. In addition to its original role as the central vault for the Imperial Workshops, it now performed as an accounting unit that produced various accounting documents. As an internal auditing bureau, in addition, the Audit Bureau became responsible for checking and approving the plausibility of requests. The ledgers and documents produced by the Treasury and the Audit Bureau were received and archived by the Archiving Bureau, which compiled the monthly reports.⁵⁰

Alongside the actual production of objects, the Imperial Workshops thus produced, collected and archived an increasingly massive volume of accounting documents. As more rounds of cost estimation, audit and reassessment became mandatory, more accounting units were created to regulate the managerial process in addition to the production process. An extensive cross-departmental paper trail thus connected production and administration, artisans and materials at the Imperial Workshops.

50 *Qinding Zongguan Neiwufu xianxing zeli er zhong*, vol. 4 (309), 302.

The Palace and the State: The Accounting System of the Palace and the Fiscal System of the Qing State

Documents like *kupiao*, monthly reports, and annual ledgers represented different stages in the workflow of *zouxiao* 奏銷. The term *zouxiao*, which means to ‘report financial matters to the imperial throne for approval’, is better known among economic historians studying the Qing fiscal system. The documents in the *Archives of the Imperial Workshops* show that the process of *zouxiao* in the Imperial Workshops, which included many loops of bookkeeping and internal and external auditing on monthly and annual bases, was not only central to the Imperial Household Department’s accounting system, but it was a microcosm of the fiscal accounting system of the Qing state.

The *zouxiao* process was widely employed in the administration of government revenue and expenditure. The regulations of the Board of Revenue stipulated that local administrators, governors and offices responsible for specific tasks had to report their tax revenues and expenses to the Board of Revenue on a regular basis, usually once a year.⁵¹ If a report passed an audit by the Board of Revenue, it was sent to the emperor. If it did not pass the audit, it would be sent back to the submitters for correction. This *zouxiao* process was widely used to record fiscal items such as land revenues, salt taxes, custom duties, officials’ salaries, government administration expenses and military expenditure. The receipt of taxation was called a ticket or *piao* 票, and – as in the accounting process of the Imperial Workshops – this served as the basis in the *zouxiao* process. During the Qing dynasty, different tickets were produced for different revenues and taxes: for salt, there were salt tickets or *yinpiao* 引票,⁵² for tin mining, there were tin tickets or *xipiao* 錫票,⁵³ and for land revenue there were ‘stringed’ tickets or *chuanpiao* 串票. The tickets for land revenue were similar to *kupiao* in terms of format.⁵⁴ Both *chuanpiao* and *kupiao* were issued on preprinted forms and sequentially

51 Shi Zhihong, *Central Government Silver Treasury: Revenue, Expenditure and Inventory Statistics, Ca. 1667-1899* (Leiden; Boston: Brill, 2016), 14.

52 *Qinding Hubu zeli* 欽定戶部則例 (Regulations and Precedents of the Board of Revenue), vol. 1, 23 (rep. *Gugong zhenben congkan* 故宮珍本叢刊. Haikou: Hainan chubanshe, 2000, vol. 284-286).

53 Court memorials from the minister of revenue Su’erna 素爾訥 to Emperor Qianlong, 1771, *Huke tiben* 戶科題本 (Memorials of the Board of Revenue), no. 02-01-04-16407-006 (The First Historical Archives of China, Beijing).

54 *Chuanpiao* began their history in the Ming dynasty and were widely used in land revenues during the Qing dynasty. Guo Runtao 郭潤濤, ‘Mingdai de chuanpiao 明代的串票’ (Revenue Tickets in the Ming Dynasty), in *Yang Guozhen jiaoshou zhishi wushinian jinian wenji* 楊國楨

numbered for archiving purposes. Each *chuanpiao* had three copies and each copy recorded the same information: the name of the taxpayer, the date of payment, and the amount of revenue.⁵⁵ According to the *Collected Statutes of the Great Qing* (Da Qing huidian 大清會典), the taxpayer kept one copy as proof of payment, the tax farmer kept one as a receipt, and the third copy was sent to the local government to be archived for future audit.⁵⁶ Therefore it is possible to infer that *chuanpiao* and *kupiao* shared similar functions: both served as records of transaction, proof of payment, and records for future audit. In other words, both were basic elements of the *zouxiao* system. The similarities suggest the usage of *kupiao* in the Imperial Workshops was linked to the overarching *zouxiao* system of the state.

A better mirror-image of the *zouxiao* system of the Qing state in the Imperial Workshops was the production of monthly reports and annual ledgers. According to the regulations of the Board of Revenue, the Three Vaults of the Board of Revenue (*Hubu sanku* 戶部三庫) had to submit a report at the end of every month to report their monthly incomes and expenditures.⁵⁷ These monthly reports would be sent to the Court of Censors (*Duchayuan* 都察院) for audit within the first ten days of the following month.⁵⁸ In addition to monthly memorials, the Three Vaults had to produce and submit by the start of the following fiscal year two types of copies of its annual ledgers, respectively called yellow registers (*huangce* 黃冊) and blue registers (*qingce* 青冊). Both registers were written in the four-column format and contained the same information. Named after the colour of their silk covers, the yellow registers were presented to the imperial throne and stored in the Archives of the Grand Secretariat (*Neige daku* 內閣大庫) while the blue registers were archived in the relevant government departments.⁵⁹

The production of monthly reports and annual ledgers in the Imperial Workshops thus resembled the accounting process of the Board of Revenue. As discussed earlier, the Archiving House was responsible for producing the Imperial Workshops' monthly reports.⁶⁰ The original monthly reports

教授治史五十年紀念文集 (Collected Essays for the Fiftieth Anniversary of Professor Yang Guozhen) (Nanchang: Jiangxi jiaoyu chubanshe, 2009), 32-55.

55 For the format of *chuanpiao*, see Huang Liuhong 黃六鴻, *Fuhui quanshu* 福惠全書, *juan* 6, 7b-8a. (1893 edition; rep. *Siku weishou jikan* 四庫未收輯刊, *shibu* 史部, vol. 19).

56 Guo Runtao, 'Mingdai de chuanpiao', 32.

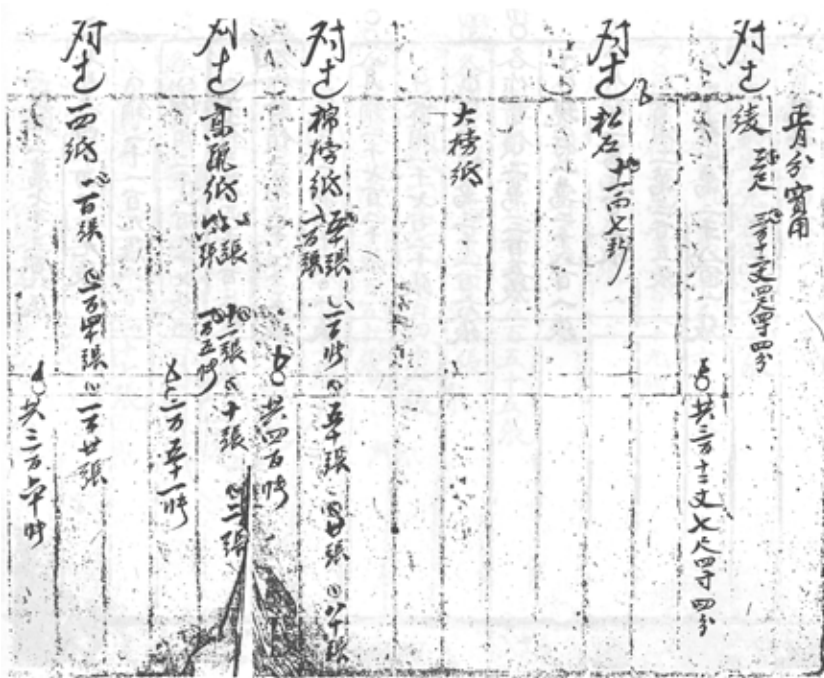
57 The Three Vaults of the Board of Revenue were: the Bullion Vault (*Yinku* 銀庫), the Miscellany Vault (*Yanliao ku* 顏料庫), and the Textile Vault (*Duanpi ku* 緞疋庫). For monthly reports by the Three Vaults, see Shi Zhihong, *Central Government Silver Treasury*, 15.

58 *Ibid.*, 15.

59 *Ibid.*

60 *Qing gong Neiwufu Zaobanchu dang'an zonghui*, vol. 7, 445.

Figure 3.6 Monthly summary (*yuezong* 月總) of 1793



Source: *Qing gong Neiwufu Zaobanchu dang'an zonghui*, vol. 54, 162

produced by the Imperial Workshops no longer exist in the published collection, probably because they were submitted to higher accounting units. Some of the drafts that the Imperial Workshops crafted in preparing the monthly reports still remain, however. The regulations of the Imperial Household Department show that, in order to produce monthly reports at the Archiving Bureau, the Treasury re-examined all the material and cash transactions before submitting its own monthly ledgers.⁶¹ The ‘monthly summary’ (*yuezong* 月總) of the 58th year of the Qianlong reign (1793) appears to be a draft for such a ledger recording monthly expenditures at the Treasury.⁶² The mark ‘*duiguo* 對過’ (meaning ‘compared’) added to the upper margin of the monthly summary demonstrates that an internal audit had taken place (see Figure 3.6). Following the internal audit was an external one by the Headquarters of the Imperial Household Department.⁶³

61 *Qinding Zongguan Neiwufu xianxing zeli er zhong*, vol. 4 (309), 297.

62 *Qing gong Neiwufu Zaobanchu dang'an zonghui*, vol. 54, 162-194.

63 *Qinding Zongguan Neiwufu xianxing zeli er zhong*, vol. 4 (309), 299.

Within this overarching structure, the monthly reports seem to have served two major functions: first, they provided the documents necessary for auditing; second, they collated datasets to prepare annual ledgers. The annual ledgers marked the final stage of the *zouxiao* process, in which all elements – beginning balance, new receipt, actual disbursement, and ending balance – were audited and settled. The extant annual ledgers of the Imperial Workshops, of which the earliest dates to 1733,⁶⁴ are divided to yellow registers (mentioned above), inventory registers (*qingce* 清冊), and navy registers (*lance* 藍冊). Few yellow registers appear in the *Archives of the Imperial Workshops*, likely due to the fact that they were stored in the Archives of the Grand Secretariat after being presented to the emperor.⁶⁵ The inventory registers and navy registers belonged to the category of ‘blue registers’; both were copies of yellow registers, but they were submitted to, and stored in, individual departments.⁶⁶ Inventory registers were copies submitted to the Headquarters of the Imperial Household Department, while navy registers were archived at the Treasury. The contents of the two were slightly different, however. Inventory registers contained a complete list of all materials, whereas the navy registers only recorded a narrower range of materials, such as textiles, pigments, firewood, paper and wax.⁶⁷ In addition, the inventory registers appeared much earlier than navy registers. The earliest copies of the former included in the published collection are from 1733, while the latter only started to appear after 1758.⁶⁸ After 1758, the two types of ledgers coexisted until 1794.⁶⁹

64 The earliest existing *Shouzhuzhu qingce* and *Xingqu qingce* in the collection are from 1733. *Qing gong Neiwufu Zaobanchu dang'an zonghui*, vol. 2, 231-206.

65 One example of the few remaining yellow registers in the published collection is the 1795 *Yellow Register of Gold and Silver Materials in Stock* (Huangce jinyin cailiao xiancun dang 黃冊金銀材料現存檔), in the *Qing gong Neiwufu Zaobanchu dang'an zonghui*, vol. 55, 508-538. This yellow register was stored in the Treasury of the Imperial Workshops, so it might be one of a few that was not submitted to the higher accounting units. See Shi Zhihong, *Central Government Silver Treasury*, 15.

66 Shi Zhihong claims that there were three types of blue registers in the Board of Revenue: inventory registers (*qingce* 清冊), blue registers (*qingce* 青冊), and navy registers (*lance* 藍冊). *Ibid.*

67 For example, the ‘*Original Records of the Blue Register of the 23rd Year under Qianlong's Reign* (Qianlong ershisian nianfen lance xiaosuan didang 乾隆二十三年份藍冊銷算底檔)’ were divided into two register books, one of which recorded silk textile and pigment transactions, while the other recorded transactions of wood, paper and wax. See *Qing gong Neiwufu Zaobanchu dang'an zonghui*, vol. 24, 1-7. The navy registers in the same pattern can be found from 1758 to 1794.

68 For *Shouzhuzhu qingce* and *Xingqu qingce* in 1733, see *Qing gong Neiwufu Zaobanchu dang'an zonghui*, vol. 2, 231-206. For navy registers from 1758, see *ibid.*, vol. 24, 1-7.

69 For deep blue registers from 1794, see *Qing gong Neiwufu Zaobanchu dang'an zonghui*, vol. 55, 470-478. For inventory registers from 1794, see *ibid.*, vol. 54, 732-752.

The emergence of navy registers was largely concomitant with the above-mentioned reforms of the workshop accounting system during the 1750s. It thus reflects a growing attention paid to specific materials and different sources and channels of circulation. It was no coincidence that textiles, pigments, firewood, paper and wax all happened to fall into the category of materials supplied by warehouses outside the Imperial Workshops: textiles and pigments came from Three Vaults of the Board of Revenue, firewood came from the Office of Palace Construction, while paper and wax came from the Grand Storage Office.⁷⁰ In accordance with the regulations of the Imperial Household Department, the Imperial Workshops had to report 'all the amount of materials requisitioned from external departments' to the Office of Inspection and Censors of Affairs at the Imperial Household Department (*Jicha neiwufu shiwu jiancha yushi yamen* 稽查內務府事務監察御史衙門) for external audit.⁷¹ It is therefore likely that the Treasury of the Imperial Workshops kept an extra copy of the ledgers that recorded transactions between the Imperial Workshops and external vaults for auditing purposes. The navy registers also embodied the practice of checks and balances in the cross-departmental *zouxiao* process: transactions between the Treasury, the Grand Storage Office and the Vaults of the Board of Revenue were subject to reviews by the Office of Inspection and Censors.

The *zouxiao* procedure was not limited to the Imperial Workshops, as it was central to the accounting system of other departments in the Imperial Household Department. For instance, at least from the 4th year of the Yongzheng reign (1726), the Six Vaults of the Grand Storage Office had to routinely submit monthly reports, blue registers and yellow registers to the Headquarters of the Imperial Household Department.⁷² In addition, from 1729 onwards, a regular external audit was introduced to the Grand Storage Office's *zouxiao* process: an official inspector was sent to the Six Vaults to audit their financial records. Beginning in 1730, all bureaus and workshops subordinate to the Grand Storage Office had to annually declare their receipts and balances and have their accounts examined by an external official. In the 30th year of the Qianlong reign (1748), the significance of the five-year audit increased to include several chief supervisors of the Imperial Household Department (*Neiwufu dachen* 內務府大臣) within the body of

70 *Qinding Zongguan Neiwufu xianxing zeli er zhong*, vol. 4 (309), 291 and 303.

71 *Ibid.*, vol. 4 (309), 299.

72 *Zongguan Neiwufu xianxing tiaoli: Guangchusi*, 35-6. Similarly, the Office of the Old Summer Palace (*Yuanmingyuan* 圓明園) had to submit monthly reports and yellow registers to the Headquarters. *Qinding Zongguan Neiwufu xianxing zeli er zhong*, vol. 2 (307), 108-9.

inspectors, and the Grand Storage Office was inspected as well as several other bureaus subordinate to the Imperial Household Department, such as the Imperial Estates (*Guanfang* 官房), Leased Vaults (*Zuku* 租庫) and the Imperial Bureau of Weaving and Dying (*Zhiranju* 織染局).⁷³

This shows that the Imperial Workshops and bureaus in the Imperial Household Department shared the same *zouxiao* system and produced similar documents. By auditing divergent monthly reports and annual ledgers, the Headquarters of the Imperial Household Department wove the *zouxiao* processes of different accounting units into the financial system of the Imperial Household Department as a whole. Furthermore, higher financing bureaus such as the Office of Inspection and Censors and the grand ministers of the Imperial Household Department were asked to audit and inspect not only internal transactions within the Imperial Household Department but also transactions between the Imperial Household Department and the Boards of Revenue and Work. Documents such as *kupiao*, monthly reports, and annual ledgers thus indicate that the *zouxiao* system of the Imperial Workshops, embedded in the Imperial Household Department's accounting system, was modelled on the fiscal system of the state. In other words, the accounting system of the Imperial Workshops was a microcosm of the accounting system of the Imperial Household Department as a whole, and the latter mirrored the Qing state's overarching fiscal system. The multilateral flow of resources between the Board of Revenue and the Imperial Workshops' vaults thus instantiated the interweaving of the state's revenues and that of the Imperial Workshops.

Conclusion

Whereas the institution of the Imperial Workshops and its accounting system had been set up exclusively for the emperor and his family, its operation was connected to that of the state and the market outside the palace. The Imperial Workshops' accounting system coordinated a complex flow of human and material resources as well as the information network between the Imperial Household Department, the external market and the Boards of Revenue and Work. Although the Imperial Workshops were not a constituent of the fiscal body of the Qing state, it operated in the same accounting mechanism that aimed to make heterogeneous economic and financial sectors function like cogwheels revolving on a gear.

73 *Zongguan Neiwufu xianxing tiaoli: Guangchusi*, 35-6.

From the 1720s to the 1750s, the accounting system experienced several changes: stricter regulations were instated regarding deadlines for paperwork, several rounds of internal audits were demanded, more and more departments started to engage in the verification of accounting books, and more attention was paid to certain materials over others. These changes instantiated the logic and goal underlying both the emperor's private purse and the empire's treasury: the need to construct a system of checks and balances in order to prevent corruption and ensure an efficient use of resources. The increasing number of bureaus established at the Imperial Workshops during the 18th century put into action numerous regulations for internal audits, cross-departmental inspections, and the archiving and memorializing of various information. These changes reflected increasing concerns about, and demands for, control over funds and resources. Through them, the Imperial Workshops pursued the goal of rational planning and cost economization at various stages of its work process. In this regard, the accounting system of the palace was itself a machine run by 'a combination of resistant bodies'.⁷⁴ *Kupiao*, tickets of the Treasury as the smallest documentary unit, embodied both the principle and the praxis of accounting. On the one hand, they recorded the day-to-day minutiae of the Imperial Workshops' financial activities in all their abundance, heterogeneity, and complexity. Abstracting such information into concise ledgers for financial appraisal and imperial perusal, on the other hand, epitomized the principles of accounting that emerged as a composite mechanism within the Imperial Workshops.

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74 Reuleaux, *The Kinematics of Machinery*, 35.

