

UCLA

UCLA Electronic Theses and Dissertations

Title

Timber Trade along the Yangzi River: Market, Institutions, and Environment, 1750-1911

Permalink

<https://escholarship.org/uc/item/5xz4h77g>

Author

Zhang, Meng

Publication Date

2017

Peer reviewed|Thesis/dissertation

UNIVERSITY OF CALIFORNIA

Los Angeles

Timber Trade along the Yangzi River:
Market, Institutions, and Environment, 1750-1911

A dissertation submitted in partial satisfaction of the
requirements for the degree Doctor of Philosophy
in History

by

Meng Zhang

2017

© Copyright by

Meng Zhang

2017

ABSTRACT OF THE DISSERTATION

Timber Trade along the Yangzi River:
Market, Institutions, and Environment, 1750-1911

by

Meng Zhang

Doctor of Philosophy in History

University of California, Los Angeles, 2017

Professor Roy Bin Wong, Chair

This dissertation studies the history of the long-distance timber trade along the Yangzi River during the eighteenth and nineteenth centuries. This voluminous trade is an important aspect of the economic, environmental, and frontier history of Qing China, but has yet to receive much examination in the literature. In addition to published materials, my study employs contracts, palace memorials, legal cases, guild records, and genealogies collected from several Chinese archives. The cultivation, trade, and taxation of timber lend the focal points for me to address a number of central debates regarding state building, environmental transition, and business paradigms in Chinese history. I examine the evolution of the relationship between the state and merchant groups, the enforcement mechanisms that sustained the expansion of long-distance trade networks, the economic and environmental impacts of core-periphery integration, and the property rights regime that enabled market-oriented reforestation.

This study provides the first reconstruction of the overall structure of the South China timber trade with hand-collected data and situates the story of timber in a broader perspective. It demonstrates the way in which merchants and the state negotiated the institutional foundations for their relationship, and how such institutional arrangements co-evolved with and reshaped the trade environment for two centuries. The project's scrutiny of the mechanisms of contract enforcement rejects the dichotomy of formal and informal institutions derived from European experiences and argues that formal and informal institutions existed along a continuum instead of in separate spheres in China's late imperial and Republican history. It also explores the impacts of the state and market expansion into the internal ethnic frontiers in the Southwest. By examining the local population's active participation in the timber trade and tree planting, this study highlights their economic agency and revises the one-sided story from earlier works that unsophisticated natives were deprived of their resources by in-migrating Han colonizers. The property rights regime on timberlands adopted here and elsewhere across South China effectively solved the liquidity problem associated with the long-term nature of tree growth and proved successful in promoting commercialized reforestation in a rural household-based economy.

The dissertation of Meng Zhang is approved.

Richard Von Glahn

Jean-Laurent Rosenthal

Dora Luisa Costa

Jessica Lillian Goldberg

Roy Bin Wong, Committee Chair

University of California, Los Angeles

2017

To my grandfather,

Zhang Zongrong

TABLE OF CONTENTS

ABSTRACT OF THE DISSERTATION	ii
LIST OF MAPS, FIGURES, AND TABLES.....	ix
ACKNOWLEDGEMENTS	xi
CURRICULUM VITAE.....	xv
INTRODUCTION.	1
Timber Rafts on the Yangzi: the Big Picture	1
Deforestation, Re-planting, and Frontier.....	5
Taxation, Procurement, and Market Regulation	12
Networks, Courts, and Contract Enforcement	20
A Note on Main Sources	25
Chapter 1. Scale and Structure of the South China Timber Market	28
The Rise of Jiangnan and its Source of Timber	29
The Ming-Qing Timber-Taxing Customs	35
The Qing Management of Customs Revenues.....	39
Timber Consumption in Jiangnan	46
Sources of Timber Supply.....	52
The Chen Guan Station in West Hunan	57
Timber Markets and Merchant Groups	65
Chapter 2. State in the Market: Timber Tribute Procurement and State Personnel’s Sideline Business	77
The Routinized Timber Tribute System of the Qing.....	77
Categories and Quota of Timber Tribute	80

Insufficient Official Funding.....	89
Business Conduct of Timber tribute Officials	93
Negotiations between Merchants and Officials	100
Sideline Timber Trade in the Grain Tribute System.....	105
Chapter 3. The Timberland Economy: Co-ownership, Securitization, and Risk-Sharing.....	114
The Miao Frontier and Its Timber Industry	116
The Lower Qingshui Communities	122
The Technology of Tree Planting and Its Challenges	128
Categories of Mountain Land Transactions	132
Creation of Landowners’ and Planters’ Shares	134
The Division and Securitization of Timberlands	140
Co-ownership Structures	146
Felling, Sales, and Transportation.....	153
Comparison to Timberland Practices in the “Old South”	157
Chapter 4. Timber Brokerages and the Eighteenth-Century Market Management	166
Long-term Trends in Late Imperial Market Management	166
The Qing Licensed Brokerage System.....	174
Timber Brokerage Licenses in Practice	182
Matchmaking and Financial Intermediation	188
Broker-Seller Network	192
Peculiarities of the Timber Brokerages in the Miao Frontier.....	201
Chapter 5. Merchant Guilds, Collective Taxation, and Local Government Finance.....	214
From Individual Brokers to Guilds	214

Official Duties, Contributions, and Merchant Groups	217
Exclusive Responsibility for Independent Standing	224
The Lijin Tax.....	229
Merchant Guilds “Undertake Contributions”	236
Chapter 6. Guild Regulations and Mechanisms of Contract Enforcement	244
The Timber Market in Shanghai and Sources of Materials	248
The Risks of Default and Information Asymmetry.....	257
Internal Mechanisms at the Timber Guilds	261
Why Play by the Rules?	265
Local Courts in Shanghai	271
Cross-Regional Disputes and the Chamber of Commerce.....	282
The Case of Yong Xing Shun	287
CONCLUSION.....	294
APPENDICES	309
Appendix A. Estimation of Timber Taxes for Jiujiang Guan and Jing Guan	310
I. Timber Taxes of Jiujiang Guan.....	310
II. Timber Taxes of Jing Guan	314
Appendix B. The <i>Longquan</i> Assessment and Valuation System.....	316
BIBLIOGRAPHY.....	324

LIST OF MAPS, FIGURES, AND TABLES

Maps

Map 1 Timber Markets, Trade Routes, and Tax Points in South China, 1700-1900.....	4
Map 2 “Miao Territories” and Timber Markets, 1750-1850	119
Map 3 Distribution of Licensed Timber Brokerages in Hunan, 1861-1911	184

Figures

Figure 1 Timber Rafts on the Yangzi River in Jiangxi Province, 1920s	3
Figure 2 Timber Taxes from Seven Customs, 1725-1850	47
Figure 3 Timber Consumption in Jiangnan, 1730-1850	50
Figure 4 Estimated Volume of 3-ft Timber Logs at Four Customs	55
Figure 5 Customs Revenue and Quota of Chen Guan, 1725-1907	61
Figure 6 Distribution of Sample Contracts by Year.....	127
Figure 7 Types of Timberland Transactions by Year	134
Figure 8 Division of Property Rights v.s. Frequency of Transactions	145
Figure 9 Division of Revenues on the Randugan Timberland.....	151
Figure 10 Trade Volume of 211 Sellers in 1909.....	198
Figure 11 Cumulative Share of Trade Volume by the Bottom X%	199
Figure 12 Network Structure of Timber Sellers and Brokers	200
Figure 13 Members of the Zhenxun Association by Native Places, 1905-1925.....	255
Figure 14 Number of Cases by Decade	274
Figure 15 Kaitai vs. Yong Xing Shun (YXS), 1932	289
Figure 13 Jiujiang Guan Customs Revenues, 1725-1850	311
Figure 14 Jing Guan Customs Revenues	315
Figure 15 Formula of Longquan Liang.....	318

Figure 16 Correspondence between Longquan Liang and Tree Age.....	320
---	-----

Tables

Table 1 Eight Main Timber-Taxing Customs	39
Table 2 Reasons for Timber Tax Shortages in Jiujiang, Wuhu, and Longjiang Customs	51
Table 3 Timber Tax Rates and Prices Used for Taxation	55
Table 4 Estimated Value and Volume of Timber Through Chen Guan.....	65
Table 5 Quota of Timber Tribute by Province.....	81
Table 6 Official Price of Tribute Timber	91
Table 7 Jurisdictions of the Villages in Document Collections	124
Table 8 Categories and Distributions of Contracts on Mountain Lands	133
Table 9 Sales of Planters' Shares	138
Table 10 Brokerage License Fees by Province	176
Table 11 Collection of Contributions by the Association of Huizhou Timber Merchants in 1909	197
Table 12 Lijin Taxes on Timber, Jiangxi ——Jiangsu	233
Table 13 Average Lijin Rates and Collection Method by Province	235
Table 14 Results of Court Cases	278
Table 15 Cross-Regional Arrear Cases.....	284
Table 14 Categories of Longquan Ma.....	319
Table 15 Discount of Longquan ma along Water Routes	322
Table 16 Billing of Tong Fu Xing Timber Brokerage	323

ACKNOWLEDGEMENTS

This dissertation work is the culmination of a long journey, which started when an undergraduate student of finance and statistics began to explore the interesting interplays of state and economy in history. For that, I owe my thanks to many members of the faculty at Peking University, who collectively built an encompassing academic environment that inspired and took seriously interdisciplinary inquiry. I am especially grateful to ZHOU Li'an 周黎安, my first teacher of economics who also introduced me to the fascinating problematics of economic history, and DENG Xiaonan 邓小南, who kindly encouraged my attempt to switch course and pursue graduate studies in Chinese history after college. Without them, I wouldn't have had the courage to let my curiosity take me to this place. I also must thank my parents, ZHANG Shuliang 张书亮 and ZHANG Lei 张雷, for giving their acquiescence when I decided to abandon the financial industry and come to UCLA to study history, which, even in the immediate aftermath of the 2008 Financial Crisis, was not a popular idea.

The six years I have spent in UCLA are most exciting, challenging, and fulfilling. Above all, my most onerous intellectual debt was accrued to my dissertation advisors, R. Bin Wong, Richard von Glahn, and Jean-Laurent Rosenthal. They set such a high bar for me to try to reach with their admirable scholarship. They challenge me to go beyond my comfort zone and try to address the widest audience. They provide the most devastating critiques, but always with encouragement and a sense of humor. The Caltech-UCLA Chinese economic history meetings, which the three of them set up to devote lengthy discussions to the works of a small group of advisees, have been the most invigorating experience in my graduate life. It has been a life-changing privilege to be their student.

Andrea Goldman, Jessica Goldberg, Ghislaine Lydon, and Muriel McClendon — among the many wonderful historians in the department whom I had the honor to know — must be thanked especially for their insightful mentorship for my academic and professional development. Economics faculty Dora Costa, Leah Boustan, and Walker Hanlon welcomed me to the weekly economic history pro-seminars over the years and, together with the participating economics graduate students, displayed enormous patience and provided stimulating insights as I routinely brought studies that were distant to them both in terms of topic and methodology. In a similar vein, I am also grateful for the platform of intellectual exchange and funding provided by the All-UC Economic History Group. Its annual workshop in October to prepare economic history job candidates for their job talks and interviews has been an enormous resource and demystified the job market for me from early on.

From the beginning, I have benefited from the friendship with the wonderful cohort of graduate students both in and outside of my home department. Maura Dykstra has been the most supportive *senpai*, whose astonishing overconfidence in me drives me crazy and forward. Hsiao-Chun Wu, Joshua Herr, Amy Gordanier, and Guillermo Ruiz-Stovel are my trusted allies, with whom I constantly seek advice, gossip, and plot strategies to maneuver through graduate school together. Hanmo Zhang 张翰墨, Guangyi Li 李广益, Yunshuang Zhang 张蕴爽, and some other students of Chinese literature in the Department of Asian Languages and Cultures initiated a weekly reading group on the *Book of Rituals* during my first years, where I found home and greatly improved my reading of classical texts. Many students who had research topics related to China participated in the China Studies Pro-seminar that Amy and I organized in my second year, which turned out to be a lively platform of interdisciplinary exchange and indulged my curiosity on what everyone was working on. I also came to know and love Dong Yan 严冬,

Sunkyu Lee, Xiang Chi 池翔, You Wang 王悠, and Xiaowen Hao 郝晓雯, who joined the program after me and proved to be great scholars and friends.

I am grateful to the UCLA History Department, the UCLA Center for Economic History, the All-UC Economic History Group, and the UCLA Terasaki Center for Japanese Studies for their crucial financial support, without which I couldn't have accomplished my extensive archival trips in China and language study in Japan. I also thank the assistance and accommodation of the archivists and librarians at the First Historical Archives of China, the National Library of China, the Sichuan Provincial Archives, the municipal archives of Suzhou, Shanghai, Hangzhou, and Nanjing, the Taipei National Palace Museum, and the Institute of History and Philology at Academia Sinica. CAO Shuji 曹树基, ZHAO Siyuan 赵思渊, JIANG Qin 蒋勤, TANG Meng 汤萌, and other faculty and staffs at the history department of Shanghai Jiao Tong University (SJTU) must be given special thanks as they welcomed me to their vault of hundreds of thousands of primary sources that they collected from local communities, catalogued, and had the ambition and technology to have efficiently digitalized. The model set by SJTU then becomes the benchmark that I endorse to process and share large amounts of local documents that are crucial to the studies of social and economic history.

The Association of Asian Studies and the World Economic History Congress provided travel grant that enabled me to attend their conferences, where I could acquaint with the international community of Chinese historians, economists, legal scholars, environmental historians, and historians of Asian borderlands. I am especially grateful to Robert Marks, Nicholas Menzies, Ian Matthew Miller, and David Bello for welcoming me into the community of Chinese environmental historians and encouraging me to think more critically about the environmental implications of my study, which has become a distinctive feature of this

dissertation that I did not anticipate initially. On the economic history side, Maarten Prak, Patrick Wallis, Elizabeth Köll, Thomas Rawski, Oscar Gelderblom, and Francesca Trivellato have provided invaluable critiques on my study of property right regimes or merchant guilds at varying stages. Kenneth Pomeranz and CH'IU Pengsheng 邱澎生 gave me warm encouragement and expressed continued interest in what I might have found, which was exactly the extra little push I needed to march forward. Towards the end of my graduate school experience, I benefited greatly from the AAS workshop “New Frontiers in Asian Economic History” at Michigan State University and the “Funding of Pre-industrial Business” workshop at Utrecht University — while the former fosters the formation of a community of scholars spanning the sub-regions and disciplinary boundaries of Asia, the latter challenges me to think more effectively about ways to communicate and collaborate on common issues of interest with specialists of other continents.

My partner WANG Ye 王焯 has been the most cheerful and unconditional supporter and the best distraction. Our dog Bajie 八戒, who entered our life last year, saved my sanity from the enormous stress in the writing process and the job market. My love goes to you both.

CURRICULUM VITAE

Meng ZHANG 張萌

EDUCATION

2017 (expected)	Ph.D. in History	University of California, Los Angeles, CA
2014	C.Phil. in History	University of California, Los Angeles, CA
2013	M.A. in History	University of California, Los Angeles, CA
2010	B.A. in Economics and Statistics	Peking University, Beijing, China

PUBLICATION

“Timber Trade Organizations in Shanghai: Institutions, Enforcement, and Dispute Resolution, 1880-1930.” *The International Journal of Asian Studies* 14, no. 2 (2017), pp. 1-28.

"Financing Plantation Forestry: Securitization of Timberlands and Shareholding Practices in Southwest China, 1750-1900." *Late Imperial China* (accepted with revisions)

GRANTS AND AWARDS (selected)

The XVII World Economic History Congress Travel Grant	2015
All-UC Economic History Group Graduate Student Fellowship	2014-15
UCLA Center for Economic History Fellowship	2014
Sasakawa Summer Japanese Language Fellowship	2012 and 2013
UCLA Five-Year Chancellor's Prize Fellowship	2011-16

TEACHING EXPERIENCE

Frontier, Ethnicity, and Empire Building in China, 1644-1950 (Spring 2016)

Commerce and Society in China, 1000-1900 (Winter 2016)

Trade and Society in Late Imperial China, 1450-1850 (Fall 2015)

CONFERENCE PARTICIPATION (selected)

“Textual and Statistical Approach to Contracts: A Case of Timberland Economy in Southwest China,” AAS Workshop “New Frontiers in Asian Economic History,” Michigan State University, MI, May 11-15. 2017

“Market, State, and Ethnicity: Timber Trade in the Miao Frontier.” Presented on the panel *Connecting the Qing frontiers through Merchant Networks* at the Annual Conference of the Association for Asian Studies (AAS), Toronto, Canada, March 16-19. 2017

INTRODUCTION.

Timber Rafts on the Yangzi: the Big Picture

During his journey along the Yangzi River in the 1870s, the British diplomat Augustus Raymond Margary remarked on the curious appearance of timber rafts:

They look like a floating village with a brisk population, and on nearer view, one cannot help admiring the ingenious construction. the larger lengths of timber are closely massed together, forming a compact raft of no mean dimensions, down the centre of which are constructed a series of neat huts for the crew to live in. the head of the raft is shaped off to somewhat of a sharp prow, and at the stern a gallery runs out fitted with steering apparatus. the fast stream of the Yangtze carries them down with sufficient speed, but they are also furnished with enormous sweeps requiring the strength of 10 to 12 men to manipulate...Three or four of these rafts generally come down in company, one behind the other in a long string, and for means of communication, a diminutive raft, rowed by five men, answered every purpose of a boat. It had all the appearance of a long-legged fly shooting across the water in spasmodic spurts.¹

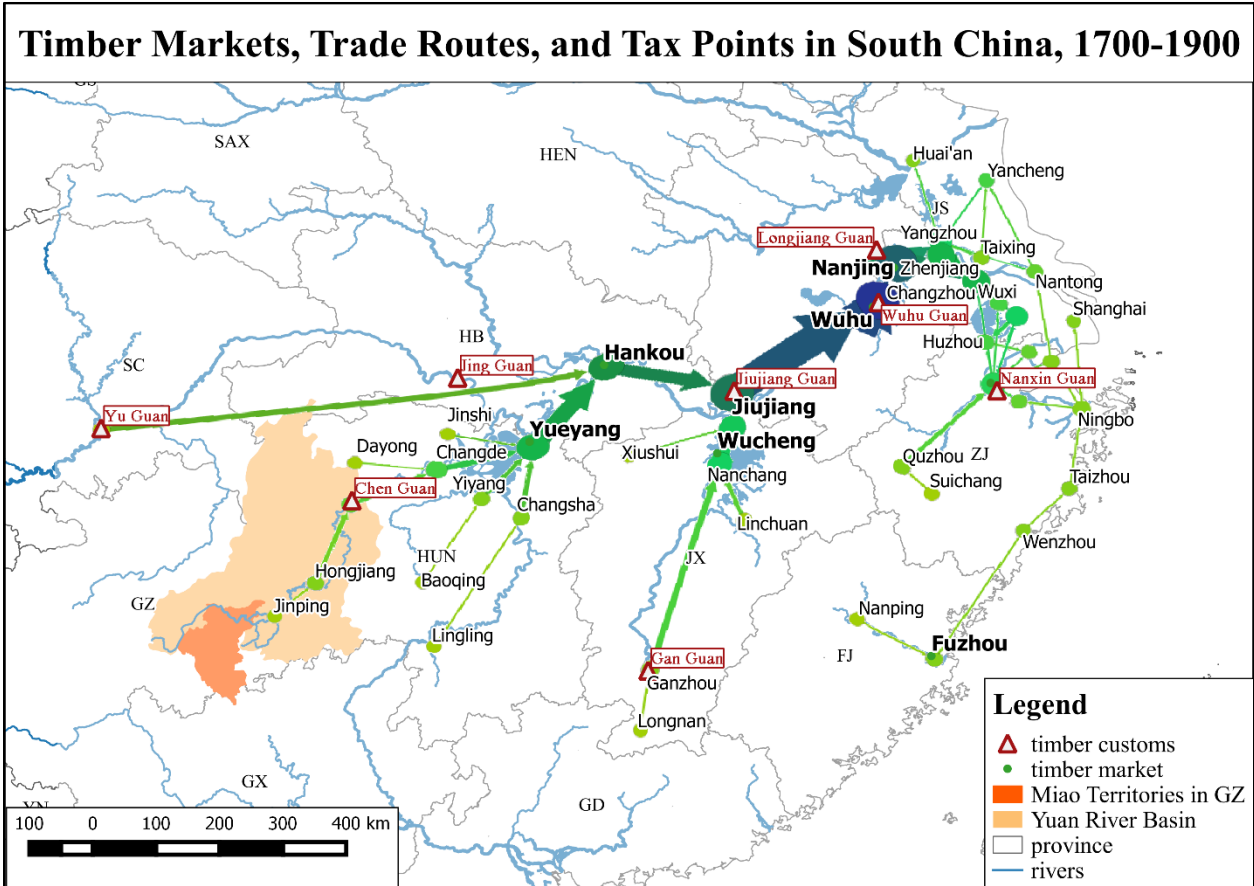
¹ Augustus Raymond Margary and Rutherford Alcock, *The Journey of Augustus Raymond Margary, from Shanghai to Bhamo, and back to Manwyne* (London: Macmillan and co., 1876). The passage is cited in Inspector General of Customs, *Decennial Reports on the Trade, Navigation, Industries Etc of the Ports Open to Foreign Commerce in China and Corea and on the Condition and Development of the Treaty Port Provinces, 1882-1891* (Shanghai: Statistical department of the Inspectorate General of Customs, 1893), 174–75.

What Margary witnessed was the operation of the cross-regional system of long-distance timber trade that spanned over the Yangzi River and its tributaries. *Map 1* gives an overview of the structure of timber trade in south China during the eighteenth and nineteenth centuries. The pull of timber demand came from the Lower Yangzi valley, which was commercializing and urbanizing extensively but at the same time largely deforested by the late imperial period. Jiangnan obtained timber from two systems. First, there is the old system of timber trade that centered at Hangzhou, which drew timber from the mountainous areas of Anhui, Zhejiang, and Fujian. This network had been developed since the twelfth century. The second system span over the Yangzi River. The Jiangxi part became quite developed during the Ming dynasty, while the southwestern section in Hunan and Guizhou became increasingly important since the seventeenth century. The time line drawn here is based on timber for mass market consumption (see Chapter 1). As later chapters will show, the procurement of imperial timber in the southwest preceded the entrance of commercial capital.



Figure 1 Timber Rafts on the Yangzi River in Jiangxi Province, 1920s ²

² http://blog.sina.com.cn/s/blog_491bcbfd0100aftf.html



Map 1 Timber Markets, Trade Routes, and Tax Points in South China, 1700-1900

This voluminous trade, which supplied the explosive growth in Chinese-style wooden buildings in the late imperial cycles of commercialization and urbanization, was an important factor in the economic, environmental, and frontier history of Qing China (1644-1911), yet the subject has not received significant attention to date. Through an analysis of the cultivation, trade, and taxation of timber, this dissertation addresses key debates in Chinese history regarding state building, environmental transition, and business paradigms. Particularly, I aim to answer the following questions. How did this trade expand to incorporate ever-increasing geographic space during the late imperial period and how did the developing timber trade contribute to the shifting structure of interregional economic exchange between core and periphery areas? What were the ecological consequences and how did local populations

adapt their ways of interactions with their environment? How did the Qing state (central and local yamen offices and officials) affect the various links in the production and trade of timber, and what can we learn about the fiscal and regulatory practices of the state and its interactions with merchant groups, migrants, and local minorities? In conducting this long-distance, capital and labor intensive trade, how did the participating merchants pool capital, build networks, gain information, enforce contracts, and resolve disputes? What were the respective functions and interrelations between formal court adjudications and informal mechanisms of enforcement within networks or merchant guilds?

Deforestation, Re-planting, and Frontier

Environmental historians of China have established that deforestation of south and southwest China occurred during the late imperial period because of demographic and economic forces. The market demand for timber had begun to intensify in the lower Yangzi region since the medieval commercial revolution around the tenth century and that demand was fulfilled by forests over an increasingly wider range.³ Yet, previous literature has relied largely on sporadic evidence from literary works, and hence, little is known about the systematic changes in the structure and volume of the timber trade.

The first step of my dissertation is to fill the gap in our knowledge of the basic statistical facts of the south China timber trade by using a series of transit tax data from seven domestic

³ For an overview of the process of China's deforestation and its regional variations over two millennia, see Mark Elvin, *The Retreat of the Elephants: An Environmental History of China* (New Haven: Yale University Press, 2004), 19–85. For the environmental transformation in frontier areas over the late imperial period, see Robert Marks, *China: Its Environment and History*, World Social Change (Lanham, Md: Rowman & Littlefield, 2012), chap. 5.

customs stations (Chapter 1). Based on this empirical evidence, I trace the development of the interregional timber trade that linked the urbanizing Lower Yangzi Valley to areas of timber supply in the west, and review the late imperial cycles of urbanization, population growth, migration, and environmental change. The phenomenon being established here, that forces of state expansion, market integration, and migration took a toll on the natural resources in previously underpopulated areas, is not particular to Chinese history, but represents a general trend in the early modern and modern world. I have identified two trends during the eighteenth and nineteenth centuries. First, the demand for timber in Jiangnan grew significantly in the eighteenth century and stagnated in the first half of the nineteenth century. Second, timber from the two southwestern provinces of Hunan and Guizhou became an increasingly important source of supply to compensate for declining supplies from the increasingly deforested Sichuan province.

With the total volume of timber export continuously expanding over centuries, the natural forests in southwest China became increasingly depleted. Population increase, in-migrants, and the spread of agriculture were significant factors in the trend of deforestation as well. In the meantime, another noticeable development was the re-planting of timber trees for market sales. During his several business trips across China, the early-20th century trans-Pacific timber magnate Robert Dollar encountered big timber rafts that were floated down the Yangzi River for many hundreds of miles from the Upper Yangzi forests in southwest China. In his memoir, he ponders on the sustainable source of domestic timber supply in China:

For a long time, I thought, when they were cutting such small timber (author's note: "small" as compared to the hundreds-year-old natural Oregon pine that Dollar's company specialized in) that they must be nearing the end of their supply. But on investigation I

find that whenever a small tract is cut off it is compulsory to immediately re-forest it by planting the ground over with small plants, and that in a couple of decades a full crop is again ready for cutting... This is the competition we have to meet in the small sizes of Oregon pine, and the reason that the Chinese market for Oregon pine calls for large sizes and excludes all of smaller...

... This is quite an improvement on the American mode of cutting everything down and doing nothing to reproduce. This Chinese method of reproduction will give them an everlasting supply of small timber. Would it not be well before it is too late, to take a leaf out of the Chinese book of knowledge, even though we think we know so much more than they?

Dollar's depiction of the Chinese situation is probably too rosy, as we know from official memorials and local gazetteers that even in the south, many localities had experienced deforestation and shortages of wood supply by the nineteenth century.⁴ However, it was indeed true that in some places, reproduction of timber trees was routinely practiced for sales in the market. Although such practices by no means turned the general trend of deforestation in the late imperial period, it is important to understand the economic conditions and property right institutions that had successfully enabled commercialized plantation forestry in these areas. This understanding would have important policy implications for contemporary state-sponsored projects of reforestation in China: it is more effective to lay the conditions that will generate the desirable results than resorting to coerced planning or straining the public budget.

⁴ Marks, *China*, location 5524.

Existing literature has highlighted some successful examples of forest management and tree planting practices in parts of southern Anhui, Jiangxi, and northern Fujian (the “Old South”).⁵ Some Chinese and Japanese scholars have also studied similar phenomenon in the southwest, which became an important exporter of cultivated timber by the nineteenth century.⁶ In all these areas where the cultivation of timber trees developed into an industry of some scale, a common factor was commercialization. With increasing cross-regional economic integration, the high demand for timber from developed areas did not simply wipe out the natural forests in the periphery, but in many cases also provided the monetary incentives for the locals to replant trees when that seemed most profitable among all alternatives.

⁵ Joseph P. McDermott, *The Making of a New Rural Order in South China: I. Village, Land, and Lineage in Huizhou, 900-1600* (New York: Cambridge University Press, 2014), 369–429; Nicholas K. Menzies, *Forest and Land Management in Imperial China*, Studies on the Chinese Economy (New York: St. Martin’s Press, 1994), 89–104; Stephen C. Averill, *Revolution in the Highlands: China’s Jinggangshan Base Area*, State and Society in East Asia (Lanham, Md: Rowman & Littlefield Publishers, 2006), 25–27.

⁶ For some Chinese and Japanese studies on the timber-producing industry in the southwest, see Zhang Yingqiang 张应强, *Mucai zhi liudong: Qingdai Qingshui Jiang xiayou diqu de shichang, quanli, yu shehui* 木材之流动: 清代清水江下游地区的市场、权力与社会 [The Movement of Timber: Market, Power, and Society in the Lower Qingshui Area during the Qing Dynasty] (Beijing: Sanlian shudian, 2006); Christian Daniels, Yang Yougeng 杨有庚, and Takeuchi Fusaji 武内房司, eds., *Kishū Myazoku ringyō keiyaku monjo kaihen (1736-1950 nen)* 貴州苗族林業契約文書匯編 (1736-1950 年) [Old Forestry Contracts of the Miao in Guizhou] (Tokyo: Tokyo University of Foreign Studies, 2001), vol. 3.

While these studies on rural tree planting industries have examined the complex effects of commercialization, available silvicultural technologies, and economical species (cunninghamia in particular), less attention has been paid to a practical conundrum, that is, even the most economical timber tree species have to take decades to grow.⁷ Although some income could be gained from intercropping in the first few years before the tree canopy closed up,⁸ the balloon revenue from cutting and selling the trees could only be realized at the end, with no income whatsoever during the two decades of waiting period in between. This peculiar cash flow structure of tree planting presented a daunting challenge to pre-modern rural households. Without a set of financial instruments (albeit rudimentary ones by today's standard) to manipulate this cash flow to fit a household's need, commercialized tree cultivation could not have attained the very large scale that it did in these regions, in terms of both the total volume of cultivated timber export from these areas and the large proportion of individual household income contributed by tree planting.

Chapter 3 searches for historical solutions to this problem relying on a collection of more than a thousand timberland contracts from southeastern Guizhou. My analysis reveals a property rights framework that solved the liquidity problem associated with the long-term nature of tree

⁷ An exception is Joseph McDermott's study on the development of "timber futures" in southern Anhui during the fifteenth and sixteenth centuries. See McDermott, *The Making of a New Rural Order in South China*, chap. 6. In Chapter 3, I make comparisons between similar practices in Anhui and Guizhou.

⁸ For a description of the intercropping practices, see Nicholas K Menzies, "Forestry," in *Science and Civilisation in China*, by Joseph Needham, vol. 6.3 (Cambridge: Cambridge University Press, 1996), 629.

growth by the division and securitization of the various kinds of rights over timberlands. I find that the development of active transactions of one's entitlements to ownership and tenancy rights, which were increasingly divided into shareholdings that could be traded independently before the standing crop of trees was harvested, allowed people to transform expected future proceeds into cash flows to match a household's consumption patterns. These practices created a market for the circulation of credit and money for a revenue yet to be realized in years and proved successful in promoting commercialized reforestation in a rural household-based economy. Methodologically, this chapter shows the benefit from a particular combination of interdisciplinary methodologies: deep textual analysis on historical materials as well as systematic statistical analysis on a large amount of homogeneous data. This approach provides a possibility to systematically study land contracts, a genre of historical material that is abundant in Chinese history yet proves challenging for database construction and quantification.

Moreover, my examination on the tree planting practices and timber market in the southwest also offers new insights into the issue of frontier development from the perspective of the local population's livelihood choices. Earlier studies on the southwest frontiers have focused on the military, ideological, and legal aspects of empire expansion. More recent inquiries have started to draw attention to the livelihood decisions that the local people made in view of the resources at their disposal and changing external conditions.⁹ Despite this recent turn in the

⁹ See, for example, Patterson Giersch's study of the Tai domains in Yunnan and Jodi Weinstein's study on the Zhongjia people in Guizhou: C. Patterson Giersch, *Asian Borderlands: The Transformation of Qing China's Yunnan Frontier* (Cambridge, Mass: Harvard University Press, 2006); Jodi L. Weinstein,

English literature, treatises on the Miao frontier has tended to assume that commercialization always ended with the Miao being exploited and losing their land rights. The mundane economic life of the Miao people and the way in which it was affected by the region's closer ties to the imperial power and China Proper remain largely unexplored.

Relying on locally preserved documents and contracts, I will show how the Miao people responded to the opportunities and challenges of the rising timber trade. Chapter 3 demonstrates that the Miao locals adopted Han contractual practices and kinship organizations into existing social orders selectively. Parts of Chapter 4 contrasts the market institutions in the Miao frontier to those of the inner provinces and attributes these differences to the Qing state's priority of easing ethnic tensions in the frontier; it also demonstrates how the Miao people resorted to the legal platform and ethnic rhetoric of the Qing state when such options seemed advantageous. Patterson Giersch's recent review on the literature of commerce and Qing borderlands has pointed out that previous literature on the southwest border might have understated the role of the state and suggested that the Qing state actively sought the involvement of the commercial sector in its empire-building efforts in the southwest as was in the northwest.¹⁰ My treatment of the power dynamics in the local timber market between the Miao locals, Han itinerant merchants, and Qing field officials puts new perspectives on the Qing state's approach to this frontier and the extent to which imperial power penetrated and transformed the local society.

Empire and Identity in Guizhou: Local Resistance to Qing Expansion, Studies on Ethnic Groups in China (Seattle: University of Washington Press, 2014).

¹⁰ C. Patterson Giersch, "Commerce and Empire in the Borderlands: How Do Merchants and Trade Fit into Qing Frontier History," *Frontiers of History in China* 9, no. 3 (2014): 361–83.

Taxation, Procurement, and Market Regulation

The story is told around timber, but it is not just about timber. In addition to such timber-specific issues as deforestation and timberland economy, my dissertation also aims to use the timber trade as a thread to connect various aspects of the Qing political economy and mercantile world. While existing scholarship on state-merchant relationships, trade networks, and commercial organizations either features general discussions or centers primarily on a particular city, merchant group, or institution, I choose a different perspective that focuses on the trade of one commodity over multiple localities. The timber trade is not selected for its peculiarities, but valued for its representativeness of credit-based long-distance trade. What we can learn from the timber trade should be generally informative about the Qing state apparatus and business practices. This and the following section discuss these matters.

The focus on timber trade allows me to evaluate the combined effect on this business generated by several state institutions, including central-level domestic customs stations that taxed long-distance trade, the systemized procurement of tribute timber, the licensed brokerage system, and local *yamen*'s revenue-collecting regimes on commerce. Of course, each of these institutions has merited specialized treatise. What I am contributing is twofold. First, by taking the timber trade as the context, we get close-up examinations of their individual implementation. Second, we are able to appreciate, from a timber merchant's perspective, how these institutions as a whole defined the contour of his business operation.

As mentioned above, Chapter 1 uses taxation data from domestic customs stations to estimate the volume and structure of timber trade. In doing so, it is paramount to first understand the operation, reporting, and supervision of the domestic customs and how these practices would

have affected the kind and quality of information conveyed by the customs' data. Therefore, Chapter 1 first examines the Qing state's management of customs stations to guide subsequent interpretations of customs revenues from which insights on the long-term trends of the timber market can be drawn. Particularly, it scrutinizes the different ways in which customs superintendents' personal promotion or punishment was linked to the amount of reported revenue in relation to the "formal quota" and "surplus quota" in different periods. Moreover, changes in the amount of formal quotas and the way surplus was rewarded, fixed, or discouraged reflected the central state's deliberate considerations on the balance between raising its fiscal income and restraining the field officials' incentive and capacity to overtax commerce. The domestic customs institution, like other sections of the Qing taxation system, should be understood in the context of the problem of information asymmetry and conflicts of interest between the central state and individual customs superintendents. Later estimations in this chapter are informed by how changing policies might have affected the reliability of the reported revenue data and how our interpretation should be adjusted to account for the potential biases.

The demand of imperial timber features predominately in the scholarship on the late imperial state's involvement with forests.¹¹ Such attention is understandable given the visual

¹¹ For discussions on the Ming-Qing procurement of timber for imperial construction projects, see Eduard B. Vermeer, "Population and Ecology along the Frontier in Qing China," in *Sediments of Time: Environment and Society in Chinese History*, ed. Mark Elvin and Ts'ui-jung Liu (New York: Cambridge University Press, 1998), 247–51; S.A.M. Adshead, "An Energy Crisis in Early Modern China," *Ch'ing-Shih Wen-T'i [Late Imperial China]* 3, no. 2 (1974): 20–28; Lan Yong 藍勇, "Ming

impact of the magnificent imperial palaces and mausoleums as well as lengthy treatises on the hardships endured by transporting workers in official memorials and local gazetteers. However, existing literature has not provided a clear sense about the relative scale of imperial timber procurement and the mass timber market. What resulted is an unproportional imagination of the amount of imperial consumption and, consequently, incorrect evaluation of the extent to which the state could have dominated or manipulated the timber market—or if the state were to restrain itself, how much forest could have been saved. Chapter 2 demonstrates that the amount of timber demanded by the central state was minimal compared to the volume of private timber trade estimated in Chapter 1. The state’s procurement was in a market, not in replacement of it. This should be the basis of our imagination of the dynamics in a timber market. Contemporary officials’ outcry of imperial extravagance should be understood in the context of the Confucian ideal of frugality, not the reality of the amount of imperial timber consumption relative to that of the total populace.

When we focus the scope on the micro-level dynamics in local marketplaces, two sets of institutions stand out in late imperial history: the *yahang* system of licensed brokerages and merchant guilds.¹² Research on *yahang* and guilds features predominantly in the historiography

Qing shiqi de huangmu caiban” 明清时期的皇木采办 [The Procurement of Imperial Timber during the Ming-Qing Period], *Lishi yanjiu* 历史研究, no. 6 (1994).

¹² In this study, I use the term “guild” in its generic meaning of commercial organizations, including native-place associations and occupation-based organizations. I want to dissociate from earlier scholarship that explicitly or implicitly compares Chinese commercial organizations with medieval European guilds, with an agenda of determining China’s stage of development. Some representative

of Chinese business history. A central question concerns the nature of their relationship with the state and the extent to which they facilitated or prohibited market exchange. For the *yahang* system, the limited number of official licenses and the prohibition of unlicensed intermediaries have led to a popular view that the *yahang* system increasingly became shackles on free exchange during the Qing.¹³ Similarly, some view the Chinese guilds as monopolistic

works of this line of inquiry include Hosea B Morse, *The Guilds of China* (Shanghai: Kelly & Wash Ltd, 1909); Peng Zeyi 彭泽益, “Zhongguo hanghui shi yanjiu de jige wenti” 中国行会史研究的一个问题 [An Issue in the Studies on the History of Chinese Guilds], *Lishi yanjiu* 历史研究, no. 6 (1988); Liu Yongcheng 刘永成 and He Zhiqing 赫治清, “Lun woguo hanghui zhidu de xingcheng he fazhan” 论我国行会制度的形成和发展, *Meng ya* 萌芽, no. 117–140 (1983). This paradigm has been challenged by studies that reflect the transferability of the term “guild” as well as studies that revealed the highly competitive market conditions in late imperial China. See Ch’iu Pengsheng 邱澎生, *Shiba shijiu shiji suzhou cheng de xinxing gongshang ye tuanti* 十八十九世纪苏州城的新興工商業團體 [Newly Emerged Industrial and Commercial Organizations in the Suzhou City during the Eighteenth and the Nineteenth Centuries] (Taipei: Taiwan daxue chuban she, 1990). More fundamentally, new theoretical approaches to studying historical guild-like organizations in world history have challenged the implicit assumption that guilds were attached to a particular stage of development in a unilinear model of historical progression. The new research trend is well represented in an edited volume, Jan Lucassen, Tine De Moor, and Jan Luiten van Zanden, *The Return of the Guilds* (Cambridge: Cambridge University Press, 2008), which attempts to combine studies on the functioning of guilds and guild-like institutions from the West to the East within a comparative framework.

¹³ For a recent elaboration of this view, see Zhou Lin 周琳, “bianshang yihuo haishang: cong zhongjie maoyi jiufen kan Qianlong zhi Daoguang shiqi Chongqing de guanya zhi” 「便商」抑或「害

organizations similar to the guilds of medieval Europe. In return for their contributions to the local yamen's revenue stream, guilds were granted considerable autonomy, including such attempts as limiting membership, restricting competition, and manipulating prices.¹⁴ More positive assessments stress the mediating and informational functions of both institutions as valuable remedies for the problems of information asymmetry and searching cost, especially in long-distance trade.¹⁵

商]——從仲介貿易糾紛看乾隆至道光時期重慶的「官牙制」 [Promoting Trade or Suppressing It? Examine the Official Brokerage System in Chongqing through Intermediation Disputes during the Period from the Qianlong to Daoguang Era], *Xin shixue* 新史學 24, no. 1 (2013): 59–106. For a short review of the Chinese-language studies on yahang in the twentieth-century, see Lin Hongzhuang 林紅狀, “Ming Qing ji jindai yahang yanjiu zongshu” 明清及近代牙行研究綜述 [Review of the Literature on the Ming-Qing and Modern Yahang System], *Lishi jiaoxue* 历史教学, no. 24 (2008): 105–8.

¹⁴ For a discussion on the debate about the economic functions of guilds, see Christine Moll-Murata, “Chinese Guilds from the Seventeenth to the Twentieth Centuries: An Overview,” *International Review of Social History* 53, no. SupplementS16 (2008): 223; William Rowe, “Ming-Qing Guilds,” *Ming Qing Yanjiu*, 1992, 47–60.

¹⁵ For *yahang*, see Chen Zhongping 陈忠平, “Ming Qing shiqi Jiangnan shizhen de yaren yu yahang” 明清时期江南市镇的牙人与牙行 [Brokers and Brokerages in Ming-Qing Jiangnan Market Towns], *Zhongguo jingji shi yanjiu* 中国经济史研究, no. 2 (1987): 31–38; Maura D. Dykstra, “Complicated Matters: Commercial Dispute Resolution in Qing Chongqing from 1750 to 1911,” Los Angeles (Dissertation, University of California, Los Angeles, 2014), 142–71. For merchant guilds, see Fu-mei Chen and Ramon H. Myers, “Coping with Transaction Costs: The Case of Merchant Associations in the

Most of these previous studies either discuss national policies generally or look at the brokers or guilds of many different occupations in a given city. What is missing, for the purpose of evaluating the effect on the level of market entrance and competition, is some understanding of the dynamics in a particular trade: how did all the licensed brokerages of a given commodity in the same locality compete or collude with each other and with their illegal counterparts? Were there multiple guilds for the same trade in a given city? If so, how did they establish independent standing, negotiate boundaries of membership, and divide responsibilities to the local government? What might all these mean for the level of competition in this trade? Here again, by focusing on the trade network of timber in multiple localities, I am able to delineate the minutiae of the local marketplace that could comprise a dozen timber brokerages and several timber guilds, each of which might have reached a particular set of agreement with the local yamen.

With primary materials from central-level archives and several timber markets, Chapter 4 and 5 examine the chronological evolution of these two institutions and their complex interactions with the local government in the context of timber trade. Central-level reforms in the first century of Qing rule that established the legal and administrative foundations for licensed brokers to perform the dual tasks of economic intermediation between traders and administrative intermediation between the state and the market. After discussing the rationale of these regulatory measures, Chapter 4 depicts the everyday business practices of licensed timber brokerages and their cohabitation with other economic intermediaries that had varying degrees of

Ch'ing Period," in *Chinese Business Enterprise*, ed. R. Ampalavanar Brown, vol. II (London and New York: Routledge, 1996), 252–71; William T. Rowe, *Hankow: Commerce and Society in a Chinese City, 1796-1889* (Stanford: Stanford University Press, 1984), 252–321.

legality. While it might be true that the requirement to trade through brokerages for local retails or real estate might be redundant, economic intermediaries were still essential to long-distance trade at least throughout the eighteenth century thanks to their exceptional knowledge about sources of supply and demand, market tendencies, and the financial situation of individual firms and traders. Concentration analysis and network analysis on the timber market in Hangzhou reveals a rather low level of concentration among the sellers as well as the division of market shares among eight brokerages, both suggesting a rather decentralized market structure that featured ample space for competition. While this is not to deny the barrier of entrance into the timber brokerage business caused by the state's requirement for sound reputation, local residency, license fee, and fixation of the number of licenses, the overall picture was still quite contrary to one where the entire local market could be monopolized and manipulated by a few players, at least for large markets like Hangzhou.

During the nineteenth century, the maturation of long-distance trade networks into organized merchant groups, especially in the most developed interregional market centers like Nanjing and Hankou, increasingly rendered transactions through licensed brokers into a legal formality rather than an economic necessity. Local magistrates experimented with ways to incorporate the newly emerged merchant guilds into the local framework of commercial taxation, largely through the rhetoric of "official duties" (*chai*) or "contributions" (*juan*). The growth of merchant guilds and the local state's increasing dependence on revenues from assigning official duties to such organizations went hand in hand. Even when the state greatly improved its capacity of direct taxation through the introduction the Lijin transit tax in the mid-nineteenth century, the merchant organizations' practice of undertaking tax quotas was incorporated into a scheme of Lijin tax farming and became even more prevalent.

These findings from southern timber markets are comparable to Susan Mann's observation of the self-regulation regime in the rural marketplaces of north China, where local elites and commercial organizations assumed responsibilities for the tax quota in return for authority over the operation of local markets. She approached these arrangements from the perspective of a basic dilemma, that is, agrarian states, when trying to expand revenues to fund the process modern state-building, had to compromise with tax farmers and other local intermediaries. In the late nineteenth century, such compromise took the form of tax farming and informal governance by merchant associations. Powerful liturgical structures successfully tolerated new commercial tax burdens and effectively used state taxing power to enhance their own standing in the local trading system.¹⁶

While a few local commercial elites seemed to have assumed dominant positions in Mann's rural marketplaces, levels of market competition and decentralization elevated for higher-level markets. By examining commercial disputes from local archives, I have found that local magistrates endeavored to strike a balance between supporting the authority and capacity of merchant guilds to levy extractions from their trade on the one hand, and protecting a healthy level of competition among separate merchants groups in a particular trade on the other. By and large, a group of timber merchants enjoyed the freedom to join an existing timber guild, or else set up a separate guild with their self-directed rules by assuming exclusive responsibilities for some official duty. That a merchant guild was enrolled for some exclusive responsibilities to the local state became its best shield against a competing guild's challenge on its legitimacy as well

¹⁶ Susan Mann, *Local Merchants and the Chinese Bureaucracy: 1750-1950* (Stanford: Stanford University Press, 1987).

as against *yamen* underlings' illicit exactions. From the perspective of market access, it did not attain the level of absolute free entrance, but was still a much less grim picture than the one once imagined by earlier scholars, such as H.B. Morse, that Chinese merchant guilds exerted a tyranny on market access and trade rules.¹⁷

Networks, Courts, and Contract Enforcement

Long-distance timber merchants and their organizations occupy a central position in this study. During the seventeenth and eighteenth centuries, successful timber merchants based in Nanjing, in particular the Anhui and Jiangxi merchant groups, marched upstream the Yangzi River towards the southwest in search of new sources of timber supplies. With the increasing incorporation of Hunan and Guizhou into the cross-Yangzi timber trade, Hankou rose to be the largest timber market in the Middle Yangzi Valley in the nineteenth century. In the process, merchant groups from Hunan and Hubei first established their foothold in timber trade as local agents of the big merchants from the Lower Yangzi and gradually succeeded in expanding their influence in the Lower Yangzi markets.

In order to sustain and develop business relations, long-distance traders have to effectively deal with the difficulty of enforcing contracts over distance. The effectiveness of formal and informal contract enforcement mechanisms in sustaining long-distance trade networks has been a focus of scholarly debate in economic history. Economic theories propose that conformity to mutual agreements can be sustained by a set of incentive-compatible institutional arrangements to deal with market inefficiencies resulting from information

¹⁷ Morse, *The Guilds of China*, 28.

asymmetry and conflicts of interest.¹⁸ Some studies, represented by the work of Douglass North, emphasize the role of the state in providing these institutional arrangements: a legal framework and a court system that formalizes the rules of the game and guarantees enforcement of contracts.¹⁹ Other scholarship has made strong arguments, both theoretically and empirically, that in addition to or instead of formal laws, there were various private-order mechanisms through which enforcement problems could be solved effectively.²⁰ A third approach argues that although specific institutions play specific roles, there was no single set of institutions of trade that applied

¹⁸ Oliver E. Williamson, “Calculativeness, Trust, and Economic Organization,” *Journal of Law and Economics* 36, no. 1 (1993): 453–86.

¹⁹ Representative works include Douglass C North, *Institutions, Institutional Change and Economic Performance* (Cambridge: Cambridge university press, 1990); Douglass C. North, John Joseph Wallis, and Barry R. Weingast, *Violence and Social Orders* (Cambridge and New York: Cambridge University Press, 2009)..

²⁰ See Greif 2006. More recent works that show the importance of networks and reputation mechanisms include Jessica Goldberg, *Trade and Institutions in the Medieval Mediterranean: The Geniza Merchants and Their Business World* (Cambridge and New York: Cambridge University Press, 2012); Sebouh Aslanian, *From the Indian Ocean to the Mediterranean: The Global Trade Networks of Armenian Merchants from New Julfa* (Berkeley: University of California Press, 2011); Ghislaine Lydon, *On Trans-Saharan Trails: Islamic Law, Trade Networks, and Cross-Cultural Exchange in Nineteenth-Century Western Africa* (Cambridge University Press, 2009)..

universally. Instead, the effective combination of various formal and informal institutions emerges from the nature of the trade and the larger political, social, and cultural conditions.²¹

In the historiography of late imperial and modern China, there has emerged a body of literature that demonstrates the widespread use of contracts across regional and occupational boundaries and officials' willingness to uphold contractual agreements when adjudicating court cases.²² On the other hand, it is widely acknowledged that mercantile organizations performed important roles in setting trade regulations, assisting in adjudication, communicating with the authorities, collecting taxes, and performing other non-economic functions in philanthropy and public service.²³ Recent studies based on the systematic examinations of judicial archives have also substantiated the capacity of merchant organizations to mediate and settle commercial

²¹ Jean-Laurent Rosenthal and R. Bin Wong have put forward a theoretical hypothesis for comparative studies on the feasibility and desirability of formal or informal contracting, see Jean-Laurent Rosenthal and R. Bin. Wong, *Before and Beyond Divergence: The Politics of Economic Change in China and Europe* (Cambridge: Harvard University Press, 2011), 67–98.. Monographic studies that have taken up this view include Goldberg 2012; Gelderblom 2013.

²² A ground-breaking work in this regard is Madeleine Zelin, Jonathan K. Ocko, and Robert Gardella, *Contract and Property in Early Modern China* (Stanford: Stanford University Press, 2004). Other studies introduce some qualifications and focus on the way contracts were (or were not) used in judicial proceedings under the late imperial Chinese legal culture, see Jerome Bourgon, “Uncivil Dialogue: Law and Custom Did Not Merge into Civil Law under the Qing,” *Late Imperial China* 23, no. 1 (2002): 50–90..

²³ Kwang-Ching Liu, “Chinese Merchant Guilds: An Historical Inquiry,” *The Pacific Historical Review*, 1988, 1–23; Rowe, *Hankow: Commerce and Society*, 289–340.

disputes outside the courtroom, often at the request of local magistrates.²⁴ However, court records alone could only offer indirect hints about the routine operations of out-of-court mediation proceedings. Chapter 6, by combining court records with a close-up picture of the everyday operations of merchant organizations, provides a fuller appreciation of the institutional framework that relied on the connectedness between the formal court system and the merchant organizations.

Trade credit was widely used in the long-distance timber trade, especially in wholesale transactions. Buyers were usually allowed a few months' credit after the delivery of timber. At the same time, excessive defaults and delays in payments were a direct threat to the fortunes of the timber trade. Unpaid timber purchases were also the most common cause of disputes between merchants in both courtrooms and merchant organizations. The ability to ensure payment within the designated time was important to maintain credit relations and the smooth flow of goods and capital. The key issue is to understand the mechanisms of enforcement provided by the merchant guilds and the court system to reduce the threat of payment defaults.

From the perspective of payment enforcement, I delineate the application of different combinations of institutional arrangements, depending on the nature of transactions and the characteristics of trading partners. Members of the same timber trade organization formed a close group with common interests and shared norms of business conduct. Spontaneous formation of trade associations ensured the consistency of interests in each association internally. Several

²⁴ See, for example, Maura D. Dykstra, "Beyond the Shadow of the Law: Firm Insolvency, State-Building, and the New Policy Bankruptcy Reform in Late Qing Chongqing," *Frontiers of History in China* 8, no. 3 (2013): 406–33..

measures were taken to maintain intra-group solidarity. The organizations constantly sought information from members and were ready to disclose any member's inappropriate behaviors to the whole group. Even without further measures, damage to one's reputation was a serious matter, as it might cost him the trust of other members in the future. However, some of the organization's regulations, for example the requirement to conform to the unified selling prices or to join actions of group sanction, although beneficial to the group's common interests, their violation were not considered a problem of morality and not linked to one's reputation. More concrete punishments were used to enforce conformity to such regulations, including the confiscation of security deposits and the deprivation of one's right to enjoy services offered by the organization, such as the certificates that allowed faster pass at the customs and the organization's assistance in cases of legal dispute.

The reputation mechanism based on information sharing was also effective towards outsiders who engaged in repeated transactions with members of the group. The organization received regular reports from members to detect customers who failed to pay for their purchases in time and shared the information to the whole group. The pooling of information by the organization was especially helpful in alleviating the information asymmetry regarding the liability situation of a potential customer. For those who continued to neglect the organizations' demand for immediate payment, notices would be sent to all members to stop trading with them until the debts were cleared. The detriment to one's reputation by the public disclosure of his defaulting behavior and the threat of joint cessation of trade increased the cost of default significantly.

The effectiveness of this mechanism decreased towards strangers or irregular customers, especially those from afar. Group members or familiar trading partners might also choose to

default, despite all the punishments carried out by the organizations. When the dispute escalated beyond the means of a single merchant association, then other organizations, including the chambers of commerce and the court system, were brought in. Vertical communications from trade associations to the chambers of commerce to the court system strengthened the continuity from informal norms of business practices to semi-formal regulations of commercial organizations to formal stipulations of law. The convergence of expected outcomes from resorting to different platforms of dispute resolution reinforced the consistency and credibility of the punishment for defaulting. Horizontal communications, mainly through the chambers of commerce and sometimes trade associations in different localities, further strengthened the capability of informal institutions to promptly respond to cross-regional cases.

A Note on Main Sources

Some of the research materials critical to my study have been published. In addition to commonly used publications such as local gazetteers and collected statutes,²⁵ the following specialized collections should be mentioned. Timberland contracts examined in Chapter 3 are from published collections of local documents discovered in southeastern Guizhou that are collectively known as *Qingshui Jiang wenshu* 清

²⁵ For local gazetteers, I use the *Zhongguo fangzhi ku* 中国方志库 database by Erudition:

<http://server.wenzibase.com/userReadAction.action?prId=77&page=fz12>. For collected statutes and

other legal and administrative texts, I have used the *Han ji dianzi wenxian ziliao ku* 漢籍電子文獻資料庫 by the Institute of History and Philology, Academic Sinica:

http://hanchi.ihp.sinica.edu.tw/ihpc/hanji?106:1829267007:10:/raid/ihp_ebook/hanji/ttsweb.ini:::@SPA

[WN](#)

水江文书 (Qingshui River documents).²⁶ For merchant organizations, the ten volume *Zhongguo huiguan zhi ziliao ji cheng* 中国会馆志资料集成 provides an invaluable compilation of guild regulations and

²⁶ I have only used a small fraction of publically available *Qingshui jiang wenshu*. Contracts examined in Chapter 3 are mainly from Daniels, Yang Yougeng, and Takeuchi Fusaji, *Kishū Myaozoku ringyō keiyaku monjo kaihen*; Chen Jinquan 陈金全 and Du Wanhua 杜万华, eds., *Guizhou Wendou Zhai Miaozu qiyue falv wenshu huibian: Jiang Yuanze jiacang qiyue wenshu* 贵州文斗寨苗族契约法律文书汇编—姜元泽家藏契约文书 [The Compilation of Contractual and Legal Documents from Wendou Village, Guizhou Province: Documents from Jiang Yuanze's Family Collection] (Beijing: Reminchuban she, 2008). Major publications also include Zhang Yingqiang 张应强 and Wang Zongxun 王宗勋, *Qingshui Jiang wenshu di yi ji* 清水江文书第一辑 [The First Collation of Qingshui River Documents], 13 vols. (Guilin: Guangxi shifan daxue chuban she, 2007); Zhang Yingqiang 张应强 and Wang Zongxun 王宗勋, *Qingshui Jiang wenshu di er ji* 清水江文书第二辑 [The Second Collation of Qingshui River Documents] (Guilin: Guangxi shifan daxue chuban she, 2009); Zhang Yingqiang 张应强, *Qingshui Jiang wenshu di san ji* 清水江文书第三辑 [The Third Collation of Qingshui River Documents] (Guilin: Guangxi shifan daxue chuban she, 2011); Zhang Xinmin 张新民, ed., *Tianzhu wenshu di yi ji* 天柱文书第一辑 [The First Collation of Tianzhu Documents] (Nanjing: Jiangsu renmin chuban she, 2014).

subscription records.²⁷ I also used the full-text database of *Shenbao*, the Shanghai-based daily newspaper from 1872 to 1949, to sample late Qing timber-related news, advertisements, and legal cases.²⁸

Other materials are collected from a number of archives. Memorials of Qing officials and veritable records, from which the time series of customs revenues was hand-collected, are obtained from the First Historical Archives (hereafter FHA) in Beijing and the online database of palace memorials provided by the National Palace Museum in Taipei (hereafter GZD).²⁹ Information about timber markets, merchant guilds, and local court cases are collected from the municipal archives of Suzhou, Shanghai, Hangzhou, Nanjing as well as the Baxian Archives (hereafter BX) from the Sichuan Provincial Archives.

²⁷ Wang Rigen 王日根 and Xue Pengzhi 薛鹏志, eds., *Zhongguo huiguan zhi ziliao jicheng* 中国会馆志资料集成 [Collection of the Records of Chinese Guilds], 1st ed., 10 vols. (Xiamen: Xiamen daxue chuban she, 2013).

²⁸ *Shenbao*, 1872-1949, digitalized by Green Apple Data Center,

<http://spuc.egreenapple.com/WEB/INDEX.html>

²⁹ *Qingdai gongzhong dang zouzhe ji Junji Chu zhejian* 清代宫中檔奏摺及軍機處檔摺件, National Palace Museum, <http://npmhost.npm.gov.tw/tts/npmmeta/GC/indexcg.html>

Chapter 1. Scale and Structure of the South China Timber Market

This chapter traces the development of the interregional timber market that linked the urbanizing lower Yangzi Valley to areas of timber supply that have expanded and shifted from the close hinterland of Jiangnan farther into the mountainous southwest over the course of the late imperial period. Demand for a sustainable supply of construction materials in the burgeoning industrial urban centers of Jiangnan motivated the specialized tree plantations in some nearby mountainous areas, and then later on into the uplands farther away.

The increasing importance of the timber supply from the Upper and Middle Yangzi was facilitated by the low cost of water transportation through the rich Yangzi riverine system and the interconnecting Grand Canal, as well as the administrative and economic incorporation of the southwestern frontier.

By reconstructing transit timber taxes based on revenue data of domestic customs, the chapter offers an overview of the market structure of the cross-Yangzi timber trade in the eighteenth and nineteenth centuries. The study identifies two trends. First, the volume of timber consumed in Jiangnan experienced significant growth in the eighteenth century and became stagnant in the first half of the nineteenth century. Second, timber from Hunan, especially the western part of the province, and eastern Guizhou became an increasingly important source of supply for the Middle and Lower Yangzi regions from the eighteenth century and continued to expand during the nineteenth century, which compensated for declining supplies from the deforesting Sichuan.

The Rise of Jiangnan and its Source of Timber

Timber has been recorded as an important commodity in interregional trade since very early times. From the early Zhou and Shang states until the Han Empire, the Jiangnan area was a well-forested periphery that supplied timber to North and Northwest China, where the core of the Chinese state was located. In *Shi Ji*, Sima Qian described tales of fortunes made in the timber trade during the early Han dynasty. Several centuries of disunion and disturbance ensued after the breakdown of the Han Empire into warlord regimes. The subsequent conquest of North China by various nomadic groups forced the refugee Chinese courts, as well as large waves of migrants, to resettle in Jiangnan, and thus began the process of the relocation of the Chinese empire with Jiangnan as the new economic heartland. By the end of the first millennium, forest clearance for agricultural cultivation was complete in the valleys of the Yangzi Delta.³⁰

During the Song Dynasty (960-1279), there was an explosive expansion in timber consumption. The government required timber for official buildings, city walls, hydraulic projects, and ship-building, while commoners used timber for houses, coffins, boats, furniture, and fuel. In the eleventh century, the timber demand in the Northern Song capital of Kaifeng was satisfied primarily from the forests in the northern Qinling Mountains and the Middle and Lower Yangzi.³¹ The loss of the northern territories to the nomadic Jurchen state initiated a new cycle of migration to the south and advanced the agricultural and commercial development of Jiangnan further. Wood and bamboo were the dominant materials for Chinese buildings, palaces, and

³⁰ Menzies, "Forestry," 563; Shiba Yoshinobu 斯波義信, *Commerce and Society in Sung China*, trans.

Mark Elvin (Ann Arbor: University of Michigan Press, 1970), 91.

³¹ Shiba Yoshinobu, *Commerce and Society in Sung China*, 92.

civilian houses alike. Fires in the crowded cities of Jiangnan occasionally burned thousands of houses to ash, and this remained a serious problem in urban communities until well into the last century.³² Junk boats, the main means of transportation through the webs of canals and rivers in Jiangnan, required a steady supply of various kinds of wood for construction and maintenance.³³

The expanding demand for fuel, furniture, and construction materials in the cities and the increasing number of market towns exhausted the natural forests in their close vicinity, and timber imports became indispensable. There were already sporadic episodes of timber import from Jiangxi during the Five Dynasties. The Southern Song capital of Hangzhou drew timber from the mountains in Anhui, Zhejiang, Jiangxi, and Fujian. Throughout the Ming-Qing period, the timber market, which developed outside of the Houchao Gate, where a branch of the Qiantang River entered the Southern Song city and connected to the Grand Canal, remained active. The shipbuilding industry in Nanjing also was a major destination for timber from Hunan and Jiangxi.³⁴

³² Mao Qiling 毛奇齡, “Hangzhou zhihuo yi” 杭州治火議 [On Fire Prevention in Hangzhou], in *Wulin zhanggu congbian* 武林掌故叢編, 光緒中錢唐丁氏嘉惠堂刊本, vol. 9 (Taipei: Tailian guofeng chuban she, 1967); Gan Xi 甘熙, *Baixia suoyan* 白下瑣言, reprint, Nanjing xijian wenxian congkan 南京稀見文獻叢刊 (Nanjing: Nanjing chuban she, 2007), juan 1.

³³ Li Bozhong 李伯重, “Ming Qing shiqi Jiangnan diqu de mucai wenti” 明清時期江南地區的木材問題 [On the Issue of Jiangnan’s Timber Supply in the Ming-Qing Era], *Zhongguo shehui jingji shi yanjiu* 中國社會經濟史研究, no. 01 (1986): 87.

³⁴ Shiba Yoshinobu, *Commerce and Society in Sung China*, 93.

Transportation costs constituted a major portion of timber prices in downstream market towns. Rafting was the most cost-efficient means to transport large volumes of timber. Hence, the mountains closest to well-connected rivers were deforested first. In the densely populated Jiangnan area, cleared mountain valleys and slopes typically were converted into agricultural land. In some of these areas, however, low transportation costs and easy access to the consumption market motivated market-oriented tree cultivation. The systematic use of tree plantations first developed in mountainous prefectures, such as Chuzhou in western Zhejiang, and Huizhou in southern Anhui, a new development during the Song according to Shiba Yoshinobu. In these regions, forested uplands were claimed as private properties.³⁵

The most favored species in tree plantations was *Cunninghamia*, also known commonly as Chinese fir,³⁶ a species native to the warm, humid, and mountainous areas of southern China.³⁷ *Cunninghamia* has several good qualities that make it a high-end construction material as well as a desirable crop for market-oriented cultivation. Since very early times, the timber of *Cunninghamia* was known to be light, durable, and water resistant. These qualities made it particularly useful wherever resistance to decay was required, for example, in palace

³⁵ Ibid. at 95–96.

³⁶ However, as Nicholas Menzies has pointed out, botanically this reference to *cunninghamia* as “Chinese fir” is incorrect. “*Cunninghamia* is a member of the family *Taxodiaceae*, in no way related to the true firs, *Abies* spp, of the family *Pinaceae*”, see Menzies, “Forestry,” 574.

³⁷ The tree grow best in in Fujian, Jiangxi, Anhui, Zhejiang, Hunan, Guizhou, Sichuan, Yunnan, Guangxi, and Guangdong. But thanks to the extensive commercialized cultivation of this tree in South China since the late imperial period, it is difficult now to determine the natural range of the genus. Ibid. at 575.

construction, coffins, and shipbuilding. It is a faster-growing tree than other species comparable in quality, with rotations between twenty to forty years.³⁸ Sprouts grow readily from the stump after cutting or fire, which makes propagation relatively easy. In his 1639 *Encyclopedia of Agronomy*, “the complete book of agricultural administration,” Xu Guangqi described the procedures used to plant *Cunninghamia* according to the practices in southern Anhui: clear-cutting, site preparation, regeneration from sprouts, intercropping, and suppression of weeds. In other locations, coppicing or seed propagation was used rather than sprouts cut from the stump.³⁹

By the Southern Song, the cultivation of *Cunninghamia* in Huizhou and environs had essentially become commercialized, and timber was perceived as a crop in its own right, rather than as a by-product of land clearance, or as a secondary product grown to satisfy household needs. Fan Chengda, a former official of Huizhou in the twelfth century, remarked that the hills of Xiuning, a county of Huizhou, were well suited to *Cunninghamia*, and that few of the local people cultivated fields, as most of them made their living by growing trees.⁴⁰ Indeed, timber remained the main source of profit in Huizhou’s economy well into the Qing dynasty, when conversion to tea production began to take over in response to the growing demand from foreign

³⁸ Terms of rotation can now be shorted to eight to twelve years with intensive modern management and cultivation, *Ibid.* at 578.

³⁹ Menzies, *Forest and Land Management*, 96.

⁴⁰ Fan Chengda 范成大, *Canluan lu* 驂鸞錄, 1175, entry for month 1, day 3, 1173, as is recorded in Zhang Haipeng 张海鹏 and Wang Tingyuan 王廷元, eds., *Ming Qing Huishang ziliao xuanbian* 明清徽商资料选编 [Selected Materials on Ming-Qing Huizhou Merchants] (Hefei: Huangshan Shushe, 1985), entry no. 530.

trade. The center of Huizhou's tree production shifted from She and Xiuning in the Song and the Yuan, to Qimen and especially Wuyuan during the Ming-Qing period. Wuyuan's timber merchants, in particular, became active figures in timber markets elsewhere, marching into the Middle and Upper Yangzi by the late Ming and early Qing.⁴¹

Timber produced in Huizhou, Chuzhou, and nearby prefectures was floated down the Qiantang River to Hangzhou, along which timber taxes were collected at transit points.⁴² In the late twelfth century, many people from Xiuning in Huizhou made fortunes by taking their timber to Hangzhou, the first time that Huizhou timber merchants earned national fame.⁴³ During the Song, timber in transit was assessed a tax at ten to twenty percent, mostly in kind, to meet the material demand of state construction projects. In times of need, the state also engaged in direct purchases at downstream timber markets or the upstream logging centers.⁴⁴ Fan Chengda lamented about the delays and material costs that Huizhou timber merchants suffered at the tax

⁴¹ Fu Yiling 傅衣凌, "Ming Qing shidai Huizhou Wushang ziliao leiji" 明清时代徽州婺商资料类辑 [Selections of Materials Related to Merchants from Wuyuan, Huizhou during the Ming-Qing Time], in *Ming Qing shehui jingji shi lunwen ji* 明清社会经济史论文集 (Beijing: Remin chuban she, 1982), 206–15.

⁴² Luo Yuan 羅願, *Chunxi Xin'an zhi* 淳熙新安志 [Gazetteer of Xin'an Prefecture Compiled in the Chunxi Era], 1180, juan 1, "fengsu."

⁴³ Zhang Haipeng and Wang Tingyuan, *Ming Qing Huishang ziliao*, 180.

⁴⁴ Shiba Yoshinobu, *Commerce and Society in Sung China*, 91.

point in Yanzhou, the pass-way from Huizhou to Hangzhou, which relied heavily on timber taxes as an important source of government revenue.⁴⁵

Population growth, urbanization, and agricultural cultivation continued to drain the few forest resources in the lower Yangzi. Tree farming practiced in the mountainous western Zhejiang, and southern Anhui became increasingly insufficient to meet Jiangnan's growing appetite for timber. Meanwhile, beginning in the Southern Song, patterns of settlement, deforestation, and conversion to agricultural production in the interior of South China followed a similar sequence of events as in the lower Yangzi. Migrants from the eastern provinces flooded into Hunan and Sichuan during the Yuan-Ming period, and the establishment of military stations and later, civil administration in Guizhou, Yunnan, and Guangxi had invited Han Chinese settlement in these areas since the Ming.⁴⁶ These developments steadily pushed the outer geographic boundaries of Jiangnan's timber supply to the Southwest.⁴⁷ Over the course of the Ming-Qing period, southeastern Hunan, Sichuan, and Guizhou were transformed from remote reservoirs of huge timber for imperial use, to the source of luxurious large timber chased by some adventurous merchants, and finally to suppliers of large quantities of *Cunninghamia* for the consumption of the mass market.

⁴⁵ Fan Chengda, *Canluan lu*, entry for Month 1, Day 3, 1173.

⁴⁶ Tan Qixiang 譚其驤, "Zhongguo neidi yimin shi Hunan pian" 中國內地移民史——湖南篇 [Internal Migration in China: Hunan], *shixue nianbao* 史學年報, no. 4 (1932); Ge Jianxiong 葛劍雄, Cao Shuji 曹樹基, and Wu Songdi 吳松弟, *jianming zhongguo yimin shi* 簡明中國移民史 [A Short History of Migration in China] (Fuzhou: Fujian renmin chubanshe, 1993), 271–393.

⁴⁷ Li Bozhong, "Ming Qing shiqi Jiangnan diqu de mucai wenti," 89.

The Ming-Qing Timber-Taxing Customs

During the Ming Dynasty, a dozen of customs stations that taxed domestic long-distance trade along main river systems became more important contributor to the central state's commercial tax income.⁴⁸ In 1429, in addition to the many commercial tax offices (*shuikē sì* 稅課司) in prosperous local markets since the beginning of the dynasty (the largest one being the Chongwen Gate Station in Beijing), the Xuande Emperor set up seven customs stations along the Grand Canal to collect transit duties on passing commercial boats.⁴⁹ This move was part of an overall monetary formula for enhancing the exchange value of the over-issued fiat money by imposing a series of excises and fees on commerce denoted in paper notes.⁵⁰ Therefore, these customs, managed by the Board of Revenue, were called “paper-money customs” (*chaoguan* 鈔關). However, by the mid-1430s, with the demise of the paper money system and the state's acquiescence to the dominant position of silver in the economy, transit duties collected by customs were increasingly commuted to a combination of silver, copper coins, and paper notes.

⁴⁸ Liao Shengfeng 廖声丰, *Qingdai changguan yu quyu jingji yanjiu* 清代常关与区域经济研究 [A Study on Regular Customs and Regional Economies during the Qing] (Beijing: Renmin chubanshe, 2010), 18–23.

⁴⁹ Li Dongyang 李東陽, *Da Ming huidian* 大明會典 [Collected Statutes of the Great Ming], 1587, juan 35.

⁵⁰ For an account of early Ming monetary policies and the ultimate demise of the paper money system, see Richard von Glahn, *Fountain of Fortune: Money and Monetary Policy in China, 1000-1700* (Berkeley: University of California Press, 1996), 70–82.

The number and locations of the customs stations underwent frequent adjustments before they became relatively stable after the 1510s, primarily featuring the six stations along the Grand Canal (Hexi Wu, Linqing, Huai'an, Yangzhou, Suzhou, and Hangzhou) and one on the Yangzi River, the Jiujiang Custom, which was established in 1450 together with a station in Wuchang in recognition of the increasing prosperity of trade along the Yangzi River.⁵¹ In most of these stations, duties were levied on the boats with the rates varying by their sizes, with the exception of Linqing and Hangzhou, where commodities carried on the boats were also taxed.⁵²

Besides the customs stations under the jurisdiction of the Board of Revenue, the Board of Works managed about a dozen of stations in succession, the *choufen ju* (抽分局), which specialized in collecting duties on timber and bamboo. Among the larger stations, the Tongzhou and Nanjing stations were established by the early fifteenth century, while the stations in Hangzhou, Wuhu, and Jingzhou were added in 1471. Transit taxes were collected in kind at varying rates depending on the variety, but were also increasingly commuted into silver payments at least since the late fifteenth century.⁵³

⁵¹ Li Dongyang, *Da Ming huidian*, *juan* 35.

⁵² Taxable items for different customs were listed in Zhang Xueyan 張學顏, *Wanli kuaiji lu* 萬曆會計錄 [National Accounting during the Wanli Era], 44 vols., 1578, *juan* 42, see Matsuura Akira 松浦章, *Qingdai neihe shuiyun shi yanjiu* 清代內河水運史研究 [A Study on Domestic River Transportation during the Qing], trans. Dong Ke 董科 (Nanjing: Jiangsu renmin chubanshe, 2010), 57.

⁵³ Liao Shengfeng, *Qingdai changguan yu quyuan jingji yanjiu*, 22; Li Dongyang, *Da Ming huidian*, *juan* 204.

Two years after its conquest, the Qing state started to reinstitute the Ming customs system, restoring tax quotas to the 1630 levels, before the late Ming state increased the quota resoundingly to cover its skyrocketing military expenses.⁵⁴ The Board of Revenue and the Board of Works largely inherited their respective customs from the Ming.⁵⁵ Moreover, taxation on timber and bamboo was fully commuted to money payments. In a few localities, including Nanjing, Hangzhou, and Wuhu, the Board of Revenue customs and the Board of Works customs coexisted. They kept separate accounts, but were managed by the same superintendent and both submitted their revenues to the Board of Revenue; the difference in jurisdiction only affected which ministry carried out the yearly auditing of the customs' account.⁵⁶ In addition to the Board of Works customs in these three cities and Jingzhou, the timber tax constituted a significant portion of the revenues of the Board of Revenue customs in Jiujiang and Ganzhou. Moreover, in late Kangxi's reign, two timber-taxing stations in Chongqing in Sichuan (1707) and Chenzhou in Hunan were formalized as central-level Board of Works customs, reflecting the central state's

⁵⁴ For increases in customs' quotas in late Ming, see Matsuura Akira, *Qingdai neihe shuiyun shi yanjiu*, 56–61.

⁵⁵ For institutional histories of individual customs stations during the Ming-Qing transition, see Deng Yibing 邓亦兵, "Qingdai qianqi shuiguan de shezhi" 清代前期税关的设置 [Establishments of Customs Stations in the Early Qing], *Qingshi yanjiu* 清史研究, no. 2 (2007).

⁵⁶ KX_HD, juan 16, "*hubu, guanshui*." The Board of Works customs in Wuhu and Hangzhou (Nanxin Guan) were managed by the personnel from the Board of Revenue, while the Board of Revenue custom in Nanjing (Xixin Guan) was managed by the personnel from the Board of Works.

recognition of the developing timber trade in the Southwest.⁵⁷ Some other customs included timber as a taxable item, such as Yangzhou, Linqing, and Huai'an, but timber taxes constituted a small portion of their revenues. Besides, a number of much smaller timber-taxing stations were set up in Manchuria and northern Shanxi and Zhili.⁵⁸ The eight major timber-taxing customs in the cross-Yangzi timber trade system during the Qing are shown on Map 1 .

Table 1 shows the basic information for these customs. The formal tax quotas of the customs underwent some adjustments during the Kangxi's reign and became fixed from the early eighteenth century. Table 1 shows the formal tax quotas as in 1753 (reported in the 1764 edition of the *Collected Statutes*), which were later increased by the imperially formulated "surplus quotas" (*qinding yingyu* 欽定盈餘) in 1799 (Jiaqing 4).⁵⁹ The proportions taken up by timber taxes varied across these customs and were not regularly disclosed in either the *Collected Statutes* or the annual revenue reports to the emperor. Tax rates for different varieties of timber also differed. In accordance with their specialization, timber taxes took up larger percentage of the revenues of the Board of Works customs than those of the Board of Revenue customs. Moreover, actual customs revenues often deviated from the quotas. So the amount of tax quotas in Table 1, though roughly informative about the overall sizes of these customs, should not be

⁵⁷ QL_HDZL, juan 47 "Hubu guanshui" and juan 136 "Gongbu guanshui."

⁵⁸ QL_HDZL, juan 47 and 136.

⁵⁹ QL_HDZL, juan 47 and 136; QSG, juan 125. For regulations regarding customs revenues beyond the formal quota during the eighteenth century and their fixation into "extra quotas" in 1799, see Qi Meiqin 祁美琴, "Guanyu Qingdai queguan eshui de kaocha" 关于清代榷关额税的考察 [An Examination on the Revenues Quotas of the Qing Domestic Customs], *Qingshi yanjiu* 清史研究, no. 2 (2004).

taken as accurate reflections of customs revenues nor the relative volume of timber passing through.

Table 1 Eight Main Timber-Taxing Customs

Eight Main Timber-Taxing Customs									
[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
Customs	Location	Date of Founding	Jurisdiction	Quota 1753	Quota since 1799	Avg. Revenue (1725-1850)	N. of Obs.	Taxable Items	Timber Tax Rate
Jiujiang Guan	Jiujiang, Jiangxi	1450	M of Revenue	172,281	520,081 ^a	518,309	110	timber, salt, tea, boat levies	by size of rafts, rate unclear
Longjiang Guan	Nanjing, Jiangsu	1393	M of Works	57,607	112,607	123,737	118	timber	by size of rafts, rate unclear
Wuhu Gong Guan	Wuhu, Anhui	1471	M of Revenue	70,146	117,146	115,333	83	timber	by size of rafts, rate unclear
Gan Guan	Ganzhou, Jiangxi	1511	M of Revenue	90,682	128,682	99,466	62	timber, among other commodities	
Jing Guan	Jingzhou, Hubei	1471	M of Works	17,019	30,019 ^b	39,780	78	timber, boat levies	3% of estimated value
Nanxin Guan	Hangzhou, Zhejiang	1471	M of Works	30,247	30,247	29,210	52	timber	10% of estimated value
Chen Guan	Chenzhou, Hunan	1686	M of Works	12,500	16,300 ^c	18,496	75	timber, salt	3% of estimated value
Yu Guan	Chongqing, Sichuan	1707	M of Works	5,000	5,000	5,630	11	timber	3% of estimated value

^a: quota of Jiujiang Guan was increased to 539,281 in 1804.
^b: quota of Jing Guan was decreased to 24,819 in 1863.
^c: quota of Chen Guan was increased to 27,711 in 1801, and further to 29,692 in 1807.
Source: *Qianlong huidian zeli*, juan 47 and 136; *Qing shi gao*, juan 125; *Guangsu huidian shili*, juan 235 and 941. Date of first founding is from Deng Yibing, *Qingdai qianqi shuiguang de shezhi*. Annual Revenue data is compiled from Liao Shengfeng, *Qingdai changguan yu qiyu jingji yanjiu*, pp.119, 371-75, 381-88; Ni Yuping, *Qingchao Jia-Dao guanshui yanjiu*, appendix tables 10, 12, 13, 15, 16; and palace memorials from National Palace Museum, Taipei and the First Historical Archives, Beijing. Data is available upon request.

The Qing Management of Customs Revenues

The rest of the chapter will estimate the value and volume of timber trade based on the data of customs revenues from the eighteenth and nineteenth centuries. It is important to recognize that the way that the Qing state managed customs revenues in different periods introduced certain biases to the reported revenue data. This section will give a general review on the Qing state's management of customs revenues to guide interpretations of customs revenues from which valuable insights on the long-term trends of the timber market will be drawn in later sections.

As was mentioned, in the early years of the Shunzhi's reign, tax quotas for domestic customs were established roughly in accordance to the levels of 1630 (Chongzhen 3). With the recovery of the economy, the initial deficits turned into consistent surpluses. Accordingly, the quotas were adjusted up for several times during the Shunzhi's and early Kangxi's reigns.

Eventually, the quotas set in 1681 (Kangxi 25) became generally fixed, referred to as the “formal quotas” (*zheng’e* 正額) in later government documents, including the *Collected Statues*. For those customs stations newly founded during the Qing, their quotas were also established and adjusted during the Kangxi and Yongzheng eras.

By the early eighteenth century, most of the quotas had become stable. The “formal quota,” despite its name, was not necessarily the only required amount. For one, in 1706 (Kangxi 45), the state set up quotas for the customs stations’ contributions to the transportation cost of copper, used for minting bronze coins, from the Southwest to the capital. This item, called “copper transportation cost” (*tongjin shuijiao* 銅斤水腳), became a required quota besides the “formal quotas” for applicable customs.⁶⁰ Comparing the section on domestic customs in the 1764 and 1899 editions of *Collected Statues*, “formal quotas” and “copper transportation costs” for the eight main timber-taxing customs remained unchanged from 1753 and are combined and reported as “quota 1753” in column 5 of Table 1.⁶¹

Surplus revenue beyond the required quota, called “*yingyu*” 盈餘, became common after the 1680s. The assessment and appropriation of surplus revenues presented a principle-agent dilemma for the central government, and related policies went back and forth between two extremes of fixation and centralization on the one hand, and laissez-faire decentralization on the other. In the first decades of the dynasty, especially during major military campaigns such as the Revolt of the Three Feudatories, to ease the fiscal difficulties of the central state all surplus revenues were rewarded with the promotion of the superintendents’ grade (*jiaji* 加級).

⁶⁰ Ibid. at 62.

⁶¹ QL_HDZL, juan 47 and 136; GX_HDSL, juan 235 and 941.

Accumulated grades, although not a direct promotion of one's substantive post or rank, was an important factor in official evaluations and would give the bearer considerable advantage when being considered as a candidate for a promotion.⁶² Rewarding surpluses with promotion provided strong incentives for the superintendents to collect revenues diligently and report higher amounts to the center. However, these practices might also result in excessive exactions on commerce, which concerned the Kangxi Emperor and led to the abolition of the promotion policy after the war in 1686. Thereafter, the central state, while encouraging full declaration and submission of surplus revenues, forfeited any effective command over the information about the actual amounts of surpluses.⁶³

Accompanying a series of fiscal reforms initiated by the Yongzheng Emperor, reformist provincial officials conducted a full examination on the actual amounts of customs revenues. Reported surpluses increased steadily during the 1720s and 1730s, reflecting both the prosperity of commerce as well as concealed revenues in the late Kangxi era. Because of the consistent increase in surpluses during the Yongzheng's reign, an administrative custom developed in the bureaucracy: By default, customs revenues were expected to increase annually; if the surplus was less than that of the previous year, then the Board of Revenue would impeach the official in charge. Therefore, the amount collected in the previous year became the *de facto* quota for the next year. However, once the problem of concealed revenue was redressed and the reported revenue reflected more truthfully the actual volume of passing commodities, fluctuations in customs revenues were the natural result. The expectation of an ever-increasing surplus soon

⁶² Qi Meiqin, "Guanyu Qingdai queguan eshui de kaocha," 64–65; QL_HDZL, juan 48, "kaofu."

⁶³ Ibid. at 65.

turned out to be impractical. In 1741 (Qianlong 6), the Qianlong Emperor issued an imperial edict to address this issue. The emperor expressed his concern that customs superintendents would excessively burden the merchants in order to avoid the ministry's impeachment, especially in years when commerce was already depressed. The new policy was that only when the amount of surplus was severely less than that of the previous year should the ministry order a full investigation by the supervising provincial officials; as long as no malpractices such as embezzlement were detected, the decreased revenue was accepted as a reflection of market fluctuation and the superintendent should not be blamed.⁶⁴

In 1749, the Board of Revenue further proposed that the superintendent should be held responsible only if surplus decreased for more than 10% compared to the previous year, and punishment in the form of demotion was linked to the percentage of surplus decrease. In response, the imperial edict stipulated that instead of the surplus of the previous year, surplus accrued in the year of 1735, the last year of Yongzheng's reign, should be set as the quota thereafter. The mid-century customs revenues were often higher than the 1735 levels. The fixation of the 1735 surplus as the quota was meant to be a gesture of imperial benevolence, freeing the customs from the pressure of continuous revenue increases.⁶⁵ In practice, with sustained revenue increases in the 1750s and 1760s, customs superintendents still used the surplus of the previous year as the benchmark in their memorials, a practice insisted by the ministry and acknowledged by the emperor.⁶⁶ In the late 1770s, however, customs revenues,

⁶⁴ QL_HDZL, juan 47, 621–509.

⁶⁵ GX_HDSL, juan 237, 794–2; QL_SYD, pages 397–98.

⁶⁶ GX_HDSL, juan 237, 798.

especially those from the three customs of Huai'an, Fengyang, and Yangzhou, decreased steadily and even fell lower than the 1753 levels, a trend manifesting the secular decline of the North-South trade along the Grand Canal. In view of this, the emperor adjusted the policy in 1777 so that surplus should be compared not only with that of the previous year, but the previous three years; only when the surplus reached a four-year low point would the official in charge be blamed and charged with the deficit.⁶⁷

Continued declines of revenues in the 1790s eventually resulted in the imperially designated "surplus quotas" by the Jiaqing Emperor in 1799 at levels considerably lower than the peaks in the eighteenth century. Column 6 of *Table 1* shows the resulted total quota.⁶⁸ A major adjustment of the extra surpluses happened in 1804, which did not involve the customs under concern here, except for the Jiujiang Customs, whose surplus quota was increased to 367,000 taels. The imperially formulated surpluses finally completed the conversion of floating surpluses into fixed quotas. After the 1820s, however, deficits to the extra quotas became increasingly widespread and frequent, in particular for previously prosperous Grand Canal customs such as Hushu and Huai'an, whose extra quotas were adjusted down in 1831. Recessions of customs revenues in the first half of the nineteenth century, especially after the 1820s, seemed to signal a general economic depression and regional disintegration.⁶⁹ In the 1850s, several major customs

⁶⁷ GX_HDSL juan 237, 798–799; Liao Shengfeng, *Qingdai changguan yu quyue jingji yanjiu*, 217.

⁶⁸ GX_HDSL, juan 238, 801–802.

⁶⁹ For the secular decrease of customs revenues in the first half of the nineteenth century, especially post-1820, see Ni Yuping 倪玉平, *Qingchao Jia Dao guanshui yanjiu* 清朝嘉道关税研究 [A Study on

were closed during the Taiping Rebellions and never reopened; moreover, with the opening of treaty ports and the spread of *lijin* tax, revenues from domestic customs never recovered to the eighteenth-century levels.⁷⁰

The above review of the Qing's management of customs quotas and surpluses offers important insights on the state's perspective on market fluctuations and its considerations regarding the trade-off between claiming more revenues on the one hand and limiting official corruption and burdens on commerce on the other. The domestic customs institution, like other sections of the Qing taxation system, was faced with the irresolvable problem of information asymmetry and conflicts of interest between the central state and individual customs superintendents as well as local governments that benefited from concealed customs income from center. The formal quota system and the changing terms in which surpluses were managed could be understood within a framework of a generalized tax-farming model, in which an assigned superintendent was held responsible for meeting a minimum requirement (either a specific amount or a derivative of previous years' income), and any shortage must be made up from his private purse. Moreover, although it was against the officially stated principles, the superintendents could, in practice, retain any income beyond the requirement without any political risk. These aspects of the Qing public finance would certainly merit a full-scale investigation elsewhere.

Domestic Customs Revenues during the Reigns of Emperors Jiaqing and Daoguang] (Beijing: Beijing shifan daxue chuban she, 2010).

⁷⁰ Liao Shengfeng, *Qingdai changguan yu quyuan jingji yanjiu*, 245–98.

For our purposes here, the main takeaway is how changing policies might have affected the reliability of the reported revenue data and how our interpretation should be adjusted to account for the potential biases. The following is the issue in a nutshell. At the turn of the eighteenth century, the expansion of trade had already rendered the formal quotas set in the early years of the dynasty obsolete. However, surpluses beyond the formal quotas were not fully revealed in reported customs revenues, partially due to the central state's deliberate negligence in order to weaken the incentives for officials to overtax commerce. In the 1720s and 1730s, with the Yongzheng Emperor's efforts at consolidating customs revenues, these revenues reflected more truthfully the markets' expansion. Meanwhile, steady increases in customs revenues during these years built up an expectation that guided the Ministry's evaluations of customs superintendents for the rest of the century, with the expectation that stable, if not ever-increasing, revenues should be reported each year. Therefore, for the period from the 1730s to the 1790s, while decreases and significant increases in customs revenues more likely reflected actual market fluctuations, steady annual increases by a few taels over a number of years should be interpreted as reflecting only the lower boundary of trade volume, as they were most plausibly the result of corrupt officials' manipulation to take the extra surplus to their own purse while avoiding impeachment. Similarly, after the fixation of the quotas for surpluses in 1799, significant deviations from the quota would indicate market movements, whereas continuous reporting of a few taels higher than the quota would more likely indicate only the lower boundary. In sum, variations seen from the reported customs revenues must be lower than the actual variations of the volume of commodities. Moreover, while decreases in trade volume would be reflected more directly in the data of customs revenues, increases tended to be underrepresented. Bearing these qualifications in mind, customs data can still be informative about changes in market conditions.

Timber Consumption in Jiangnan

Since the compositions of customs revenues were not regularly included in annual reports, I can only estimate the amounts of timber taxes, which are shown in Figure 2. For the four customs stations of Longjiang Guan, Wuhu Gong Guan, Nanxin Guan, and Yu Guan, timber taxes constituted the vast majority of their revenues, so timber taxes are estimated as equal to the total revenues. The estimation for Chen Guan will be explained in the next section. The estimation methods for Jiujiang Guan and Jing Guan are detailed in Appendix A. Unfortunately, the Board of Revenue customs' Gan Guan station is omitted here. The reason is that, although Gan Guan taxed a major source of timber in southern Jiangxi, it also taxed various kinds of commodities along the only overland trade route to Canton. Taxes from silk and tea, instead of timber, contributed the most to its revenues, and there was no information whatsoever on the percentage of timber taxes.⁷¹

The timber taxes of the three big customs of Jiujiang Guan, Wuhu Gong Guan, and Longjiang Guan (at Nanjing) reflected the amount of timber that reached the Lower Yangzi via the Yangzi River. Despite small differences in their taxation methods, the timber taxes of these

⁷¹ Liao Shengfeng 廖声丰, "Qingdai Gan Guan shuishou de bianhua yu Dayuling shanglu de shangpin liutong" 清代赣关税收的变化与大庾岭商路的商品流通 [The Changes of the Taxes in Gan Custom and the Commodity Circulation in Dayuling Mountain in the Qing Dynasty], *Lishi Dang'an*, no. 4 (2001): 85–92.

three customs stations were basically at the same scale and largely demonstrated synchronized movements.⁷²

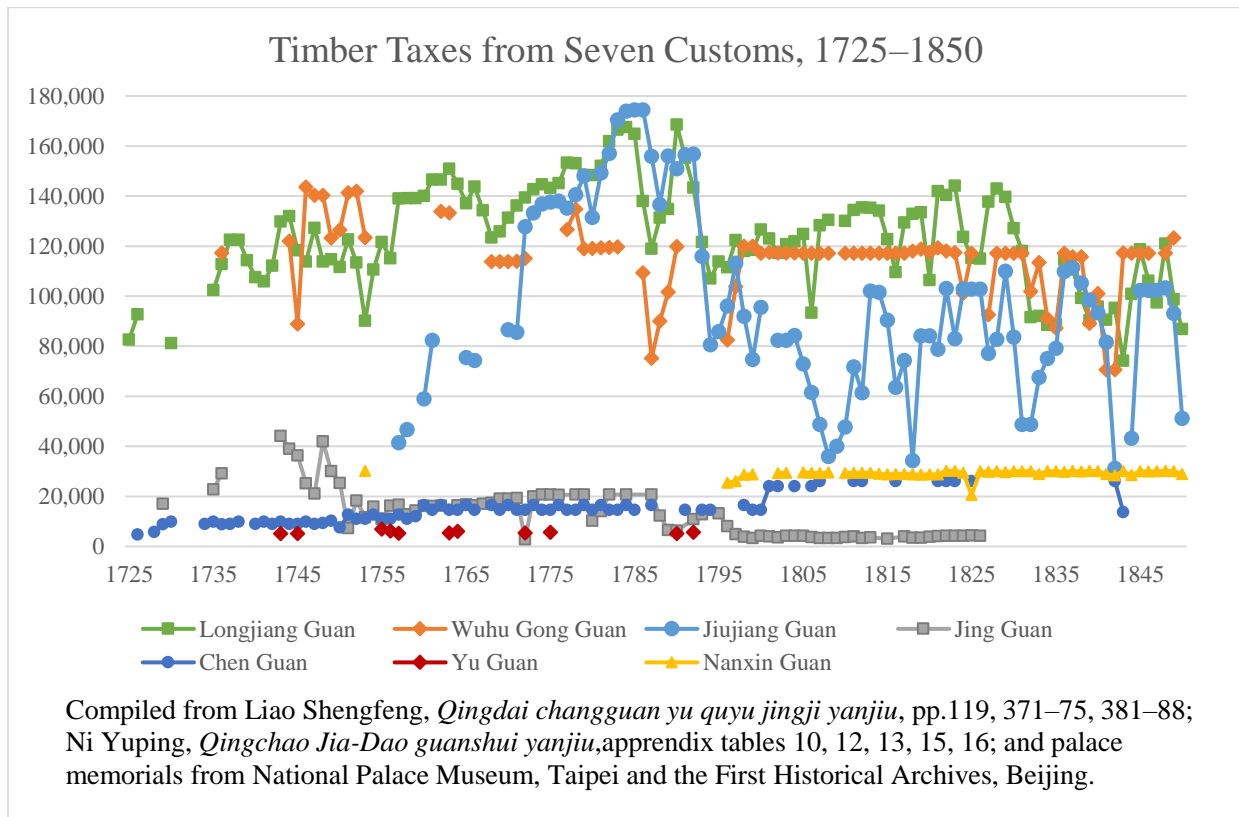


Figure 2 Timber Taxes from Seven Customs, 1725-1850

Timber that reached Jiujiang Guan included timber from the Upper Yangzi that continued to float down from Hankou and timber from Jiangxi, known as *Ximu*, which was transported

⁷² Responsible officials sometimes referred to similar revenue declines in the other two customs as evidence that market conditions, instead of their malpractices, were the reasons for the decline. For example, see the memorial of Liangjiang Governor-General Gao Jin 高晉 on 5/7/QL36 (1771), National Palace Museum, GZD-014090; the memorial of Anhui Governor Chen Yongfu 陳用敷 on intercalary5/15/QL54 (1789), National Palace Museum, GZD-040641.

northward to Jiujiang. *Ximu* was produced in southern Jiangxi, which followed Gongjiang, Zhangjiang, Xiushui, Fuhe and other rivers in Jiangxi and finally converged into the Gan River. Exporting timber rafts were gathered in the town of Wucheng in Jiujiang, retied into larger rafts, and entered the Yangzi River through the Poyang Lake.⁷³ The main station of Jiujiang Guan taxed timber from upriver Yangzi, and a branch station at Gutang 姑塘 targeted timber transported from the Gan River. Jiujiang only consumed very small portions of the timber that passed through the customs. Most of this timber continued to travel downriver and was taxed again at Wuhu. A small amount of timber produced in southern Anhui, aiming for the Nanjing market, was also transported across the province to Wuhu, and then floated down the Yangzi River to Nanjing. Like Jiujiang, consumption in local market of Wuhu was small compared to the volume of passing timber. The destination of most timber was Nanjing, which was the redistribution center of timber for both Jiangnan and Jiangbei.

Apart from the timber consumed locally in Nanjing, the majority was retied into smaller rafts and transported along the Grand Canal to cities in Jiangnan and the Huai River Valley. Timber heading for Jiangnan entered the Grand Canal at Zhenjiang and reached Changzhou, Wuxi, Suzhou, and Shanghai. The timber rafts heading north would enter the Grand Canal at Yangzhou and be distributed to Taixing, Nantong, and Yancheng. Although ways to measure different kinds of timber rafts are explained in great detail for Longjiang Guan, the applicable tax rates were nowhere to be found. A memorial from 1730 indicated that the duty on 10,000 timber

⁷³ Yin Qing 蔭青, “Jiangxi zhi mucai ye” 江西之木材業 [The Timber Industry in Jiangxi], *Jingji xun kan* 經濟旬刊 4, no. 7 (1935).

logs for boat construction was 1,300 taels.⁷⁴ At this rate, the number of timber logs that reached Nanjing would be 0.95 million on average for the period from 1725 to 1850, and 1.2 million at the high point of the late eighteenth century. Another method is to assume that rates at Longjiang Guan were similar to those used in Chen Guan, Jing Guan, and Yu Guan (Table 3), then the estimation would be 0.8 to 1.0 million 3-foot logs on average, and 1.1 to 1.4 million at the highest. Since the two results are very similar, we can be fairly confident in the estimation. The average market value, at the market price of 10 taels per 3-foot log, would be 8.0 to 10.0 million taels. Notice that the 10-tael price was observed in western Hunan in 1729, and therefore the average price level at Nanjing should be higher.⁷⁵

Figure 3 shows estimated timber consumption at per capita levels. Besides timber that reached Nanjing through the Yangzi River, some timber from southern Anhui and western Zhejiang was transported to Hangzhou and redistributed from there. So the combined amount of timber at Longjiang Guan in Nanjing and Nanxin Guan in Hangzhou could roughly represent the amount of timber distributed in the core areas of Jiangnan and Jiangbei, with the exclusion of some timber transported by sea from Fujian to Zhejiang. The higher boundary of per capita consumption is generated by dividing the estimated number of logs in Longjiang Guan and Nanxin Guan by the population of the 10 prefectures that are collectively known as “Jiangnan.”

⁷⁴ Memorial of Zhenhai General He Tianpei 何天培 on 7/19/YZ3 (1725), National Palace Museum, GZD-402018896.

⁷⁵ Wang Rou, “Zouchen chen shouren wubang zhe” 奏陳臣受人誣謗摺 [A Memorial Explaining in Detail False Accusations on Your Minister], YZ7 (1729), National Palace Museum, GZD-4020009317.

The lower boundary is estimated by dividing the number of logs at the two customs by the combined populations of Jiangsu and Zhejiang provinces.

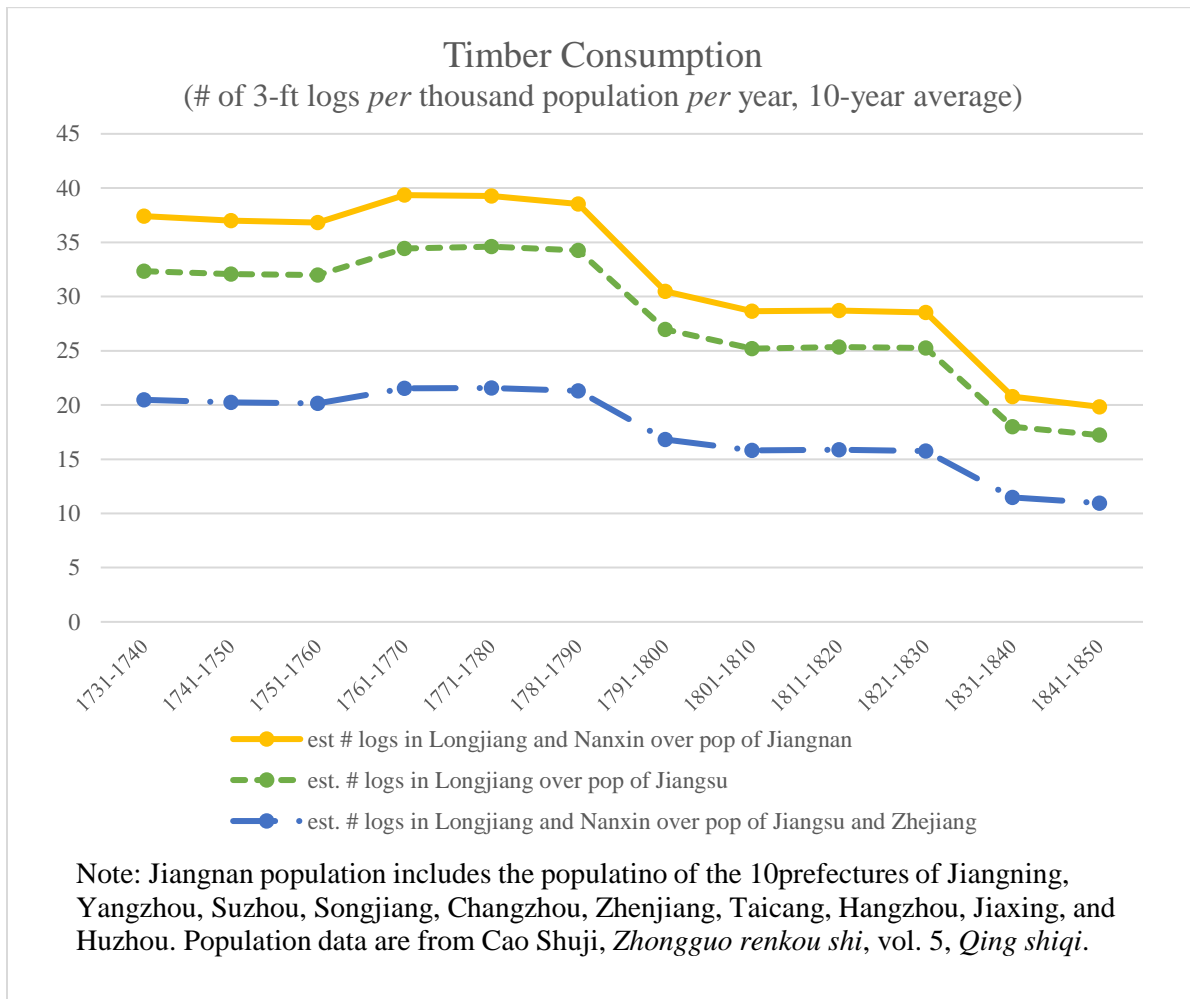


Figure 3 Timber Consumption in Jiangnan, 1730-1850

Both timber taxes of Longjiang Guan and estimated per capita timber consumption in Jiangnan suggested trends of growth in the eighteenth century and declines in the first half of the nineteenth century. From the 1720s to the 1780s, timber volume almost doubled, which overcompensated for the 30% increase of Jiangnan’s population during the same period. The decade from 1785 to 1795 saw two instances of sharp decreases in the volume of timber, as

shown in the timber taxes of all three customs of Longjiang, Wuhu, and Jiujiang. The depression continued throughout the first decade of the nineteenth century. Although there was some recovery with fluctuations from 1810 to 1830, it never attained the peak level of the 1780s. The 1830s and 1840s experienced another round of recession. With a continuous population increase, timber consumption at the per capita level consistently dropped in the first half of the eighteenth century. While occasional shortages of timber taxes in the eighteenth century were mostly attributed to disruptions to river transportations due to either flood or drought, the nineteenth-century shortages were more often ascribed to sluggish demand in the Lower Yangzi, confirming a general economic depression in the eighteenth century, especially during the Daoguang era.

Table 2 Reasons for Timber Tax Shortages in Jiujiang, Wuhu, and Longjiang Customs

Reasons for Timber Tax Shortages in Jiujiang, Wuhu, and Longjiang Customs				
	1725-1780		1781-1852	
demand				
sluggish sales in Jiangnan	3	27%	20	48%
supply	8	73%	20	48%
transportation	5	45%	13	31%
deforestation			4	10%
high labor cost	2	18%	2	5%
other	1	9%	1	2%
Other: high silver prices			2	5%
# of reasons mentioned	11	100%	42	100%
# of instances	9		36	

Note: the table is compiled with 57 memorials regarding timber tax decreases in the three customs in 45 years during the period from 1725 to 1852. It shows the counts of different reasons offered to explain the shortages. In 2 instances during 1725-1780 and 5 instances during 1781-1852, reasons from both the supply and demand sides were mentioned, in which case counts are added to all applicable entries.

The reconstruction of Jiangnan after its devastation during the Taiping Rebellion led to a boom in timber trade from the 1860s. Many accounts of the Nanjing timber market in the Republican period, though ill-informed, traced its origin to the post-Taiping reconstruction.⁷⁶ With half the population lost during the war, per capita timber volume in Jiangnan should also have rocketed. But since its closure in 1853, Longjiang Guan was never reinstated.⁷⁷ The new timber-taxing institution in Nanjing after the Taiping, the Bureau of Timber *Lijin* 木釐局, was beyond the control of the central state. Without systematic reports of the bureau's income, it is impossible to have similar estimations of timber volume and per capita consumption after 1850.

Sources of Timber Supply

Jiangxi remained the most important source of timber for Jiangnan throughout the period. Although timber taxes at Gan Guan in southern Jiangxi are hard to estimate, scattered evidence suggested large volumes of timber were exported from Jiangxi. In 1744, at Wuhu Gong Guan, taxes from Jiangxi timber amounted to 95,601 taels (78%), while taxes on timber from Hunan

⁷⁶ For example, see Dai Yuan 戴淵, "Nanjing Shangxin He mucai maoyi zhuangkuang" 南京上新河木材貿易狀況 [Timber Trade Situations in the Market of Nanjing Shangxin He], *Zhongguo nongxue hui bao* 中國農學會報, no. 129–130 (1934); Wu Chuanjun 吳傳鈞, "Nanjing Shangxin He de mushi: Changjiang zhongxia you mucai jisan de zhongxin" 南京上新河的木市——長江中下游木材集散的 中心 [The Timber Market at Nanjing Shangxin He: The Distributing Center of Timber for the Middle and Lower Yangzi Region], *dili* 地理 6, no. 2–4 (1949): 37–44.

⁷⁷ GX_HDSL, juan 941.

and Hubei were 26,376 taels (22%).⁷⁸ For the term of 1780 (from Month 4 of 1779 to Month 4 of 1780), the timber tax at Jiujiang Guan was 131,489 taels by my estimation, 62% of which, or 82,364 taels, were collected in the Gutang branch station that specialized in taxing Jiangxi timber according to a memorial by Jiangxi Governor Hao Shuo 郝碩. This amount of tax from Jiangxi timber was considered low compared to usual standard. In fact, Hao Shuo mentioned that in the fifth and sixth months of 1780 alone, timber taxes collected at Gutang already reached 95,223 taels. So for the term of 1781, timber from Jiangxi contributed at least 64% of the estimated 149,201 taels of timber tax.⁷⁹ With the steady expansion of timber supply from Hunan, the proportion of timber supplied from Jiangxi might have decreased in the nineteenth century. From the nineteenth century, Jiangxi timber was typically smaller and considered of lower quality than timber from Hunan and was priced lower accordingly. Nevertheless, Jiangxi continued to be the most important timber source alongside Hunan throughout the Republican period.⁸⁰

Apart from timber from Jiangxi, patterns of timber supply from other locations can be glimpsed from the timber taxes of the four smaller customs stations. Yu Guan (Chongqing) represented timber from Sichuan. Jing Guan (Jingzhou) represented timber shipped from

⁷⁸ Memorial of Anhui Governor Fan Can 范璨 on 7/7/QL9 (1744), cited in Liao Shengfeng, *Qingdai changguan yu quyuan jingji yanjiu*, 123.

⁷⁹ See the memorial of Jiangxi Governor Hao Shuo 郝碩 on 7/9/QL45 (1780), National Palace Museum, GZD-027882.

⁸⁰ Lu Yin 蘆隱, “Shangxin He shamu ye wushi nian gaikuang” 上新河杉木業五十年概況 [An Overview of the Cunninghamia Trade in Shangxin He for the Last Fifty Years], *Muye jie* 木業界, no. 1, 2, 4 (1940): (1) 10-13, (2) 13-28, (4) 5-14; Yin Qing, “Jiangxi zhi mucai ye.”

Sichuan, Hubei, and a small part of northern Hunan down the Yangzi River, targeting the market of Hankou. Chen Guan represented timber from western Hunan and Guizhou. Nanxin Guan represented timber from southern Anhui and western Zhejiang transported to Hangzhou. The four customs stations taxed individual timber logs at designated rates based on estimated values. As shown in Table 1 and Table 3, timber tax rates in Chen Guan, Jing Guan, and Yu Guan were all 3%. The prices used to evaluate the timber logs at the three customs stations were comparable. Nanxin Guan, located in Hangzhou, taxed timber at 10%. Prices used in Nanxin Guan to evaluate timber are not available. Assuming that Nanxin Guan used the same price estimations as Jing Guan and Chen Guan, and that all timber logs were 3 feet in circumference, *Figure 4* shows the estimated volume of timber that passed through these four customs stations.⁸¹

⁸¹ My estimation of timber volume for Jing Guan is much lower than Shi Ying's (2015) because I have taken out estimated boat levies from Jing Guan's revenue (see Appendix A), while Shi takes the total revenue as timber tax. Apart from this small flaw, the bigger problem in Shi's approach is that she uses the estimated volume of timber through Jing Guan as the indicator of the scale of Hankou's timber trade. As is explained in this study, Jing Guan only accounted for timber from Sichuan and Hubei, a shrinking portion of Hankou's timber supply. Shi's conclusion, based on Jing Guan's revenue data, that the timber market in Hankou became stagnant in the first half of the eighteenth century is contradictory to historical accounts of the rapid development of Hankou's Parrot Island timber market since the 1800s. The reason lies in Shi's omission of the rising amount of timber from Hunan, which more than compensated for declining supplies from Sichuan. See Shi Ying 石瑩, "Qingdai Hankou de zhumu shichang jiqi guimo fenxi" 清代汉口的竹木市场及其规模分析 [The Timber Market in Qing Hankou and an Analysis on Its Scale], *Zhongguo jingjishi yanjiu* 中国经济史研究, no. 1 (2015): 108–19; Chen Xing 陈醒 and Chen Lilian 陈立廉, "Hanyang Yingwu Zhou zhumu shichang shihua" 汉阳鹦鹉洲竹

Table 3 Timber Tax Rates and Prices Used for Taxation

Timber Tax Rate and Prices Used for Taxation				
[1] Perimeter (ft.)	Price used for Taxation (taels)			Market Price
	[2] Chen Guan	[3] Yu Guan	[4] Jing Guan	[5] 1729 Hunan
1.8-2		1	1	
3	5	4	5	10
4	15	7	15	26
5	33	10	33	45
6	58			75-160
Tax Rate	3%	3%	3%	

Column 2-4: prices used in the customs of Chen Guan, Yu Guan, and Jing Guan to evaluate the value of timber for taxation. Column 5: market prices paid by tribute timber officials, reported by Wang Rou in the same memorial. Source: Wang Rou, "Zouchen chen shouren wubang zhe," 1729, 4020009317, National Palace Museum; *Guangxu huidian shili*, juan 941; *Minguo Hubei tongzhi*, juan 50, "zhumu shoushui zeli"; Shi Ying, "Qingdai Hankou zhumu shichang," p.118.

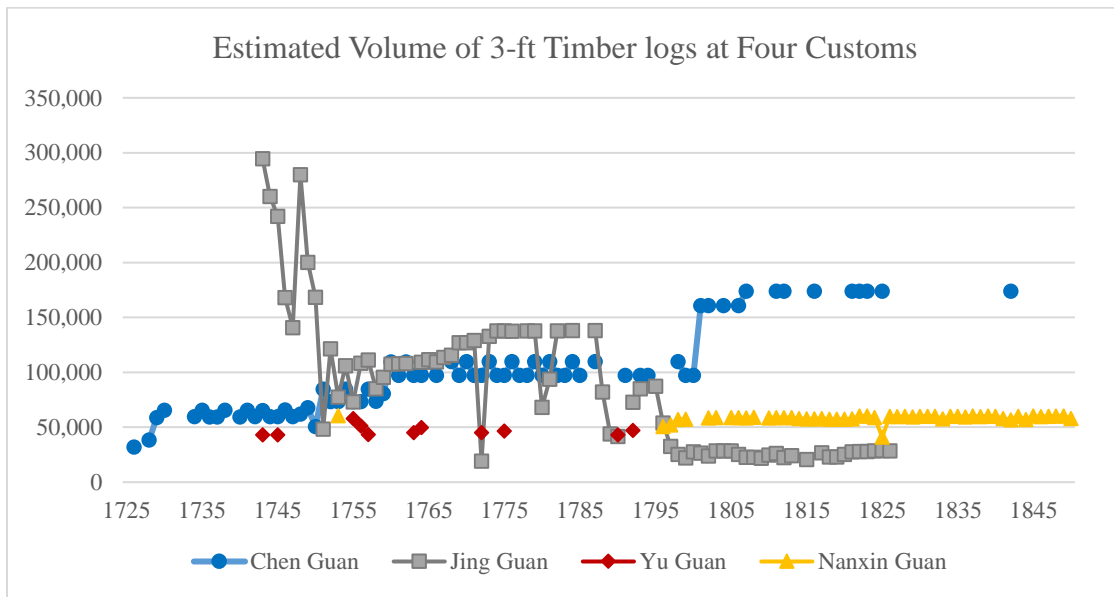


Figure 4 Estimated Volume of 3-ft Timber Logs at Four Customs

木市场史话, in *Wuhan wenshi ziliao wenku* 武汉文史资料文库, reprint of 1964 article, vol. 3 (Wuhan: Wuhan chubanshe, 1999), 362–78.

The volume of timber at Chongqing and Hangzhou stayed very stable at 20,000 and 30,000 taels, respectively. The contrasting trends of Chen Guan and Jing Guan suggest the decline of Sichuan and Hubei and the rising importance of Hunan and Guizhou as sources of timber for the Middle and Lower Yangzi. This confirms the impression obtained from the Hankou market, where timber from Sichuan, Hubei, Hunan, and Guizhou converged. Notice that while Jing Guan accounted for almost all of Sichuan and Hubei timber that reached Hankou, Chen Guan only taxed timber from western Hunan. Timber from eastern Hunan was therefore untaxed on its way to Hankou.

The rise of the Parrot Island timber market in Hankou in the early nineteenth century was closely associated with increasing timber supplies from Hunan and the dominance of Hunan timber merchants over the local Hubeinese.⁸² Jing Guan was not well positioned to tap revenues from the flourishing Hankou timber trade. The superintendents of Jing Guan consistently reported revenue shortages due to shrinking Sichuan supplies from 1806 to 1823.⁸³ In 1857, a new timber-taxing custom station, named Xin Guan, was set up in Wuhan to tax the timber flooding into Hankou, with a quota of 27,700 taels. By the 1890s at the latest, Xin Guan generated a surplus of 12,295 taels beyond the quota, an impressive accomplishment considering the general decline of domestic customs revenues in the second half of the nineteenth century.⁸⁴

⁸² Chen Xing and Chen Lilian, “Hanyang Yingwu Zhou zhumu shichang shihua.”

⁸³ Ni Yuping, *Qingchao Jia Dao guanshui yanjiu*, 99–104.

⁸⁴ GX_HDSL, juan 941.

The Chen Guan Station in West Hunan

The next topic to closely examine is the institutional history of the Chen Guan customs station and its long-term revenue trend for two purposes: First, it serves as an example that illustrates the aforementioned nuances of customs revenue data. Second, it demonstrates the substantial development of the timber trade along the Yuan River in Hunan during the eighteenth century. The Chen Guan customs station was located in Chenzhou Prefecture, Hunan Province. The exact time of its establishment is unclear. The earliest existent mentioning of this station dates to 1686, but it was not included as one of the regular Board of Works customs stations until after the 1730s.⁸⁵ The station was managed by the prefect of Chenzhou, as a superintendent was not assigned from the ministry.

At the outset, Chen Guan's position in the structure of timber trade needs to be clarified. *Cunninghamia* produced in Hunan and parts of Guizhou and Guangxi was known as “*Guangmu*” 廣木 in the timber markets of Middle and Lower Yangzi. The character “*guang*” was used because Hunan and Hubei were combined as the province of Huguang before 1664. The quality of *guangmu* was considered better than *ximu* (timber from Jiangxi), the other main variety of *Cunninghamia*. Within the category of *guangmu*, timber produced in the drainage basin of the Xiang 湘 and Zi 資 Rivers in the eastern part of Hunan was known as *dong humu* (東湖木 “timber of eastern Hunan”), while timber produced in the mountains along the Yuan 沅 River in

⁸⁵ The 1686 mentioning of Chen Guan is found in an entry in QL_HDZL, juan 146, 38–1. However, it was not included in the formal list of Board of Works customs in the Kangxi edition of *Collected Statues*, which covered up to 1686, or in the Yongzheng edition, which covered up to 1727. See KX_HD, juan 136, 21–1; YZ_HD, juan 201, 17–1.

southwestern Hunan and southeastern Guizhou was known as *xi humu* (西湖木 “timber of western Hunan”). A small amount of timber was also produced along the Li 澧 River in western Hunan. *Xi humu* was of higher quality than *dong humu* and divided into three categories. First, timber produced above the riverhead of the Yuan River, primarily in the counties of Jinping and Tianzhu along the Qingshui River, was the best of *xi humu*, usually called “Miao timber” as the area was occupied primarily by Miao people. Second, the *xi humu* came from around Qianyang County, located at the confluence of the Qingshui and Qu rivers into the Yuan River. Third, the timber came from areas around Chenzhou, where the Chen Guan customs station was located.⁸⁶ So this station was positioned to tax *xi humu* closest to its source. However, Chenzhou was not the site for a market exchange.

The first major market for *xi humu* was located farther down the Yuan River in Changde, where timber merchants gathered to trade in the Deshan market town. Although there had been occasional suggestions from officials to move the customs to Deshan since the 1720s, it was relocated for only a couple of years during the Taiping Rebellions at the proposal of Hunan Governor Luo Bingzhang and then moved back to Chenzhou in 1863.⁸⁷ The Yuan, Li, Zi, and

⁸⁶ Chen Xing and Chen Lilian, “Hanyang Yingwu Zhou zhumu shichang shihua,” 118–19.

⁸⁷ Chenzhou-Yuanling-Jingzhou Circuit Intendant Wang Rou, “Zouchen chen shouren wubang zhe”; Luo Bingzhang 駱秉章, “Chenzhou muguan yishe Changde yuke chouxiang zhe” 辰州木關移設常德裕課籌餉摺, 咸豐九年乙未月 [A Request to Relocate the Chenzhou Timber Customs Station to Changde in Order to Raise Funds for Military Campaigns: Memorial to the Throne by the Hunan Governor in Month *Yiwei*, 1859], in *Luo Wenzhong gong zouyi* 駱文忠公奏議 [Collected Memorials of Luo Bingzhang], reprint (Taipei: Wenhai chuban she, 1967), vol. 3, pp. 1703–1709; GX_HDSL, juan 941.

Xiang Rivers converged into the Dongting Lake and entered the Yangzi River at Yueyang 岳陽, where timber was retied into larger rafts to survive the currents of the Yangzi.⁸⁸

Chen Guan only taxed timber and salt. In 1726, Hunan Governor Bulantai 布蘭泰 initiated to scrutinize the revenues of Chen Guan. In the Kangxi era, the quota of Chen Guan was only 2,400 taels, of which 1,375 taels were for salt and 1,030 taels were for timber. Bulantai's investigation reported that by the 1720s, the surplus had reached more than 6,000 taels, two-thirds of which were attributed to the growing volume of timber passing down the Yuan River.

Given the central government's loose control over customs' surpluses during the Kangxi's reign, this surplus was concealed from the Ministry and retained in the prefecture, or, according to Bulantai, more often than not embezzled by the prefects. Bulantai proposed to assign a special official to sort out the revenues of Chen Guan, and he reset the formal quota.⁸⁹ Following Bulantai's initiative, Chen-Yuan-Jing Circuit Intendent Wang Rou 王柔 supervised the taxation at Chen Guan from 1728 to 1730. Based on the revenues of these years, the formal

⁸⁸ Dai Yuan, "Nanjing Shangxin He mucai maoyi zhuangkuang"; Liu Peiliang 柳培良 and Fan Jingyu 范淨宇, "Nanjing shi mucai shikuang diaocha shang" 南京市木材市況調查上 [Investigation on the Nanjing Timber Market], *Nongye tongxun* 農業通訊 1, no. 10 (1947): 20–21.

⁸⁹ "Hunan xunfu Bulantai zhe" 湖南巡撫布蘭泰摺 [A Memorial from Hunan Governor Bulantai], 6/22/YZ4 (1726), National Palace Museum, GZD-402016499; also printed in 國立故宮博物院, ed., *Gongzhong dang Yongzheng chao zouzhe* 宮中檔雍正朝奏摺 [宮中檔雍正朝奏摺] (Taipei: National Palace Museum, 1979), vol. 6, page 197.

quota for Chen Guan was increased to 12,500 taels in normal years, and 13,400 taels in years with intercalary months, effective from 1732.⁹⁰

The reported revenues of Chen Guan for the rest of the eighteenth century showed very interesting patterns (Figure 5) that clearly indicated the underreported revenues. The first noticeable feature in the revenue series is the serrated shape that corresponds to different quotas in normal years and leap years. The tax revenues collected by Wang Rou in 1728, 1729, and 1730 were 9,370 taels, 12,452 taels, and 13,417 taels, respectively. When setting formal quotas based on revenues of these three years, local officials reasoned that since 1730 was a leap year (in the traditional Chinese calendar, an extra month is added to a leap year), the higher revenue of that year only represented the extra taxes collected in the intercalary month and should not be set as the quota. In the end, the middle level of 12,500 taels was set as the quota for normal years, and 13,400 taels as the quota for leap years.⁹¹ In fact, however, considering the revenues in 1725 were about 8,400 taels, according to Bulantai, the steady increase of revenues in these years most probably reflected the significant growth timber trade thanks to the dredging of the Qingshui River around this time, which opened merchants' access to the timber supply in the

⁹⁰ Wang Rou 王柔, “Zoubao Chen Guan shuikē shiyi zhe” 奏報辰關稅課事宜摺 [A Memorial on Customs Revenues of Chen Guan], YZ8 (1730), National Palace Museum, GZD-402013901; Gao Qizhuo 高其倬, “Tiwei qingcha shuiyin dengshi” 題為清查稅銀等事 [Memorial on Customs Revenues by Hunan Governor Gao Qizhuo], 9/10/QL1 (1736), FHA, 02-01-04-12848-003.

⁹¹ Gao Qizhuo, “Tiwei qingcha shuiyin dengshi.”

Miao areas.⁹² The rise of timber taxes over these few years were likely a prelude to the secular trend of the trade boom fostered by improved transportation and the conclusion of military campaigns in the region. That 1730 was a leap year does not explain the trend from 1725 to 1730. Moreover, the timber trade was a seasonal business, so an extra month in different seasons was unlikely to increase tax revenues uniformly.

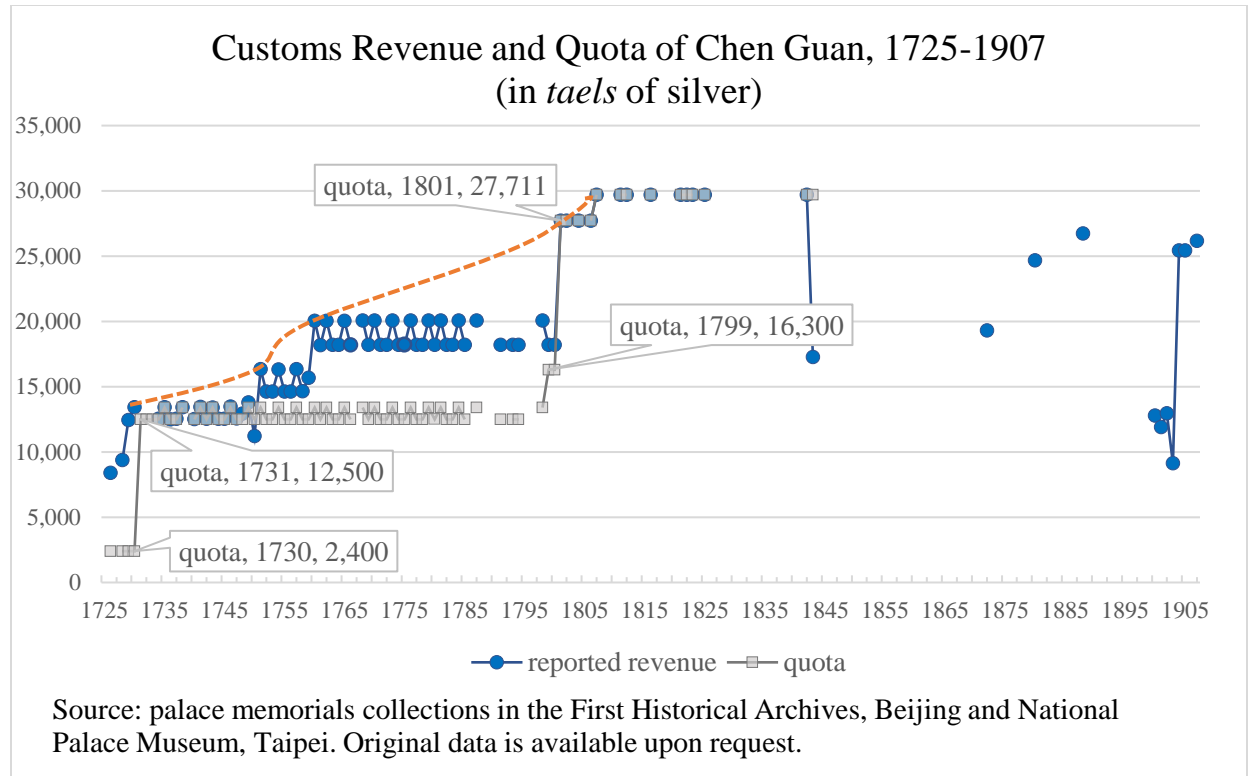


Figure 5 Customs Revenue and Quota of Chen Guan, 1725-1907

The serrated shape of the revenue series was more likely than not the result of fabrication.

As discussed in the previous section, during the Yongzheng and Qianglong eras, customs

⁹² Fang Xian 方顯, “Zou chen Miaojiang difang zhi shiyi” 奏陳苗疆地方之事宜 [A Memorial on Local Affairs in the Miao Territories], 6/15/YZ10 (1732), National Palace Museum, GZD-402002884.

surpluses should be compared with those of the previous years. In the case of Chen Guan, revenues of normal years were compared with those of the previous normal years, and likewise for leap years. If we separate the normal-year revenue series and the leap-year series, the two series remained extremely stable over the years, except for a few jumps, indicating that most officials just reported the previous comparable year's revenue, adding a difference of a couple of taels. The staircase fashion of revenue increases support this inference. In 1751 and 1760, substantial revenue increases were reported, up 18% and 23% respectively. Interestingly, in subsequent years, reported revenues caught up with the higher levels and then flattened. The market would not actually work this way. Because there was no change in taxable items or specific rates, the only explanation for the staircase pattern of reported revenues was that most officials followed suit and only a few disclosed the actual revenues.

Few comments were given about the revenue jumps in 1751 and 1760, but the instance at the turn of the nineteenth century serves as a good illustration. In 1799, the Jiaqing Emperor stipulated the surplus quota for Chen Guan to be 3,800 taels, making the resulting total quota of 16,300 taels close to, but still lower than, the usually reported revenues. Moreover, the different quotas for leap years was abandoned. In 1800, revenue of 18,215 taels was reported. A few months later, however, Hunan Governor Zu Zhiwang 祖之望, who had personally investigated the revenue of Chen Guan, memorialized the emperor that the actual amount of revenue accrued in 1800 was 27,711 taels.⁹³ This exact amount was reported for the following few years until

⁹³ Linning 琳寧, “Ti wei zunzhi chahe Hunan Chen Guan zi Jiaqing sinian liuyue qi yinian qiman zhengshou shuiyin shumu shi” 题为遵旨察核湖南辰关自嘉庆四年六月起一年期满征收税银数目事 [Memorial on the Customs Revenue of Chen Guan from the Minister of Works Linning], 2/14/JQ6

1807, when Hunan Governor Jing An 景安 incorporated into reported revenues as an income item that was previously retained in the customs; that is, the residual of the 10% *huohao* after covering the customs' expenses, rendered the *de facto* quota as 29,692 taels—exactly the same amount that was reported for the next few decades.⁹⁴

Customs data became scattered after the 1840s, but the mid-century depression and the later recovery in the 1870s and 1880s are noticeable. For unclear reasons, there is a steep drop in the early 1900s. However, with the general trend of the encroachment of domestic customs by *lijin* tax stations in the second half of the nineteenth century, the revenue data after the 1850s cannot be directly compared to the eighteenth century series.

If we accept that spikes in reported revenues represented true disclosures and then link these points together, the dashed red line in Figure 5 should give us an approximate idea of the trend of market expansion during the eighteenth century. The monetary value of timber passing through Chen Guan can be estimated by these time spots. Since the 1860s, memorials started to report timber and salt taxes separately. From a dozen of these memorials, it can be inferred that the quota for salt taxes was set at 3,255 taels in 1732, which remained stable, except for an addition of 10% *huohao* in 1807. Annually collected salt taxes seemed to be around the quota

(1801), FHA, 02-01-04-18334-018; Ma Huiyu 馬慧裕, “Tibao Chen Guan zi Jiaqing wunian wuyue qi yinian qiman zhengjie shuiyin shumu shi” 提報辰關自嘉慶五年五月起一年期滿徵解稅銀數目事 [Memorial on Customs Revenues of Chen Guan by Hunan Governor Ma Huiyu], 9/17/JQ6 (1801), FHA, 02-01-04-18335-028. See also GX_GBZL, juan 80, page 554.

⁹⁴ Jing An 景安, “Zouwei chaming Chen Guan zhengshou shui hao ji heyi linian zhixiao dongyong shumu shi” 奏為查明辰關征收稅耗及核議历年支銷動用數目事, 4/13/JQ (1807), FHA, 03-1768-039.

level until after the 1850s, when shortages of a few hundred to more than a thousand taels became normal.⁹⁵ Subtracting 3,600 taels from the customs revenues in the eighteenth century, the remaining amount should be the approximate taxes from timber.

In Chen Guan, the tax rate for timber was 3% of the estimated monetary value based on a handbook of prices for different varieties of timber. I estimate the value of timber passing through Chen Guan to be 327,229 taels in 1730, 424,556 taels in 1751, and 803,726 taels in 1801, a 2.5-fold growth in 70 years. The prices used in the customs stations to evaluate the timber were rarely updated and, according to Wang Rou's memorial, seemed to be much lower than market prices. After Wang Rou's adjustment of prices in 1729, I find no further changes.⁹⁶ Therefore, the above estimation would likely be the lower boundary of the market value of timber taxed at Chen Guan. Since 5-foot circumference or even larger timber, falling into the "mast wood" category, was unlikely to take up large portions of timber in circulation, Table 4 shows the estimated number of timber logs under three simplified scenarios:

- (1) If all the logs were 3 feet in circumference
- (2) If three-quarters were 3 feet and one-quarter 4 feet
- (3) If half were 3 feet and half were 4 feet

To provide a scale for comparison, consider scenario (2), in which 25% of the timber passing through Chen Guan was 4 feet in circumference. Even if the central state's annual

⁹⁵ For example, see the memorial of Hunan Governor Yun Shilin 惲世臨 on 12/20/TZ3 (1863), FHA, 02-01-04-21762-039; the memorial of Hunan Governor Liu Kun 劉崑 on 10/9/TZ7 (1868), FHA, 02-01-04-21851-022.

⁹⁶ Wang Rou, "Zouchen chen shouren wubang zhe."

demand required 1,140 4-foot logs under the tribute timber system (to be examined in Chapter 3) that were all purchased in this part of Hunan, they would only consume 10% of the 11,000 4-foot logs in 1729. The resulting percentage would have decreased to 4% by 1801.

Table 4 Estimated Value and Volume of Timber Through Chen Guan

Estimated Value and Volume of Timber Through Chen Guan				
Year	Est. Value (taels)	Est.# of logs (all 3 ft. round)	Est.# of logs (75% 3 ft., 25% 4 ft.)	Est.# of logs (half 3 ft., half 4 ft.)
1730	327,229	65,446	43,631	32,723
1751	424,556	84,911	56,607	42,456
1760	548,380	109,676	73,117	54,838
1801	803,726	160,745	107,163	80,373

Timber Markets and Merchant Groups

This section turns to the trade environment and merchant groups in the two most important timber markets of the cross-Yangzi trade system during the eighteenth and nineteenth centuries: Nanjing and Hankou. By mapping out the merchant groups and commercial organizations that were active in each market, it lays out the social and organizational foundations for our discussion on economic institutions in later chapters. Despite differences in specificities, the interconnection of business networks and commonality in commercial practices, initiatives of merchant associations, and subjects of contention suggested a business landscape that can be examined as an integrated whole.

Nanjing

Nanjing was the central hub of the South China timber market. Prices generated in Nanjing were the ultimate market signals for the cross-Yangzi timber trade. It was the final stop

on the Yangzi River for merchants who brought timber from the Upper and Middle Yangzi. Wholesale merchants from cities and market towns in Jiangnan and Jiangbei came here to make bulk purchases. The timber market was located in the town of Shangxin He 上新河 in the western suburb. The Shangxin Canal was first constructed during the Hongwu's reign of the Ming Dynasty to connect the Qinhuai River to the Yangzi River. During the early Ming, the riverbank of the Shangxin Canal became known as the "imperial timber sawmill" (皇木廠 *huangmu chang*) and the "riverbank of treasure boats" (寶船灘 *baochuan tan*), for it was used to stock timber logs for constructions of imperial palaces and the treasure boats used in Zheng He's voyages. One of the first timber-taxing *choufen changs* was established here in 1393, the predecessor of the Board-of-Works Longjiang Guan Customs of the Qing.⁹⁷

Merchants initially gathered here to supply timber for government projects. By the mid-Ming, the location had already developed into a large timber market, in which three groups of timber merchants, the *bangs* of Huizhou, Linqing, and Jiangxi, started their history as the most influential groups in timber trade until the mid-nineteenth century. The Huizhou *bang* were timber merchants from the Huizhou prefecture in southern Anhui, mostly the county of Wuyuan.⁹⁸ The Linqing *bang* were timber merchants from the Qingjiang County of the Linjiang

⁹⁷ Nanjing shi difang zhi bianzuan weiyuan hui 南京市地方志编纂委员会, *Nanjing wuzi zhi* 南京物资志 (Zhongguo chengshi chuban she, 1993), 19–21.

⁹⁸ Xu Chengyao 許承堯, "She fengsu lijiao kao" 歙风俗礼教考 [Examination on the Customs and Rituals in She County], in *She shi xiantan* 歙事闲谈, 1937. For examples of Huizhou merchants trading timber in Nanjing, see the short biographies of Jin Zhao 金照 and Cheng Zhaoji 程肇基 in Wu E 吳鶚

prefecture in Jiangxi, located at the drainage basin of Linchuan and Qingjiang rivers. The Jiangxi *bang*, or “*xi bang*” in short, included the Nanchang and the Ganzhou *bangs*, which were timber merchants from downstream and upstream Gan River respectively.⁹⁹ While the Jiangxi *bang* mainly traded timber from Jiangxi, both the Huizhou and the Linqing *bangs* were famous not for trading timber produced in their places of origin. Indeed, timber from Huizhou was largely marketed through Hangzhou rather than Nanjing, and Linjiang was hardly a timber-producing prefecture.

and Wang Zhengyuan 汪正元, *Guangxu Wuyuan xianzhi* 光緒婺源縣志 [Gazetteer of Wuyuan County Compiled in the Guangxu Era], 1880, juan 34. Yu Sheng 俞盛 mobilized the fellow Wuyuan timber merchants to dredge the Shangxin Canal to facilitate safe transportation of timber rafts, *Ibid.* at juan 35.

⁹⁹ Wu Chuanjun, “Nanjing Shangxin He de mushi.” One issue is that *Nanjing wuzi zhi* and some other works have associated “*xi bang*” with the Shanxi or Shaanxi merchants. For example, see Yang Yougeng 杨有庚, “Qingdai Qian dongnan Qingshui Jiang liuyu muhang chutan” 清代黔东南清水江流域木行初探 [A Preliminary Examination on the Timber Brokerages in the Qingshui River Valley of Southeastern Guizhou in Qing Dynasty], *Guizhou shehui kexue* 贵州社会科学, no. 8 (1988): 49; Jin Qin 金勤, “Qing mo sanda hangye zhiyi de Shangxin He mushi” 清末三大行业之一的上新河木市 [Timber Market in Shangxin He: One of the Three Biggest Trades in Late Qing], no. 1 (1985): 26–28. However, there doesn’t seem to be clear sources to support this claim. Although the Shanxi and Shaanxi merchants were indeed referred to as *xi bang* in salt and other trade, no source whatsoever indicated that they were a significant group in the trade of timber in South China. On the other hand, writings by timber merchants in the Republican period clearly explained that “*xi bang*” in timber trade referred to merchants from southern Jiangxi, see Yin Qing, “Jiangxi zhi mucai ye.”

In fact, the Huizhou and Linqing merchants, and to a lesser extent the Jiangxi *bang* as well, were pioneers in expanding the timber trade further to the southwest. They traveled upstream the Yangzi River to make purchases and started bringing *guangmu* to the Nanjing market since the late Ming. Timber merchants with abundant capital also engaged in money lending to finance the purchases of fellow merchants in the southwest. For example, in the section of “righteous behavior” in the Wuyuan gazetteer, there was the story of an early-Qing merchant, Sun Huiwu 孫徽五, who purchased timber from Hunan, only to be burned up by accident upon arriving Jiujiang. Another twenty-some merchants who had borrowed capital from Sun to trade timber also suffered seriously from the fire. Sun, although devastated himself, pardoned the debts of these merchants.¹⁰⁰ A Zhu Xiaochang 朱孝昌 set up a native bank to lend credit to his fellow Wuyuan timber merchants in Changde to purchase Miao timber.¹⁰¹

From the mid-nineteenth century, timber merchants from Hunan and Hubei grew to take advantage of their geographical closeness to the source of timber and increasingly transported timber downstream the Yangzi River for sale. The two *bangs* of Hunan and Hubei gradually joined the traditional three *bangs* in the market of Nanjing.¹⁰² By the late Qing, each of the *bangs* occupied delineated sections along the bank of the Shangxin Canal and established a guild (*gongsuo* 公所). From west to east, they were the *bangs* of Nanchang, Ganzhou, Hubei, Hunan, Linqing, and Huizhou. The Hubei *bang* comprised of two small *bangs* of Dazhi and Jiangnan.

¹⁰⁰ Wu E and Wang Zhengyuan, *Guangxu Wuyuan xianzhi*, juan 33.

¹⁰¹ *Ibid.* at juan 35.

¹⁰² Nanjing shi difang zhi bianzuan weiyuan hui, *Nanjing wuzi zhi*, 21.

The boundaries between zones occupied by different *bangs* were results of lengthy negotiations and the growth and decline of each *bang*'s power.¹⁰³

These large *bangs* were on the selling side in Nanjing. Mediocre sellers usually traveled with the timber. Once arrived at Nanjing, they stayed in the lodges of local timber brokers and sold the commodities through them. Larger sellers set up permanent firms (*mu hao* 木號) within the zone of his own *bang*. According to the Qing regulation, these stores still had to trade through licensed brokers. Some timber stores were able to obtain certificates of official brokerage, so that they could trade directly with customers.¹⁰⁴ Timber brokers had their own organization, the Timber Trade Association (*mu ye gongsuo* 木業公所).¹⁰⁵

Only a small portion of the timber that arrived at Nanjing was consumed locally. Besides the suburban Shangxin He timber market that mainly served interregional trade, there were two smaller-scale timber markets located at the West Water Gate and the Hanzhong Gate of the Nanjing city. Timber merchants in these two markets made purchases from the Shangxin He market and retailed to local customers within the city wall, mainly carpentry workshops and construction contractors.¹⁰⁶ Apart from the timber consumed locally in Nanjing, the majority was retied into smaller rafts and transported along the Grand Canal to cities in Jiangnan and the Huai River Valley. Timber heading for Jiangnan entered the Grand Canal at Zhenjiang and reached

¹⁰³ Dai Yuan, "Nanjing Shangxin He mucai maoyi zhuangkuang," 237.

¹⁰⁴ Yin Qing, "Jiangxi zhi mucai ye," 8–9; Liu Peiliang and Fan Jingyu, "Nanjing shi mucai shikuang diaocha shang," 17.

¹⁰⁵ Wu Chuanjun, "Nanjing Shangxin He de mushi."

¹⁰⁶ Liu Peiliang and Fan Jingyu, "Nanjing shi mucai shikuang diaocha shang," 21.

Changzhou, Wuxi, Suzhou, and Shanghai. Those heading north would enter the Grand Canal at Yangzhou and be distributed to Taixing, Nantong, and Yancheng.

The town of Shangxin He was devoted to the trade of timber. Workers employed in the timber business, numbering thousands, constituted the main population of the town. They were specialized in twelve professions and belonged to nine *bangs* based on native-place origins. The twelve professions could be roughly put into three categories: transportation of timber on water and overland, timber measurement, and tying rafts. Transportation-related professions were most subdivided, both by tools of transportation and route coverage. For example, there were those specialized in moving the rafts out of and into the river along the riverbanks, steering the rafts in water, towing timber rafts with junk boats, transporting timber with carriages by land, and so forth. Measurement and raft tying were more skilled jobs that required years of apprenticeship, and the practitioners were less mobile than labors employed in transportation. Besides, there were workers who specialized in marking stores' seals to timber logs and making bamboo cables used to tie rafts. ¹⁰⁷

Hankou

Merchants from Huizhou and Jiangxi started to trade timber in Hankou since the late Ming. The local gazetteers of the Wuyuan County in Huizhou recorded many Ming-Qing timber merchants who conducted their trade back and forth between Nanjing and Hankou. This particular trade route was described with a specific term, "Nanjing as head and Hankou as tail"

¹⁰⁷ Wu Chuanjun, "Nanjing Shangxin He de mushi," n. 6; Dai Yuan, "Nanjing Shangxin He mucai maoyi zhuangkuang," 238.

(*wutou chuwei* 吳頭楚尾).¹⁰⁸ According to the local tales, the timber market in Hankou first developed because of the expanding sales of Jiangnan's cotton cloths in the Upper and Middle Yangzi areas. As the marketing of cotton cloths reached the Miao regions in southwestern Hunan, the interregional timber-for-cotton exchange gradually developed, with Hankou as a central entrepôt.¹⁰⁹ Although it was typical to purchase timber in Hankou and transport to Nanjing directly, timber could also be changed hands at several timber markets along the way, in particular Jiujiang and Wuhu, where rafts had to be stopped to declare taxes at the customs anyway. In Wuhu, the riverbank used by timber merchants to stock logs was called the "Hui-Lin band" (徽臨灘), for timber merchants were mostly from Huizhou and Linjiang.¹¹⁰

Only in the early nineteenth century did Hankou become a major center for the trade in timber and bamboo, which was accompanied with two concurrent processes: the silting up of the Parrot Island and the rise to prominence of Hunan merchants, who started to compete with the

¹⁰⁸ For examples of Wuyuan timber merchants who traded along the Hankou-Nanjing route, see the biographies of Bi Xing 畢興 in *Guangxu Wuyuan xianzhi*, juan 30; Wang Renzu 汪任祖 in *Ibid.* at juan 34.

¹⁰⁹ A comprehensive account of the historical development of Hankou's timber market and the customary practices in this business is written by Chen Xing and Chen Lilian, two timber merchants who had traded in Hankou since the early twentieth century for several decades. See Chen Xing and Chen Lilian, "Hanyang Yingwu Zhou zhumu shichang shihua," 117.

¹¹⁰ Liang Qirang 梁啓讓, *Jiaqing Wuhu xianzhi* 嘉慶蕪湖縣志 [Gazetteer of Wuhu Prefecture Compiled in the Jiaqing Era], 1807, juan 6; Yu Yimi 余誼密, *Minguo Wuhu xianzhi* 民國蕪湖縣志 [Gazetteer of Wuhu Prefecture Compiled in the Republican Era], 1919, juan 13.

Jiangxi and Huizhou outsiders to export timber from their home districts. The original timber market was located in Hankou proper, accessible through the Hanshui River from the Yangzi River. The Parrot Island first appeared in 1769 off the shore of Hanyang city in the middle of the Yangzi River, then gradually silted up to form a long sand band, providing a more convenient site for mooring and unloading timber rafts. When the Hunanese timber merchants first came to Hankou in the early nineteenth century, the old timber band in Hankou proper was already fully occupied, so they started to utilize the growing Parrot Island. By the time the island's merit as a harborage had become clear, the Hunanese had established a de facto monopoly over the most advantageous locations on the island: the long beachhead and the straits that separated it from the Hanyang shore. When the Jiangxi merchants relocated to the Parrot Island, they found themselves left with high lands far from the river, where customers were reluctant to visit except for rare varieties of timber.¹¹¹

By the 1840s, the timber market on the Parrot Island had eclipsed the one in Hankou proper, and the Hunan merchants had become the dominant group. In the post-Taiping era, with the postwar demand for reconstruction in the ravaged Middle and Lower Yangzi and a series of state-led military and industrial modernization reforms centered in Wuhan, Parrot Island timber market experienced the greatest period of growth.¹¹² Known collectively as the “*Nan bang*”, the Hunan merchants were divided by places of origin into eight prefecture-level groups and eighteen sub-groups. These groups federated into two big alliances for trades of “timber of

¹¹¹ Chen Xing and Chen Lilian, “Hanyang Yingwu Zhou zhumu shichang shihua,” 116–17.

¹¹² Rowe, *Hankow: Commerce and Society*, 269–72; Chen Xing and Chen Lilian, “Hanyang Yingwu Zhou zhumu shichang shihua,” 123.

eastern Hunan” (prefectures of Changsha, Hengzhou, and Baoqing) and “timber of western Hunan” (Chenzhou, Yuanling, Yongzhou, Jingzhou, and Changzhou) respectively. More than twenty guild halls were constructed on the Island representing alliances at all these different levels. Around 1865, an overarching Lianghu Huiguan 兩湖會館 was also established by the entire community, uniting the eastern and western groups. The locals spoke of the “five prefectures and eighteen *bangs*” united under the multiplex association of Lianghu Huiguan, and called the Parrot Island “little Hunan.”¹¹³

Another major group in the Parrot Island market was the local Hubei merchants. Known as the “Han *bang*” or “Bei *bang*”, these merchants initially served as local agents for the Jiangxi, Huizhou, and Huangzhou merchants, and later entered into the long-distance trade in timber from western Hunan. As the timber market continued to expand in the second half of the nineteenth century, they sought to claim a share of the mooring space on the Island monopolized by the Hunan merchants. They appealed to the local magistrate, accusing the Hunan merchants of monopolizing the trade and barring the locals from entering the timber trade and questioning

¹¹³ The phrase “five prefectures” is not exact. As mentioned above, there were in fact eight prefecture-level groups. When the western Hunan and eastern Hunan groups united to form the Lianghua Huiguan, there was the issue of how to allocate guild fees between the two. Instead of dividing the fees equally among the eight prefectural groups, it was agreed that the three eastern groups should be responsible for sixty percent, while the five western groups for forty percent. So in name, the five western prefectures were represented as only “Changde” and “Chenzhou” in Lianghu Huiguan to match the percentage allocation of financial responsibility, although the responsibility was in fact shared by all five. Therefore the “five prefectures” wording. Chen Xing and Chen Lilian, “Hanyang Yingwu Zhou zhumu shichang shihua,” 121–24.

the legality of the Hunanese's claims on the property of the land on the Parrot Island. After some back and forth in legal proceedings and even outbreaks of physical conflicts, an agreement was reached that the Hunan merchants could continue to occupy the moorage and dominate the importation of timber to Hankou, but the sales of the timber had to be conducted through licensed brokerages, the right to which was now to be limited to Hubei locals. After this settlement, the Hubei merchants began to apply for official brokerage licenses and set up firms on the Island.¹¹⁴

Conclusion

The development of the timber trade across the Yangzi River accompanied the late imperial cycles of urbanization, population growth, migration, and deforestation. The source of timber supply to economic core areas, in particular Jiangnan, steadily pushed its geographic

¹¹⁴ Rowe, *Hankow: Commerce and Society*, 272–73; Chen Xing and Chen Lilian, “Hanyang Yingwu Zhou zhumu shichang shihua,” 124–26. An interesting interlude was that in their appeals, the Hubei merchants included as one of their accusations that the “Hunan merchants seized the co-owned guild hall, the Lianghu Huiguan, as their own”. The Hubei merchants twisted the meaning of the term “Lianghu” as referring to “Hunan and Hubei”, while in fact it referred to “western and eastern Hunan”. That this accusation was groundless became apparent instantly in the legal proceedings, but the Hunan merchants still changed the name of their guild to “Hunan Huiguan” to avoid future troubles. Ibid. at 125. William Rowe mentioned that the Lianghu Huiguan became inclusive towards Hubei merchants after the settlement of this dispute at the pressure of the two prominent Hunanese officials Zeng Guofan and Zuo Zongtang, and thereafter became an all-Hunanese timber trade organization. However, there is no cited source to support this claim. Rowe, *Hankow: Commerce and Society*, 273.

boundaries to the southwest. The medieval economic revolution started to exhaust the forest reserves of Anhui, Zhejiang, and Jiangxi since the beginning of the last millennium. Over the course of the Ming-Qing period, many mountainous regions in Sichuan, Hunan, and Guizhou were transformed from remote forest reserves sparsely inhabited by the indigenous groups to settlements of Han migrants and sources of large quantities of timber for the consumption of the mass markets in the Middle and Lower Yangzi.

Overall timber consumption in Jiangnan and, to a lesser extent, per capita consumption, experienced significant growth during the eighteenth century. Although the impetus of market demand slackened in the first half of the nineteenth century, the incorporation of frontier forests into the mass timber market remained steady. Customs data confirmed the deforestation of Sichuan and Hubei and the increasing reliance on timber from Hunan and Guizhou. In the second half of the eighteenth century, Hunan and Jiangxi had become the two most important sources of timber for Jiangnan, with the relative importance of western Hunan continuing to grow throughout the nineteenth century.

It is clear that the historical developments of marketplaces and merchant groups resulted from and contributed to the general changes in sources of timber supply delineated in previous sections. During the seventeenth and eighteenth centuries, successful timber merchants based in Nanjing, in particular the Huizhou, Liqing and Jiangxi merchant groups, marched upstream the Yangzi River towards the southwest in search of new supplies of timber. With the increasing incorporation of Hunan and Guizhou into the cross-Yangzi timber trade, Hankou rose to be the largest timber market in the Middle Yangzi Valley in the nineteenth century. In the process, merchant groups from Hunan and Hubei first established their foothold in timber trade as local

agents of the three big *bangs* and gradually succeeded in expanding their influence in the Lower Yangzi markets.

Chapter 2. State in the Market: Timber Tribute Procurement and State Personnel's Sideline Business

This chapter examines the Qing system of timber tribute procurement for imperial use. Together with the first chapter, it serves to dissociate official purchases of timber from mass-market timber trade and provide a reliable comparison of their relative scale. The chapter demonstrates that the amount of timber demanded by the central state was minimal compared to the estimated volume of private timber trade in Chapter 1. It further examines the way timber tribute quotas were fulfilled. While timber tribute officials in the earlier Ming dynasty had to personally organize the labor force to locate, cut, and transport timber logs out of the mountains, official procurement during the Qing almost completely relied on market purchases, thanks to the increasing commercialization of timber trade even in remote areas. Insufficient official funding was remedied by the profit made from the sideline private trade conducted by the timber tribute officials, who handled the public and private business following the same practices as a timber merchant.

The Routinized Timber Tribute System of the Qing

The Ming state obtained timber from two sources. First, there were in-kind transit levies on merchants' timber at a number of customs stations (discussed in Chapter 1), which, however, were increasingly converted into silver payments overtime. The second source was large-scale provisional procurements in the southern provinces in times of need. In the early fifteenth century, some of the largest timber used in the construction of the imperial palace in Beijing was cut in the mountains of Sichuan, Hunan, and Guizhou. The Jiajing and Wangli era in the

sixteenth century saw another peak in the court's search for large timber in these provinces.¹ By the late Ming, such purchases were contracted increasingly more often to timber merchants, who would obtain a certain amount of funding from the government and deliver timber of the specified quality and quantity before a certain date.²

During the Qing dynasty, transit taxes on timber were collected in silver in China proper. North of the Great Wall, a ten to fifteen percent transit levy in kind was implemented at several stations, but the total scale was quite small. The central state satisfied its regular need for timber mainly through market purchases. Unlike the irregular purchases during the Ming, a normalized system of annual timber tribute procurement was established during the early Qing; this became the major source of timber for imperial projects, and was supplemented only occasionally by imperial order to purchase specific kinds of timber above the annual quota designated.

The regular timber tribute system of the Qing was referred to in official documents as “annual timber quota” (額木, 額辦, or 年例木植) or “timber tribute for imperial construction projects” (欽工例木), and was usually called “imperial timber” (皇木) in the private sectors. This system, instituted in 1649, lasted until the fall of the dynasty in 1911, and was under the management of the Ministry of Works before 1906, when the new Ministry of Civil Affairs assumed control.³ In 1649, the Ministry of Works began to send agents to Jiangnan province to

¹ Lan Yong, “Ming Qing shiqi de huangmu caiban”; Guizhou sheng bianji zu 贵州省编辑组, *Dongzu shehui lishi diaocha* 侗族社会历史调查 (Beijing: Minzu chubanshe, 2009), 6–7.

² Lan Yong, “Ming Qing shiqi de huangmu caiban.”

³ Aihara Yoshiyuki 相原佳之, “Shinchō ni yoru mokuzai chōtatsu no ichisokumen: shinchō zenki no reiki seido” 清朝による木材調達の一側面——清朝前期の例木制度 [An Aspect of the Procurement

purchase timber with the assistance of local officials. By 1658, it was stipulated that a specific amount of funds should be appropriated from the land and head tax of Jiangnan province to purchase 2000 logs of timber on an annual basis and transport them to the capital. In the same year, the Ministry of Works ordered an inspection of the forest reserves in some mountainous areas in the provinces of Jiangnan, Zhejiang, and Jiangxi, and concluded with disappointment that it was necessary to turn to the Middle Yangzi area and the southwestern provinces for adequate supplies of imperial timber.

When the province of Jiangnan was split into Jiangsu and Anhui in 1667, the responsibility for timber tribute fell upon Jiangsu.⁴ Jiangsu's procurement of timber tribute resumed in 1680 after a period of disruption because of the Revolt of the Three Feudatories (1673-1681). In 1687, Zhejiang, Jiangxi, and Hunan provinces were added to the system, and annual quotas, timber standards, the price of purchase, and the amount of funds to be appropriated from land tax were set for each of these provinces. The quotas remained the same

of Timber during the Qing: The Tribute Timber Institution in Early Qing], *Chūgoku-shi kenkyū ronsō* 中国史研究論叢, no. 3 (2003): 22.

⁴ In 1760, the Administrative Commissioner's Office in Jiangsu was split into the Jiangning (Nanjing) Commissioner and the Suzhou Commissioner. Since then, the two prefectures of Jiangning and Zhenjiang took turns in purchasing Jiangsu's timber tribute, with funds provided by the two Commissioners respectively. *Ibid.* at 30. For the administrative changes at the provincial level in the Jiangnan area during the early Qing, see Fu Linxiang 傅林祥, "Jiangnan, Huguang, Shanxi fensheng guocheng yu Qing chu shengzhi de bianhua" 江南、湖广、陕西分省过程与清初省制的变化, *Zhongguo lishi dili luncong* 中国历史地理论丛 23, no. 2 (2008): 119–26.

until the end of the dynasty, except for an increase in Jiangsu's quota in 1698 (Table 5).⁵

Governors of these four provinces appointed specialized timber tribute agents each year, usually subprefect-level officials, to purchase timber at prices designated officially and transport them along the Yangzi River and the Grand Canal to the Imperial Timber Storage located in Tongzhou, near Beijing. The “cost of timber tribute,” a fixed amount calculated from the fixed quota and official price, was written off from each province's tax revenue as a regular expense, although the actual expense was usually higher. As will be discussed shortly, the provinces developed various means to deal with the deficiencies in formal funding.⁶

Categories and Quota of Timber Tribute

⁵ GX_HDSL, *juan* 875, “mucang”, *juan* 877, “muja”; Aihara Yoshiyuki, “Shinchō ni yoru mokuzai chōtatsu no ichisokumen: shinchō zenki no reiki seido,” 25.

⁶ GX_HDSL, *juan* 875.

Table 5 Quota of Timber Tribute by Province

Quota of Timber Tribute of the Four Provinces								
[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]
Class	Length (ft)	Perimeter (ft) ^a	Approx. Age (years) ^b	Hunan	Jiangxi	Jiangnan	Zhejiang	Total
“mast wood” 桅木 <i>weimu</i>	60	4.5		20	20	20		60
“cunninghamia” 杉木 <i>shamu</i>	30	3.9	>100	380	380	380		1140
“scaffold wood” 架木 <i>jiamu</i>	30	1.5	33-36	1400	1400	2400 ^c	1400	4200
“slim cunninghamia” 桐皮槁 <i>tongpi gao</i>	25	1.3	27-30	200	200	200	200	800

^a: column 3 reports the required perimeter at the thick end of the log.
^b: Approximate age of the cunninghamia tree is estimated based on average age and radial growth pattern of the cunninghamia species in Xing et al. (2011).
^c: In 1698, Jiangsu's jiamu quota was increased from 1400 to 2400.
Source: GX_HDSL, juan 875 "Gongbu, wucui, mucang", 877 "gongbu, wucui, mujia"; Aihara, "Shinchō zenki no reiki seido", pp. 23-25.

Cunninghamia was the only variety of tree demanded in the timber tribute system. It was divided into four categories according to the length and diameter of the logs (Table 5). By matching the designated sizes of each category with *Cunninghamia*'s pattern of radial growth by age, it is possible to estimate the approximate ages of the tree in each category.⁷ The first class

⁷ There is little comprehensive study on *Cunninghamia*'s growth pattern by age, especially for very long period of time beyond a few decades. Here I am using the age-perimeter pattern of *Cunninghamia* in Pei Xing, Qibin Zhang, and Patrick J. Baker, "Age and Radial Growth Pattern of Four Tree Species in a Subtropical Forest of China," *Trees* 26, no. 2 (2012): 283–90. The result is the average of 30 observations (Table 1 and Figure 4 in their paper describe the diameter distribution of these 30 trees, Figure 6 is the result). The oldest tree in this sample was around eighty years in age, attending a

was *weimu* 桅木, literally meaning “a ship’s mast.” A total of 60 *weimu* were demanded annually. This referred to lumber that was long and uniformly thick from top to bottom, usually from trees that had grown for hundreds of years. Although they were appropriated occasionally by official shipyards to be used as masts, most of the “mast woods” were used as flagpoles or pillars in imperial palaces, temples, and mausoleums. The second class, *shamu* 杉木, consisted of trees approximately one to two hundred years of age that were used in construction of the main supporting structures of buildings, and were sometimes cut into planks for shipbuilding.⁸ *Jiamu* 架木 and *tongpi gao* 桐皮槁, usually 20 to 40 year-old trees, were more common varieties that were readily available in timber markets. *Jiamu* (“scaffold wood”) was so named because it was used to set up scaffolds at construction sites or other temporary frameworks for ceremonies or civil examinations. These were usually recycled back to the imperial storage after use.⁹ Slim *cunninghamia* was called *shagao* 杉槁. *Tongpi gao* was a high quality variety of *shagao* that was

perimeter of about 80 cm (2.34 ft), which would be better than “scaffold wood” but not passable for the “*shamu*” category. Thus, in Table 5, age estimations for the lower categories are more accurate. *Shamu* would be at the very least more than a hundred years old, while mast woods would be several hundred year-old trees.

⁸ Aihara Yoshiyuki, “Shinchō ni yoru mokuzai chōtatsu no ichisokumen: shinchō zenki no reiki seido,” 23–24.

⁹ Rules on using and returning “scaffold woods” from the Imperial Timber Storage can be found in GX_HDSL, *juan* 58, “Huang muchang.”

red in color and had a bark similar to that of the Chinese parasol tree; this was usually sawn to make utensils.¹⁰

In principle, the Qing state should have allocated tributes of different commodities according to the special local products of the provinces. However, in the case of timber tribute, Zhejiang and Jiangsu were included because of their abundant provincial treasuries and easy access to major timber markets rather than their proximity to timber producing areas. Zhejiang was included initially because of Hangzhou's status as an important timber market along the Grand Canal during the Ming dynasty, but soon it became obvious that its capacity was limited to mediocre materials cultivated in the mountains of southern Anhui and western Zhejiang. While the other three provinces were required for *weimu* and *shamu*, Zhejiang was exempt from supplying large timber from the beginning. Two centuries later, the Imperial Household Agency, which was in desperate need of timber to repair the destroyed Summer Palace, proposed that Zhejiang, together with the others, should contribute large timber. The governor of Zhejiang was taken by complete surprise and cited the timber tribute system as evidence that "Zhejiang never produced big woods, and there was no precedent of such demands whatsoever."¹¹

¹⁰ Aihara Yoshiyuki, "Shinchō ni yoru mokuzai chōtatsu no ichisokumen: shinchō zenki no reiki seido," 25.

¹¹ See the memorial of Zhejiang Governor Yang Changrui 杨昌濬, "Zou wei Zhejiang xiang bu chuchan damu, fengpai xiuli Yuanming Yuan gongcheng nan bai deng xiang muzhi wucong caiban shi" 奏為浙江向不出产大木奉派修理圆明园工程楠柏等项木植无从采办事 [Zhejiang never produces large timber and has no means to supply the timber required for the repairment of the Summer Palace], 3/10/TZ13 (1874), FHA 04-01-37-0123-009.

The ordinary varieties of *jiamu* and *tongpi gao* were procured by the four provinces directly from the timber markets within their respective provincial boundaries, usually through the mediation of licensed brokers. As mentioned above, Zhejiang relied on the timber market in Hangzhou. Jiangsu had ready access to Nanjing, the largest distribution center for timber shipped from the Upper and Middle Yangzi. Hunan and Jiangxi were both rich in timber resources. Purchases were made close to the sites of production to reduce costs. Therefore, in both provinces, the purchasing responsibility fell upon those prefects who sat on riverine timber market systems where logs freshly cut in the mountains arrived first. In Jiangxi, this was the prefect of Ganzhou, a mountainous southern prefecture the timber from which was transported northwards along the Gan River and into the Yangzi River.¹² In Hunan, logs transported along the Yuan River from the timber-producing areas in southwestern Hunan and southeastern Guizhou gathered in the prefecture of Changde before entering Dongting Lake. A prosperous timber market developed in Changde during the Qing, and the sub-prefect of Changde usually had been delegated the responsibility of purchasing Hunan's timber tribute since the late eighteenth century.¹³

¹² Aihara Yoshiyuki, "Shinchō ni yoru mokuzai chōtatsu no ichisokumen: shinchō zenki no reiki seido," 28–29.

¹³ For Hunan's arrangement on where to obtain the timber tribute, see Ba Habu 巴哈布, *Jiaqing Hunan tongzhi* 嘉慶湖南通志 [Gazetteer of Hunan Province Compiled during the Jiaqing Era], 219 vols., 1820 juan 175, "wuliao."

While ordinary timber could be obtained easily from the private markets, the three provinces that were ordered to supply *weimu* and *shamu* that were hundreds of years old struggled to meet the annual quota. The task was easier for Hunan. Since 1746, assigned officials traveled upstream along the Yuan River to make purchases directly from the Hunan-Guizhou border area, which was occupied primarily by the Miao people.¹⁴ Jiangxi and Jiangsu faced more

“委常德府同知領價赴辰沅靖各地方及黔省採購，並於沅州之臨口、常德之德山河下向客商木簿抽買一根。仍俟上一次委員辦齊收旗，下次委員始豎旗接買。買齊後，準自備護木四千根，俱在常德大河捆紮成簿，運至江南北河口，改紮小弔，前進赴工部木倉交收。”

For examples of the delegation of this responsibility to the Sub-prefect of Changde, see Kang Shaoyong 康紹鏞, “Zoubao dongzhi diding yinliang caiban muzh shi” 奏報動支地丁銀兩採辦木植事 [A memorial to report the purchase of tribute timber with funds from land and head tax revenue], 3/25/DG7 (1827), FHA 04-01-35-0953-040. Similar memorials include FHA 04-01-35-0954-056, 04-01-37-0090-038, 04-01-37-0101-018, 04-01-35-0962-041, 04-01-35-0818-025, and so on.

¹⁴ The Hunan timber tribute officials for the year 1746 (the eleventh year of Qianlong’s reign), Zhou Zhi 周知 and Yin Liangdong 殷良棟, set the precedent of purchasing large woods from the Miao territories. See Guang Hou 廣厚, “Jingkong caiban jiejing limu weiyuan sishe guankou choushou muzhi an” 京控採辦解京例木委員私設關口抽取木植案事 [A memorial regarding a law suit brought to the capital against tribute timber officials who set up illegal tax stops to collect timber], 8/20/JQ19 (1814), FHA 03-2235-020.

“乾隆十一年辦木委員周知、殷良棟因商販桅杉大木甚少，難于才買，議請赴苗疆出產大木之處購辦；其架槁及護木在常德城外德山河下聚木埠頭採買。經前藩司徐杞詳奉批允。”

problems than did Hunan. By the 1720s at the latest, the Ministry of Works began to complain about the constant deficiency in, and inferior quality of the wood supplied by Jiangxi and Jiangsu. Defects in quality were sometimes measured in monetary terms, for which the appointed timber tribute official was required to compensate from his private purse. For example, in the terms of 1724, of the 1400 scaffold woods submitted by Jiangxi, 170 were inferior in quality, for which the responsible official was charged one third of the official price (0.067 tael per log, 11.4 taels in total).¹⁵ For large timber, however, shortages and defects were not allowed to be resolved by financial payment; rather, the deficit had to be made up in future terms. The number of logs delivered was first discounted by any defect in length, thickness, or texture to generate the

See also Yang Xifu 楊錫紱, “Zouqing ding jicha ban mucai chiyan deng bi zhi li shi” 奏請定稽查辦木材遲延等弊之例事 [A memorial requesting to set up precedents on investigating and punishing the delays in the procurement of tribute timber], 6/2/QL12 (1747), National Palace Museum GZD-000840. “竊查湖南每年額辦解京桅木 20 根，杉木 380 根，架木 1400 根，桐皮杉槁木 200 根，以京師各工之需用而派辦，止有此數，價值水腳又準銷，寬裕誠不可稍貽民累也。緣桅杉二木近地難覓，須向辰州府以上沅州靖州及黔省苗民境內採取；架槁二木則需在常德聚木之處購辦，而紮牌架運經歷江湖黃運各河。又須備木幫護以免沿途磕觸傷損。此原難少之項。”

¹⁵ See the memorial of the Secretariat of the Ministry of Works, Kua Dai 夸岱, on 7/15/YZ6 (1728), cited in Aihara Yoshiyuki, “Shinchō ni yoru mokuzai chōtatsu no ichisokumen: shinchō zenki no reiki seido,” n. 45.

“其餘架木一百七十根與部定丈尺不符。行令照例折算、減價題銷。將該減銀兩、着落承辦官名下照數追還項，等因。除將徑寸不符架木一百七十根，折減一十一兩四錢，現在催追還項。”

account-book number of fulfilled quota, usually with decimal points. That number was then compared to the quota to determine the deficit for which a province was required to compensate in the future. In 1741, in addition to the annual quota of timber, Jiangxi delivered the accumulated timber due from the years 1735, 1738, and 1739, which totaled 14.56 mast woods and 206.42 *shamu*.¹⁶

The practice of discounting the number of logs by their quality in effect encouraged Jiangsu and Jiangxi to deliver smaller timber in larger numbers, which, after being discounted by their inferior quality, would still meet the quota. For example, in 1754, all of the twenty mast woods delivered by Jiangsu were smaller than the standard; however, the problem was resolved easily when another ten such mast woods were submitted to make up for the deficit.¹⁷ The increasing prevalence of this practice worried the Ministry of Works. In a memorandum in 1765, the Secretariat complained that although it was permitted to “compensate for quality by

¹⁶ See the memorial of Deputy Jiangxi Governor Peng Jiaping 彭家屏, on 12/20/QL13 (1748), cited in *Ibid.* at 46.

“緣江省採辦乾隆六年應解官木、併歷年應補木植、招商龍觀光承辦。共採辦乾隆六年分杉木三百八十根。又買補雍正十三年分夏有光名下桅木四根八分七釐、杉木四十六根一分九釐；又買補乾隆三年徐祭恩名下桅木九根六分九釐、杉木一百一十八根九分五釐；辦解乾隆四年分木植缺少杉木四十一根二分八釐。俱經催據原辦商人夏有光等照數完繳銀兩、彙同乾隆六年應解杉木三百八十根一併招商龍觀光承辦。

¹⁷ “Jiebu muzhi zhaoyi zhangchi fenjing ruwei canchu” 解部木植照依丈尺分徑如違參處 [Imperial edict: timber tribute delivered to the ministry of works should conform to the standard and violations would be punished], SYD, QL30 (1765).

number”(zhésuan tiānbù 折算添補), increasing reliance on this practice would result inevitably in a serious future shortage of large timber. In response, an imperial edict issued new regulations that the mast woods delivered should conform to the standard, and the practice of “compensating for quality by number” could be applied to no more than a handful of logs. While the standard for mast woods was enforced, the requirement for other varieties was relaxed in recognition of the difficulties faced by the provinces. The quotas for each of the three kinds of timber were divided equally into three sub-classes, the first of which was the same as the original standard, while the second and third classes were downgraded slightly.¹⁸

To meet the challenge of supplying large timber, Jiangxi and Jiangsu contracted its procurement to timber merchants increasingly often, who, like their Hunan counterparts, frequented the Miao territories along the Hunan-Guizhou border.¹⁹ It should be noted that when these delegates from Hunan, Jiangxi, and Jiangsu provinces went to the Miao areas, they still made purchases at the standard local markets, competing with other merchants to acquire firsthand access to large timber. Unlike the practices during the Ming and the initial years of the Qing, they did not organize the labor force directly to go deep into the mountains and undertake the cutting and transporting from the beginning. Ying An 英安, in his capacity as the sub-prefect of Changsha, was appointed to purchase and transport Hunan’s timber tribute in 1777 and 1781.

¹⁸ Ibid; GX_HDSL, *juan* 875, “mucang”.

¹⁹ Activities of Jiangsu and Jiangxi timber merchants who were delegated the task of purchasing large timber for those two provinces were mentioned in a number of legal cases in 1806, which are reprinted in Guizhou sheng bianji zu, *Dongzu shehui lishi diaocha*, 39–41.

He remarked, “cutting the mountains” would cost much more than “purchasing at the rivers.”²⁰

This complete reliance on the markets was made possible by the increasing commercialization of timber trade even in the remote areas.

Insufficient Official Funding

The fixed amount of formal funding was far from sufficient to cover the cost. Not only were transportation costs not accounted for, the official purchase prices were not adjusted to the market level. For the more ordinary scaffold woods and slim *Cunninghamia*, logs were drawn from the timber markets at official prices, which was a *de facto* transit tax levied on commercial

²⁰ Ying An’s activities and communications during these two assignments were recorded in a manuscript, catalogued as “Caiyun huangmu andu” 採運皇木案牘 (Call No. 260664) in the National Science Library in the Chinese Academy of Sciences, Beijing, China. The manuscript is fully examined and extensively quoted in Aihara Yoshiyuki 相原佳之, “Shindai chūki Kishū tōnanbu shimizu kō ryūiki ni okeru mokuzai no ryūtsū kōzō: ‘Caiyun huangmu andu’ no kijutsu wo chūshin ni” 清代中期貴州東南部清水江流域における木材の流通構造——「採運皇木案牘」の記述を中心に [The Distribution Mechanism of Timber in Southeastern Guizhou Qingshui-Jiang Valley during the Mid-Qing Period: Analysis of Caiyun Huangmu Andu], *Shakai keizai shigaku* 社会経済史学 72, no. 5 (2007): 547–66. “惟有杉木最所難得，價亦無定，有十兩以上的，有廿兩及三四五十餘兩的，總只要有買。去坎青山，盤費浩大，多有坎青山算來不如買平水的。” Ying An 英安, “Caiyun huangmu andu” 採運皇木案牘 [Records from the Procurement of Imperial Timber], 1781, National Science Library at the Chinese Academy of Sciences, 4a, cited in Aihara Yoshiyuki, “Shindai chūki Kishū tōnanbu shimizu kō ryūiki ni okeru mokuzai no ryūtsū kōzō,” n. 45.

timber. For large timber, the discrepancy between the official and market prices was even more severe. The official price could be only a fraction of the market value. Market prices for mast woods and *shamu* reported by Chen-Yuan-Jing Circuit Intendant Wang Rou in 1729, which he had obtained from the expense books of the Hunan Timber tribute official, at least doubled the official prices (column 8 in Table 2).²¹ In the 1770s, a good mast wood cost more than fifty *taels* even in Guizhou, while the official price remained only twenty.²²

²¹ Wang Rou 王柔, “zouchen chen shouren wubang zhe” 奏陳臣受人誣謗摺 [Memorial on Your Minister being falsely accused], YZ7 (1729), National Palace Museum GZD-4020009317.

²² Aihara Yoshiyuki, “Shindai chūki Kishū tōnanbu shimizu kō ryūiki ni okeru mokuzai no ryūtsū kōzō,” 555.

Table 6 Official Price of Tribute Timber

Official Price of Tribute Timber (tls per log)							
[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Class	Subclass (from 1765)	Length (CN_ft)	Perimeter (CN_ft)	1687 official price	1759 official price	1798 official price	1729 Market price ^a
"mast wood" 桅木 <i>weimu</i>		60	>4.5	24.0	21.45*	21.45*	40-170, depending on size
"cunninghamia " 杉木 <i>shamu</i>		30	3.9	10.8	8.99*		26
	1st class	30	3.9			8.99*	
	2nd class	30	3.8			8.29*	
	3rd class	30	3.5			7.57*	>10
"scaffold wood" 架木 <i>jiamu</i>		30	1.5	0.2	0.23*		
	1st class	30	1.6			0.24	
	2nd class	29	1.4			0.21	
	3rd class	28	1.3			0.18	
"slim cunninghamia " 桐皮槁 <i>tongpi gao</i>		25	1.3	0.2	0.15*		
	1st class	25	1.4			0.16	
	2nd class	24	1.3			0.14	
	3rd class	23	1.1			0.12	

^a: column 8 shows market prices in Changde, Hunan in 1729 as was reported in the memorial by Chen-Yuan-Jing Circuit Intendent Wang Rou, *Gongzhongdang Yongzheng chao zouzhe*, vol 26, page 16.
 *: average level across provinces. In general, official prices in Hunan and Jiangxi were relatively lower than those in Jiangsu and Zhejiang.
 Source: GX_HDSL, *juan* 875 "Gongbu, wucai, mucang", 877 "gongbu, wucai, mujia"; Aihara, "Shinchō zenki no reiki seido", pp. 23-25.

The officials in charge of timber tribute purchase were tempted to invoke the authority of local magistrates periodically to force the sale of high-quality mast woods at lower prices. However, agents in different provinces and other merchants competed fiercely for the rare large timber. Consequently, in this sellers' market, even with the threat of such extreme measures, the final price might be just a few *taels* lower than the initial offer, still far higher than the official

price.²³ More often than not, the timber tribute agents settled for the high market prices of large timber, fearing that if missed, there might not be enough to fulfill the quota.²⁴ Thus, in the case of large timber, the designated official prices were only the amount of funds appropriated from the state treasury; the actual expenses were much closer to market prices.

The four provinces developed different arrangements to deal with the insufficiency of official funding. Jiangxi drew extra funding from the “nourishing virtue silver” (*yanglian yin*) of the local officials of Jiangxi. With the increased funding, the procurement of timber tribute was then contracted to merchants.²⁵ Jiangsu entrusted the official fund to the leading timber

²³ Ying An, “Caiyun huangmu andu,” 107b, “致居停”, quoted in Aihara Yoshiyuki, “Shindai chūki Kishū tōnanbu shimizu kō ryūiki ni okeru mokuzai no ryūtsū kōzō,” n. 91.

“廿五日所買二桅，係三月十二日到者，議至再三，彼總執定五六十兩，及弟欲差人赴郡，請官協買，彼始畏懼，復邀集眾，主家勸議毛銀六十一兩，為之買就，其餘尚未議妥。”

²⁴ Ying An, “Caiyun huangmu andu,” 91b, “致鈕公”, quoted in Aihara Yoshiyuki, “Shindai chūki Kishū tōnanbu shimizu kō ryūiki ni okeru mokuzai no ryūtsū kōzō,” n. 54.

“其所買桅木價銀，較苗內似覺稍貴。然只好木，則公項可無慮矣。弟處遇有桅段，自當盡買，斷不放鬆。惟靖州買價，切勿實告托口客人等，恐傳說到此，將來難以購辦。”

²⁵ See footnote 16 for the practice of contracting to merchants. Jiangxi’s usage of “the nourishing virtue silver” was mentioned by Ying An, who met with the timber tribute officials of Jiangsu and Jiangxi when transporting the rafts to Beijing in 1777. Ying An, “Caiyun huangmu andu,” 35a, “稟藩憲”, quoted in Aihara Yoshiyuki, “Shindai chūki Kishū tōnanbu shimizu kō ryūiki ni okeru mokuzai no ryūtsū kōzō,” n. 33 and 34.

merchants and brokers in Nanjing's major timber trade associations, who became accountable for assembling the full quota and transporting it to the imperial storage at whatever extra cost. These timber trade associations in turn stipulated the rates at which logs of various qualities should be extracted from their members' rafts and the amount of monetary contribution, usually differentiated by the size of members' businesses. Hunan, on the other hand, allowed the appointed officials to conduct a private timber trade alongside the official assignment, making the task appealing despite the limited official funding.²⁶

Business Conduct of Timber tribute Officials

As mentioned above, in Hunan, the personnel who were involved in the purchase and transportation of the timber tribute, including officials, sub-bureaucrats, and hired crews for transportation, were all allowed to bring their private timber alongside the official rafts.²⁷ The officially stated legitimization was that these privately owned rafts, called “woods for protection” (*humu* 護木), would be floating on the four sides of the timber tribute rafts to protect them from potential damage when they bumped into rocks. Moreover, if the timber tribute was

“前次運木進京，中途得遇江西、南京運木委員，備悉江西辦運例木，因額費不資，係詳定通省州縣內按廉派幫。而南京例木，亦因官辦維艱，係江寧府將額價發交木行，總商承辦，於辦齊後，仍令木商繳出一切運費，交與委員北運...是楚省既無州縣派幫之例，又無殷實木商堪以承辦，全在委員因時調劑節用得宜，方於公務無誤。”

²⁶ Aihara Yoshiyuki, “Shindai chūki Kishū tōnanbu shimizu kō ryūiki ni okeru mokuzai no ryūtsū kōzō,” 553, 557–59.

²⁷ For the private business activities of Hunan's timber tribute officials, see *Ibid.* at 557–59.

found to be short in number or inferior in quality during the final inspection at the Imperial Timber Storage, logs could be drawn from these private possessions to make up the difference so that no deficit would be accumulated in the future. While the timber tribute was tax free at domestic customs, these private possessions should, in principle, be declared and taxed at normal rates.²⁸ This arrangement, similar to the allowance for a certain amount of private merchandise on tribute grain junks (discussed in more detail later), was the state's acquiescence to existing behavior in the recognition that official funding for such endeavors was far from sufficient and that outright prohibition would be neither necessary nor possible.²⁹

In practice, the timber tribute officials handled public and private businesses indiscriminately. The official assignment and the associated opportunity to attend to private enterprise were considered as a combined bundle. Although the potential for an imperial audience and promotion upon prompt delivery of timber tribute was a desirable outcome that advised against lingering too long along the route trying to engage in more private transactions,³⁰

²⁸ See Guang Hou, "Jingkong caiban jiejing limu weiyuan sishe guankou choushou muzhi an," FHA 03-2235-020.

“湖南省采办解京例木每年額买桅木 20，杉木 380，架槁 1600，此项木植經启长江大河风浪冲击难免磕碰损失，因於例木之外委员自出己资买脩木植繫筏帮护，名為“護木”，并脩交收時以補正額之缺，經過各關照例納稅。”

²⁹ Aihara Yoshiyuki, "Shindai chūki Kishū tōnanbu shimizu kō ryūiki ni okeru mokuzai no ryūtsū kōzō," 559.

³⁰ Ying An, "Caiyun huangmu andu," 88b–89a, "致居停", quoted in Aihara Yoshiyuki, "Shindai chūki Kishū tōnanbu shimizu kō ryūiki ni okeru mokuzai no ryūtsū kōzō," n. 74 and 75.

their daily considerations focused on maximizing the total profit from the assignment, with the quota of timber tribute regarded as a fixed cost. Correspondence between Ying An, Hunan's timber tribute official in 1777 and 1781, and his private retainers illustrated this profit-oriented business approach. Ying An and several of his private retainers spread out strategically to make purchases in different localities. Ying An and one assistant stayed in the large timber market in Changde extracting ordinary timber logs from passing commercial rafts. Another assistant stationed himself in Tuokou, a timber market upstream on the Yuan River, drawing ordinary logs as well as trying to purchase some *shamu*. Another assistant went farther to the timber market in Jinping County, located in the Qingshui riverine in Guizhou, purchasing mast woods and *shamu* from the Miao sellers through local brokers. Others might visit Jingzhou, Chenzhou, or other timber-exporting localities depending on information about the availability of large timber.³¹ In addition to assisting in Ying An's business, these assistants also made their own investments. Although Ying An and his retainers shared information and advised each other on business decisions, their capital remained separate, rather than being pooled into a partnership. Hired transportation crews also brought their private timber for sale along the way. Moreover, Ying An himself was operating on a personal loan at an interest rate of 3 percent per month, signifying the essentially private nature of his enterprise overall.³²

Beyond the required quota, purchases were made with an acute awareness of the changing conditions in the downriver markets. In particular, market conditions in Nanjing were

³¹ Aihara Yoshiyuki, "Shindai chūki Kishū tōnanbu shimizu kō ryūiki ni okeru mokuzai no ryūtsū kōzō," 552.

³² *Ibid.* at 558.

being monitored keenly.³³ Ying An and his assistants evaluated prospective deals based on expected prices in Nanjing minus transportation costs.³⁴ Despite the potential handsome profit margin on mast woods, the demand and price for such high-end timber were not as predictable as for the more ordinary varieties. Therefore, one retainer advised that, except for taking advantage of bargains, no exceptional efforts should be made to purchase mast wood beyond the quota.³⁵ Their private businesses centered on the ordinary logs destined for the mass market. By this time,

³³ Ying An, “Caiyun huangmu andu,” 87a and 88a, quoted in Aihara Yoshiyuki, “Shindai chūki Kishū tōnanbu shimizu kō ryūiki ni okeru mokuzai no ryūtsū kōzō,” n. 61.

87a “致居停”：“再時訪南京時價，賣得幾貫，隨時示知，以便遵辦。”

88a “致居停”：“所以前札內懇不時詢訪南京時價，以便通盤籌算。”

³⁴ Ying An, “Caiyun huangmu andu,” 72a, “致居停”，quoted in Aihara Yoshiyuki, “Shindai chūki Kishū tōnanbu shimizu kō ryūiki ni okeru mokuzai no ryūtsū kōzō,” n. 58

“再桅木內...一个則長及七丈，圓圍有五尺，核之龍泉碼價，要賣十六兩零三分，一貫且作十貫而論，則到南京亦值一百六十餘兩，似此算來，原不為貴。”

³⁵ Ying An, “Caiyun huangmu andu,” 86b and 87b, quoted in Aihara Yoshiyuki, “Shindai chūki Kishū tōnanbu shimizu kō ryūiki ni okeru mokuzai no ryūtsū kōzō,” n. 56 and 57.

86b “致居停”：“桅木實係一家貨，總緣價貴，難以出售。即如前次所買兩桅之客，尚有畧彎小者數根，迄無受主，亦未嘗非價高難賣所致也。’

87b “致居停再啟”：“然桅木於足額外，如能以廉價多得，固屬妙事。否則亦不必設法購求，以致買價既昂，出售非易也。”

Hankou had become an emergent timber market on the Yangzi River.³⁶ Ying An's group planned to sell some timber when they reached Hankou to reduce the taxes due to the downriver domestic customs in Jiujiang, Wuhu, and Nanjing.³⁷ They also fostered good relations with Huizhou and Jiangxi merchants who were purchasing timber in Guizhou, in the hope of relying on these experts for market information and connections once they arrived in Nanjing.³⁸ Moreover, Ying An operated a sideline business in which he delivered merchants' timber to Nanjing; in return for a contracted payment, Ying An would take care of all the matters along the way, including declaring and paying taxes at the three customs sites, as well as providing for and paying wages to the hired labor. This arrangement was mutually beneficial, because merchants' rafts, while

³⁶ A short survey of Hankou's timber market in English can be found in Rowe, *Hankow: Commerce and Society*, 269–73.

³⁷ Ying An, "Caiyun huangmu andu," 82b, "致宋公", quoted in Aihara Yoshiyuki, "Shindai chūki Kishū tōnanbu shimizu kō ryūiki ni okeru mokuzai no ryūtsū kōzō," n. 64.

“晚聞漢口亦可售貨，祈將弟處發來段木，擇其大者亦另札一籩，放在大籩浮面，若到漢口得價，盡可出稅，亦何必墜牙儉之奸計也。”

³⁸ Ying An, "Caiyun huangmu andu," 108b, "致居停", quoted in Aihara Yoshiyuki, "Shindai chūki Kishū tōnanbu shimizu kō ryūiki ni okeru mokuzai no ryūtsū kōzō," n. 101.

“茲有徽客胡君，名廷魁，字兆三，係國學生，為人正直清雅，與弟相好數月，頗稱莫逆。即木行利弊，又深承指教，將來南京一切猶可藉為耳目。”

acting as a shield of protection, would enjoy faster passage floating alongside the timber tribute; Ying An, of course, also profited personally from this business.³⁹

The procurement of timber tribute was market-dependent and more like a private business on the part of appointed officials. The state chose not to interfere as long as the profit-seeking activities of these agents did not disturb the normal market order or inhibit the punctual arrival of the timber tribute. However, such disturbances began to come to the attention of provincial officials increasingly often. In 1747, Yang Xifu 楊錫紱, in his capacity as the governor of Hunan, submitted a memorial regarding several forms of malpractice that had arisen from the timber tribute officials' profit-seeking practices, including instances of forced sales at reduced prices for their private timber, as well as excessive delays to make sales in Nanjing:⁴⁰

However, the sub-prefects who have received the funds and assumed the task often used the official procurement as an excuse. In the Miao territories, without asking for the Miaos' consent to sell, they went ahead to mark timber logs as officially claimed, pay the official prices, and start felling. The Miao people dare not arguing because it was an official mission. When the appointed officials got to the Deshan River in Changde Prefect, where merchants' timber rafts all gather, they then selectively marked merchants' timber for official purchase and forced their sales at low prices. In addition to the timber tribute quota, they often smuggled private timber on the side and lingered in

³⁹ Aihara Yoshiyuki, "Shindai chūki Kishū tōnanbu shimizu kō ryūiki ni okeru mokuzai no ryūsū kōzō," 563.

⁴⁰ Yang Xifu, "Zouqing ding jicha ban mucai chiyang deng bi zhi li shi."

the Jiangnan area to conduct private sales. Sometimes they spent more than a year on the road before making it to the capital.

乃領帑承辦之同知通判等官每借採辦名色，在於苗地，不問民之願賣與否，將樹木徑行號記，給價砍伐，苗民以奉公採辦不敢較論；及至常德府德山河下，商木匯聚之所，又將商木選擇號記，輕價勒買，除額辦外常夾帶私木，至江南一帶逗留私賣。每有在途經年尚不到京之事。

In view of these problems, Yang ordered that official purchases in timber markets should be conducted through local licensed brokers at fair prices, and prohibited the appointed officials from purchasing from merchants' rafts arbitrarily. He stated further that purchases in the Miao territories should be made at market prices with the selling party's full consent. Moreover, following the practices of transporting tribute grain and copper, provinces along the way should be responsible to notify Hunan about the arrival of its timber tribute rafts, urge their timely departure, and impeach any unnecessary delays.⁴¹

⁴¹ Ibid.

“臣到任以來察知常德勒買商木之弊，已行令承辦之員會同武陵縣知縣將架槁二木在於常德河下公憑木牙平價採買，不許委員自行號記，在案。其在辰州以上各苗地採辦桅杉二木，現亦行令布政使查議轉飭。如果聚木行市之處辦不足數，須在苗境購覓，務必委員知會地方官，詢問苗民情願，然後照依時值買？，仍令地方官通報查考。其木運至辰關，承辦之員將所辦木數申報辰沅靖道，親臨查點，以杜多帶漁利之弊。亦在案。至其沿途逗留，本省無從查察，應請俟後開行之時，臣先期咨會沿途省撫飭行地方官照糧船銅船之例催趕出境，或有風水阻滯，地方官結

Negotiations between Merchants and Officials

In all of the four provinces charged with timber tribute provision, officials acknowledged that the purchase of timber tribute from commercial rafts at official prices was a burden on timber merchants. Officials and merchant groups engaged in negotiations to decide how to allocate the quota among merchants in different marketplaces or from different native places. Such negotiations centered on the rhetoric of “fairness” and “capability”: the more heavily burdened groups would attempt to enlist other groups to share the task, although those whose names were called might attempt to dodge the task by pleading helplessness, and the officials struggled to strike a balance.

For example, in 1683, timber brokers in Nanjing petitioned the Jiangsu Provincial Administration Commissioner, complaining that the burden of supplying Jiangsu’s annual timber quota had all fallen to Nanjing’s brokers and merchants and requesting that timber merchants in Suzhou and Changzhou should share the responsibility. Timber merchants in Suzhou responded that Suzhou was essentially a consumption market, the timber for which was all shipped from Nanjing, where shipment along the Grand Canal could be rather slow in seasons of tribute grain transportation. The Provincial Commission of Finance decided that timber brokers in Nanjing should continue to undertake the task alone, although the allocation of some of the quota to

報本省督撫移咨湖南備案，若在途無故逗留私賣，地方官據實揭報請參。徇隱者查出一體議處。如此庶擾累民商歷延各弊可以禁杜，而公務亦得速竣矣。”

Zhenjiang, another major timber market at the confluence of the Yangzi River and the Grand Canal, could be permitted in times of extra demand from Beijing.⁴²

A dispute that made its way to Beijing in 1814 is illustrative of the various tensions that were involved in timber tribute officials' purchases in the markets.⁴³ The dispute originated from the different percentages at which tribute logs should be purchased from the rafts owned by local and long-distance timber merchants. Since 1774, the Hunan Provincial Administration Commissioner had stipulated that, in the timber market of Changde, timber tribute officials could procure two per one hundred logs from Hunanese merchants at official prices, and one per one hundred logs from Huizhou and Linjiang timber merchants, the only two major non-local merchant groups until the mid-eighteenth century. It was likely that the distinction between local and non-local groups was initially made because at that time, the local timber merchants only traded along the Yuan River and had not entered the long-distance trade across the Yangzi River.⁴⁴ The more favorable rate for Huizhou and Linjiang merchants was probably offered in

⁴² See Suzhou lishi bowu guan 苏州历史博物馆, *Ming Qing Suzhou gongshang ye beike ji* 明清蘇州工商業碑刻集 [Stele Records from Commerce and Industry in Ming-Qing Suzhou] (Jiangsu: Jiangsu renmin chubanshe, 1981), No. 073.

⁴³ The details of the this case are reported by the Hunan Governor Guang Hou in “Jingkong caiban jiejing limu weiyuan sishe guankou choushou muzhi an.”

⁴⁴ Ying An noticed that while Huizhou and Linjiang merchants tied their rafts in a particular way to reduce tax duties at the Yangzi customs, local groups tied their rafts rather carelessly since the scope of their was limited within Hunan. Aihara Yoshiyuki, “Shindai chūki Kishū tōnanbu shimizu kō ryūiki ni okeru mokuzai no ryūtsū kōzō,” 562.

consideration of the many other tax points they had to pass through later. For the same reason, in 1808, a group of timber merchants from Susong in Anhui was also granted the lower rate in accordance with the non-local precedent set for Huizhou and Linjiang.

By 1812, as increasing numbers of timber merchants from Hunan joined the long-distance trade,⁴⁵ they felt their disadvantage compared to non-local groups more acutely. Inspired by the success of the Susong group, Li Daoyuan 李道遠, an employee of a Yuanling timber merchant, solicited monetary contributions from a group of Hunan timber merchants to launch a united appeal to the provincial governor's office requesting equal rates. Li personally promised lower rates to all the merchants who contributed money for the lawsuit regardless of the result. Initially, the request was granted by the provincial governor and administration commissioner, only to be revoked immediately after the timber tribute official claimed that he was unable to fulfill the quota at the reduced rate. However, reassured by Li's promise, and equipped with the provincial governor's initial consent, four timber merchants who had contributed money attempted to refuse the two per one hundred rate when stopped by the timber tribute official's runners in the market of Changde. However, ultimately, they were intimidated by the runners into paying a bribe in addition to the two percent official purchase.

The enraged merchants then hired Jian Yuanji 剪元吉, who volunteered to *use his own name* to sue the timber tribute official and his runners at the Ministry of Works in Beijing. Jian accused the timber tribute official of "setting up illegal tax stops in the Deshan market of Changzhou, drawing merchants' timber without compensation, reselling the collected timber

⁴⁵ Rowe, *Hankow: Commerce and Society*, 270.

immediately to make profit, carrying private timber with the tribute and evading taxes at customs, and demanding bribes.”

Upon receiving Jian’s petition, the ministry referred the case to Hunan Governor, Guang Hou 廣厚, who made the final judgment. Li Daoyuan and Jian Yuanji, the two persons who initiated the litigations, were charged with contracting litigation (*baogao* 包告), fabricating, and “fooling the authorities in return for money” (詐欺官司取財). As the penalty for this charge was inferred from “theft of the same amount” according to the Code, the result was ninety bamboo sticks for Li, and one hundred bamboo sticks and three-year exile for Jian. The runners who demanded bribes were also punished accordingly. The other timber merchants were judged to have been duped by Li and Jian, and were pardoned. The higher percentage of purchase for Hunan locals remained in effect.

This case illustrates some general issues of interest. First, the stipulation of rates of purchases itself showed the state’s recognition that official purchases were in effect taxation. Timber merchants’ dubious attitudes towards the timber tribute official resulted directly from the inseparable nature of his private gains and the public enterprise. The official tried to purchase as much as possible at the low official purchase price. The timber tribute official Ying An’s account, mentioned previously, shows clearly that the same official mark, “for imperial use,” was carved on all of the timber purchased, including what he purchased privately in the name of “woods for protection.” This lack of distinction meant that his private timber would not necessarily be taxed at the domestic customs as the protocol required.⁴⁶ Guang Hou, in his report

⁴⁶ Aihara Yoshiyuki, “Shindai chūki Kishū tōnanbu shimizu kō ryūiki ni okeru mokuzai no ryūsū kōzō,” 558.

on this case, defended the indispensability of “woods for protection.” The profit made from purchasing beyond the quota and reselling at market prices was necessary to make up for the deficiency in official funding for the expensive large timber and transportation costs. It was impossible for the provincial government to determine and enforce what would be a reasonable amount of “woods for protection,” and what would be counted as excessive pursuit of private profit. In the niche market for large timber in the Miao areas, it was relatively easy for the sellers to track the number of large logs that had been purchased by the official and refuse to forgo the higher prices offered by other merchants when they knew that the quota was already fulfilled.⁴⁷ By contrast, timber merchants passing through Changde would not be able to do the same. Meanwhile, from another perspective, there was a sense of equality because one’s direct competitors were taxed at the same rate at Changde—one could not evade the burden simply by delaying passage until after the quota was filled. The long-term acceptance of different rates for local and non-local merchants was predicated upon the fact that they operated in totally separate markets and could be identified easily by the number and style of their rafts.⁴⁸ Disputes began to emerge when the sense of equality broke down as Hunan merchants not only competed among themselves, but also began to compete with the non-local groups in long-distance trade.

⁴⁷ Ibid. at 90. “且主家山販均知額數將完，亦不肯多賣”

⁴⁸ Ying An, “Caiyun huangmu andu,” 82a, quoted in Aihara Yoshiyuki, “Shindai chūki Kishū tōnanbu shimizu kō ryūiki ni okeru mokuzai no ryūtsū kōzō,” n. 96.

“近觀徽臨兩幫所買之木，均將大頭削光，招招紮緊，以省關稅。而山客之木皆不修飾，亦不論大小彎曲一概買之。如過關時以此試驗，即可杜山客冒充徽臨之弊耳。”

Second, the case also sheds light on the nature of merchants' group litigation against government officials and clerks. The practice of "outsourcing litigation," although outlawed by the state, seemed to be quite common in litigations against government officials and clerks. In both of the instances of litigation in this case, most of the timber merchants pooled their funds, but concealed their names during the legal proceedings. They would benefit universally if the appeal were granted, while being protected from any punishment if it failed. Although those who came forward had some experience in the timber trade, they were not big merchants. Li Daoyuan was an employee of a timber merchant, and Jian Yuanji was a former *yamen* runner who only conducted some timber retailing after being dismissed. There are two possible interpretations of this. First, it could indeed be as the Hunan governor's report described, that Li and Jian were the initiating parties and the merchants simply took the opportunity to speculate. The outsourcing agreement was consensual between two unrelated, voluntary parties. Another possibility was that the merchants actually initiated the matter. They could have developed the strategy, pooled the money, and appointed an employee or hired a delegate to carry out the litigation in order to shield themselves from non-monetary risks, with the knowledge that punishment for "outsourcing litigation" would fall on the party hired. At present, I cannot determine which scenario was more likely in this case. In fact, for outsourced litigations in general, either could take place. Either way, it provided merchants with the option to engage in risky legal adventures, especially against powerful state personnel.

Sideline Timber Trade in the Grain Tribute System

To put into context the private businesses conducted by timber tribute officials alongside their formal assignments, let us consider a similar phenomenon in the grain tribute system, which

occupied a far more important position in the Qing fiscal system than timber tribute. State personnel and employed sailors routinely engaged in sideline businesses of conveyance and private trade along the routes of tribute grain transportation. As one of the many kinds of commodities involved in such sideline enterprises, timber, because of its bulkiness, sometimes managed to upset the high court for its obstruction of canal traffic and the timely arrival of tribute grains.

The grain tribute (*caoyun* 漕運) system, namely the state transportation of taxed grains to imperial capitals and sometimes to military forces stationed at borders, had a history as long as the imperial period. During the Qing, approximately 150-200 thousand tons of tribute grain was collected annually from eight provinces: Jiangsu, Zhejiang, Anhui, Jiangxi, Hubei, Hunan, Shandong, and Henan. The grain was transported along waterways, in particular the Grand Canal and the Yangtze River, to the capital.⁴⁹

Like the Ming, the Qing state relied on a system of transportation that was entirely under government control and operated by government personnel, rather than depending on private merchants. The total number of boatmen employed in the transport of tribute grain varied from 70 to 120 thousand, most of whom were drawn from a class of hereditary imperial tenants

⁴⁹ For general survey of the late imperial Grain Tribute system, see Harold C. Hinton, “The Grain Tribute System of the Ch’ing Dynasty,” *The Far Eastern Quarterly* 11, no. 3 (1952): 339–54; Fan Shuzhi 樊树志, “Ming Qing caoyun shulue” 明清漕运述略 [A Brief Discussion of the Ming-Qing Grain Tribute System], *Xueshu yuekan* 学术月刊, no. 10 (1962): 23–29; Li Wenzhi 李文治 and Jiang Taixin 江太新, *Qing dai caoyun* 清代漕运 [The Qing Grain Tribute System], 2nd edition (Beijing: Shehui kexue wenxian chubanshe, 2008).

holding land in a form of military tenure (*tuntian* 屯田). The officers and men of the fleets of grain junks received a meager salary and grain allowance for their service, which was barely enough to cover their traveling expenses, let alone supporting their families.⁵⁰

To make up for the modest official stipend, the boatmen were permitted to carry a certain amount of private merchandize when making trips in government service, a policy that could be traced back to the early Song dynasty when Emperor Taizong acquiesced to the boatmen's private trading as long as such activities did not obstruct the grain transportation. The Ming dynasty enlarged the allowed volume for such private commodities several times, from 10 *dan* per junk in 1470 all the way to 60 *dan* per junk in 1579. The amount within the quota was exempt from examination and taxation at the customs stations along the way. The Qing state further increased the tax-exempt quota, finally to 150 *dan* per junk for northbound trips and 84 *dan* for southbound return trips in 1800.⁵¹ Officers and boatmen on the tribute fleets were able to make multiple transactions at the markets along the route and became an important force in facilitating the economic exchange between the north and the south. Moreover, because of tribute junks' priority in passing through the dikes and locks along the Grand Canal and the tax-exempt status of the allowed quota, a kind of conveyance business developed as some brokers

⁵⁰ Hinton, "The Grain Tribute System of the Ch'ing Dynasty," 348–52.

⁵¹ Chen Feng 陈峰, "Jianlun Song Ming Qing caoyun zhong sihuo fanyun ji maoyi" 简论宋明清漕运中私货贩运及贸易 [A Brief Discussion on Private Trade in the Tribute Grain System of Song, Ming, and Qing Dynasties], *Zhongguo jingji shi yanjiu* 中国经济史研究, no. 1 (1996): 121–22.

became specialized in arranging for merchants to load their commodities on the tribute grain junks.⁵²

The gradual relaxation of the limit on private merchandize reflected the state's recognition of the insufficient official compensation and was a compromised policy to relieve the boatmen's hardship and prevent them from stealing from the grain tribute. In essence, the state chose to forgo some transit taxation and allow the boatmen some access to its transportation facility for private gains, rather than raising formal taxes to increase the boatmen's wages. However, these sideline business sometimes caused concerns as they messed with the elaborate timetable for the junks to progress up the Grand Canal, either because the boatmen lingered at big markets to make sales or because the junks could not make it through the treacherous northern section of the watercourse as they were overloaded with private merchandize.

Timber was especially problematic, because unlike other commodities that were loaded on the junks, timber logs were tied into rafts and attached to the sides of the junks. While the attached rafts were not a problem on the broad Yangzi River, even a good protection of the grain junks against stormy waves, they could easily block the traffic along the much narrower Grand Canal. In 1737, Director General of Grain Transport (*caoyun zongdu* 漕運總督) Buxi 補熙 have laid out the various considerations given to the problem that too much timber was attached to the Jiangxi grain tribute fleets:⁵³

⁵² Ibid. at 123–25.

⁵³ See the palace memorial of Buxi 補熙, “Zoubao zhuoliang banli caochuan xiedai muzhi shi” 奏報酌量辦理漕船攜帶木植事 [taking caution in dealing with the matter that tribute grain junks carried timber], 03/16/ QL2 (1737), FHA 04-01-35-0137-005.

We have found that the Jiangxi tribute junks carried a large amount of timber in addition to their quota of planks. Upon inquiry, we know that this has been the case for a long time. The tribute grain junks of Jiangxi are larger and longer than those of other provinces and carried much more rice, so they incurred double expenses in hiring trackers to drag the junks through dikes and locks. All these expenses along this long journey could only be covered thanks to the extra profit made from the timber. This is why such practice has been carried on for so long.

If all of these junks are allowed to pass through, (it would be problematic because) the Grand Canal is different from the Yangzi River. The Yangzi water is very turbulent; the tribute junks can be protected by the timber on the sides. Along the Grand Canal, by contrast, grain junks have to pass through dikes and locks. If overloaded with timber, it is inevitable that their passage would be much delayed.

However, if we demand all the timber should be unloaded (upon entering the Grand Canal, it would also be inappropriate because) this timber has already been taxed at the Wuhu Customs Station; if the poor boatmen have to dispose of their timber in mid-way, they would lose all their capital investment. That would certainly cause dispute and entanglement along the way, or even lead to malpractices like stealing and selling from tribute grain. The progress of grain fleets will be delayed. These possible situations have to be contemplated and prepared for in advance. Moreover, Shangdong and northern Zhili have always relied on the timber carried by the tribute grain junks from Jiangxi,

Huguang, and Anqing to make the appliances used by officials and commons. Now if all the supply were blocked, it would be rather inconvenient.

惟是臣等查驗江西幫船於應帶板木之外裝載木植甚多，詰詢從前皆系如此。蓋緣該省糧船較之他省長大，兌米獨多，一切提溜打閘顧覓繹夫需費倍重，全藉賣木之餘資以供長途之費用，歷來相沿職是故也。若照蓋準放行，則運河非長江可比。長江水勢洶湧，多帶木植轉足以夾護船身。運河過閘過壩，多帶木植不免經行阻滯，殊多遲緩。然竟行卸下不准攜帶，則此項木植業於蕪湖關抽分稅銀，一旦棄置中途在窮丁等資本全失，必致沿途攪纏不敷或生盜賣糧米等弊，貽誤漕行，又不得不預為籌及者也。且山東、北直地方向賴江廣及安慶糧船所帶杉槁等項木植供官民器具之用，今全行堵截實有不便。

Apparently, Buxi was concerned with the delayed arrival of grain tribute caused by the difficulty of dragging timber along the Grand Canal, which he was ultimately held accountable in his capacity as the Director General of Grain Transport. Nevertheless, he still highlighted the necessity of allowing the Jiangxi boatmen to take on extra timber along the tribute fleets to compensate for their high transportation cost. He also worried about the impracticality of forcibly ordering the boatmen to dispose of their private timber before the fleets turned into the Grand Canal, as they had invested interest and were already assessed for transit taxes at Wuhu. The possible fierce resistance to such an unreasonable policy might delay the schedule of tribute grain even more. Moreover, timber carried by grain tribute junks was an important source of supply for the northern provinces.

Based on these considerations, Buxi argued against completely prohibiting tribute junks from taking along timber. He proposed a lenient policy allowing a small amount of timber loaded onto the tribute junks, with the rest detached from the junks and tied into small rafts upon

entering the Grand Canal. The rafts were allowed to follow the tribute fleets, and the boatmen might freely make sales along the route. After this particular instance reported by Buxi concerning the extra timber attached to the Jiangxi junks, similar complaints that overloaded private merchandize obstructed the timely progress of grain tribute drew the emperors' attention over the years. Apart from restating the allowed quota and demanding any amount beyond the quota be assessed for transit taxes as normal merchant goods, the state largely condoned such practices.⁵⁴ Ultimately, it was the state's reluctance to raise the formal compensation to the boatmen, which would increase the already high cost of maintaining the grain tribute system, that led to the tolerant attitude towards the sideline private businesses conducted by the boatmen.

Conclusion

The portfolio of the kinds of timber demanded by the imperial state leaned more heavily on large timber as compared to the varieties available in the mass market. The Qing central state obtained timber through the "timber tribute system", which entailed four provinces purchasing and delivering annual quotas of timber to Beijing. The chapter shows that the timber tribute system functioned within the contours of an integrated interregional timber market. The annual timber tribute quota included several thousand logs of ordinary-sized timber and a few dozens of super-large timber. For the ordinary varieties, the required amount was minimal compared to the

⁵⁴ For some examples, see FHA palace memorials 04-01-35-0162-007 (1772), 04-01-35-0220-028 (1813), 04-01-35-0265-011 (1834), 04-01-35-0379-052 (1843); JQSL, juan 231, month 6, day *jiachen*, JQ15 (1810); DGSL, juan 146, month 11, day *renyin*, DG8 (1828); DGSL, juan 252, month 5, day *yihai*, DG14 (1834); DGSL, juan 255, month 8, day *jiyou*, DG14 (1834).

volume of private timber trade and could be easily fulfilled by purchases from regular markets. The dozens of large timber proved more challenging, which brought the timber tribute officials to the newly opened timber market in the Miao regions in Hunan and Guizhou. The examination of the Qing timber tribute system provides a glimpse into the general trend of the South China timber trade, which underwent significant geographic incorporation during the Qing and enabled the absolute reliance on timber markets by the Qing timber tribute officials, which was not as feasible during the Ming.

Insufficient official funding was remedied by the profit made from the sideline private trade conducted by the timber tribute officials. The close examination of the business conduct of timber tribute officials shows that they largely followed the business norms in the private sectors when pursuing profits. Their activities were both enabled and constrained by market principles. We have also seen similar sideline businesses in the grain tribute system. In both cases, the state tolerated, even formally approved, government personnel's attending to private gains while on official trips. This was in recognition of the inadequacies of the formal channels to fulfill the funding needs of these tasks.

If we use the modern standard of fiscal rationality, it is tempting to label these arrangements as lacking of clear distinctions between public and private enterprises. One would wonder, why not provide enough official funding and forbid these private activities all together? Although there is no explicit treatise on this alternative from Qing sources, it is not difficult to appreciate some of the important considerations. First, the state would have to expand its tax revenue, either by elevating the overall tax rate or by levying the extra cost on a particular sector of the society based on location, occupation, or status. Second, it would require a much closer match between the amount of official funding and the actual cost. Fixed "official prices" simply

would not do. Any attempt on the state's part to estimate in advance the would-be cost of these missions would be difficult given the multiple layers of agencies and information asymmetry. Should a reimbursement system be adopted, there would be the further problem of field officials reporting more expenses than actually incurred. Moreover, the volatility of market prices would introduce annual variations to the national account, which was built on the principles of budgeting and predictability. All this is not to say that the Qing way of doing things was the only way or the best way, but it is important to understand the rationale behind this system before dismissing it as irrational fiscal policy.

Chapter 3. The Timberland Economy: Co-ownership, Securitization, and Risk-Sharing

Timber produced in southwest China, especially Guizhou and Hunan provinces, has become increasingly important in meeting the burgeoning consumption market in the Lower Yangzi Delta since the seventeenth century. The process accelerated after the strengthening of civil administration in areas dominated by the Miao ethnic group in the early eighteenth century. The development of the timber industry in western Hunan and southeastern Guizhou was facilitated by improved water transportation, which connected this region directly to the Yangzi River system and promoted the economic exchange between the natural resources of the southwest and the handicraft products from the east. Meanwhile, accompanying waves of Han Chinese in-migration, projects for converting forests into agricultural land supplied timber to the market (instead of the outright slash-and-burn method) whenever such endeavors were profitable after excluding the cost of labor and transportation. While the expansion of the timber trade started to take a toll on the natural forests, in some areas that were adjacent to timber markets or easily accessible by river transportation, potential profits from timber trade motivated market-oriented tree plantations after the natural vegetation was depleted. In this dissertation, I use the term “plantation” in its generic meaning that plants were cultivated by human labor, especially for commercial purposes. As the following sections will show, the way in which such a plantation was organized in Chinese forestry could be very different from the model of a large estate owner managing many resident labors that were more common in Western experiences. This chapter focuses on the Qingshui River Valley in southeastern Guizhou, where tree planting

and the tenancy of mountain land started to become common practice from the second half of the eighteenth century.

The closeness to a major timber market downriver and the unsuitability of its rugged mountains for agriculture rendered the option of tree planting appealing in this area. Yet potential tree cultivators could be easily put off by a number of risks involved in this endeavor. Setting aside potential risks of fire, theft, and harvest failures, the mere time of tree growth, normally 30 years before maturing enough to be valuable as timber, was a severe challenge to the household-based economy.¹ Timber cultivation could not have become the economic mainstay of this area if the liquidity problem associated with the long-term nature of tree growth was not solved. The findings in this chapter suggest that the solution lay in the institutional arrangements imbedded in the ownership and tenancy structures of mountain lands, which made long-term tree cultivation plausible. It finds that the development of active transactions of ones' entitlements to mountain landholdings and tenancy rights, which were increasingly divided into shareholdings that were independently tradable before the standing crop of trees was harvested, enabled investors to deal with the inherent risk in the timber crop's long duration of growth and

¹ Rotation lengths for *cunninghamia* seem to longer in earlier periods. The 1735 *Gazetteer of Kaihua County* recorded a duration of 30-40 years. Sun Jin 孫錦, *Yongzheng Kaihua xianzhi* 雍正開化縣志 [Gazetteer of Kaihua County Compiled in the Yongzheng Era], 1735, vol. 3. In the early twentieth century, with the development of silviculture technology, the duration could be reduced to a minimum of 18 years. Rotations are now usually between 15 and 20 years. In the most intensively managed plantations of *cunninghamia* today, the rotations can be as short as 8 to 12 years. Menzies, "Forestry," 578; *Forest and Land Management*, 97; Guizhou sheng bianji zu, *Dongzu shehui lishi diaocha*, 85.

to transform expected future proceeds into cash flows to match a household's consumption pattern.

The Miao Frontier and Its Timber Industry

The Yuan River basin in southeastern Guizhou and western Hunan constituted a sub-regional system in the Middle Yangzi macro-region according to G. William Skinner et al.'s construction of physiographic and socioeconomic macroregions in nineteenth-century China. This area mainly consisted of the hills at an average altitude of over 2,000 meters, which formed a geographic, economic, and ethnic region that featured the dominance of non-Han population and rich forest resources.² The non-Han groups in this area, officially categorized today as Miaozu 苗族, Dongzu 侗族, Yaozu 瑶族, and other minority nationalities, were often collectively labeled as “Miao” 苗 or classified with varying adjectives of specificity (“Flower Miao,” “Cave Miao,” and so forth) in both official and popular usages during the Qing.³ In this chapter, I use the term “Miao” in accordance with its general Qing usage instead of its contemporary meaning.

² G. William Skinner, “Regional Urbanization in Nineteenth-Century China,” in *The City in Late Imperial China*, ed. G. William Skinner (Stanford: Stanford University Press, 1977), 211, 218; G. William Skinner, Mark Henderson, and Zumou Yue, “Physiographic Macroregions of China,” *Harvard Dataverse*, VI, 2013, <http://hdl.handle.net/1902.1/21763>.

³ Laura Hostetler, *Qing Colonial Enterprise: Ethnography and Cartography in Early Modern China* (Chicago: University of Chicago Press, 2001), xxiv–xxv.

Since the mid-Ming, the state began the centuries-long efforts to replace indirect rule through native chieftains with more direct governance by state-appointed civilian officials, a process known as *gaitu guiliu* 改土歸流, which featured the annexation of large chieftain domains that often covered areas equal to the size of several prefectures, and their division into small native offices under the scrutiny of regularly appointed prefecture or county officials. In most cases, there were more native offices in an area following *gaitu guiliu* than prior to the reform. Throughout the Qing dynasty, small native chieftain offices that oversaw dozens of non-Han villages continued to occupy a large part of the administrative landscape in Guizhou.⁴

In the 1730s, the Yongzheng Emperor's ambitious attempt at administrative incorporation ignited a fierce Miao revolt and led to large-scale military operations in the Hunan-Guizhou border region.⁵ After its pacification, the Qing state set up six sub-prefectures (*ting*) in the newly incorporated Miao territories (Qingjiang 清江, Taigong 台拱, Guzhou 古州, Danjiang

⁴ For the centuries-long endeavors at *gaitu guiliu* reforms by the Ming-Qing state, see John E. Herman, "The Cant of Conquest: Tusi Offices and China's Political Incorporation of the Southwest Frontier," in *Empire at the Margins: Culture, Ethnicity, and Frontier in Early Modern China*, ed. Pamela Kyle Crossley, Helen F Siu, and Donald S Sutton (University of California Press, 2006), 135–70.

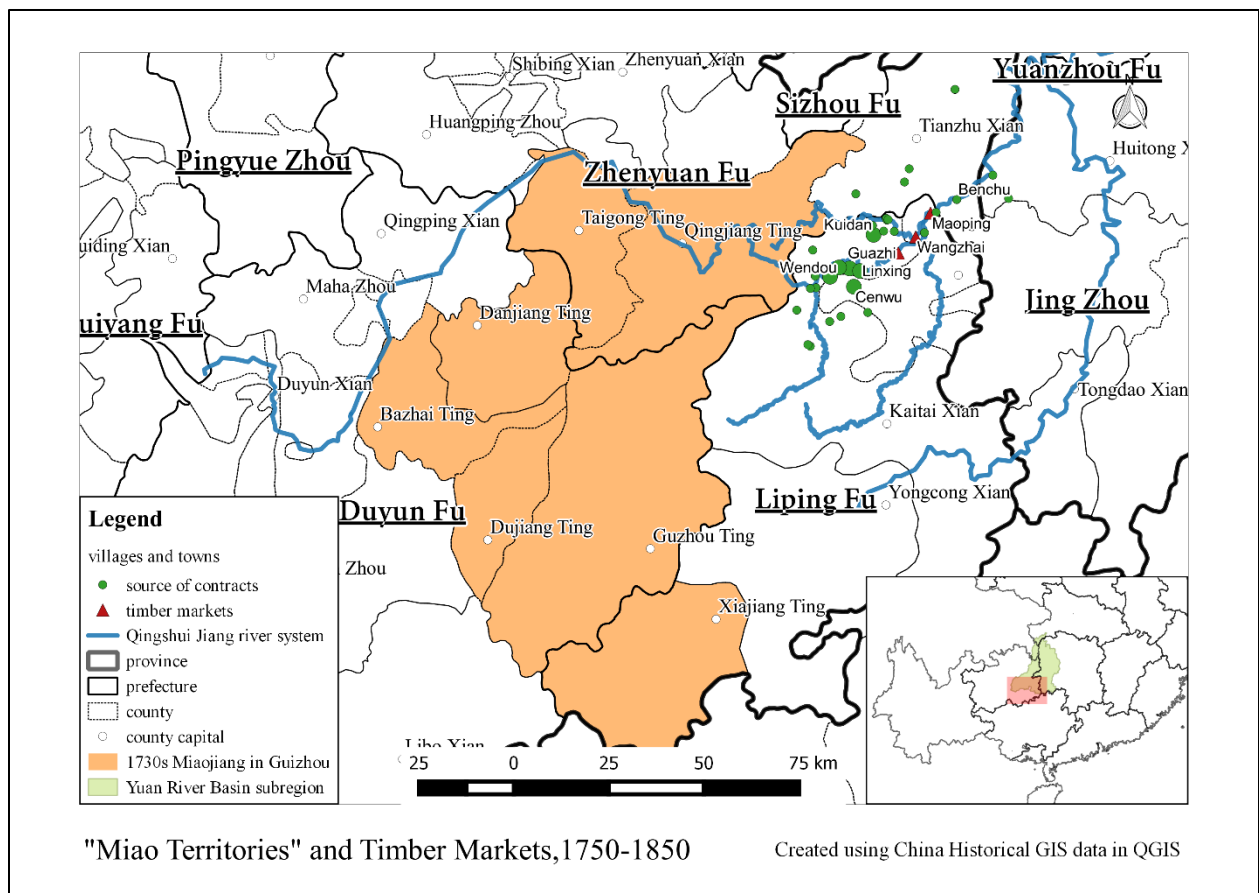
⁵ From the collection of memorials on the matter, military activities in the Miao frontier lasted from the fifth year of the Yongzheng Emperor's reign (1727) until the first year of the Qianlong Emperor's reign (1736), with the large-scale campaign ended in the ninth year of the Yongzheng's Emperor's reign (1731). See Zhongguo diyi lishi dang'an guan 中国第一历史档案馆, ed., *Qingdai qianqi Miao min qiye dang'an shiliao huibian* 清代前期苗民起义档案史料汇编 [Collected Archival Materials on Miao Revolts in Early Qing] (Beijing: Guangming ribao chubanshe, 1987), 1–230.

丹江, Dujiang 都江, and Bazhai 八寨, see Map 2).⁶ These newly established sub-prefectures were referred to as “*Miaojiang*” (苗疆, Miao frontier or Miao territory) in its strictest sense.⁷ When used in a more general sense, the term included more extended areas of Hunan and Guizhou that were principally inhabited by non-Han groups. *Miaojiang* did not indicate a physical border or a sovereign zone of the Miao people; rather, the term denoted a sense of administrative peculiarity that required special handling in juxtaposition to the regularly governed interior (*neidi* 內地).⁸

⁶ Later, another Xiajiang Sub-prefecture was separated from Guizhou. Aibida 愛必達, *Qiannan shilue* 黔南識略 [Brief Knowledge of Southern Guizhou], 1847, *juan* 9, 13, 22.

⁷ The use of the term “*Miaojiang*” became current in official writings during the Miao revolt, popularized by its inclusion in the official title of the new Miao Councilors in 1735. That is, its usage became common not before, but after the frontier was “opened up” to direct civil administration. In official memorials of the Yongzheng and early Qianlong reign, “*Miaojiang*” was used interchangeably with “*Xinjiang*” (newly incorporated territories), although the latter was later closely associated with the new territories in eastern Turkestan and finally became the name of the province established there. For examples of using “*Xinjiang*” to denote Miao territories, see the Memorial of Fang Xian 方顯, “Zou chen Miaojiang difang zhi shiyi” 奏陳苗疆地方之事宜 [A Memorial on Local Affairs in the Miao Territories], 6/15/Yongzheng10, GZD-402002884, National Palace Museum; Huang Tinggui 黃廷桂, *Yongzheng Sichuan tongzhi* 雍正四川通志 [Gazetteer of Sichuan Province Compiled in the Yongzheng Era], 47 vols., 1733, vol. 16, “muzheng.”

⁸ For a study on the special legal provisions and exemptions exacted by the Qing state in the Miao territories, see Donald S. Sutton, “Violence and Ethnicity on a Qing Colonial Frontier: Customary and



Map 2 “Miao Territories” and Timber Markets, 1750-1850⁹

Statutory Law in the Eighteenth-Century Miao Pale,” *Modern Asian Studies* 37, no. 01 (February 2003), http://www.journals.cambridge.org/abstract_S0026749X03001021.

⁹ Administrative units and river systems are constructed with 1820 datasets of China Historical GIS, Version 4. Cambridge: Harvard Yenching Institute, January 2007; spatial information for the Guizhou-Hunan macroregion is obtained from the data of PhysiographicMacroregions (c) G. William Skinner, Mark Henderson, and Zumou Yue. Davis: University of California, Regional Systems Analysis Project, Jan. 2007.

A significant event to the development of the timber industry in this region was the mobilization of local labors to dredge the Qingshui River and its tributaries during the military campaign in the 1730s.¹⁰ As an endeavor meant to facilitate the movement of military forces and supplies, the dredging opened the export route for the forest resources of the Qingshui River Valley to the Yuan River and further to the Yangzi River through the Dongting Lake. The trade of timber took off once social stability was restored after the war. Timber produced from the Hunan-Guizhou area, known as “timber from the Miao territories” (*Miao mu* 苗木) or “timber from western Hunan” (*xi-Hu mu* 西湖木), became increasingly important in satisfying the state’s and the mass market’s demand for construction materials.

The Chen Guan Customs Station, sitting on the Yuan River in the Chenzhou Prefecture of Hunan, taxed the “Miao Timber” closest to its source. Based on taxation data collected from the First Historical Archives, I estimate the value of timber passing through Chen Guan to be 327,229 taels in 1730, 424,556 taels in 1751, and 803,726 taels in 1801, a 2.5-fold growth in 70 years. The prices used in the customs stations to evaluate the timber were rarely updated and, according to Chen-Yuan-Jing Circuit Intendant Wang Rou 王柔, seemed to be much lower than

¹⁰ Liang Cong 梁聰, *Qingdai Qingshui Jiang xiayou cunzhai shehui de qiyue guifan yu zhixu: yi Wendou Miao zhai qiyue wenshu wei zhongxin de yanjiu* 清代清水江下游村寨社会的契约规范与秩序——以文斗苗寨契约文书为中心的研究 [Contract Norms and Order in the Lower Qingshui Villages during the Qing Dynasty: A Study Centered on Contractual Documents from the Wendou Miao Village] (Beijing: Renmin chubanshe, 2008), 212–17; Zhang Yingqiang, *Mucaizhi liudong*, 28–35.

market prices.¹¹ Therefore, the above estimations would likely be the lower boundary of the market value of timber taxed at Chen Guan.

The prosperous timber trade quickly exhausted the natural forests. It is estimated that by the Daoguang Emperor's reign (1821–1850), virgin forests had virtually disappeared along the Qingshui River Valley, except in a few inaccessible enclosed districts.¹² The area continued to be an important source of timber supply until now thanks to the widely practiced tree planting, which became the mainstay of the local economy by the second half of the eighteenth century.¹³

The local practices of tree planting and the usages of Chinese-style contracts to transact property rights over timberlands can be seen in the large amount of documents that have been preserved in the Lower Qingshui Valley communities. Known as the “Qingshui River documents” (*Qingshui Jiang wenshu* 清水江文书), they have become increasingly accessible in

¹¹ Memorial by Chen-Yuan-Jing Circuit Intendant Wang Rou 王柔, “zouchen chen shouren wubang zhe,” 奏陳臣受人誣謗摺, 1729, National Palace Museum GZD-4020009317.

¹² Christian Daniels, “Shimizu ryūiki no Myaozoku ga shokurin o kaishi suru made—— ringyō keiei e to karitate ta sho yōin” 清水流域の苗族が植林を開始するまで—林業経営へと駆り立てた諸要因 [The Beginnings of Tree Planting by the Miao People in the Qingshui River Area: The Factors That Motivated the Forestry Management Industry], in *Kishū Myaozoku ringyō keiyaku monjo kaihen (1736-1950 nen)* 貴州苗族林業契約文書匯編 (1736-1950 年), ed. Christian Daniels, 楊有廣, and 武内房司, vol. 3 (Tokyo: The Institute for the Study of the Languages and Cultures of Asia and Africa, Tokyo University of Foreign Languages, 2003), 11.

¹³ Guizhou sheng bianji zu, *Dongzu shehui lishi diaocha*, 15.

the recent decade thanks to a number of extensive projects of compilation and publication.¹⁴

These documents, dating from the mid-eighteenth to the early twentieth century, feature mostly contracts of timberland transactions, tenancy contracts, and agreements on the divisions of shares and profits. Other materials include household division agreements, copies of court cases, village compacts, records of the resolution of disputes, and so forth.¹⁵

The Lower Qingshui Communities

Map 2 shows the villages where the published documents have been discovered. They straddled the Lower Qingshui River and its tributaries at the north of the Qing Liping 黎平 Prefecture and the west of the Tianzhu 天柱 County, Zhenyuan 镇远 Prefecture. As shown in

¹⁴ For an introduction to the Qingshui River documents, see Zhang Yingqiang 张应强, “Qingshui Jiang wenshu de shouji, zhengli, yu yanjiu” 清水江文书的收集、整理与研究 [The Collection, Collation, and Study of Qingshui River Documents], in *Qingshui Jiang wenshu di yi ji* 清水江文书 第一辑, ed. Zhang Yingqiang 张应强 and Wang Zongxun 王宗勋, vol. 1, 13 vols. (Guilin: Guangxi shifan daxue chuban she, 2007), 1–7. For a collection of representative documents of each genre, see Jinping xian difangzhi bianzuan weiyuan hui 锦屏县地方志编纂委员会, *Jinping Xian zhi, 1991-2009* 锦屏县志 1991-2009 [Gazetteer of Jinping County], vol. 2, 2 vols. (Fangzhi chuban she, 2011), vol. 2, 1261–95, 1509–45.

¹⁵ Chen Jinquan and Du Wanhua, *Guizhou Wendou Zhai Miaozu qiyue falv wenshu huibian*; Daniels, Yang Yougeng, and Takeuchi Fusaji, *Kishū Myaозoku ringyō keiyaku monjo kaihen*; Zhang Yingqiang and Wang Zongxun, *Qingshui Jiang wenshu I*; Zhang Yingqiang and Wang Zongxun, *Qingshui Jiang wenshu II*; Zhang Yingqiang, *Qingshui Jiang wenshu III*; Zhang Xinmin, *Tianzhu wenshu I*.

Map 2, most of these villages were located in the Miao-dominated areas within Liping and Tianzhu. In the eighteenth century, the Miao population of these villages were assimilated to the Qing rule to varying degrees. Here, it is useful to introduce a very commonly used conjunction in the Qing official rhetoric, that of the “acculturated/familiar” (熟 *shu*) and the “crude/unfamiliar” (生 *sheng*) Miao.¹⁶ The former referred to those Miao people who were governed by some form of state-recognized authorities, either regularly appointed civil officials or native chieftain offices, who were familiar with the Chinese language and probably had taken up some Chinese cultural practices. The “crude/unfamiliar” Miao referred to those people who were not under any form of state control and were defiant of the Qing rulership, and some aspects of their economic and cultural practices were deemed raw and uncivilized by the Chinese. According to the vision of the Qing statecraft, the two were not static opposites but dynamic categories, with the

¹⁶ Here I am deviating from Magnus Fiskesjö’s classical translation of *sheng* and *shu* into “raw” and “cooked.” This is partly just a simple linguistic choice, as the *sheng/shu* contrast does apply to the level of familiarity in the Chinese language (both classical and colloquial). Another reason for my different translation is my reservations in regards to Fiskesjö’s argument that the ‘Raw’ were persistently designated ‘Raw’ even as they actually became “civilized” by the late imperial standard because the existence of “barbarians” were at the very foundation of imperial sovereignty. I believe “acculturated/crude” or “familiar/unfamiliar” are more accurate and neutral choices. See Magnus Fiskesjö, “On the ‘Raw’ and the ‘Cooked’ Barbarians of Imperial China,” *Inner Asia* 1, no. 2 (1999): 139–68.

expectation that the “unfamiliar” would eventually become “familiar” and the “familiar” would become indistinguishable from the Han Chinese through acculturation processes.¹⁷

Table 7 Jurisdictions of the Villages in Document Collections

Jurisdictions of the Villages in Document Collections					
			# of Miao Villages	Villages in Document Collections	
Liping Prefecture	Native Chieftain Offices	1 Tanxi Native Office (chief & deputy)	潭溪長官司	53	
		2 Bazhou Native Office	八舟長官司	27	
		3 Hongzhou Native Office (chief & deputy)	洪州長官司	53	
		4 Guzhou Native Office	古州長官司	66	
		5 Xinhua Native Office	新化長官司	11	Mengzhai 孟寨
		6 Huer Native Office (chief & deputy)	湖耳長官司	29	Pinglue 平略, Guazhi 掛治
		7 Liangzhai Native Office	亮寨長官司	21	
		8 Ouyang Native Office (chief & deputy)	歐陽長官司	13	Leizhai 雷寨
		9 Zhonglin Native Office	中林長官司	24	Pingjin 平金, Bayang 八羊
		10 Longli Native Office	龍里長官司	50	Wendou (Upper) 文斗上寨*, Yanwan 岩灣, Jiachi 加池, Padong 扒洞, Miaoguang 苗光, Wushan 烏山
		11 Caodi Native Office (abolished in 1684)	漕滴長官司		
		12 Chixi Native Office (abolished in 1684)	赤溪長官司		
		13 Xishan Yangdong Native Office (abolished)	西山陽洞司		
Other Miao Villages not ruled by native offices	Miao villages directly governed by the Liping Prefect		53	Ping'ao 平鰲, Zhanghua 張化, Wangzhai 王寨, Maoping 茅坪, Huangmen 黃悶	
	Miao villages newly incorporated in 1729 (no native offices established, put directly under the Liping Prefect)		37	Yaoguang 瑤光, Zhongyang 中仰, Geweng 格翁	
Tianzhu County, Zhenyuan Prefecture	Three Miao-dominated Li (Juren Li 居仁里, Youyi Li 由義里, Xunli Li 循禮里)		252	Gaoniang 高釀, Gandong 甘洞, Bangzhai 邦寨, Diba 地壩, Benchu 岔處, Wendou (Lower) 文斗下寨*	
	Eight Han-dominated Li			Yanmen 岩門, Lantian 藍田, Wengdong 甕洞, Yuankou 遠口	

Source: [Guangxu] *Liping fu zhi*, juan 2a and 6b; [Guangxu] *Xuxiu Tianzhu xian zhi*, juan 2a and 3.
 *: for the complex local history that led to the division of Upper and Lower Wendou into two different prefectures, see Zhang Yingqiang, *Mucai zhi liudong*, pp. 198-208.

¹⁷ Norma Diamond, “Defining the Miao: Ming, Qing, and Contemporary Views,” in *Cultural Encounters on China’s Ethnic Frontiers*, ed. Stevan Harrell (Seattle: University of Washington Press, 1995), 92–116.

Under this official rubric, it can be said that the Miao residents of the villages in the sample were mostly “familiar” Miao by the 1730s. Additionally, there seemed to be a small number of Han-dominated villages and a few “unfamiliar” Miao villages that newly pledged their allegiance during the military operations.

Local steles, genealogies, and records of the resolution of inter-village conflicts suggest the gradual acculturation of the Miao population to Han Chinese cultural practices and the Qing civil administration. The in-migration of Han Chinese and more acculturated Miao people, who used to live close to administrative centers such as the Tonggu Garrison Station, was a key factor in the spread of Han practices, including marriage and death rituals, kinship organizations, the acquisition of the Chinese language, written contracts, and participation in civil examinations. Some local residents adopted Chinese surnames and appended themselves to the genealogies of in-migrant lineages.¹⁸ The fabrication of kinship relations and common ancestry through genealogy compilation resembled the practices among non-Han ethnic groups in Fujian and Guangdong during the previous Ming Dynasty.¹⁹ Moreover, Takeuchi Fusaji points out that bringing lawsuits to the local magistrates replaced the traditional Miao practice of divine

¹⁸ For a careful examination on the interactions between natives and in-migrants, the process of the incorporation of the Wendou Village into the Qing rule, and the local Longs’ adoption of the Jiang surname, see Zhang Yingqiang, *Mucai zhi liudong*, 198–208.

¹⁹ Michael Szonyi, *Practicing Kinship: Lineage and Descent in Late Imperial China* (Stanford: Stanford University Press, 2002); David Faure, *Emperor and Ancestor: State and Lineage in South China* (Stanford: Stanford University Press, 2007).

judgment as the common mechanism of dispute resolution in this area by the early nineteenth century.²⁰

On the other hand, many traditional Miao customs were preserved and mingled with the Han practices in various ways. For example, Miao women's stronger claims to property and closer ties to their natal family manifested clearly in their independent agency in many Chinese-style contracts used in the local community. The local social organization of *kuan* 款 and Miao elders' ritual and adjudication authority were retained in the official terminology of village compacts and *lijia* heads.²¹

²⁰ Takeuchi Fusaji 武内房司, “Narukami to nakan no aida — Shindai Kishū Myaozoku ringyō keiyaku bunsho ni miru nae zoku no shūzoku to funsō shori” 鳴神と鳴官のあいだ—清代貴州苗族林業契約文書に見る苗族の習俗と紛争処理 [Between Divine Judgment and Lawsuit in Court: Dispute Resolution among the Miao People as Seen in the Forestry Contracts in Qing Guizhou], in *Kishū Myaozoku ringyō keiyaku monjo kaihen (1736-1950 nen)* 貴州苗族林業契約文書匯編 (1736-1950年), ed. Christian Daniels, Yang Yougeng 楊有賡, and Takeuchi Fusaji 武内房司, vol. 3, 3 vols. (Tokyo: The Institute for the Study of the Languages and Cultures of Asia and Africa, Tokyo University of Foreign Languages, 2003), 83–120.

²¹ *Ibid.* at 92–100.

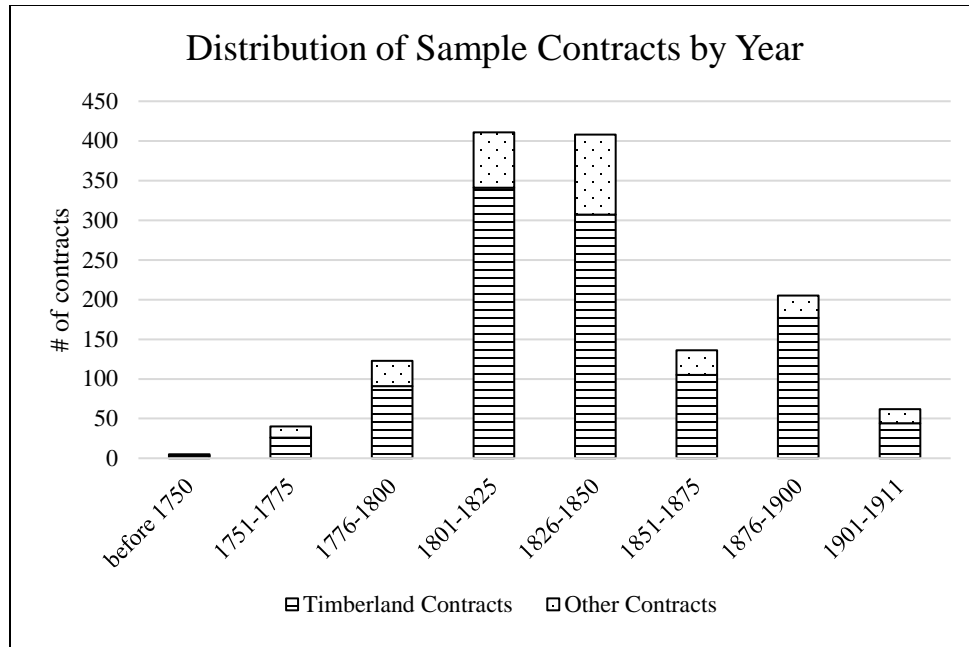


Figure 6 Distribution of Sample Contracts by Year

For the purpose of this study, the most important transformation in the local society was the adoption of Chinese-style contracts in the tree planting industry. A Qing-era genealogy mentioned the local people’s practice of *cunninghamia* planting in the late Ming, although there is the possibility that the Qing-era people projected their recent memories to an earlier time.²² In any case, tree planting had already become commonly practiced in the Lower Qingshui area by the mid-eighteenth century. Moreover, this activity seemed to have spread from the Lower Qingshui communities to the middle and upper ranges of the river. By the late eighteenth century, the “Black Miao” residents in the sub-prefecture of Qingjiang, which was among the least acculturated regions in the Miao frontier, had begun to emulate the Lower Qingshui’s

²² Zhang Yingqiang, *Mucai zhi liudong*, 200–202.

investment in *cunninghamia* planting for sales in the market.²³ Some officials also actively promoted the planting of timber and fruit trees among the Miaos.²⁴ As for the use of Chinese-style contracts, observations in the 1750s stated that even the more acculturated Miaos seldom used written contracts, but carved marks on wooden plaques as evidence of agreements.²⁵ By the late eighteenth century, contracts became routinely produced in the Lower Qingshui communities with concepts and styles similar to those found in other parts of China. The first half of the nineteenth century saw the rapid development of contracted transactions of ownership and tenancy rights on timberlands (Figure 1).

The Technology of Tree Planting and Its Challenges

Cunninghamia sinensis (or *C. lanceolata*) is the most important conifer planted for timber in south China. It attains a height of up to 50 meters, often free of branches for the first 18 to 20 meters, and has a firm and straight trunk as much as two meters in perimeter. The durable qualities of the *cunninghamia* timber make it the most useful general-purpose tree in China, widely utilized for construction, shipbuilding, furniture, coffins, and roofing, etc.²⁶

The technology of *cunninghamia* planting was quite flexible. *Cunninghamia* sprouts readily from its stump after cutting or a fire, which makes propagation relatively easy. It could be established from seed propagation, coppicing, and sprouts cut from the stump. According to

²³ Aibida, *Qiannan shilue*, vol. 13, pp. 332–44.

²⁴ *Ibid.*, vol. 9, pp. 257–260.

²⁵ *Ibid.*, vol. 13, 341–44; vol. 22, pp. 561–70.

²⁶ Menzies, “Forestry,” 574–78.

sporadic evidence from agricultural handbooks published in different times, the method of planting a cutting using offshoots seemed to be the mainstream practice in China from the thirteenth to the sixteenth centuries; thereafter, sprouts cut from the stumps seemed to have replaced offshoots because of their faster growth and higher success rates.²⁷ The seventeenth-century encyclopedia of agronomy by Xu Guangqi, *The Complete Book of Agriculture Administration (Nong Zheng Quanshu)*, explained in detail the procedure of planting Cunninghamia from sprouts cut from stumps as seen in southern Anhui. First plough the land and plant sesame for a year or more, which helps fertilize the soil. Then at the beginning of the second month, cut fresh sprouts from the stumps one foot and one or two inches in length, plant them to half their lengths, and press the soil down firmly. Weed and hoe every year; or conduct intercropping by planting millet in the summer and wheat in the winter.²⁸

Another method used in the Qingshui River area was seed propagation. Seeds are collected in September from thriving trees and planted in seedbed. The next June, when the seedlings reached about one meter, they should be transplanted in rows. Compared to planting a cutting, the seed propagation method is more labor consuming, but the resulted trees are of higher quality and produce better sprouts after cutting. In practice, the two methods were often rotated.²⁹

²⁷ Daniels, “Shimizu ryūiki no Myaozoku ga shokurin,” 27–28.

²⁸ Xu Guangqi 徐光啟, *Nongzheng quanshu* 農政全書 [Complete Treatise on Agricultural Administration], 1639, vol. 37. Translated in Menzies, *Forest and Land Management*, 96.

²⁹ Aibida, *Qiannan shilue*, vol. 21; Daniels, “Shimizu ryūiki no Myaozoku ga shokurin,” 29–30.

During the early years, crops with differing tolerance to shade were interplanted to suit the changing levels of light as the tree canopy gradually closed overhead. Annual crops included wheat, millet, maize, sweet potatoes, and cassava. Sometimes annual crops were followed by perennials, commonly oil-bearing trees such as tung oil (*Aleurites fordii* Hemsl. and *Aleurites montana* Wils.) and tea oil (*Camellia oleosa*), which could be harvested for several years. The tree canopy closes after three-to-five years, preventing further agricultural use, and the land is used solely for the timber crop until the cycle is repeated following the harvest of timber.³⁰ As Nicholas Menzies has pointed out, this kind of successional intercropping system of forest management, known as “Taungya” and previously thought to have originated in Burma during the British Colonial period, has been used for at least three centuries in China by the Han population and other ethnic minorities.³¹

Despite the annual products generated by the intercropping system in the first few years, once the canopy closed up, there was a long wait of decades with hardly any income from the land before the timber crop could be harvested for sale. Compared to other timber trees, *cunninghamia* is very fast-growing, which contributes to its overwhelming popularity among cultivators. But it still requires a minimum of 30 years to attain the size of general-purpose timber. In the pre-modern, household-based rural economy, the long duration of the trees’ growth meant serious difficulty in transforming expected future profits into ready cash to meet spikes in a household’s consumption needs. If the planting of a few trees was meant to be a

³⁰ Menzies, *Forest and Land Management*, 96.

³¹ Nicholas K. Menzies, “Three Hundred Years of Taungya: A Sustainable System of Forestry in South China,” *Human Ecology* 16, no. 4 (December 1988): 361–76.

source of supplementary income or insurance in addition to a household's regular income from agriculture, the timing could be carefully planned in anticipation of significant expenses for marriages and funerals. For example, records from as early as the thirteenth century speak of the practice in southern Anhui that people would plant a few *cunninghamia* trees upon the birth of a child, so that the revenue could be realized in time to pay for his or her marriage expenses.³² But still, if tree planting was to be the mainstay of the household economy, as was the case in the Lower Qingshui area, the challenge of its long rotation period had to be solved effectively.

To deal with the unfavorable temporal structure of the payoff from tree cultivation, individual timberland owners could plant mixed-age stands of trees on his own plot to secure a more regular and reliable income. But this way, the scale is small and efficiency is compromised. A better option would be if there was an active market to trade one's claims on the future revenue at any time during the growth of the tree crop. Individuals could diversify their holdings by acquiring shares on a number of plots planted with different-aged trees and easily cash out by selling off their shares. As the following discussions on timberland contracts will demonstrate, diversified investment in securitized shares of timberlands was indeed the mainstream strategy adopted in the Lower Qingshui Valley. This system, resembling a prototype of a forward-contract market, provided more flexibility and enabled an economy of scale in the production of timber, especially at the moment of felling.

³² See Luo Yuan, *Chunxi Xin'an zhi*, 1.5a.

Categories of Mountain Land Transactions

Contracts concerning the forested mountains can be roughly put into three categories: formation of tenancy relations between landowners and planters, sales of rights over a mountain plot property, and agreements among co-owners. Each category can be further divided into sub-categories as shown in Table 8. It should be noted here that while the sub-categories of tenancy contracts and co-owner's agreements corresponded with the terms used by the agents themselves, the further division of the sale contracts required breaking down the very general terms used in the contracts' titles such as "sale of mountain land" (*mai shanchang* 賣山場), "sale of timber" (*maimu* 賣木), and "sale of mountain land and trees" (*mai shanchang shanmu* 賣山場杉木) with the more detailed information specified in the body part of the contracts in order to provide a clearer appreciation of the variety of rights over the properties being transacted. The trees being traded in these contracts invariably still required years of growth before they were ready for the market. We rarely see sale contracts of trees that were ready to be felled, most probably because such transactions featured on-spot payment and did not require contracts or long-term holding of the contracts.³³ We know about the sale of matured trees usually from the profit division contracts among co-owners.

³³ In a rare contract of the sale of ready-to-fell trees, besides the total price, price per tree and number of trees were specified, which was different from sales of trees in growth. See JYZ 102.

Table 8 Categories and Distributions of Contracts on Mountain Lands

Categories and Distributions of Contracts on Mountain Lands					
Categories		Description	Indicators	Quantity	Percentage
Tenancy Relations					
T	Tenancy contract	establish tenancy relations between landowners and planters, usually specify each party's share in the future sales income, which is to be reconfirmed with (D).	“招佃”, “承佃”, “佃裁”	142	
D	Confirmation of the division of future sales income between landowners and planters	confirmation of the division of future income between landowners and planters, usually in the fifth year of the tenancy tenure.	“主佃分成合同”	36	
Sales of Rights over Mountain Lands				844	100%
W	Whole property	sale of the whole property of a plot.	“卖山场/杉木”, no other specifications	158	19%
S	Share of whole property	sale of some share of the whole property of a plot.	“卖山场/杉木”, shares specified	270	32%
U & US	Usufruct right (U) or some portions of it (US)	sale of usufruct rights. Usually means the sale of the standing trees on a plot; occasionally the plot was unplanted and the buyer was free to plant his own trees and harvest for one tenure. Seller has no claim on future revenue from the sale of felled trees. Land should be returned to the seller after the felling.	“木植长大, 发卖砍尽, 地归原主”	30 US (10, 33%)	4%
Landowners'/Planters' shares				386	46%
L & LS	Landowners' share (L) or some portions of it (LS)	sale of landowners' share of future revenue, landowners' share and planters' share are determined in (T) and (D).	“地股” or “土股”	163 LS (127, 78%)	
P & PS	Planters' share (P) or some portions of it (PS)	sale of planters' share of future revenue.	“栽手股”	169* PS (50, 30%)	
LPS	Portions of both landowners' and planters' shares (LPS)	sale of some portion of landowners' share and planters' share of a plot.		54*	
Agreement among Co-Owners					
A	Agreement among co-owners to clarify shares and divide profits	clarification of ownership/tenant shares of a property; division of the profit from the final sale of the tree stand among co-owners; also include household division documents that	“分山”, “分木”, “分關”, “卖木分银”	124	
Total				1146	

Sales of whole property right (W) over a mountain plot become increasingly rare over time (Figure 7). The practice of two-tiered landownership similar to the structure in rice paddies, whereby the landowner sells the usufruct rights while retaining the legal ownership of a plot, was well established. Sale of usufruct rights (U & US) was for the tenure of one crop of trees. By “usufruct right” I refer to the ownership over the standing trees on the plot in question. When the trees became mature, the buyer harvested the trees and returned the land to the original owner, who could not share the profit from the trees. In those cases where the usufruct right of a barren plot was sold, the buyer had the right to plant trees by himself and then return the land after the felling of that stand of trees. In such cases, buyers of usufruct rights might also sub-lease the land to tenant planters, with whom he would divide the profits.

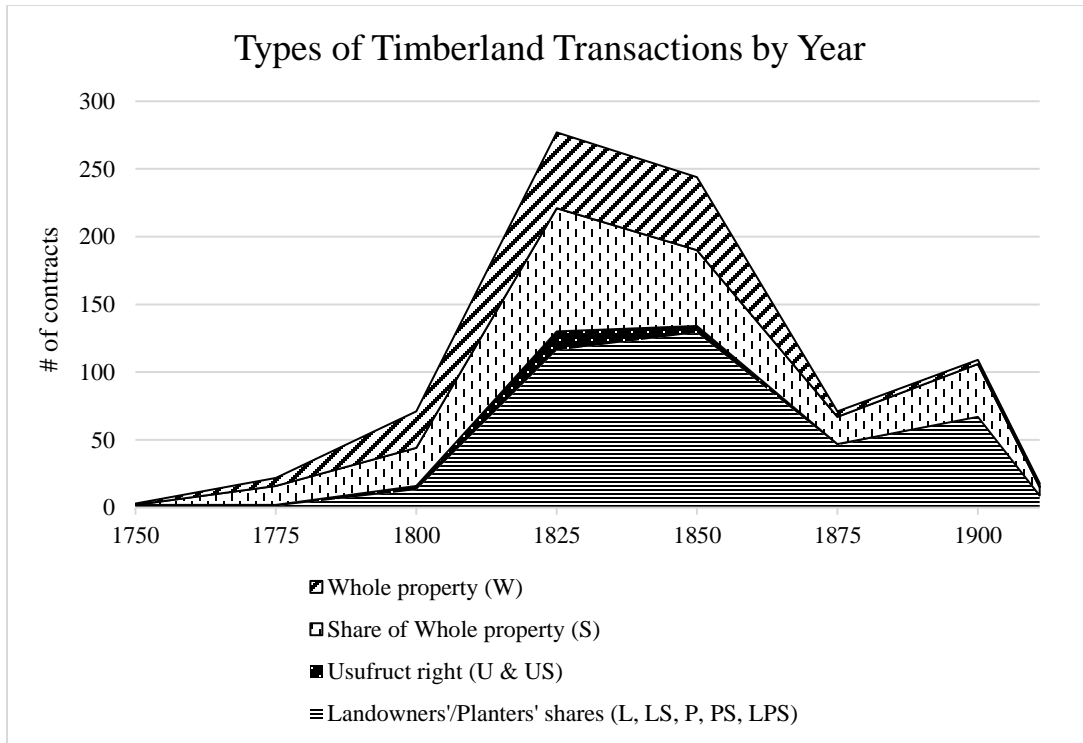


Figure 7 Types of Timberland Transactions by Year

Creation of Landowners' and Planters' Shares

Planters entered into tenancy contracts (T in Table 8) with the landowners (i.e., holders of the whole property rights) or, on occasions, holders of usufruct rights. The tenant planter's share of the timber crop was usually 40% or, less often, 50%. The average planter's share from 493 tenancy contracts was 42%.³⁴ The planting of trees and other crops was concentrated in the first five years; the required work thereafter was minimal, mainly looking out for theft and preventing fire. So at the end of the fifth year, the tenant would invite the landowner over to inspect how his

³⁴ To my knowledge, the earliest tenancy contract was from 1780, as recorded in Guizhou sheng bianji zu, *Dongzu shehui lishi diaocha*, 15.

mountain plot had been thickly planted, that is, it had “turned into a young forest” (*chenglin* 成林). At that moment, a contract that confirmed the profit division between the landowner and the tenant planter was signed; this contract was called “*fencheng hetong*” 分成合同 (D).

The signing of this contract completed the separation of the usufruct rights of the timberland into landowners’ shares (L) and planters’ shares (P). With this confirmation, the liquidity of tenancy shares increased dramatically. The tenant could easily cash out a lump sum by liquidating his tenancy shares, sometimes to the landowners, who usually claimed preemptive rights to purchase back the tenancy shares.³⁵ As shown in Figure 7, sales of landowners’ and planters’ shares, either the total or portions of such claims (L, LS, P, PS, LPS), became increasingly common over time. From 1775 to 1875, the proportion of such transactions among all timberland sales increased from 18% to 65%.

Tenancy on timberlands should be seen a device that combined labor and monetary investment, with the relative importance of either aspect varying from case to case. For laborers and new in-migrants, tenancy planting was a good way to accumulate some wealth with a temporal horizon of as short as five years.³⁶ Tenants were not required to share the harvest from the millet, wheat, and others crops that they grew in the space between tree saplings with the

³⁵ For examples of planters selling back all or some of their shares to the landowner, see GZM B0120, B0136, B0141. It was more common for planters to sell their shares to buyers other than the landowner, for example, see GZM B0140, B0185, and B0203.

³⁶ Transfer or termination of tenancy during the first few years when the planting was not yet completed was not unseen, but very rare, usually due to natural disasters or other personal emergencies.

landowners, so they could obtain considerable annual income in the first five years.³⁷ Once the profit division was confirmed by a contract in the fifth year, some planters sold their shares right away. For example, in 1819, Fan Yutang and his nephews sold their tenancy shares to Jiang Yinghui for 76 taels of silver just a month after a contract confirming their share of 40% was signed with the landowners (surnamed Fan).³⁸ Many planters would move on to another tenancy tenure every five years, while choosing to hold or sell the earned planters' shares depending on their own financial situations.

Tenant planters who stayed with a crop from start to finish were rare. The few tenants who did see to the maturity of the crop would likely be one of the biggest beneficiaries from the sale of trees, especially when the landowners' shares had become divided into numerous small portions as they always did through transactions and partible inheritance. The final realization of

³⁷ The initial tenancy contract usually specify that the tenant could “grow millet and plant cunninghamia” (*zhongsu zaishan* 種粟栽杉). For example, see JYZ 69. In Qingshui Valley, the crop of millet was not shared with the landowner, which was different from the custom in Huizhou, where sometimes the tenant were required to pay additional annual rent from supplementary crops such as grain, sesame, mushrooms or other plants that he grew on the same mountain land site. See Cheng Zeshi 程泽时, *Qingshui Jiang wenshu zhi fayi chutan* 清水江文书之法意初探 [Explore the Legal Implications of Qingshui River Documents] (Beijing: Zhongguo zhengfa daxue chubanshe, 2011), 69; McDermott, *The Making of a New Rural Order in South China*, 402–3.

³⁸ See JYZ 173, 174b. Another example can be found in JYZ 196-97, where tenancy shares were sold on the very next day after the establishment of profit division contract.

a planter's profit should be understood as a combination of the return to his initial labor input and the accumulated time value of his waiting.

Confirmed planters' shares were viewed as a purely monetary investment by people with capital. It was very common for the same party to hold portions of both the landowners' and the planters' shares on various plots.³⁹ Sporadic evidence indicates that merchants from other provinces, particularly Hunan and Jiangxi, also invested in timberland shares, which worked as forwards to secure their timber supply at a future time.⁴⁰ The relative profit and power that one could derive from a tree stand depended not on the kind but the number of his shares, blurring the once-thought sharp distinctions between the labels of "landlords" and "tenants." In some contracts, when someone holding a mixture of both kinds of shares was transferring his holdings, he might just state the total number of shares owned by him, bypassing the usual section where one should explain the division of ownership and tenancy shares and his holding of each kind.⁴¹

Of the 223 contracts that featured sales of planters' shares, 147 contracts (66%) specified the origins of the shares, whether earned by labor or previously purchased from someone else (Table 9). There were 129 contracts where the sellers of the shares personally planted the trees (*qinzi dianzai* 亲自佃载). Among these, 65 (50%) contracts showed that the planters sold their

³⁹ A large landowner Jiang Yinghui, for example, invested in tenancy shares of a number of plots on which he did not have ownership shares. See JYZ 142, 148, 149, 150, 155.

⁴⁰ For example, a merchant from Jiangxi purchased tenancy shares, see GZM B0143.

⁴¹ For example, the seller curtly said, "there are a total of eight ownership and tenancy shares, among which I owned four. Two of these shares have been sold previously in 1842," see GZM B0131. See also GZM B0132, B0144, and B0160.

shares back to the landowners, sometimes one or more persons among all the co-owners of the land. Eighteen contracts stated explicitly that the planters' shares being sold were previously purchased from someone else.

Table 9 Sales of Planters' Shares

Sales of Planters' Shares	
Total sales of planters' shares (P+PS+LPS)	223
Tenant planters sell their shares	129
planters' shares sold back to landowners	65 (50.4%)
Reselling of previously acquired planters' shares	18
Details unknown	76

Since the necessity to disclose details could very well vary for different kinds of sales, the percentages drawn from these 147 contracts should only be taken as rough indicators instead of confident estimations. For one thing, it is probable that tenant planters, when selling their shares, tended to use the established phrase of “personally planted the trees” more than someone who was selling previously purchased shares would disclose about their origins. If this was the case, by an educated guess, it was likely that a larger portion of the remaining 76 contracts where detailed information was lacking featured the reselling of previously acquired planters' shares. Take the extreme case where all 76 contracts were resales. This would mean that, roughly speaking, among all the planters' shares that tenants had sold out, 73% of them were sold for a second time. At the other extreme, suppose all 76 contracts were sales initiated by the planters. This means that 91% of the people who purchased planters' shares from the tenants had kept the shares and only 9% resold them. The actual case would be somewhere in between and more

complicated, not the least because planters' shares could be transacted for multiple times before the harvest of the crop.⁴²

Sales of ownership shares only entailed the landowner's share of the current crop of trees, which was separated from the legal ownership of the subsoil. Some sales contracts of landowners' shares made this explicit by adding the phrase "after the trees are cut in the future, the land should be returned to the original owner."⁴³ When the landowner was selling both his share of the crop and the legal title of the land, both should be specified in the contract.⁴⁴ The separation of ownership and tenancy shares became so popular that even when selling the whole property right over a mountain site, some might choose to be explicit that "tenancy shares, ownership shares, and the land are all for sale" instead of the commonly used ambiguous phrase of the "sale of mountain and trees"; those selling usufruct rights might specify that "tenancy shares and ownership shares are all for sale."⁴⁵

Part of the reason for this specification was that the current landowner might have acquired the whole property by purchasing ownership and tenancy shares successively, including the situation where the landowner had redeemed tenancy shares from the planter and was now

⁴² For examples of resale of purchased tenancy shares, see GZM B0178, B0201.

⁴³ For an example, see JYZ 194. In this sale, one twelfth of ownership shares, which in total accounted for 60% of the standing trees, were sold to Jiang Yinghui; the phrase "after the trees are cut in the future, the land should be returned to the original owner" was included towards the end of the contract. See also JYZ 195, 206.

⁴⁴ For such an example, see GZM B0159.

⁴⁵ GZM B0115, B0127, B0202, B0166.

selling the whole property or usufruct rights.⁴⁶ But even in cases where the seller had always possessed the whole property outright and the trees were planted by himself, such a phrase might still be used in the contract for clarification.⁴⁷ Such practices testified to profoundness of the perception that rights over a mountain land could be separated into that of the subsoil and that of the standing trees, the latter of which was further divided into landowners' shares and planters' shares when there was tenancy relation involved.

The Division and Securitization of Timberlands

Securitization, that is, the tendency to divide rights over a property into independently tradable shares, featured all kinds of rights claimed over a mountain plot (witness S, US, LS, PS, and LPS in Table 8). Unless otherwise noted, the term "share" refers to the right over a portion of the monetary proceeds to be accrued from the sale of the trees, rather than a part of the physical divisions of a specific plot or a specific number of this plot's standing trees.

Partible inheritance might be the initial mechanism that created shares out of a family's whole ownership on a mountain plot. While agricultural land and real estate were usually physically divided among sons, forested mountains were normally kept intact and divided into equal shares of rights over revenue from future sales. Property division documents commonly said that "the mountain land and trees are not yet divided. In the future, when the trees are felled

⁴⁶ For an example that specifically explained that the whole usufruct rights for sale was acquired through two previous purchases of landowner's share and tenant's share, respectively, see GZM B0167.

⁴⁷ GZM B0115.

and sold, the proceeds should be equally allocated among the sons.” For example, in the family of Jiang Yinghui, mountain land was not physically divided in the household divisions for three generations in 1819, 1859, and 1896, respectively.⁴⁸

Indeed, to divide up a mountain site with trees in growth would present difficulties in drawing up the demarcation of the land and designating who owned which trees, especially when the family’s holding of mountain land was dispersed over a number of plots. Let alone the problem of fair division, tree planting required a certain level of scale to be economically feasible. In this, it was very different from the rice paddies, the efficient size of which was inherently small with intensive cultivation and the physical division of a family’s holding usually did not require breaking up individual production units. By contrast, if a forested mountain was divided up into excessively small plots owned by different agents, it required additional coordination against boundary disputes and risk-sharing mechanisms—just imagine the potential disputes if the trees allocated to one son suffered fire, theft, or failed crop while those of the other son stayed intact; over time, these small plots would be planted with trees of different ages, making large-scale felling and selling at the time of maturity untenable.

In addition to partible inheritance, shares became more finely divided when the seller chose to alienate portions, instead of the total, of his holdings or when several parties purchased together and divided the shares among themselves. For individual investors, the guiding principle was to diversify resources in different plots growing trees of different ages. Even for large

⁴⁸ See JYZ 172, 433, 483.

mountain landowners, their holdings were shares of scattered sites. Shares transacted in sale contracts might just be one out of dozens or even a hundred total shares.⁴⁹

In case of complex parcelization, there were two ways to express the shares. The first method, which was more commonly used, specified the multi-tiered division of shares in order to explain the origin of one's holdings and what is being sold, usually using the expression of dividing one "big share" (*dagu* 大股) into a number of "small shares" (*xiaogu* 小股). For example, when Jiang Laogui was selling his shares on two plots in 1844, for the first plot he explained:

this mountain is divided into five shares, among which landowners have three and the planters have two. Among the landowners' three shares, Laogui and Laoping collectively own one. This one share is further divided into two shares, one of which is owned by Laogui. Laogui also owned one of the two planters' shares....

So in total, Laogui owned one-sixth of the ownership shares and half of the tenancy shares.⁵⁰ The benefit of this method was that the route of previous transactions was clear and other co-owners whose shares are not explicitly mentioned could stay intact in case of disputes.

Another case shows how shares could be further divided among multiple buyers during a transaction. The timberland in Wuqi was equally divided into two big shares, one for the landowners and one for the planters. The landowners' one share was further divided into four small shares, and the brothers Wenshang and Wenhan owned two of them. The brothers then sold these two small shares to a group of seven buyers, who divided in the following way: Zibin,

⁴⁹ For examples of such cases, see GZM B0133; JYZ 191.

⁵⁰ JYZ 392. For an example of multiple sources of one's holding of landowners' share, see GZM B0161.

Zixiu, Laoxian collectively took one share; Yingxian took a half share; and Zhimo and his two brothers took the remaining half share.⁵¹

The second method, usually used when previous transactions were too numerous to be expressed with big shares and small shares without confusion, was to attach an arbitrary amount of “taels” to the whole property and list the amount of tael owned by the party in question. “Tael” in this case did not refer to the actual monetary value of the land but was merely an arbitrary number used to denote shares. Because the Chinese character for “share,” *gu* 股, was usually not used for fractions, except for half of a share, this method provided a convenient way to report the total percentage of a property owned by one person. For instance, when Jiang Changtai sold his portion of the landowners’ one-third share of a mountain site in 1810, he put it this way:

... this is a mountain of 5 taels, Jiang Danyan and Jiang Tingzhu have 2 taels, Yinghui has 1.5 taels, Jinkui has 0.75 taels, Changhai has 0.75 taels. Now I (Changtai) am selling my share of 0.75 taels of the mountain to Jiang Tingkui. In the presence of both parties and intermediaries, a price of 21.5 taels of silver was agreed upon, which I have received in person....⁵²

The shortcoming of this method is that we cannot know if his holdings had different sources, such as Jiang Laogui in the previous example, who held some portion of the

⁵¹ GZM B0005.

⁵² JYZ 114. See also JYZ 131, 138; GZM B0135, B0138.

landowners' shares and some portion of the tenants' shares, resulting in a total of 30% of the property; that 30% for sale would be the only information revealed by the second method.

Sometimes both methods were used in the same contract. For example:

...this mountain is divided into two big shares, one for the planters, and one for the landowners. The landowners' one share is further divided into two shares, one owned by Jiang Shaolv, the remaining one share is divided as a mountain worth of 10 taels: Jiang Ziwei has 2.5 taels, Daxiang has 1.25 taels, Tingchang has 1.25 taels...now my own share of 1.25 taels is sold to uncle Jiang Shaolue. In the presence of both parties, a price of 9.2 taels of silver was agreed upon, which I have received in person....⁵³

Based on transactions of portions of landowners'/planters' shares in the nineteenth century (LS, PS, LPS, US, S; N=422), the average percentage of owners' share being sold was 26%, the average percentage of planters' share being sold was 51%. Figure 8a shows the trend of the average percentages of owners'/planters' claims being sold, which move in opposite directions than the total frequency of such transactions in each period. Figure 8b indicates that among all the transactions of landowners'/planters' shares, the proportion of the sales of portions, rather than total, of such claims (e.g., 25% of the landowners' share or 50% of the planters' share on a timberland) moved together with the total number of transactions. These two figures suggest a generally positive correlation between the frequency of timberland transactions and the extent of parcelization.

⁵³ JYZ 169. See also JYZ 120.

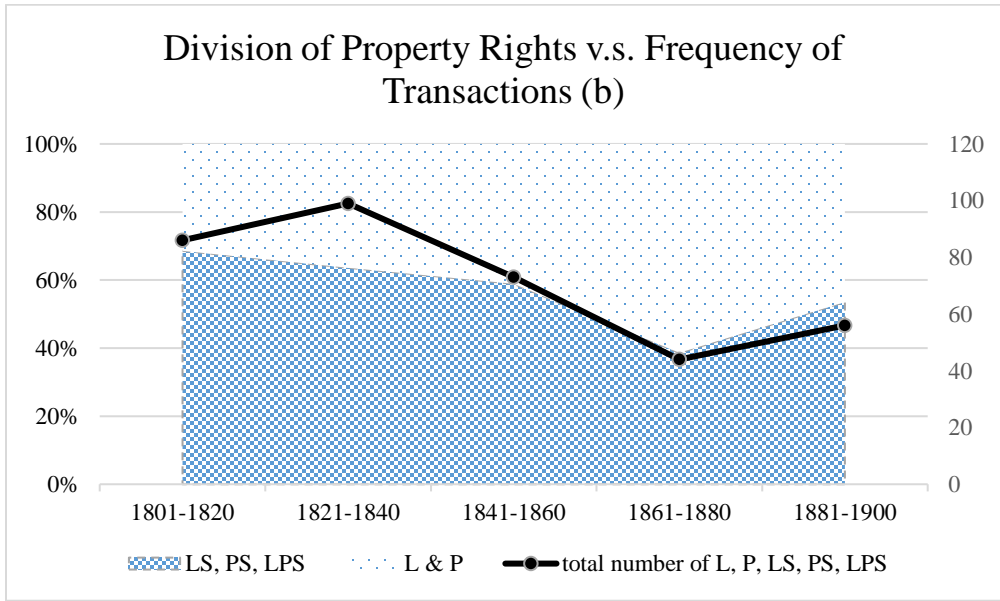
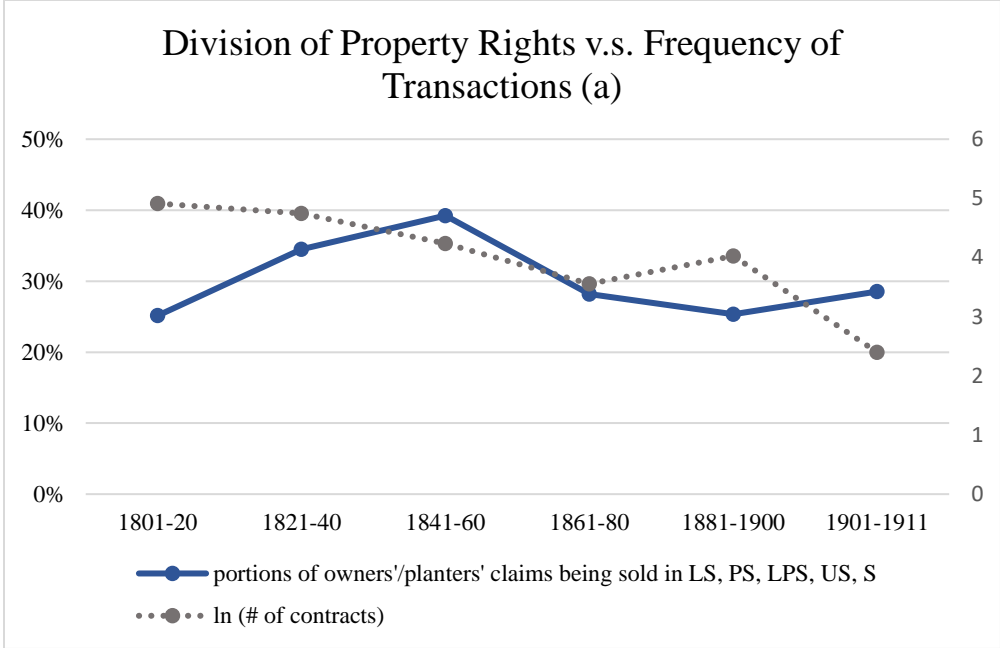


Figure 8 Division of Property Rights v.s. Frequency of Transactions

We should note that the sample size is relatively small when divided into five 20-year periods, so this correlation is more suggestive than definite. Nevertheless, it makes sense that higher liquidity of timberland shares was associated with more finely divided property rights. The current picture suggests a decrease in the frequency of timberland transactions in the mid-

nineteenth century, which coincided with the local turmoil in the southwest during a Miao rebellion and the shutdown of the interregional timber trade due to the blockage of the Yangzi River during the Taiping Rebellion. It suggests a strong connection between the liquidity of timberland shares on the production sites and the conditions of local and interregional timber trade. More research in this regard awaits an enlarged sample as well as information about changes in the volumes and prices of timber entering the trade.⁵⁴

Co-ownership Structures

Timberland contracts commonly specify the number of shares being sold and the total number of existing shares. But they only occasionally included the names of other shareholders.

⁵⁴ The documents found in the Lower Qingshui area are organized and published according to the original villages and households from which they were found initially. The current sample includes all the documents included in *Jiang Yuanze jiacang qiyue wenshu* (JYZ) and *Kishū Myaозoku ringyō keiyaku monjo kaihen* (GZM), which center on the two villages of Wendou and Ping'ao. If a household's documents are published, they are published in whole; there is no selection among them. If the sample can be expanded to cover all the villages, idiosyncratic factors that were particular to a village or a household, which could have influenced the temporal distribution of the number of contracts, can be evened out. Collaborative efforts are necessary for the digitalization and coding of three dozen volumes of the *Qingshui Jiang wenshu* and the *Tianzhu wenshu* series, more of which is still coming out. Hopefully, the categories and database structure use in this study can inform the design of variables in large coding projects in the future. The simple categorization based on if there is tenancy relation involved on a timberland, which is used in *Kishū Myaозoku ringyō keiyaku monjo kaihen*, does not reflect the complexities in reality.

Although it was common practice to have one or two other shareholders as intermediaries and witnesses (*zhongzheng* 中証) of transactions, but usually all the shareholders were not involved. After several such private transactions, co-owners felt the need to compose a detailed list of all shareholders and their shares, called “the agreement on mountain division” (*fenshan hetong* 分山合同).⁵⁵ Signatories in such lists always numbered dozens, and some of them were representatives of a group, making the number of people at stake even more numerous. Such lists might also be the result of the resolution of disputes among owners, listing the agreed-upon division of shares and announcing any previous contracts proving otherwise to be invalid thereafter.⁵⁶ These documents were intended to replace all previous purchase contracts and become the sole legal record of the land and the basis of future allocation of the proceeds from the sales of the trees. Sometimes a mountain division contract was composed right before the trees on the mountain plot in question were ready to be felled, and the new contract was supposed to be the uncontested basis for profit division.⁵⁷ Most of the time the portions designated in the lists referred to shares of future revenues, but occasionally it could actually be physical divisions of a mountain land into a few plots to be separately managed, mostly because

⁵⁵ JYZ 554, 555, 559, 566, 583.

⁵⁶ Agreements on share division after disputes were sometimes called “clarification agreement” (*qingbai zi*, 清白字), a genre that was also used in the private resolution of other kinds of disputes. For studies on the use of *qingbai zi* in the Qingshui Valley, see Cheng Zeshi, *Qingshui Jiang wenshu zhi fayi chutan*, 108–23. For an example of a *qingbai zi* that recorded revised division of shares after a dispute in 1801, see Zhang Yingqiang and Wang Zongxun, *Qingshui Jiang wenshu II*, vol. 3, 28.

⁵⁷ JYZ 554.

of a disagreement regarding whether to allow some potential buyers to be co-owners or the time of felling.⁵⁸

The notion of “public mountains” (*gongshan* 公山) sometimes came up in the documents. A careful examination on the usage of the term clarifies that it actually denoted the fact that a mountain plot was divided by shares into the hands of a lot of shareholders, who could trade their shares freely.⁵⁹ Namely, the character “*gong*” conveyed a sense of “many,” rather than collective ownership. The ownership structure of such “public mountains” resembled more of a publically listed corporation, where one’s claims of control and profit corresponded to the number of independently tradable shares held, than village commons to which every member of the community had equal access and responsibility (see the later example of Randugan timberland in Figure 9).

⁵⁸ For an example of a physical division of a mountain plot, see JYZ 58.

⁵⁹ Some examples include GZM A0020, A0062, A0069, A0245, C0008. Aihara Yoshiyuki has made the same argument regarding such “public mountains,” see Aihara Yoshiyuki 相原佳之, “Shindai Chūgoku Kishū Shō Shimizu Kō ryūiki niokeru ringyō keiei no ichi sokumen — ‘Kishū Myaozoku ringyō keiyaku monjo kaihen’ Ping’ao Zhai bunsho o jirei toshite” 清代中国, 贵州省清水江流域における林業経営の一側面—『貴州苗族林業契約文書匯編』平鰲寨文書を事例として [Forest Management in the Qingshui River Valley in Guizhou Province in Qing China: A Case Study of the Documents from Ping’ao Village], in *Kishū Myaozoku ringyō keiyaku monjo kaihen (1736-1950 nen)* 貴州苗族林業契約文書匯編 (1736-1950 年), ed. Christian Daniels, Yang Yougeng 楊有廣, and Takeuchi Fusaji 武内房司, vol. 3 (Tokyo: The Institute for the Study of the Languages and Cultures of Asia and Africa, Tokyo University of Foreign Languages, 2003), 141–42.

Distinguished from such shareholding “public mountains,” there were indeed some community endeavors at regulating the access to, and utilization of, common timberlands, sometimes to protect the beneficial geomancy of the village’s graveyard. For example, the villagers of Zhangshan 章山 had collectively contributed the initial endowments to establish a plot of geomantic timberland and prohibited any cutting.⁶⁰ In another case, the Guigu 归故 village inscribed on stone steles that specified the enclosed area and the penalties for illegal cutting and burial.⁶¹ Such village management of collectively owned forests and woodlots were also found in other parts of south China.⁶² The rich documents of the Lower Qingshui Area enable the understanding that the relative scale of such collective timberlands was very small compared to those claimed by private shares and sustained by contracts. This information is not often known for other regions where private, household-level documents have not been preserved as well. In fact, the nature of available documents, such as stone steles and literary works, tends to over-represent the community regulation of commons. The Lower Qingshui case invites us to reexamine the different forms of timberland ownership in China and their relative popularity, while being mindful of the potential biases from each genre of evidence.

Many villages were dominated by one or two surnames, such as the Fans in Yanwan and the Jiangs in Wendou and Ping’ao. A large tract of timberland that had been acquired by an ancestor early in the eighteenth century would, by the late nineteenth century, seemingly mimic lineage-owned land thanks to generations of partible inheritance. However, the resemblance is

⁶⁰ Jinping xian difangzhi bianzuan weiyuan hui, *Jinping xianzhi*, 2:1519.

⁶¹ *Ibid.* at 1521–22, 2.

⁶² Menzies, *Forest and Land Management*, 78–80.

only superficial. Like the case of “public mountains,” such timberlands dominated by members of the same lineage were, in effect, shareholding structures, rather than incorporated lineage estates that were most popular in Lingnan and, to a lesser extent, Jiangnan.⁶³ In the Lower Qingshui area, individuals were left to their own devices to possess rights over timberlands, instead of through their lineages. They could freely alienate their shares, although there was the norm that close kinsmen, including both agnates and affines, should have preemptive rights to buy them before outsiders. There was no management board at the top of the lineage organization that made overarching decisions regarding these properties. The final proceeds from the felling and sale of the trees would actually be divided among all the shareholders instead of being retained as lineage fund. In other words, the lineage as a corporate institution that managed a separate set of properties to generate revenues for common activities was *not* a significant phenomenon in the Qingshui Valley.⁶⁴ As will be discussed in more detail later, this is a big

⁶³ For a discussion on lineage-owned timberland, see *Ibid.* at 76–78. For regional variations in Chinese descent groups’ control over properties, see James L. Watson, “Anthropological Overview: The Development of Chinese Descent Groups,” in *Kinship Organization in Late Imperial China, 1000-1940*, ed. Patricia Buckley Ebrey and James L. Watson (Berkeley and Los Angeles: University of California Press, 1986), 274–92.

⁶⁴ Kishimoto Mio has made the same observation that the so-called “public mountains” or “lineage mountains” in the Lower Qingshui area were not collectively owned, see Kishimoto Mio 岸本美緒, “Kishū no sanrin keiyaku monjo to Kishū no sanrin keiyaku monjo” 貴州の山林契約文書と徽州の山林契約文書 [Timberland Contracts in Guizhou and Huizhou], in *Kishū Myaозoku ringyō keiyaku monjo kaihen (1736-1950 nen)* 貴州苗族林業契約文書匯編 (1736-1950 年), ed. Christian Daniels,

difference between Guizhou and timber-producing areas in the old South, such as Huizhou, where powerful lineages corporations dominated most timberlands.

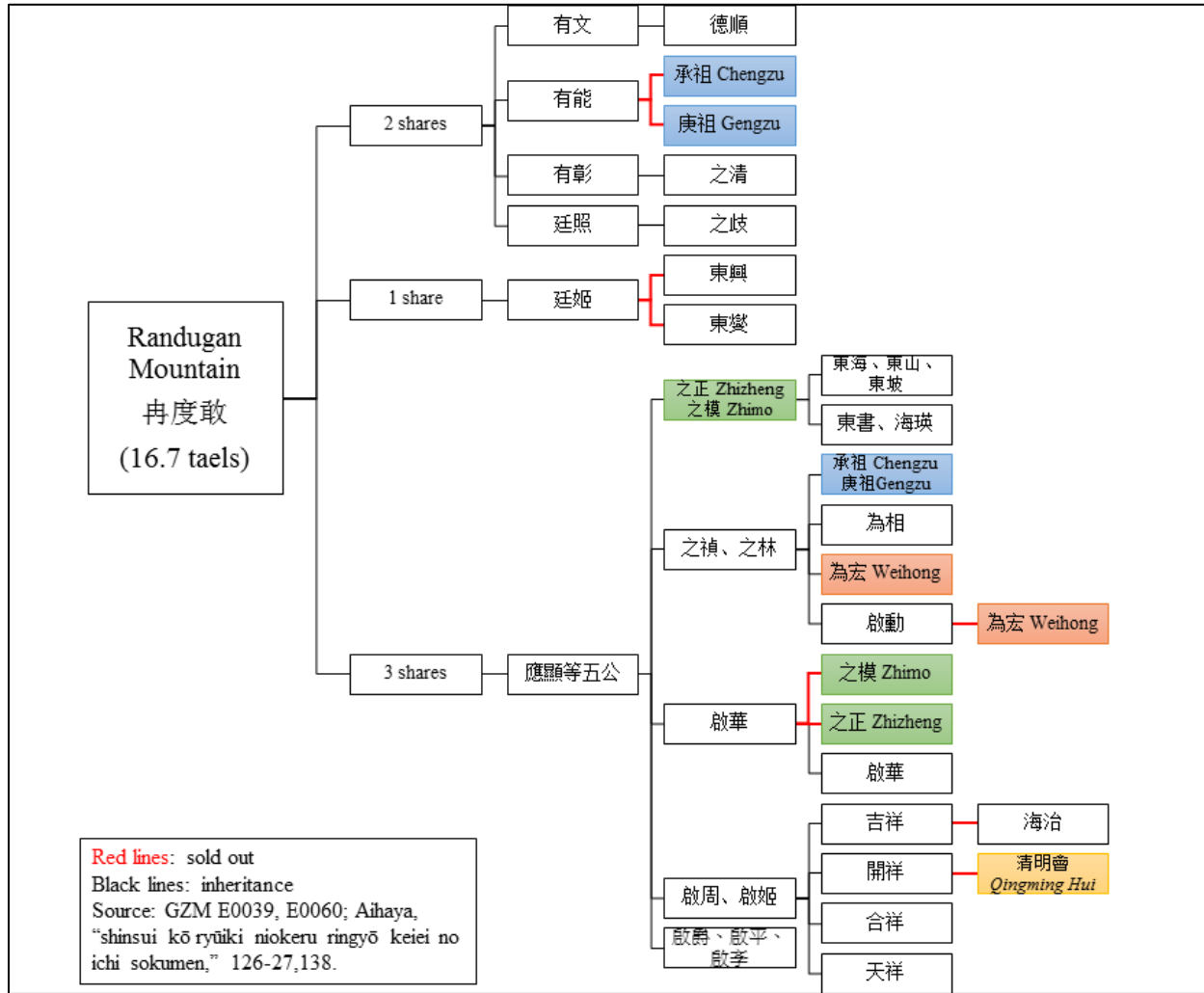


Figure 9 Division of Revenues on the Randugan Timberland

Yang Yougeng 楊有賡, and Takeuchi Fusaji 武内房司, vol. 3 (Tokyo: The Institute for the Study of the Languages and Cultures of Asia and Africa, Tokyo University of Foreign Languages, 2003), 188.

The division of revenues on the Randugan 冉度敢 timberland, which was sometimes referred to as a “public mountain,” serves a good illustration of the kind of complex ownership structures derived from generations of partible inheritance and transactions of shares.⁶⁵ Figure 9 shows the division of final revenue among holders of landowners’ shares after the planters’ share of 40% had been paid off, leaving a total of 16.7 taels in 1891. The division of shares roughly follows the framework of patrilineal inheritance. Each party had the right to freely alienate his shares. The red lines in the figure indicate purchases of shares instead of inheritance. The brothers Chengzu and Gengzu (blue boxes in the figure), who were from a distant branch, came to invest in this timberland by purchasing shares from two sets of landowners. The green and red boxes in the figure shows transfers of shares among existing holders, contributing to some members of the lineage eventually claiming more or less profits than his initial inheritance right entailed.

Despite the lack of lineage-wide endowment, various kinds of private trusts, called “hui” (會), appeared as investors in the mountain lands during the nineteenth century. Some *hui* were trusts founded by religious institutions or kinship groups to generate revenues for ritual ceremonies and ancestral sacrifices, such as the *Qingming hui* 清明會 that shows up in Figure 9. Others included “the trust of the Nanyue Hall” (*Nanyue Gong hui* 南嶽宮會) and “the trust for ancestral worship” (*jisi hui* 祭祀會).⁶⁶ Some seemed to be pure economic associations founded

⁶⁵ GZM E0039, E0060; Aihara Yoshiyuki, “shinsui kō ryūiki niokeru ringyō keiei no ichi sokumen,” 126–27, 138.

⁶⁶ See GZM B0201; JYZ 468.

by kin and non-kin members alike for rotating credit and profit-making.⁶⁷ Some *hui* might be ad hoc constructions out of existing co-ownership structures. These trusts engaged in purchasing mountain land, tenantry, and money-lending. Shares in private trusts, called “*jiao*” 腳, could be freely inherited, transferred, and collateralized.⁶⁸ Just like individual investors, these trusts acquired their mountain land holdings through purchases of shares. Some properties of the trusts might also come from the confiscation of collaterals of unpaid loans extended to members and outsiders.⁶⁹

Felling, Sales, and Transportation

The final sale of the trees was usually conducted by the landowners. Tenants were explicitly forbidden to directly chop down their portion of the crop.⁷⁰ Once the revenue from the sale was realized, landowners first appropriated the amount due to the tenancy shares, and then divided the residual among holders of ownership shares. The names appeared in the contract of profit division might be deceased ancestors, whose shares were taken by one or a few representative offspring, who would then divide the amount among all legitimate inheritors.⁷¹

⁶⁷ JYZ 360, 365, 486.

⁶⁸ Cheng Zeshi, *Qingshui Jiang wenshu zhi fayi chutan*, 135–46. See for examples of transfer of shares in religious trusts and getting loans from private trusts in the nearby villages of Quidan and Jiachi.

⁶⁹ For an example of land used as collateral for loans from a *hui*, see JYZ 468.

⁷⁰ Liang Cong, *Qingshui Jiang xiayou cunzhai shehui*, 54.

⁷¹ JYZ 461, 562, 572, 568.

The buyers of mature trees were mostly locals who became specialized timber merchants, who were known as the “guest from the mountains” (*shanke* 山客) in the downriver timber market. They hired labors to fell, carry, raft, and deliver the trees to the market for sale at their own risk, similar to the “cut-and-buy” (*pinmai* 拚買) practice in Anhui and Zhejiang.⁷² By the early nineteenth century, some local merchants accumulated large capital and came to control timber supply over extensive mountains. As the local saying has it, “Yao (Jizhou 姚繼周) owns a million taels of silver, Li (Rongkui 李榮魁) has 3,000 *Longquan liang* worth of trees (*Longquan liang* was a measurement unit for timber), and Jiang (Zhiyuan 姜志遠) has taken more than half of all the mountains.” The stories of their rise to fortune invariably featured some kind of speculative investment at the right market timing. For example, Jiang Shizhao 姜仕朝 from the Wendou Village made great fortunes by hoarding large amount of timber when the trade was blocked in 1805 and 1806 because of the violent disputes between Benchu and the three towns (more on this later).⁷³

Logging operations were labor-intensive and technologically sophisticated. Hired workers conducted the felling and carried the logs out of the mountains. It was sometimes necessary to build trestles and slipways in rough terrain to bring the logs to the water. A system of cable logging was used on exceedingly steep slopes, which consisted of a capstan device

⁷² For profit division contracts that mentioned trees sold to be felled by the buyer, see JYZ 461 and 572.

For Huizhou merchants’ *pinmai* in Anhui and Zhejiang, see Zhang Haipeng and Wang Tingyuan, *Ming Qing Huishang ziliao*, 181; McDermott, *The Making of a New Rural Order in South China*, 427.

⁷³ Guizhou sheng bianji zu, *Dongzu shehui lishi diaocha*, 29–30.

turned by oxen or dozens of men.⁷⁴ Many local peasants participated in this seasonal occupation and formed labor organizations of dozens or even more than 100 people. The head of such groups, called *gongtou* 工頭, negotiated contracts with the timber merchants.

Once at the river, bamboo hawsers were used to bunch the logs to form a triangular-shaped raft. The hawsers were also passed through holes drilled at the bottom of the logs to add rigidity. As the rafts travelled downstream and entered the major river system, they would be joined together to form huge floating platforms.⁷⁵ The biggest rafts traveled in the Yangzi River, which amazed many foreign visitors in the late nineteenth and early twentieth century, including Robert Dollar, a timber magnate in California who also set up businesses in Shanghai. The Yangzi rafts could be more than 100 feet wide, about 400 feet long, six feet above the water, and eight feet under. Shelters were built on the surfaces of the rafts for the crew of more than 100 people to live in, who even grew vegetables and kept pigs. Dollar remarked that the mass of timber in a Yangzi raft far exceeded what he had seen in his early-life experience of rafting timber in Canada.⁷⁶

Two common problems in the floating of timber rafts were the contest over the passage of timber and the redemption of lost logs, as both involved bitter negotiations with the inhabitants of the river valleys. As seen elsewhere in China, the mutual agreements derived from

⁷⁴ Menzies, *Forest and Land Management*, 112; Guizhou sheng bianji zu, *Dongzu shehui lishi diaocha*, 87–89.

⁷⁵ Menzies, “Forestry,” 640–41.

⁷⁶ Robert Dollar, *Memoirs of Robert Dollar* (San Francisco: privately published by W.S. Van Cott & Co., 1921), 72.

such negotiations were often inscribed on stone steles. In 1789, the villagers of Diya complained that the timber dealers were careless when passing through their dams and broke the irrigation system. The villagers and timber merchants reached the common agreement that the merchants had to hire porters from this village to transport the logs through a designated segment of the river; outside labors were not allowed. If the dam was damaged in any way in the process, the timber merchants should pay for the repairs. In effect, the villagers took advantage of their location and monopolized the labor supply for this section of the river.⁷⁷ Such agreements seemed to be common in the communities along timber passage routes. Local history from Jianghua, Hunan included similar complaints by villagers and the collection of “dam fees” on passing rafts.⁷⁸

The other contested issue was about the redemption fees for the logs that drifted away in stormy waves and got pulled up by local villagers. Some villagers just concealed the logs for their own use or took the opportunity to ask for very high compensations from the merchants. In 1828, the local magistrate granted the petition of the timber merchants and erected a stele in Liangjiang Village that specified the redemption prices for logs of varying sizes, ranging from 0.4 to 1.5 taels per log, and recognized the brand marks carved at the base of the logs as evidence

⁷⁷ “Diya jin bei”地芽禁碑 in *Jinping xian difangzhi bianzuan weiyuan hui*, *Jinping xianzhi*, 2:1513–14.

Similarly, the villagers of Guisai demanded that porters of timber logs should stay off their rice paddies, “Guisai jinbei”圭腮禁碑 in *Ibid.* at 1514, 2.

⁷⁸ Menzies, “Forestry,” 642–43.

of the merchants' legal ownership.⁷⁹ A similar stele from 1880 was found in Wangzhai, the local timber market, which forbade the villagers from destroying the brand marks and set the redemption price at 1,000 *wen* of bronze coins per *Longquan liang* of timber. Timber merchants and the village *baojia* heads should together examine the brand marks and supervise the measurement of the logs. If the merchants failed to claim the logs within 40 days, the villager could freely dispose of them.⁸⁰

The first major market that these timber rafts hit would be the timber market close to the county border of Tianzhu and Jinping, which featured three towns (Wangzhai 王寨, Guazhi 掛治, and Maoping 茅坪) having the exclusive right to take annual turns to open brokerages and mediate trade between Miao sellers and long-distance merchants who came afar to make purchases. We will return to examine this three-town rotating monopoly system at the end of Chapter 4, after taking a general survey of the empire-wide licensed brokerage system and its institution in the timber trade, which will give us the perspective needed to appreciate the peculiarities of the three-town system in its frontier setting.

Comparison to Timberland Practices in the “Old South”

The strategies of the mountain land management found in the Qingshui River Valley in the eighteenth and nineteenth centuries resembled remarkably the patterns seen in the forested mountains of Southern Anhui since the fifteenth century, an area where trade in timber began to

⁷⁹ “Liangjiang mucai piaoliu shuqu bei” 亮江木材漂流贖取碑 in *Jinping xian difangzhi bianzuan weiyuan hui*, *Jinping xianzhi*, 2:1514–15.

⁸⁰ “Wangzhai piaoliu mucai qingshu bei” 王寨漂流木材清贖碑 *Ibid.* at 1517–18, 2.

be an important source of income from as early as the thirteenth century. Contracts for mountain land tenancy and transactions found in Southern Anhui and Southeastern Guizhou shared more common features with each other than with contracts of agriculture land in their respective region. The comparative analysis in this part demonstrates the common economic logic in forestry practices, despite their differences in managing agricultural land, local customs, ethnic composition, and governance policies.

In Huizhou, terms used in the mountain land contracts from the early Ming already revealed a distinction between topsoil and subsoil. Granting of “work portions,” that is, tenancy shares, to tenants of forested mountain became clearly evident by the 1450s. It was from the latter half of the fifteenth century, when the cities and towns of the Lower Yangzi were entering into an extended period of secular growth, that the intensive commercialization of Huizhou’s timber production became widespread, which required constant efforts into the maintenance and replacement of tree stocks.⁸¹ Practices similar to those in the eighteenth- and nineteenth-century Qingshui River Valley—the sale of shares during a stand of trees’ growth, tenants’ transfer of their shares entailed by cultivation rights, clarification of shares among co-owners—have been evident in Huizhou since the fifteenth century.⁸² Contracts from both Huizhou and Guizhou’s forested mountains can potentially be analyzed as representative samples of a common economic logic in forestry practices in various parts of China.

⁸¹ McDermott, *The Making of a New Rural Order in South China*, 382–83.

⁸² *Ibid.* at 370–73.

An important difference between Huizhou and the Qingshui Valley seems to be the role of lineages.⁸³ Existing lineage trusts in Huizhou took the opportunity of the Yuan-Ming transition in the fourteenth century to expand the trusts' landholdings, and endeavored thereafter to prevent alienation of the trusts' property by its members, though with mixed rates of success. The Doushan Trust of the Chengs was illustrative of the agenda of Huizhou lineages. In the early fifteenth century, the Doushan trust possessed clear and uncontested claims of full ownership over its listed properties, acquired during the extensive depopulation and destruction of land records during the Yuan-Ming transition. The trust endeavored to guard its whole property rights over mountain land by barring the members of the trust from privately purchasing work portions from the trust's tenants and thereby pocketing extra profit for themselves. The trust's 1547 pact called for the purchase back of all the tenancy shares of the trust's mountain property. By the end of the sixteenth century, the Doushan trust's purchases and holdings leaned even more towards land and tenancy shares, eventually rendering its principle of inalienability of its holdings untenable.⁸⁴ By the end of the sixteenth century, even with the stronger presence of lineages in Huizhou, the fragmentation of mountain ownership and tenancy rights into alienable shares compromises past claims of strong lineage control of Huizhou's forested mountains, despite some lineages' rhetorical claims of extensive ownership.⁸⁵

⁸³ For a comparison between the timberland practices in Guizhou and Huizhou, see Kishimoto Mio,

“Kishū no sanrin keiyaku monjo.”

⁸⁴ McDermott, *The Making of a New Rural Order in South China*, 374–76.

⁸⁵ *Ibid.* at 418.

In the lower Qingshui Valley, by contrast, the lineages in the eighteenth century were never active holders of mountain land properties. As mentioned before, some primitive form of lineage trusts existed. Small private trusts were established by groups of kinsmen engaged in mountain land holdings and money-lending, and some used the income for group sacrifices, but they by no means covered the whole lineage. Trusts established by kinsmen for ancestral sacrifice were just one kind of many private trusts founded by kin or non-kin to finance various religious activities or simply to make profit for shareholders. When these organizational investors came into the game, securitized shares were already the norm in the Qingshui Valley. So from the beginning, the holdings of private trusts took the form of parcelized shares rather than extensive whole property rights, which was different from the powerful fifteenth-century lineage trusts in Huizhou.

Other differences between the contracts from Huizhou and the Qingshui Valley reflect the different extent to which state apparatus had penetrated into the local rural society.⁸⁶ In Huizhou, from the Song if not earlier, taxation on mountain land was assessed as distinct categories from dry land and paddy fields.⁸⁷ In the first half of the Ming Dynasty, mountain land sales increasingly drew on early Ming cadastral surveys for information on the land's location, type, identification number, and boundaries. Many of the contracts found in Huizhou were official contracts with red seals, with tax quota of the land in question specified in the context.⁸⁸

⁸⁶ Kishimoto Mio, "Kishū no sanrin keiyaku monjo," 181–88.

⁸⁷ Luo Yuan, *Chunxi Xin'an zhi*, 3.4b.

⁸⁸ The pattern can be easily seen in the table catalogue of Ming mountain land contracts in *Zhongguo shehui kexue yuan lishi yanjiu suo* 中国社会科学院历史研究所, *Ming Qing Huizhou shehui jingji*

However, reference to official registration and tax payment records could play a dubious role in clarifying ownership rights in cases of disputes, as later fish-scale registers failed to update actual transfers of ownership. In effort to offset the confusion from official registers, owners and buyers were prompted to include even more details in their sale contracts as evidenced by the increasing specifications of the type, age, size, purpose, and location of purchased trees in land sale contracts of the sixteenth century.⁸⁹ In the Qingshui Valley, although transfers of tax payment responsibilities were occasionally mentioned in the sale contracts of agricultural land, no reference to taxation was founded in mountain land contracts.⁹⁰ There is no evidence of land identification numbers generated from cadastral surveys for either mountain land or agricultural land.

While timberland contracts to the scale of Huizhou and the Lower Qingshui collections haven't been found in other locations, similar forestry management practices in many timber-producing regions in south China can be glimpsed from the late Qing and Republican

ziliao congbian di er ji: Zhongguo shehui kexue yuan lishi yanjiu suo cang Song Yuan Ming sandai Huizhou tudi maimai wenqi jiyao 明清徽州社會經濟資料叢編第二集:中國社會科學院歷史研究所藏宋元明三代徽州土地賣賣文契輯要 [The Second Collation of Social and Economic Materials from Ming-Qing Huizhou] (Beijing: Zhongguo shehui kexue chubanshe, 1988), 561–610.

⁸⁹ McDermott, *The Making of a New Rural Order in South China*, 387–89; Cheng Zeshi, *Qingshui Jiang wenshu zhi fayi chutan*, 59–67.

⁹⁰ For an example of taxation responsibility being transferred together with agricultural land, see JYZ 47.

investigations on local customs.⁹¹ Evidence from Zhejiang, Anhui, Fujian, and Hunan suggest that the legal title of the land and the standing trees were established as separate rights and could be traded in shares independently. Planters' share could range from 20% to 80%, depending on the conditions of the land and other arrangements, such as whether annual rent would be paid to the landowners.

In terms of lineage powers and the state's presence, it seems that the cases of Huizhou and the Lower Qingshui were at two extremes. When commercialized tree planting started to take off in Huizhou, it happened within the contours of established lineage authorities and existing taxation frameworks of the state. The Lower Qingshui, on the other hand, quickly developed its timber industry in response to the opening of the market and readily adopted a set of matured contractual practices before kinship organizations, which were also a new introduction, took control over the local economic resources. The Lower Qingshui area enjoyed the second-mover advantage and a space of development free from the shackles of vested interests. Other timber-producing regions in south China seem to be somewhere in between. In southern Jiangxi, for example, while some lineages claimed common assets through genealogies, their dominance was far less than in Huizhou and private ownership substantiated by contracts was common.⁹²

⁹¹ Qian Nanjing guomin zhengfu sifa xingzheng bu 前南京國民政府司法行政部, *Minshi xiguan diaocha baogao lu* 民事習慣調查報告錄 [Collection of Reports of Custom Surveys on Civil Matters] (Beijing: Zhongguo zhengfa daxue chuban she, 2000).

⁹² Ibid. at 247.

Conclusion

During the eighteenth century, the development of the timber industry in the Miao territories was greatly facilitated by improved water transportation, in-migration, and market integration. Timber produced in the Miao frontier became increasingly important in satisfying the demand for construction materials in the Middle and Lower Yangzi regions. The timberlands practices found in the Lower Qingshui Area and south China in general seem to represent a common set of approach to long-term investments, as seen in the contractual practices in the Zigong salt industry and the fishing rights on the Poyang Lake.⁹³ These investments all require a certain level of economy of scale, because physical divisions would be difficult and inefficient. The shareholding structures in these industries were more closely related to the commercial sector than the agricultural sector. It will generate useful insights on Chinese business traditions by examining the shareholding partnerships that were commonly adopted by Chinese firms through the same lens.

The economic analysis on transactions of timberland properties can also provide some perspectives on the issue of environmental stability/degradation. In core-periphery theory, market integration between the core and periphery led to the exploitation of natural resources in

⁹³ Madeleine Zelin, *The Merchants of Zigong: Industrial Entrepreneurship in Early Modern China* (New York: Columbia University Press, 2005); Liu Shigu 刘诗古, “Ming mo yijiang Poyang Hu diqu ‘shuimian quan’ zhi fenhua yu zhuanrang: yi ‘mai hu qi’ he ‘zhu hu zi’ wei zhongxin” 明末以降鄱阳湖地区“水面权”之分化与转让——以“卖湖契”和“租湖字”为中心 [Division and Transferal of Rights over the Poyang Lake since Late Ming: A Study Centered on Sale and Lease Contracts], *Qingshi yanjiu* 清史研究, no. 3 (2015): 60–73.

peripheral lands to benefit the center. For forest resources, this can lead to “forest mining” where logging or clearance is not followed by sustainable management to renew the resources. The case of the Lower Qingshui Valley shows that the general depletion of natural forests in Guizhou notwithstanding, in some scenarios strong market demand could also motivate long-term labor and capital input into reforestation. High demand, low transportation cost, closeness to markets, and the unsuitability of the land for the cultivation of higher-value grain or cash crops all provided the necessary conditions for tree farming in the Lower Qingshui Valley. Market integration further encouraged specialization in tree cultivation in the local economy by ensuring access to other consumption goods from the market.

Another line of literature stresses the importance of well-defined private rights to forest land and forest products, the lack of which leads to exploitation rather than management. In this argument, the importance of a proper property right regime to sustainable development was seen through the angle of “externality,” an idea popularized by the classical work of Garrett Hardin on “the tragedy of commons,” that shared and unregulated resources tend to be over-exploited.⁹⁴ The solution to the “tragedy,” as the theory has it, lies in clearly delineated private ownership and/or effective regulation by state or community.⁹⁵ It could be argued that the well-defined private property by written contracts in the Lower Qingshui Valley helped restrain over-exploitation of forest resources.

⁹⁴ Garrett Hardin, “The Tragedy of the Commons,” *Science, New Series* 162, no. 3859 (1968): 1243–48.

⁹⁵ Elinor Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action* (Cambridge, UK: Cambridge University Press, 1990).

Yet still, the delineation and protection of private property alone was not enough to foster the plantation of timber trees. Large-scale tree cultivation would not be plausible if individual cultivators had to deal with the 30-year waiting time before harvesting. This leads to an aspect of property rights-related environmental practice that has yet to be fully examined. The key was a property rights framework that was compatible with the long-term commitment required by tree cultivation. As this study shows, the liquidity problem associated with the long-term nature of tree growth was solved through the division and securitization of landownership and tenancy rights in the Lower Qingshui Valley. Such practices proved successful in promoting commercialized reforestation in a rural household-based economy.

Chapter 4. Timber Brokerages and the Eighteenth-Century Market Management

This chapter first traces the long-term trends in the market management strategies adopted by the Chinese state during the second millennium of the Common Era. It asserts the general tendency of the state's withdrawal from direct commercial taxation and bureaucratic control over local marketplaces between the thirteenth century and the mid-nineteenth century. The late imperial state developed increasing reliance on indirect market controls through such intermediators as registered *hang* organizations, licensed brokers, and merchant guilds. Central-level reforms in the first century of Qing rule established the legal and administrative foundations for licensed brokers to perform the dual tasks of economic intermediation between traders and administrative intermediation between the state and the market.

After discussing the rationale of these regulatory measures, I will turn to the everyday business practices of licensed timber brokerages and their cohabitation with other economic intermediaries that had varying degrees of legality. In addition to their role in matchmaking, I will pay special attention to the financial functions of the timber brokerages, which facilitated the flow of credit from urban centers to rural suppliers. The last section of this chapter also examines the variations of the licensed brokerage system in the Miao territories, showcasing the interplays between the state's aim at social stability and different local agents' economic pursuit in the frontier setting.

Long-term Trends in Late Imperial Market Management

The Tang dynasty (618-907) was the last to have exert directed bureaucratic control over a strictly regulated market system. Official market inspectors (*shiling* 市令) presided over

designated areas within walled cities, who were responsible for registering shops, regulating measures and prices, monitoring the quality of commodities, and allocating levies of goods or labor services among the merchants as the state's demands arose. Merchants and artisans occupied a specialized category within the household registration system. A Tang marketplace mapped its economic and administrative functions to the physical space. Specific wards (*fang* 坊) of the empire's capital, prefectural, and county cities were designated as marketplaces (*shi* 市). Within such a marketplace, each row (*hang* 行) of stalls was grouped by a particular trade. The lead merchant of each trade, known as the *hang* head (*hangtou* 行頭), was the correspondent answerable to official market inspectors.¹

The Tang ideal of regulated markets was sustained early during the dynasty partly because trade at that time remained largely concentrated at administrative centers, the lowest level being county seats. The medieval commercial revolution since the mid-eighth century started to transform the morphology of cities and towns. The confinement of commerce to segregated wards began to collapse in the late Tang and disappeared altogether in the Song (960-1276). Marketplaces and fairs mushroomed within and outside city walls; periodic markets sprang up in the countryside as well. Although official surveillance and ward boundaries withered, merchants in the same trade often clustered together, creating specialized marketplaces

¹ Denis Crispin Twitchett, "The T'ang Market System," *Asia Major* 12, no. 2 (1966): 202-48; Mann, *Local Merchants*, 32-33.

in cities and towns.² From the late Tang to early Ming, the state no longer imposed physical restrictions on commerce, but chose to maintain registrations of large merchants in each trade to facilitate official procurement of goods and services. Merchants so registered were to “shoulder the *hang* duties” (*danghang* 當行). A *hang* (commonly known as *tuanhang* 團行 during the Song and *puhang* 鋪行 during the Ming) was no longer attached to a physical row of stalls, but gradually came to signify the state-designated organization of merchants who participated in the same trade or simply to refer to occupation in a certain trade. *Hang* leaders were delegated the task of maintaining market order, facilitating the collection of commercial taxes, and allocating the quota of state purchases among the now more dispersed merchants.³

In addition to its control over merchant communities through the *hang* registration, the Song state also developed a nationwide web of commercial tax offices (*shangshui wu* 商稅務). In 1077, there were 2,060 tax stations collecting transit taxes and excise, a level that was not surpassed in the post-Song era until the mid-nineteenth century. Non-agriculture taxation

² Mann, *Local Merchants*, 33; Richard von Glahn, *The Economic History of China: From Antiquity to the Nineteenth Century* (Cambridge, United Kingdom ; New York: Cambridge University Press, 2016), 216.

³ Ch’iu Pengsheng 邱澎生, “you shili lüli yanbian kan ming qing zhengfu dui shichangde falü guifan” 由市廛律例演變看明清政府對市場的法律規範 [Examining Legal Regulations on Market Based on Changes in Market-Related Laws and Precedents during the Ming-Qing Period], in *Dang falü yushang jingji: Ming Qing zhongguo de shangye falü* 當法律遇上經濟: 明清中國的商業法律 (Taipei: Wunan tushu, 2008).

contributed more than two thirds to the national fiscal income.⁴ While the Tang market system combined regulation, official procurement, and taxation functions in the official market inspector who presided over an enclosed marketplace, the Song state generally separated these functions into the *hang* organizations that mediated market regulation and official purchases and the commercial tax offices that directly taxed trade.

The Song institution of commercial tax offices was inherited in the early Ming, known as *shuikē sì/jū* 稅課司/局. Yet there was a sharp decline in their number. In the early Ming, about 380 tax stations were established at the prefectural and county level. Over the course of the dynasty, unprofitable stations were abolished or merged into larger ones, leaving 125 stations in 1585, a mere 6 percent of the number that existed in 1077.⁵ Accompanying the decline in the amount of commercial taxes collected from such local-level stations, a dozen of domestic customs stations that taxed long-distance trade along main river systems became the more important contributor to the Ming state's commercial tax income. After their first establishment in 1419, known as *chaoguan* 鈔關, the number and locations of the customs stations underwent frequent adjustments before they became relatively stable after the 1510s, primarily featuring the six stations along the Grand Canal and one on the Yangzi River. The decline of local commercial tax in the state's formal fiscal income and the rising importance of transit tax collected at domestic customs continued into the Qing, when local-level tax offices were virtually non-existent and the number of domestic customs increased to its stable level at about two dozen. So

⁴ William Guanglin Liu, "The Making of a Fiscal State in Song China, 960-1279," *The Economic History Review* 68, no. 1 (February 2015): 64.

⁵ Li Dongyang, *Da Ming huidian*, vol. 35; Liu, "The Making of a Fiscal State," 64.

the Ming-Qing state concentrated its capacity of direct commercial taxation at a few number of customs stations located at important crossroads of interregional trade, while choosing to forgo direct control over the more local-level small-scale commercial exchanges.

Meanwhile, as trade activities expanded beyond confined spaces and officials' vigilant regulations since the late Tang, intermediation by brokers became crucial for trades between strangers. During the Song, increasingly specialized brokers (*yaren* 牙人, *shikuai* 市儈, *zangkuai* 𨾏儈) offered intermediation services in matching sellers and buyers, negotiating prices, notarizing contracts, acting as guarantors, hiring labors, and providing lodging and storages.⁶ In addition to its reliance on the *hang* organizations, the Song state also inaugurated the practice of using the brokers as intermediaries to tax commerce and regulate the circulation of goods. Over the course of the Song dynasty brokers became more tightly regulated by the state, especially as proprietary trading of the brokers threatened to exert monopolistic leverages on the market and disturb free trade.⁷ Some Song-Yuan local magistrates experimented with officially registering brokers and issuing license plaques, whereby licensed brokers verified the legality of contracts, promoted the circulation of commodities, and forwarded sales taxes to the local government.⁸

The licensed brokerage system became incorporated into the Great Ming Code as a nationwide ordinance in 1397. The early Ming addition of an article on “illicit undertaking of

⁶ Shiba Yoshinobu, *Commerce and Society in Sung China*, 165–73.

⁷ Li Weiguo 李伟国, “Songdai jingji shenghuo zhongde shikuai” 宋代经济生活中的市儈 [Market Intermediaries in the Economic Life of Song Dynasty], *Lishi yanjiu* 历史研究, no. 2 (1992): 110–24; von Glahn, *The Economic History of China*, 268.

⁸ Ch'iu Pengsheng, “you shili lüli yanbian kan ming qing zhengfu dui shichangde falü guifan,” 14.

brokerages and harbormaster offices” (*sichong yahang butou* 私充牙行埠頭) and other alterations of the inherited Tang articles in the market regulation section of its legal code signified the importance of licensed brokers in the Ming state’s management of the market system. The Ming law explicitly forbade unlicensed brokers from interfering in the market and bestowed upon the licensed brokers with all of the functions of facilitating exchange, registering deals, and monitoring the movement of goods and individuals.⁹ Although references to “official and private brokers” (*guan si yaren* 官私牙人) also appeared in Song dynasty materials, it is important to notice that the connotations were significantly different from the licensed brokerage system of Ming-Qing times. During the Song, “official brokers” were those employed by the imperial household or state offices, such as the market-exchange agencies (*shiyi wu* 市易務) during the New-Policy era (approx. 1072-1085). “Private brokers”, used only as a juxtaposition to the officially employed brokers and seldom seen used alone, referred to the normal brokers that mediated private trades. In other words, during the Song, the majority of brokers were “private,” and being “private” did not mean illegal. By contrast, under the licensed brokerage system of Ming-Qing times, only officially licensed brokers were licit agents; “private brokers” referred to those unlicensed, thus illicit, brokers.¹⁰

⁹ Lei Menglin 雷夢麟, *Dulü suoyan* 讀律瑣言 (1557), reprinted and annotated by Huai Xiaofeng 怀效鋒 and Li Jun 李俊 (Beijing: Falü chubanshe, 2007), 200.

¹⁰ Miyazawa Tomoyuki 宮澤知之, “Sodai no gajin” 宋代の牙人 [Brokers in the Song Dynasty], *Toyoshi Kenkyu* 東洋史研究 39, no. 1 (1980): 8–9. For detailed analysis on the origin of the term “yaren” and differences between official and private brokers in Tang-Song times, see Kobayashi Takashi 小林高

As licensed brokers became official conduits of market information, official procurements of goods and labor services were also increasingly delegated to these brokers. On the other hand, the state's insistence on maintaining *hang* registrations for each trade became gradually relaxed, especially with the mid-Ming general reforms on *corvee* obligations (*yaoyi* 徭役) in both cities and the countryside (the *hang* merchants' obligation to supply the state with merchandise at officially designated prices was a kind of urban *corvee*). The process of abolishing mandatory *hang* obligations since the late Ming continued its course in the first few decades of the Qing. Stele records from Jiangsu show that official announcements to abolish mandatory *hang* duties for various occupations concentrated during the periods of the 1610s-1630s and 1670s-1690s, with noticeable abruptions during the dynastic transition. Trends in the lumber trade accorded with such general tendencies.¹¹ Towards the end of the seventeenth

四郎, "Tō Sō gajin ko" 唐宋牙人考 [A Study on the Tang-Song Brokers], *shigaku* 史學 8, no. 1 (1929): 53–69; Kobayashi Takashiro 小林高四郎, "Tō Sō gajin ko hosei" 唐宋牙人考補正 [Supplements to the Study on Tang-Song Brokers], *shigaku* 史學 8, no. 3 (1929): 165–67. Another view is that the difference between "official" and "private" brokers during the Song lay in whether written contracts and taxes were required for the deal in question, which was still divergent from the Ming-Qing usage. See Shiba Yoshinobu 斯波義信, *Sōdai shōgyō shi kenkyū* 宋代商業史研究 [Study on the Song Commercial History] (Tokyo: Kazama shobō, 1968), 392; Shiba Yoshinobu, *Commerce and Society in Sung China*, 165.

¹¹ For records related to the timber and bamboo business, see Suzhou lishi bowu guan, *Ming Qing Suzhou gongshang ye beike ji*, 106–20; Shanghai bowu guan 上海博物館, ed., *Shanghai beike ziliao xuanji* 上海碑刻資料選輯 (Shanghai: Remin chuban she, 1981), 105–12. Later sporadic occurrences of forced

century, “shouldering *hang* duties” (*danghang* 當行 or *dangguan* 當官) was no longer accepted as a justifiable excuse for local governments to tap resources from merchants, at least in the more developed markets of the empire. In the meantime, licensed brokerages replaced the state-mandated *hang* organizations as the primary channels for market management and official purchases.¹²

By the time the Qing state came to establish its rule, the late imperial market management system had already undergone two transitions: the Tong-Song transition from direct bureaucratic regulation over physically confined marketplaces to control and taxation through state-mandated *hang* organizations of merchants who conducted businesses over dispersed spaces, and the further transition to a system that centered on licensed brokerages as the liaison between state and market over the course of the Ming dynasty. The changing modes of governance in local market places reflected the long-term shift away from direct bureaucratic control to reliance on intermediaries for tax collection and market regulation in late imperial period. Another development since the late Ming was the emergence of spontaneous mercantile organizations in major cities and market towns that were organized based on common native places or occupations. The increasing prevalence and influence of such organizations over the

hang duties were uniformly abolished at the request of troubled merchants, with explicit reference to earlier precedents during the Kangxi’s reign. For example, see Suzhou lishi bowu guan, *Ming Qing Suzhou gongshang ye beike ji*, 76.

¹² For the rise of the licensed brokerage system and the withering of mandatory *hang* obligations over the course of the Ming dynasty, see Ch’iu Pengsheng, “you shili lüli yanbian kan ming qing zhengfu dui shichangde falü guifan.”

course of the eighteenth and nineteenth centuries accompanied yet another shift in the imperial market system: from a licensed-brokers-centered system to one in which spontaneous merchant organizations assessed themselves to “undertake tax responsibilities” and enjoyed significant autonomy for self-regulation (discussed in Chapter 5).

The Qing Licensed Brokerage System

The Qing state inherited and further formalized the licensed brokerage system (commonly known as *yahang* 牙行 during the Ming and the Qing). The principles of a nationwide system of *yahang* licensing, auditing, and renewing had been established. In 1686, the Kangxi Emperor decreed the quinquennial examination on brokers’ licenses and prohibited any attempt at illicit imposter, monopolizing market access, overcharging in name of taxation, or delaying payments to customers, with specified punishments for local officials found guilty of indulging such abuses.¹³ The eighteenth-century state understood *yahang* as the pivotal axis of market exchange as well as the hotbed of most of the problems in the market system. The High Qing system of market management aimed to achieve its goal of fair trade by focusing its policies on regulating the obtaining and operation of brokerage licenses.

Attention should be paid to the often divergent concerns of the central and local governments with regards to the revenue-generating aspect of the *yahang* system. From the

¹³ GX_HDSL, *juan* 106, 370-31. It was also added to the Qing code as a sub-statute in 1706. See Xue Yunsheng 薛允升, *Du lü cunyi* 讀律存疑 (1905) [Notes from Reading the Qing Code], Punctuated and edited by Huang Tshing-chia 黃靜嘉 (Taipei: Chinese materials and research aids service center, 1970), 406.

central state's perspective, the brokerages' taxation function was almost negligible. Brokers paid a nominal annual fee, a mere 1.5 to 2 taels on average, for the licenses (*yatie* 牙贴), which authorized them to mediate deals in the specified commodity. Brokers charged commission fees of 3-5% of the value of merchandise from the deals they mediated, which was divided between the buying and selling side by different portions according to the industry. For a few kinds of transactions, notably livestock and real estate, brokers assessed taxes from the traders in addition to the commission fees, which were to be remitted to the local government. Each county had a quota, usually no more than a few hundred taels annually, for such miscellaneous taxes. The local licensed brokers were required to remit taxes only up to the amount of the quota. The total amount of license fees (96,386 taels in 1724) and the little miscellaneous taxes collected through the brokers (approx.134,092 taels) were all that ever entered the official account of national finance (0.6% of the total fiscal income of that year).¹⁴ The total of all miscellaneous taxes, which included brokerage fees in addition to exercises on special commodities, pawnshop taxes, and other Board-approved localized incomes that might or might not have been collected through licensed brokers, took up 7.3% of the total fiscal income of the realm in 1753.¹⁵ Such was the extent of the revenues generated by the brokerage system that was known (but not necessarily remitted) to the central state.

¹⁴ Such revenues from each province in 1724 were reported in *YZ_HD*, *juan* 53.

¹⁵ *QL_HDZL*, *juan* 50.

Table 10 Brokerage License Fees by Province

Brokerage License Fees 牙帖稅 (in silver taels)		1685	1724	1753	1899
Zhili	直隸	10,729	13,390	17,549	18,047
Guangdong	廣東	2,152	48,961	17,847	17,847
Jiangsu	江蘇	9,316	6,775	11,130	11,559
Shangxi	山西	7,015	6,395	9,088	9,111
Anhui	安徽	5,394	3,460	8,031	8,444
Shandong	山東	6,407	1,716	6,493	18,422
Jiangxi	江西	2,611	3,082	5,043	5,206
Zhejiang	浙江	4,327	2,791	4,528	4,518
Hubei	湖北	7,344	999	2,776	5,937
Fujian	福建	5,226	2,683	2,721	2,721
Shengjīng	奉天	233	466	2,501	1,928
Henan	河南	7,488	2,180	2,179	60413*
Shaanxi	陝西	2,305	1,721	1,665	1,765
Sichuan	四川	200	357	1,170	1,486
Hunan	湖南	738	743	1,035	1,045
Gansu	甘肅	1,188	509	760	752
Guizhou	貴州	151	159	514	572
Guangxi	廣西	101	N/A	N/A	50
Yunnan	雲南	N/A	N/A	N/A	386
Total License Fees		72,822	96,386	95,028	109,357
		0.23%	0.27%	0.23%	0.11%
Total Fiscal Income		31,230,000	35,850,000	40,690,000	101,560,000

Sources: KX_HD, juan 35; YZ_HD, juan 53; QL_HDZL, juan 50; GX_HDSL, juan 245; Shen Xuefeng, “Qingdai Caizheng Shouru.”
 *: this curious sharp jump in Henan's brokerage fees was unexplained in the *Collected Statutes*. Could be a typo in the source.

By contrast, additional revenues from the brokerage system were crucial for local magistrates and sub-bureaucratic personnel, who were caught between demanding administrative responsibilities and chronic shortages of fiscal resources. They found partial relief in the supplementary income made from issuing more licenses, attaching unreported levies to license

fees, and raising extra taxes from commercial activities through the licensed brokers.¹⁶ Brokers specialized in certain trades were also ready intermediaries to help local *yamen* acquire those goods and services, usually with only a gesture of payment.

Such demands of the local *yamen* necessitated the brokers' need to add surcharges to the deals through their hands, which often, if not always, overcompensated to varying degrees. These extra charges in addition to the normal commission fees marginally reduced the attractiveness of licensed brokers as economic intermediaries as compared to those deal makers who worked in the shadows of legality. Often seen in stele materials and county *yamen* archives are licensed brokers' petitions to local magistrates to prohibit the latter's activities in the name of "ensuring the fulfillment of our responsibilities to the *yamen*".¹⁷ As the previously mentioned decree of the Kangxi Emperor signified, the central state's ban on unlicensed brokers originated from the concern on market order. It was meant to target unscrupulous imposters who might purposefully deceit traders for profit or lacked the financial resources to make up for the deals that went bad. On the other hand, local officials' actual enforcement of this ban was often motivated by the bound interests of *yamen* finance to the privilege of licensed brokers. Local magistrates not only had incentives to force illicit brokers to obtain licenses, but also to introduce brokerage licenses to industries for which licenses had not been required previously. Therefore, a policy that was intended to warrant the qualifications of market participants was implemented as

¹⁶ Mann, *Local Merchants*, 43–44.

¹⁷ For the example of the Suzhou Xunzheng 巽正 Association, see Suzhou lishi bowu guan, *Ming Qing Suzhou gongshang ye beike ji*, 124–25.

a shielder of vested interest and raised the cost of market participation. As the Yongzheng Emperor lamented:

Of late, We have learned that the brokerage licenses of every province have been increasing yearly. In the marketplaces, small-time peddlers of miscellaneous goods have always been transacting without the mediation of brokers. But now, even they have been issued licenses. Wicked brokers then rely on the licenses as excuses to coerce others to trade through them and extract percentages of profit from these deals. For each additional brokerage license issued to the marketplace, merchants and consumers are burdened with additional hardship. This is quite the opposite of the policy's original intention to keep fair prices and facilitate commerce.¹⁸

近聞各省牙帖、歲有增添。即如各集場中、有雜貨小販、向來無藉牙行者、今繫行給帖。而市井姦牙、遂恃此把持、抽分利息。是集場多一牙戶、商民即多一苦累。甚非平價通商之本意。

In view of such problems, the Yongzheng Emperor moved to reform the brokerage system to strengthen centralized control, accompanying his general package of fiscal reforms to

¹⁸ YZSL, year 11, month 10, day 6 (*jiayin*).

consolidate and supervise local government finance.¹⁹ In the same 1733 edict as the one quoted above, county-level magistrates were deprived of the authority to issue brokerage licenses, which was transferred to provincial administrative commissioners. Provincial officials were ordered to conduct a survey on the number of existing brokerage licenses, based on which adjustments could be made according to local conditions to set a fixed quota. Once the fixed numbers were reported to the Board of Revenue, additions should not be made arbitrarily. In fact, new licenses should be only issued when a new marketplace was opened, with the appropriate number of licenses reported to the Board for review. Other than that, the management of the brokerage system centered on monitoring the retirement and reissuance of existing licenses. By limiting the number of licensed brokers, the emperor hoped to spare the small-time traders the extortions of brokers.²⁰

Following the 1733 assertion of provincial control over license issuance, a series of regulations about the *yahang* system were put forward in the next decade to further restrain local officials and privileged groups from maneuvering the *yahang* system for profit. Local *yamen* offices were ordered to purchase goods of public or private needs at market prices and prohibited from extracting supplies through licensed brokers without compensation.²¹ *Yamen* employees and

¹⁹ For the Yongzheng era fiscal rationalization, see Madeleine Zelin, *The Magistrate's Tael* :

Rationalizing Fiscal Reform in Eighteenth-Century Ch`ing China (Berkeley: University of California Press, 1984).

²⁰ YZSL, year 11, month 10, day 6 (*jiayin*). The law was reinforced by the Qianlong Emperor when he noticed the resurgence of newly issued licenses by county officials in Jiangsu in 1739. See QLSL, year 4, month 6, day 22 (*dingyou*).

²¹ Xue Yunsheng, *Du lü cunyi*, 412–13.

imperial degree holders, who might use their formal or informal privileges to bully others and interfere with fair trade, were forbidden from taking up brokerage licenses.²² “Those undertaking a brokerage license must have a considerable estate and commoner status”, so that they could conduct business with others as equals and had enough resources to facilitate the resolution of disputes should the deal went bad.²³

The reforms produced mixed results in the decades that followed. The regulation with the most long-lasting impact was the strict quota system on brokerage licenses. Its direct administrative objective of curtailing the local bureaucrats’ extortions from over issuing licenses seemed to be effective. Between the 1730s and the end of the dynasty, there was only one occasion of widespread adjustments on license quotas during the recovery years after the pacification of the Taiping Rebellion in the 1860s. The rigid quota system could hardly keep up with changes in trade volumes of different commodities and market sizes. In declining trades, licenses could not all be issued for want of applicants. For those trades that only emerged in a market after the fixation of quota, there were no licenses to accommodate the market need for intermediaries. In such cases, many local officials have acquiesced to the operation of private brokers, who were usually called *jingji* 經紀. In Hunan, *jingji* had become the term for

²² The restrictions on yamen employees and degree holders were issued in 1740 and 1743, respectively.

See QLSL, year 5, month 9, day 10 (*wuyin*); year 8, month 6, day 28 (*jimao*).

²³ *Ibid.*

unlicensed yet locally permitted brokers. Some county magistrates even set quotas for the number of *jingji* in addition to the central quota on *yahang*.²⁴

Another goal of the reform, to prohibit local *yamen* offices from arbitrarily extracting resources through licensed brokers, had only limited success. Outright extortions without any compensations seemed to have been curtailed. Yet scheduled supplies to local *yamen* offices were rigid obligations that hardly allowed flexibility in quantities or adjustment in prices even under extreme market conditions. For example, in 1799, licensed timber brokers petitioned to the Baxian magistrate that because of the disturbance of the White Lotus rebellion, timber supplies to Chongqing were cut off –the Yu Guan Customs only collected one tenth of its normal timber taxes – and timber trade within the city had come to a standstill. They requested to postpone the obligated supplies to the Baxian *yamen* offices, only to be rejected by the magistrate even though their appeal to the Chongqing prefect earned some sympathy.²⁵

The reforms on the licensed brokerage in the first half of the eighteenth century aimed to preserve the integrity of the market space from excessive interferences of the local administrative framework and bestowed upon individual licensed brokers the responsibility to promote unhindered market exchange according to economic logics. With its mixed record of success and failure, these regulations set the foundational market principles for the next century or so, during

²⁴ Hunan sheng diaocha ju 湖南省调查局, *Hunan shangshi xiguan baogao shu (1911)* 湖南商事習慣報告書 [The Report on Business Customs in Hunan Province], annotated by Lao Bolin 勞柏林 (Changsha: Hunan jiaoyu chuban she, 2010), 117.

²⁵ BX 006-005-04602 (1799).

the period of which licensed brokers assumed the central positions in mediating non-local trade and participating in the resolution of commercial disputes in the local court system.²⁶

Timber Brokerage Licenses in Practice

Timber brokers were usually called *muhang* 木行 or *muya* 木牙. They usually opened simple lodges by the river to accommodate visiting sellers and buyers. Specialized timber brokerages only mediated transactions in return for commission fees and conducted no proprietary trading. But holders of brokerage licenses might well establish a separate trading firm to deal on their own accounts.²⁷

The numbers of brokerage licenses for each market were largely fixed after the 1730s. The only occasion of significant adjustment happened after the pacification of the Taiping Rebellion in the 1860s. Other than that, the number of timber brokerages underwent little change. There were fewer than ten timber brokerage licenses even for large timber markets such as Hangzhou and Chongqing and even fewer for smaller markets.²⁸ For the largest timber market at Nanjing, there was no definite information prior to the 1850s. When timber trade was

²⁶ For the role of licensed brokers in court adjudication of commercial cases in the city of Chongqing, see Dykstra, “Complicated Matters,” chap. 3.

²⁷ Dai Yuan, “Nanjing Shangxin He mucai maoyi zhuangkuang,” 237.

²⁸ Rigen Wang 王日根 and Xue Pengzhi 薛鹏志, eds., “Huishang gongsuo zhengxin lu” 徽商公所徵信錄 (1909) [Records of the Guild of Huizhou Merchants], in *Zhongguo huiguan zhi ziliao jicheng di yi ji* 中国会馆志资料集成第一辑, vol. 10 (Xiamen: Xiamen da xue chu ban she, 2013), 173–288; Dykstra, “Complicated Matters,” 143.

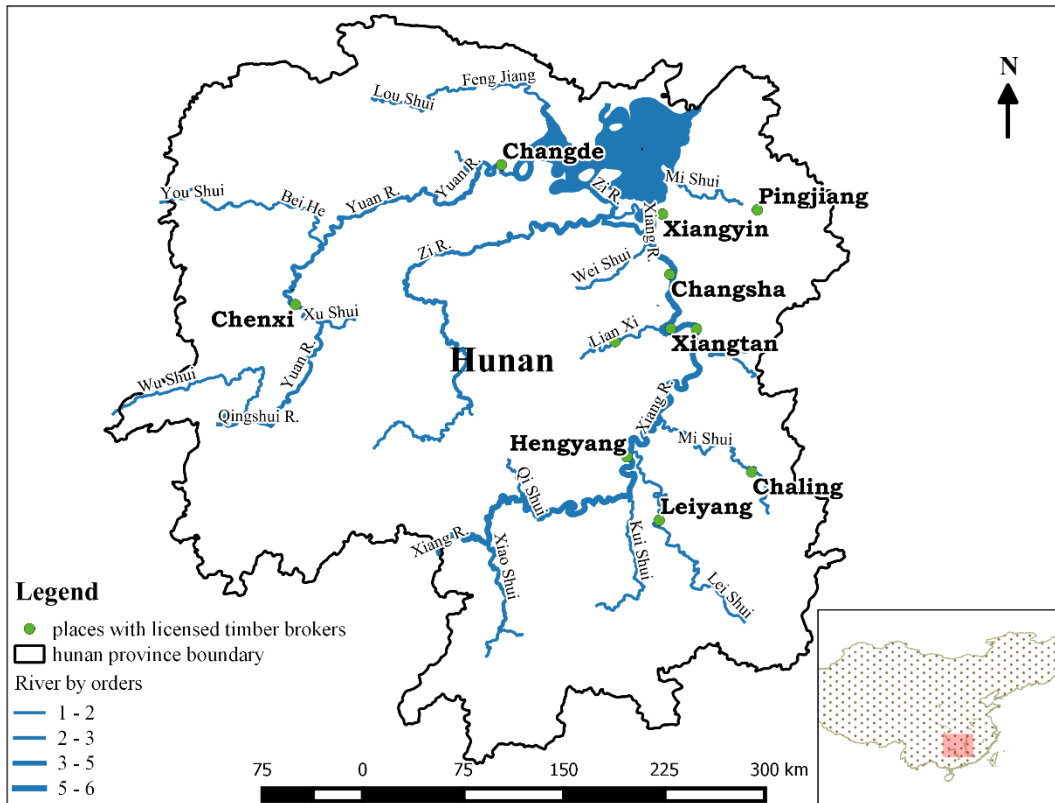
recovered in 1864, the number of timber brokers was set to forty.²⁹ In Hankou, until the end of the Qing, fifteen official brokerage licenses were obtained, of which thirteen were owned by Hubei locals, and two by Hunanese.³⁰ In Hunan, after a round of consolidation in 1861, the numbers of brokerage licenses for each commodity were re-fixed until the end of the dynasty. As a major timber-exporting province, timber and bamboo brokers, alongside those of grain, oil, and salt, were the most prevalent. As shown in Map 3, licenses of timber brokerages in Hunan were all distributed in cities along the Xiang and Yuan rivers and their tributaries, the main exporting routes for timber produced in eastern and western Hunan respectively.³¹

²⁹ Liu Peiliang and Fan Jingyu, “Nanjing shi mucai shikuang diaocha shang”; Wu Chuanjun, “Nanjing Shangxin He de mushi.”

Of the thirty-nine registered timber brokers in 1933, thirty-two were established during the Qing, within which about half were in the 1880s. The distribution of the founding time of the thirty-two brokers opened in the Qing was as follows: one in the 1860s, eight in the 1870s, fourteen in the 1880s, six in the 1890s, and three from 1909 to 1911. The other seven brokers were founded during the Republican period, only two during the 1910s and 1920s, and five from 1930 to 1933. Although information on the turnover of brokers is not available, but roughly speaking it seems that the number of timber brokers increased quickly during the 1870s and 1880s, then the increase slowed down. Brokers founded during the Qing had been quite stable until the 1930s. Nanjing shi difang zhi bianzuan weiyuan hui, *Nanjing wuzi zhi*, table 1-4.

³⁰ Chen Xing and Chen Lilian, “Hanyang Yingwu Zhou zhumu shichang shihua,” 127.

³¹ Timber brokerage licenses were issued in Changsha, Xiangyin, Xiangtan, Changde, Longyang, Hengzhou, Anxiang, Xiangxiang, Pingjiang, Chaling, Zhuzhou, Hengyang, Leiyang, and Chenxi. Hunan sheng diaocha ju, *Hunan shangshi xiguan baogao shu*, 108–9.



Distribution of Licensed Timber Brokerages in Hunan, 1861-1911 Created using China Historical GIS data in QGIS

Map 3 Distribution of Licensed Timber Brokerages in Hunan, 1861-1911

The official regulation required that a brokerage firm could only be opened by the registered bearer of the license and the transfer of ownership should not be handled privately. If a son of the deceased holder wanted to inherit the license, he should pay the name-change fee and formally register his own name with the local state. If the holder intended to forgo the license, it should be retired to the government and reissued to another qualified applicant. In practice,

however, leasing of brokerage licenses was very common, a practice known as *dingtie* 頂帖 or *xietie* 寫帖.³²

The evidence included in an 1804 case is illustrative of the complicated ownership and leasing practices on brokerage licenses.³³ The case involved five timber brokerage licenses.

According to a court mandated investigation, the following is the ownership situations:

Name on license: Zhou Tianshun, who was Zhou Shizhong's grandfather and passed away decades ago. Shizhong's uncle Zhou Chaoxiang and father Zhou Chaodian had successively inherited the brokerage business, both passed away.

Name on license: Song Dazhao, who was the father of Song Kehui.

Name on license: Wang Hongren, who was the father of Wang Shiao. Both (Song Kehui and Wang Hongren) had passed away years ago.

Name on license: Gong Kaihou, who had been dead for years. A *jiansheng* degree-holder, Chen Zhengshu, took over the license to open a brokerage.

(Name on license) Feng Zhaoyuan was a pseudonym representing three person: Feng Wanjin, Du Qizhao, and Liu Dianyuan. The fraud was reported by local and guest merchants to the yamen, so the name on the license was changed to Du Qizhao. Feng Shilin is the son of Feng Wanjin. Wanjin and others had all passed away. The license is now in the brokerage firm of Chen Zhengshu.

³² Ibid. at 109.

³³ BX 006-004-03018 (1804).

帖名周天順，乃周世忠祖父之名，已故數十年，伊伯父周朝相、伊父周朝典接開，俱故。

帖名宋大照乃宋克輝之父。

帖名王洪仁乃王世鰲之父。俱故有年。

帖名龔開厚多年故絕，帖系監生陳正書頂開。

查馮兆元即馮萬金、杜啟兆、劉殿元三姓串名，因本客具控捕府，帖更杜啟兆之名。馮世麟即馮萬金之子。萬金等俱故，帖存陳正書木行。

The licenses officially registered under the names of Zhou Tianshun, Song Dazhao, and Wang Hongren had been inherited by their sons or grandsons without going through the formal procedure of name changes. The license under the name “Feng Zhaoyuan” was co-owned by three persons, and “Feng Zhaoyuan” was a pseudonym grouped by one character from each of the three names. Once discovered by the authorities, the name on the license was officially changed to Du Qizhao, but the license was still co-owned by the three parties.

From this document and another co-signed petition by Zhou, Song, and Wang, it can be inferred that a *jiansheng* degree-holder, Chen Zhengshu, had come to take hold of all five licenses through leasing arrangements. To avoid the charge of illicit imposter, Chen and the five license-holding families claimed that Chen was hired to “help manage the business of the five brokerage firms” (*banghang* 幫行). The court dispute was started when Tian Jinbang 田金榜 claimed that he had lent money to the five original license holders in return for the right to use their licenses in 1778 and sued their offspring and Chen Zhengshu in court. The authenticity of the two contracts presented by Tian as evidence was challenged by the defendants and the case

file failed to provide information on how the dispute was judged in the end. Nevertheless, in terms of styles and formats, these contracts are still informative.

Signatories of borrowing contract: Wang Hongren, Feng Zhaoyuan, Song Dazhao, Zhou Tianshun, and Gong Kaihou. Because the construction project of the prefecture and county *yamen* offices (demanded contributions and we are in need of fund), we use two out of ten shares of our brokerage firms as collaterals to borrow 100 strings of bronze coins from Tian Jinbang through an intermediary, with which we will fulfill our *chai* obligations. We have made the clear decision on site that the borrowed amount should carry no interest, and (the collateral) bestows Tian the right to conduct brokerage business and demands no leasing fees. From this borrowing date onward, Tian is free to (use our licenses to) broker transactions between buyers and sellers. In the future, if Tian makes a fortune and wants to leave the brokerage business, we five license holders shall return the 100 strings of cash to Tian. This agreement is reached at the two parties' free will, there is no coercion. We are afraid that oral agreement carries no proof and establish this borrowing contract as evident on record.

Intermediaries: Zhou Wanshun, Wang Denghou

1778, month 12, day 24. Signatories of borrowing contract: Wang Hongren, Feng Zhaoyuan, Song Dazhao, Zhou Tianshun, and Gong Kaihou.

立借約人王洪仁、馮兆元、宋大照、周天順、龔開厚今因修造府縣衙署??????憑中將材板行 10 股之內除 2 股抵借到田金榜名下銅錢 100 串整，應辦差務。其錢當

日議明無利, 有行無租, 自借之後認從田姓代客買賣. 倘日後田姓發達辭行, 五貼首仍將錢 100 串還田姓收回。此系二家情願, 中間並無勒逼. 恐口無憑, 立此借字存照。

憑中: 周萬順 王登厚

乾隆四十三年十二月二十四 立借約人宋大照、王洪仁、馮兆元、周天順、龔開厚

The two parties in this contract made use of the format of a legally binding loan contract to embody the terms of an illicit arrangement of license leasing. In the name of a no-interest, indefinite term loan with shares of the brokerage firms as the collateral, the actual effect of the contract was that Tian obtained the right to use the brokerage license for as long as he wished with a leasing fee of 100 strings of cash. From the case file, it was apparent that the 20% share of the brokerages was only a way to express Tian's right to use the license, not his claim on any share of profit. Of course, the 100 strings were never meant to be returned.

Matchmaking and Financial Intermediation

Licensed timber brokerages shared the business of matchmaking with various other forms of economic intermediaries. Take the timber market in Hangzhou for an example. The licensed timber brokerages in Hangzhou were dominated by Huizhou natives, who maintained close connections with timber sellers from their home prefecture. Apart from these official timber brokers, there was another group of intermediaries called “Mr. Timber” (*mu xiansheng* 木先生), who were agents hired by timber retailers located in consumption markets such as Jiaxing and Huzhou to help make purchases in Hangzhou and arrange for the transportation. Mr. Timber was usually an experienced practitioner in timber trade who had earned a good reputation and were

well connected to licensed timber brokers. Each Mr. Timber was usually contracted to work for several timber retailers. Compensation to Mr. Timber was also on a commission basis.

Therefore, timber trade in Hangzhou was conducted through two agents, with the licensed timber broker more aligned with the interests of the sellers and the Mr. Timber representing the interests of the buyers. There were similar purchasing agents in other timber markets too, for example, those in Fujian were called “Mr. Nantai” (*Nantai xiansheng* 南臺先生).³⁴

Extending credit to sellers was an important side business of the timber brokers, who obtained relatively cheap loans from urban financial institutions such as pawnshops and native banks and made handsome profit from the interest gaps. Timber brokers played an important role as financial intermediaries. It was difficult for sojourning sellers to obtain loans directly from the native banks in the city. But the bankers were willing to extend credit to the timber brokers, who in turn lent money to the sellers at a higher interest rate. Close connection to native banks was almost a prerequisite to be a successful broker. If a seller borrowed capital from a timber broker to purchase timber in the mountains, customarily when he brought the timber for sale the next

³⁴ “Zhejiang zhi mucai” 浙江之木材, *Zhong wai jingji zhoukan* 中外經濟周刊, no. 219 (1927): 13–14;

Chen Ruizhi 陈瑞芝, “Hangzhou mucai ye de neimu” 杭州木材业的内幕 [The Insider’s Story of the Timber Business in Hangzhou], in *Zhejiang wenshi ziliao xuanbian (di jiu ji)* 浙江文史资料选编 (第九辑) (Hangzhou: Zhejiang renmin chubanshe, 1964), 92; Qian Nanjing guomin zhengfu sifa xingzheng bu, *Minshi xiguan diaocha baogao lu*, 604–5.

year, he should sell his commodities through the same broker. So timber brokers had direct access to the sellers' timber as collaterals.³⁵

The timber brokers also employed intermediaries in money-lending to secure the loans. The managers of the workers who specialized in transporting rafts along the rivers, called *baotou* 包头, worked together with the timber brokers to contract loans to sellers. Because all the sellers hired these managers to transport their timber rafts, these managers acquired detailed information on the family, property, and credibility of specific sellers. Sellers who had not built enough credit history with timber brokers could obtain loans with a *baotou* as the guarantor.³⁶

Sometimes the timber brokers behaved more like wholesalers than intermediaries, especially with the money-lending function. Sellers without much capital would obtain loans from a timber broker each year to purchase and transport timber from the mountains. The turnover of the timber trade took at least a whole year (two years for those working the full Yangzi River route), with cuttings in the winter and spring, rafting from the early summer, and sales in the summer and fall. After the sales of the timber in the next summer, the broker would take out the principle, the accumulated interest, and commission fees from the sales revenue before paying the seller with the residuals; meanwhile, the seller would have to borrow again

³⁵ The inside story of Hangzhou's timber brokers and customary practices in timber trade were revealed most vividly in the memoir of Chen Ruizhi 陈瑞芝, a Wuyuan merchant who succeeded his father to practice the business of timber brokerage in Hangzhou for more than thirty years and became the director of the Association of Timber Trade in the late 1940s. See Chen Ruizhi, "Hangzhou mucai ye de neimu," 111–12.

³⁶ Ibid. at 113.

from the broker for the next year's business. This way, the brokers were like wholesalers who secured the next years' commodities by extending loans to small sellers from the place of production. The more the sellers relied on loans from the brokers, the more they were like agents rather than patrons of the brokers. This was a common practice employed by official brokers of other trades as well. For example, the association of brokers of mountain products in Yiyang, Hunan regulated that members should not broke the goods of a seller who had obtained loans from another member, which was to prevent the sellers from intentionally defaulting on the loans after receiving the sales revenue; members should report defaulted sellers to the organization so that when those sellers attempted to trade through other member brokers, they could notify the organization to withhold the commodities to compensate the victims.³⁷

Therefore, licensed brokerages and other intermediaries alike mitigated the frictions of transactions in two ways. They made the market by matching sellers to potential buyers. They also facilitated the flow of credit from urban capital centers to rural suppliers. They were able to perform these functions because of an informational edge: the knowledge of market price, customer base, source of capital, and solvency of traders was so essential in long-distance trade that informative intermediaries were indispensable.

³⁷ See “Shanhuo hang tiaogui” 山貨行條規 in *Hunan Shangshi xiguan baogao shu* 湖南商事習慣報告書 (1911), recorded in Peng Zeyi 彭澤益, ed., *Zhongguo gongshang hanghui shiliao ji* 中國工商行會史料集 [Historical Sources for Commerical and Industrial Guilds in China] (Beijing: Zhonghua shu ju, 1995), 215–16.

Broker-Seller Network

Thanks to a publication by the guild of timber brokers in Hangzhou, we can have a glimpse on the internal structure of the broker-seller network in this market.³⁸ First, I shall briefly introduce the main merchant groups and their guilds in the Hangzhou timber market.

Since the Song Dynasty, Hangzhou was a local distribution center for timber produced in Anhui and Zhejiang. It remained a major timber market during the Ming-Qing time, although the relative importance of Hangzhou's timber supply to the Jiangnan area diminished overtime compared to the growing volume of timber transported down the Yangzi River. The Jiangnan 江干 timber market was located south to the Houchao Gate 候潮門 of the Hangzhou city, along the riverbank of the Qiantang River, which was connected to the Grand Canal by three south-to-north canals that ran through the city. Timber produced in southern Anhui and a few western Zhejiang prefectures were floated along the Qiantang River to the Jiangnan market, a trade route that had been developed since the thirteenth century.³⁹ Sales of timber in the Hangzhou market targeted the core area of Jiangnan: Hangzhou, Jiaxing, and Huzhou in Zhejiang, and secondly Suzhou, Wuxi, and Changzhou in Jiangsu.

Hangzhou was different from Nanjing and Hankou in that it was very close to the areas of timber supply. While players in the markets of Nanjing and Hankou were mostly large capitalized timber-trading firms by the nineteenth century, many sellers in Hangzhou were first-hand owners of timber with limited capital. In this respect, Hangzhou was more similar to other

³⁸ “Huishang gongsuo zhengxin lu.”

³⁹ See Chapter One. Specifically, timber-producing prefectures included Huizhou in southern Anhui, and Chuzhou, Quzhou, Yanzhou, and Jinhua in western Zhejiang. See “Zhejiang zhi mucai.”

local markets in proximity to areas of production, such as Changde, Ganzhou, and Fuzhou. Generally, in these markets, sellers were not very acquainted with the practices in timber trade and relied heavily on the services and capital provided by brokers. Some sellers were countrymen who were delegated with the timber produced in the mountains of his lineage; some worked with capital borrowed from the timber brokers to purchase timber in the mountains. Unlike the case in Nanjing and Hankou where licensed brokers existed because more of official requirement than their economic functions over the course of the nineteenth century, the economic and financial intermediation by timber brokers remained indispensable in the Hangzhou market until the early twentieth century,.

Three organizations in the trade of timber were established representing different groups of interests. The Association of Huizhou Timber Merchants (Huishang Muye Gongsuo 徽商木業公所) was the organization of the timber brokers who were originally from Huizhou as well as sellers from Huizhou. The Eastern Zhejiang Timber Association (Zhedong Muye Gongsuo 浙東木業公所) was the organization of timber sellers from the four timber-producing prefectures in eastern Zhejiang, including Jinhua, Quzhou, Yanzhou, and Chuzhou.⁴⁰ The existent record of the

⁴⁰ Traditionally, “eastern” and “western” Zhejiang were divided in reference to the Qiantang River. The Hangzhou-Jiaxing-Huzhou area, though located in the northern top of the province, constituted “western Zhejiang” (*Zhexi* 浙西), while the very large region including Shaoxing-Ningbo area, Taizhou-Wenzhou area, and the above-mentioned timber-producing Jinhua-Quzhou-Lishui area was all part of “eastern Zhejiang” (*Zhedong* 浙東). In this work, except for historical proper names such as the Zhedong Muye Gongsuo here, directional words are used in the common sense.

activities of these two associations went back to the 1780s.⁴¹ The Association of Tax-paying Timber Merchants (Keshang Muye Gongsuo 課商木業公所) was the organization of buyers from the jurisdiction of the six Jiangnan prefectures of Hangzhou, Jiaxing, Huzhou, Suzhou, Wuxi, and Changzhou. The earliest existent mentioning of this organization was in 1876.⁴² The Association of Tax-paying Timber Merchants was named so because it was delegated the tax-farming responsibly of collecting taxes from timber buyers of these prefectures. As the next section will show, this practice represented the common formula developed between local *yamen* offices and merchant guilds in the nineteenth century, especially in the post-Taiping era.⁴³

Because of the large space requirement of timber trade, moorage along the river band was a constant cause for contention among merchant groups and between timber merchants and local residents. The two organizations of timber sellers, Association of Huizhou Timber Merchants and Eastern Zhejiang Timber Association, were initially founded to safeguard the timber merchants' common property right over the sandy land along the Qiantang River and to fend off the intrusions to the land by the crops grown and the sheds built by villagers who lived close to the riverbank. The so-called "South Customs sandy land" (Nanguan shadi 南關沙地) referred to the strip of land of about two square kilometers produced by the alluvium of the Qiantang River, where the Ming-Qing Nanxin Guan timber tax station was located.

Government documents regarding the dispute between the merchants and the villagers and its resolution in favor of the merchants during the Qianlong's reign was copied in a 1909

⁴¹ "Huishang gongsuo zhengxin lu," 184–92.

⁴² Ibid. at 200–201.

⁴³ Chen Ruizhi, "Hangzhou mucai ye de neimu," 94–95.

publication of the Association of Huizhou Timber Merchants. From the perspective of local and provincial officials, the substantial income from timber taxes overshadowed the mere hundreds of taels of grain tax that could be collected if the land had been granted to the villagers. The remark by the financial commissioner of the Zhejiang province in 1785 reasoned:

... the sandy land is crucial for the timber merchants to stock timber when passing the Nanxin customs station... if pressed too close to the river, big loss would be incurred if the timber logs drifted away when water rose... *It is unreasonable to risk thousands of taels of custom taxes just for a few hundred land taxes.* Comparing the effects on state income, the two options show great disparity. Of course the land should be permanently managed by the timber merchants, provided that they should *compensate for the forgone land tax quota*...

The case was submitted all the way up the bureaucratic hierarchy, until the Ministry of Finance presented it to the emperor and obtained his majesty's consent. The deal was for the timber merchants to compensate for the forgone land tax, called "the contribution for grain tax on the sandy land" (*shaliang juan* 沙糧捐). A stele was erected as evidence in 1787 by the leaders of both the Huizhou and Zhejiang associations.⁴⁴

⁴⁴ "Huishang gongsuo zhengxin lu," 184–86. Frequent regime changes during the Republican period reignited waves of contest over the property of the sandy land. Moreover, when the two association of Huizhou and Zhejiang timber merchants were reestablished in 1946 after the Sino-Japanese war, it was again listed as the top priority of the two organizations to reclaim and clear up the sandy land. Chen Ruizhi, "Hangzhou mucai ye de neimu," 96–97; "Huishang yu Zhedong muye fulishe cailiao" 徽商与浙东木业福利社材料, 1947-48, Hangzhou Municipal Archives L010-001-196.

The Huizhou and Zhejiang associations of timber sellers collected contributions from members to pay for the “contribution for grain tax on the sandy land”. The organizations also hired security guards to patrol the riverbank to look out for thieves and fires, the expense of which was also collected from members. According to the regulation of the Association of Huizhou Timber Merchants (included in its 1909 gazette), the contribution was collected at 4.75‰ out of the value of the timber through the timber brokers, in which 1‰ was for the security guard and 3.75‰ was for the land rent.⁴⁵ The value of transactions conducted through each member broker of this organization, shown in column 8 in Table 11, is calculated by dividing the amount of fees collected by each broker by 4.75‰. It should be noticed that although such collections were levied in the name of these two causes, the revenue collected was used to cover all the expenses of the guild, either obligations to local government agencies or the cost of providing other economic or ritualistic functions.

As shown in Table 11, in the year of 1909, 347 transactions of timber were conducted between 211 sellers and eight timber brokers, generating a total of 1529.6 *yuan* of silver as contributions to the organization, which meant an annual trading volume of 0.32 million *yuan* by the members of the Association of Huizhou Timber Merchants. While only this snapshot from 1909 is available from the sources, the following discussion about the broker’s network can, to some extent, be applied to earlier times. From the guild’s gazette, we know that their trade bounded back rather quickly after the Taiping Rebellion, during which the guild hall was burned down. After its rehabilitation, previous practices resumed and the number of member brokerage firms remained stable. The guild gazette left no remark about any systematic transformation in

⁴⁵ “Huishang gongsuo zhengxin lu,” 180–83.

the timber market because of the Taiping. Hangzhou's network of timber supply and distribution was not significantly influenced by the treaty-port system until the late 1920s, when imported timber started to flow into Hangzhou through Shanghai in volume (see Chapter 6). The 1909 data did show a few new expenditures that were apparently added in the late Qing, such as contributions to the local police office, merchant protection association, chamber of commerce, and bureau of lifeguard. To cover these additional cost, it is possible that the 4.75‰ levy as of 1909 was higher than the rate in the eighteenth century.

Table 11 Collection of Contributions by the Association of Huizhou Timber Merchants in 1909

Collection of Contributions by The Association of Huizhou Timber Merchants in 1909								
(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)
I.D.	Broker		no. of trans.	no. of sellers	land rent	security	total fees	trade volume
1	生記	Sheng Ji	64	50	247.83	66.09	313.92	66,088.00
2	德昌隆	De Chang Long	69	47	223.62	59.63	283.25	59,632.00
3	巽記	Xun Ji	49	29	161.82	43.15	204.97	43,150.93
4	裕大	Yu Da	32	26	148.76	39.67	188.43	39,669.33
5	同義興	Tong Yi Xing	47	28	137.65	36.71	174.36	36,706.67
6	同利興	Tong Li Xing	23	19	104.50	27.87	132.37	27,866.67
7	隆記	Long Ji	39	36	102.54	27.34	129.88	27,344.00
8	同茂興	Tong Mao Xing	24	18	80.88	21.57	102.45	21,568.00
Total			347	211*	1,207.60	322.03	1,529.62	322,025.60

Source: Wang Rigen and Xue Pengzhi, "Huishang gongsuo zhengxin lu (1909)," 231-88.

Note: column (3) shows the number of transactions each broker intermediated during the year of 1909. column (4) shows the number of sellers who sold timber through each broker; because some sellers traded with the same broker several times during the year, the number in column (4) is smaller than column (3). Column (5) is the amount of "contribution for the grain tax on the sandy land" (*shaliang juan*) collected by each broker, which was 3.75‰ of trade volume. Column (6) is the amount of contribution to cover the expenses in hiring security guards collected by each broker, which was 1‰ of trade volume. Column (7) is the sum of column (5) and (6). Column (8) is the inferred volume of trade intermediated by each broker, calculated by column (7) divided by 4.75‰. Column (5) to (8) is measured in silver *yuan*.

*: note that the total number of sellers at the end of columne (4) is not the sum of the number of sellers each broker served (253). The reason was that some sellers traded through more than one broker. The more detailed network of business relationship will be discussed later in the paper.

Trade volume of the sellers varied very much, ranging from 26 *yuan* to Zhan Maochun's 18,922 *yuan*, with a mean of 1526 *yuan*, a median of 1048 *yuan*, and a standard deviation of

2001 *yuan*. Figure 10 shows the histogram of the sellers' trade volume. About eighty percent of the sellers were small dealers who sold for less than 2,000 silver *yuan* during the year. On the right tail, fifteen large sellers traded for more than 4,000 *yuan*, whose collective share of trade volume reached 30%. As shown in Figure 11, the few top-ranked sellers were significantly larger than the others; the top three took up 13% of the total volume. Overall, the Herfindahl index was 0.013, indicating a relatively unconcentrated and competitive market for sellers.

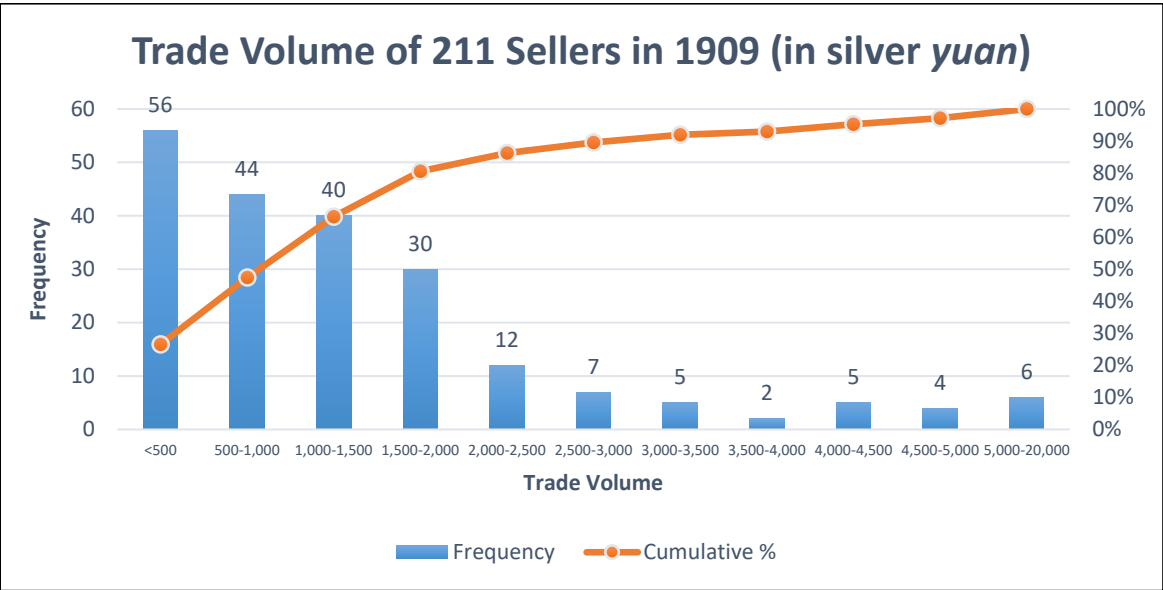


Figure 10 Trade Volume of 211 Sellers in 1909

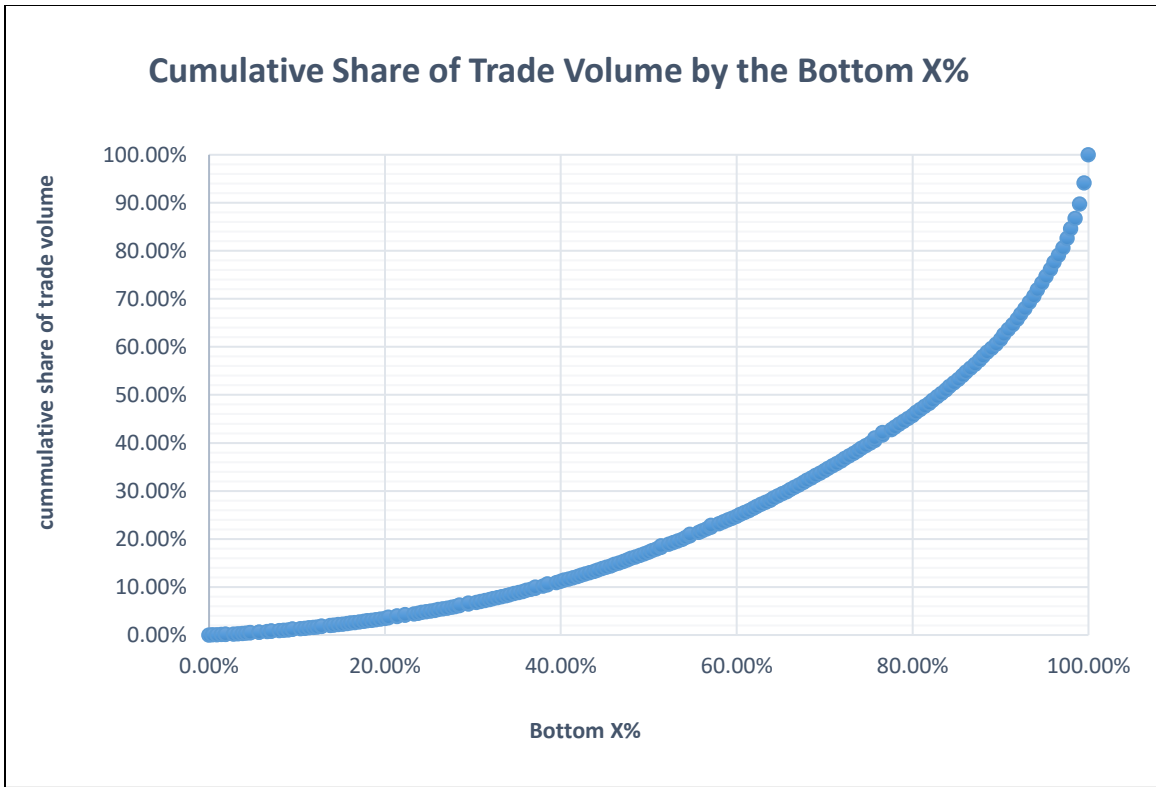


Figure 11 Cumulative Share of Trade Volume by the Bottom X%

Larger sellers tended to trade through more brokers (correlation=0.71) and trade for more than once during the year (correlation=0.80). Among the 211 sellers, 32 of them transacted with more than one broker. The three largest sellers, Zhan Maochun 詹茂春, Song Zi 松字, and Heng Faxiang 恆發祥, all did business with four brokers and traded more than seven times in this year. Four sellers traded with three brokers, and twenty-five with two brokers.

Figure 12 illustrates the structure of the seller-broker network as reflected by the 347 transactions. Eight communities, nodes in each represented by a different color, are detected through the modularity algorithm. As one may expect, every community centered on a timber broker. Each broker had a relatively independent customer base among medium to small sellers. The more connected part of the graph was through the larger sellers, who traded with more than

one broker. The thickness of the edges represented the scaled volume of trade between two connected nodes (the spatial distribution of nodes and the length of edges do not carry any significance). Observe those sellers who were connected with more than one broker and placed in the relative center part of the graph, notice that they each had a primary broker, the trade volume through whom overshadowed the volume with other connected brokers.

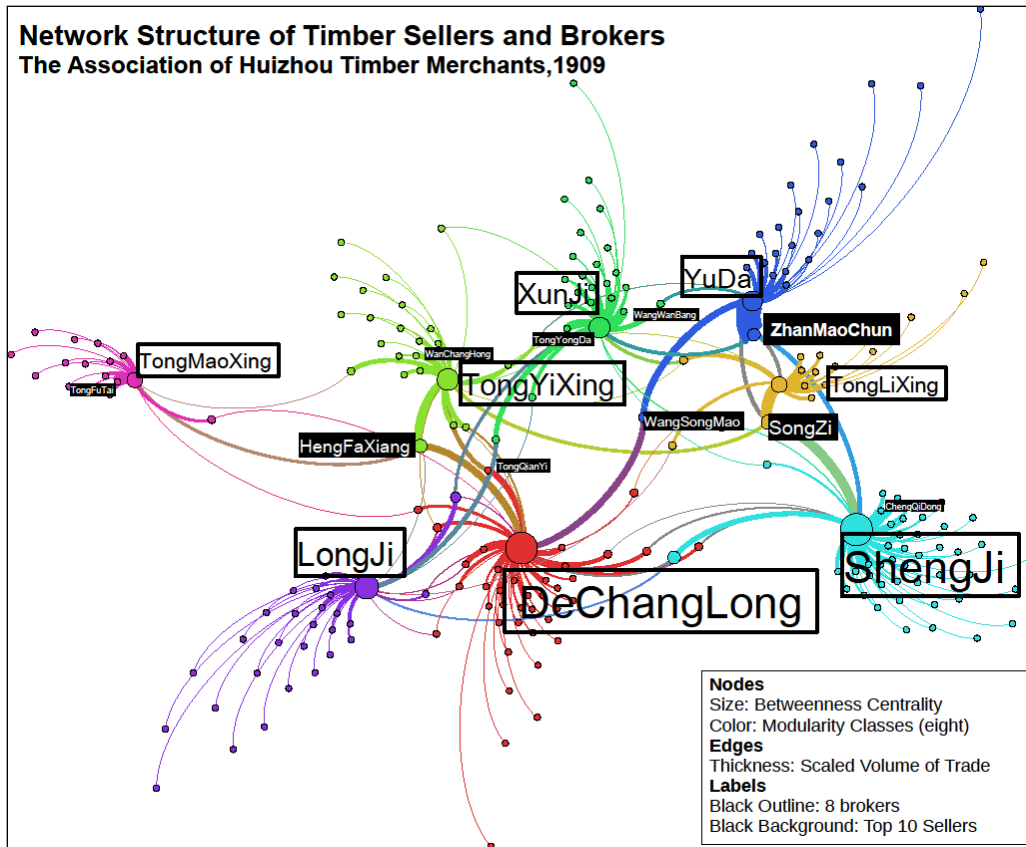


Figure 12 Network Structure of Timber Sellers and Brokers

This was true for most of the top ten sellers, who were marked out with black boxes. For example, the largest seller Zhan Maochun was most close to Yu Da, while doing smaller businesses through Xun Ji, Sheng Ji, and Tong Lixing as well. The second largest seller Song Zi was most closely connected to Tong Lixing, and meanwhile connected to Sheng Ji and Tong

Yixing. Some of the large sellers were committed to a single broker, such as Cheng Qidong to Sheng Ji and Tong Futai to Tong Maoxing. Some of the brokers shared more customers than others. The communities of the two largest brokers, Sheng Ji and De Changlong, were well separated. The two smallest brokers, Tong Maoxing and Long Ji, also seemed to enjoy an independent niche; only Long Ji seemed to be competing for some customers with the De Changlong. The four medium brokers were more closely connected through shared customers, indicating more intense competition among them.

The relative low level of concentration among the sellers as well as the division of market among the eight brokerages both suggested a rather decentralized market structure that featured ample space for competition. While this is not to deny the barrier of entrance into the timber brokerage business caused by the state's requirement for sound reputation, local residency, license fee, and fixation of the number of licenses, the overall picture was still quite contrary to one where the entire local market could be monopolized and manipulated by a few players, at least for large markets like Hangzhou.

Peculiarities of the Timber Brokerages in the Miao Frontier

Recall that in Chapter 3 we have seen the development of timber trade and tree planting in the Qingshui River valley in southeastern Guizhou. We have left that chapter at the felling of the trees and their transportation out of the mountains, with a promise to discuss the local timber market later. Now, having examined the administrative dimensions of the licensed brokerage institution and the everyday economic operation of timber brokerages in the non-frontier regions, we are equipped with the perspective to appreciate the installation and variation of timber

brokerages in the Miao territories and how these differences represented the complex negotiations between politics and economy in the ethnic frontier setting.

The nearest timber market to the Lower Qingshui community was located at the three towns of Wangzhai 王寨, Guazhi 掛治, and Maoping 茅坪, which are at the county borders of Jinping and Tianzhu. During the military campaign in the 1730s, these three towns were granted the exclusive right to take turns on a yearly basis to open timber brokerages and facilitate the transactions between Miao sellers from the mountains and Han buyers from afar.⁴⁶ The town taking the turn was said to be “under the duty of managing the river” (*dangjiang* 當江) that year.⁴⁷ The three-town monopoly was initially established for its practicality. In the years immediately after the military conquest in the 1730s, the area around the three towns was on the

⁴⁶ Wu Zhenyu 吳振械, *Qian yu* 黔語 [Speaking of Guizhou], 1887, juan xia, “Liping mu”; Guizhou sheng bianji zu, *Dongzu shehui lishi diaocha*, 36. The local saying usually attributes the invention of the rotating monopoly to Zhang Guangsi 張廣泗, who was the governor of Guizhou at the time and an important figure in the pacification of the area. I haven’t found direct evidence such as Zhang’s memorial or stele records from the 1730s that could support this claim. But that the rotating *dangjiang* by the three towns was a precedent set by Zhang during the Yongzheng Emperor’s reign was mentioned repeatedly and used as supporting evidence by the representatives of the three towns as well as local magistrates in later court disputes over the right to “manage the river.” See for example an petition sent by representatives of Wangzhai in 1817 in Jinping xian difangzhi bianzuan weiyuan hui, *Jinping xianzhi*, 2:1536–37.

⁴⁷ Yu Wei 俞渭, *Guangxu Liping fu zhi* 光緒黎平府志 [Gazetteer of Liping Prefecture Compiled in the Guangxu Era], 1880, juan 3a, 32b; Liang Cong, *Qingshui Jiang xiayou cunzhai shehui*, 216–17.

verge of any effective control that the state could exert in the newly incorporated Miao territory. In the eyes of many Qing officials, the Miao people of the three towns, who understood both Chinese and Miao languages, were ready mediators of trade. The newly incorporated territories further in the west should be kept as a prohibited region for the entrance of downriver Han merchants so as to forbear violent ethnic conflicts.⁴⁸ In the following a century and a half, concerns about ethnic tensions and social stability committed the state to the three-town monopoly system at this perceived Han-Miao border, despite recurrent challenges from downriver Han-Chinese towns and overarching acculturation that rendered less relevant the initial rationale of mitigating cultural and linguistic barriers.

Brokerage firms had a very simple organization, with one hired manager and two vice managers in charge of public relations and accounting, respectively, a few workers specialized in timber measurement, a cook, and some handymen and apprentices. The primary task of the brokerages was to match sellers and buyers, which might take a long time when the purchase list of the buyer included a variety of products. The brokerages also helped lease the dock on the riverbanks to stock and inspect the tree trunks, measure the timber, hire laborers for transportation, negotiate the price, and manage the account books for both sellers and buyers.

⁴⁸ For example, a placard issued by the Guizhou governor in 1801 stated that the residents of the three towns were initially of the same origin as the “Black Miao” who brought timber from upriver mountains, and should continue working as brokerages for their better understanding of the customs of the “Black Miao.” *Jinping xianzhi*, 2:1523–24.

Short-term trade credit might also be extended to those sellers in need.⁴⁹ In exchange for these services, a 4%–5% commission fee out of the transaction price was paid to the brokerages.⁵⁰ Therefore, in terms of their actual business operations, these timber brokerages in the three towns were no different from the licensed brokerages in the non-frontier provinces.

While sellers were called “guests from the mountains,” buyers were called “guests from the rivers” (*shuike* 水客) as they traveled by river from afar. Purchasers of timber active in the three towns were composed of several merchant groups of different native place origins, the most dominant of which were referred to as the “three *bangs* and five *xiangs*” (*san bang wu xiang* 三幫五勦, the character 勦 when read as “xiang” means “to assist”). It was by no means surprising that the dominant “three *bangs*” here were the same as those active in Nanjing: the *bangs* of Huizhou, Linqing, and Jiangxi. They were the first to have entered into timber trade in this region in the early seventeenth century and sometimes worked concurrently as entrusted agents to purchase tribute timber quotas for the provinces of Jiangsu, Jiangxi, and Hunan. The five *xiangs* were merchants from nearby prefectures in Guizhou and Hunan along the water route who started as assistants or employees of the three *bangs* and later developed into independent timber merchants.⁵¹ Entering the nineteenth century, some merchants further down the water

⁴⁹ See the announcement of Guizhou governor in 1801, recorded in *Ibid.* at 1523, 2. See also Yu Wei, *Guangxu Liping fu zhi*, juan 3a, 32.

⁵⁰ Guizhou sheng bianji zu, *Dongzu shehui lishi diaocha*, 32.

⁵¹ There are different opinions on the exact places of origin of the five *xiang*. The aforementioned complaint of sellers in 1827 identified the five *xiang* as merchants from Changde, Deshan, Hefo, Hongjiang, and Tuokou of Hunan Province, all of which were timber markets along the Yuan River.

route from Changsha, Hengzhou, Hankou, and other prefectures in Hunan and Hubei also came to purchase timber in Jinping, sometimes referred to as the “eighteen *bangs*.”⁵²

The fight over the right to “manage the river” became an enduring theme almost as soon as the institution was established. Benchu 盆處, a Han-dominated town just a few miles downriver from Maoping, was the most insistent competitor that sought to overthrow the monopoly of the three towns. The residents of Benchu repeatedly applied to the authorities for official licenses to open brokerages. At the turn of the nineteenth century, the conflict between Benchu and the three towns escalated into a series of violent conflicts and lawsuits from 1798 to 1806. The details were preserved in official memorials, private copies of legal documents from the court cases, and an account in the local gazetteer. The story also became the basis of a popular local ballad called the “the tale of river fighting” (*zhengjiang ji* 爭江記).⁵³

A major conflict erupted in 1801. When Sun Yisheng 孫貽盛, a leading merchant from Huizhou, was refused by the chief of Maoping and could not purchase land and establish native

Another opinion views the five *xiang* as from several districts of the Tianzhu County, which was adjacent to Jinping. See Jinping xian difangzhi bianzuan weiyuan hui, *Jinping xianzhi*, 2:1537; Guizhou sheng bianji zu, *Dongzu shehui lishi diaocha*, 30; Zhang Yingqiang 张应强, “Cong Guazhi ‘Yishi Yongzun’ shike kan Qingdai zhonghou qi de Qingshui Jiang mucai maoyi” 从卦治《奕世永遵》石刻看清代中后期的清水江木材贸易 [Looking at Late-Qing Timber Trade along the Qingshui River from the “Yishi Yongzun” stele Record Found in Guazhi], *Zhongguo shehui jingji shi yanjiu* 中国社会经济史研究, no. 3 (2002).

⁵² Zhang Yingqiang, “Cong Guazhi ‘Yishi Yongzun’ shike.”

⁵³ “The tale of river fighting” is recorded in Guizhou sheng bianji zu, *Dongzu shehui lishi diaocha*, 36–37.

place associations, Wu Shiren 伍仕仁 from Benchu took advantage of this rift and invited the three *bang* merchants over to trade in Benchu. Wu also talked Sun and others into suing the timber brokerages of the three towns with the charge of “manipulating the market, obstructing trade, and impeding tax revenue” in a number of domestic customs stations that depended on timber taxes to fulfill revenue quotas, especially the Longjiang Customs in Nanjing. The case quickly drew the attention of the Ministry of Revenue and the Ministry of Works, which were the competent authorities of the domestic customs, the Liangjiang Governor-General, and the governors of Anhui and Jiangsu. Inquiries from these parallel administrations pressured the Guizhou Governor to attend to the matter immediately.⁵⁴ Nevertheless, the case did not turn out happily for Wu Shiren, who ended up in exile, not the least because he violently blocked the water route for timber rafts that had passed the three towns, causing the drifting apart of the logs purchased by a group of Deshan merchants from Hunan.

A few years later, in 1805 and 1806, a group of angry Benchu shopkeepers resorted to more extreme means. They blocked the water route to the three towns and even set afire five rafts co-owned by some merchants from Huizhou and Hunan, causing a total market stalling. Forty-plus junk boats and timber rafts lingered in Tianzhu County, and hundreds of merchants

⁵⁴ See the judgment of the Guizhou Governor in 1801, the joint report of the prefects of Guiyang, Anshun, and Liping in 1806, and the joint announcement of the Guizhou Administrative Commissioner and Commissioner of Justice in 1806, *Ibid.* at 38–39, 42–43. See also Yu Wei, *Guangxu Liping fu zhi*, juan 3a, 33a.

were stuck in Hongjiang of Hunan.⁵⁵ Representative merchants of the Huizhou *bang*, Linqing *bang*, and the five *xiangs*, as well as leading sellers, all sided with the three towns and submitted petitions to the authorities.⁵⁶ In particular, some Huizhou and Linjiang merchants were bearing the funds of Jiangsu Province to purchase its tribute timber quota and claimed that the official funds could be in jeopardy if their rafts continued to be blocked. The rotating monopoly of the three towns' timber brokerages was once again confirmed by the joint judgment of the Administrative Commissioner (*buzheng shi* 布政使) and the Commissioner of Justice (*ancha shi* 按察使) of Guizhou.⁵⁷

Despite the misconduct of Wu Shiren and other advocates of Benchu, the state's insistence on the three towns' monopoly seemed to be contradictory to the general principle of guaranteeing free market entrance when dealing with charges of market manipulation and illegal private brokerages. As we have seen in the previous sections, according to the established licensed brokerage system, any individual who met a set of criteria could obtain a *yatie* by paying a certain annual fee. Licensed brokerages were protected by law enforcement against the competition from any private, thus illegal, brokerages (*siya* 私牙), which did not pay for the official license, and thus operated at lower costs. Private brokerages' collection of commission

⁵⁵ The details of this outbreak and the causes that led to it are summarized in a memorial of Guizhou Governor Fuqing 福慶 on /7/28/JQ12 (1807), FHA 04-01-08-0119-004.

⁵⁶ For the full text of these petitions, see Guizhou sheng bianji zu, *Dongzu shehui lishi diaocha*, 39–42.

⁵⁷ For the full text of the judgment, see *Ibid.* at 42–43.

fees from the trade they mediated was usually referred to as “private illegal taxation” (*sichou yashui* 私抽牙稅) and was outlawed strictly.⁵⁸

Therefore, the accusation against the three towns, brought by Wu Shiren and Sun Yisheng, that these timber brokerages did not even have the official *yatie* and were privately collecting illegal levies on commerce by forcing the sellers and the buyers to trade through them, was a legitimate and serious charge. After all, the request of Benchu was only for the application of the empire-wide law that brokerages without *yatie* were illegal and that anyone could open legal brokerages as long as they paid for the license. For the same reason, they soon won the attention and support of market regulating agencies on all levels.⁵⁹

Indeed, the accusation of Benchu against the three towns was partially true. The timber brokerages in Jinping were not incorporated into the regular *yahang* system until 1889. The three towns’ monopoly in brokerage was rooted in the favorable policies towards the Miao people issued by the first generation of frontier officials. By sticking to the “*dangjiang*” nomenclature and avoiding self-reference as *yahang*, these brokerages were permitted to operate freely as legal private brokerages and were never required to go through the normal procedure to obtain *yatie* or compelled to pay annual fees to extend their legal status. Moreover, because timber was not taxed in Liping, they did not bear the usual responsibility of *yahang* to collect commercial taxes from the trade they intermediated. In refutation of the accusation of “illegal collection of

⁵⁸ For example, the stele records in Suzhou show that the local officials have always upheld this principle.

For judgment on disputes over the “market manipulation” of some timber brokerages, see Suzhou lishi bowu guan, *Ming Qing Suzhou gongshang ye beike ji*, No. 74 and 76.

⁵⁹ Guizhou sheng bianji zu, *Dongzu shehui lishi diaocha*, 39.

commercial tax,” the three towns emphasized that they were not performing the tax collecting functions of *yahang* at all, and the commission fee was not illegal levies on commerce, but only in compensation of the services that they provided at an amount agreed upon by all parties.⁶⁰

The overriding consideration behind the officials’ repeated rejection of Benchu’s applications was the political consequence of introducing competition from the Han Chinese of Benchu to the timber brokerage business, a livelihood that had been promised exclusively to the Miao people of the three towns. The disputes between the three towns and Benchu happened in the middle of a general Miao revolt in parts of Guizhou and Hunan that lasted from 1795 to 1806. Indeed, the loss of economic resources to Han settlers was the chief cause of the revolt. The slogan of the rebels was to expel Han in-migrants and regain the alienated land properties. Advocates of in-migration and assimilation learned the hard way that extensive acculturation of Miao individuals to Chinese ways did not necessarily carry with it a sense of loyalty to the Qing rule.⁶¹ Although the Miao litigants involved in the three town versus Benchu dispute had nothing to do with the revolt, Guizhou officials nonetheless considered pacifying Miao resentment and protecting their economic interests as the first priority.

The following remarks by provincial and prefectural officials of Guizhou represented the common rhetoric regarding the situation (*italics added by the author for emphasis*):

⁶⁰ Yu Wei, *Guangxu Liping fu zhi*, juan 3a, 32a and 35.

⁶¹ Donald S. Sutton, “Ethnicity and the Miao Frontier in the Eighteenth Century,” in *Empire at the Margins: Culture, Ethnicity, and Frontier in Early Modern China*, ed. Pamela Kyle Crossley, Helen F. Siu, and Donald S. Sutton (Berkeley: University of California Press, 2006), 190–228.

...When guest merchants lodged in the three towns, it was *customary* to pay a four percent fee to cover the house rent, water labor, security, raft tying, and other miscellaneous services, so that *the poor Miao people* (*qiongmiao* 窮苗) in the three towns could have a means of living....

...The town of Benchu was a Han community under the jurisdiction of the Tianzhu County of Zhenyuan Prefecture, and little timber was produced there; it went without saying that Benchu had nothing to do with Maoping and other areas in the Miao frontier. How dare the *rogues* of Benchu constantly attempt to seize the profit?

...(The current arrangement) had been working for over a hundred years, merchants and the Miao people lived in peace with it. If we make even the slightest change, I fear not only the Miao people in the three towns would lose their means of living, other Han Chinese towns down the river might all follow the example of Benchu to set up *yahang* and levy taxes, then there would be no stop to lawsuits, and timber merchants would suffer endlessly. More importantly, it might impact the stability of the Miao frontier....⁶²

The official rhetoric was utilized and further enhanced by the three towns' self-portrayal in their petitions. They appealed to officials that, "we *poor Miao people* (*qiongmiao*) set up the brokerage business and depend on it for a living," and if Benchu's violent blockage of the river was not stopped, then "not only were we to suffer, all the Miao area along the river would be

⁶² Guizhou sheng bianji zu, *Dongzu shehui lishi diaocha*, 38–39, 42–43.

badly impacted as their timber could not find buyers. In sum, as long as the evil people are not eradicated, timber merchants would not come, and we poor Miao could have no reliance for life.”⁶³ The upriver sellers, in support of the petition of the three towns, lamented their own loss over so many cut trees that could not be sold. They referred to the competitors from Benchu as the “treacherous Han Chinese” (*Hanjian* 汉奸), while emphasizing their common Miao identity with the three towns’ brokers, who “spoke the Miao language and understand the dialects of Huizhou, Linjiang, and Shaanxi” and “always gave fair prices and stuck to the proper silver standard.”⁶⁴

In fact, by the 1800s, cultural and language barriers were no longer as overwhelming as they were in the 1730s. As shown in the previous sections, acculturation was in process. The Miao people in the Lower Qingshui area had taken up lineage concepts, acquired the ability to read and write in literary Chinese, and increasingly turned to the local administration for dispute resolution in replacement of traditional practices of divine judgment especially when dealing with outsiders. Many of the large land-owning families had produced degree-holders by taking advantage of the favorable Miao quotas in civil examinations.⁶⁵ This is not to say that the Miaos had become fully assimilated, but their emphasis on the common Miao customs and languages in

⁶³ Ibid. at 39–40.

⁶⁴ Ibid. at 41–42.

⁶⁵ Jinping xian difangzhi bianzuan weiyuan hui, *Jinping xianzhi*, 2:1511–13, 1517; Zhang Yingqiang 张应强 and Hu Teng 胡腾, *Xiangtu Zhongguo Jinping* 乡土中国 锦屏 [Rural China: Jinping] (Shanghai: Sanlian shudian, 2004).

their appeals to Qing officials reflected less about actual communicational difficulties with Han merchants than their strategic use of the state's ethnic policies to fend off Han competition.

In regular timber markets, the Qing state usually upheld the principle of equal and fair market entrance (although the application of the principle to specific cases was subject to the interpretation of individual magistrates). In the Miao frontier, by contrast, concerns about ethnic tensions and social stability committed the state to a monopoly system at the perceived Han-Miao border even after the initial economic rationale withered away. The examination of the active timber trade in the Guizhou-Hunan region reveals a more multi-faceted picture of the "unfamiliar Miao" frontier than the simplistic understanding that economically unsophisticated natives were deprived of their land and other resources by encroaching outsiders. Episodes of fighting over the rights to open timber brokerages demonstrate that the state's ethnic policies and administrative priorities were all strategically utilized by the involved economic agents, including the Miao natives, to achieve their respective interests.

Conclusion

The late imperial market management system underwent gradual changes towards less direct taxation and control. The Ming and Qing central state had largely forgone revenues from local-level commercial tax offices and only directly collected transit taxes at a much fewer number of domestic customs stations. In local marketplaces, the licensed brokerage system became the primary intermediary for the local government to obtain information, procure commodities, regulate trade, and collect revenues from commerce. The central-level reforms on the licensed brokerage in the first half of the eighteenth century aimed to preserve the integrity of the market space from excessive interferences of the local administrative framework and

bestowed upon individual licensed brokers the responsibility to promote unhindered market exchange according to economic logics. These regulations set the foundational market principles for the next century, when licensed brokers assumed the central positions in mediating non-local trade.

The most important functions performed by licensed brokerages and other economic intermediaries alike in the trade of timber were informational: the matching of buyers and sellers as well as creditors and borrowers. What made these intermediaries essential to long-distance trade was their exceptional knowledge about sources of supply and demand, market tendencies, and the financial situation of individual firms and traders. Despite the usual accusations of licensed brokerages as monopolizing local markets, my examination on the broker-seller network in big markets such as Hangzhou revealed a much decentralized market structure. Moreover, other than licensed brokerages, there were various economic intermediaries involved in the mediation of timber trade that occupied a legally recognized or customarily tolerated niche in the market. Both facts attested to the ample space for competition at least in big markets. Frontier regions could have a very different story, though. The tree-town monopoly of timber brokerages in the Miao territories arose more from the state's concern of protecting Miao livelihood and maintaining local stability than its normal calibrations of market regulation.

While the eighteenth-century reform centered on individual brokers and traders, the nineteenth century saw the proliferation of self-directed merchant organizations. The next chapter will turn to how local government experimented with ways to incorporate and systematize the newly emerged merchant institutions into the local framework of commercial litigation and taxation.

Chapter 5. Merchant Guilds, Collective Taxation, and Local Government Finance

Entering the nineteenth century, the maturation of long-distance trade networks into organized merchant groups increasingly rendered transactions through licensed brokers into a legal formality rather than an economic necessity. Without explicit central directives, local magistrates experimented with ways to incorporate and systematize the newly emerged merchant institutions into the local framework of commercial litigation and taxation. The resulted revenue-collecting arrangement involved individual merchant organization's pledge to perform "exclusive responsibilities" for the local state, in return for an officially recognized standing among similar organizations and remarkable autonomy in self-directed regulation and taxation. Even after the mid-nineteenth century state greatly improved its capacity of direct commercial taxation through the introduction the Lijin transit tax, the merchant organizations' practice of undertaking tax quotas was incorporated into a scheme of Lijin tax farming and became even more prevalent in the second half of the nineteenth century.

From Individual Brokers to Guilds

The eighteenth-century regulations on *yahang* were made on the basic imagination of market transactions as being conducted by individual sojourning traders through independently operating individual brokers. By the early nineteenth century, officials in the fields were increasingly dealing with organized groups of merchants and brokers.

Long-distance trade networks underwent consistent development during the century-long domestic prosperity and stability. Business networks matured into loosely associated groups (*bang* 幫) —not just the nominal provincial *bangs* like "Shanxi *bang*" or "Huizhou *bang*", but

more concrete constituencies like the “western Chongqing *bang* of pine timber traders” ——and some went further to become incorporated guild-like organizations with permanent estates. Such merchant guilds (with the names of *huiguan* 會館 or *gongsuo* 公所), which first appeared in the late sixteenth century, proliferated in cities and market towns and started to take on such functions as establishing trading rules, mediating members’ disputes, and interacting with local authorities.¹

The increasing formalization of merchant networks into guilds with permanent estates, written regulations, and registered members reduced the dependence on licensed brokers to match and guarantee deals, especially in the most developed interregional market centers like Nanjing and Hankou. In these markets, trade through licensed brokers became more of a legal formality than an economic necessity. Indeed, K.C. Liu attributes the proliferation of merchant guilds in the Qing to the merchants’ efforts to free themselves of the licensed brokers.² Some guilds of timber traders obtained a brokerage license under the name of a deceased founder or even the anonym of a deity worshiped by the group, in order to help their members circumvent the official requirement to trade through licensed brokers. For example, in Hankou, the guild of timber traders from Changsha and Hengzhou of Hunan province obtained a license under the name “Zou Gongyi 鄒公義,” which was not a real person but the anonym of a local god, Master Zou.³ Such practices streamlined the separate obligations of brokers and merchant guilds to the

¹ For a detailed study on these newly established merchant organizations in eighteenth- and nineteenth-century Suzhou, see Ch’iu Pengsheng, *Shiba shijiu shiji Suzhou cheng*.

² Liu, “Chinese Merchant Guilds: An Historical Inquiry,” 8.

³ Chen Xing and Chen Lilian, “Hanyang Yingwu Zhou zhumu shichang shihua,” 127.

local government into one. Member merchants registered their deals with the guild and paid the charges of a few percent in the name of “membership fees.” The guild in turn used the fund to pay for the brokerage license fee and other surcharges levied by various *yamen* offices as well as to keep the organization running and afford the promised services to its members.

In response, licensed brokers also tended to organize themselves into incorporated associations to collectively deal with their now organized customers and defend their legal privileges of taxation. In Suzhou, for example, the Xunzheng 巽正 Association of licensed timber brokers was founded in response to the establishment of the Daxing 大興 Association of timber traders, as members of the latter organization attempted to circumvent the brokers and sell to customers directly. Upon its founding, the Xunzheng Association petitioned to the Suzhou prefect that “all timber from Fujian, Zhejiang, Jiangxi, and Hunan should be taxed by the association at four coins per standard raft... seller who transported timber to Suzhou must trade through us brokers and be forbidden to deal with customers directly,” which was to ensure that “enough funds could be raised to cover the service obligations (*chaiwu* 差務) to the *yamen*.”⁴ Similar guilds of timber brokers also existed in Nanjing and Hankou, which engaged in constant negotiations with multiple organizations of timber dealers that were founded on the basis of the merchants’ native places or the origin, destination, or targeted customers of their timber.

As merchant associations increasingly became the organizing framework in the market space since the late eighteenth century, local *yamen* officials adjusted their revenue-raising schemes accordingly. In many ways, for the local *yamen* offices, the rise of merchant *bangs* and guilds was like a return to the previous Ming system of *hang* obligations, only now merchants

⁴ Suzhou lishi bowu guan, *Ming Qing Suzhou gongshang ye beike ji*, 123–25.

organized themselves at their free will instead of being mandated to do so and the *bangs* attained much larger scope than the old *hangs*.

Official Duties, Contributions, and Merchant Groups

Any group of merchants that were considering establishing a *bang* or a guild for their trade faced a trade-off. The benefits included enhanced network connections, better enforcement of trade regulations, common space for business negotiations and storages, etc. They also enjoyed some level of official recognition and protection if they chose to register their real estate properties and guild regulations with the local *yamen*. Yet organized groups were also more visible to local officials and *yamen* clerks and therefore more vulnerable to their squeeze. Individual traveling merchants, on the other hand, were more likely to be able to live beyond the local government's purview of revenue extraction, given the latter's limited direct control over commerce. The proliferation of various forms of merchant organizations since the mid-eighteenth century indicated net benefit from this trade-off, in many occasions if not always.⁵

⁵ The interpretation offered here is somewhat different from a long-existing view represented by the work of Negishi Tadashi, who held that mid-nineteenth century was a critical turning point in the relationship between the state and merchant guilds. Many guilds were founded in this period *in response to* the state's demand for "contributions," as guilds could provide some organized defense against state intrusions. See Negishi Tadashi 根岸佶, *Chūgoku no girudo* 中國のギルド [Chinese Guilds] (Tōkyō: Nihon Hyōron sha, 1953); Negishi Tadashi 根岸佶, *Shanghai no girudo* 上海のギルド [Guilds in Shanghai] (Tōkyō: Nihon Hyōronsha, 1951). In contrast, my argument is that guilds formed in the

Without explicit central directives, local magistrates experimented with ways to incorporate and systematize the newly emerged merchant institutions into the local framework of commercial litigation and taxation. In the first half of the nineteenth century, a balance was struck out of negotiations between merchant groups and local magistrates: officials lent their legal authorities to enforce customary practices in each trade as manifested in guild regulations, as long as they did not object with basic principles of free market entrance and fair exchange. Other than that, officials maintained a non-interventionist position in the market. In return, merchant guilds offered their cooperation in securing the local government's fiscal objectives, which magistrates promised to be limited to the basics and fairly allocated among different merchant groups.

Local government officials mobilized merchant groups for revenue and services in the name of "official duties" (*chai* 差) or "contributions" (*juan* 捐), concepts that had been around for centuries but whose usage became increasingly flexible and widespread during the nineteenth century. They replaced the Ming-early Qing terminology of "*hang* duties" (*danghang* or *dangguan*) as the common reference to exactions demanded of merchant groups by local officials.

As was mentioned in the previous chapter, the reform on the licensed brokerage system had prohibited local offices and their employees from using official purchase as an excuse to exact goods below market prices. In 1737, the Qianlong emperor decreed:

nineteenth century *despite* the disadvantage of being more susceptible to government demands, because these costs were overcome by the economic benefits of cooperative activities.

Any items demanded for public or private use in yamen offices at all levels must be purchased fairly at market prices. It is forbidden to employ licensed brokers or allow yamen runners to illicitly demand them. If an official duty (*chaiban* 差辦) requires that items be obtained, it must be done *in a just manner*, and it is not permitted to use this as an excuse for extortion and bully commoners.⁶

大小衙門凡公私所需貨物，務照市價公平交易，不得充用牙行，縱役私取。即有差辦，必須秉公提取，毋許藉端需索，作踐良民。

In principle, local governments were now supposed to make necessary purchases at the going market price, just like other market actors. However, this part of the new law was seldom followed in practice. Succeeding emperors attempted to abolish “official purchase prices” time and again, but all in vain.⁷ For one thing, the annual procurement of imperial timber was still

⁶ QL_HDZL, *juan* 18, 35. A similar sub-statute was also added to the Qing Code, see Xue Yunsheng, *Du lü cunyi*, 412–13.

⁷ JQSL, year 1803 (JQ8), month 9, day 21 (*guichou*). “各衙門需用鋪戶貨物。自應各照市價平買。安得輒立官價名目。向鋪戶等紛紛科取物件。倚勢病民。嗣後著將官價之名永遠禁革。違者照例懲處不貸。”

GXSL, year 1884 (GX9), month 2, day 23 (*jiayu*). “諭內閣、御史魯琪光奏、官價病民、請飭裁免一摺。據稱各省文武衙門、逐日購物、類給官價、假手胥役、又復侵蝕剋扣。其舉行鄉試等事、輒藉辦差為名、責令各鋪戶供應等語。各衙門購買物件、應照市價給值、何得別立官價名目。至辦公需用、均應按物付價、豈容藉端擾累。著各直省督撫通飭所屬。革除陋習。嗣後如有仍蹈前轍者。隨時懲辦。以恤商民。”

conducted at below-market official prices until the end of the dynasty (see chapter 2). The fund-deprived local government had no means to obey this central law exactly. But local officials made a range of commitments to each trade in an effort to keep official purchases from ruining businesses, including opening the channel of negotiation with merchant groups to adjust official purchase prices – not high enough to cover the merchants’ cost, but at least to limit their losses caused by the official procurement system to a reasonable amount.⁸

As “*chaiban*” was the only occasion in which officials were permitted to obtain items from the local market in Emperor Qianlong’s decree, local officials increasingly utilized the “*chai*” concept as the rhetoric to define the term of relationship between merchant groups and the *yamen* office. And since “voluntary contributions” from merchant guilds would not fall under these regulations, “*juan*” was another concept that came to be widely used. Although it was not realistic for the local government to afford market prices, the explicit prohibition at the central level did caution most magistrates to impose some self-restraint and allocate *chai* and *juan* in a fair and just manner that could be accepted, though not welcomed, by the merchant groups.

Other scholars have correctly observed that many petitions brought by merchant coalitions in a magistrates’ court involved a delicate negotiation in which *chai* or *juan* obligations were used as the legitimate cause to press for the officials’ endorsement of the

⁸ For an example of merchant groups successfully negotiating official prices with local magistrates, see Dykstra, “Complicated Matters,” 240.

guilds' attempt to suppress dissidents in the group or drive out competitors.⁹ In the timber trade, a typical petition reads as follows:¹⁰

Petition. We the timber trading *bang* in the city of Chongqing, including the firms Mei Rongxing, Tong Yiyuan, Li Daosheng, Wang Yongmao, Li Lisheng, Jiang Yongju, Xu Bingxing, and Wang Ruisheng, now collectively request Your Magistrate's judgment on the following matter of defying official duties and illicitly usurping the trade. We operate businesses of timber trade, and shoulder the annual duty of supplying all the *yamen* offices and examination halls in the provincial capital without any violations.

Recently, an insubordinate Li Guisen has forcibly occupied a position in the Fushun Storehouse and illicitly made sales of timber. He vied to compete with us in the trade, and defied the responsibility to contribute for the official duty. We have verified the truthfulness of this condition, with a former buyer (from Li Guisen), He Changfa, as the living testimony of Li's surreptitious sales. We have invited all the *bang* members to gather and reason with Li, who still did not repent and even threatened to sue us without fear.

Our business is small, yet our *chai* duty is heavy. Upon repeated urge from the *yamen* to remit the required timber, we went to collect Li's share without any success. Now that Li

⁹ Madeleine Zelin, "Chinese Business Practice in the Late Imperial Period," *Enterprise and Society*, 2013, 785–86.

¹⁰ BX 006-056-0868. Similar cases in other trades can be seen in Dykstra, "Complicated Matters," chap. 5.

Guisen conducts trade but shoulders no official duty, other members of our *bang* all have a wait-and-see attitude. It is for certain that others will follow suit and it will be more difficult to fulfill the *chai* duty. We collectively request Your Magistrate to open a court session to investigate this matter and make things right...

稟狀本城木幫梅榮興、同義元、黎道生、王永茂、李立生、江永聚、徐炳興、王瑞生，今於大老爺台前為抗差霸買、協稟做主事。情民等各買木廠生意，充當值年，承應各衙及省垣關差等事無違，今遭不法李桂森霸距福順棧內，私賣木料，霸奪民等各家生買，抗差不應，民等查實，買主何長發活質，說出李桂森暗賣前情。邀集幫眾理論，惡尤恃橫估霸、賭控不畏。切民等買微差繁，疊奉札飭催解，民等往收關差無著。今桂森霸抗，有買無差，民等幫眾各懷觀望，勢必效尤，差務難辦，協稟作主喚究...

This is a simple case in which a merchant *bang* brought suit against an individual merchant who refused to conform to the fee-collecting scheme of the group and, consequently, could offer more competitive prices in market exchange. Because levies collected from group members were, at least partially, used to fulfill the *chai* obligations towards *yamen* offices undertaken by the group, the legal authority of the magistrate was called upon to discipline the uncooperative individual. By expressing their concern that if left untended, others might follow this precedent and the official duty could be in jeopardy, the merchant group subtly insinuated the magistrate's obligation of helping enforce their internal regulations in exchange of their performance of the *chai*. The magistrate's verdict at the end of the petition confirmed his overall priority in ensuring the timely delivery of the group's due amount of contribution:

Verdict: await the court's voucher to order Li Guisen to contribute to the *chai* duty according to the group's regulations. Should he violates this order, bring him to court for punishment. As for this year's due payment of 40 taels for the timber needed at the Renwu-term Examination, which the provincial governor and administrative commissioner have repeatedly pressed for delivery within 10 days, the group should follow the order to raise the full amount and submit it as soon as possible to the specialized agent for remittance. Do not make other excuses to drag on anymore. Otherwise, should any official business be adversely affected, you will be held accountable.

批：候簽飭【李桂森】照規幫差，如違帶究。至本年壬午科應解闈場木植銀 40 兩，現奉藩憲迭訊嚴催，勒限十日批解，仰及遵照克日如數措齊呈繳，聽後專差申解。勿再藉詞推延，致干究追不貸。

From the magistrate's verdict, we may make some inference about the initial cause of the lawsuit. It was possible that the sequence of events was just like how the merchant group presented it, that Li Guisen's refusal to pay for the *chai* duty obstructed the group's timely payment for their 40-tael due. Or, it was also possible that Li's individual share of contribution would not make such a big difference, but the group simply utilized the provincial officials' urgent demand for examination fund as an opportunity to press the magistrate into disciplining Li, possibly a long-term competitor who refused to join the group or failed to conform to the group's way. As the magistrate warning at the end, "Do not make other excuses to drag on anymore," indicated, he might have suspected the latter possibility.

Exclusive Responsibility for Independent Standing

While individual defiant like Li Guisen would often be straightened by court verdicts,¹¹ magistrates were more cautious when dealing with conflicts between groups. Similar lawsuits brought by *chai*-bearing groups against competing groups of merchants seldom resulted in protected fiefdoms, but a re-allocation of *chai* obligations so that the defendant group was officially granted access to the market by being assigned a portion of the *chai* duty. The result was the projection of exclusively assigned official duties (*zhuanchai* 專差 or *zhuanze* 專責) to officially recognized merchant associations. Any group of merchants that wanted to dissociate or remain separate from an existing *bang* due to dissatisfaction with its trade rules or fee collection schemes would be able to do so with official recognition by assuming an independently assigned official duty. That a merchant association was enrolled for some exclusive responsibilities to the local state became its best shield against a competing guild's challenge on its legitimacy as well as against *yamen* underlings' illicit exactions. From the perspective of market access, it did not attain the level of absolute free entrance, but was still a much less grim picture than the one once imagined by earlier scholars, such as H.B. Morse, that Chinese merchant guilds exerted a tyranny on market access and trade rules.¹² The following case will illustrate.¹³

The timber-trading *bang* within the city of Chongqing that showed up in the previous case, also known as the Cunninghamia bang (*Shamu bang* 杉木幫), was assigned the annual *chai* of 40 taels in the name of contributing the timber needed for examinations since 1864. Another

¹¹ For similar cases in the timber trade, see BX 006-056-0905, 41, 51, 52.

¹² Morse, *The Guilds of China*, 28.

¹³ BX 006-6336.

timber-related group in the city, the Green Mountain *bang* (*Qingshan bang* 青山幫) of coffin materials, was not involved in the performance of this particular *chai*. It should be noted that while the names of these *bangs* indicated different specializations, there was no clear-cut boundaries in their members' business scope. And neither group could claim a monopoly in the trade of a certain kind of timber. Firms in the Cunninghamia *bang* traded cunninghamia planks in addition to poles, which was a good material for coffins; and members of the Green Mountain *bang* could sell their inventories for uses other than coffin making. Members of the Cunninghamia *bang* and the Cypress *bang* (showed up later in the case) certainly focused on cunninghamia and cypress respectively, but did not necessarily limit their business to that particular variety.

In 1884, when the local government raised the original *chai* by 20 taels, the Cunninghamia *bang* attempted to enlist the Green Mountain *bang* to share the responsibility. Their version of events was that when the 40-tael *chai* was initially assigned to timber merchants in Chongqing twenty years ago, the Green Mountain *bang* was able to shirk the duty and the Cunninghamia *bang* had to shoulder their due share for the past seven examinations. The Cunninghamia *bang* continued to complain:

... Now that the provincial officials ordered to increase the duty by twenty taels, Your Magistrate also sent us the direction to handle the matter accordingly, we are considerate of the public need and ought to obey the order. But they (the Green Mountain *bang*) are also a *bang* of timber trade, conducting the same business and making the same profit, how come they alone are able to escape from the official duty? They used to be peddlers doing small businesses, but now they build a guild hall at the Chuqi Gate, which is a magnificent mansion. We, on the other hand, have undertaken a lot of debt for our

business and could raise no more money. If we still have to shoulder the official duty all by ourselves, how can we possibly survive the hardship...

...今蒙督憲覆札加攤銀二十兩，恩復簽飭辦理，民等體公，亦應遵辦。但伊亦木幫，生理利息同叨，何得公務獨逃？伊前此尚屬小販微貿，今於儲奇門大修公所，宮室煊赫。而民幫生理復至負貸多金，無款可籌。若復獨應公務，苦累何堪...

In their countersuit, the Green Mountain *bang* refuted the charge that they shouldered no official duty and offered their version of events:

...The truth is that we have always been trading coffin timber and making sales to many places. Known as the Green Mountain *bang*, we fulfil the official *chai* to supply seven *yamen* offices in the city with timber planks and pay the due amount of state taxes, only then do we dare to make sales. We have attempted no violations for decades. We and the *Shamu bang* have separate businesses and separate *chai* duties, and there is no confusion here.

In 1879, Zhou Tongxing of the Cunninghamia *bang* attempted to use their examination *chai* as excuses to make extortions from us and falsely sued Wang Yuchun and others in our *bang* with the charge of defying official duties in court. Thankfully, the previous magistrate made the judgment that the two *bangs* should do separate businesses and undertake separate *chai* duties, (the Cunninghamia *bang*'s official duty) has nothing to do with us. The record of the case can be checked in the Division of Works' dossier in the county *yamen*. Now that the provincial officials ordered their *bang* to pay more for the examination *chai*, Wang Yongmao (of the Cunninghamia *bang*) had the nerve to conceal

the previous lawsuit and sued us in court with the charge of defying official orders and obstructing public duties...

...情民等向販棺木，各處發賣，名為青山木幫，歷應城內七轅差板，並完國課，始敢出售。數十年無違。與杉木幫各貿各差，毫無紊亂。至光緒五年，遭杉木幫周同興等以貢院差徭勒派民等，捏推抗差懸控民幫王玉春等在案，沐前主審訊，斷令各貿各差，與民等無涉，工卷可查。今沐督憲札飭，伊幫因貢院加攤銀兩，遭王永茂等膽瞞前案，以藐扎阻公控民等在案...

Here the Green Mountain *bang* invoked the basic principle of “separate trades, separate duties” (*gemao gechai* 各貿各差) regarding merchant groups and official *chai* duties, that is, separate groups were allowed to conduct their businesses and handle their *chai* duties independently according to their own preferences. Whereas the Cunninghamia *bang* was responsible for the *chai* related to provincial examinations, the Green Mountain assumed a different responsibility in supplying planks to seven *yamen* offices in the city of Chongqing. Although both were timber-trading merchant groups, their independent organization was manifested in and guaranteed by their separate duties towards the local state. When the Cunninghamia *bang* attempted to impose their internal taxing scheme upon the Green Mountain *bang* in the name of allocating official duties five years ago, their request was rejected by the previous county magistrate precisely for the principle of “separate trades, separate duties.”

As for the current dispute, the magistrate acknowledged that the demanded 20-tael increase in the Cunninghamia *bang*'s duty was too heavy, and eventually made the decision that the 20 taels should be shouldered equally by three timber merchant groups: the Cunninghamia

bang, the Green Mountain *bang*, and yet another group known as the Cypress *bang* (*Baimu bang* 柏木幫). The Green Mountain and Cypress *bangs* were allowed to handle the increased amount according to their existing arrangement of fee collections from members and answer directly to the local state, instead of being subject to the Cunninghamia *bang*'s directions. So what resulted was a re-allocation of official duties among different *bangs* in the same trade and a restatement of the boundaries between these groups as the merchants themselves saw fit. In addition to this incident, the Cunninghamia *bang* had made other similar attempts at taking over smaller timber merchant groups and subjugating them to its own fee-collecting formula, but never succeeded. So long as these smaller groups petitioned to the local magistrate to assume a portion of the duty in question, their independence from the interference of the Cunninghamia *bang* was protected.¹⁴

In the nineteenth century, the growth of merchant organizations and the local state's increasing dependence on revenues from assigning official *chai* duties to such organizations went hand in hand. Local magistrates endeavored to strike a balance between supporting the authority and capacity of merchant organizations to levy extractions from their trade on the one hand and protecting a healthy level of competition among separate groups in a trade on the other. By and large, a group of merchants enjoyed the freedom to join an existing guild or set up a separate association with distinct rules by assuming exclusive responsibilities for some official *chai*. In a second-tier timber market as Chongqing, there were at least three *bangs* of timber traders within the walled city and around a half dozen if counting in those dotted in the suburban towns. When the mid-century fiscal crisis across the empire compelled the formal introduction of

¹⁴ See BX 006-4527, BX 006-056-0905.

Lijin taxes on commerce, the local *chai* arrangement between *yamen* offices and merchant organizations was also incorporated and modified to facilitate the functioning of the new system.

The Lijin Tax

In response to the central and provincial fiscal crisis caused by the prolonged military involvement with the Taiping and rebellious groups across the empire, the Lijin tax was introduced as a small percentage transit tax on commerce. The practice was first adopted in Jiangsu in 1853 and then quickly spread all over the realm.¹⁵ While some provincial officials initiated the collection of Lijin taxes, the tax income was increasingly mandated and controlled by the central Board of Revenue and became a mainstay of formal government finance in the second half of the nineteenth century.

The Lijin tax marked a significant shift in the Qing taxation policy on commerce. Previously, only a dozen of domestic customs stations were established along only major interregional trading routes to directly collect transit taxes. Commercial taxes collected from the domestic customs contributed around 10 percent to the national fiscal income before the 1850s.¹⁶ Whatever arrangements existed between the local state and merchant communities remained shadowy practices in a legally gray area.

¹⁵ Ch'iu Pengsheng, "you shili lüli yanbian kan ming qing zhengfu dui shichangde falü guifan," 54–57.

¹⁶ Shen Xuefeng 申学锋, "Qingdai caizheng shouru guimo yu jiegou bianhua shulun" 清代财政收入规模与结构变化述论 [Changes in the Scale and Structure of Qing Fiscal Income], *Beijing Shehui Kexue*, no. 1 (2002): 87.

When Lei Yixian 雷以誠, the military commander stationed at Yangzhou who first proposed the Lijin tax, encountered financial difficulties in sustaining the military activities, he initially resorted to the tried-and-tested method of “contribution mobilization” (*quanjuan* 劝捐), whereby officials lobbied the local gentries and merchant communities into making half-mandated half-voluntary contributions.¹⁷ In the eighteenth and early nineteenth centuries, “contribution mobilization” proved to be an effective campaign to deal with the state’s extraordinary needs in wars, water control works, famine reliefs, and other irregular circumstances. Such occasional, short-term campaigns were a necessary supplement to the state’s regular commitment to fiscal abstinence.¹⁸ But as the Taiping Rebellion dragged on for years and plagued the most prosperous region of the realm, the usual mobilization of contributions could not produce a sustainable source of revenue. Lei eventually turned to the idea of Lijin tax as a way to routinize and regularize the contributions demanded from the merchant communities.¹⁹

With the adoption of Lijin tax, The Qing state increased its capacity to directly and regularly tax commerce. The most visible change was the establishment of Lijin tax stops, the

¹⁷ See Lei Yixian’s 1854 memorial on experimenting with the Lijin tax in *Huang Qing Dao-Xian-Tong-Guang zouyi* 皇清道咸同光奏議 [Qing Memorials during the Reigns of Daoguang, Xianfeng, Tongzhi, and Guangxu], Jiuqing Zhai 1903 lithographic edition (Taipei: Wenhai chuban she, 1969), juan 37.

¹⁸ R. Bin Wong, “Taxation and Good Governance in China, 1500-1914,” in *The Rise of Fiscal States: A Global History 1500-1914*, ed. Bartolome Yun-Casalilla, Patrick K. O’Brien, and Francisco Comin Comin (Cambridge: Cambridge University Press, 2012), 365–72.

¹⁹ Lei Yixian’s memorial in Wang Yanxi and Wang Shumin, *Dao-Xian-Tong-Guang Zouyi*, juan 37.

number of which counted to thousands, along busy water and overland routes of transportation.²⁰ While some Lijin stations replaced previously existing domestic customs that were destroyed during the Taiping (such as the Longjiang Customs at Nanjing), the vast majority were newly added tax stops. Contemporaries and later scholars lamented the dramatically increased burden on commercial exchange, which was admittedly true. In the meantime, to put it into perspective, the number of reported Lijin tax stations in 1862 exceeded 2,500, only roughly on par with the density of Song-era commercial tax stations (2,060 stations in 1077) if the much larger territory

²⁰ Since its beginning years, there were two kinds of Lijin: those levied at the market place, known as *zuoli* 坐釐, as well as transit Lijin known as *xingli* 行釐. The terms came from the conventional paired opposites of resident merchants (*zuogu* 坐賈) and traveling merchants (*xingshang* 行商). After 1858, for some export commodities like tea and silk, there was also Lijin levied as the place of production. Among the three categories, transit Lijin soon became the most paramount. Many southern and eastern provinces (Jiangsu, Zhejiang, Anhui, Jiangxi, Hunan, Hubei, Fujian, and Guangdong) that initially had marketplace Lijin taxes gradually turned to rely primarily on transit Lijin. Marketplace Lijin remained important in Manchuria.

There were many local aliases and variants of transit Lijin, usually corresponding to a particular method or stage of Lijin taxation, including *lijuan* 釐捐, *tongjuan* 統捐, *tongshui* 統稅, *qili* 起釐, *yanli* 驗釐, *luodi li* 落地釐, *qipo li* 起坡釐, *baihuo li* 百貨釐, etc. For simplicity, the current study follow the definition in the Nationalist government's 1930 announcement of Lijin abolishment and treat all these variants and other Lijin-like transit taxes as Lijin. The announcement on Dec 15, 1930 can be found in *Gongshang banyue kan* 工商半月刊, vol. 3, no. 1. For detailed discussions on the different categories of Lijin, see Luo Yudong 羅玉東, *Zhongguo lijin shi* 中國釐金史 [History of the Lijin Tax] (Shangwu yinshu guan, 1936), 55–61.

of the Qing was taken into account.²¹ By 1885, the Lijin tax was contributing about 20 percent to the fiscal income of the late Qing state, which had increased from 41 to 77 million in forty years. The absolute amount of Lijin tax quadrupled between 1885 and 1911, rising from 12 to 43 million taels.²²

Take a main artery of timber trade, the water route from southern Jiangxi to Nanjing and Zhenjiang, for an example (Table 12). In the pre-Lijin era, four domestic customs stations were established along the way, and timber was taxed at a rate around 3-5% at each. Under the Lijin regime, the number of tax stops increased to eleven. Wucheng, Gutang, and Hukou stations used to be branches of the Jiujiang Guan Customs, and a voucher system had been employed to prevent repeated taxation on timber that passed through more than one of these branch stations. Under the Lijin regime, they have become independent stations. The same applied to the Dasheng Guan and Nanjing Lijin stations, which used to be branch stations of the Longjiang Guan Customs.

²¹ Liu, "The Making of a Fiscal State," 69; Luo Yudong, *Zhongguo lijin shi*, 81.

²² Shen Xuefeng, "Qingdai caizheng shouru," 84–85, 88.

Table 12 Lijin Taxes on Timber, Jiangxi —Jiangsu

Lijin Taxes on Timber, Jiangxi—Jiangsu				
Province	pre-Lijin customs	Lijin Tax Station		Lijin Tax Rate (%)
Jiangxi		Sanjiang Kou	三江口	6
	Gan Guan	Ganzhou	贛州	7
		Sanhu	三湖	7
	Jiujiang Guan	Wucheng	吳城	8
		Gutang	沽塘	7
		Hukou	湖口	2
	Anhui		Anqing	安慶
Wuhu Gong Guan		Wuhu	蕪湖	8
Jiangsu	Longjiang Guan	Dasheng Guan	大勝關	2
		Nanjing	南京	8.4
		Zhenjiang	鎮江	5

Source: "Jiangxi zhi mucai ye," 11-12.

When Lijin was first introduced in Yangzhou in 1853, the tax rate was set at roughly one percent, which was literally what “Lijin” meant. In the following decades, the Lijin tax rates had been increased steadily. By the Guangxu era (1875-1908), average Lijin tax rates were around 4 to 5 percent, varying from 1 percent in Fengtian to 10 percent in Fujian and Zhejiang. The rates during the Republican period roughly remained at the late-Qing level.²³ Table 12 reports the Lijin tax rates on timber at each station along the southern Jiangxi to Zhenjiang route as of the late 1920s.²⁴

²³ For average Lijin tax rates and collection methods in each province, see Luo Yudong, *Zhongguo lijin shi*, 56–57, 62.

²⁴ Yin Qing, “Jiangxi zhi mucai ye,” 11–12.

But the tax rate at individual stations only partially determined the total Lijin that a shipment of commodities would incur along the way. Of equal importance was how many stations one needed to stop for and pay the taxes, which also varied greatly between provinces.²⁵ Jiangsu and Anhui, for example, ordered that merchants had to pay taxes at every Lijin station that they encountered along the way within the province (*yuqia wanli* 遇卡完釐). So although the 5 percent average Lijin tax rate of Jiangsu did not seem to be very high, with its more thickly planted tax stops and the pay-at-every-station rule, the burden endured by merchants in Jiangsu was the greatest. Jiangxi, on the other hand, adopted the so-called “two departures, two inspections” (*liangqi liangyan* 兩起兩驗) system, whereby long-distance merchants would pay Lijin taxes for four times within Jiangxi province. Under this system, a merchant traveling through Jiangxi would pay the first “departure tax” (*qijuan* 起捐) at the first Lijin stop that he encountered in the province and submit his intended itinerary. Between the current stop and the last Jiangxi’s Lijin stop on his journey, two more Lijing stations were selected out as checking points, where his commodities would be inspected and taxed. The taxes paid at the third stop was called the second “departure tax”, while those paid at the second and the last stops were called “inspection tax” (*yanjuan* 驗捐). This system was also used in Fujian and eastern Zhejiang. Other collection methods included one-time collection at departure stations, adopted in Shandong, Fengtian, and Heilongjiang; collections at departure and arrival stations in Hunan, Sichuan, and Shaanxi; and the so-called “one departure, one inspection” (*yiqi yiyan* 一起一驗)

²⁵ Luo Yudong, *Zhongguo lijin shi*, 62.

system with one check point between departure and arrival, adopted in western Zhejiang and Guangdong.

Table 13 Average Lijin Rates and Collection Method by Province

Average Lijin Rates and Collection Method by Province			
Province		Average Rate (%)	Collection Method
Jiangsu	江蘇	5	pay-at-every-station
Anhui	安徽	2	pay-at-every-station
Hubei	湖北	2	pay-at-every-station
Guangxi	廣西	2	pay-at-every-station
Gansu	甘肅	1-2	pay-at-every-station
Zhejiang (west)	浙西	5.5	“1 departure 1 inspection”
Zhejiang (east)	浙東	10	“2 departures 2 inspections”
Jiangxi	江西	10	“2 departures 2 inspections”
Fujian	福建	10	“2 departures 2 inspections”
Guangdong	廣東	7.5	“1 departure 1 inspection”
Hunan	湖南	6	departure and arrival
Sichuan	四川	4	departure and arrival
Shaanxi	陝西	4	departure and arrival
Shandong	山東	2	one-time collection at departure
Fengtian	奉天	1	one-time collection at departure
Heilongjiang	黑龍江	1	one-time collection at departure
Jilin	吉林	2	unknown
Yunnan	雲南	5	unknown
Henan	河南	1.6	unknown
Shanxi	山西	1.5	unknown
Zhili	直隸	1.5	unknown
Source: Luo Yudong, <i>Zhongguo lijin shi</i> , 62.			

With the information on different provinces’ collection methods, let us go back to Table 12 and consider a typical merchant who travelled the popular route of Ganzhou—Nanjing. Within Jiangxi, he paid Ljin taxes at Ganzhou, Hukou, and two out of the three stations in between, accumulating a total tax rate of about 23%. Entering Anhui and Jiangsu, he paid taxes at every station that he passed through. The total Lijin tax incurred along the Ganzhou-Nanjing route would be around 45.4% of the total value of his commodity.

The nationwide layout of Lijin stations and personnel provided the basic infrastructure of direct commercial taxation. Upon arriving at a Lijin tax station, the ship owner was responsible to declare the number of crews and passengers and the kind and value of the cargos. The declaration form was submitted to the Lijin station, and a clerk was dispatched to inspect the ship. The inspectors randomly selected some cargos, measured their volume, estimated the weight using a list of empirical constants for each particular kind of commodity, and compared the result against the declaration form. Based on the verified volume of commodities, the amount of Lijin taxes was billed. Each merchant on the ship then took his bill to the station and made the payment.²⁶ Three-part receipts were adopted in most provinces (although the exact design differed by province), with one part retained at the tax station, one issued to the merchant, and one submitted to the provincial bureau for auditing. The receipt obtained was valid for a specified amount of time for the merchant to pass the inspections at the following stations.²⁷

Merchant Guilds “Undertake Contributions”

In addition to this formal structure of direct taxation, *renjuan* 認捐, or “undertaking contributions,” was a common arrangement between Lijin Bureaus and merchant organizations. Merchant organizations assessed themselves and undertook an organizational-level tax quota

²⁶ Ibid. at 99–103.

²⁷ Fujian, Zhejiang, Guangxi, and Gansu had four-part receipts, the additional part either submitted to the provincial financial ministry for inspection or used as a passport by the merchant to pass through the following steps. For explanations and illustrations of the receipts used in different provinces, see Ibid. at 93–99, 625–40.

from the Lijin bureau or other taxation agencies; in return, individual members, with certificates issued by the organization, would not be subject to direct taxation when passing through the Lijin stations. Besides transit taxes, this arrangement was most commonly used for Lijin or its variants in other names levied on local market places.²⁸

For example, in Hankou, the Bamboo-and-Timber Lijin Bureau delegated the collection of timber taxes to the native-place association of Hunan timber merchants (the Lianghu Huiguan 兩湖會館) and the guild of licensed timber brokers (the Muhang Gonghui 木行公會). The guilds developed a scheme to collect a percentage fee from members' timber and submitted a portion of this income to the Bureau as Lijin. A three-section ticket was used for exporting timber from Hankou, each section bearing a stamp to verify fulfilled payments to the Lianghu Huiguan, the guild of brokers, as well as the "education contribution" to the local state. The collection of the "education contribution" was in fact also delegated to the Lianghu Huiguan. The Lianghu Huiguan even established an office adjacent to the Lijin Bureau to collect contributions. Once all three payments were completed, the merchant was issued, by the Lianghu Huiguan instead of the Lijin Bureau, a receipt certifying that his due amount of tax was paid in full and his timber could pass through the Lijin station.²⁹ Similarly, the Association of Tax-paying Timber Merchants in Hangzhou (mentioned in Chapter 4) assumed a quota of Lijin taxes on timber that was to be exported to six nearby prefectures in Zhejiang and Jiangsu, which legitimized its collection of

²⁸ Ibid. at 109–17.

²⁹ Chen Xing and Chen Lilian, "Hanyang Yingwu Zhou zhumu shichang shihua," 128.

fees from members and the coercing requirement that all the timber buyers from these prefectures should join the organization.³⁰

From the late Qing through the Republican period, two timber trade organizations in Shanghai, the South Marketplace Association of Timber Merchants and the Zhenxun Association of Imported Timber, applied the collective taxation practice for a series of duties and fees, including Lijin and similar transit taxes, levies on particular kinds of timber, duties at domestic and maritime customs, and moorage rent payable to the Land Bureau.³¹ Membership certificates issued by the organizations would ensure the cargoes' fast passage through tax stations and harassment from the bribe-seeking taxation clerks could be minimized.³² The arrangement featured either a monthly or annual quota payable by the organization to certain tax agencies or the organization as the intermediate collector of an individual member's dues. The former included the "contributions of imported timber" undertaken by the Zhenxun Association and the "contributions of Hunan timber" undertaken by the South Marketplace Association.³³ The latter included the rent payable to the Land Bureau and the sales taxes introduced in the 1931. The South Marketplace Association designated a clerk, whose name was put on record with the maritime customs, to help members declare duties and mediate any issues that arose in their interactions with the customs.³⁴ Merchant organizations represented members to fend against

³⁰ Chen Ruizhi, "Hangzhou mucai ye de neimu," 94–95.

³¹ Taxation-related matters are mainly covered in SHMA S145-2-5.

³² SHMA S145-1-7, pp. 44 (1925).

³³ SHMA S145-2-5, pp. 20–21 (n.d.); S145-1-33 (1922).

³⁴ SHMA S145-2-8, pp. 62–63 (1932).

higher taxes, as evidenced by the South Marketplace Association's resistance to increased levies on timber-transporting boats from Fujian, and the Zhenxun Association's constant bargaining on the total quotas of imported-timber contributions.³⁵

In the case where merchant organizations undertook a lump-sum tax quota, the funds, of course, came from fees collected from member firms. The amount of membership fees usually varied according to the sizes of businesses, but did not correspond exactly to a firm's estimated tax dues. In fact, it seemed that a few leading members would contribute an exceptionally large share to the funds of the organizations. For example, in the Shanghai Zhenxun Association, the largest firms each made a one-time contribution of 3,000 taels initially and subscribed to a monthly payment of 40 taels, whereas ordinary members paid a 30-tael joining fee and a monthly fee of less than one tael. Since the organizational regulations stipulated that voting rights were linked to monetary contributions, the mechanism meant that large firms shouldered tax burdens for smaller members in return for legitimate authority in decision-making.³⁶ The fund of the merchant organization also had a cushion effect: the various agency's frequent attempts to increase tax quotas, if not resisted successfully by the organization, would be absorbed by the collective fund first before resulting in higher membership fees. In 1925, when the Zhenxun Association had to elevate the monthly fees after the tax bureau's demand to increase their quotas by five times, it stipulated a 20% increase for ordinary members and a 30% to 40% increase for the top 10 firms (from their already much higher base).³⁷

³⁵ SHMA S145-1-33 (1922); S145-1-7, pp. 26–31, 46–47 (1913–1925).

³⁶ SHMA S145-1-7, p. 26 (1925).

³⁷ SHMA S145-1-7, p. 49 (1925).

There seemed to be a change of attitude towards merchant guilds' collective taxation among common merchants that was brought about by the state's increased capacity of direct commercial taxation after the introduction of Lijin. In the pre-Lijin era, the state had little direct monitoring and control over traveling merchants. Direct transit taxes were only collected at a few domestic customs, and the tax rates were relatively low. Whereas organized groups were visible targets for the local government's exactions, individual merchants outside of any commercial organization had an easier time evading such demands and held considerable advantages in cost-saving. In other words, from individual merchants' perspective, in spite of other possible benefits from joining a commercial organization, the collective taxation arrangement was more often than not considered a burden.

The increasing implementation of direct commercial taxation since the second half of the nineteenth century changed the situation. The middle- and lower-Yangzi area where timber trade flourished, including Jiangsu, Jiangxi, Zhejiang, Hubei, and Hunan, happened to be those provinces that established the most concentrated net of Lijin stations. A merchant had nowhere to hide. The good news for him was that the long-established practice for a merchant organization to collectively pledge a quota of contribution was incorporated into the Lijin tax regime. From this individual merchants' perspective, the collective taxation regime had now become a more desirable service. The capacity of merchant organizations to negotiate with multiple agencies regarding tax rates was considered an attractive feature by potential members. If covered by the collective arrangement of a commercial organization, a merchant would be shielded from the unpleasantness of the long wait to be assessed at a tax, the volatile tax rates, and bribe-seeking clerks.

Indeed, the Zhenxun Association mentioned the undertaking contribution practice as a major benefit to join the organization in its public letter to non-members.³⁸

...Furthermore, the association undertakes annual contributions for the timber tax.

Compared to each practitioner in this trade making his individual payment, (collective taxation) precludes the malpractice of harassment and extortions (at the tax stations) and reduces the economic cost greatly. The benefit to our business is indeed remarkable. Over the years, the tax station negotiated with us seeking to take it back to be run by the government directly, and attempted to increase the amount of our contributions. These were only fended off by the association's endless endeavors and utmost struggles...

...又如木捐一項每年由公所認捐，較諸各同業各自納捐，不但留難需索之弊可免，而經濟上亦大減負擔，營業便利實非淺鮮。稅所歷年交涉屢欲收回仍歸官辦，並有增加捐數等因，亦持有公所百計經營竭力抗阻得免...

Indeed, some non-member merchants even chose to pay monthly fees to the Zhenxun Association in order to get covered by its collective taxation arrangement.³⁹

This perspective furthers earlier endeavors in the literature to understand the rational for the proliferation of merchant guilds in the late nineteenth century. Negishi Tadashi's study on Shanghai guilds argues that the state's increasing demand for "contributions" from merchants

³⁸ *Zhenxun Muye Gonghui baogao lu*, pp. 39-40.

³⁹ *Zhenxun Muye Gonghui baogao lu*, pp. 19-22.

after the mid-nineteenth century prompted the founding of many trade-based guilds as an organized response to such solicitations.⁴⁰ While increased state demands was indeed an inducer, I argue that, more precisely, it was the *combined* effects of the expansion of direct taxation apparatus and its failure to completely replace the traditional indirect platform that made the option of collectively undertaking tax quotas more appealing to the merchant communities in the late Qing and Republican era.

Conclusion

While the eighteenth-century reform centered on individual brokers and traders, the nineteenth century saw the proliferation of self-directed merchant organizations. Local government experimented with ways to incorporate and systematize the newly emerged merchant institutions into the local framework of commercial litigation and taxation. The resulted bargain between the local *yamen* and merchant groups centered on the latter's undertaking exclusively specified official *chai* duties. A merchant association's enrollment in some exclusive responsibilities to the local state lent legitimacy to its standing and provided protection against random *yamen* underlings' illicit exactions. In the first half of the nineteenth century, such *chai* arrangements between merchant groups and local government existed in a legally gray area and the central state largely turned a blind eye to its increasing prevalence. These revenues supplemented the ill-funded local administration and were beyond the auditing and control of the central state.

⁴⁰ Negishi Tadashi, *Shanghai no girudo* 上海のギルド (Tōkyō: Nihon Hyōronsha, 1951), 243-47.

The Qing state's capacity of direct commercial taxation was improved dramatically by the introduction of the Ljin tax in the 1850s. The provincial administrations gained immediate benefit from its collection, and the central state soon moved to impose regulation and assert claims on this new tax. The nationwide layout of more than two thousand Lijin stations provided the basic infrastructure to collect transit tax, a level of coverage that surpassed the Song system for the first time in centuries. But this direct-taxation infrastructure did not replace the well-established *chai* arrangements between merchant groups and state agencies. Rather, merchant organizations' practice of pledging contributions was incorporated into a scheme of Lijin tax farming and became even more prevalent in the second half of the nineteenth century. Merchant organizations assessed themselves and undertook an organizational-level tax quota from the Lijin bureau; in return, individual members, with certificates issued by the organization, would not be subject to direct taxation when passing through the Lijin stations. If covered by the collective arrangement of a commercial organization, a merchant would be shielded from the unpleasantness of the long wait at tax stops, inconsistent tax rates, and bribe-seeking clerks. In a way, the expansion of the state's direct taxation apparatus made the alternative of joining a collective taxation program offered by merchant organizations a more appealing option in the late Qing and early Republican era.

This chapter has covered the merchant organizations' interaction with the local state and their tax-related functions. The next chapter will turn to the economic functions of merchant organizations by focusing on their regulations on business practices, internal enforcement mechanisms, and connections to other formal and informal platforms of dispute mediation.

Chapter 6. Guild Regulations and Mechanisms of Contract Enforcement¹

In 1932, the Kaitai 開泰 Timber Store in Shanghai tried to recover 1400 silver taels owed by the Yong Xing Shun 永興順 Timber Store in Wuxi for the seven hundred timber logs it purchased from Kaitai two months ago on credit. After going through all the available venues of dispute resolution, including the timber trade guilds, chambers of commerce, and the local courts, Kaitai still ended up with nothing.

This chapter centers on the risks of default and information asymmetry that providers of trade credit like Kaitai had to face. The key issue is to understand the array of institutional solutions that were available to the merchant communities to combat such risks. For a credit-based trade to sustain, Kaitai's unfortunate outcome had to be infrequent enough. If there were too many cases like Kaitai, the trade of timber would have had to fall back to cash transactions, which would be far less efficient than credit. In reality, that did not happen. Spot transactions were unusual in the timber trade; instead, credit was widely used. Short-term trade credit in the form of chains of deferred payment was essential for the development of timber wholesale. This is not only because of the high monetary value of typical transactions (usually featuring several thousand of silver *yuan*), but also due to the long term it took for transporting timber and finishing a construction project. The system of contract enforcement constituted by the formal and informal institutions within the city and cross-regionally must have been fairly effective to

¹ An adapted version of this chapter will be published as Meng Zhang, "Timber Trade Organizations in Shanghai: Institutions, Enforcement, and Dispute Resolution, 1880-1930," *The International Journal of Asian Studies* 14, no. 2 (2017): 1–28.

check excessive defaults in payment and ensure the smooth flow of goods and credit along the long supply chain.

This chapter examines the different mechanisms of contract enforcement at work in the timber trade during the nineteenth and early twentieth centuries. The findings confirm two important observations made in previous literature on commercial disputes and their resolutions in late imperial China. First, the traditional justice system was willing to uphold contractual agreements.² Its proceedings of commercial matters were not adjudication based on a formal code but more akin to a mediation process that required the mutual consent of the litigants to settle a case.³ Second, merchant organizations played an important role in informing the court of local business customs and mediating commercial disputes outside the courtroom, sometimes at the request of the magistrates.⁴ The archival materials of the timber trade guilds used in this

² Zelin, Ocko, and Gardella, *Contract and Property in Early Modern China*.

³ On the intermediation nature of the traditional legal system on civil matters, see Shiga Shuzo 滋賀秀三, “Qingdai susong zhidu zhi minshi fayuan de gaikuo xing kaocha: qing, li, fa” 清代诉讼制度之民事法源的概括性考察——情、理、法 [General Examination on the Civil Legal Foundations of Qing Jurisprudence: Emotion, Reason, and Law], in *Ming Qing shiqi de minshi shenpan yu minjian qiyue* 明清时期的民事审判与民间契约, ed. Wang Yaxin 王亚新 and Liang Zhiping 梁治平 (Beijing: Falü chuban she, 1998), 19–53.

⁴ Fan Jinmin 范金民, Yao Yang 姚暘, and Ni Yi 倪毅, *Ming Qing shangshi jiu fen yu shangye susong* 明清商事纠纷与商业诉讼 [Ming-Qing Commercial Disputes and Lawsuits] (Nanjing: Nanjing daxue chuban she, 2007); Ch’iu Pengsheng 邱澎生, “Guofa yu bangui: Qingdai qianqi Chongqing cheng de chuanyun jiu fen jie jue jizhi” 國法與幫規: 清代前期重慶城的船運糾紛解決機制 [State Law and

study show that many default cases were resolved by the guilds and never needed to go to court. Applying the framework of institutional economics, I find that at the center of the guilds' enforcement capacity was reputation mechanisms based on information sharing and collective punishment strategies.

In addition, I will highlight two more points. By cross-examining court records with a close-up picture of the everyday operations of merchant organizations, I provide a fuller appreciation of the interconnectedness of the formal court system and the merchant organizations and how order was brought by their cooperation. Moreover, while earlier works typically take the end of the Qing dynasty as either the starting or the ending point of their study, this chapter's coverage to the 1930s traces the dynamic merging process of Chinese practices and Western legal concepts. Instead of one-way influence of western jurisprudence on the traditional Chinese system, it was their mutual adaptation that pushed forward the transformation of commercial adjudication in modern China.

The understanding drawn from timber trade is significant in the institutional analysis of credit issues in Chinese long-distance trade in general. It brings this chapter in direct conversation with the debate in economic history on the effectiveness of formal and informal contract enforcement mechanisms in sustaining long-distance trade networks. Economic theorists argue that contracts must be sustained by incentive-compatible institutional arrangements.⁵ Some

Guild Rules: The Mechanisms for Resolving Shipping Disputes in Chongqing], in *Ming Qing falü yunzuo zhong de quanli yu wenhua* 明清法律運作中的權力與文化, ed. Ch'iu Pengsheng 邱澎生 and Chen Xiyuan 陳熙遠 (Taipei: Academia Sinica, 2009), 275–344; Dykstra, “Complicated Matters.”

⁵ Williamson, “Calculativeness.”

studies, represented by the work of Douglass North, emphasize the role of the state in providing these institutional arrangements: a formal legal framework and a court system.⁶ Other scholarship has made equally strong arguments that various informal, private-order mechanisms have provided effective means to solve enforcement problems.⁷

The findings of this study support a third approach, which argues that although specific institutions play specific roles, there was no single set of institutions of trade that applied universally. Instead, the effective combination of various formal and informal institutions corresponds to the nature of the trade and the larger political, social, and cultural conditions.⁸ My argument for institutional complementarity, it should be stressed, does not deny the distinctiveness between the proceedings of formal adjudication and informal mediation, but rather emphasizes channels of communication and collaboration, which contributed to the

⁶ Representative works include North, *Institutions, Institutional Change and Economic Performance*; North, Wallis, and Weingast, *Violence and Social Orders*.

⁷ See Greif, *Institutions and the Path*. More recent works that show the importance of networks and reputation mechanisms include Goldberg, *Trade and Institutions*; Aslanian, *From the Indian Ocean to the Mediterranean*; Lydon, *On Trans-Saharan Trails*.

⁸ Jean-Laurent Rosenthal and R. Bin Wong have put forward a theoretical hypothesis for comparative studies on the feasibility and desirability of formal or informal contracting, see Rosenthal and Wong, *Before and Beyond Divergence*, 67–98. Monographic studies that have taken up this view include Goldberg, *Trade and Institutions*; Oscar Gelderblom, *Cities of Commerce: The Institutional Foundations of International Trade in the Low Countries, 1250-1650* (Princeton: Princeton University Press, 2013).

convergence of the expected outcomes from different platforms of resolution, thus limiting the room for legal speculation.⁹

The Timber Market in Shanghai and Sources of Materials

This chapter sets the main scene in Shanghai, while also drawing comparable evidence from a number of other major timber markets. The reason for the choice of Shanghai, apart from covering the rise of this important timber market since the mid-nineteenth century, is that it showcases the intermingling between domestic and international timber trade, between Chinese

⁹ This view is similar to that of Shiga Shuzo, who has argued that court adjudication and private mediations, although distinct in term of procedures and formalities, worked as a coordinated system. See Shiga Shuzo 滋賀秀三, “Shindai no minji saiban ni tsuite” 清代の民事裁判について [On Civil Adjudication in Qing China], no. 12 (1996): 226–52. On a related note, Liang Zhiping also acknowledges the functional cooperation between state law and customary law. Meanwhile, he stresses the rupture between the two knowledge systems at the level of jurisprudence, which is less relevant to the current discussion on practical implementation. See Liang Zhiping 梁治平, *Qingdai xiguan fa: shehui yu guojia* 清代习惯法: 社会与国家 [Customary Law in Qing China: Society and State] (Beijing: Zhongguo zhengfa daxue chuban she, 1996), 127–40. Moreover, there is no consensus among legal historians as to whether local customs could be said to have constituted customary/civil laws in late imperial China, but it is beyond the scope of this paper to deal with this debate. For representative views from each side, see Philip C Huang, *Civil justice in China, representation and practice in the Qing* (Stanford: Stanford University Press, 1996); Philip C. Huang, *Code, Custom, and Legal Practice in China: The Qing and the Republic Compared*, Law, Society, and Culture in China (Stanford: Stanford University Press, 2001); Bourgon, “Uncivil Dialogue.”

and foreign firms, and between native and western legal practices at work in the late Qing and Republican period. As the following discussions will show, the kind of reputation-based intra-group mechanisms of enforcement that developed in domestic merchant guilds of all kinds of trades over the Qing period was also adopted in the newly established guilds that specialized in international trade in the treaty ports. Many foreign companies operating in the treaty ports also joined these guilds as members and relied on the same guild principles and informal forums of mediation to uphold contracts. In the meantime, domestic courts in the Chinese city and the mixed courts in the international settlements exhibited similar patterns of jurisprudential transformations in adjudicating commercial matters, belying the sharp contradictions of Chinese and Western legal procedures that previous studies have claimed each to represent.

There were two timber trade guilds in Shanghai. The South City Association of Timber Merchants was the organization of traders of domestic timber produced in Fujian. The Zhenxun Association represented firms that imported timber from North America, Southeast Asia, and other overseas regions. This section introduces the development of the market for domestic and imported timber in Shanghai, the brief history of the two guilds, and the available sources used for this study.

Shanghai started to develop into a regional distributing center for domestic timber in the 1860s. Before then, Fujian timber was usually shipped by sea to Ningbo or to the port of Zhapu in Hangzhou Bay and then distributed by river across Zhejiang.¹⁰ In the 1860s, when the Taiping Rebellion interrupted this traditional route, timber merchants who were originally based in Zhapu relocated to Shanghai attracted to its treaty-port security. These merchants clustered in the

¹⁰ “Zhejiang zhi mucai.”

market south to the old city walls and became known as the “south city timber merchants” (*nanshi mushang* 南市木商). Thus, Shanghai became the distribution center of Fujian timber for Zhejiang and Jiangsu provinces.¹¹ Buoyed by the burgeoning timber demand in Shanghai, Fujian timber sales grew rapidly from the 1870s to the 1910s and reached their heyday in the 1920s.¹² The organization of domestic timber trade, known as the South City Association of Timber Merchants (*Nanshi Mushang Gongsuo* 南市木商公所, hereafter SCATM), was established in 1875. While most members were traders of Fujian timber, some traded Hunan timber that was transshipped to Shanghai from Nanjing.¹³

¹¹ SHMA, S145-3-1-12 (1953); S145-1-3 (1916).

¹² Weng Lixin 翁禮馨, “Fujian zhi mucai” 福建之木材 [Timber of Fujian] (福建省政府秘書處統計室, 1940), 1.

¹³ There were several changes in the official name of this organization, including *gongsuo* 公所, *huiguan* 會館, and *tongye gonghui* 同業公會. For detailed coverage on the organizational history of both SCATM and the Zhenxun Association, see Zhu Rong 朱榕, “Cong tongye gongsuo dao tongye gonghui: 1858 nian zhi 1937 nian shanghai muye tongye zhuzhi de jindai hua” 从同业公所到同业公会——1858年至1937年上海木业同业组织的近代化 [From Gongsuo to Gonghui: The Modernization of Timber Trade Organizations in Shanghai from 1858 to 1937], in *Dang'an li de Shanghai* 档案里的上海, ed. Shanghai shi dang'an guan 上海市档案馆 (Shanghai: Shanghai cishu chuban she, 2006). Focusing on membership criteria and the election procedures of management boards, Zhu argues that the traditional timber trade guilds became “modernized” during the mandated reorganizations in the Republican era. This study, on the other hand, argues for the significant

The SCATM was essentially an organization of wholesale sellers, although from time to time members made purchases from each other and engaged in brokerage services and retail sales as well. Most of them purchased timber directly from Fujian, shipped it to Shanghai with junk boats they owned or rented, and made sales to local or long-distance buyers. Since the time of the Qing, timber merchants in Shanghai usually acquired the official status of timber brokers, mainly to avoid the legal risk of being charged with “not selling through a licensed broker and avoiding taxes.”¹⁴ Sometimes, they might intermediate transactions between sellers in Fujian and buyers in Shanghai, but brokerage was the not their main business.¹⁵

Timber merchants based in Shanghai set up purchasing offices on the island of Zhongzhou 中洲 in Fuzhou to acquire timber through local brokers. Such offices were known as *zhuang* 莊 and were usually headed by a senior employee of the firm.¹⁶ Similar purchasing offices were also set up in Hankou, the major transshipment market for timber from Hunan,

continuities in terms of the economic functions and internal regulations of these two guilds, irrespective of the nominal reorganizations and title changes.

¹⁴ That these timber firms continued to pay the brokerage certificates can be confirmed in SHMA S145-1-40 (1931). See also a letter from the SMTAM to the Zhenxun Association of Imported Timber explaining that holders of brokerage certificates should not need to pay sales taxes, SHMA S145-2-9 (1931).

¹⁵ See the 1898 and 1916 regulations of the SCATM, SHMA S145-1-2, S145-1-3.

¹⁶ Twenty-seven *zhuang* agencies established by Shanghai timber firms were reported in 1931.

Comparing to the 27 members of the SCATM in 1927, it seems that every timber shop in Shanghai had set up a *zhuang* in Fujian, of which 25 were in Zhongzhou and two were within the city of Fuzhou. The names of these 27 *zhuangs* were listed SHMA S145-1-40 (1931).

Guizhou, and Sichuan. In Fuzhou, Shanghai firms organized their offices into the Peaceful Sea Association of Guest Timber Merchants in Fujian from Zhejiang. It represented the interests of these traveling timber merchants and engaged in negotiations with the sellers in Fujian and local commercial organizations. The Peaceful Sea Association maintained constant communication and cooperation with the Shanghai-based SCATM.¹⁷

Imported timber began to arrive in quantity in Shanghai in the 1890s. Imports met the surging demand from the meteoric rise of modern urban buildings. The long-term fall in shipping costs made imports of bulky timber economically viable. Imported lumber was sold as planks more suitable for direct use in construction of modern buildings than most domestic timber, which was sold as round logs. Many retail stores were opened in the international settlements north of the old city. Traders of imported timber became known as the “north marketplace timber merchants” (*beishi mushang* 北市木商) in contrast to the cluster of Fujian timber firms in the south marketplace. They ordered timber from large import export foreign firms equipped with extensive sawmills, the most influential ones being China Import & Export Lumber Company, Elles & Company, East Asiatic Company, and Canadian Trading Company.¹⁸

North American pine accounted for the bulk of importation. Hardwoods from the Philippines and Borneo were also popular. Some domestically produced planks from Fujian and Wenzhou were also traded by the timber stores in the international settlements. Some Shanghai

¹⁷ For example, the two organizations coordinated a resistance to the Fujian Provincial Department of Finance’s attempt at levying sales taxes on the *zhuangs* in 1931. See *Ibid.*

¹⁸ “Shanghai muye jianshi ziliao” 上海木業簡史資料, SHMA S145-3-1-12 (1953).

timber merchants also began to invest in sawmills to cut Fujian logs to planks.¹⁹ The vast majority of imported lumber was consumed locally in Shanghai. Construction of office buildings for government agencies and large companies, factories, grand hotels, and luxurious western-style houses were the first to boost demand. By the 1930s, construction and decorations of upper-to-middle class houses in urban Shanghai all relied on imported timber. From the 1920s, demand on high-end timber from Jiangnan cities such as Suzhou, Wuxi, Jiaxing, and Hangzhou also started to rise, so that sales to these cities contributed to the revenue of Shanghai stores.²⁰ On the other hand, the sale of domestic timber within Shanghai was limited to coffins and low-end bungalows in the suburbs. Timber shipped from Fujian was largely redistributed to the purchasers from inland cities.²¹ In 1905, the Zhenxun 震巽 Association of Imported Timber (Zhenxun Yangmu Ye Gongsuo 震巽洋木業公所) was founded in the international settlements. A western-style guild hall was constructed by 1916 with a 1% levy collected from members' sales. The name of the association was the two characters selected from the eight trigrams that represented wood, one of the five mutually generating and inhibiting elements.²²

According to their regulations, both the Zhenxun and the SMTAM were occupation-based associations whose members were firms. Each firm was represented by its manager (or owner, if no professional manager was hired and the owner was acting as the manager). In

¹⁹ *Shenbao*, 1917.1.4 (sec. 11).

²⁰ See an investigation on the timber market conducted by the Shanghai Bureau of Social Affairs in 1935, SHMA S145-1-47.

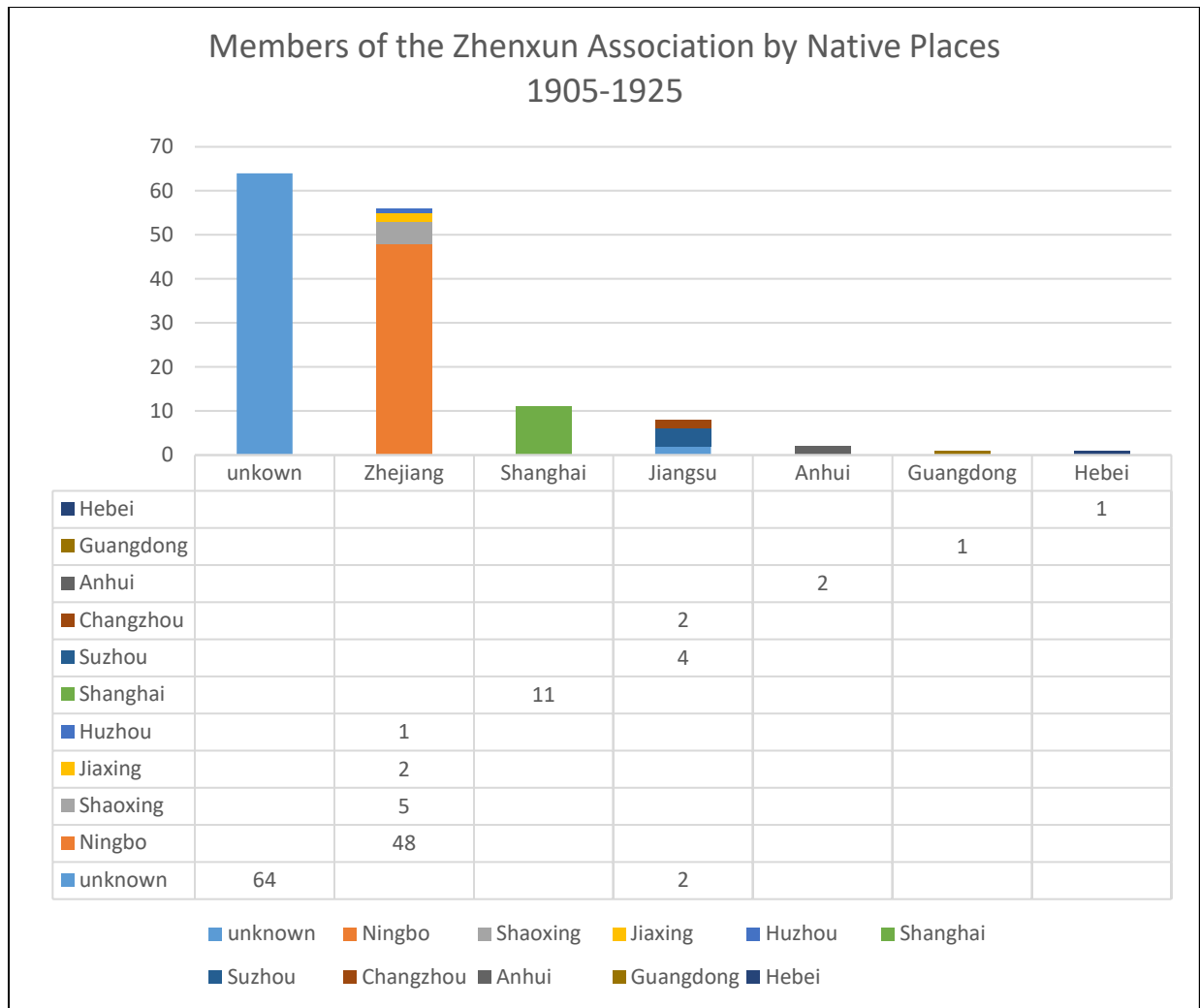
²¹ *Ibid.*

²² *Zhenxun Muye Gonghui baogao lu*, pp. 3-9.

principle, any firm that traded in designated varieties of timber and was willing to pay the required fees was qualified to be a member. Native-place origin was not a stated principle of membership, although the concentration of certain places of origin was visible. Ningbo was the dominant native-place origin of the managers of Zhenxun's member firms. Among the 143 merchants members of Zhenxun from 1905 to 1925, we have native-place information for 79, and 48 were from Ningbo prefecture (60.7%).²³ Moreover, membership in a timber trade organization did not preclude membership in a native place association. For example, Hu Zhiqing 胡執卿, a Huizhou native, acted as a director in both the SCATM and the Hui-Ning Sigong Hall (Huining Sigong Tang 徽寧思恭堂), which was the Huizhou and Ningguo Native-Place Association.²⁴

²³ Numbers are calculated based on the lists of staff and members in 1925, and past or deceased staff and members in *Zhenxun Muye Gonghui baogao lu*.

²⁴ *Shenbao*, 1913.4.16 (sec. 10).



Note: numbers are drawn from the lists of staff and members as of 1925 and the lists of past or deceased staff and members, see “Zhenxun Muye Gonghui baogao lu.”

Figure 13 Members of the Zhenxun Association by Native Places, 1905-1925

The two timber trade organizations’ membership overlapped somewhat. Some of the founding firms of the Zhenxun Association originally dealt in Fujian timber and later turned to the business of imported timber. Of the 62 member firms of Zhenxun in 1925, 17 were still located in the south marketplace. Moreover, another 42 firms were not official members of the

Zhenxun Association, but paid monthly contributions to the organization nevertheless.²⁵ Some of these were also registered as members of the SCATM but also traded imported timber. They were willing to pay the monthly contributions to Zhenxun so that the taxes and levies associated with their trade in imported timber would be covered by Zhenxun's program of the collective payment of members' taxes.²⁶

The Zhenxun Association and the SCATM also jointly managed a common hall to meet with clients and make sales: the Timber Merchants' Tea Club (Mushang Chahui 木商茶會), which was located in different teahouses over the years. Members of both organizations, construction contractors, and local and visiting buyers all gathered in the club every afternoon from 4:00 to 6:00 p.m. to negotiate transactions. The Tea Club proved convenient for sellers and buyers who did business in both domestic and imported timber.²⁷

The two timber trade guilds have left rich archival materials from the 1880s to the 1930s.²⁸ The records include detailed organizational histories, thus, providing a good opportunity to understand the institutional arrangements and to evaluate their effectiveness. In particular, the archives contain both organizations' internal regulations in different periods, letters of correspondence, and records of disputes that occurred between members and with non-members, including disputes that were resolved within the guilds and those that eventually went to court.

²⁵ *Zhenxun Muye Gonghui baogao lu*, pp. 19-22.

²⁶ SHMA S145-2-8, pp. 129–30 (n.d.).

²⁷ For the co-management of the Timber Merchants' Tea Club, see SHMA S145-1-22. For a brief history of the Tea Club and its successive locations, see SHMA S145-3-1-13 (1953).

²⁸ These materials are preserved in the SHMA, fonds NO. S145.

However, the archival collections are not complete. Apart from historical regulations, litigation records, and correspondence with government authorities that were preserved for their apparent importance as evidence of the organizations' legitimate status and specific aspects of their operation, most extant dated routine documents are clustered around random months of particular years. Therefore, the ultimate disposition of many cases is unknown to us. We cannot even guess at the proportions of cases resolved by the merchant guilds and those that eventually involved the court. Nevertheless, the documents produced in the routine operations of the merchant organizations reveal the repertoire of measures that were actually implemented at the organizational level and member merchants' response to different dispute resolution strategies. To a certain extent, the perceived effectiveness and desirability of different measures can be glimpsed from the member merchants' requests that certain regulations be applied and their opposition towards others. Moreover, to gain a fuller perspective, I have collected about 250 court cases of timber trade debt litigation from 1878 to 1932 from *Shenbao* 申報, the daily local newspaper that contained a section with succinct reports of court cases.

The Risks of Default and Information Asymmetry

This section delineates the nature and manifestation of the risks of default and information asymmetry in the trade of timber, while the following sections will examine the solutions offered by different institutions and their collaboration.

Default was the most common cause of disputes, and it could take many forms beyond outright refusal to pay. For example, there is the problem of merchants trying to exploit changes in market prices long after orders were placed. Such cases might arise when buyers refused to pay the previously agreed-upon price when market prices fell, or when sellers demanded extra

payment if market prices rose after the conclusion of the deal.²⁹ Furthermore, how much time should be allowed for the buyer to pay up after delivery was another issue. Since its establishment in 1875, SCATM extended the time allowance after delivery several times, from seventy days to four months, as a reasonable interval for both sellers and buyers. The four-month term then became a mutually recognized customary practice after 1898.³⁰ Delays beyond the fourth month should bear market interest.³¹

To some extent, the lengthening of credit terms between 1875 and 1898 reflected the relative easiness with which Shanghai timber merchants could finance their business. Those were the years when Shanghai gradually rose as the new distribution center of Fujian timber for Zhejiang and Jiangsu. The area supplied by Shanghai's timber merchants expanded beyond the immediate vicinity of Shanghai to cover a larger hinterland. As buyers from more remote places came to Shanghai to buy wood, longer intervals were required for them to ship the purchased timber back, make sales, and earn the money to repay the sellers in full. The extension of payment deadline tells us that Shanghai wholesalers essentially financed these delays. In contrast, the timber merchants in Shanghai paid their Fujian suppliers upon signing the contracts,

²⁹ For examples of such cases, see *Shenbao*, 1898.8.31 (sec. 3), 1906.1.17 (sec. 9).

³⁰ These regulations can be found in SHMA S145-1-2, S145-1-3.

³¹ The four-month allowance was restated in SCATM's regulations in 1916 and 1927, and was quoted by both the selling and buying sides on a number of occasions to justify a decision. For example, in a collection of more than two dozen letters from member merchants to SCATM suggesting issues to prioritize by the guild, the four-month term was constantly mentioned as the principle to be upheld. See SHMA S145-1-13 (1927). For example of customers recognizing the four-month provision and using SCATM's other regulations to argue their case, see S145-2-7, pp. 86–103 (1930).

that is, long before the arrival of the timber at Shanghai.³² In other words, Shanghai was not only the center of redistribution, but also financed the operations of upstream and downstream traders.

This financing capacity was made possible thanks to Shanghai's financial institutions. Several documents mention that the timber merchants' ability to bear with the buyers' delay in payment depended on the liquidity situation in Shanghai's financial market.³³ In fact, close business connections between timber merchants and native banks can be found in other important centers of timber trade such as Nanjing and Hankou. Failure to repay bank loans was commonly cited as cause for a timber firm to be sued in court.³⁴ The interdependence between native banks and timber firms was further intensified by cross-holdings of their shareholders.³⁵ Sometimes the bankruptcy of a large timber firm could drag down several native banks and start a small financial crisis in the city, as was the case at Nanjing in 1875 and Zhenjiang in 1910.³⁶ Moreover, timber firms and native banks often shared owners. For example, four of the five listed partners of the newly founded Hengji native bank in 1923 were part of other businesses. In particular, two of them, who each held 10% of Hengji, were partners of the Yongji and Guangmao timber firms, respectively.³⁷

³² SHMA, S145-2-7, pp. 59–62 (1930).

³³ *Shenbao*, 1919.1.3 (sec. 10).

³⁴ For example, see *Shenbao* 1884.2.6 (sec. 3), 1899.2.4 (sec. 9), 1904.5.29 (sec. 3), 1909.1.7 (sec. 12), 1923.7.6 (sec. 16), 1927.4.4 (sec. 15).

³⁵ *Shenbao*, 1923.3.1 (sec. 14).

³⁶ *Shenbao*, 1875.8.13, 1910.8.22 (sec. 12), 1910.8.26 (sec. 11), 1910.8.31 (sec. 12).

³⁷ *Shenbao*, 1923.3.1 (sec. 14).

Although Shanghai timber merchants could accommodate some delays on the buyers' side in order to make more sales, there had to be a limit. Effective means to prevent excessive arrears were needed to protect the interests of members. An extra delay by one or two months would be unpleasant for individual sellers, but not worthwhile to be taken through the litigation process, which was uneconomical in terms of both time and money. However, occasional short-term delays, if left unpunished, would lead to a systematic extension of customary time limit and compromise the common interests of the whole group.

Moreover, what troubled the timber merchants the most was information asymmetry. They found it difficult to learn the solvency of a potential customer. They were always concerned to avoid entering sales agreement with customers who were already deeply indebted to other members.³⁸ Some speculative customers placed new orders with no intention of repaying old debts, secretly transferred the revenue made through resale to their relatives, and suddenly announced bankruptcy to deny payments to creditors. For example, a Rongchang timber firm purchased timber valued at more than 10,000 silver *yuan* in total from 11 Shanghai stores within a period of two months. The 11 firms only found out about Rongchang's huge debt after its sudden announcement of bankruptcy.³⁹

Having laid out the problems, the following sections of the article will turn to the solutions. I will examine in sequence the private-order solutions based on reputation mechanisms at the timber trade guilds, the more formal solutions offered by the domestic and mixed courts in

³⁸ SHMA S145-1-2; S145-1-7, pp. 13–17, 63–66.

³⁹ For other examples of such cases, see SHMA S145-2-6, pp. 49–94 (1932).

Shanghai, and the inter-organizational (vertical) and cross-regional (horizontal) collaboration efforts among these institutions.

Internal Mechanisms at the Timber Guilds

The two timber trade guilds used information sharing and group sanctions to reduce the threat of payment defaults by both members and outsiders. Members were required to report any customer who failed to pay by the designated time limit, and the association would send a notice to all its members to stop doing business with the reported customer until the arrears in question were cleared. The pooling of information on defaults helped alleviate the information asymmetry that might cause members to enter into risky contracts with deeply indebted customers. The threat of exclusion of trade and the loss of reputation to a whole group of merchants increased the cost of default significantly. Such measures had been adopted by the SCATM by the 1880s at the latest. The regulation from that period stipulated that “should any member dare continuing to trade with the reported customer upon receiving the organization’s notice, he himself would be held responsible to repay the debt.” This provision was preserved in later regulations of the SCATM in 1898 and 1916.⁴⁰

Similarly, the 1911 regulation of the Zhenxun Association prescribed that it would send a notice to all members when it learned of a defaulting customer. Every member involved with that customer had to report the amount of his outstanding debt. Then a leaflet containing the pooled information would be published, and all members should stop transactions with the defaulter. The group’s sanction would only be lifted after all the outstanding accounts were

⁴⁰ SHMA S145-1-2, S145-1-3.

cleared. Members who continued to trade with the defaulter after the notice would go without the association support in any litigation following losses from those transactions. Moreover, the regulation stipulated specific rules about how to deal with construction contractors, the main customer base for members of the Zhenxun Association. The organization urged members to look out for those contractors who left debts unpaid by enlisting new partners and changing their firms' registrations. Whenever a member found such contractors working as partners of other construction firms, he should notify the association so that a warning could be sent out to all members.⁴¹ The 1925 and 1930 regulations of the Zhenxun Association kept all these articles, and further added that the group sanction mechanism also applied to situations when customers attempted to take advantage of price decreases after orders were placed.⁴²

The operation of these enforcement mechanisms can be seen in what has survived of the guilds' routine correspondence. Each month, SCATM asked members to submit detailed information on accounts receivable that had been outstanding for over four months. The SCATM's request came with the proviso that if a member firm neglected to report customers who did not pay on time, it could not request the guild's assistance in future disputes about these transactions.⁴³ The guild then added up each individual customer's debts to its members and took

⁴¹ See the 1911 regulations of the Zhenxun Association in SHMA S145-1-7, pp. 63–66.

⁴² SHMA S145-1-7, pp. 13–17.

⁴³ For examples of the SCATM's monthly notice for members to submit names of customers in arrears, see SHMA S145-2-7, pp. 18–23, 39–41 (1930).

a first-step measure of writing to late debtors in name of the organization pressing for immediate payment.⁴⁴

The threat of group sanction was also invoked from time to time. For example, the council notified all members to stop trading with the Yi Tai Feng firm in Wujiang County after it ignored several letters from SCATM demanding immediate payment to a member firm.⁴⁵

SCATM also published announcements in newspapers, urging debtors to clear outstanding accounts in time and threatening to impose group sanctions at the beginning of the next month.⁴⁶

Letters from members demanding that the guilds issue notice to stop trading with certain customers showed that the warning of a group sanction was considered a valuable weapon. For instance, the Chang Yuan Xie timber firm requested SCATM to issue a notice to halt trading with Cheng Dechang's store, located in Suyang in Jiangsu province, on the ground that Cheng Dechang still owed him more than 200 *yuan* from prior year's transaction.⁴⁷

Sometimes the organization led campaigns against groups of customers in particular places based on the common needs of members. Such a campaign directed at the Shahe group of timber merchants in Qingkou town was organized in 1929. Seven members of SCATM submitted lists of timber stores and the amounts owed by each. For example, seven timber stores

⁴⁴ For examples of the SCATM'S letters to debtors urging payment, see SHMA S145-2-7, pp. 24–25, 31–35, 42–58 (1930).

⁴⁵ SHMA S145-2-7, pp. 63–69 (1930).

⁴⁶ Two of such public announcements on newspapers are preserved, see SHMA S145-2-7, pp. 12–14 (1930).

⁴⁷ SHMA S145-2-7 (1927).

in Qingkou owed Changyuanxie about 1,900 *yuan*. The organization produced an aggregate list that it sent to the Qingkou Chamber of Commerce to hasten payment.⁴⁸

The timber trade guilds also assumed the authority to adjudicate disputes between members. For bankruptcy cases, at the request of owners or creditors, the organization could seize property, reckon accounts, and oversee the distribution of a bankrupt firm's liquidation to its creditors and shareholders. The guilds required a timely report of any change in ownership or management at member firms. This information was critical to bankruptcy cases, for creditors usually only dealt with managers and lacked information about the owners and their respective shares. Partners in a dispute over each one's liability also sought the guilds' adjudication.⁴⁹

When a member was suspected of fraud, the organization investigated and audited account books to find evidence. For example, a member firm was accused of assisting an outsider in bilking large quantities of timber with voided checks. At the request of members, the Zhenxun Association looked into the accused firm's account books, and found excessively low purchasing prices and inconsistencies in the invoices. Whereas the fraudster had escaped town and there was no means to locate and sue him in court, this member firm suspected of assisting in the crime was held responsible to compensate the victims for their losses. This was according to Zhenxun's regulation that "when strangers came with suspicious goods for sale, members should report to the organization. If any member accepted the suspicious goods without

⁴⁸ SHMA S145-2-7, pp. 104–22 (1929).

⁴⁹ SHMA S145-2-4, 4-7 (1927).

reporting, he should be held responsible to repay the victims when definite evidence showed that the goods in question were stolen from others.”⁵⁰

Why Play by the Rules?

Effective measures were needed to ensure that members conformed to notices of group sanction, or else the threat would not be credible. Although it was in the common interest of all members to maintain the effectiveness of the sanction mechanism, there was a free-rider problem. A member might be tempted to take advantage of the opportunity when no other merchants would trade with the defaulting customer and negotiate a good deal for himself. If the defaulting customer could not pay cash, a higher price could be obtained to compensate for his higher probability of future default again and for the strong bargaining power of this single merchant who was still willing to sell to him. What would prevent the guilds’ members from ignoring the organizations’ command and taking up such opportunities?

An effective instrument that helped reduce members’ temptation to free ride was a security deposit. The guild took a deposit of several hundred silver *yuan* from each member, the so-called “security to uphold the agreement” (*jianyi zhi zhi* 堅議之質). The fund was deposited in native banks and generated interest at market rates to be distributed to members at the year-end clearing of accounts. Should any member disobey the order to cease trade with sanctioned customers or violate any other internal regulations of the organization, the deposit would be

⁵⁰ SHMA, S145-2-6, pp. 96–114 (1933).

confiscated to tip the informer or saved as a collective fund to pay for holding festivals and other ritual events.⁵¹

The security deposit was only one component of what ensured members' conformity to organizational regulations. Additionally, the guilds provided a series of exclusive benefits that could only be received by a member in good standing. The potential loss of the entitlement to such benefits would weigh against whatever profit that could be gained by violating the regulations.

A most important excludable benefit was the enrollment in the guilds' collective taxation arrangement. As has been discussed in Chapter 5, *renjuan*, or "undertaking contributions," — whereby merchant organizations assessed taxes on their members and delivered the cumulative annual tax quota to the local government and other taxation agencies in lieu of direct taxation by the state — had been a well-established practice from the early Qing. Even after the introduction of more direct commercial taxations through *Lijin*, in the 1850s merchant organizations were able to continue the practice of collective taxation, negotiating an organizational-level quota with the *Lijin* bureaus and taxing individual members.

The two timber trade guilds in Shanghai applied the practice of collective taxation for a series of duties and fees, including *Lijin* and other transit taxes, levies on particular kinds of timber, duties at domestic and maritime customs, and moorage rent payable to the Land Bureau.⁵² Membership certificates issued by the organizations ensured the fast passage of cargo

⁵¹ SHMA S145-1-2.

⁵² Taxation-related matters are mainly covered in SHMA S145-2-5.

through tax stations and minimized the harassment from bribe-seeking taxation clerks.⁵³ The guilds also mobilized collective endeavors to fend off higher taxes, as evidenced by SCATM's resistance to increased levies on timber-transporting junks from Fujian, and the Zhenxun Association's constant bargaining to reduce the total quotas of imported-timber "contributions".⁵⁴

When merchant organizations undertook a lump-sum tax quota, the funds, of course, had to be collected from member firms through fees. The amount members paid varied according to the sizes of businesses, but did not correspond exactly to their assessed taxes. In fact, membership fees were designed to be more progressive than taxes. Leading members contributed most of the funds of the organizations. In the Zhenxun Association, the seven largest firms each made an initial one-time contribution of 3,000 taels and subscribed to a monthly payment of 40 taels, whereas ordinary members paid a 30-tael entrance fee and a monthly fee of less than one tael. Since voting rights in the association were linked to monetary contributions, the progressive taxation meant that larger firms shouldered tax burdens for smaller members in return for exercising control of the Association.⁵⁵ The funds of the merchant organizations also had a cushioning effect. When the various government agencies' frequent attempts to increase tax

⁵³ SHMA S145-1-7, pp. 44 (1925).

⁵⁴ SHMA S145-1-33 (1922); S145-1-7, pp. 26–31, 46–47 (1913–1925).

⁵⁵ SHMA S145-1-7, p. 26 (1925).

quotas succeeded, they were first absorbed by the collective funds before resulting in higher membership fees.⁵⁶

Previous studies on collective taxation mainly see it from the perspective of the state's need for efficient means of revenue extraction.⁵⁷ Additionally, I should stress, from the individual merchant's perspective, the collective taxation regime was considered a desirable and exclusive service performed by the guilds for their members. The capacity of each guild to negotiate with multiple state agencies regarding tax rates made life simpler for merchants. A merchant covered by the collective arrangement of a commercial organization would be shielded from the unpleasantness of waiting to be assessed at a tax station and subjected to volatile tax rates and bribe-seeking clerks. Indeed, the Zhenxun Association mentioned the *renjuan* practice as a major benefit in its public letter to attract non-members.⁵⁸ Some merchants even chose to pay monthly fees to the Zhenxun Association simply for access to its collective taxation arrangement, although they were not officially registered as members.

SCATM also provided valuable services related to the long-distance and wholesale nature of its members' businesses. It handled issues with Fujian timber suppliers through the Fujian Peaceful Sea Association (Anlan Huiguan 安澜会馆) and maintained moorage space

⁵⁶ For example, in 1925, when the Zhenxun Association had to elevate the monthly fees after the tax bureau's demand to increase their quotas by five times, it stipulated a 20% increase for ordinary members and a 30% to 40% increase for the top 10 firms (from their already much higher base). See SHMA S145-1-7, p. 49 (1925).

⁵⁷ A representative work of this approach is Mann 1987.

⁵⁸ SHMA S145-1-7, p. 39-40 (1925).

along the bank of the Huangpu River for its member firms to stock timber.⁵⁹ SCATM also negotiated for transport services on its members' behalf, which involved contact and negotiation with several associations of commercial junks both in Shanghai and along the coastal route. For example, the Renji 仁濟 Association of Commercial Junks in Ningbo provided regular reports to SCATM about the arrival, departure, and occasional delay of the timber junks owned or rented by the Shanghai firms. It also arranged guarding boats to sail with the timber junks at the request of SCATM.⁶⁰ Moreover, SCATM formed an alliance with the association of commercial junks to prohibit steamship transportation by members in return for significant discounts in junk rates.⁶¹

The different services provided by the guilds, including contract enforcement, litigation support, collective taxation, transportation, and storage, may seem unrelated functions. However, the exclusiveness of such services banded them together into a mutually reinforcing system that

⁵⁹ The riverbank used for timber storage presented an enduring problem when the state attempted to regulate the space along the Huangpu River. The negotiation went back and forth for almost two years, ended with designated space for timber at the compromise of both sides. SCATM also purchased some additional land at the Longhua port for storage. Some of the negotiation process can be found in *Shenbao* 1916.12.1 (sec. 10), 1917.1.4 (sec. 11), 1917.3.9 (sec. 10), 1917.3.16 (sec. 11), 1917.4.10 (sec. 11), 1917.4.26 (sec. 10), 1917.9.30 (sec. 10), 1918.1.30 (sec. 10), 1918.5.12 (sec. 10), 1918.6.12 (sec. 10), 1918.7.28 (sec. 10).

⁶⁰ For examples of regular reports and letters to arrange guarding boats, see SHMA S145-2-8, pp. 75–123 (1929–1934).

⁶¹ SHMA S145-1-59 (1924).

promoted members' solidarity.⁶² Only members in good standing could have access to these services. Violators would have to face the probability of losing his entitlement to not just one, but all, of these benefits. In addition to such preventative measures as the security deposit, these exclusive collective benefits added to the cost side should a member weigh the net benefit of violating a regulation or not cooperating in group sanctions.

It should also be noted that the Shanghai timber trade organizations were not alone in establishing information sharing, group sanction, and security deposit. Similar practices are seen in many merchant organizations of different trades and localities. The Shanghai Tea Guild established similar stipulations in 1870.⁶³ The Guild of Native Banks in Shanghai registered the shareholders, managers, and invested capital of member banks, and made such information available to creditors in the event of a member bank's bankruptcy.⁶⁴ The Hankou Financial Guild, established in 1871, demanded security deposits of several hundred taels from each member bank.⁶⁵ The Guild of Mountain Products in Changsha stipulated that members should

⁶² Mancur Olson, Jr. has developed a theoretical framework regarding collective actions in groups, which argues that individual members are less likely to free ride in groups that provide benefits only to active participants, i.e., excludable benefits, instead of non-excludable public goods. See Mancur Olson, *The Logic of Collective Action: Public Goods and the Theory of Groups* (Cambridge: Harvard University Press, 1965).

⁶³ Du Xuncheng 杜恂诚, *Jindai Zhongguo qianye xiguan fa: yi Shanghai qianye wei shijiao* 近代中国钱业习惯法: 以上海钱业为视角 [Customary Law in the Banking Industry of Modern China: From the Perspective of Shanghai Banking Industry] (Shanghai: Shanghai caijing daxue chuban she, 2006), 43.

⁶⁴ *Ibid.* at 58.

⁶⁵ Rowe, *Hankow: Commerce and Society*, 174.

share information regarding the credit worthiness of contracted suppliers; it also required the reporting of customers in default and listed group sanctions as a last-resort measure.⁶⁶ Although the exact combination of specific regulations varied, they constituted a set of commonly adopted strategies in commercial guilds that aimed to alleviate problems of information asymmetry and default.

Local Courts in Shanghai

The timber trade guilds' internal enforcement mechanisms could by no means resolve all the default and bankruptcy cases. An issue of great interest is how merchants maneuvered between formal and informal platforms of dispute resolution. Shanghai's status as a treaty port, featuring several legal tribunals depending on one's business/residence location and nationality, added more variables to the mix. The question is to what extent these different platforms constituted a coordinated system of resolution that generated coherent expectations for potential litigants. If not, speculative litigants would be able to take advantage of the divergent promises at different tribunals.

There were many courts in Shanghai. The standard Qing bureaucracy centered on the Shanghai County Magistrate. The Magistrate, as the administrator of all aspects of local governance, heard cases in his *yamen* in the walled city. Appeal cases were heard by the Songjiang Prefecture and then the provincial-level officials of Jiangsu. In the Republican period, a local court was established as a separate entity from the local government.

⁶⁶ Hunan sheng diaocha ju, *Hunan shangshi xiguan baogao shu*, 192–94.

Following the Opium War, since 1843 foreign settlements were established north of the walled city. Foreign nationals of treaty powers were subject to the consular courts of their home countries.⁶⁷ With the growing Chinese population in the foreign settlements after the 1850s, a court was needed in the settlements to adjudicate disputes among Chinese people as well as those involving suits filed by foreigners against Chinese defendants. This need led to the Mixed Court of the British-American Settlement (later the International Settlement) and the Mixed Court of the French Concession, both formally established in 1869.⁶⁸ The mixed courts dealt with the nationals of China and non-treaty powers who were accused of offenses or crimes committed within settlement limits. While a Chinese magistrate sat for purely Chinese cases, a western

⁶⁷ Britain and the United States later replaced consular courts with independent Courts for China and appeal courts. In addition, a Court of Foreign Consuls was established in 1882 as an administrative tribunal to deal only with suits against the Shanghai Municipal Council, the governing body of the foreign settlements. See Yang Xiangjun 杨湘钧, *Diguo zhi bian yu guatou zhi lian: Shanghai Huishen Gongxie quanli guanxi bianqian yanjiu* 帝国之鞭与寡头之链——上海会审公廨权力关系变迁研究 [Whip of the Empire and Chains of Oligopolies: Changing Power Relations in the Shanghai Mixed Courts] (Beijing: Beijing daxue chuban she, 2006), 46–56.

⁶⁸ The prototype of the mixed court was first established in 1864 in the British Consulate and was composed of a Chinese official and a British assessor. For the process of the establishment of mixed courts, see Thomas B. Stephens, *Order and Discipline in China: The Shanghai Mixed Court, 1911-27* (Seattle: University of Washington Press, 1992), 44–47; Yang Xiangjun, *Diguo zhi bian*, 67–73, 91–96.

consular representative sat with the magistrate for cases where the plaintiffs were of treaty power nationalities.⁶⁹

In addition to these formal courts, other entities could adjudicate small cases. In particular, the South-City Roadwork Bureau (Nanshi malu gongcheng ju 南市馬路工程局) was a proto-municipal organ established by Chinese gentry-merchants in 1895 in the Chinese city. The bureau was initially concerned with the construction of roads, but it came to take on broader responsibilities including maintaining public order and adjudicating small disputes. Since many timber firms were located in the South City, a number of cases involving them were decided by the Bureau.

Figure 14 shows the distribution of 255 timber trade debt cases that were brought to these different venues from 1878 to 1932, which I have collected from *Shenbao*, the daily local newspaper. While a small number of cases were reported in details as interesting news, most of the cases came from a section of the newspaper that was devoted to summarizing the daily proceedings in the various Shanghai courts. Accounts until the 1910s tended to provide more details of the cases and even dialogues in court; entering the Republican era, the reports became increasingly succinct, usually including only the causes of dispute and the judges' verdicts.

⁶⁹ After the 1911 revolution, the personnel of the mixed courts became under the control of the foreign consulates. Foreign assessors could sit in pure Chinese cases, too. In 1927, the Mixed Court of the International Settle was abolished and replaced by a Provisional Court presided by only Chinese judges. In 1931, the Provisional Court was renamed the Local Court of the First Special District of Shanghai; in the same year, the Mixed Court of the French Concession was abolished and replaced by the Local Court of the Second Special District of Shanghai. See Stephens, *Order and Discipline*, 48–51, 64–65.

Foreign firms appeared as plaintiffs in 25 cases (9.8%), 20 of which featured the British firm China Import & Export Lumber Company, which was also a member of the Zhenxun Association.⁷⁰

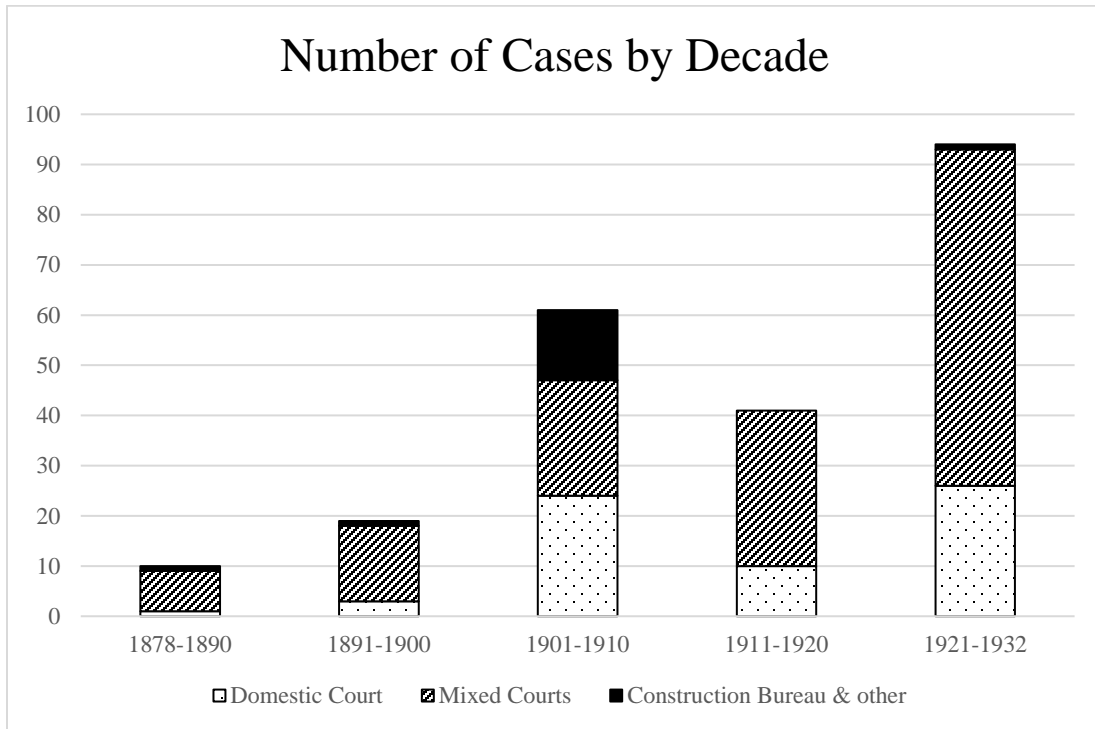


Figure 14 Number of Cases by Decade

Most of the cases were local. Based on the cases where the occupations of both parties were known, the most common cause of a dispute in court was a contractor's failure to pay a timber firm (67 such cases in total). Because most of these construction projects were in the foreign settlements, these cases ended up in the mixed courts. A contractor often had the proprietor as his guarantor when he obtained timber and other construction materials on credit. It

⁷⁰ Foreign timber firms sent their Chinese compradors as representatives in the Zhenxun Association. SHMA S145-1-7, pp. 19–22 (1925).

could also be the other way around where the timber firm acted as the guarantor of the contractor to the proprietor, agreeing to see to the completion of the project should the contractor abscond.⁷¹ Moreover, some contracts stipulated that upon the completion of the project, the proprietor would pay the timber firm what it was owed directly.⁷² A dispute might thus arise among any pair of the timber merchant-building contractor-real estate owner triplet. Finally, because contractors and timber merchants belonged to different guilds, disputes between them were beyond the influence of any single guild and they were more likely to end up in court.

It is noteworthy that disputes between timber merchants, either in Shanghai or cross-regional, seldom showed up in court (10 such cases in total). When they did, it usually involved multiple litigants and/or complex ownership-creditor dispute in bankrupt cases. Litigation rarely arose from simple arrears in transactions between timber merchants. One reason for this rarity lay in the structure of cross-regional flow of goods and credit. If a Shanghai merchant failed to pay his Fujian sellers, the most likely process would be for the sellers to sue the Shanghai firm's dispatched purchase office in the Fuzhou local court. If timber buyers who resided in another locality in Jiangsu or Zhejiang fell behind, it would be more effective to sue them in their locality than in Shanghai. Still, compared to the records of SCATM where arrears disputes between timber merchants are most commonly seen, the absence of such cases in the Shanghai courts, especially those between local merchants, points to the effectiveness of the merchant guilds in resolving simple disputes among members.

⁷¹ For example, see *Shenbao*, 1896.6.1 (sec. 3), 1902.9.14 (sec. 9), 1902.10.1 (sec. 9), 1919.11.7 (sec. 11).

⁷² For example, see *Shenbao*, 1903.7.24 (sec. 3), 1905.5.16 (sec. 19), 1918.10.19 (sec. 11).

It should be stressed that, despite the mixed court' peculiar status as a colonial institution and the political and legal tensions between China and the treaty powers it embodied, my examination of mundane commercial disputes shows that domestic courts and mixed courts were similar in their handling of such cases.⁷³ The two dozen cases that involved foreign firms as plaintiffs, although a limited sample, indicate no deviation from the processes seen in purely Chinese cases. In principle, whether the Shanghai County Magistrate or the mixed courts had jurisdiction depended on the residential or business address of the defendant. In practice, litigants had considerable flexibility when the case involved only Chinese nationals. Some litigants, when unsatisfied with the result of the proceedings in one court, brought the same case to another court in the hope of a more favorable verdict. However, such attempts, once revealed by the

⁷³ Existing studies on the Shanghai mixed courts have focused on the interplay of power relations and the tensions between two different legal cultures. The materials used in these studies are mainly documents that reflected different parties' diverging stances as well as legal cases that stood out as manifestations of underlying clashes. See Yang Xiangjun, *Diguo zhi bian*; Stephens, *Order and Discipline*. My demonstration of the similarity of the mixed courts and domestic courts in dealing with commercial disputes calls into question the empirical foundation of a widespread argument that portrays the mixed courts as a one-directional channel through which Westerners brought in new formal institutions, which consequently accounted for the economic growth in Shanghai. See Debin Ma, "Law and Economy in Traditional China: A 'Legal Origin' Perspective on the Great Divergence," in *Law and Long-Term Economic Change: An Eurasian Perspective*, ed. Jan Luiten van Zanden and Debin Ma, *Law and Long-Term Economic Change: an Eurasian Perspective* (Stanford: Stanford University Press, 2011), 46–67.

counterparty to the magistrates, always led to the same outcome: the original verdict was usually upheld unless important new material evidence was presented or significant wrongdoing in the previous proceedings was detected.⁷⁴ For example, in 1878, Wu Yongpu agreed to guarantee the defendant's debt of 1,900 taels to the plaintiffs and signed a contract at SCATM, which gave jurisdiction to the Shanghai County Court. Later, the creditors sued Wu at the French Mixed Court for failing to pay the remaining 400 taels on that debt. The Mixed Court Magistrate decided that Wu should come up with the payment within a week, or else be delivered to the Shanghai County Magistrate for further adjudication.⁷⁵

Court proceedings and verdicts went through a noticeable change during the Republican era, departing from Qing practices. The domestic court and mixed court seem to have evolved synchronously. As shown in Table 14, before the 1910s, courts were unlikely to issue a judgment that explicitly found the defendant guilty or innocent, or decided the specific monetary amount payable to each plaintiff. Most often, the court simply urged the litigants to settle their dispute. Even in cases where the court decided that one party was at fault, it refrained from dictating the exact amount of compensation, but instead left it open for the litigants' negotiation. The magistrates' verdicts often read "settle by a certain date" or "find a reliable merchant to bail out the defendant and help them settle." When the litigants failed to resolve the case after several such orders, detention or physical punishments might be used to urge the defendant to settle. The involvement of commercial guilds was also more visible before the 1910s. The court upheld settlements that had been brought about by the guilds, relied on the expertise of the guilds'

⁷⁴ For example, see Huang Wenwei vs. Huang Yunyu in *Shenbao*, 1902.6.11 (sec. 9).

⁷⁵ *Shenbao* 1878.1.4 (sec. 3).

directors to reckon accounts and estimate values, and referred cases to merchant guilds and the Chamber of Commerce for out-of-court mediation.

Table 14 Results of Court Cases

Results of Court Cases					
Result	pre-1911		post-1911		Total
	Domestic Court	Mixed Courts	Domestic Court	Mixed Courts	
explicit verdict	19%	14%	94%	75%	58%
order timely settlement	67%	61%	6%	7%	27%
commercial organization involved	14%	17%		3%	7%
private settlement		6%		8%	5%
canceled		3%		7%	4%
Average Monetary Amount (taels)	4,707	1,603	1,948	1,850	2,203
Total # of cases	21	36	31	73	161

So in late Qing Shanghai, the Shanghai County magistrate as well as the magistrates of the two mixed courts followed similar procedures in handling commercial disputes as their colleagues in other parts of China. As Maura Dykstra’s study on insolvency cases in Qing dynasty Ba county has shown, the magistrates followed a deliberate strategy that recognized the court’s limited information and the inflexibility of its verdicts.⁷⁶ The court urged litigants to employ mediation platforms outside the court and limited its involvement to situations when out-of-court negotiations had been exhausted. But even then, besides ordering short-term detainment and light physical punishment, the court seldom mandated solutions other than those reached outside of the courtroom. Moreover, it could not offer effective means to enforcing its solutions if one party was determined not to comply. The magistrates were willing to intervene when a litigant claimed that the director of the commercial guild was partial or unfair in his mediation, but it did nothing more than appointing other merchants as mediators.⁷⁷ When everyone was

⁷⁶ Dykstra, “Complicated Matters.”

⁷⁷ For example, see a dispute between Xu Wenshu and Sun Shaoqing at the Mixed Court of the International Settlement in *Shenbao*, 1899.1.25 (sec. 9), 1899.2.6 (sec. 9), and 1899.5.12 (sec. 3).

willing to participate, the flexibility of the system produced compromises acceptable to all parties. But the system was virtually powerless if one or both parties refused to compromise, resulting in deadlocks that could endure for months and even years.

All this began to change in the 1910s. Both domestic and mixed courts became more willing to issue explicit verdicts and less likely to refer cases directly to merchant guilds. The improved capacity of the courts owed much to the establishment of a new position, the court accountant. This new office greatly reduced the court's reliance on commercial organizations for reckoning accounts. The result of the court accountant's auditing became the most important basis for judgment.⁷⁸ The courts' better grasp of a debtor's financial condition allowed the judge to decide the amounts debtors should pay. It also made the auction of the debtor's assets a more feasible option to the court, which was further facilitated in the mixed court by the introduction of court auctioneers.⁷⁹ Moreover, the employment of attorneys was no longer limited to Sino-foreign cases, but became common practice among Chinese merchants as well. When defendants failed to show up in court, the judge now ordered the plaintiffs to publish a notice on local newspapers. If the defendant (or his representative) failed to register at the court within the specified period, typically two weeks, the judge had no hesitation in making verdicts in the

⁷⁸ For example cases, see *Shenbao*, 1918.11.12 (sec. 11), 1919.1.18 (sec. 11), 1918.11.25 (sec. 11), and 1922.1.8 (sec. 12).

⁷⁹ Anatol M. Kotenev, *Shanghai: Its Mixed Court and Council Material Relating to the History of the Shanghai Municipal Council and the History, Practice and Statistics of the International Mixed Court. Chinese Modern Law and Shanghai Municipal Land Regulations and Bye-Laws Governing the Life in the Settlement* (Shanghai: North-China Daily News & Herald, Limited, 1925), 272.

absence of the defendant when the evidence presented by the plaintiff's attorney was considered strong enough.⁸⁰ Twelve cases from the Republican era, 11% of the cases with verdicts, were decided in the absence of defendants or their representatives.

While outright referral of cases to out-of-court forums of mediation became uncommon, the involvement of commercial guilds in court proceedings continued. Guilds retained legal consultants for themselves and their members.⁸¹ Most importantly, guilds were often consulted by the court with regard to customary practices in specific matters. For instance, in a typical case that concerned the triangle relationship between proprietors, hired contractors, and timber stores, the Jiangsu Provincial Court asked the Zhenxun Association whether the proprietor or the contractor of the project should sign the receipt for the timber.⁸²

The legal basis for such consultations came from a 1913 decision by the Supreme Court of China (*daliyuan* 大理院) that stated:

Civil cases are decided first according to express provisions of law; in the absence of express provisions, then according to customs, and, in the absence of customs, then in accordance with legal principles (*tiaoli* 條理).⁸³

⁸⁰ For example, see *Shenbao*, 1919.11.27 (sec. 11).

⁸¹ SHMA S145-2-7, pp. 78–80 (1932).

⁸² SHMA S145-2-6 (1927).

⁸³ *The Chinese Supreme Court Decisions*, no. 1, 2d year A.C. 64, in Kotenev, *Shanghai*, 431.

The Chinese term *tiaoli* is best understood in this context as the idea of “the generally-acknowledged best principles to apply in such cases in the interests of regularity and order.”⁸⁴ This decision, together with the collection of the Supreme Court’s precedents, served as the *de facto* civil law before 1930, when the Republican Civil Code was finally promulgated. Regular and mixed courts often invoked as “customs” or “legal principles” both the principles delineated in the 1911 Draft Civil Code of the Great Qing and the short-lived 1906 Qing Bankruptcy Code, as well as the regulations of commercial guilds.⁸⁵

It was common understanding that business customs, as was enshrined in the regulations of commercial guilds, were enforceable principles in court as long as they were not contradictory to express stipulations of law. When Zhu Yaoqing, a Taicang merchant indebted to a number of SCATM timber firms, lost a lawsuit over his debts in Taicang county court, he hired an attorney to appeal his case and accused his creditors of violating SCATM’s own regulations regarding standardized measurements and fair pricing. In response, his creditors requested that a SCATM representative testify that they had always conformed to the organization’s regulations. In the end, Zhu’s appeal was not accepted by the Jiangsu Supreme Court for lack of evidence (not for lack of grounds).⁸⁶ The significant point revealed by this incidence is that guild members, non-

⁸⁴ Stephens, *Order and Discipline*, 87.

⁸⁵ Huang Yuansheng 黄源盛, *Mingchu Daliyuan Yu Caipan* 民初大理院與裁判 [The Supreme Court and Its Judgements in the Early Republic of China] (Taipei: Angle Publishing Co, Ltd., 2011); Kotenev, *Shanghai*, 257–71; Stephens, *Order and Discipline*, 88.

⁸⁶ SHMA, S145-2-7, pp.86-103; S145-2-6 (1930).

members, and the court all agreed on the standards of conduct in the timber trade and that the formal court system had a role in supporting these private business norms.

Cross-Regional Disputes and the Chamber of Commerce

Cross-regional disputes presented more severe informational and enforcement challenges. The network of chambers of commerce, established in 1904, proved essential for the resolution of cross-regional cases.⁸⁷ Previous studies have shown chambers of commerce inserted a more formal venue of vertical communication between merchant organizations and the court. Trade-based guilds (and to a lesser extent native-place organizations) were brought under the umbrella of the chamber of commerce network. The chamber of commerce, thus, concentrated the strengths of long-established, non-court social mediation and took on officially recognized authority in providing final resolution to commercial disputes. This newly integrated merchant forum remained the primary platform for settling contentious commercial disputes until the 1940s.⁸⁸ This section will show that, in addition to its role in narrowing the gap between local

⁸⁷ For an account of the establishment of the chambers of commerce, see Zhongping Chen, “The Origins of Chinese Chambers of Commerce in the Lower Yangzi Region,” *Modern China* 27, no. 2 (2001): 155–201.

⁸⁸ Ma Min 马敏 and Zhu Ying 朱英, *Chuantong yu jindai de erchong bianzou -- wan Qing Suzhou shanghui ge'an yanjiu* 传统与近代的二重变奏—晚清苏州商会个案研究 [Tradition and Modernity: Case Studies of the Late-Qing Suzhou Chamber of Commerce] (Chengdu: Bashu shushe, 1993); Ma Min 马敏, “Shangshi caipan yu shanghui: lun wan Qing Suzhou shangshi jiufen de tiaochu” 商事裁判与商会——论晚清苏州商事纠纷的调处 [Commercial Adjudication and the Chamber of Commerce:

courts and private mediation embedded in merchant guilds, the nationwide system of chambers of commerce also served the important function of facilitating cross-regional communications and negotiations between merchants and their guilds in different localities.

Of the two dozen cross-regional arrears cases collected from the Municipal Archives of Suzhou and Shanghai (SZMA and SHMA), half of them involved one or more chambers of commerce (see Table 15). In disputes that involved timber merchants who were based in different localities, it was common to see the flow of information and request between the two localities' timber trade guilds through their respective chambers of commerce. In cases where there was no specialized organization for timber trade, the local chamber of commerce would contact the timber firm in question directly. A chamber of commerce could also address county courts within its jurisdiction as an equal entity and request the magistrate's assistance in locating and detaining suspected defaulters.⁸⁹

Resolution of Commercial Disputes in Late Qing Suzhou], *lishi yanjiu* 历史研究, no. 1 (1996);

Dykstra, "Beyond the Shadow of the Law."

⁸⁹ For example, the Suzhou General Chamber of Commerce requested the magistrate of Zhenze County to urge a defendant to make his presence in court at Jiaxing. Suzhou Municipal Archives [hereafter SZMA], I14-001-0817-068 (1906).

Table 15 Cross-Regional Arrear Cases

Cross-Regional Arrear Cases					
No.	Source	Loc. in Archives	Year	Brief	Chain of Communication
1	SHMA	S145-2-7, pp. 36-38	1930	Chengxie Ji (Changshu) owed Zhengyu	SMATM noticed members of Chengxie Ji's arrears to Zhengyu and asked if there were other creditors
2	SHMA	S145-2-7, pp. 104-122	1929	collective pressing for payment of debt (agst. Qingkou)	creditor — SMATM — outside defaulting customer
3	SHMA	S145-2-7, pp. 59-62	1930	Fulongtai (Suyang) owed Shanghai firms	creditor — SMATM — outside defaulting customer
4	SHMA	S145-2-7, pp. 42-58	1930	collective pressing for payment of debt (agst. Suyang)	creditor — SMATM — outside defaulting customer
5	SHMA	S145-2-7, p. 141	1931	Hengtaixiang Yuji (Kunshan) owed Shentai (Shanghai)	creditor — SMATM — outside defaulting customer
6	SHMA	S145-2-7	N/A	Cheng Dechang (Suyang) owed Changyuanxie (Shanghai)	creditor — SMATM — outside defaulting customer
7	SHMA	S145-2-7, pp. 136	N/A	Mao Sentai (Changzhou) owed Yongtai (Shanghai)	creditor — SMATM — outside defaulting customer
8	SHMA	S145-2-7, pp. 63-69	1930	Yifengtai (Luxu) owed Yongtai (Shanghai)	creditor — SMATM — outside defaulting customer; SMATM sent notice to members to stop trade with the customer in question.
9	SHMA	S145-2-7, pp. 71-73	1931	Tongsheng Hao (Shandong) owed Yongsheng (Shanghai)	creditor — SMATM — Shanghai CoC — Rizhao CoC — debtor
10	SHMA	S145-2-7	N/A	Wuwen Ji (Suzhou) owed Shuntai (Shanghai)	creditor — Zhenxun — Shanghai CoC — Suzhou CoC — debtors
11	SHMA	S145-2-7, pp. 137-138	1931	Chunmao (Hangzhou) owed Shuntai (Shanghai) etc.	guarantor — Zhenxun
12	SHMA	S145-2-6, pp. 49-94	1932	Yongxingshun (Wuxi) owed Kaitai etc. (Shanghai)	creditor — Zhenxun, SMATM — Timber Trade Organizations of Changzhou, Wuxi, Yixing; creditor — Zhenxun, SMATM — Shanghai CoC — Wuxi CoC, Yixing CoC
13	SZMA	I14-001-0264-056	1912	Tongfaxiang (Suzhou) owed Laixiangxing (Changzhou)	creditor — Changzhou CoC — Suzhou CoC — debtor
14	SHMA	S145-2-6	N/A	a case in Yongjia that involved Yin Ji & Shengdalong (Shanghai)	creditor — Yongjia Timber Trade Organization — Yongjia CoC — Shanghai CoC — SMATM — related members
15	SZMA	I14-001-0177-025	1906	Huyuanfeng vs. debtors	creditor — Suzhou CoC — Xijin CoC & Jiangyin CoC
16	SHMA	S145-2-6	1911	Tongsen (Hubei) owed Ruida etc. (Shanghai)	creditor — Shanghai CoC — Wuchang Quanye Circuit — Jiangxia County
17	SZMA	I14-001-0263-162	1911	Wang Hengtai (Suzhou) owed Zhentaisheng (Jiaxing)	creditor — Jiaxing CoC — Suzhou CoC — debtor
18	SZMA	I14-001-0172-005 I14-001-0817-068 I14-001-0172-008 I14-001-0172-010	1906	Zhang Hongchang etc.(Zhenze) owed Zhengxing (Jiaxing)	creditor — Jiaxing CoC — Suzhou CoC — Zhenze County Court — debtors
19	SZMA	I14-001-0267-065	1912	Lv Dalai (Tongli) owed Yifengchang (Suzhou)	creditor — Suzhou CoC — Tongli CoC
20	SZMA	I14-001-0165-041	1906	Tang Hongmao (Suzhou) owed Yuchangfeng (Hupu)	creditor — Changzhou County Court — Suzhou CoC — timber trade org. — debtor
21	SZMA	I14-001-0107-046	1912	Li Ming (Suzhou) owed Yichangheng (Shanghai)	creditor — Shanghai Bureau of Agriculture, Industry, and Commerce — Suzhou CoC — debtor
22	SZMA	I14-001-0255-154 I14-001-0177-045	1910	Jin Renji (Suzhou) owed Yingfengyu (Changzhou)	creditor (Changzhou) — Bureau of Agriculture, Industry, and Commerce — Suzhou CoC — timber trade org. — debtors
23	SHMA	S145-2-7, p.86-103 S145-2-6	1930	Zhu Yaoqing (Taicang County) owed Kaitai etc. (Shanghai)	SMATM — Zhu Yaoqing (Taicang); SMATM — Taicang Timber Trade Organization; lawsuit at Taicang County Court

Note: SZMA (Suzhou Municipal Archives); SHMA (Shanghai Municipal Archives); CoC (Chamber of Commerce).

Take, for example, a case that started as a dispute between two local firms in the Yongjia County of Wenzhou, Zhejiang Province but also involved merchants based in Shanghai.⁹⁰ Lin Zhensheng 林震升 purchased timber planks from Liu Zhenfeng 劉震豐 in Yongjia with a void

⁹⁰ Detail of this case is found in SHMA S145-2-6.

promissory note and soon announced bankruptcy. Lin then absconded to Shanghai and sold the contested timber to Yin Ji 寅記 and Sheng Da Long 盛大隆, two member firms of the Zhenxun Association. Liu and other creditors of Lin sent representatives to Shanghai to capture Lin. They also sought help from the Yongjia Timber Trade Guild, which forwarded their request to the Yongjia Chamber of Commerce. That chamber then contacted the Shanghai Chamber of Commerce, requesting that the two Shanghai stores to withhold their payment to Lin until Lin and his creditors reached a settlement agreement under the mediation of the Yongjia Timber Trade Guild.

A month later, the Yongjia Chamber of Commerce updated the Shanghai Chamber of Commerce that the dispute had been resolved with all the creditors' agreement on a proportional settlement. It requested that the two Shanghai stores entrust the payment of about 1,500 silver *yuan* owed to Lin to the Yongjia Chamber of Commerce's account in the Bank of China, because the Chamber had taken on the responsibility of distributing payment to Lin's creditors.

Upon receiving the forwarded notice from the Shanghai Chamber of Commerce, the two stores sensed the potential risk of surrendering the money to the Yongjia Chamber of Commerce without Lin's written consent, for "although Lin is indebted to many others, he is a creditor to us. Without Lin's authorization and a legal procedure, we cannot deposit the money owed to Lin to other entities' account." To avoid being found fault by Lin in the future, the two stores entrusted the money to the Zhenxun Association, which contacted the Yongjia Chamber of Commerce and arranged the deposit.

The Yongjia-Shanghai case was representative of the cross-regional flow of information and requests through commercial organizations and chambers of commerce. Moreover, these organizations dealt with complex issues when representing members to ensure fairness and help

them avoid potential risks, such as the Yongjia Chamber of Commerce's distributing payment to Lin Zhensheng's creditors and the Zhenxun Association's dealing with the sensitive payment for the two Shanghai stores.

The coordinated action of these organizations was far more flexible and effective than if the parties had have to rely on the court system exclusively. The formal legal system reacted slowly to bankruptcies and thus could not act in a timely fashion to seize the properties of the bankrupt firm before its managers and shareholders appropriated any remaining assets and fled the city. In the above case, by having the two stores in Shanghai hold on to the money payable to Lin Zhensheng until further instruction, the guilds in representation of the creditors effectively froze part of Lin's assets. The right to dispose of the frozen money was then entrusted to a third party, the Yongjia Chamber of Commerce, to make sure that Lin's residual assets would be fairly distributed among his creditors.

The efficiency and effectiveness of this disposition owed much to a shared informal norm as to how to deal with suspicious bankruptcies. This norm was exemplified by an article in the 1925 regulation of the Zhenxun Association, which stated:

if any indebted customer shows inclinations of fleeing town or his firm seems about to go bankrupt, it would be too much of a delay to go through all the formal legal procedures for the official agencies to act in time. With the universal consent of our members and in reference to the practices in other cities, (in future situations like this) we should gather local police officers and gentlemen jointly to impound the property of the suspicious

party and take him into custody, while at the same time submitting formal petitions to the court...⁹¹

The operation of this informal procedure in cross-regional cases relied on the aforementioned chain of communication through chambers of commerce. Institutional arrangements at the organizational level helped remedy some limitations of the formal court system in resolving contradictory evidence, acquiring the knowledge of specific business customs in different trade, and enforcing judgements given the mobility of long-distance traders and the opacity of their property. Communications and collaboration between merchant communities in different localities, often through the mediation of chambers of commerce, could often bypass the slow hierarchical procedures in the formal bureaucracy and enable action in a more timely fashion to deal with cross-regional disputes. The role played by the network of chambers of commerce was particularly important given the lack of political unity and legal clarity in the early years of the Republican period. Chamber of commerce was able to mitigate the obstacles against solving cross-regional conflicts in a way that neither local magistrates/courts nor merchant guilds could have done, a function that was only taken up by a more fully constructed and connected legal system much later.

The Case of Yong Xing Shun

Having examined the solutions offered by different institutions to the default problem, this section revisits the case against the Yong Xing Shun Timber Store in Wuxi (hereafter YXS)

⁹¹ SHMA S145-1-7, pp. 13–17.

mentioned at the beginning of the paper. The YXS case involved complicated trading relations among timber merchants of Shanghai, Changzhou, Wuxi, and Yixing. It exemplifies the complexities of an insolvency case resulting from a chain reaction to an exposed defaulting, of maneuvers and negotiations happening outside of the courtroom during the trial, and of the measures taken by the timber trade guilds to safeguard members' rights.⁹² This is a case where all the institutions and channels of communications discussed above were put into full operation and yet still failed, which makes it a good illustration of the capacity and upper limit of the system.

The incident started in 1932 with YXS's timber purchase from Yin Ji in Shanghai. YXS paid 2000 *yuan* with a guaranteed promissory note issued by a native bank in Changzhou, with the remaining 4,900 *yuan* left unpaid. When his entreaties for the remaining payment failed, Yin Ji sued the manager of YXS, Yu Pingfu 俞屏甫, his nephew Yaoqing 俞耀卿, and their accomplice Cheng Jinjian 程金鑑, the owner of the Dasheng 大生 and Dayou 大有 timber stores in Changzhou, at the Wuxi County Court for fraud and won the lawsuit. The Zhenxun Association, upon receiving the news, sent letters to its members, as well as SCATM and the timber guilds in Wuxi, Changzhou, and Yixing, disclosing the defeat of YXS and demanding that all the noticed parties stop trading with the three fraudsters.

From the Zhenxun's notice, the Kaitai Timber Store, a member of SCATM, learned of Yin Ji's lawsuit against YXS. Kaitai's managers realized that his firm might suffer from YXS's insolvency since it had sold YXS 1400 *yuan* worth of timber totally on credit. Kaitai sent an employee to Wuxi to conduct secret investigations on YXS. The employee found out that the

⁹² Details of this case is found in SHMA S145-2-6, pp. 49–94 (1932).

timber purchased from Kaitai had already been resold to the Wankang 萬康 Store in the town of Guanlin 官林. Wankang had been directed by YXS to directly forward the proceeds of the sale to Cheng Jinjian to repay YXS's "debt" to the Dasheng and Dayou timber stores. Finally, Wankang had sold the Kaitai timber to the Yitai 益泰 Store in Yixing.

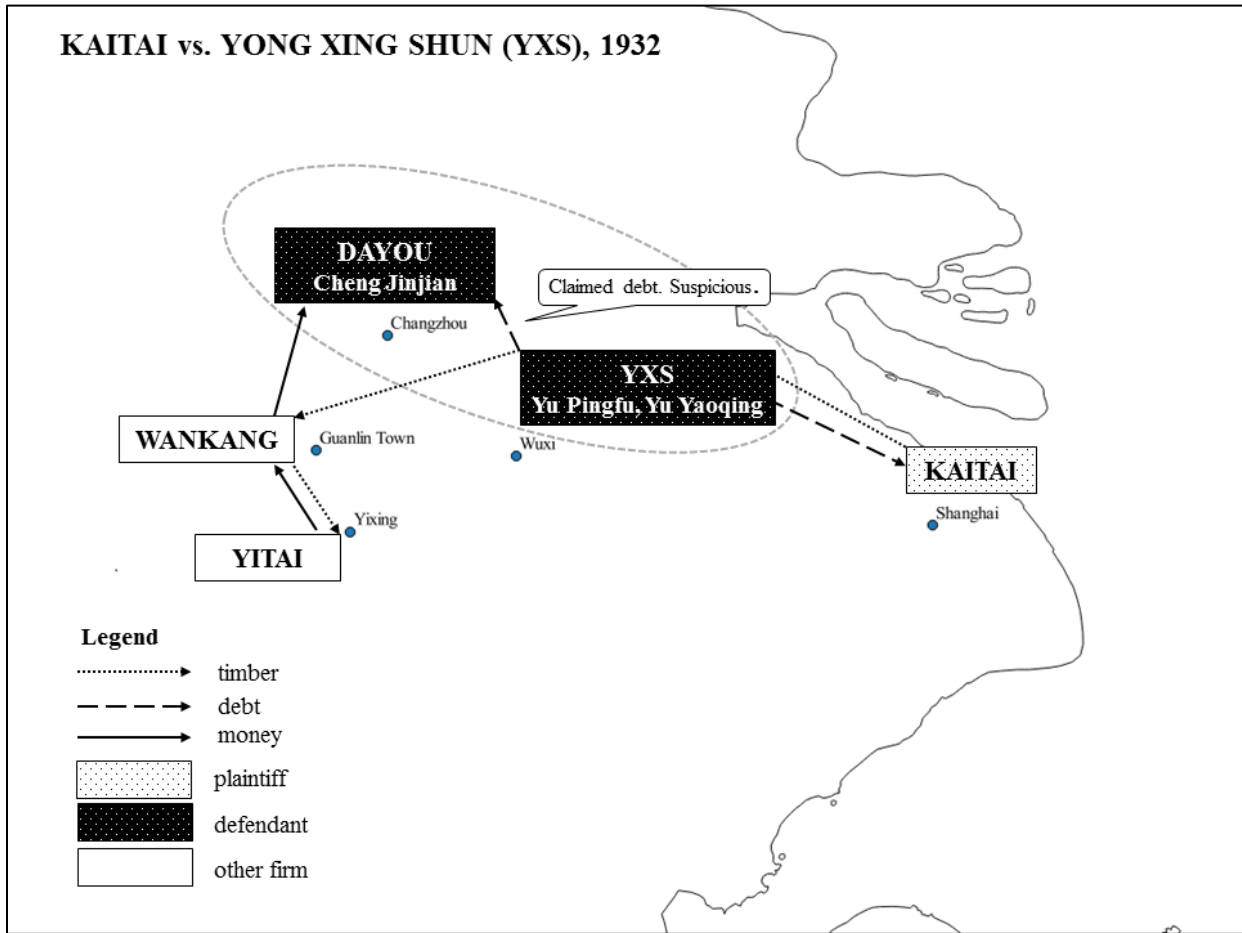


Figure 15 Kaitai vs. Yong Xing Shun (YXS), 1932

Believing that YXS would not be able to pay for its timber in full, Kaitai petitioned the Shanghai General Chamber of Commerce through SCATM to ask for the assistance of the chambers of commerce in Wuxi, Yixing, and Changzhou. Kaitai's managers argued that these

chambers should announce all these transactions void and cancelled and have Kaitai's timber shipped back to Shanghai. Unfortunately, Kaitai's request was not legitimate because only two months had passed since its transaction with YXS. According to the guild's regulation YXS still had another two months to make good with Kaitai. Moreover, YXS's sales to downstream customers were legitimate transactions and could by no means be repudiated at Kaitai's demand. However, because YXS had been found guilty of intentional fraud at court, SCATM and the Shanghai Chamber of Commerce deemed Kaitai's request as reasonable and supported it anyway.

As one would expect, Yitai refused to return the timber that it purchased legally from Wankang without reimbursement, while Cheng Jinjian refused to return the money to Wankang on the grounds that the money was to cover YXS's debts. At the same time, YXS and Cheng Jinjian accused each other of having masterminded the fraud and hogged all the benefits, leaving the other with no money at all.

Investigation conducted by the Wuxi Chamber of Commerce suggests that most likely Cheng Jinjian and the two Yus conspired to fabricate YXS's huge debt to Dasheng and Dayou, the two stores owned by Cheng Jinjian. Proceeds from the resale of the timber obtained on credit from Kaitai and Yin Ji was then transferred to Cheng Jinjian in the name of repaying YXS's debt. After embezzling whatever was left in YXS, Yu Pingfu and Yu Yaoqing announced the bankruptcy of YXS to deny payment to the two Shanghai stores and other creditors. Yu and Cheng then divided the profit from the fraud.

The conspiracy of Yu and Cheng was deliberately crafted, as the account books of YXS and the two stores of Cheng showed YXS's indebtedness to Cheng. As there was no priority of liability before the announced bankruptcy of YXS, it was fully legal to appropriate the funds

from reselling the timber purchased from Shanghai to repay the “debt” to Cheng instead of paying the Shanghai stores immediately. When YXS’s bankruptcy was announced, it had little left to compensate its creditors. Although Kaitai and Yin Ji won the lawsuit against Yu Pingfu and Yu Yaoqing in court, Cheng Jinjian was let off due to a lack of evidence. The judgment that Yu Pingfu should pay the two stores in full was difficult to enforce because on the books Yu Pingfu and his nephew were legally insolvent. In the end, the only real punishment meted out to Yu and Cheng was the disclosure of their fraud conspiracy by the timber trade guilds and chambers of commerce in all three cities, and the proclamation that no member should ever trade with them in the future.

That Yu and Cheng chose to do what they did despite their well awareness of such punishments shows that the effectiveness of reputation mechanisms has a limit. The ultimate limit is at the point where the potential gain from cheating could offset the present value of all the possible profit that one could make by trading with Shanghai timber firms in the future. The same could be said about the limit to the effectiveness of the court system.

However, the YXS case also illustrates another aspect of “limit” — that the limit of each individual institution of enforcement was extended by their communication and collaboration. Vertical communications from timber trade guilds to the chambers of commerce to the court system strengthened the continuity from informal norms of business practices to semi-formal regulations of commercial organizations to formal court adjudications. Horizontal communications, mainly through the chambers of commerce and sometimes trade guilds in different localities, further strengthened the capability of informal institutions to promptly respond to cross-regional cases. Of course, this coordinated system still hit its limit in a case like YXS, but its capacity was undoubtedly higher than if each institution worked separately. Cases

like that of YXS were rare enough that the Shanghai timber trade continued to flourish based on credit. What was significant was the continuity of the formal and informal systems of enforcement and the easiness at which merchants navigated between the two.

Conclusion

The findings of this study shed new light on the issue of the *substitutability* and *complementarity* of formal and informal institutions in the Chinese context. R. Bin Wong has suggested a contrast between early modern China and Europe in this respect. In early modern Europe, there was a clear distinction between what was formal and what was informal, and the tendency was to shift from informal to more formal mechanisms of enforcement. The institutions constructed in late imperial China fit less comfortably into the binary contrast of formal and informal institutions; rather, they⁹³ spanned a continuum between the two. Merchant guilds and the court system constituted a complementary institution of payment enforcement. The continuum from informal to more formal mechanisms was further enhanced by the network of chamber of commerce since the first decade of the twentieth century, which facilitated vertical inter-institutional communication as well as horizontal cross-regional dispute resolution.

Moreover, although the distinctions between formal and informal institutions can be sharply drawn in theory, it is much more difficult to draw the line in historical experiences. While merchant guilds are usually identified as “informal” institutions in Chinese historiography, we have seen in this paper that these organizations could stipulate particular actions to be taken

⁹³ R. Bin Wong, “Formal and Informal Mechanisms of Rule and Economic Development: The Qing Empire in Comparative Perspective,” *Journal of Early Modern History* 5, no. 4 (2002): 387–408.

under specific conditions, a feature generally associated with more formal mechanisms. On the other hand, the “formal” court system, especially before the 1910s, had few explicit topic-specific rules for commercial activities, but encouraged and recognized the open-ended settlement that was generated from the social forums of mediation. In the Republican era, modernization efforts in the legal realm proclaimed new formal mechanisms that were meant to demarcate more clearly the spaces of legal vis-à-vis customary relationships and induce a “formalization” process. However, the introduced sense of *substitutability* did not drive out the persistence of the earlier logic of *complementarity* between formal and informal mechanisms. Therefore, the 20th-century scenario played out under the mutual influence of introduced Western legal practices and the continuity of indigenous perceptions. From a comparative perspective, the historical experience found in this study, that formal and informal institutions could complement each other, serves to broaden the empirical basis for economic and social theories, which have drawn almost exclusively from the European and American trajectory of increasing demarcation and the substitution of the informal by the formal.

CONCLUSION

This dissertation pivots around the two keywords of “timber” and “trade.” In the preceding six chapters, I described the production and circulation of timber and the institutions that underlay the contours of its trade. While the project centers on the trade of this particular commodity, it has provided a historical account of the convoluted interactions between market, institutions, and forestry. Each aspect must be understood in light of the others. The state’s lack of direct involvement in forests, the procurement of imperial timber from the market, as well as the spontaneous development of plantation forestry in the local economy must all be understood in the context of the expansive interregional market, without which the forms of forest management and mechanisms of timber supply wouldn’t have been the same. Moreover, the institutional history of formal market regulating apparatus and private-order initiatives by the merchant communities should be seen as a connected tandem that collectively defined the business norms in the local marketplaces.

Chinese Replantation Forestry in Comparative Environmentalism

Existing synthesis on Chinese environmental history overwhelmingly emphasize the Chinese civilization’s destructive effects on the ecology. Both Mark Elvin and Robert Marks’ works stress that short-term gains in productivity or military advantage compromised systematic sustainability in the long run. Wild animals and diverse eco-systems gave way to uniform

agricultural lands.¹ From another perspective, we should be mindful of how long spans of historical time are taken lightly when we focus on “long-term” effects, which is partially attributable to the underlying presumption that things moved slowly in pre-industrial times. In fact, the temporal term used to evaluative historical developments is much longer than the amount of time that had elapsed to test modern ideas of environmentality. This is not necessarily wrong, but scholars should be careful of the implications of such disparity. In a way, aren’t “three-thousand years” and “unsustainable development” contradictory? Given the large population and high levels of living supported on its land for China’s long history, the mode of production and environmental management in at least some parts of the country must be sustainable on the scale of centuries or millennia, an achievement to be aspired by today’s industrial world. Indeed, Marks notes that the Chinese agricultural system was exceptionally sustainable over long periods of time.² While the overall coverage of old growth forests certainly declined in the last millennium as woodlands were converted to new farms and settlements, there also developed extensive plantations of timber trees and fuelwoods in the Old South and the new frontier of the Southwest.³

¹ Mark Elvin, “Three Thousand Years of Unsustainable Growth: China’s Environment from Archaic Times to the Present,” *East Asian History*, no. 6 (1993): 7–46; Mark Elvin and Ts’ui-jung Liu, eds., *Sediments of Time: Environment and Society in Chinese History*, Studies in Environment and History (Cambridge: Cambridge University Press, 1998); Elvin, *The Retreat of the Elephants*; Marks, *China*.

² Marks, *China*, 3.

³ Ian Matthew Miller, “Roots and Branches: Woodland Institutions in South China, 800-1600,” Cambridge (Dissertation, Harvard University, 2015), 31.

In his pioneering study on the forest management systems in Chinese history, Nicholas Menzies posed the key question of what were the contributing factors for forest management to take place under general conditions of deforestation.⁴ Although his study was conducted at a time when the large amounts of local genealogies and contractual documents that are available to us today had not been discovered and published yet, he was able to propose a set of plausible conditions for durable plantation to take place based on scattered evidence. At the center of these necessary, though no sufficient, conditions are the demand for forest products and the capacity to enforce boundaries on access to the resources (either by authority, values and norms, or economic interests).⁵ While excessive demand for forest resources has always been blamed as a major factor leading to the exhaustion of natural forests, the market's demand for an increasingly scarce resource could translate into considerable profit to be made from managed forest and motivate long-term investment.

The few scholars who followed this inquiry thereafter supported these general principles, including this study. There was considerable regional differences in terms of patterns of deforestation and forest management. The North experienced timber shortages from quite early, but the South and the Southwest often saw the conversion of old-growth forests into managed forests.⁶ While various ecological factors and historical legacies were at play in creating these regional differences, the superior riverine transport network and cross-regional market system in

⁴ Menzies, *Forest and Land Management*, 2.

⁵ *Ibid.* at 123–37.

⁶ For the development of regionally differentiated patterns of forest management during 800-1600, see Miller, “Roots and Branches,” chap. 5.

the South no doubt contributed to the replanting of timber trees, fuelwood, or other economic species such as tung oil and lacquer trees. As early as the twelfth century, the development of plantation forests in the Southern Song were interlinked with the growing urban markets, which left a market-oriented legacy in forest management in South China.⁷ During the Ming-Qing time, in the mountainous areas connected to Jingdezhen, wealthy lineages and entrepreneurs cultivated fuelwood to supply the imperial kilns.⁸ Planting of *cunninghamia* and camphor was practiced in Fujian to supply the well-established timber marketing system in the Min River system.⁹ The similarity of silvicultural and lumbering techniques between the two well-studied regions of Huizhou and eastern Guizhou suggests knowledge transfer from the Old South to the frontiers when Jiangxi and Huizhou merchants marched westward to expand their supply networks. Meanwhile, private claims of forest properties were intricate local knowledge supported by written evidence such as contractual documents, genealogies, and graphs of grave groves, all of which were considered legitimate forms of proof in the court of law.¹⁰

In addition to such factors as market demand and enforced property rights, the current study goes further to examine how private forest management could be profitable, flexible, and sustainable in the long term. The decades-long turnover period for planting timber trees was a

⁷ Ian Matthew Miller, unpublished book manuscript, chapter 1, p.37.

⁸ Marks, *China*, location 6071.

⁹ E. Elena Songster, "Cultivating the Nation in Fujian's Forests: Forest Policies and Afforestation Efforts in China, 1911-1937," *Environmental History* 8, no. 3 (2003): 457-58.

¹⁰ McDermott, *The Making of a New Rural Order in South China*, chap. 6; Miller, "Roots and Branches," chap. 6.

serious obstacle for household finance and an often-cited reason to promote state forestry and public planning. This problem was mitigated in the Old South as corporate entities such as lineage trusts became the primary claimants of woodlands. The persistent structures and long investment horizons of corporate lineages made them well-adapted for production forestry. Instead of dividing the woodland into individual plots, members of the lineage were entitled to shares. When the system was first developed during the Ming, such shares were in principle inalienable and the profits from the forests were retained for lineage-wide activities. Overtime, the shares became increasingly tradable and more like private properties of individual households.¹¹ During the Qing, similar share-holding practices were adopted in the Southwest where powerful lineage organization were virtually absent. Rather than a lineage-dominated landscape, shares were claimed by individuals, divided up to be inherited by multiple heirs, and transferrable to kin and non-kin alike, resulting in a woodland share-holding structure that most resembled a modern corporation.

How does the Chinese case compare to the rest of the world? From existing literature on other countries and world regions, one gets the impression that to the extent that purposeful and effective forest management existed in the pre-modern period, the state played an important role. Between the fourteenth and eighteenth centuries, to deal with the perceived threats of timber shortages and fuel crisis, the Venetian Republic acquired mainland forest holdings and developed specialized bureaucracies to manage the most useful forests as state assets.¹² In early

¹¹ McDermott, *The Making of a New Rural Order in South China*, chap. 6.

¹² Karl Richard Appuhn, *A Forest on the Sea: Environmental Expertise in Renaissance Venice* (Baltimore: Johns Hopkins University Press, 2009).

modern East Asia, the overwhelmingly privatized forestland in China ran contrary to the experience of both Japan and Korea, where the state exerted much heavier control over access to forests.¹³ In response to the severe timber shortage as a result of the nationwide population growth and building boom during the century of 1570 to 1670, the Tokugawa governments issued and enforced a series of edicts to regulate the management, distribution, and consumption of timber.¹⁴ Political leaders and official advisors also advocated tree planting and the maintenance of forest productivity. Eighteenth-century Japan saw the development of plantation forestry, where the state took a direct involvement either by organizing the labor force in government afforestation projects or rewarding (or compelling) entrepreneurial endeavors.¹⁵

Into the modern world, governments began to take even more responsibility in forest management thanks to the spread of the ideas about scientific forestry. The late nineteenth century and early twentieth century saw the emergence of a set of environmental ideals that advocate a proper balance between humans and the natural world. The model of empire forestry set forth by British India, which was greatly influenced by continental European forest sciences, inspired massive conservation movement and nationalization of forest lands across the globe,

¹³ Conrad D Totman, *The Green Archipelago: Forestry in Preindustrial Japan* (Berkeley: University of California Press, 1989); John S. Lee, "Postwar Pines: The Military and the Expansion of State Forests in Post-Imjin Korea, 1598-1684," *Journal of Asian Studies*, forthcoming; John S. Lee, "Forests and the State in Pre-Industrial Korea, 918-1897," Cambridge (Dissertation, Harvard University, forthcoming).

¹⁴ Totman, *The Green Archipelago*, chap. 4.

¹⁵ *Ibid.* at 6.

which is considered by environmental historians the first phase of modern environmentalism.¹⁶ Several sacred assumptions lie at the center of this body of modern environmentalism thought and practice: that agencies of experts are better suited to design and direct the development of the landscape than untrained, self-interested peasants; that coordinated public planning is essential to solve the haphazard and exploitative practices common in the laissez-faire approach; and that scientific methods must become the foundation on which environmental plans should be built.¹⁷

The Chinese experience doesn't fit into this line of development. In late imperial China, it seems that the greatest state interventions into direct forest management was during the last decades of Northern Song at the turn of the twelfth century. Even then, the state's presence was limited and abortive. By the mid-1400s, state forest programs were virtually non-existent and little taxes were levied on forests at all. Conversely, in the Old South, lineages gradually took hold of extensive forest lands and invested heavily in plantation forestry by the fifteenth and sixteenth centuries.¹⁸ In the southwest, as this dissertation has shown, similar practices of private plantation forestry developed during the eighteenth and nineteenth centuries despite the lack of high-order lineages similar to those in the Old South. Although the Qing dynasty maintained

¹⁶ K Sivaramakrishnan, *Modern Forests: Statemaking and Environmental Change in Colonial Eastern India* (Stanford: Stanford University Press, 1999); S. Ravi Rajan, *Modernizing Nature: Forestry and Imperial Eco-Development 1800-1950*, Oxford Historical Monographs (Oxford : Oxford ; New York: Clarendon Press ; Oxford University Press, 2006); Gregory A. Barton, "Empire Forestry and American Environmentalism," *Environment and History* 6, no. 2 (2000): 187–203.

¹⁷ Donald Worster, *American Environmentalism; the Formative Period, 1860-1915*. (New York: Wiley, 1973), 2.

¹⁸ Miller, "Roots and Branches," chap. 5.

reserves of forests under direct state control in Manchuria for both strategic and symbolic reasons, privately managed forests and, to a much lesser extent, community commons were the dominant forms in much of China proper.

Therefore, what is surprising by the theories of modern environmental thinking is that replantation of considerable scales was achieved by self-interested households following silvicultural technologies transmitted intergenerationally in the context of laissez-faire private property regime. Interestingly, in those parts of south China where local residents depended on replantation forestry for their livelihood, the most destructive deforestation happened when such private enterprises became state-owned or community-owned common land without effective enclosure in the 1950s and when a responsibly system was instituted to contract out collectively owned forests but fail to promise tenure security during the 1980s.¹⁹ At the center of the issue is not simply whether state, collective, or private ownership is best for preservation or afforestation—history has shown us either could work or fail. The key is whether specific dimensions of a particular ownership regime could coordinate to make sure the alignment of the interests of the people with direct access to the forests to the more general interest of maintaining forest coverage.

The development of state forestry in some countries during the early modern period has been praised for laying the ground for the smooth adoption of the modern conservationist, scientific state forestry. However, we should be mindful that these early modern states were motivated to take hold of forest lands less for the conservationist ideal, but more for the utilitarian purpose of securing sustainable timber supply for construction and military uses, either

¹⁹ Marks, *China*, location 6149-6231.

for fear of the over-exploitation of forests by local residents or for the lack of reliable market supply of good-quality timber. For example, after acquiring the forested territories in the fifteenth century, the Venetians initially relied on timber supply from the market and only started to implement direct state control over the forests when the market alone failed to guarantee stable supply. To some extent, the private economy and market development in late imperial China eased these concerns for the Chinese state. Replantation in the south was motivated by its economic profit without coercion from the state, and the integration of a nationwide timber market consistently supplied most of the central and local states' need for timber. I would conjecture that the late imperial Chinese state did not develop an extensive state forestry program not for the lack of capacity but for the lack of necessity, for the domestic market was expansive and efficient.

Market Integration and Specialization

The depiction of a cross-regional system of timber trade brings us to an older debate regarding whether a national market system had developed over the late imperial period, which engaged scholars since the 1980s. In the US, the debate was inspired by William Skinner's regional systems approach, which argues that instead of a national market system, it were several functionally independent market hierarchies operating at the macro-regional level.²⁰ Earlier

²⁰ Rowe, *Hankow: Commerce and Society*, 60–62; Barbara Sands and Ramon H. Myers, "The Spatial Approach to Chinese History: A Test," *The Journal of Asian Studies* 45, no. 4 (1986): 721–43; Daniel Little and Joseph W. Esherick, "Testing the Testers: A Reply to Barbara Sands and Ramon Myers's Critique of G. William Skinner's Regional Systems Approach to China," *The Journal of Asian Studies*

proponents of the existence of a national market has elicited as evidence the nationwide rice trade and co-movement of rice prices.²¹ Opponents would argue that the appearance of cross-regional movement of rice could be the cumulated result of much shorter localized trade, that the inter-macroregional export of grain took up but a tiny percentage of a region's annual output, and that the state intervened heavily in moving around grains for strategic purposes. Similar doubt on the state's visible hand could apply to the use of the national salt trade or copper trade as evidence. In response to these skepticisms, the trade of timber lends stronger support to a nationwide market system. Timber export from the southwest was not the outflow of surpluses that were not consumed intra-regionally, but destined for the Lower Yangzi market in the first place. As Chapter 1 and 2 have shown, the state's procurement of imperial timber *depended* on the development of timber trade, not vice versa. The state's purchase took up too small a market share to wield significant influence.

To be precise, Skinner's framework does not deny interregional trade, but maintains that to the extent that there was interregional trade, it should occur between high-level central places within different macroregions. That is, any exports from a macroregion will not flow directly into a national market system, but will first be concentrated in the central cities of the macroregion core and then pass to central cities of other macroregions for distribution within

48, no. 1 (1989): 90–99; William Lavelly, "The Spatial Approach to Chinese History: Illustrations from North China and the UpperYangzi," *The Journal of Asian Studies* 48, no. 1 (1989): 100–113; Barbara Sands and Ramon H. Myers, "Economics and Macroregions: A Reply to Our Critics," *The Journal of Asian Studies* 49, no. 2 (1990): 344–46.

²¹ Sands and Myers, "The Spatial Approach," 724.

those regions' own market systems.²² Moreover, Skinner and supporters also refer to the high costs of transportation as the factor that effectively eliminated low-priced bulky goods from interregional trade.²³ The timber trade challenges both propositions. Occasional luxurious timber cut from old-growth forests was insignificant compared to the large volume of low-priced ordinary poles harvested regularly from managed forests. The route of timber export from Guizhou followed the most direct itinerary to the Lower Yangzi, without first diverting to the regional high-level market centers such as Changsha. The booming plantation forestry was a testament to the level of regional specialization that developed in response to cross-regional economic integration.

From the perspective of commercialization and specialization, plantation forestry can be effectively compared to other cases of commercial agriculture that developed in the coastal provinces during the same period.²⁴ Sucheta Mazumdar's study on the Guangdong sugar industry makes two conclusions that are particularly relevant to the discussion here. First, diversification of production was carried out at the level of small peasant households. She maintains that household production units, which were concerned with subsistence and hedging against risks of over-specialization, would have had less incentive to cut costs than profit-seeking plantations.

²² Little and Esherick, "Testing the Testers," 91.

²³ G. William Skinner, "Mobility Strategies in Late Imperial China: A Regional Systems Analysis," in *Regional Analysis*, ed. Carol A. Smith, vol. 1 (New York: Academic Press, 1976), 330; Skinner, "Regional Urbanization in Nineteenth-Century China," 217, 248–49; Frances V Moulder, *Japan, China, and the Modern World Economy. Toward a Reinterpretation of East Asian Development Ca. 1600 to Ca. 1918*. (Cambridge, UK: Cambridge University Press, 1979), 32–35.

²⁴ von Glahn, *The Economic History of China*, 328.

The strengthening of the property rights of direct producers was blamed for preventing the complete proletarianization of poor and middle peasants and consequently curtailing the development of more efficient managerial plantation.²⁵ Second, she highlights the sugar-industry's over-dependence on international market and sees structural limitations on the expansion of domestic demand, claiming that "the domestic market for all commodities remained restricted, and sugar is but one example."²⁶ The economy was not driven by market principles of demand and supply, but manipulated by lineages, guilds, and other organizations that constituted the "extra-economic nexus in the operation of markets."²⁷

The timber industry examined in this dissertation challenges the generalization of Mazumdar's arguments. Plantation forestry was achieved precisely because of the security of small property rights in the form of future shares, which enabled the coordination of production at much larger scales than what a single household could attain. Thanks to the shareholding options, households could diversify their income streams from different products without compromising productivity. Peasant households entered the tree planting industry not because they were *compelled* to do so by the state and landlords' demand for cash payment as Mazumdar claims the Guangdong sugar producers had been. Rather, they did so to take advantage of the profit-making opportunity presented by the market. The trade of timber was driven precisely by the booming domestic demand. Moreover, Mazumdar's depiction of the marketplaces during the

²⁵ Sucheta Mazumdar, *Sugar and Society in China: Peasants, Technology, and the World Market*, vol. 45 (Harvard University Asia Center, 1998), 230–40, 292–94.

²⁶ *Ibid.* at 56–59, 45.

²⁷ *Ibid.* at 313–22, 45.

Qing as being controlled by merchant monopsony and of a land market tightly controlled by lineages ran counter to the rather competitive capital and commodity market as seen from the timber trade.

State and Merchant Institutions

Several of the institutions examined in this work fall into the scope of Qing fiscal history, including the domestic customs, the timber tribute system, informal local government finance through commerce, and licensed brokerages. Even when combined together, they contributed only small portions to the state's revenue, which is probably why they have been overshadowed by more important income items like land taxes and grain tributes in the fiscal historiography and seldom examined as a bundle that collectively intervened in the empire's commercial landscape. What we have learned from this examination about the Qing fiscal administration aligns with Madeleine Zelin's depiction of the eighteenth-century formalization and legalization of previously informal practices in order to adequately provide field officials with the means to carry out their duties.²⁸ The mechanisms to evaluate the performance of the superintendents of domestic customs were often adjusted with an eye to balance the priority between income and supervision. State personnel were allowed to conduct sideline private businesses to compensate for the insufficient official funding provided for their formal mission. Local governments' informal taxation of commerce was regulated and restrained through the Licensed Brokerage reform.

²⁸ Zelin, *The Magistrate's Tael: Rationalizing Fiscal Reform in Eighteenth-Century Ch'ing China*.

However, contrary to Zelin's portray of a slow erosion of rationalization efforts in the following century, I see continued fiscal innovations and adaptations to accommodate new developments in the commercial realm. New norms of interactions gradually formed between local yamen and the increasingly prevalent merchant guilds, with the latter incorporated into the local framework of commercial taxation through the rhetoric of "performing exclusive official duties." While such "official duties" established a certain guild's legitimate standing and lent official support to its regulating capacity among members, they could hardly be used as a monopolizing excuse, for competitors could easily set up their own guild by pledging to shoulder their share of the duty. Merchant guilds' practice of undertaking tax quotas was incorporated to facilitate the collection of Lijin almost right after its introduction as a transit levy, which reduced the state's cost of implementing direct taxation and further elevated the authority and appeal of guilds among merchants.

The resulted trading environment in marketplaces lay somewhere in between the free market ideal and a controlled space featuring oligopoly and oligopsony, with higher-level markets approaching the former. Merchant organizations tended to have a snow-balling effect: when one group of merchants organized into a guild, their improved collective bargaining power often urged their counterparts (upstream or downstream traders, competitors of different specialty or native-place origins, practitioners in related industries) to formally organize themselves too. Wholesale timber trade, in particular, often featured transactions between two parties that each belonged to an organized group. The capacity of a single merchant guild to monopolize market and fix price was often limited and constantly challenged.

I find the most appealing economic function that a merchant guild offered its members was information and enforcement. Without effective mechanisms to fend against default, long-

distance timber trade could not have relied on credit as much as it did. The gathering of information about firm status and default behaviors and group sanctions against cheaters were not only adopted by timber guilds, but seemed to be widely practiced strategies across industries. One of central themes of this dissertation is the importance of a panoramic view of the co-workings of different institutions. In the discussion about the enforcement mechanisms employed by Chinese merchants, it would be a wrong approach to compare the effectiveness of different institutions as if they worked independently; rather, we should evaluate how well they complemented each other and formed a coherent system. The channels of communication and collaboration between merchant organizations, chambers of commerce, and courts across occupations and places spanned a continuum between formal and informal mechanisms of enforcement and contributed to the convergence of the expected outcomes from different platforms of resolution. The turn of the twentieth century saw the dynamic merging process of Chinese practices and Western jurisprudence through mutual adaptation, which pushed forward the transformation of commercial adjudication in modern China.

APPENDICES

Appendix A. Estimation of Timber Taxes for Jiujiang Guan and Jing Guan

I. Timber Taxes of Jiujiang Guan

In Jiujiang Guan, besides boat levies, commercial taxes were collected on salt, tea, and timber.¹ Jiujiang Guan's revenues averaged 400,000 taels in the 1750s, an increase of more than 70% to 740,000 taels in the mid-1780s and gradually decreased to fluctuate between 500,000 and 600,000 in the first half of the nineteenth century (Figure 16). Evidence from the 1750s, 1820s, and 1830s indicated that the number of salt boats fluctuated around 1,200 to 1,300 in normal years, generating customs revenues of 130,000 to 150,000, including levies on salt boats, taxes on salt, and taxes on commodity-bearing returning salt boats.² Data from the 1750s to the 1760s indicated that boat levies (other than those on salt boats), about 200,000 taels annually collected from more than 45,000 to 60,000 boats, accounted for about 40% to 55% of Jiujiang Guan's revenues.³ In 1818, Jiangxi Governor Qian Zhen remarked on the composition of Jiujiang Guan's average revenues of 540,000 taels. By then, the number of passing boats had reached 90,000, and boat levies 300,000 taels, contributing 55% of total revenue. Taxes from salt were 150,000 taels,

¹ GX_HDSL, juan 235.

² Xu Tan 许檀, "Qingdai qianqi de Jiujiang Guan jiqi shangpin liutong" 清代前期的九江关及其商品流通 [The Jiujiang Custom and the Circulation of Commodities in the Early Qing], *Lishi dang'an* 历史档案, no. 1 (1999): 89; Memorial by Jiangxi Governor Qian Zhen 钱臻 on 4/27/JQ23 (1818), quoted in Liao Shengfeng, *Qingdai changguan yu quyuan jingji yanjiu*, 122.

³ Xu Tan, "Qingdai qianqi de Jiujiang Guan jiqi shangpin liutong," 87.

and taxes from tea and other miscellaneous fees were about 10,000 taels. The rest was timber tax, fluctuating around 80,000 taels.⁴

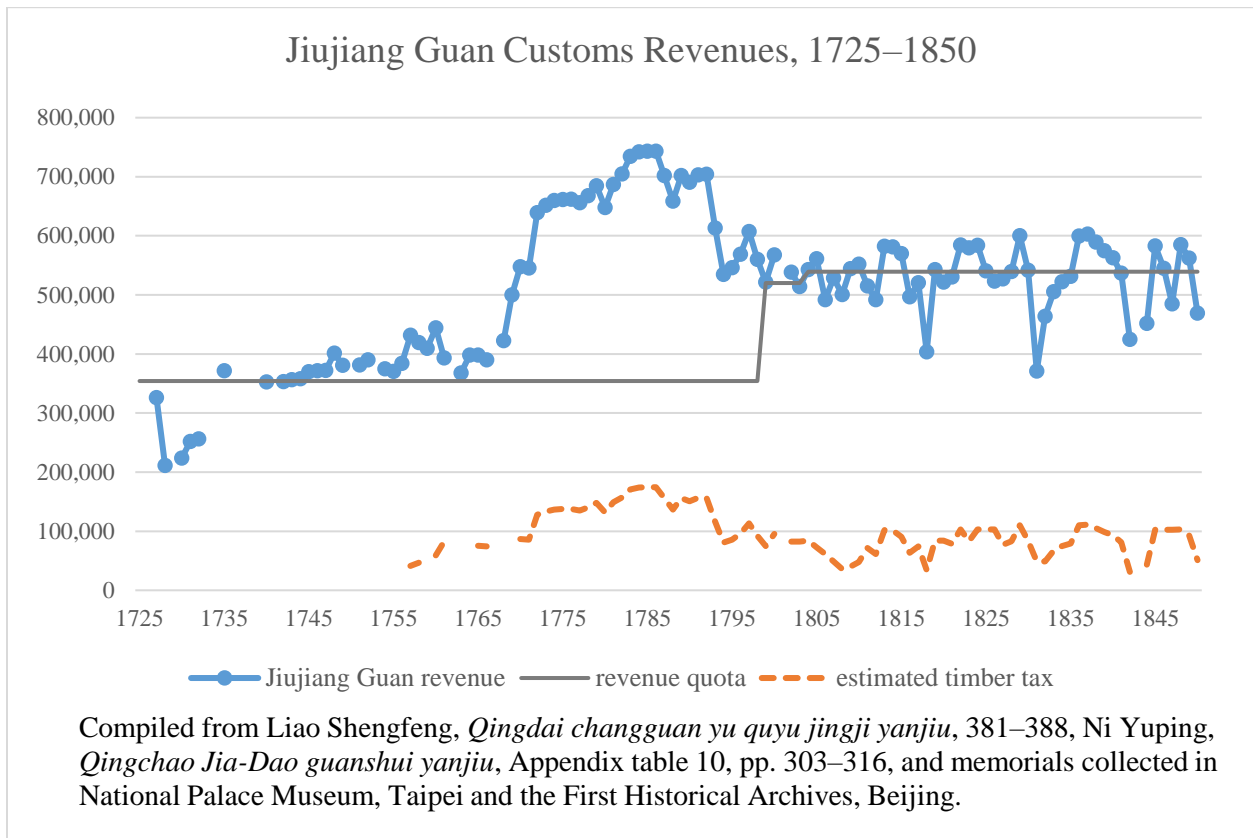


Figure 16 Jiujiang Guan Customs Revenues, 1725-1850

Based on the customs superintendents' memorials, it was clear that taxes from salt and tea were very stable, while changing numbers of passing boats and timber rafts were always cited as reasons for revenue fluctuations. From 1796 to 1850, there were 38 instances of revenues decreasing from the previous years and/or falling below the quota. It was customary for officials

⁴ Memorial by Jiangxi Governor Qian Zhen on 4/27/JQ23 (1818), quoted in Liao Shengfeng, *Qingdai changguan yu quyu jingji yanjiu*, 122.

to offer explanations for such decreases in their memorials, which were available for 32 of these instances. Among the reasons offered, “fewer passing boats,” usually due to unfavorable price trends or natural disasters that discouraged interregional trade, were mentioned 19 times; “fewer passing timber,” either because of upstream supply shortage or downstream sluggish demand, were mentioned 20 times; and salt was only listed as a reason for three times, twice of which were as a supplementary cause besides the former two.⁵

Based on this information, I adopted the following strategy to estimate the timber taxes for Jiujiang Guan from the 1757 to 1850. Unfortunately, because no information is available regarding the composition of customs revenues prior to 1757, I have not done the estimation for the first half of the eighteenth century. First, I assume salt and tea taxes remained at 160,000 taels for 1750 to 1850. Second, for a few years in the 1750s and 1760s when the amount of boat levies was known, I took the residual of the total revenue as timber taxes. The estimated timber taxes for these years should represent relatively accurately the situation in the mid-eighteenth century. From 1770 to 1850, I assumed that boat levies took up 55% of total revenues and salt and tea taxes remained at 160,000 taels and took the residual as timber tax. Then I adjusted the estimated numbers with descriptive information in the aforementioned memorials. Specifically, for a given year, if the reasons for decreased customs revenues included both boat levies and timber, then the estimated number is as shown. If “fewer passing boats” was given as the only reason, then the estimated timber tax, if lower than the level of the estimated amount for the previous year, was set to be the same as the previous year’s level.

⁵ The counting is based on cited memorials in Ni Yuping, *Qingchao Jia Dao guanshui yanjiu*, 88–96.

If “fewer timber” was given as the only reason, I would assume that the boat levies for this year were the same as the estimated boat levies of the previous year, and I would adjust the estimated timber tax accordingly, sometimes with the help of occasional information in the memorials that mentioned the scale of the decrease of timber tax compared to the previous year. For example, for 1823, the estimated timber tax using the general method is 100,731 taels. The total customs revenue in 1823 was about 5,000 taels lower than that in 1822. Sluggish demand for timber in Jiangnan due to a flood was given as the explanation, and boat levies were not mentioned. So I would assume that boat levies in 1823 stayed about the same as those of 1822, which are estimated to be 321,510 taels (55% of the 1822 total revenue of 584,565 taels). Then I estimated the 1823 timber tax by subtracting the estimated boat levies of 321,510 taels and salt and tea taxes of 160,000 taels from the total revenue of 579,403 taels, resulting in 97,892 taels. This would be the estimated timber tax of 1823 if no other information was available.

In this case, however, the memorial reported that timber tax was about 20,000 taels lower than the previous year. The estimated timber tax for 1822 of minus 20,000 taels is 83,054 taels, lower than the estimation of 97,892 taels. Therefore, the final estimation of timber tax for 1823 is 83,054 taels.

The estimated series of timber taxes from Jiujiang Guan is shown in Figure 16. A piece of circumstantial evidence from 1780 lent support to the above estimation method. The estimated timber taxes for Jiujiang Guan for 1780 and 1781 were 131,489 taels and 149,201 taels, respectively. A memorial by Jiangxi Governor Hao Shuo 郝碩 in 1780 revealed that timber taxes collected at a branch station of Jiujiang Guan, Gutang 姑塘, which taxed timber shipped up from Jiangxi, amounted to 82,364 taels in 1780 (from Month 4 of 1779 to Month 4 of 1780). This was considered very low; in fact, Hao Shuo mentioned that in the fifth and sixth months of 1780

alone, timber taxes collected at Gutang already reached 95,223 taels and expressed his optimism for revenues of 1781. Gutang only taxed timber from Jiangxi, so the timber from Hunan and other upper Yangzi regions was taxed at the main station. In these two years, timber taxes at Chen Guan, which accounted for only timber from the western part of Hunan, were 14,611 taels and 16,473 taels, respectively. Timber taxes at Jing Guan, which accounted for timber from Hubei and Sichuan, were 10,211 taels and 14,065 taels. Comparing these numbers, putting the estimated timber taxes of Jiujiang Guan at 131,489 taels and 149,201 taels seems reasonable. Moreover, the estimations for the 1800s and the 1810s are in line with Qian Zhen's 1818 description that timber taxes averaged 80,000 taels.

II. Timber Taxes of Jing Guan

Jing Guan taxed timber and boats floating down the Yangzi River from Sichuan. The timber taxes during the eighteenth century are estimated based on a 1748 memorial by Jing Guan Superintendent Sige 四格 that stated the “fluctuations of Jing Guan's revenues are solely dependent on the amount of timber floating down from Sichuan; annual boat levies were stable between 28 to 30 thousand.”⁶

⁶ Memorial of Jing Guan Superintendent Sige 四格, 9/12/QL13 (1748), National Palace Museum, GZD-003335.

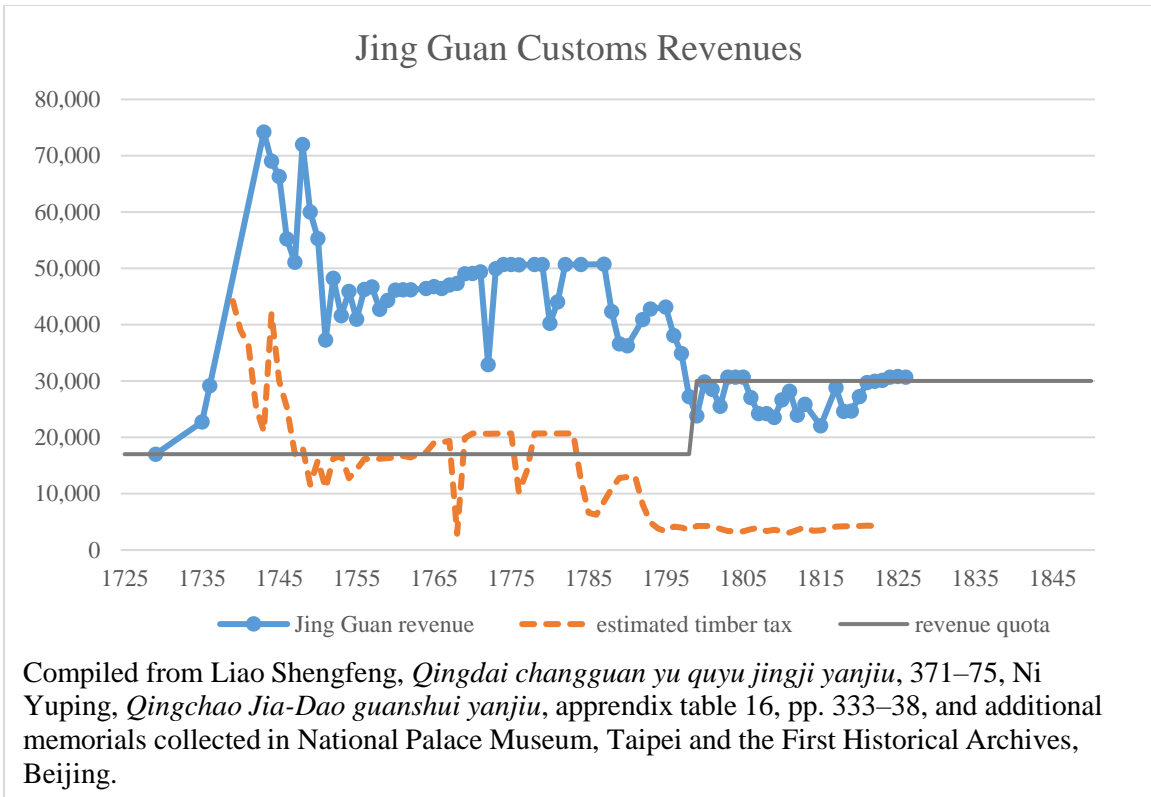


Figure 17 Jing Guan Customs Revenues

Appendix B. The *Longquan* Assessment and Valuation System

A system to measure and price timber, called “*Longquan ma*” (龍泉碼), was commonly used in timber trade during the Qing and Republican period. Measurement reforms failed to replace it with the metric system until 1954.¹ The system was devised by the elder daughter of a Ming loyalist *jinshi* scholar Guo Weijing 郭维经 of the Longquan County in southern Jiangxi, an area famous for its *Cunninghamia* export. Miss Guo devised a set of tables that had eight categories of *ma* to represent different stages of timber growth, which were further subdivided into a total of 120 grades. Each timber log could be assessed by a calculation based on the circumference at eyebrow and the length of the log.² As the legend has it, in the early Qianlong era, two Huizhou timber merchants, surnamed Wang and Dai respectively, finely tuned the *Longquan ma* system to better suit practical needs.³

¹ For descriptions on how the *Longquan ma* system worked in a number of markets, see Guizhou sheng bianji zu, *Dongzu shehui lishi diaocha*, 82; Tang Bingnan 湯丙南, “Hankou ce mucai zhi fa” 漢口測木材之法 [The Measurement of Timber in Hankou], *Hubei sheng nonghui nongbao* 湖北省農會農報 2, no. 9 (1921); Wang Boxin 王伯心, “Nanjing shi mucai maoyi jijia fangfa gaiyao” 南京市木材貿易計價方法概要 [Summary of the Method of Measurement and Pricing in the Timber Trade of Nanjing], *Linye tongxun* 林業通訊, no. 1 (1947); Yin Qing, “Jiangxi zhi mucai ye,” 9–11.

² Menzies, “Forestry,” 633.

³ Wang Zhenzhong 王振忠, “Taiping Tianguo qianhou huishang zai jiangxi de muye jingying: xin faxian de ‘Xihe Muye Zuanyao’” 太平天国前后徽商在江西的木业经营---新发现的《西河木业纂要》 [Huizhou Merchants’ Timber Business in Jiangxi around the Taiping Rebellion: A Study Based on the Newly found “Xi He Muye Zuanyao”], *lishi dili* 历史地理 28 (2013): 151.

The idea of this system is quite straightforward. The value of a trunk is a convex function of its volume. The intuition is that an integral trunk is worth more than the combined value of its two halves if it was cut in the middle. The *Longquan ma* system introduced a measure that was a convex function of a trunk's circumference at eyebrow. The circumference of a log was measured at a 0.05 foot interval from 0.95 to 7 foot.⁴ Each point corresponded to a value called “*liang*” 兩, a constructed abstractive unit that shared the same character as “*taels*”, the monetary unit for silver. Hereafter, it will be referred to as the “*Longquan liang*” for clarity. As shown in Figure 18, the function looks very much exponential. Although perimeter goes up to 7 foot in the full-version function, in practice, logs larger than 5-foot round were rare enough that they were usually priced individually in negotiations.⁵

⁴ In timber trade, with some regional variations, 1 foot (灘尺 *tanchi*) \approx 34.22 cm. Aihara Yoshiyuki,

“Shindai chūki Kishū tōnanbu shimizu kō ryūiki ni okeru mokuzai no ryūtsū kōzō,” 550.

⁵ Ibid. at 555.

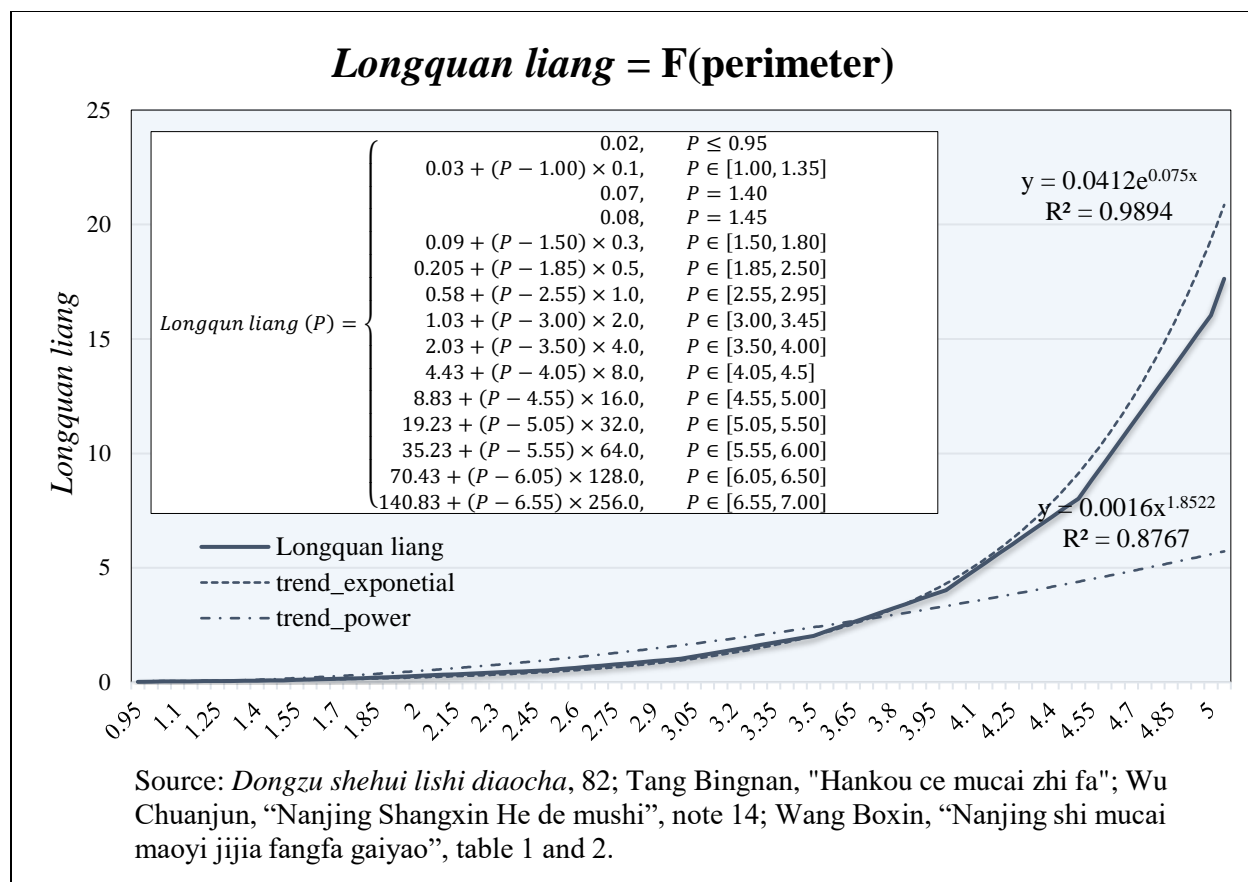


Figure 18 Formula of *Longquan Liang*

Based on the measure of *Longquan liang*, timber was classified into nine classes of “*ma*” (see Table 16). And for each class of *ma*, the market had one unit price that was expressed as *taels* of silver per *Longquan liang*, whereby *Longquan liang* was always called “*guan*” 贯 in price quoting. For example, consider a truck with a circumference of 2 foot and a length of 42 foot, it has a *Longquan liang* of 0.28 and will be classified as category No. 4, *zhongqian ma* 中錢碼. If the current market price for *zhongqian ma* is 13 *taels* per *guan*, then this truck is worth 3.64 *taels* of silver (13 × 0.28).

Table 16 Categories of *Longquan Ma*

Categories of <i>Longquan Ma</i>						
(1)	(2)	(3)	(4)	(5)	(6)	(7)
NO.	Categories of <i>ma</i>	Categories_CN	Least Length (ft)	Perimeter (ft)	<i>Longquan liang</i>	Age (years)
1	<i>zimu</i>	子木		≤ 0.95	0.02	≤ 20
2	<i>fen ma</i>	分碼	32	[1.00, 1.50]	[0.030, 0.09]	[21, 38]
3	<i>xiaoqian ma</i>	小錢碼	36	[1.55, 1.80]	[0.105, 0.18]	[39, 50]
4	<i>zhongqian ma</i>	中錢碼	40	[1.85, 2.20]	[0.205, 0.38]	[51, 70]
5	<i>daqian ma</i>	大錢碼	46	[2.25, 2.65]	[0.405, 0.68]	[71, over 80]
6	<i>qibajiu ma</i>	七八九碼	52	[2.70, 2.95]	[0.73, 0.98]	
7	<i>danliang ma</i>	單兩碼	60	[3.00, 3.45]	[1.03, 1.93]	
8	<i>shuangliang ma</i>	雙兩碼	60	[3.50, 4.00]	[2.03, 4.03]	
9	<i>fei ma</i>	飛碼	60	[4.05, 7.00]	[4.43, 256.03]	

Note: For NO.2-7, if the length is 0.1 ft short, discount the perimeter at 30% or by 0.5 ft; if short by more than 1 ft, it is considered as scraps, and the perimeter is discounted at 50% or 60%. For NO. 8 and 9, if the length is less than 60 ft, it is considered scraps; price should be negotiated separately.

Columns (1) to (6) are constructed from the rules of the *Longquan ma* system, cross-checked from the following sources: *Dongzu shehui lishi diaocha*, 82; Tang Bingnan, "Hankou ce mucai zhi fa"; Wu Chuanjun, "Nanjing Shangxin He de mushi", note 14; Wang Boxin, "Nanjing shi mucai maoyi jijia fangfa gaiyao", table 1 and 2.

Column (7) shows the age range of *cunninghamia* corresponding to the range of perimeter, calculated based on Figure 6 in Xing et al. (2012), which shows the age-diameter relationship of *cunninghamia* from age 1 to 80. According to this source, an 80 year-old *cunninghamia* stem would have an average perimeter of 2.375 ft, still falling into the range of *daqian ma*.

Each class of *ma* had a required minimum length. There were specific rules to discount *Longquan liang* to account for shortage in length. The amount of *Longquan liang* could also be discounted if a log was slender towards the top, bent or irregularly shaped in other ways, with holes, scarred, or rot. Buyers and sellers bargained over these imperfections to adjust the amount of *Longquan liang* for the stock of timber in question.

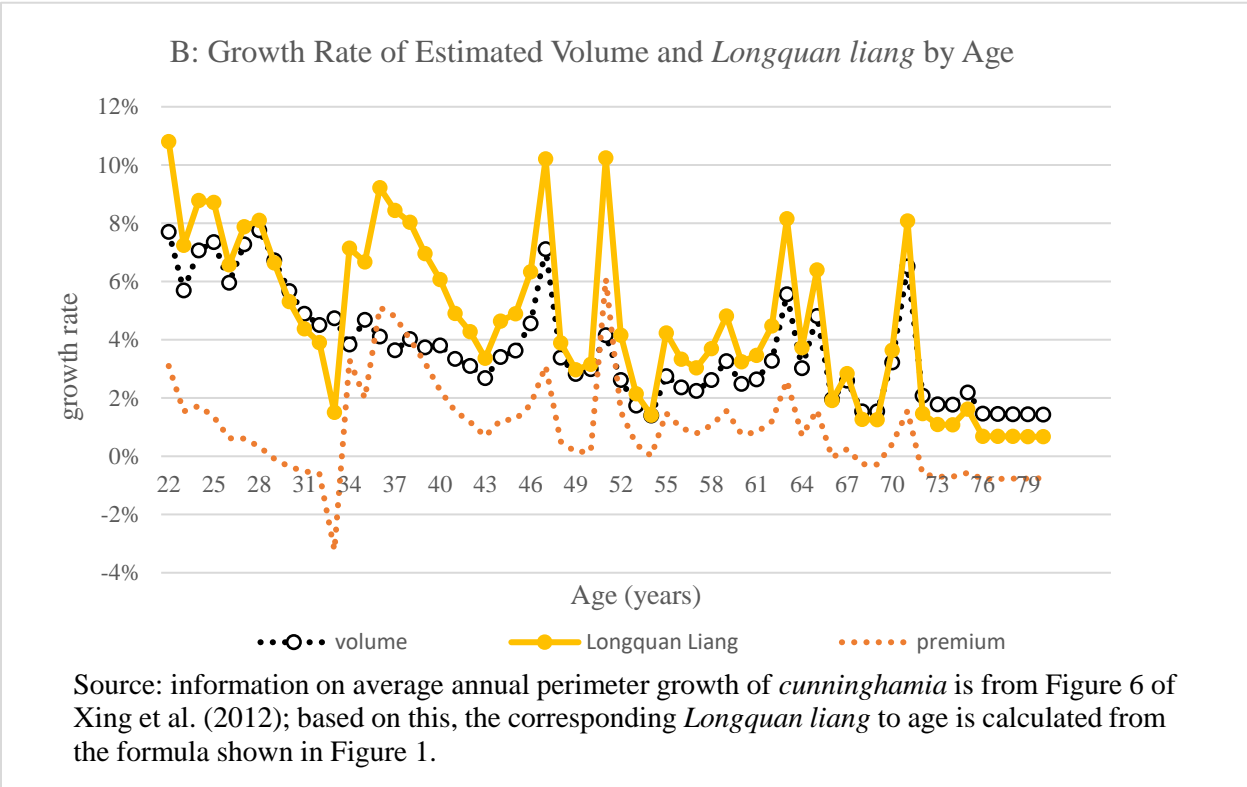
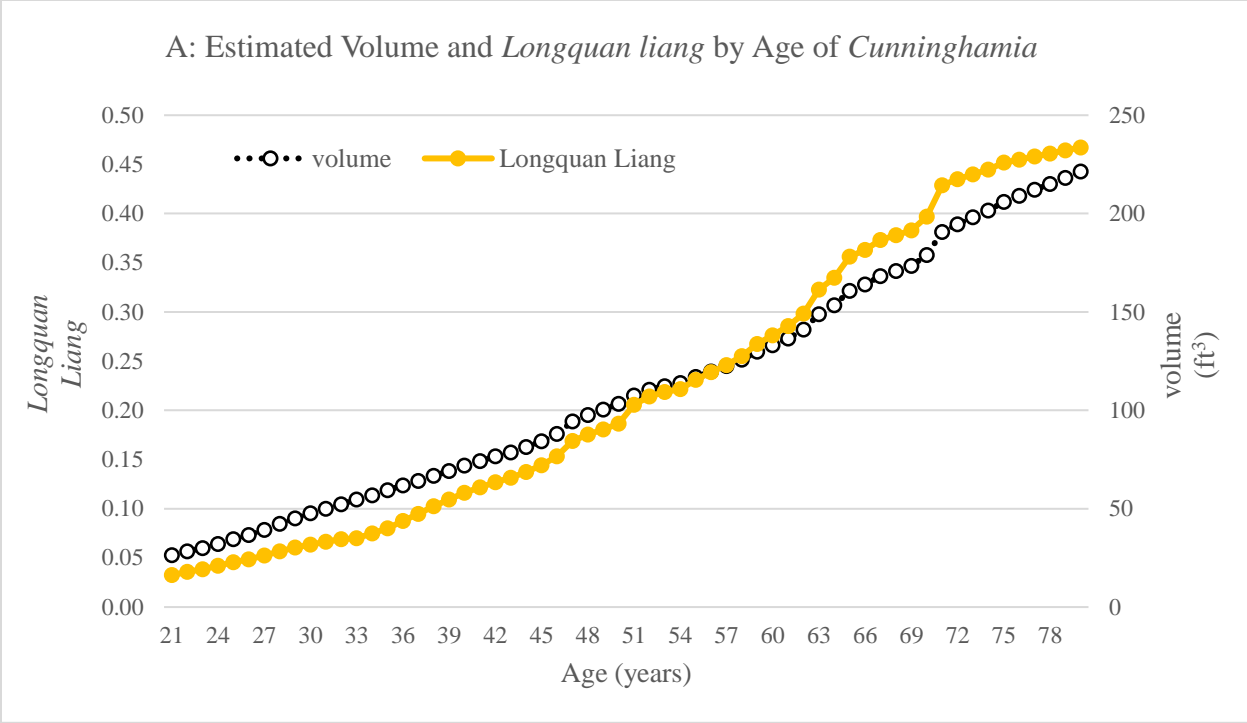


Figure 19 Correspondence between *Longquan Liang* and Tree Age

Figure 19 shows the estimated growth of timber volume annually and the corresponding *Longquan liang*.⁶ In general, the growth rate of *Longquan liang* is higher than that of volume. The difference represented the net premium of larger timber: if timber was sold at unit a price by volume, the increase of price per year would correspond exactly to the growth of volume; under the *Longquan ma* system, the increase of price corresponds to the increase of *Longquan liang*, which was usually higher than the growth of volume. One exception was for 30-year old trees, for which the pricing system encouraged cutting down instead of waiting. This conformed to the market for planted trees, which were usually grown for thirty years.

There was also a practice of discount closer to regions of supply in calculating *Longquan liang*. The benchmark unit prices per *Longquan liang* for each category of *ma* were determined in large markets such as Hankou and Nanjing, while transportation cost along the river was partially reflected in a series of upriver markets by the discount of *Longquan ma*. For example, in the place of production, when measuring the perimeter of a trunk, 1.1 feet was taken as 1 foot, and the perimeter should be measured at 9 feet above the hole that was drilled in order to tie the wood into raft, called the “water hole” (*shuiyan* 水眼). The measured total *Longquan liang* was then discounted by 8 percent off. Once the timber was transported to Jinping, 1.07 feet was taken as 1 foot, the perimeter was measured at 8 feet above the water hole, and the total *longquan liang* was still discounted at 8 percent. As shown in Table 3, further down the river, the discount rate

⁶ Information on average annual perimeter growth of *cunninghamia* is based on Pei Xing, Qibin Zhang, and Patrick J. Baker, “Age and Radial Growth Pattern of Four Tree Species in a Subtropical Forest of China,” fig. 6.

decreased gradually until it became 0.5 percent in Nanjing.⁷ That the unit prices stayed roughly the same while the *Longquan liang* was discounted to account for the distance revealed that the Southwestern timber was very much oriented towards the market along the Yangzi River and the extent to which the timber market along the Yangzi was integrated.

Table 17 Discount of *Longquan ma* along Water Routes

Discount of <i>Longquan ma</i> along Water Transportation Route			
(1)	(2)	(3)	(4)
Location	1 foot = ? foot in reality	feet above water hole	discount rate (%)
Production site	1.10	9	8
Jinping, Guizhou	1.07	8	8
Jingzhou, Hunan	1.07	7	8
Hongjiang, Hunan	1.05	5	5
Zouxi, Hunan	1.00	5	2
Hankou, Hubei	1.00	5	1
Nanjing, Jiangsu	1.00	5	0.5

Note: the table is constructed from the information in *Dongzu shehui lishi diaocha*, 82. Colum (2) shows when measuring the diameter of a trunk, how many Chinese feet were taken as one foot (33.3 cm). Colum (2) shows at how many feet above the water hole the diameter was measured. Colum (3) is the discount rate on the measured *Longquan liang*.

The first section of a billing document between Wang Yisheng 王義生, a seller from Huizhou, and the Tong Fu Xing 同福興 timber broker in Hangzhou in 1900 illustrated the use of the *Longquan ma* system in pricing.⁸ The rest of the bill specified the amount of commission fees to brokers, contributions to merchant organizations, as well as the advance loan extended by the broker to the seller, which was repaid out of the sales revenue as the “amount already paid to the seller previously” (129.4 *liang*) at the bottom.

⁷ Guizhou sheng bianji zu, *Dongzu shehui lishi diaocha*, 82.

⁸ Liu Boshan 刘伯山, ed., *Huizhou wenshu di san ji* 徽州文书第三辑 [The Third Collection of Huizhou Documents] (Guilin: Guangxi shifan daxue chuban she, 2009), vol. 7, 245.

Table 18 Billing of Tong Fu Xing Timber Brokerage

Billing of Hangzhou Ton Fu Xing Timber Brokerage to Wang Yisheng, 1900							
No.	(1) category	(2) quantity	(3) total <i>Lq liang</i>	(4) avg. <i>Lq liang</i>	(5) discount	(6) price (<i>yuan/liang</i>)	(7) value
Income							
1	<i>fen ma</i>	533	23.78	0.04	0.19	11.70	276.03
2	<i>zhongqian ma</i>	11	2.28	0.21	0.02	13.00	29.38
3	<i>zi mu</i>	373	3.73	0.01	0.03	9.00	33.30
						Total Income	338.71
Expense							
4	rent of the dock						-0.12
5	wages paid to labors that measured the timber						-1.92
6	wages paid to labors that tied the raft						-0.14
7	wages paid to labors that carried the raft						-3.05
8	living expense of the seller						-1.00
9	contribution to the military						-0.07
10	contribution to the Association of Huizhou Timber Merchants						-2.20
11	contribution to Weishan charity hall						-0.51
12	contribution to Tongshan charity hall						-0.34
						Total Expense	-9.35
	Amount already paid to the seller previously						-129.40
	Amount received from the seller for living expense						0.35
						Total Amount Paid to the Seller Today	200.31

BIBLIOGRAPHY

Abbreviations

- BX Baxian 巴縣 Archives, Sichuan Provincial Archives, Chengdu
- FHA the First Historical Archives of China, Beijing
- GX_HDSL *Guangxu Da Qing huidian shili* 光緒大清會典事例
- GXSL *Guangxu chao shilu* 光緒朝實錄
- GZD *Qingdai Gongzhong dang zouzhe ji Junji Chu zhejian ziliao ku* 清代宮中檔奏摺及軍機處摺件資料庫, National Palace Museum, Taipei.
- GZM Daniels, Christian, Yang Yougeng, and Takeuchi Fusaji, eds. *Kishū Myaozoku ringyō keiyaku monjo kaihen 1736-1950 nen* 貴州苗族林業契約文書匯編 (1736-1950 年). 3 vols. Tokyo: Tokyo University of Foreign Studies, 2001.
- JQSL *Jiaqing chao shilu* 嘉慶朝實錄
- JYZ Chen Jinquan and Du Wanhua, eds. *Guizhou Wendou Zhai Miao zu qiyue falv wenshu huibian: Jiang Yuanze jiacang qiyue wenshu* 貴州文斗寨苗族契約法律文書匯編—姜元澤家藏契約文書. Beijing: Remin chuban she, 2008.
- QL_HDZL *Qianlong Da Qing huidian zeli* 乾隆大清會典則例
- QLSL *Qianlong chao shilu* 乾隆朝實錄
- SHMA Shanghai Municipal Archives
- SZMA Suzhou Municipal Archives
- YZ_HD *Yongzheng Da Qing huidian* 雍正大清會典

Works Cited

Adshead, S.A.M. “An Energy Crisis in Early Modern China.” *Ch’ing-Shih Wen-T’i [Late Imperial China]* 3, no. 2 (1974): 20–28.

Aibida 愛必達. *Qiannan shilue* 黔南識略 [Brief Knowledge of Southern Guizhou], 1847.

Aihara Yoshiyuki 相原佳之. “Shinchō ni yoru mokuzai chōtatsu no ichisokumen: shinchō zenki no reiki seido” 清朝による木材調達の一側面——清朝前期の例木制度 [An Aspect of the Procurement of Timber during the Qing: The Tribute Timber Institution in Early Qing]. *Chūgoku-shi kenkyū ronsō* 中国史研究論叢, no. 3 (2003): 22–38.

———. “Shindai Chūgoku Kishū Shō Shimizu Kō ryūiki niokeru ringyō keiei no ichi sokumen —— ‘Kishū Myaozoku ringyō keiyaku monjo kaihen’ Ping’ao Zhai bunsho o jirei toshite” 清代中国, 貴州省清水江流域における林業経営の一側面—『貴州苗族林業契約文書匯編』平鰲寨文書を事例として [Forest Management in the Qingshui River Valley in Guizhou Province in Qing China: A Case Study of the Documents from Ping’ao Village]. In *Kishū Myaozoku ringyō keiyaku monjo kaihen (1736-1950 nen)* 貴州苗族林業契約文書匯編 (1736-1950 年), edited by Christian Daniels, Yang Yougeng 楊有廣, and Takeuchi Fusaji 武内房司, 3:121–64. Tokyo: The Institute for the Study of the Languages and Cultures of Asia and Africa, Tokyo University of Foreign Languages. 2003.

———. “Shindai chūki Kishū tōnanbu shimizu kō ryūiki ni okeru mokuzai no ryūsū kōzō: ‘Caiyun huangmu andu’ no kijutsu wo chūshin ni” 清代中期貴州東南部清水江流域に

- おける木材の流通構造——「採運皇木案牘」の記述を中心に [The Distribution Mechanism of Timber in Southeastern Guizhou Qingshui-Jiang Valley during the Mid-Qing Period : Analysis of Caiyun Huangmu Andu]. *Shakai keizai shigaku* 社会経済史学 72, no. 5 (2007): 547–66.
- Appuhn, Karl Richard. *A Forest on the Sea: Environmental Expertise in Renaissance Venice*. Baltimore: Johns Hopkins University Press. 2009.
- Aslanian, Sebouh. *From the Indian Ocean to the Mediterranean: The Global Trade Networks of Armenian Merchants from New Julfa*. Berkeley: University of California Press. 2011.
- Averill, Stephen C. *Revolution in the Highlands: China's Jinggangshan Base Area*. State and Society in East Asia. Lanham, Md: Rowman & Littlefield Publishers. 2006.
- Ba Habu 巴哈布. *Jiaqing Hunan tongzhi* 嘉慶湖南通志 [Gazetteer of Hunan Province Compiled during the Jiaqing Era]. 219 vols., 1820.
- Barton, Gregory A. “Empire Forestry and American Environmentalism.” *Environment and History* 6, no. 2 (2000): 187–203.
- Bourgon, Jerome. “Uncivil Dialogue: Law and Custom Did Not Merge into Civil Law under the Qing.” *Late Imperial China* 23, no. 1 (2002): 50–90.
- Chen Feng 陈峰. “Jianlun Song Ming Qing caoyun zhong sihuo fanyun ji maoyi” 简论宋明清漕运中私货贩运及贸易 [A Brief Discussion on Private Trade in the Tribute Grain System of Song, Ming, and Qing Dynasties]. *Zhongguo jingji shi yanjiu* 中国经济史研究, no. 1 (1996): 120–27.

- Chen, Fu-mei, and Ramon H. Myers. "Coping with Transaction Costs: The Case of Merchant Associations in the Ch'ing Period." In *Chinese Business Enterprise*, edited by R. Ampalavanar Brown, II:252–71. London and New York: Routledge. 1996.
- Chen Jinquan 陈金全, and Du Wanhua 杜万华, eds. *Guizhou Wendou Zhai Miao zu qi yue falv wenshu huibian: Jiang Yuanze jiacang qi yue wenshu* 贵州文斗寨苗族契约法律文书汇编—姜元泽家藏契约文书 [The Compilation of Contractual and Legal Documents from Wendou Village, Guizhou Province: Documents from Jiang Yuanze's Family Collection]. Beijing: Remin chubanshe. 2008.
- Chen Ruizhi 陈瑞芝. "Hangzhou mucai ye de neimu" 杭州木材业的内幕 [The Insider's Story of the Timber Business in Hangzhou]. In *Zhejiang wenshi ziliao xuanbian (di jiu ji)* 浙江文史资料选编 (第九辑), 90–120. Hangzhou: Zhejiang renmin chubanshe. 1964.
- Chen Xing 陈醒, and Chen Lilian 陈立廉. "Hanyang Yingwu Zhou zhumu shichang shihua" 汉阳鹦鹉洲竹木市场史话. In *Wuhan wenshi ziliao wenku* 武汉文史资料文库, Reprint of 1964 article., 3:362–78. Wuhan: Wuhan chubanshe. 1999.
- Chen Zhongping 陈忠平. "Ming Qing shiqi Jiangnan shizhen de yaren yu yahang" 明清时期江南市镇的牙人与牙行 [Brokers and Brokerages in Ming-Qing Jiangnan Market Towns]. *Zhongguo jingji shi yanjiu* 中国经济史研究, no. 2 (1987): 31–38.
- Chen, Zhongping. "The Origins of Chinese Chambers of Commerce in the Lower Yangzi Region." *Modern China* 27, no. 2 (2001): 155–201.

- Cheng Zeshi 程泽时. *Qingshui Jiang wenshu zhi fayi chutan* 清水江文书之法意初探 [Explore the Legal Implications of Qingshui River Documents]. Beijing: Zhongguo zhengfa daxue chubanshe. 2011.
- Ch'iu Pengsheng 邱澎生. “Guofa yu bangui: Qingdai qianqi Chongqing cheng de chuanyun jiu fen jie jue jizhi” 國法與幫規: 清代前期重慶城的船運糾紛解決機制 [State Law and Guild Rules: The Mechanisms for Resolving Shipping Disputes in Chongqing]. In *Ming Qing falü yunzuo zhong de quanli yu wenhua* 明清法律運作中的權力與文化, edited by Ch'iu Pengsheng 邱澎生 and Chen Xiyuan 陳熙遠, 275–344. Taipei: Academia Sinica. 2009.
- . *Shiba shiji shiji suzhou cheng de xinxing gongshang ye tuanti* 十八十九世紀蘇州城的新興工商業團體 [Newly Emerged Industrial and Commercial Organizations in the Suzhou City during the Eighteenth and the Nineteenth Centuries]. Taipei: Taiwan daxue chubanshe. 1990.
- . “you shili lüli yanbian kan ming qing zhengfu dui shichangde falü guifan” 由市廛律例演變看明清政府對市場的法律規範 [Examining Legal Regulations on Market Based on Changes in Market-Related Laws and Precedents during the Ming-Qing Period]. In *Dang falü yushang jingji: Ming Qing zhongguo de shangye falü* 當法律遇上經濟: 明清中國的商業法律. Taipei: Wunan tushu. 2008.
- Dai Yuan 戴淵. “Nanjing Shangxin He mucai maoyi zhuangkuang” 南京上新河木材貿易狀況 [Timber Trade Situations in the Market of Nanjing Shangxin He]. *Zhongguo nongxue hui bao* 中國農學會報, no. 129–130 (1934).

- Daniels, Christian. “Shimizu ryūiki no Myaozoku ga shokurin o kaishi suru made—— ringyō keiei e to karitate ta sho yōin” 清水流域の苗族が植林を開始するまで—林業経営へと駆り立てた諸要因 [The Beginnings of Tree Planting by the Miao People in the Qingshui River Area: The Factors That Motivated the Forestry Management Industry]. In *Kishū Myaozoku ringyō keiyaku monjo kaihen (1736-1950 nen)* 貴州苗族林業契約文書匯編 (1736-1950 年), edited by Christian Daniels, 楊有賡, and 武内房司, 3:9–48. Tokyo: The Institute for the Study of the Languages and Cultures of Asia and Africa, Tokyo University of Foreign Languages. 2003.
- Daniels, Christian, Yang Yougeng 楊有庚, and Takeuchi Fusaji 武内房司, eds. *Kishū Myaozoku ringyō keiyaku monjo kaihen (1736-1950 nen)* 貴州苗族林業契約文書匯編 (1736-1950 年) [Old Forestry Contracts of the Miao in Guizhou]. 3 vols. Tokyo: Tokyo University of Foreign Studies. 2001.
- Deng Yibing 邓亦兵. “Qingdai qianqi shuiguan de shezhi” 清代前期税关的设置 [Establishments of Customs Stations in the Early Qing]. *Qingshi yanjiu* 清史研究, no. 2 (2007).
- Diamond, Norma. “Defining the Miao: Ming, Qing, and Contemporary Views.” In *Cultural Encounters on China’s Ethnic Frontiers*, edited by Stevan Harrell, 92–116. Seattle: University of Washington Press. 1995.
- Dollar, Robert. *Memoirs of Robert Dollar*. San Francisco: privately published by W.S. Van Cott & Co. 1921.
- Donald S. Sutton. “Ethnicity and the Miao Frontier in the Eighteenth Century.” In *Empire at the Margins: Culture, Ethnicity, and Frontier in Early Modern China*, edited by Pamela Kyle

- Crossley, Helen F. Siu, and Donald S. Sutton, 190–228. Berkeley: University of California Press. 2006.
- Du Xuncheng 杜恂诚. *Jindai Zhongguo qianye xiguan fa: yi Shanghai qianye wei shijiao* 近代中国钱业习惯法: 以上海钱业为视角 [Customary Law in the Banking Industry of Modern China: From the Perspective of Shanghai Banking Industry]. Shanghai: Shanghai caijing daxue chuban she. 2006.
- Dykstra, Maura D. “Beyond the Shadow of the Law: Firm Insolvency, State-Building, and the New Policy Bankruptcy Reform in Late Qing Chongqing.” *Frontiers of History in China* 8, no. 3 (2013): 406–33.
- . “Complicated Matters: Commercial Dispute Resolution in Qing Chongqing from 1750 to 1911.” Los Angeles. Dissertation. University of California, Los Angeles. 2014.
- Elvin, Mark. *The Retreat of the Elephants: An Environmental History of China*. New Haven: Yale University Press. 2004.
- . “Three Thousand Years of Unsustainable Growth: China’s Environment from Archaic Times to the Present.” *East Asian History*, no. 6 (1993): 7–46.
- Elvin, Mark, and Ts ’ui-jung Liu, eds. *Sediments of Time: Environment and Society in Chinese History*. Studies in Environment and History. Cambridge: Cambridge University Press. 1998.
- Fan Chengda 范成大. *Canluan lu* 驂鸞錄, 1175.
- Fan Jinmin 范金民, Yao Yang 姚暘, and Ni Yi 倪毅. *Ming Qing shangshi jiu fen yu shangye susong* 明清商事纠纷与商业诉讼 [Ming-Qing Commercial Disputes and Lawsuits]. Nanjing: Nanjing daxue chuban she. 2007.

- Fan Shuzhi 樊树志. “Ming Qing caoyun shulue” 明清漕运述略 [A Brief Discussion of the Ming-Qing Grain Tribute System]. *Xueshu yuekan* 学术月刊, no. 10 (1962): 23–29.
- Faure, David. *Emperor and Ancestor: State and Lineage in South China*. Stanford: Stanford University Press. 2007.
- Fiskesjö, Magnus. “On the ‘Raw’ and the ‘Cooked’ Barbarians of Imperial China.” *Inner Asia* 1, no. 2 (1999): 139–68.
- Fu Linxiang 傅林祥. “Jiangnan, Huguang, Shanxi fensheng guocheng yu Qing chu shengzhi de bianhua” 江南、湖广、陕西分省过程与清初省制的变化. *Zhongguo lishi dili luncong* 中国历史地理论丛 23, no. 2 (2008): 119–26.
- Fu Yiling 傅衣凌. “Ming Qing shidai Huizhou Wushang ziliao leiji” 明清时代徽州婺商资料类辑 [Selections of Materials Related to Merchants from Wuyuan, Huizhou during the Ming-Qing Time]. In *Ming Qing shehui jingji shi lunwen ji* 明清社会经济史论文集. Beijing: Remin chuban she. 1982.
- G. William. Skinner, Mark Henderson, and Zumou Yue. “Physiographic Macroregions of China.” *Harvard Dataverse*, VI, 2013. <http://hdl.handle.net/1902.1/21763>.
- Gan Xi 甘熙. *Baixia suoyan* 白下琐言. Reprint. Nanjing xijian wenxian congkan 南京稀见文献丛刊. Nanjing: Nanjing chuban she. 2007.
- Ge Jianxiong 葛剑雄, Cao Shuji 曹树基, and Wu Songdi 吴松弟. *Jianming zhongguo yimin shi* 简明中国移民史 [A Short History of Migration in China]. Fuzhou: Fujian renmin chuban she. 1993.

- Gelderblom, Oscar. *Cities of Commerce: The Institutional Foundations of International Trade in the Low Countries, 1250-1650*. Princeton: Princeton University Press. 2013.
- Giersch, C. Patterson. *Asian Borderlands: The Transformation of Qing China's Yunnan Frontier*. Cambridge, Mass: Harvard University Press. 2006.
- . "Commerce and Empire in the Borderlands: How Do Merchants and Trade Fit into Qing Frontier History." *Frontiers of History in China* 9, no. 3 (2014): 361–83.
- Goldberg, Jessica. *Trade and Institutions in the Medieval Mediterranean: The Geniza Merchants and Their Business World*. Cambridge and New York: Cambridge University Press. 2012.
- Greif, Avner. *Institutions and the Path to the Modern Economy: Lessons from Medieval Trade*. New York: Cambridge University Press. 2006.
- Guizhou sheng bianji zu 贵州省编辑组. *Dongzu shehui lishi diaocha* 侗族社会历史调查. Beijing: Minzu chubanshe. 2009.
- Hardin, Garrett. "The Tragedy of the Commons." *Science, New Series* 162, no. 3859 (1968): 1243–48.
- Herman, John E. "The Cant of Conquest: Tusi Offices and China's Political Incorporation of the Southwest Frontier." In *Empire at the Margins: Culture, Ethnicity, and Frontier in Early Modern China*, edited by Pamela Kyle Crossley, Helen F Siu, and Donald S Sutton, 135–70. University of California Press. 2006.
- Hinton, Harold C. "The Grain Tribute System of the Ch'ing Dynasty." *The Far Eastern Quarterly* 11, no. 3 (1952): 339–54.
- Hostetler, Laura. *Qing Colonial Enterprise: Ethnography and Cartography in Early Modern China*. Chicago: University of Chicago Press. 2001.

- Huang, Philip C. *Civil justice in China, representation and practice in the Qing*. Stanford: Stanford University Press. 1996.
- Huang, Philip C. *Code, Custom, and Legal Practice in China: The Qing and the Republic Compared*. Law, Society, and Culture in China. Stanford: Stanford University Press. 2001.
- Huang Tinggui 黄廷桂. *Yongzheng Sichuan tongzhi* 雍正四川通志 [Gazetteer of Sichuan Province Compiled in the Yongzheng Era]. 47 vols., 1733.
- Huang Yuansheng 黄源盛. *Mingchu Daliyuan Yu Caipan* 民初大理院與裁判 [The Supreme Court and Its Judgements in the Early Republic of China]. Taipei: Angle Publishing Co, Ltd. 2011.
- Hunan sheng diaocha ju 湖南省调查局. *Hunan shangshi xiguan baogao shu (1911)* 湖南商事習慣報告書 [The Report on Business Customs in Hunan Province]. Annotated by Lao Bolin 勞柏林. Changsha: Hunan jiaoyu chubanshe. 2010.
- Inspector General of Customs. *Decennial Reports on the Trade, Navigation, Industries Etc of the Ports Open to Foreign Commerce in China and Corea and on the Condition and Development of the Treaty Port Provinces, 1882-1891*. Shanghai: Statistical department of the Inspectorate General of Customs. 1893.
- Jin Qin 金勤. “Qing mo sanda hangye zhiyi de Shangxin He mushi” 清末三大行业之一的上新河木市 [Timber Market in Shangxin He: One of the Three Biggest Trades in Late Qing], no. 1 (1985): 26–28.

Jinping xian difangzhi bianzuan weiyuan hui 锦屏县地方志编纂委员会. *Jinping Xian zhi, 1991-2009* 锦屏县志 1991- 2009 [Gazetteer of Jinping County]. Vol. 2. 2 vols. Fangzhi chuban she. 2011.

Kishimoto Mio 岸本美緒. “Kishū no sanrin keiyaku monjo to Kishū no sanrin keiyaku monjo” 貴州の山林契約文書と徽州の山林契約文書 [Timberland Contracts in Guizhou and Huizhou]. In *Kishū Myaazoku ringyō keiyaku monjo kaihen (1736-1950 nen)* 貴州苗族林業契約文書匯編 (1736-1950 年), edited by Christian Daniels, Yang Yougeng 楊有賡, and Takeuchi Fusaji 武内房司, 3:165–90. Tokyo: The Institute for the Study of the Languages and Cultures of Asia and Africa, Tokyo University of Foreign Languages. 2003.

Kobayashi Takashiro 小林高四郎. “Tō Sō gajin ko” 唐宋牙人考 [A Study on the Tang-Song Brokers]. *shigaku* 史學 8, no. 1 (1929): 53–101.

———. “Tō Sō gajin ko hosei” 唐宋牙人考補正 [Supplements to the Study on Tang-Song Brokers]. *shigaku* 史學 8, no. 3 (1929): 165–67.

Kotenev, Anatol M. *Shanghai: Its Mixed Court and Council Material Relating to the History of the Shanghai Municipal Council and the History, Practice and Statistics of the International Mixed Court. Chinese Modern Law and Shanghai Municipal Land Regulations and Bye-Laws Governing the Life in the Settlement*. Shanghai: North-China Daily News & Herald, Limited. 1925.

- Lan Yong 藍勇. “Ming Qing shiqi de huangmu caiban” 明清時期的皇木采办 [The Procurement of Imperial Timber during the Ming-Qing Period]. *Lishi yanjiu* 历史研究, no. 6 (1994).
- Lavelly, William. “The Spatial Approach to Chinese History: Illustrations from North China and the UpperYangzi.” *The Journal of Asian Studies* 48, no. 1 (1989): 100–113.
- Lee, John S. “Forests and the State in Pre-Industrial Korea, 918-1897.” Cambridge. Dissertation. Harvard University. forthcoming.
- . “Postwar Pines: The Military and the Expansion of State Forests in Post-Imjin Korea, 1598-1684.” *Journal of Asian Studies*, forthcoming.
- Lei Menglin 雷夢麟. *Dulü suoyan* 讀律瑣言 (1557). Reprinted and annotated by Huai Xiaofeng 怀效锋 and Li Jun 李俊. Beijing: Falü chuban she. 2007.
- Li Bozhong 李伯重. “Ming Qing shiqi Jiangnan diqu de mucai wenti” 明清时期江南地区的木材问题 [On the Issue of Jiangnan’s Timber Supply in the Ming-Qing Era]. *Zhongguo shehui jingji shi yanjiu* 中国社会经济史研究, no. 01 (1986): 86–96.
- Li Dongyang 李東陽. *Da Ming huidian* 大明會典 [Collected Statutes of the Great Ming], 1587.
- Li Weiguo 李伟国. “Songdai jingji shenghuo zhongde shikuai” 宋代经济生活中的市侩 [Market Intermediaries in the Economic Life of Song Dynasty]. *Lishi yanjiu* 历史研究, no. 2 (1992): 110–24.
- Li Wenzhi 李文治, and Jiang Taixin 江太新. *Qing dai caoyun* 清代漕运 [The Qing Grain Tribute System]. 2nd edition. Beijing: Shehui kexue wenxian chuban she. 2008.

- Liang Cong 梁聰. *Qingdai Qingshui Jiang xiayou cunzhai shehui de qiyue guifan yu zhixu: yi Wendou Miao zhai qiyue wenshu wei zhongxin de yanjiu* 清代清水江下游村寨社会的契约规范与秩序——以文斗苗寨契约文书为中心的研究 [Contract Norms and Order in the Lower Qingshui Villages during the Qing Dynasty: A Study Centered on Contractual Documents from the Wendou Miao Village]. Beijing: Renmin chuban she. 2008.
- Liang Qirang 梁啓讓. *Jiaqing Wuhu xianzhi* 嘉慶蕪湖縣志 [Gazetteer of Wuhu Prefecture Compiled in the Jiaqing Era], 1807.
- Liang Zhiping 梁治平. *Qingdai xiguan fa: shehui yu guojia* 清代习惯法: 社会与国家 [Customary Law in Qing China: Society and State]. Beijing: Zhongguo zhengfa daxue chuban she. 1996.
- Liao Shengfeng 廖声丰. *Qingdai changguan yu quyue jingji yanjiu* 清代常关与区域经济研究 [A Study on Regular Customs and Regional Economies during the Qing]. Beijing: Renmin chuban she. 2010.
- . “Qingdai Gan Guan shuishou de bianhua yu Dayuling shanglu de shangpin liutong” 清代赣关税收的变化与大庾岭商路的商品流通 [The Changes of the Taxes in Gan Custom and the Commodity Circulation in Dayuling Mountain in the Qing Dynasty]. *Lishi Dang'an*, no. 4 (2001): 85–92.
- Lin Hongzhuang 林红状. “Ming Qing ji jindai yahang yanjiu zongshu” 明清及近代牙行研究综述 [Review of the Literature on the Ming-Qing and Modern Yahang System]. *Lishi jiaoxue* 历史教学, no. 24 (2008): 105–8.

- Little, Daniel, and Joseph W Esherick. "Testing the Testers: A Reply to Barbara Sands and Ramon Myers's Critique of G. William Skinner's Regional Systems Approach to China." *The Journal of Asian Studies* 48, no. 1 (1989): 90–99.
- Liu Boshan 刘伯山, ed. *Huizhou wenshu di san ji* 徽州文书第三辑 [The Third Collection of Huizhou Documents]. Guilin: Guangxi shifan daxue chubanshe. 2009.
- Liu, Kwang-Ching. "Chinese Merchant Guilds: An Historical Inquiry." *The Pacific Historical Review*, 1988, 1–23.
- Liu Peiliang 柳培良, and Fan Jingyu 范淨宇. "Nanjing shi mucai shikuang diaocha shang" 南京市木材市況調查上 [Investigation on the Nanjing Timber Market]. *Nongye tongxun* 農業通訊 1, no. 10 (1947).
- Liu Shigu 刘诗古. "Ming mo yijiang Poyang Hu diqu 'shuimian quan' zhi fenhua yu zhuanrang: yi 'mai hu qi' he 'zhu hu zi' wei zhongxin" 明末以降鄱阳湖地区“水面权”之分化与转让——以“卖湖契”和“租湖字”为中心 [Division and Transference of Rights over the Poyang Lake since Late Ming: A Study Centered on Sale and Lease Contracts]. *Qingshi yanjiu* 清史研究, no. 3 (2015): 60–73.
- Liu, William Guanglin. "The Making of a Fiscal State in Song China, 960-1279." *The Economic History Review* 68, no. 1 (February 2015): 48–78.
- Liu Yongcheng 刘永成, and He Zhiqing 赫治清. "Lun woguo hanghui zhidu de xingcheng he fazhan" 论我国行会制度的形成和发展. *Meng ya* 萌芽, no. 117–140 (1983).

- Lu Yin 蘆隱. “Shangxin He shamu ye wushi nian gaikuang” 上新河杉木業五十年概況 [An Overview of the Cunninghamia Trade in Shangxin He for the Last Fifty Years]. *Muye jie* 木業界, no. 1, 2, 4 (1940): (1) 10-13, (2) 13-28, (4) 5-14.
- Lucassen, Jan, Tine De Moor, and Jan Luiten van Zanden. *The Return of the Guilds*. Cambridge: Cambridge University Press. 2008.
- Luo Bingzhang 駱秉章. *Luo Wenzhong gong zouyi* 駱文忠公奏議 [Collected Memorials of Luo Bingzhang]. Reprint. 3 vols. Taipei: Wenhai chuban she. 1967.
- Luo Yuan 羅願. *Chunxi Xin'an zhi* 淳熙新安志 [Gazetteer of Xin'an Prefecture Compiled in the Chunxi Era], 1180.
- Luo Yudong 羅玉東. *Zhongguo lijin shi* 中國釐金史 [History of the Lijin Tax]. Shangwu yinshu guan. 1936.
- Lydon, Ghislaine. *On Trans-Saharan Trails: Islamic Law, Trade Networks, and Cross-Cultural Exchange in Nineteenth-Century Western Africa*. Cambridge University Press. 2009.
- Ma, Debin. “Law and Economy in Traditional China: A ‘Legal Origin’ Perspective on the Great Divergence.” In *Law and Long-Term Economic Change: An Eurasian Perspective*, edited by Jan Luiten van Zanden and Debin Ma, *Law and Long-Term Economic Change: an Eurasian Perspective.*, 46–67. Stanford: Stanford University Press. 2011.
- Ma Min 马敏. “Shangshi caipan yu shanghui: lun wan Qing Suzhou shangshi jiufen de tiaochu” 商事裁判与商会——论晚清苏州商事纠纷的调处 [Commercial Adjudication and the Chamber of Commerce: Resolution of Commercial Disputes in Late Qing Suzhou]. *lishi yanjiu* 历史研究, no. 1 (1996).

- Ma Min 马敏, and Zhu Ying 朱英. *Chuantong yu jindai de erchong bianzou -- wan Qing Suzhou shanghai ge'an yanjiu* 传统与近代的二重变奏—晚晴苏州商会个案研究 [Tradition and Modernity: Case Studies of the Late-Qing Suzhou Chamber of Commerce]. Chengdu: Bashu shushe. 1993.
- Mann, Susan. *Local Merchants and the Chinese Bureaucracy: 1750-1950*. Stanford: Stanford University Press. 1987.
- Mao Qiling 毛奇龄. “Hangzhou zhihuo yi” 杭州治火議 [On Fire Prevention in Hangzhou]. In *Wulin zhanggu congbian* 武林掌故叢編, 光緒中錢唐丁氏嘉惠堂刊本. Vol. 9. Taipei: Tailian guofeng chuban she. 1967.
- Margary, Augustus Raymond, and Rutherford Alcock. *The Journey of Augustus Raymond Margary, from Shanghae to Bhamo, and back to Manwyne*. London: Macmillan and co. 1876.
- Marks, Robert. *China: Its Environment and History*. World Social Change. Lanham, Md: Rowman & Littlefield. 2012.
- Matsuura Akira 松浦章. *Qingdai neihe shuiyun shi yanjiu* 清代內河水運史研究 [A Study on Domestic River Transportation during the Qing]. Translated by Dong Ke 董科. Nanjing: Jiangsu renmin chuban she. 2010.
- Mazumdar, Sucheta. *Sugar and Society in China: Peasants, Technology, and the World Market*. Vol. 45. Harvard University Asia Center. 1998.
- McDermott, Joseph P. *The Making of a New Rural Order in South China: I. Village, Land, and Lineage in Huizhou, 900-1600*. New York: Cambridge University Press. 2014.

- Menzies, Nicholas K. *Forest and Land Management in Imperial China*. Studies on the Chinese Economy. New York: St. Martin's Press. 1994.
- Menzies, Nicholas K. "Forestry." In *Science and Civilisation in China*, by Joseph Needham, 541–740. Cambridge: Cambridge University Press. 1996.
- Menzies, Nicholas K. "Three Hundred Years of Taungya: A Sustainable System of Forestry in South China." *Human Ecology* 16, no. 4 (December 1988): 361–76.
- Miller, Ian Matthew. "Roots and Branches: Woodland Institutions in South China, 800-1600." Cambridge. Dissertation. Harvard University. 2015.
- Miyazawa Tomoyuki 宮澤知之. "Sodai no gajin" 宋代の牙人 [Brokers in the Song Dynasty]. *Toyoshi Kenkyu* 東洋史研究 39, no. 1 (1980): 1–34.
- Moll-Murata, Christine. "Chinese Guilds from the Seventeenth to the Twentieth Centuries: An Overview." *International Review of Social History* 53, no. SupplementS16 (2008): 213–47.
- Morse, Hosea B. *The Guilds of China*. Shanghai: Kelly & Wash Ltd. 1909.
- Moulder, Frances V. *Japan, China, and the Modern World Economy. Toward a Reinterpretation of East Asian Development Ca. 1600 to Ca. 1918*. Cambridge, UK: Cambridge University Press. 1979.
- Nanjing shi difang zhi bianzuan weiyuan hui 南京市地方志编纂委员会. *Nanjing wuzi zhi* 南京物资志. Zhongguo chengshi chuban she. 1993.
- Negishi Tadashi 根岸佶. *Chūgoku no girudo* 中國のギルド [Chinese Guilds]. Tōkyō: Nihon Hyōron sha. 1953.

———. *Shanghai no girudo* 上海のギルド [Guilds in Shanghai]. Tōkyō: Nihon Hyōronsha. 1951.

Ni Yuping 倪玉平. *Qingchao Jia Dao guanshui yanjiu* 清朝嘉道关税研究 [A Study on Domestic Customs Revenues during the Reigns of Emperors Jiaqing and Daoguang]. Beijing: Beijing shifan daxue chuban she. 2010.

North, Douglass C. *Institutions, Institutional Change and Economic Performance*. Cambridge: Cambridge university press. 1990.

North, Douglass C., John Joseph Wallis, and Barry R. Weingast. *Violence and Social Orders*. Cambridge and New York: Cambridge University Press. 2009.

Olson, Mancur. *The Logic of Collective Action: Public Goods and the Theory of Groups*. Cambridge: Harvard University Press. 1965.

Ostrom, Elinor. *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge, UK: Cambridge University Press. 1990.

Pei Xing, Qibin Zhang, and Patrick J. Baker. “Age and Radial Growth Pattern of Four Tree Species in a Subtropical Forest of China.” *Trees* 26, no. 2 (2012): 283–90.

Peng Zeyi 彭泽益, ed. *Zhongguo gongshang hanghui shiliao ji* 中國工商行會史料集 [Historical Sources for Commerical and Industrial Guilds in China]. Beijing: Zhonghua shu ju. 1995.

———. “Zhongguo hanghui shi yanjiu de jige wenti” 中国行会史研究的一个问题 [An Issue in the Studies on the History of Chinese Guilds]. *Lishi yanjiu* 历史研究, no. 6 (1988).

- Qi Meiqin 祁美琴. “Guanyu Qingdai queguan eshui de kaocha” 关于清代榷关额税的考察 [An Examination on the Revenues Quotas of the Qing Domestic Customs]. *Qingshi yanjiu* 清史研究, no. 2 (2004).
- Qian Nanjing guomin zhengfu sifa xingzheng bu 前南京國民政府司法行政部. *Minshi xiguan diaocha baogao lu* 民事習慣調查報告錄 [Collection of Reports of Custom Surveys on Civil Matters]. Beijing: Zhongguo zhengfa daxue chuban she. 2000.
- Rajan, S. Ravi. *Modernizing Nature: Forestry and Imperial Eco-Development 1800-1950*. Oxford Historical Monographs. Oxford : Oxford ; New York: Clarendon Press ; Oxford University Press. 2006.
- Rigen Wang 王日根, and Xue Pengzhi 薛鵬志, eds. “Huishang gongsuo zhengxin lu” 徽商公所徵信錄 (1909) [Records of the Guild of Huizhou Merchants]. In *Zhongguo huiguan zhi ziliao jicheng di yi ji* 中国会馆志资料集成第一辑, 10:173–288. Xiamen: Xiamen da xue chu ban she. 2013.
- Rosenthal, Jean-Laurent, and R. Bin. Wong. *Before and Beyond Divergence: The Politics of Economic Change in China and Europe*. Cambridge: Harvard University Press. 2011.
- Rowe, William. “Ming-Qing Guilds.” *Ming Qing Yanjiu*, 1992.
- Rowe, William T. *Hankow: Commerce and Society in a Chinese City, 1796-1889*. Stanford: Stanford University Press. 1984.
- Sands, Barbara, and Ramon H. Myers. “Economics and Macroregions: A Reply to Our Critics.” *The Journal of Asian Studies* 49, no. 2 (1990): 344–46.
- . “The Spatial Approach to Chinese History: A Test.” *The Journal of Asian Studies* 45, no. 4 (1986): 721–43.

- Shanghai bowu guan 上海博物馆, ed. *Shanghai beike ziliao xuanji* 上海碑刻资料选辑.
Shanghai: Remin chuban she. 1981.
- Shen Xuefeng 申学锋. “Qingdai caizheng shouru guimo yu jiegou bianhua shulun” 清代财政收入规模与结构变化述论 [Changes in the Scale and Structure of Qing Fiscal Income].
Beijing Shehui Kexue, no. 1 (2002): 84–90.
- Shi Ying 石莹. “Qingdai Hankou de zhumu shichang jiqi guimo fenxi” 清代汉口的竹木市场及其规模分析 [The Timber Market in Qing Hankou and an Analysis on Its Scale].
Zhongguo jingjishi yanjiu 中国经济史研究, no. 1 (2015): 108–19.
- Shiba Yoshinobu 斯波義信. *Commerce and Society in Sung China*. Translated by Mark Elvin.
Ann Arbor: University of Michigan Press. 1970.
- . *Sōdai shōgyō shi kenkyū* 宋代商業史研究 [Study on the Song Commercial History].
Tokyo: Kazama shobō. 1968.
- Shiga Shuzo 滋賀秀三. “Qingdai susong zhidu zhi minshi fayuan de gaikuo xing kaocha: qing, li, fa” 清代诉讼制度之民事法源的概括性考察——情、理、法 [General Examination on the Civil Legal Foundations of Qing Jurisprudence: Emotion, Reason, and Law]. In *Ming Qing shiqi de minshi shenpan yu minjian qiye* 明清时期的民事审判与民间契约, edited by Wang Yaxin 王亚新 and Liang Zhiping 梁治平, 19–53. Beijing: Falü chuban she. 1998.
- . “Shindai no minji saiban ni tsuite” 清代の民事裁判について [On Civil Adjudication in Qing China], no. 12 (1996): 226–52.

- Sivaramakrishnan, K. *Modern Forests: Statemaking and Environmental Change in Colonial Eastern India*. Stanford: Stanford University Press. 1999.
- Skinner, G. William. "Mobility Strategies in Late Imperial China: A Regional Systems Analysis." In *Regional Analysis*, edited by Carol A. Smith, 1:327–64. New York: Academic Press. 1976.
- . "Regional Urbanization in Nineteenth-Century China." In *The City in Late Imperial China*, edited by G. William Skinner, 211–49. Stanford: Stanford University Press. 1977.
- Songster, E. Elena. "Cultivating the Nation in Fujian's Forests: Forest Policies and Afforestation Efforts in China, 1911-1937." *Environmental History* 8, no. 3 (2003): 452–73.
- Stephens, Thomas B. *Order and Discipline in China: The Shanghai Mixed Court, 1911-27*. Seattle: University of Washington Press. 1992.
- Sun Jin 孫錦. *Yongzheng Kaihua xianzhi* 雍正開化縣志 [Gazetteer of Kaihua County Compiled in the Yongzheng Era], 1735.
- Sutton, Donald S. "Violence and Ethnicity on a Qing Colonial Frontier: Customary and Statutory Law in the Eighteenth-Century Miao Pale." *Modern Asian Studies* 37, no. 01 (February 2003). http://www.journals.cambridge.org/abstract_S0026749X03001021.
- Suzhou lishi bowu guan 苏州历史博物馆. *Ming Qing Suzhou gongshang ye beike ji* 明清蘇州工商業碑刻集 [Stele Records from Commerce and Industry in Ming-Qing Suzhou]. Jiangsu: Jiangsu renmin chubanshe. 1981.
- Szonyi, Michael. *Practicing Kinship: Lineage and Descent in Late Imperial China*. Stanford: Stanford University Press. 2002.

- Takeuchi Fusaji 武内房司. “Narukami to nakan no aida —— Shindai Kishū Myaozoku ringyō keiyaku bunsho ni miru nae zoku no shūzoku to funsō shori” 鳴神と鳴官のあいだ—清代貴州苗族林業契約文書に見る苗族の習俗と紛争処理 [Between Divine Judgment and Lawsuit in Court: Dispute Resolution among the Miao People as Seen in the Forestry Contracts in Qing Guizhou]. In *Kishū Myaozoku ringyō keiyaku monjo kaihen (1736-1950 nen)* 貴州苗族林業契約文書匯編 (1736-1950 年), edited by Christian Daniels, Yang Yougeng 楊有賡, and Takeuchi Fusaji 武内房司, 3:83–120. Tokyo: The Institute for the Study of the Languages and Cultures of Asia and Africa, Tokyo University of Foreign Languages. 2003.
- Tan Qixiang 譚其驤. “Zhongguo neidi yimin shi Hunan pian” 中國內地移民史——湖南篇 [Internal Migration in China: Hunan]. *shixue nianbao* 史學年報, no. 4 (1932).
- Tang Bingnan 湯丙南. “Hankou ce mucai zhi fa” 漢口測木材之法 [The Measurement of Timber in Hankou]. *Hubei sheng nonghui nongbao* 湖北省農會農報 2, no. 9 (1921).
- Totman, Conrad D. *The Green Archipelago: Forestry in Preindustrial Japan*. Berkeley: University of California Press. 1989.
- Twitchett, Denis Crispin. “The T’ang Market System.” *Asia Major* 12, no. 2 (1966): 202–48.
- Vermeer, Eduard B. “Population and Ecology along the Frontier in Qing China.” In *Sediments of Time: Environment and Society in Chinese History*, edited by Mark Elvin and Ts’ui-jung Liu, 235–79. New York: Cambridge University Press. 1998.
- von Glahn, Richard. *Fountain of Fortune: Money and Monetary Policy in China, 1000-1700*. Berkeley: University of California Press. 1996.

- . *The Economic History of China: From Antiquity to the Nineteenth Century*. Cambridge, United Kingdom ; New York: Cambridge University Press. 2016.
- Wang Boxin 王伯心. “Nanjing shi mucai maoyi jijia fangfa gaiyao” 南京市木材貿易計價方法概要 [Summary of the Method of Measurement and Pricing in the Timber Trade of Nanjing]. *Linye tongxun* 林業通訊, no. 1 (1947).
- Wang Rigen 王日根, and Xue Pengzhi 薛鵬志, eds. *Zhongguo huiguan zhi ziliao jicheng* 中国会馆志资料集成 [Collection of the Records of Chinese Guilds]. 1st ed. 10 vols. Xiamen: Xiamen daxue chuban she. 2013.
- Wang Yanxi 王延熙, and Wang Shumin 王樹敏, eds. *Huang Qing Dao-Xian-Tong-Guang zouyi* 皇清道咸同光奏議 [Qing Memorials during the Reigns of Daoguang, Xianfeng, Tongzhi, and Guangxu]. Jiujing Zhai 1903 lithographic edition. 64 vols. Taipei: Wenhai chuban she. 1969.
- Wang Zhenzhong 王振忠. “Taiping Tianguo qianhou huishang zai jiangxi de muye jingying: xin faxian de ‘Xihe Muye Zuanyao’” 太平天国前后徽商在江西的木业经营---新发现的《西河木业纂要》 [Huizhou Merchants’ Timber Business in Jiangxi around the Taiping Rebellion: A Study Based on the Newly found “Xi He Muye Zuanyao”]. *lishi dili* 历史地理 28 (2013): 144–65.
- Watson, James L. “Anthropological Overview: The Development of Chinese Descent Groups.” In *Kinship Organization in Late Imperial China, 1000-1940*, edited by Patricia Buckley Ebrey and James L. Watson, 274–92. Berkeley and Los Angeles: University of California Press. 1986.

- Weinstein, Jodi L. *Empire and Identity in Guizhou: Local Resistance to Qing Expansion*. Studies on Ethnic Groups in China. Seattle: University of Washington Press. 2014.
- Weng Lixin 翁禮馨. “Fujian zhi mucai” 福建之木材 [Timber of Fujian]. 福建省政府秘書處統計室. 1940.
- Williamson, Oliver E. “Calculativeness, Trust, and Economic Organization.” *Journal of Law and Economics* 36, no. 1 (1993): 453–86.
- Wong, R. Bin. “Formal and Informal Mechanisms of Rule and Economic Development: The Qing Empire in Comparative Perspective.” *Journal of Early Modern History* 5, no. 4 (2002): 387–408.
- . “Taxation and Good Governance in China, 1500-1914.” In *The Rise of Fiscal States: A Global History 1500-1914*, edited by Bartolome Yun-Casalilla, Patrick K. O’Brien, and Francisco Comin Comin, 353–77. Cambridge: Cambridge University Press. 2012.
- Worster, Donald. *American Environmentalism; the Formative Period, 1860-1915*. New York: Wiley. 1973.
- Wu Chuanjun 吳傳鈞. “Nanjing Shangxin He de mushi: Changjiang zhongxia you mucai jisan de zhongxin” 南京上新河的木市——長江中下游木材集散的 center [The Timber Market at Nanjing Shangxin He: The Distributing Center of Timber for the Middle and Lower Yangzi Region]. *dili 地理* 6, no. 2–4 (1949): 37–44.
- Wu E 吳鶚, and Wang Zhengyuan 汪正元. *Guangxu Wuyuan xianzhi* 光緒婺源縣志 [Gazetteer of Wuyuan County Compiled in the Guangxu Era], 1880.
- Wu Zhenyu 吳振棫. *Qian yu 黔語* [Speaking of Guizhou], 1887.

- Xu Chengyao 許承堯. “She fengsu lijiao kao” 歙风俗礼教考 [Examination on the Customs and Rituals in She County]. In *She shi xiantan* 歙事闲谈, 1937.
- Xu Guangqi 徐光啟. *Nongzheng quanshu* 農政全書 [Complete Treatise on Agricultural Administration], 1639.
- Xu Tan 许檀. “Qingdai qianqi de Jiujiang Guan jiqi shangpin liutong” 清代前期的九江关及其商品流通 [The Jiujiang Custom and the Circulation of Commodities in the Early Qing]. *Lishi dang'an* 历史档案, no. 1 (1999): 86–91.
- Xue Yunsheng 薛允升. *Du li cunyi* 讀律存疑 (1905) [Notes from Reading the Qing Code]. Punctuated and edited by Huang Tshing-Chia 黃靜嘉. Taipei: Chinese materials and research aids service center. 1970.
- Yang Xiangjun 杨湘钧. *Diguo zhi bian yu guatou zhi lian: Shanghai Huishen Gongxie quanli guanxi bianqian yanjiu* 帝国之鞭与寡头之链——上海会审公廨权力关系变迁研究 [Whip of the Empire and Chains of Oligopolies: Changing Power Relations in the Shanghai Mixed Courts]. Beijing: Beijing daxue chuban she. 2006.
- Yang Yougeng 杨有庚. “Qingdai Qian dongnan Qingshui Jiang liuyu muhang chutan” 清代黔东南清水江流域木行初探 [A Preliminary Examination on the Timber Brokerages in the Qingshui River Valley of Southeastern Guizhou in Qing Dynasty]. *Guizhou shehui kexue* 贵州社会科学, no. 8 (1988): 48–53.
- Yin Qing 蔭青. “Jiangxi zhi mucai ye” 江西之木材業 [The Timber Industry in Jiangxi]. *Jingji xun kan* 經濟旬刊 4, no. 7 (1935).

- Ying An 英安. “Caiyun huangmu andu” 採運皇木案牘 [Records from the Procurement of Imperial Timber], 1781. National Science Library at the Chinese Academy of Sciences.
- Yu Wei 俞渭. *Guangxu Liping fu zhi* 光緒黎平府志 [Gazetteer of Liping Prefecture Compiled in the Guangxu Era]. 8 vols., 1880.
- Yu Yimi 余誼密. *Minguo Wuhu xianzhi* 民國蕪湖縣志 [Gazetteer of Wuhu Prefecture Compiled in the Republican Era], 1919.
- Zelin, Madeleine. “Chinese Business Practice in the Late Imperial Period.” *Enterprise and Society*, 2013.
- . *The Magistrate’s Tael: Rationalizing Fiscal Reform in Eighteenth-Century Ch`ing China*. Berkeley: University of California Press. 1984.
- . *The Merchants of Zigong: Industrial Entrepreneurship in Early Modern China*. New York: Columbia University Press. 2005.
- Zelin, Madeleine, Jonathan K. Ocko, and Robert Gardella. *Contract and Property in Early Modern China*. Stanford: Stanford University Press. 2004.
- Zhang Haipeng 张海鹏, and Wang Tingyuan 王廷元, eds. *Ming Qing Huishang ziliao xuanbian* 明清徽商资料选编 [Selected Materials on Ming-Qing Huizhou Merchants]. Hefei: Huangshan Shushe. 1985.
- Zhang, Meng. “Timber Trade Organizations in Shanghai: Institutions, Enforcement, and Dispute Resolution, 1880-1930.” *The International Journal of Asian Studies* 14, no. 2 (2017): 1–28.
- Zhang Xinmin 张新民, ed. *Tianzhu wenshu di yi ji* 天柱文書第一輯 [The First Collation of Tianzhu Documents]. Nanjing: Jiangsu renmin chuban she. 2014.

- Zhang Xueyan 張學顏. *Wanli kuaiji lu* 萬曆會計錄 [National Accounting during the Wanli Era]. 44 vols., 1578.
- Zhang Yingqiang 张应强. “Cong Guazhi ‘Yishi Yongzun’ shike kan Qingdai zhonghou qi de Qingshui Jiang mucai maoyi” 从卦治《奕世永遵》石刻看清代中后期的清水江木材贸易 [Looking at Late-Qing Timber Trade along the Qingshui River from the “Yishi Yongzun” stele Record Found in Guazhi]. *Zhongguo shehui jingji shi yanjiu* 中国社会经济史研究, no. 3 (2002).
- . *Mucai zhi liudong: Qingdai Qingshui Jiang xiayou diqu de shichang, quanli, yu shehui* 木材之流动: 清代清水江下游地区的市场、权力与社会 [The Movement of Timber: Market, Power, and Society in the Lower Qingshui Area during the Qing Dynasty]. Beijing: Sanlian shudian. 2006.
- . “Qingshui Jiang wenshu de shouji, zhengli, yu yanjiu” 清水江文书的收集、整理与研究 [The Collection, Collation, and Study of Qingshui River Documents]. In *Qingshui Jiang wenshu di yi ji* 清水江文书 第一辑, edited by Zhang Yingqiang 张应强 and Wang Zongxun 王宗勋, 1:1–7. Guilin: Guangxi shifan daxue chuban she. 2007.
- . *Qingshui Jiang wenshu di san ji* 清水江文书第三辑 [The Third Collation of Qingshui River Documents]. Guilin: Guangxi shifan daxue chuban she. 2011.
- Zhang Yingqiang 张应强, and Hu Teng 胡腾. *Xiangtu Zhongguo Jinping* 乡土中国 锦屏 [Rural China: Jinping]. Shanghai: Sanlian shudian. 2004.

- Zhang Yingqiang 张应强, and Wang Zongxun 王宗勋. *Qingshui Jiang wenshu di er ji* 清水江文书第二辑 [The Second Collation of Qingshui River Documents]. Guilin: Guangxi shifan daxue chubanshe. 2009.
- . *Qingshui Jiang wenshu di yi ji* 清水江文书第一辑 [The First Collation of Qingshui River Documents]. 13 vols. Guilin: Guangxi shifan daxue chubanshe. 2007.
- Zhongguo diyi lishi dang'an guan 中国第一历史档案馆, ed. *Qingdai qianqi Miao min qiye dang'an shiliao huibian* 清代前期苗民起义档案史料汇编 [Collected Archival Materials on Miao Revolts in Early Qing]. Beijing: Guangming ribao chubanshe. 1987.
- Zhongguo shehui kexue yuan lishi yanjiu suo 中国社会科学院历史研究所. *Ming Qing Huizhou shehui jingji ziliao congbian di er ji: Zhongguo shehui kexue yuan lishi yanjiu suo cang Song Yuan Ming sandai Huizhou tudi maimai wenqi jiyao* 明清徽州社会经济资料丛编第二集: 中国社会科学院历史研究所藏宋元明三代徽州土地买卖文契辑要 [The Second Collation of Social and Economic Materials from Ming-Qing Huizhou]. Beijing: Zhongguo shehui kexue chubanshe. 1988.
- Zhou Lin 周琳. “bianshang yihuo haishang: cong zhongjie maoyi jiufen kan Qianlong zhi Daoguang shiqi Chongqing de guanya zhi” 「便商」抑或「害商」——從仲介貿易糾紛看乾隆至道光時期重慶的「官牙制」 [Promoting Trade or Suppressing It? Examine the Official Brokerage System in Chongqing through Intermediation Disputes during the Period from the Qianlong to Daoguang Era]. *Xin shixue* 新史學 24, no. 1 (2013): 59–106.
- Zhu Rong 朱榕. “Cong tongye gongsuo dao tongye gonghui: 1858 nian zhi 1937 nian shanghai muye tongye zhuzhi de jindai hua” 从同业公所到同业公会——1858年至1937年上海

木业同业组织的近代化 [From Gongsuo to Gonghui: The Modernization of Timber Trade Organizations in Shanghai from 1858 to 1937]. In *Dang'an li de Shanghai* 档案里的上海, edited by Shanghai shi dang'an guan 上海市档案馆. Shanghai: Shanghai cishu chuban she. 2006.

“Zhejiang zhi mucai” 浙江之木材. *Zhong wai jingji zhoukan* 中外經濟周刊, no. 219 (1927).