The Recognition of Financial Experts in an Early Fiscal State: A Study on the Financial Officials of the Sung Empire, including a Quantitative Analysis

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Abstract

Existing literature establishes that the professional conduct of modern Chinese accounting professionals differs fundamentally from that of their Western counterparts. While the current authoritarian institutions may offer an explanation for the difference, this thesis traces the origins of such institutions to the Sung Empire to discover more deep-rooted reasons for the difference.

Unlike Western civilisations, which developed the rule of law and governmental accountability before establishing mature fiscal states, the Sung Empire constructed a fiscal state in the absence of democracy, accountable governance, or a broadly literate population. Using geopolitical analysis grounded in Selectorate Theory, this study demonstrates that the persistent threat from nomadic polities compelled the Sung Empire to develop a fiscal state under emergency conditions. This necessity drove the empire to proactively recruit and incentivise its limited literate population, transforming them into financial experts essential for state administration. Drawing on archival sources, this study shows that these financial experts played a crucial role in key functions, including tax collection, centralised treasury management, payroll administration for the standing army, and bookkeeping and auditing to support fiscal operations.

To evaluate the effectiveness of the empire's strategies in incentivising financial experts, this thesis employs interactionism, integrating ERG (Existence, Relatedness, Growth) theory to construct a framework for assessing their professional recognition. Quantitative methods and network analysis are applied to data from the China Biographical Database to measure the level of recognition these experts received. The findings indicate that financial experts were not only better remunerated but also more socially connected than general officials. Additionally, they were systematically favoured in candidate selection for key financial positions. Overall, the results suggest that financial experts in the Sung Empire occupied a status analogous to modern professionals, falling just short of official recognition, as predicted by Selectorate Theory.

These findings highlight the Sung Empire's success in mobilising financial talent to sustain a fiscal state, ultimately shaping the asymmetric power dynamic between emperors and their supporters. This absolutist structure compelled the literati to adjust their ideological framework, fostering the development of authoritarian institutions that later influenced the cultural context underpinning the behaviour of modern Chinese professionals.

Table of Contents

Abstract I
Table of Contents II
List of Figures IV
List of Tables VI
Attestation of Authorship IX
Acknowledgement X
Dedication XI
Chapter 1. Introduction 1
- 1.1. Introduction 1
- 1.2. Existing Research 3
- 1.3. Research Question and Research Design 4
- 1.4. Organisation. 7
- 1.5. Referencing and Terminology 9

Chapter 2. A Generic Framework for Researching Professions 11
- 2.1. Introduction 11
- 2.2. Existing Paradigms of the Studies on Professions 12
- 2.3. The Deficiency of the Paradigms: Accounting as an Example 19
- 2.4. A Generic Research Design for Studying Professions 39

Chapter 3. Understanding the Financial Experts of the Sung Empire in World History: A Geopolitical Analysis 46
- 3.1. Introduction. 46
- 3.2. Background and Theory 47
- 3.3. The Geopolitical Structure 51
- 3.4. The Geopolitical Code 72
- 3.5. The Executors of the Geopolitical Codes: Financial Experts as a Prototype Profession 92

Chapter 4. The Establishment of the Government and the Financial Works 95
- 4.1. Introduction 95
- 4.2. The Central Government 95
- 4.3. The Establishments Outside of the Capital 113
- 4.4. Tasks of the Financial Officials 121

Chapter 5. The Mechanism to Manage Financial Experts. 128
- 5.1. Introduction 128
- 5.2. Human Resource Authorities 128
- 5.3. Recruitment 131
- 5.4. Experience System and Appointment. 139
- 5.5. Remuneration and Reward 149
- 5.6. A Summary of Implications for the Following Chapters. 155

Chapter 6. The Social Acceptance of Financial Officials: A Study via the Lens of Network Analysis 156
- 6.1. Introduction 156
- 6.2. Methodology 156
- 6.3. Data Processing and Descriptive Statistics 157
- 6.4. Egocentric Method and Results 176
- 6.5. Whole Network Methods 181
- 6.6. Network Centrality 190
- 6.7. Summary 200

Chapter 7. The Preference for Expertise for Financial Positions. 202
- 7.1. Introduction 202
- 7.2. Background 203
- 7.3. Research Design 206
- 7.4. Data Source and Descriptive Statistics 210

7.5. Findings ... 217
7.6. Robustness Tests ... 220
7.7. Summary ... 222
Chapter 8. The Economic Rewards of Financial Officials. ... 223
8.1. Introduction ... 223
8.2. Hypothesis ... 223
8.3. Research Design ... 224
8.4. Descriptive Statistics ... 226
8.5. Result ... 231
8.6. Robustness Tests ... 233
8.7. Summary ... 240
Chapter 9. Conclusion, Contributions, and Limitations. ... 241
9.1. Conclusion ... 241
9.2. Contributions. ... 242
9.3. Limitations and Future Research Opportunities. ... 247
References ... 250
English ... 250
Chinese ... 268
Ancient Chinese ... 272
Japanese ... 273
Glossary ... 274
Appendix A. Deciding Salary Rank of the Officials ... 290
Appendix B. Major Polities in Continental East Asia ... 300
Appendix C. A Simplified Timeline of the Five Dynasties and Ten Kingdoms ... 303
Appendix D. Major Affairs of the Sung Empire ... 306
Appendix E. Model-building Considerations ... 308
Appendix F. Secretarial Titles in Fiscal-related Departments ... 311
Appendix G. Reconciliation between Sample Sizes ... 312
Appendix H. Tests on Different Eras ... 316

List of Figures

Figure 1 *Institutional Link between History and Present* 2
Figure 2 *Interactionism and Measurement.* 6
Figure 3 *The Structure of this Thesis.* 9
Figure 4 *An Illustrative Figure for Attributes of Professions.* 14
Figure 5 *Interactionism to Generalisable Measurement.* 43
Figure 6 *The Three Scopes of People in Selectorate Theory.* 51
Figure 7 *The Evolution of the Political Order of Nomadic People.* 54
Figure 8 *The Geopolitical Codes of the Sung Empire* 73
Figure 9 *The Political Structure of the Sung Empire* 86
Figure 10 *A Brief Illustration of the Population Structure According to the Political Status.* 92
Figure 11 *The Eras Covered by Section 2* 97
Figure 12 The Ideal Government in the Early Han Empire 99
Figure 13 *A Brief Illustration of The System of the T'ang Empire* 101
Figure 14 *The Structure of the Central Government of the Sung Empire before the Yuanfeng Restructure* 102
Figure 15 *Organisation Chart of the Fiscal Bureau in the Early Sung* 105
Figure 16 *Structure of the Central Government at the Capital of the Sung Empire after the Yuanfeng Restructure* 112
Figure 17 *The Power Structure of the Sung Empire, including Regional Governments.* 115
Figure 18 *The Remittance Before Yuanfeng Restructure.* 116
Figure 19 *The Remittance After Yuanfeng Restructure.* 117
Figure 20 *Remittance of Traditional Revenues (The Imperial Treasury)* 122
Figure 21 *Remittance of Revenue from Reform (The Cabinet's Treasury)* 123
Figure 22 *The Structure of the Imperial Examination* 132
Figure 23 *The Structure of the Public School System.* 137
Figure 24 *Recorded Officials by Entry Pathways.* 162
Figure 25 *Male Records by Index Year and Entry Pathway.* 163
Figure 26 *Number of Officials by Recorded Appointments* 164
Figure 27 *Appointments Recorded in CBDB by Type.* 166
Figure 28 *Officials by Personal Highest Salary Rank (Pre-Yuanfeng)* 176
Figure 29 *Officials by Personal Highest Salary Rank (Post-Yuanfeng)* 176
Figure 30 *Proportion of Officials by Number of Associates Recorded in CBDB.* ... 179

Figure 31 *Model Structure of the SEM Analysis of Network Centrality: Officials, Before Yuanfeng Restructuring* 198
Figure 32 *Model Structure of the SEM Analysis of Network Centrality: Officials, After Yuanfeng Restructuring* 200
Figure 33 *Model Structure for SEM Analysis of Salary Rank: Officials Before Yuanfeng Restructuring* 237
Figure 34 *Model Structure for SEM Analysis of Salary Rank: Officials After Yuanfeng Restructuring* 239
Figure 35 *Institutional Influence of the Financial Experts* 244

List of Tables

Table 1 *The Streams of Research on Professions* 18
Table 2 *Accounting Practitioners in Some Countries.*.. 34
Table 3 *Management Accounting Bodies in the UK, the US, Canada, Australia, and New Zealand* 38
Table 4 *The Coevolution in Political Order by Nomadic and Sedentary Peoples.*.... 59
Table 5 *The Endings of T'ang and Five Dynasties* 66
Table 6 *Possible Choices for National Defence.* 76
Table 7 *Human Resource Authorities and Their Purviews* 131
Table 8 *Examples of Initial Appointments for Hsüan-jen by Entry Pathway*........... 140
Table 9 *A Brief Illustration of the Experience System*.. 144
Table 10 *Position-Based Payment for Senior and Financial Positions.* 153
Table 11 *The Number of Persons of the Sung Empire in CBDB by Index Year.*.... 159
Table 12 *Recorded Officials of the Sung Empire by Entry Pathways.* 161
Table 13 *Recorded Officials of the Sung Empire by Index Year and Entry Pathway* 162
Table 14 *Descriptive Statistics of the Number of Appointments by Each Official*... 164
Table 15 *Descriptive Statistics of the Number of Incumbents for Each Job Position* 165
Table 16 *Identification Process of Ambiguities in Secretary Titles*......................... 168
Table 17 *The Number of Recorded Appointments by Financial or Non-financial Functions.* 169
Table 18 *The Number of Appointments of the Known Year by Semi-century*........ 171
Table 19 *The Number of Persons by the Number of Financial Positions Taken.* ... 172
Table 20 *The Number of Financial Officials per Entry Pathway*............................. 173
Table 21 *The Number of Financial Officials and Non-Financial Officials by Entry Pathway and Types*.. 174
Table 22 *The Number of Officials by Recorded Number of Kins.* 178
Table 23 *The Number of Officials by Recorded Number of Associations.* 178
Table 24 *T-test of Number of Associations.* 180
Table 25 *T-test of Number of Kins.* 180
Table 26 *T-test of Number of Associations and Kin.*.. 180
Table 27 *The Number of Persons in a K-Core by Functions, Presented by the Value of K.* 184
Table 28 *Network Density Comparison for the Whole Sung Empire*...................... 186
Table 29 *Network Density Comparison for Both Dynasties* 187

Table 30 *Top Modularity Communities for Both Eras of the Sung Empire.* 189
Table 31 *Comparison of Normalised Eigenvector Centrality between Financial and Non-financial Officials Using t-Tests, Stratified by Pathway of Entry* 191
Table 32 *Descriptive Statistics for Pre-Yuanfeng Samples.* 194
Table 33 *Spearman Correlation Matrix of Key Variables for Pre-Yuanfeng Samples.* 194
Table 34 *Descriptive Statistics for Post-Yuanfeng Samples.* 195
Table 35 *Spearman Correlation Matrix of Key Variables for Post-Yuanfeng Samples.* 195
Table 36 *Regression Analysis of Network Centrality by Period: Officials Before vs. After Yuanfeng Restructuring* 196
Table 37 *Path Coefficients from SEM Analysis of Network Centrality: Officials, Before Yuanfeng Restructuring* 197
Table 38 *Path Coefficients from SEM Analysis of Network Centrality: Officials, After Yuanfeng Restructuring* 199
Table 39 *Three Scenarios Regarding the Appointment Policy for Senior Financial Positions.* 205
Table 40 *The Leadership of Fiscal Functions* 208
Table 41 *The Number of Recorded Appointments of Senior Financial Officials by Function.* 211
Table 42 *The Number of Senior Officials by the Number of Junior Appointments* . 212
Table 43 *Comparing the Number of Appointments between the Heads of Financial and Administrative Functions.* 212
Table 44 *The Number of Senior Financial Officials by Rank, Branch, and Past Experiences (Pre-Yuanfeng Bureaus)* 213
Table 45 *The Number of Senior Financial Officials by Rank, Branch, and Past Experiences (Post-Yuanfeng Bureaus)* 215
Table 46 *The Number of Senior Financial Officials by Rank, Branch, and Past Experiences (Bureaus from Hsi-ning Reform)* 216
Table 47 *The Number of Senior Financial Officials by Rank, Experience, and Eras.* 217
Table 48 *Comparison of Financial Appointment Counts Between Senior Financial and Other Officials Using t-Tests* 218
Table 49 *Comparison of Financial Appointment Counts Between Senior Financial (with extended definition) and Other Officials Using t-Tests* 218
Table 50 *Descriptive Statistics of Logistic Regression* 219
Table 51 *Spearman Correlation Matrix of Key Variables for all Appointments.* 220

Table 52 *Logistic Regression Analysis of Appointments* 220
Table 53 *Summary of Robustness Tests with Logistic Regression Analysis of Appointments, Changing the Definition of Senior Financial Positions and Adding Controlling Variables* 221
Table 54 *Descriptive Statistics for Pre-Yuanfeng Restructuring Data (excluding Samples without Network and Age Data)* 227
Table 55 *Descriptive Statistics for Post-Yuanfeng Restructuring Data (excluding Samples without Network and Age Data)* 227
Table 56 *Spearman Correlation Matrix of Key Variables for Pre-Yuanfeng Restructuring Samples.* 229
Table 57 *Spearman Correlation Matrix of Key Variables for Post-Yuanfeng Restructuring Samples.* 230
Table 58 *Regression Analysis of Salary Rank by Period: Before vs. After Yuanfeng Restructuring, with Financial Expertise Proxied by Financial Appointments* 231
Table 59 *Regression Analysis of Salary Rank by Period: Before vs. After Yuanfeng Restructuring, with Financial Expertise Proxied by Seniority in Financial Functions* 232
Table 60 *Summary of Robustness Tests with Regression Analysis of Salary Rank, with Different Control Variables.* 234
Table 61 *Path Coefficients from SEM Analysis of Salary Rank: Officials Before Yuanfeng Restructuring*.. 236
Table 62 *Path Coefficients from SEM Analysis of Salary Rank: Officials Before Yuanfeng Restructuring*.. 238
Table 63 *Summary of Additional Tests with Regression Analysis of Salary Rank, Treating Low-Rank Comptrollers as Financial Officials.*... 240

Attestation of Authorship

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor used artificial intelligence tools or generative artificial intelligence tools (unless it is clearly stated, and referenced, along with the purpose of use), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.

25 February 2025

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Dedication

To Monica Li.

Chapter 1. Introduction

1.1. Introduction

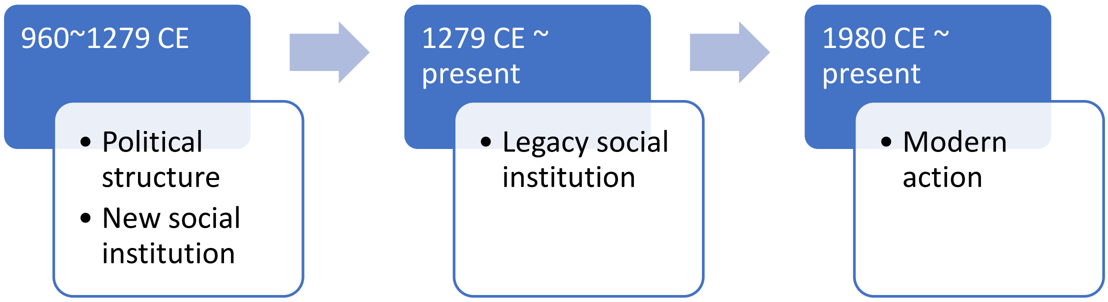
The modern Chinese accounting profession was established to leverage Western expertise to support economic development in China (Bing, 1998; Tang, 2000). However, the practices of Chinese accountants diverge significantly from those of their Western counterparts, particularly in their interactions with the government (Tang, 2000; Yang et al., 2018; Yee, 2012). Since social norms and institutional frameworks deeply influence professional practices (Ajzen, 1991; Bing, 1998), understanding the historical origins of modern Chinese social institutions is vital. While Chinese civilisation spans several millennia, the Sung Empire (960–1279 CE) is widely regarded as a turning point in the transition from ancient governance structures to a modern fiscal state (Miyakawa, 1955; 刘光临, & 关, 2021). Examining this period is crucial for understanding how the foundations of modern Chinese institutions, particularly the distinct form of Eastern absolutism, emerged.

This thesis focuses on financial experts, as they played a central role in the development of modern fiscal states, particularly in the establishment of advanced tax systems (Carr-Saunders & Wilson, 1933; Zeff, 2003). In Western history, fiscal modernisation was often intertwined with the creation of representative tax bargaining institutions, which contributed to the rise of modern democracy (Bates & Lien, 1985). In contrast, the Sung Empire achieved a remarkable feat: despite the absence of democracy, the rule of law, or widespread literacy, it successfully centralised fiscal power and professionalised its royal army in a financially sustainable manner (Liu, 2015).

This raises a crucial question: How did the Sung Empire mobilise the human resources necessary to administer its fiscal state, including efficient tax collection, the management of paper currency, and payroll systems for a large standing army? Historical records suggest that the Sung government relied on a cadre of financial experts to manage these complex responsibilities (Hartwell, 1971a). However, the status and nature of these financial experts remain contested. One view posits that they were generalist bureaucrats who happened to occupy financial roles (周藤, 1966), while another suggests they constituted a specialised professional group with distinct expertise and unique social status within the bureaucratic hierarchy (Hartwell, 1971a). This unresolved debate underscores the need for empirical research to clarify their roles and contributions.

Thus, this thesis investigates how financial experts were utilised in the Sung Empire, particularly emphasising the distinction between financial experts and generalist bureaucrats. By employing quantitative methods and network analysis, this research provides new insights into historical records that have not yet been rigorously evaluated using modern methodologies.[1] By examining the strategies employed by the Sung government to manage its financial experts, this thesis offers valuable insights into the early modernisation of Chinese civilisation and the distinctive evolution of its social institutions, which ultimately diverged from Western models. The geopolitical pressures faced by the Sung Empire necessitated the early adoption of fiscal state mechanisms before the rule of law principle had the opportunity to develop organically or spread to the Eastern world. This, in turn, led to the emergence of an absolutist institutional framework, which became a lasting legacy, continuing to shape various aspects of modern society (**Figure 1**).

Figure 1
Institutional Link between History and Present



Beyond the aforementioned contributions, this thesis also serves as a demonstration of how generic political theories can be effectively applied to the study of East Asian history. While the necessity of financial experts was evident, Selectorate Theory suggests that granting them a monopoly over financial functions would have been contrary to the interests of the emperors. Consequently, a strategic compromise—acknowledging the value of expertise while simultaneously employing laypersons in financial administration—aligned with imperial interests, a conclusion supported by the findings of this study.

Furthermore, by examining the coevolution of sedentary and nomadic polities, this thesis positions the Sung Empire within the broader context of world history. Its early modernisation should not be viewed as an isolated anomaly but rather as part of the natural developmental trajectory of Eurasian polities.

[1] Traditional history studies usually focus on archival research.

The remaining parts of this chapter are organised in the following manner. Section 2 provides a background for the research reported in this thesis in relation to the extant literature on the origins and development of the accounting profession. Section 3 discusses the research design of the thesis. Section 4 introduces the organisation of this thesis. The final section discusses referencing and the usage of terminology. This last step is needed because the thesis relies on English language and Chinese language literature and unique sources of data.

1.2. Existing Research

The origins and development of the accounting profession vary significantly across regions, influenced by social class and existing professions.[2] A pivotal moment occurred in 1854 when Scottish receivers established the title "chartered accountants" to protect their domain from the legal profession (Lee, 1995; Macdonald, 1984). This precedent inspired the formation of accounting bodies worldwide. Practitioners in England, Canada, Victoria, and France organised autonomous bodies to safeguard their status (Carnegie & Edwards, 2001; Carr-Saunders & Wilson, 1933; Chua & Poullaos, 1993; Ramirez, 2001; Richardson, 2020). Conversely, in New York, practitioners collaborated with the state to create a licensing system (Zeff, 1988), while governments in Germany and New Zealand directly controlled licensing (Johnson & Caygill, 1971). In China, studies initially focused on bookkeeping methods (郭 & 张美红, 1993) before investigating the first and second accounting professions (Yee, 2001; 林, 2006).

Scientific studies of the Sung Empire began as part of Sinology (de Pee, 2012). Early research confirmed that officials of the Sung Empire were members of an upper-middle class characterised by wealth, connections, and Confucian training (Kracke, 1947, 1953). Although Confucianism is not inherently anti-science, officials prioritised Confucian dogma over scientific pursuits (Liu, 1959). Contrary to the stereotype of Confucian harmony (Li, 2006), these officials were pragmatic, realistic (Standen, 2007), and strategically militaristic (Lorge, 2017b). From an institutional perspective, while Confucian ideology distanced officials from financial skills, these skills were valued when aligned with geopolitical priorities.

The Sung Empire relied on non-agricultural taxes, such as wine, tea, and trade taxes, primarily to finance its military (贾大泉, 1981, 1983; 黎, 1995; 章, 2011; 汪, 1995). Its

[2] Traditional British professions usually emerged from the middle class and had close relationships with existing professions (Carr-Saunders & Wilson, 1933).

sophisticated treasury system included paper money as a critical financial tool (梅原, 1971; 管 & 钱, 2016). Officials managed revenue collection, bookkeeping (方, 1991, 2004, 2007), expenditure oversight (張, 2018), auditing (方, 2015; 许, 2019), and reporting (陈扬, 2012). While Sudō (周藤, 1966) argued that fiscal leadership was often held by laypersons, Hartwell (1971a) identified financial officials as a distinct group of experts.

1.3. Research Question and Research Design

1.3.1. Research Question

While Hartwell (1971a) suggested that financial experts were a distinct group of practitioners, Sudō (周藤, 1966) found that the head of the fiscal branch was staffed by laypersons such as generals and ordinary bureaucrats. The two seemingly contradictory opinions would explain the development of the Sung Empire in highly different ways. Since the Sung Empire converted itself into a fiscal state, it should have had sufficient financial expertise to operate the state. Otherwise, the bureaucratic inefficiency should have made the fiscal state impossible. This thesis seeks to resolve these inconsistencies by applying quantitative methods to answer the following question:

> *RQ: Were financial experts treated differently from other bureaucrats in the Sung Empire?*

1.3.2. Measurement of the Status of Financial Officials

The aforementioned treatments can be categorised into two distinct aspects: those that effectively enhanced the personal satisfaction of financial experts (**differences in substance**) and those that extended beyond personal satisfaction (**differences in form**) (Figure 2). [3] With regard to financial experts in the Sung Empire, the **differences in form** have been extensively explored by Hartwell (1971a) and, therefore, are not empirically examined in this study; however, the **differences in substance** warrant empirical investigation.

Nevertheless, modern methods for measuring differences in substance are not directly applicable to financial experts of the Sung Empire. To bridge the socio-historical gap between ancient and modern societies in assessing the fulfilment of human needs, this study employs Alderfer's (1969) ERG theory (Figure 2). ERG, an acronym for Existence, Relatedness, and Growth, provides a generalisable framework for

[3] Granting recognition using the word "professional" may not improve the satisfaction of professionals (Goldner & Ritti, 1967).

evaluating professional satisfaction. In terms of existence, professionals are expected to receive higher monetary compensation, as emphasised by Durkheim (1893) (Figure 2). For relatedness, they are anticipated to enjoy greater social acceptance, as highlighted by Lorandini and Odella (2022) (Figure 2). Regarding growth, professionals are presumed to have increased opportunities for career advancement, as discussed by Berlant (1975) (Figure 2).

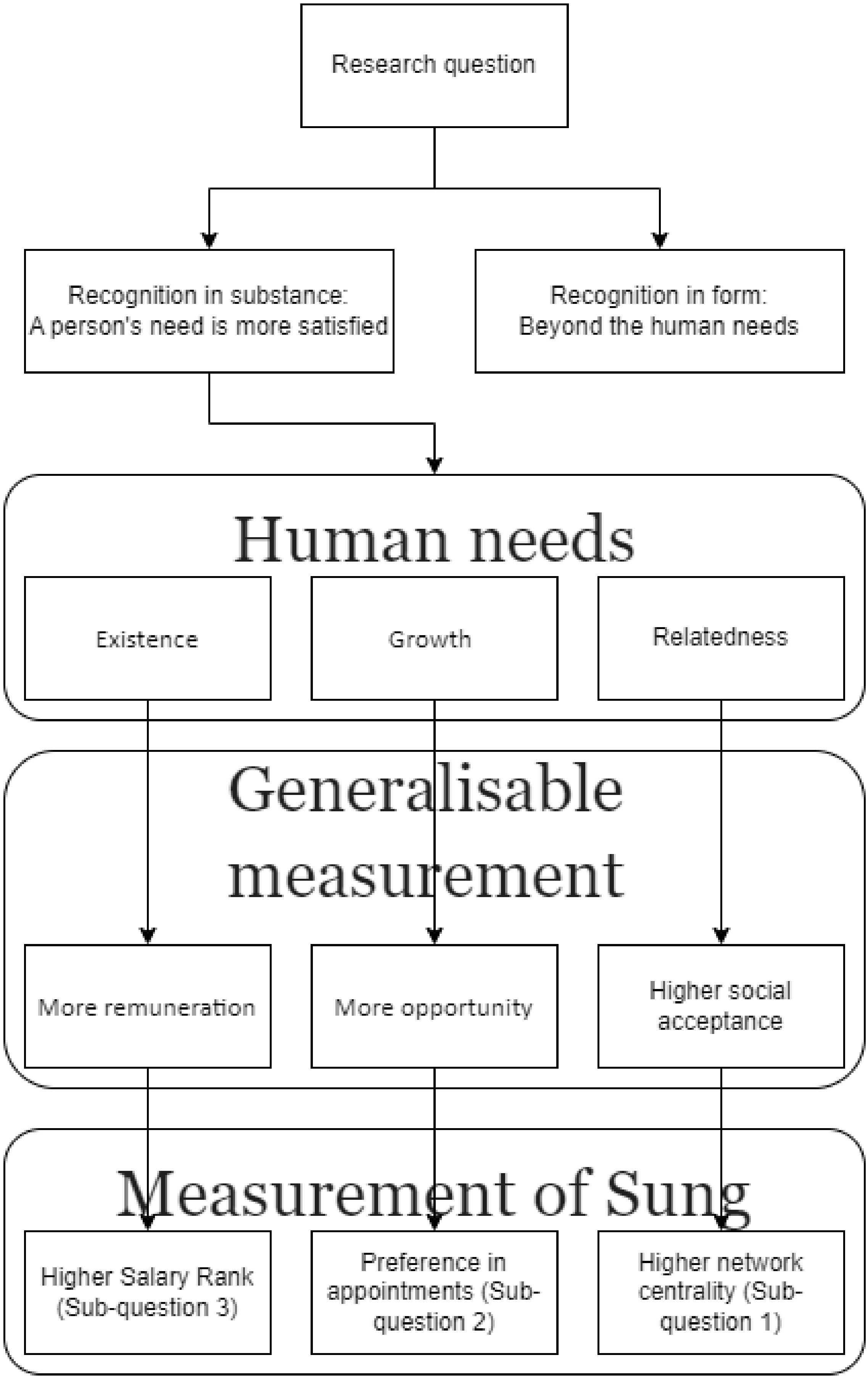
When applied to the context of the Sung Empire, these dimensions are operationalised through specific proxies (Figure 2). Existence is assessed via monetary income, represented by salary rank; relatedness is evaluated through social acceptance, proxied by network centrality; and growth is measured by opportunities for career advancement, indicated by preferential appointments to senior financial positions. These metrics offer a structured and empirical approach to assessing the professional status of financial officials in the Sung Empire. Therefore, the research question could be divided into three sub-questions as follows:

Sub-question 1: Was the social acceptance of financial officials higher than that of other officials?

Sub-question 2: Were financial officials preferred over other officials in being appointed to financial positions?

Sub-question 3: Were financial officials rewarded better than other officials?

Figure 2
Interactionism and Measurement.



1.3.3. Research Material

The data for this thesis are sourced from the China Biographical Database (CBDB), a freely-accessible, relational database containing biographical information on approximately 491,000 individuals as of May 2021, primarily spanning the 7th to 19th centuries (The CBDB project, n.d.). The CBDB has been extensively utilised in academic studies employing quantitative methods and network analysis. For instance, Bol (2018) used comparative centrality to examine interactions among historical figures and the betweenness centrality between two ancient scholars. Similarly, Li et al. (2017) developed a visualisation toolkit to analyse social relationships derived from an ancient Chinese text. Mazanec (2018) employed Gephi for visualisation and betweenness analysis to explore networks of poetry exchange during the T'ang Empire. Huang (2013) constructed a social network graph for two ancient Chinese families and calculated the shortest path between any two individuals in the network. Moreover, Huang and Luo (2018) applied a signed graph model and a novel group partition algorithm to identify the power dynamics and influence of historical figures within groups. The CBDB has also facilitated studies into the relationship between official ranks and entry pathways into the imperial bureaucracy, as demonstrated by Ma and Li (2019). These diverse applications underscore the utility of the CBDB in uncovering complex historical relationships and informing various methodologies, including network and statistical analysis.

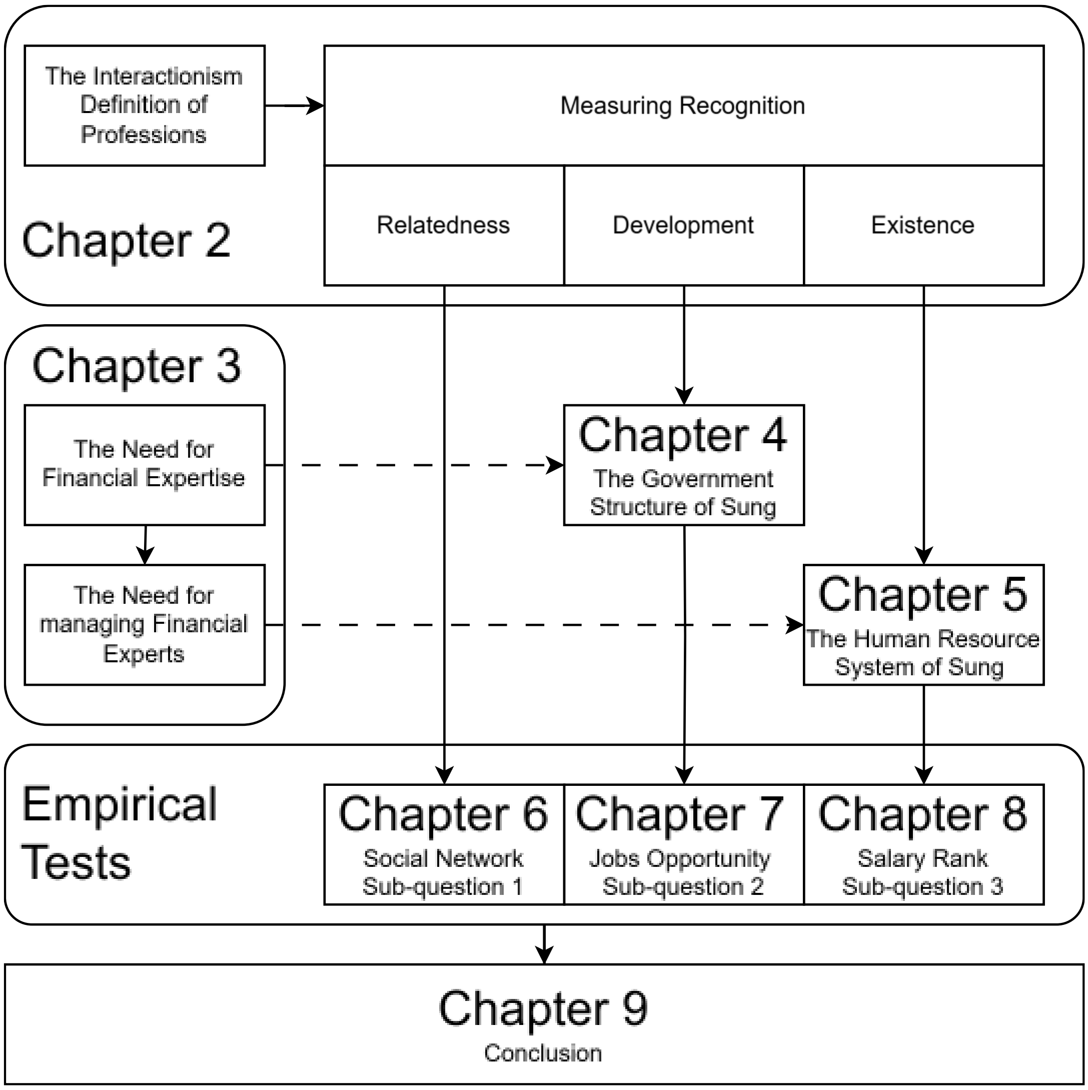
1.3.4. Summary

To address the research question, Interactionism, with its inclusive nature, serves as the foundational theory for defining a profession based on the recognition by society. The Selectorate Theory, as a broad political framework, is employed to analyse the geopolitics of the Song Empire, examining the politics of its nomadic neighbours and its internal politics. In this context, the Selectorate Theory helps explain why financial experts were recognised as essential and why the emperors were compelled to recognise them partially. As a general model of human needs, the ERG Theory is used to assess the public's recognition of a specific group of practitioners. Quantitative methods and network analysis are applied to CBDB data to evaluate the recognition of financial experts.

1.4. Organisation.

The remaining parts of this thesis are organised in the following manner (see **Figure 3**). Chapters 2 to 5 provide the background of this research: Chapter 2 examines the literature that covers the various views about professions and identifies a framework for ascertaining the generic features of a profession that can be applied to a setting that precedes the modern-day professions by several centuries. Chapters 3 to 5 provide a detailed account of the context of this research: Chapter 3 reviews the emergence of the Sung Empire as a fiscal state from a geopolitical aspect; Chapter 4 reviews the organisation of the bureaucratic system of the Sung Empire; and Chapter 5 reviews the imperial human-resource management system, including recruitment, appointment, and incentives. Chapters 6 to 8 provide three empirical tests to answer each of the three sub-questions: using network analysis, Chapter 6 explores the social network of financial officials and answers sub-question 1; Chapter 7 examines the relationship between financial experience and appointments to financial positions to answer sub-question 2 with logistic regression; Chapter 8 examines the relationship between financial experience and the salary rank of officials to answer sub-question 3. The final chapter brings together the findings of the earlier chapters, in particular, chapters 6 to 8, and concludes the thesis.

Figure 3
The Structure of this Thesis.



1.5. Referencing and Terminology

1.5.1. Referencing

The utilisation of a large amount of Chinese historical materials and modern journal articles creates unusual transliteration challenges for this study. For readability, this study follows the special rule of the APA manual that "(i)f transliteration is not possible or advisable, it is acceptable to reproduce the original alphabet in the paper" (American Psychological Association, 2019, Section 9.38) for three reasons. Firstly, unlike phonograms, Chinese characters cannot be transliterated without losing information. Secondly, different family names of Chinese scholars shared the exact transliteration, which led to a loss of information on the authors of Chinese language documents. Thirdly, Chinese characters are more convenient for readers with Chinese literacy than transliterated ones, while transliterations are not better for readers who are not literate in Chinese. In addition, there are multiple methods of transliterating Chinese, such as Wade-Giles, Chinese postal romanisation, Tong-yòng Pin-yin and Hanyu Pinyin.[4] Choosing one method means creating difficulties for readers unfamiliar with such a method. To summarise, using the Chinese names in their original form is more appropriate. Hence, this thesis uses the following policy with non-English sources:

- Citation:
  - When no authors share a family name, present the family names of the authors used in the original article.[5]
  - When multiple authors share the same family name, present the full names used in the original article.[6]
- Reference list:
  - Present full names of the authors used in the original article.[7]
  - Provide the original name of the article, followed by the English translation.[8]
  - Present the names of journals in their original languages.

1.5.2. Terminology

To accommodate readers regardless of their knowledge of Ancient Chinese, the terminologies are presented in the following manner. (1) Original characters are always presented at the first appearance of an ancient terminology. (2) If translation improves readability, ancient terminologies are translated, followed by the original characters. (3) If translation for readability is not feasible, transliteration is provided, followed by original characters, and an explanation is provided after the transliteration. (4) All terminologies are listed in the glossary in the Appendix.

[4] The Wade-Giles system was widely used in historical research and Sinology. Chinese postal romanisation was mainly used for transliterating place names in China. Tong-yòng Pin-yin (通用拼音) was used in Taiwan. Hanyu Pinyin (汉语拼音) was used in the People's Republic of China. Many other methods still exist.

[5] For example, if a Chinese author writes an English article with a transliterated name, the transliterated name is cited; but if the same person writes a Chinese article with original name, the original family name is cited.

[6] For Chinese and Japanese authors writing in Chinese or Japanese, their family names precede first names to form whole names, without commas or periods. Characters in traditional Chinese and simplified Chinese are treated as different family names unless the author could be confirmed to be one person.

[7] For Chinese and Japanese authors writing in Chinese or Japanese, their family names precede first names to form whole names, without commas or periods.

[8] Many modern Chinese papers are accompanied with translated names and abstracts provided by the original authors. For papers without such translation, the name is translated by the author of this thesis.

Chapter 2. A Generic Framework for Researching Professions

2.1. Introduction

This thesis studies the financial experts of the Sung Empire from the perspective of a profession. However, in the Sung era, the notions of a profession had not developed in the form of the professions of modern times. This chapter aims to establish a research framework based on a generic concept of profession that could suit the analysis of the traits of the Sung Empire's financial experts.

The concept of a profession has long been characterised by ambiguity and inconsistency. Terms such as "professional," "profession," and "professionalism" have been used with considerable latitude in public discourse, while academia has struggled to reach a consensus on their precise definitions (Cogan, 1955). Different paradigms have approached the definition of professions from various perspectives: some focus on the strategic actions of practitioners, others on their achievements, while alternative frameworks, such as governmentality and class struggle, offer their interpretations. Furthermore, many studies have been constrained by narrow scopes, often examining single professions or limited to specific national contexts. As a result, definitions are frequently shaped by the social settings in which they are developed, highlighting the need for a context-neutral approach to defining professions.

To address this issue, this chapter undertakes a critical review of existing studies on professions, categorising them by their methodologies. It then examines the historical progression from accounting practitioners to accounting professionals, adopting a global perspective to expose the shortcomings of prevailing definitions. Drawing on this analysis, the chapter advocates for a definition grounded in the most inclusive and generic paradigm: interactionism. This interactionist definition reconciles the characteristics of widely accepted professions and serves as the foundation for a proposed analytical framework. This framework is designed to be adaptable across diverse contexts and utilise the data available on the Sung Empire's financial experts for empirical analysis.

The remainder of the chapter is organised as follows: Section 2 reviews the body of existing literature on professions; Section 3 explores the evolution of accounting practitioners, presenting illustrative examples and counterexamples in relation to existing theories. Section 4 introduces interactionism, incorporating network analysis as a recommended method for future research. Finally, Section 5 concludes the chapter.

2.2. Existing Paradigms of the Studies on Professions

The definition of a profession was chaotic. The words “professional,” “profession,” and “professionalism” were usually used at the whim of the public, while academia also did not have a consensus on the definition (Cogan, 1955).[9] The academic definition could be divided into many paradigms from different angles. Attributes-focused research usually focuses on the strategies practitioners use during professionalisation, and the professionals' achievements (or effects). Marxism and Foucauldian theory focused on the state’s strategies in building professions. The institutional theory focused on the abstract institution that all parties accepted: the states, the clients, and the professionals contributed to the final institution that decided the effects of professionalisation. The interactionism only focused on the effects, which is the recognition of professions. To clarify the existing knowledge of professions, this section reviews studies by their paradigm.[10]

2.2.1. Early Studies and Contemporary Observatory Studies

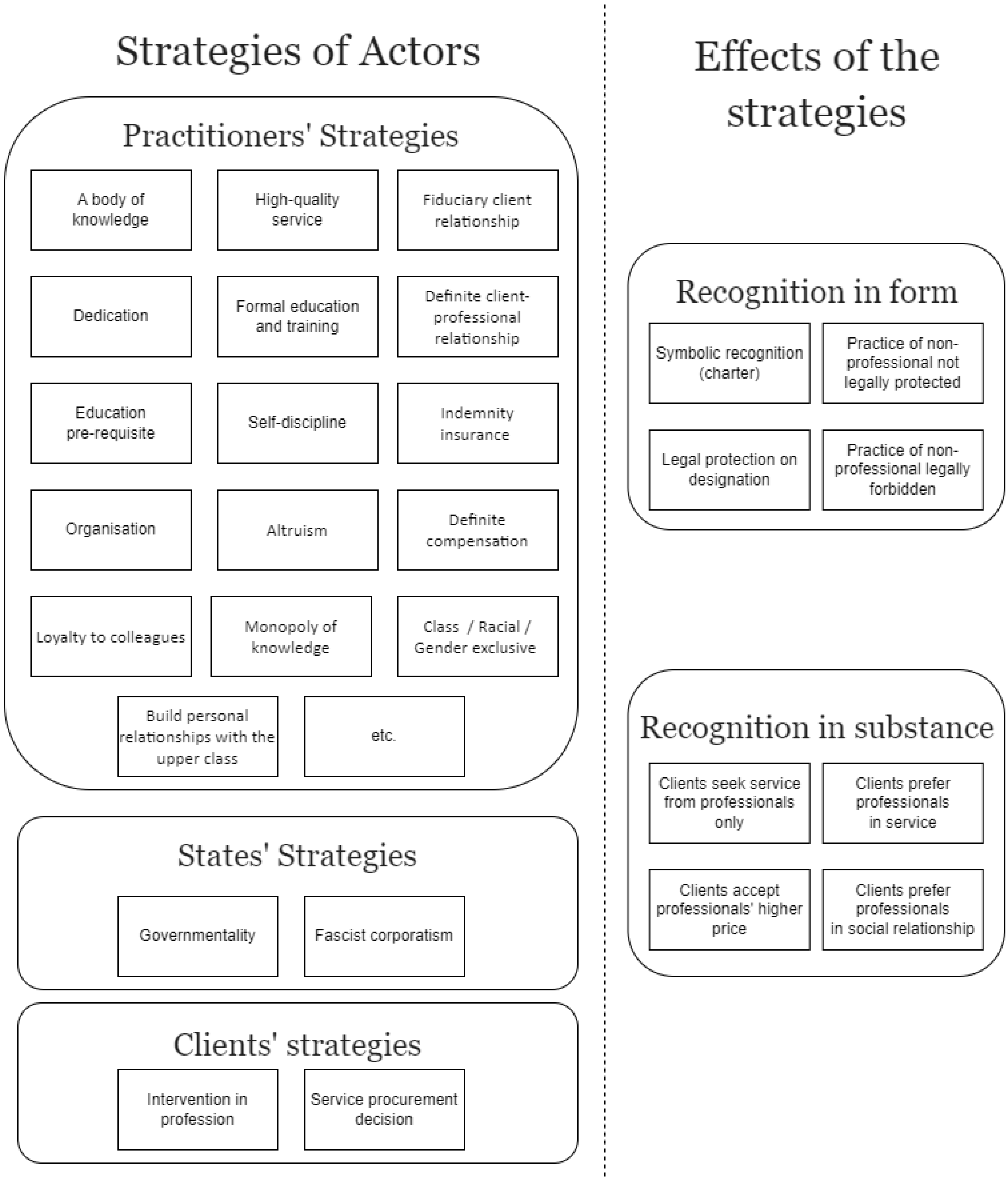
Early research on professions often focused on isolated examples, with scholars typically examining their own disciplines and drawing comparisons with well-established professions such as law and medicine. While these studies offered valuable insights into specific occupational groups, they consistently lacked a theoretical and generalisable framework for understanding professions. For instance, Flexner (1915) defined professions as occupations requiring intellectual operations, significant personal responsibility, and the application of scientifically-derived techniques to practical problems, all of which necessitate formal education (see the left section of **Figure 4**). Despite its influence, this definition, like many that followed, remained limited by its scope. Subsequent scholars frequently concentrated on their respective professions or closely related fields, often neglecting to examine a broader range of professions (Brewer, 2008; Penegar, 1987). Much of this research centred on strategies to enhance the standing of specific professions (shown in the left section of **Figure 4**), such as reinforcing professional identity (Fitzgerald, 2020). As a result, while significant attention has been given to aspects such as professionalism, professional identity, and professional behaviours, the broader understanding of professions as societal phenomena remains elusive.

In contrast, Carr-Saunders and Wilson (1933) adopted a cross-profession approach, examining various British practitioner groups without pre-defining the concept of a

[9] Skilful craftspeople and even terrorists were frequently referred to as professionals, probably because they lived on their expertise. Examples could be found in many popular mass media platforms, such as the Guardian (Fouda, 2003) and CNN (Menon, 2013).
[10] A summary is available in **Table 1**.

profession. Their seminal work challenged simplistic definitions and offered critical observations that remain influential. The insights provided by Carr-Saunders and Wilson (1933) have inspired this research to pursue a more inclusive and generalised definition of professions, one that transcends the limitations of earlier, discipline-specific studies.

Figure 4
An Illustrative Figure for Attributes of Professions.



2.2.2.Taxonomic Studies

Taxonomic studies were among the earliest attempts to apply the scientific method to studying professions as a societal phenomenon (Greenwood, 1957; Hickson & Thomas, 1969; Millerson, 1964). These studies typically began by predetermining a set of occupations or organisations as professions and then identifying common characteristics among them, as well as distinctions between professions and nonprofessions.[11] However, this predetermined scope introduced a significant issue of subjectivity (Timperley & Osbaldeston, 1975). Attributes considered characteristic of professions in one context were often absent in another. For instance, while the legal profession in the United States is rooted in university education, its counterpart in the United Kingdom historically relied on training through the Inns of Court (Carr-Saunders & Wilson, 1933; Pue & Sugarman, 2003). This variability highlights the limitations of taxonomic approaches in developing a universally applicable understanding of professions.

2.2.3.Theory-based Studies

In exploring the phenomenon of professions, scholars have increasingly turned to theoretical frameworks from ecology, sociology, and political science to explain the establishment and development of professional systems.

i. Functionalism

Functionalism draws on ecological principles, positing that every individual and group has a role contributing to societal survival, much like organisms within an ecosystem. Under this perspective, professionals are seen as providers of essential and ethical services, justified in receiving privileges in return for their contributions (Barber, 1963; Durkheim, 1957; Etzioni, 1969; Marshall, 1939; Parsons, 1939). Functionalism, therefore, links a strategy of professionalisation with the effects of professionalisation by emphasising the reciprocal relationship between the provision of ethical service and the resulting societal privilege. However, the framework has faced criticism for its ahistorical nature, failing to account for the dynamic and evolving context of professions (Robson & Cooper, 1990).

ii. Marxism, Foucauldian Theories, and Corporatism

Marxist analyses of professions focus on their relationship to production and the broader power structures. According to this view, professions often serve the ruling class, either as tools to exert control over production (Ehrenreich & Ehrenreich, 1979) or as members of the ruling class themselves (Navarro, as cited by Saks, 2016). Other interpretations suggest a process of proletarianisation, where professionals' status and autonomy are gradually undermined to align with capitalist imperatives (Braverman, 1998).

[11] Attributes were found to include traits such as theoretical knowledge, extensive education and training, being organised, adhering to a code of conduct, providing altruistic service, services influencing other people, providing indispensable public service, licensed community sanction, definite professional-client relationship, fiduciary client relationship, best impartial service given, loyalty to colleagues, and definite compensation.

Critical studies have also argued that privileged individuals often use professions to sustain their social status. For instance, the legal profession in post-revolutionary France was a means for the nobility to preserve their influence (Hannes Siegrist, 2003). Similarly, in Britain, middle-class families encouraged younger generations to pursue professional careers to maintain social standing (Egerton, 1997), with strategies like forging connections with the upper class, as observed among British barristers (Lemmings, 2003).

In the United States, critical theories highlight how the accounting profession has been complicit in maintaining systemic inequalities, such as racial exclusion to uphold white supremacy (Hammond, 1997b) and gender discrimination to preserve male dominance (Hammond, 1997a; Hooks, 1992; Kirkham, 1992; Lehman, 1992). These exclusivist practices may also have been used as branding strategies to position professionals as members of an elite group (Poullaos, 2009).[12]

Foucauldian perspectives, meanwhile, focus on professions as instruments of state power. Foucault argued that professions act as mechanisms for governments to exert control over society (Foucault, 1975/1977; Lemke, 2012). For example, German auditors and lawyers have been observed to align with these Foucauldian principles (Harston, 1993; Hannes Siegrist, 2003). Hoskin and Macve (1986) applied Foucault's knowledge-power theory to demonstrate how examinations facilitated the professionalisation of accountants by institutionalising control. However, the oversimplified assumption that professionals merely served as tools of the government is inconsistent with modern observations—particularly the regulatory capture theory—which suggests that professions leverage government power for their interests (Laffont & Tirole, 1991). Also, the examination assumption is inconsistent with the history since Scottish (Carr-Saunders & Wilson, 1933), English (Carr-Saunders & Wilson, 1933), and Canadian (Richardson, 2020) organisations of chartered accountants had already built their influence and obtained their charters long before examinations were introduced.

Corporatism, in turn, interprets professionalisation as a collaborative arrangement between the state and practitioners. Under this model, governments protect professionals from market competition in exchange for loyalty and support (Rodrigues et al., 2003). While more prominent in continental Europe (Rodrigues et al., 2003), corporatist practices have also been critiqued within the British accounting profession (Walker & Shackleton, 1995).

[12] From a passive angle, at least exclusiveness could help them in avoiding linking their profession to the discriminated people in the society.

iii. Neo-institutionalism

Neo-institutionalism explains professions through the lens of institutional logic, attributing their existence to the collective establishment, maintenance, or disruption of professional norms and practices. This framework encompasses the strategies of all stakeholders as "institutional work" that shapes the professional landscape (Goodrick & Reay, 2011). For instance, Goodrick and Reay (2011) identified two key components of professional logic: "practitioners control knowledge" and "practitioners decide the scope of practice." These elements exemplify how institutional structures underpin the professional phenomenon.

iv. Weberian

Max Weber conceptualised a profession as a product of rationalisation, characterised by specialised knowledge, fixed doctrines, and vocational qualifications (Ritzer, 1975).[13] Hence, unlike functionalist approaches, Weber focused on the strategies employed by professionals rather than their societal effects. Building on Weber's ideas, Abel (as cited in Pue, 1990) shifted attention to the impact of market control, defining a profession as a historical construct enabling its members to "exercise a substantial degree of control over the market." Other Weberian studies also focus on market control with knowledge monopoly (Saks, 2012, 2016). However, the claim was too strong to be consistent with the legal (Pue, 1990) and the accounting (Zeff, 2003a) professions, as neither profession monopolised the whole market in which they operated. In addition, accounting professional bodies could choose market differentiation instead of complete market control (Velayutham & Rahman, 2000).

2.2.4. The Necessity of a New Framework

As discussed above, studies that focus exclusively on the strategies of states, ruling classes, or practitioners often neglect the roles of other stakeholders. Moreover, strategy-centric approaches lack generalisability, as social contexts vary across countries and evolve over time. No single strategy is universally sufficient or necessary across different states or historical periods. To address these limitations, the following section examines the historical development of accounting practitioners, laying the groundwork for the final section, which employs interactionism to propose a comprehensive definition of professions for this research.

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[13] In discussing priest as a profession, Weber proposed four defining characteristics: (1) power, (2) doctrine / general systematic knowledge, (3) rational training, and (4) vocational qualification. Weber also proposed seven other characteristics: (5) specialisation, (6) a full-time occupation, (7) the existence of a clientele, (8) salaries, (9) promotions, (10) professional duties, and (11) professional culture (Ritzer, 1975).

Table 1
The Streams of Research on Professions

Stream	Examples	Strength	Weakness
Taxonomic	Wilensky (1964) Riggs (1982)	Based on empirical observations.	Arbitrary in selecting samples.[14]
Functionalism	Marshall (1939) Parsons (1939) Durkheim (1957) Etzioni (1969) Hickson and Thomas (1969) Goode (1960) Merton (1957)	Attempts to explain the legitimacy of professional privilege by the "ethics in exchange for privileges" ideal.	Subscribed to materials from professional bodies without scrutiny. Inconsistent with fact.
Interactionism	Becker (1962) Hughes (1963)	Professions are labels awarded by society.	The construction of labels needs further investigation.
Marxism	Ehrenreich and Ehrenreich (1979) Braverman (1998)	Critically analysed the propaganda of professions and pointed out that professions can change.	There is no generalisable theory, and many predictions failed.
Foucauldian	Foucault (1975/1977)	Pointed out that professions can harm society.	Portraying professions as a method of government is contradictory to regulation capture theory.
Neo-Weberian	Parry and Parry (1976) Berlant (1975)	Rational Choice Theory links personal interests with professionalisation.	
Neo-institutionalism	Goodrick and Reay (2011) Scott (2008)	The concept of an institution is an excellent simplification of shared beliefs, including the perception of professions by market participants.	

[14] For example, removing all samples of occupations that were not sanctioned by the state, the conclusion would be all professions need sanctions from the state. The arbitrary method cannot avoid potential cherry-picking.

2.3. The Deficiency of the Paradigms: Accounting as an Example

This section examines the history of individuals possessing accounting skills to offer a broad perspective on the accounting profession. Avoiding a predetermined definition of "profession," this review seeks to include a diverse range of individuals connected to, but not always resembling, the archetypal accounting professionals, such as British chartered accountants or U.S. certified public accountants.

2.3.1. The “Non-professional” Practitioners

While the history of accounting has traced the development of bookkeeping techniques back to the pre-modern era, there is limited research exploring the role of accounting practitioners as individuals prior to the establishment of the three Scottish accounting bodies. Nevertheless, some studies suggest the possible existence of informal groups of accounting practitioners during earlier periods.

i. Before Double-entry Bookkeeping

Egyptian historical records from before the 20th century BCE indicate that scribes enjoyed a privileged lifestyle while managing businesses for rulers. These scribes employed school-taught, rudimentary bookkeeping skills and denomination methods to record stocks and currencies (Ezzamel, 1994). Notably, these scribes often performed bookkeeping as a part-time activity, paralleling modern certified public accountants (CPAs), who frequently engage in non-attestation services (Zeff, 2003a, 2003b).

In Eastern history, records from as early as 807 CE (元和二年) reveal that a historian-official of the T’ang Empire presented a document titled "States’ Account as of Yuan-he" (元和國計簿) to highlight a reduction in royal revenues and military forces compared to a previous era (陈兰, 2013). During the Sung Empire (960 CE to 1279 CE), emperors required "civil officials" to submit annual fiscal statements (*宋史*, ca. 1346/n.d., 志第一百三十二). Additionally, ad hoc financial reports were produced (陈扬, 2012) based on single-entry bookkeeping systems (方, 1991) and were subject to regular reviews (方, 1991).

In Britain, the Charge and Discharge Accounting method, a form of single-entry bookkeeping, was used by at least 1256 CE. It was primarily adopted by clergy to manage church real estate holdings (Stone, 1962). The concept of "profectus" (profit) in these records indicates a departure from simple stock documentation (Stone, 1962). Evidence of using single-entry bookkeeping has also been found scattered throughout Europe (Llopis et al., 2002).

ii. The Development of Accounting in the West

Although double-entry bookkeeping was used by chartered accountants to justify their professional monopoly (Carr-Saunders & Wilson, 1933), such a method was far from the only convenient way in the historical context. Alternative techniques were widely employed by various practitioners (Napier, 1998). Single-entry bookkeeping, for instance, remained prevalent for financial accounting in Europe (Baladouni, 1986; Robertson & Funnell, 2012). The Dutch East India Company relied on single-entry bookkeeping for decades until its stockholders successfully appealed to the government to force the company to adopt double-entry bookkeeping (Robertson & Funnell, 2012).

The 16th-century managers of the Venetian Arsenal, a critical component of national defence, utilised advanced management techniques such as periodic reporting, performance assessments, and resource planning (Zan, 2004; Lane, 1973). During the rise of mercantilism, costing methods emerged to regulate economies, promote protectionism, and enhance royal enterprise efficiency (E. Carmona & Gómez, 2002; S. Carmona, 2006).

The Industrial Revolution marked further innovation in costing methods. Engineers and managers in Britain developed techniques for cost control, responsibility management, overhead allocation, product costing, and decision-making (R. K. Fleischman et al., 1995; Fleischman & Parker, 1990, 1991; Nikitin, 1990; Walsh & Stewart, 1993). Similar advancements occurred in the US (Chandler, 1977; Fleischman & Tyson, 1993; Hoskin & Macve, 1994, 1986; H. T. Johnson, 1972, 1984, 1986, 1991; Porter, 1980; T. Tyson, 1992, 1993; T. N. Tyson, 1990). In 1880, the American Society of Mechanical Engineers (ASME) was established, providing a platform for discussing these techniques (Wells, 1977). Between 1891 and 1914, Engineering Magazine published nearly 100 papers on costing compared to just one on bookkeeping (Fleischman, 1996).

Accounting for decision-making was predominantly performed by non-accountants until the 1920s (Smallpiece, 1949). Proprietors, their agents, and external consultants played key roles in industrial costing and bookkeeping tasks (Boyns & Edwards, 2006). Additionally, operations researchers, whose methods evolved from military decision-making, contributed significantly to quantitative decision-making in business, overlapping with management accounting functions (Kriens et al., 1983).

Double-entry bookkeeping may have been invented before the 13th century CE (G. A. Lee, 1977). It proved particularly advantageous for merchants engaged in complex trades (Sangster, 2018), which explains why eight of the earliest ten books on double-entry bookkeeping were published in Venice, known as the "merchants' republic" (Coronella & Santaniello, 2018). Non-accountants frequently employed double-entry bookkeeping long before the emergence of formal accounting professions. Writing masters (Edwards & Anderson, 2011) and unlicensed accountants (O'Regan & Killian, 2021) were also common in the British Isles.

By the early 20th century, the number of bookkeepers in Dublin was ten times as great as that of accountants within professional bodies, reflecting the widespread dissemination of bookkeeping skills outside formal education or professional organisations (O'Regan & Killian, 2021). Similar trends were observed across continental Europe. Commercial schools in the Netherlands taught double-entry bookkeeping (Davids, 2004), and a state-funded college pioneered Portuguese accounting education (Rodrigues et al., 2003).

Universities and colleges have largely overtaken professional accounting bodies in providing accounting education in the modern era. For example, over half of US accounting graduates do not sit for CPA exams (Dawkins & Dugan, 2022). Alternative education methods, such as self-teaching and private tutoring, also facilitate accounting education outside professional frameworks. In China, 20 million holders of the Accounting Qualification Certificate monopolised accounting services until 2017. Similarly, in Japan, generalist staff often performed in-house accounting roles instead of CPAs (Sakagami et al., 1999), while non-accountant tax practitioners provided tax compliance services in both Japan (日本税理士会連合会, 2023) and China (国家税务总局, 2006).

iii. Other Modern Practitioners Performing Similar Functions to the Accounting Profession

In addition to the skills traditionally associated with accounting, many professionals from other fields have performed tasks that overlap with those of accountants. For instance, surveyors use quantity surveying to estimate material costs for civil engineering projects (Male, 1990). These standards are upheld by professional bodies, such as those represented by the Building Cost Information Service (2012). Similarly, actuaries contribute by providing cost analyses for insurance policies (Carr-Saunders & Wilson, 1933). More broadly, finance experts specialise in quantitative decision-making for investment purposes.

iv. Implications From the Review of "Non-professional" Practitioners

Historically, accounting tasks have often been carried out by individuals from various professions and occupations, including clergy, managers, engineers, general staff, and bookkeepers. The transmission of accounting knowledge has occurred through various channels, such as books, apprenticeships, universities, and cram schools, many of which lie outside the framework of the formal accounting profession.

This highlights that accounting skills and functions are not inherently tied to the professionalisation of accounting practitioners. While these skills are undoubtedly relevant, they cannot serve as a sole or definitive criterion for defining a profession. Instead, historical evidence, such as the existence of guilds, points to the tendency of individuals with similar skill sets to form alliances to promote their shared interests. These shared interests—rather than merely shared skills—may underpin the emergence of professions, offering a deeper explanation for their development over time.

2.3.2. The Scottish model of accounting professions

The emergence of accounting as a formalised profession is marked by both historical depth and regional diversity (see **Table 2**). Evidence suggests that accounting expertise was already recognised in Italian communities during the 15th century (Brown, 2013). However, the development of modern external accountants as an independent profession began with the fight for a monopoly over receivership in Scotland (T. Lee, 1995; Macdonald, 1984).

i. The Scottish Legacy

From a network perspective, early accountants in Scotland formed a network closely tied to the legal profession. Judges customarily appointed accountants for receivership duties, considering them part of a broader "legal" profession (Carr-Saunders & Wilson, 1933). Moreover, accountants often hailed from families already entrenched in professional spheres, particularly the legal domain. This kinship strengthened their social connections with other elites and entrenched their role within the broader professional network.

When legislative challenges emerged in Scotland, such as a proposed bill allowing lawyers to share the receivership market, accountants consolidated their social networks into three cooperating, city-level organisations to protect their interests. These efforts were supported by their strong ties to judges and legislators and an appeal to Scottish nationalism (T. Lee, 1995). Interestingly, actuaries joined the Glasgow organisation but not others, indicating that these organisations were structured around social relationships and expertise rather than strictly defined disciplinary boundaries.

The success of Scottish accountants in securing professional status ahead of their English counterparts can be attributed to their pre-existing high social standing (Lee, 2004). Judges granted them monopolies in receivership before their formal organisations were established. Consequently, the royal charter they later received served as a formal recognition of their professional status rather than the foundation of such professional status.

The Scottish accountants' approach to professionalisation reflected several distinctive features:

- Independent yet collaborating city-level organisations.
- The royal charter was awarded by the Privy Council.
- The royal charter was a prestigious brand rather than a functional directive.
- Legal sanctions covered only specific services, not the entire scope of their work.
- Membership-based privileges were prioritised over government-issued licences.
- Professional development remained unlinked to university education (Carr-Saunders & Wilson, 1933).

This independence allowed Scottish accountants to maintain significant autonomy without sacrificing control to government licensing or university oversight.

ii. Early developments in England, Wales, and Ireland

English and Welsh accountants adopted similar practices but soon merged their city-level organisations into a single body to strengthen their position against external challengers (Carr-Saunders & Wilson, 1933). In Ireland, accountants retained the city-level organisational structure (Parker, 2005).

iii. The leakage of apprentices and the Incorporated Accountants.

A mismatch of human resource needs and market control posed an important problem to chartered accountancy. On the one hand, chartered accountants need assistants to expand their business. On the other hand, when these assistants became a new generation of chartered accountants, the supply of chartered accountants would saturate the market.

To prevent market saturation, the institutes implemented a quota system, allowing each chartered accountant to recruit only a limited number of articled apprentices whose experience was recognised by the institute (Carr-Saunders & Wilson, 1933). However, this policy alone could not solve the mismatch problem. The excessive assistants who could not be “articled” also accumulated experience similar to the “articled” apprentices, and they would seek alternative methods of gaining recognition. Thus, the exclusion of unarticled clerks led to the rise of alternative organisations, such as the Society of Incorporated Accountants and Auditors, registered with the Board of Trade.

Incorporated accountants offered an alternative pathway for recognition but soon became a source of contention. Chartered accountants' firms faced challenges retaining incorporated accountants, who were barred from partnership roles due to institute-imposed restrictions. Furthermore, the divided image of the accounting profession created reputational difficulties for the chartered bodies. Eventually, the Institutes of Chartered Accountants absorbed the Society of Incorporated Accountants, consolidating the profession under a unified organisational framework.

This unification further demonstrated that professional status within accounting was less about technical expertise and more a function of social networks, organisational ratification, and institutional dynamics. It underscored the idea that the accounting profession, particularly in its early stages, was as much a social construct as a reflection of functional or technical necessities.

iv. A federal-provincial structure: Canada

Canadian accountants formed their professional organisations in response to the potential market invasion by British professional bodies. Accountants in Montréal (Québec) and Ontario organised separately and secured charters from provincial governments (MacDonald & Richardson, 2004; Richardson, 1987, 2020; Richardson & Kilfoyle, 2012).[15] Later, organisations were established in different provinces and received their respective provincial charters. One organisation received a federal charter, igniting a turf war, which was soon ended by a de jure merger (Richardson, 2020). Interestingly, the chartered accountants in Canada never de facto merged: only provincial bodies could award memberships - provincial governments granted the privilege to the professional body in their province - and the federal body had little power over provincial bodies.

Despite this structural difference, the Canadian model bore many similarities to the Scottish approach. The founders of early Canadian accounting bodies maintained personal ties with the Scottish institutes, influencing their organisational strategies (Richardson, 2020). As in Scotland, the membership consisted predominantly of English-speaking elites with a British heritage. However, in Québec, this created a notable disconnect between the Anglo-Saxon accounting elite and the francophone majority. With Anglo-Saxons dominating the economy and politics, the English-speaking accountants primarily aligned with the business elite, sidelining the poorer, underrepresented francophone communities (Richardson, 2020).

[15] Montréal, rather than Québec, is used in the name of the professional body, following the Scottish tradition of naming accounting bodies after a city rather than a province or state.

v. The only overseas royal charter: Australian

Australian accountants attempted to replicate the Scottish model to establish a strong accounting profession. Two key organisations emerged: the Incorporated Institute of Accountants, Victoria (IIAV), and the Australasian Corporation of Public Accountants.

The IIAV was an inclusive organisation, attracting both external and internal accountants. However, its repeated attempts to secure a royal charter failed due to various factors (Carnegie & Edwards, 2001; Chua & Poullaos, 1993). Following these failures, prominent IIAV members working in accounting firms left to form the Australasian Corporation of Public Accountants. This exclusive organisation later secured a charter, becoming the Institute of Chartered Accountants in Australia (Carnegie et al., 2003). Despite its lack of a charter, the IIAV continued to grow and eventually became CPA Australia, one of the largest accounting professional bodies globally. This evolution demonstrated that a charter, while advantageous, was not always essential for organisational success.

The Australian model, however, diverged from its British counterparts in significant ways. Today, the Australian government controls key licences for auditing (Australian Securities & Investments Commission, 2021) and tax services (Tax Practitioners Board, 2022), making it more aligned with the European approach to professional regulation.

vi. Continental model in the Commonwealth: New Zealand

In New Zealand, accountants attempted to establish professional bodies but failed to secure a royal charter (Emery et al., 2002). The turning point came with the introduction of a 1908 law influenced by socialist ideals, which placed licensing authority under a government-controlled board (T. J. Johnson & Caygill, 1971). This marked a significant departure from the British laissez-faire approach, aligning New Zealand's professional framework more closely with European continental models. The contrasting histories of Australia and New Zealand highlight how accounting professions could evolve differently even within the Commonwealth, with similar political and legal systems.

vii. British Model on the Continent: French and Italian Experience

In France, tax practitioners and accounting teachers formed independent organisations, mirroring British attempts to self-regulate professions. However, the French government, attempting to emulate British laissez-faire policies, faced different social dynamics. The "Experts-Comptables" in France struggled to achieve the same social status as their British counterparts until modern times (Ramirez, 2001).

Similarly, Italian accountants, including the "ragionieri" and "Dottori Commercialisti," faced challenges in gaining public support and often found themselves ignored by populist politicians (Macchioni et al., 2021). While continental theories often frame professionalisation as a pathway for social mobility, the experiences of French and Italian accountants suggest that achieving such mobility was far from straightforward.

viii. The Emergence of Alternative Professional Bodies

Excluded accounting practitioners frequently countered by forming their own professional organisations. This pattern was evident across Commonwealth countries:

In Britain, the Society of Accountants and Auditors emerged to accommodate students working for chartered accountants, but were excluded by the policy of the apprenticeship quota. Similarly, the London Association of Accountants, later the Association of Chartered Certified Accountants (ACCA), provided a platform for tax practitioners excluded from other bodies (Carr-Saunders & Wilson, 1933; Garrett, 1961).

In Canada, in-house accountants created the Certified General Accountants (CGA) designation. French-speaking Québécois accountants formed "L'Institut des comptables et auditeurs de la province de Québec" to challenge the dominance of Anglo-centric professional bodies by issuing CA designations to its members (Richardson & Kilfoyle, 2012). Some Canadian tax practitioners established organisations to issue CPA designations to themselves (Richardson, 2020).

These developments underscore the fragmented nature of the accounting profession, where practitioners were divided not by function but by social relationships, status, language, and geography.

ix. Overall experience from the chartered accountants

These examples illustrate that professionalisation in accounting was less about unifying practitioners under a shared functional umbrella and more about consolidating power among social elites. Professional bodies often acted as mechanisms for maintaining social “immobility,” allowing elite groups to dominate markets and exclude outsiders.

The Role of Elite Control in Professionalisation

Chartered accountants were typically organised not by their specific functions but by their social affiliations and elite status. For example, Irish chartered accountants maintained loyalty to the British crown even after the Republic of Ireland's independence, emphasising their alignment with elite loyalist values rather than broader Irish nationalist ideals (Parker, 2005). Similarly, in Québec, early chartered accountants were predominantly English-speaking immigrants who resisted integrating

French-speaking Québécois practitioners into their ranks (Richardson, 1987). Such patterns highlight how professional bodies often perpetuate exclusivity. They were less about technical expertise and more about leveraging social networks and cultural capital to control market access and preserve privilege.

Inclusion, Expertise, and Alternative Strategies

Although excluding laypeople was the ideal of professionalisation, exclusion in the real world often stemmed from systemic barriers. First, exclusion could be based on social capital: many accounting clerks could not be “articled” because each chartered accountant's number of articled apprentices was limited (Garrett, 1961). Second, exclusion could be based on race: non-white practitioners' access to established professional networks was significantly limited (Poullaos, 2009). Third, exclusion could be based on gender: women faced significant barriers to entry in the male-dominated accounting profession (West, 1996). Besides, exclusion could be based on sectors, locations, or nationalities.

Excluded practitioners developed innovative strategies to enhance their status and legitimacy. Incorporated Accountants leveraged the influence of chartered accountants to establish themselves as external accountants (Carr-Saunders & Wilson, 1933). ACCA emphasised rigorous examinations as a public signal of expertise (Carr-Saunders & Wilson, 1933). *L'Institut des comptables et auditeurs de la province de Québec* mobilised support from the French-speaking public to gain recognition (Richardson & Kilfoyle, 2012). Canadian CPAs used ties with tax authorities to assert their legitimacy (Richardson & Kilfoyle, 2012).

While some alternative professional bodies, like ACCA, thrived and continue to exist, others were either disbanded or absorbed into chartered accountants' organisations. For example, members of disbanded bodies like the Society of Accountants and Auditors eventually received the “chartered accountant” designation, demonstrating how the boundaries between professional bodies could blur over time (Garrett, 1961; Richardson & Kilfoyle, 2012). From a human perspective, the excluded practitioners often achieved professional recognition, even if their organisations did not survive independently. This highlights an important distinction: the status of individual practitioners often mattered more than the status of their professional bodies. While the absorption of the early CPA bodies in Canada and the disbandment of the IA Society marked the end of the professional bodies, their members gained great success by receiving the “Chartered Accountant” designation. These historical insights suggest the need for a human-centric approach to studying professions, particularly in fields like accounting. Rather than focusing solely on the institutional vehicles of professionalisation, researchers should consider individual practitioners' experiences, strategies, and successes. This perspective can provide a more nuanced understanding of how professions evolve and the complex interplay between expertise, social relationships, and systemic barriers.

2.3.3.The CPA model of accounting professions.

The development of the accounting profession in the United States marked a departure from the British model, reflecting the socio-political dynamics of a democratic society. The first accounting organisation in the US was an inclusive body, welcoming public practitioners, accountants employed by non-accounting firms, and bookkeepers. However, this organisation faded quickly, failing to establish a lasting foundation (Romeo & Kyj, 1998).

Public accounting practitioners in New York collaborated with the state government to create a state-operated certification scheme, culminating in the introduction of the Certified Public Accountant (CPA) designation. This designation was deliberately crafted to distinguish American accountants from their British Chartered counterparts, reflecting a unique identity for the profession (Zeff, 1988).

Key Features of the New York Model

The New York CPA model bore similarities to the Scottish model, notably in its regional organisation and reliance on a strong professional brand rather than a rigidly defined set of functions. However, two significant differences stood out: (1) licensing by the government: unlike Chartered Accountants, who obtained membership from independent professional bodies, CPAs were licensed directly by the state government; (2) university-based training: while Chartered Accountants often bypassed university education, CPAs were typically trained in universities, aligning the profession more closely with higher education institutions (Zeff, 1988).

The Influence of Democratic Structures

The New York model's reliance on government licensing and university-based education reflected broader patterns in American professions. Similar trends were observed in the legal and medical fields, where professional privilege emerged from partnerships with the state and academic institutions rather than self-regulation by professional elites, as seen in Britain (Pue & Sugarman, 2003).

Adaptation of the New York Model in the Republic of China (Pre-1949)

The Republic of China mirrored the U.S. approach when introducing its accounting licensing scheme in 1918 (Xu & Xu, 2003). Licences were instead granted based on education or experience (Xu & Xu, 2003). Professional bodies in China, though established, operated with greater independence from the government than their European counterparts. For instance, Chinese accountants successfully resisted a proposed regulation mandating party membership in the Nationalist Party (國民黨) for all accountants (林, 2006). Like the British and US accountants, early Chinese accountants predominantly practised in large cities, which had already undergone Westernisation and had a functioning market economy (Xu & Xu, 2003). In contrast, the broader Chinese society largely lacked professional accounting services, resulting in a fragmented professional landscape (林, 2006).

Implications of the New York Model

The New York CPA model demonstrated the adaptability of professionalisation processes in diverse socio-political contexts. By aligning with democratic values and leveraging partnerships with government and academia, the U.S. and its adopters created professional structures suited to their unique environments. At the same time, the flexibility of this model underscored its potential for adaptation in other parts of the world, such as China, where societal and economic conditions required a nuanced approach to professional legitimacy and independence.

2.3.4. The State-centric model of accounting practitioners.

In many European and Asian countries, accounting practitioners operated under significant state control, marked by state-issued licences and mandatory membership in state-controlled professional bodies. This model starkly contrasted with the independence of the British accounting profession and highlighted regional variations in the professionalisation process.

i. German Model: Functional Segmentation and Corporatism

The German accounting profession was distinctly split by function: auditors (Wirtschaftsprüfer) and tax advisors (Steuerberater). Both groups were subject to strict state oversight: (1) auditing licensees must join a state-controlled professional body to practice (Harston, 1993); (2) licences were tied to the specific function, meaning licensees could not change their career focus without forfeiting their certification (Harston, 1993).

This corporatist arrangement encouraged cooperation between the accounting profession and the state, prioritising privilege through state collaboration over independence—a clear departure from the British model (Dykxhoorn & Sinning, 1992). Similar state-centric arrangements governed accounting practitioners in Spain (Carrera et al., 2001) and Portugal (Rodrigues et al., 2003).

ii. Japan: Evolving State Control

Japanese accountants initially organised themselves in the early 20th century, but by 1927, the state had taken over the profession through a new scheme (計理士) (Watanabe, 1939). Most licensees were exempt from examinations due to their educational background, limiting the scheme's societal impact (Watanabe, 1939). After World War II, Japan replaced this system with the Certified Public Accountant (公認會計士) framework (Sakagami et al., 1999). While CPAs initially self-governed, repeated financial reporting frauds led the government to assume control of their professional body. A separate licensing scheme for tax agents (税理士) was introduced in 1951 as part of post-war tax reforms. This system mirrored the German model, with specific functions allocated to distinct professional groups (衆議院, 1951).

iii. China

In China, significant changes followed the 1976 coup that ended the "Great Cultural Revolution." The new leadership sought to reform state-owned enterprises and attract foreign investment (Ge & Jun Lin, 1993; Hao, 1999; M. W. Luke Chan & Rotenberg, 1999; Tang, 1997, 2000). However, due to two poorly drafted pieces of legislation, exclusive audit rights were mistakenly granted to two separate groups of accounting practitioners: Registered Accountants[16] (注册会计师) under the Ministry of Finance and Registered Auditors (注册审计师) under the National Audit Office (Yee, 2012). As associations of these groups were under different government bureaus, the turf war between associations was effectively a conflict between government agencies. It did not end until the two associations were merged under political intervention (Yee, 2012). Hence, naturally, the registered accountants were under strict patronage and control of the state: (1) the government controlled the examination of qualifying registered

[16] The official translation was "Certified Public Accountants", a copy of the US CPA. However, the Chinese name is literarily "registered accountants". Still, registered accountants should not be seen as the equivalent of the CPA profession in the US. While the CPA is the accounting profession in the US for their broad remit in the leadership of accounting affairs, registered accountants hardly reach the same scale. China's bookkeeping and in-house accounting function was labour-intensive; China had 13 times as many bookkeepers or in-house accountants as the US, with a smaller GDP. In the U.S. there were 0.67 million CPAs (NASBA, 2023) and 1.5 million bookkeepers(Bureau of Labor Statistics, 2023). Therefore, the ratio was almost 1:2.2, while there were 0.23 million Registered Accountants (中国注册会计师协会, 2018) and 20 million bookkeepers (财政部会计司, 2016) and, therefore, the ratio was 1:870. Even considering that registered accountants working outside firms might undertake leadership roles, their coverage was still very minor. In addition, if following the Weberian theory to use "controlling the market" as the definition of a profession, the bookkeeping licensees would be the accounting profession of China before 2017, while the Registered Accountant is an auditing profession. Therefore, the labour structure in China seriously compromised the representability of studies on registered accountants concerning financial reporting, tax, and other non-auditing functions. Thus, caution should be applied in researching accounting practitioners by focusing on the name "accountant" or focusing on "the profession".

accountants (Yee, 2012); (2) the government controlled both the national and the provincial accounting bodies that the registered accountants must join (全国人民代表大会常务委员会, 1994); (3) the government authorised the creation of accounting firms that registered accountants must join to practise (全国人民代表大会常务委员会, 1994); (4) the right of registered accountants to practise was limited by the privilege that the government granted to other groups, such as tax agents, bookkeepers, business valuers and so on.

iv. Summary

The continental model of accounting professionalisation stands in stark contrast to the Scottish model. In this approach, statutory auditing licences are directly issued by central governments, often requiring practitioners to affiliate with regional professional bodies to practise. Unlike the broad professional roles of the Scottish model, licences within the continental framework are typically defined by specific statutory functions. Besides, university education is not universally mandated; its necessity depends on each country's regulations and respective governments' decisions.

Unlike the Scottish or New York models, the state-centric approach relies not heavily on pre-existing social conditions to function effectively. This model is adaptable to contexts where accountants are not already established, where democratic governance is absent, or where professional institutions are undeveloped. The state-centric model can succeed as long as the state maintains robust control over societal structures. Consequently, this approach has been widely adopted across diverse regions in accounting and other professions.

Although the social status and market dynamics of practitioners under this model differ significantly from those of British accountants, they remain better trained and compensated than unorganised bookkeepers. This distinction underscores the state-centric model as a viable and valid pathway to professionalisation.

The state-centric model reflects a regionally tailored approach to developing accounting professions, heavily shaped by political systems and socio-economic priorities. By fostering state collaboration to uphold standards and privileges for practitioners, this model demonstrates the diverse pathways to achieving professional recognition, emphasising the importance of adaptability to local contexts.

2.3.5. “International” accounting professions

From a functionalist perspective, professions were perceived as abstract societal functions, suggesting minimal variation between societies. Hence, traditional research on professions often overlooked national borders, except when comparing specific professions across countries. However, history challenges this assumption. For instance, legal practitioners in Western countries differ significantly in terms of social status, training, autonomy, and work approach (Pue & Sugarman, 2003). Professions, therefore, are often jurisdictionally bound. Interestingly, by internationalisation, the accounting profession created an extra layer of complexity regarding borders.

i. Strategies used regarding cross-border issues

Still, only a handful of accounting professional bodies embraced going abroad. The context of the accounting profession usually determines the strategy, including resistance, expansion, and internationalisation.

The first strategy is resistance. Governments are usually not incentivised to incur the expense of licensing foreigners residing on foreign soil. Also, serving the public in a state naturally leads to the requirement of domestic experience, preventing the immigration of foreign accountants and the training of overseas apprentices. This strategy is widely adopted by states with a state-centric modelled accounting profession. Historically, Scottish chartered accountants also adopted this strategy (Poullaos, 2009).

The second strategy is expansion. The professional body did not seek to train overseas apprentices but supported their members who emigrated to other countries, including lobbying for the right to practise. This strategy was initiated by British accountants emigrating to British colonies (Briston & Kedslie, 1997).

The third strategy is internationalisation. The professional body seeks to train apprentices regardless of their geographic location (Briston & Kedslie, 1997). Sometimes, a professional body cooperates with local accounting bodies to reach this goal (Bakre, 2005; Annisette, 2000). Nevertheless, following the First World War, various organisations emerged with the concept of "accountants without borders," often incorporating "international" into their names (Gavens & Gibson, 1992). However, none of these bodies reached their goals.

On top of the three straight strategies, professional bodies could also build mutual recognition to increase the cross-border mobility of their members without internationalising the professional body.

ii. Factors contributing to the success of internationalisation.

In the aftermath of the First World War, numerous organisations emerged with the ambitious vision of "accountants without borders," often incorporating the term "international" into their names (Gavens & Gibson, 1992). However, most of these "international" organisations failed to endure, while those without the "international" label continued to operate globally. This suggests that ideology alone was insufficient to sustain their long-term ambitions.

The success of professional bodies such as the Society of Incorporated Accountants and Auditors and the Association of Chartered Certified Accountants offers valuable insights. Both organisations achieved a degree of success in their home country before expanding abroad. However, their influence was predominantly multinational rather than truly global, as they managed to establish their professional brands in only a handful of countries. This prompts an examination of the factors contributing to the successful internationalisation of accounting professions.

One critical factor is the organisation's origin in an influential country, such as the United Kingdom, whose accounting practices are well-regarded globally. Another key element is the absence of a competing domestic accounting profession in the target country. In such cases, local accountants often seek external validation through foreign accounting qualifications, making internationalisation more feasible. Cooperation from domestic accounting bodies, particularly under specific geopolitical circumstances, can further facilitate the process (Bakre, 2005; Annisette, 2000). Conversely, domestic accounting professions can invoke nationalism to resist foreign competitors.

Social relationships with influential actors also play a significant role. For instance, foreign investment from robust economies like the United States and the United Kingdom elevates the status of accountants recognised by these overseas investors. Additionally, the absence of a robust domestic accounting education system creates a reliance on professionals trained under foreign accounting bodies.

Finally, domestic politics significantly impact the success of foreign professional bodies. Racism, nationalism, and other socio-political agendas often intersect with the accounting profession, shaping the acceptance or rejection of foreign qualifications (Bakre, 2005; Annisette, 2000).

iii. Cross-profession reproduction in international settings.

The internationalisation of accounting professions brought a distinctive characteristic: professionals and their apprentices could belong to different professional bodies. Traditionally, the continuity of a profession depended on mentorship, with established members training apprentices who would eventually join the same organisation. However, apprentices were not only future professionals but also an essential source of immediate labour. When the objectives of professional reproduction and meeting labour demands diverged, practical necessities often took priority.

One notable example is the role of the Association of Chartered Certified Accountants (ACCA) in training apprentices beyond the reach of the institutes of chartered accountants. Chartered accountants were historically restricted from training apprentices abroad, as their institutes mandated apprenticeships to be completed within the British Isles (Annisette, 2000). To address this limitation, many chartered accountants turned to the ACCA to provide training opportunities for their overseas apprentices. This arrangement contributed significantly to the internationalisation of the ACCA, as chartered accountants aimed to retain skilled staff by facilitating their professional development. At the same time, apprentices reciprocated through their contributions to the accountants' practices.

iv. Implications of internationalisation of the accounting profession.

The internationalisation of the accounting profession offers a distinctive yet interconnected case for studying the dynamics of professionalisation. While many state-licensed professions are confined within national borders, certain professions, such as finance, actuarial science, and surveying, demonstrate the potential to extend their influence across countries. This underscores that while states play a pivotal role in shaping professions, they are not the sole actors in this process.

Furthermore, the internationalisation of accounting highlights the critical role of social networks. Elements such as foreign investments, the migration of accountants, cross-profession mentorship, and collaborative efforts between professions create intricate networks of relationships. These networks establish mutual interests among individuals and organisations, ultimately shaping the status and recognition of accountants as a profession.

Table 2
Accounting Practitioners in Some Countries.

Profession / Occupational group	Start	Place	Origin	Qualifying Body	Current Situation
ICAS	1854	Scotland	Receivers	Professional body	Existing
ICAEW	1880	England & Welsh	Mostly external practitioners	Professional body	Existing
CTAI (CIPFA)	1885	Britain	Municipal Treasurers	Professional body	Existing #
LAA (ACCA)	1904	Britain	Tax practitioners	Professional body	Existing †
ICWA (CIMA)	1919	Britain	In-house practitioners in costing	Professional body	Existing ‡
SIAA	1908	Britain		Professional body	Dissolved ††

Profession / Occupational group	Start	Place	Origin	Qualifying Body	Current Situation
CPA in each state of the US	1896 ##	Each state of the US	Public practice	State Boards of Accountancy	Existing
NACA (IMA)	1919	The US	Cost accountants	Professional body	Existing
CA bodies in Canada	1879 ‡‡	Each province of Canada	Mostly Public practitioners	Professional body	Merged into CPA Canada
CGA bodies	1908	Each province of Canada	In-house (railway) accountants	Professional body	Merged into CPA Canada
CSCA	1920	Canada		Professional body	Merged into CPA Canada
NZSA	1908	NZ	All accountants	Professional body	Existing
IIAV (CPA Australia)	1886	Victoria *	All accountants	Professional body	Existing
ICAA	1928	Australia	Public accountants	Professional body	Merged into CAANZ
Wirtschaftsprüfer	1932	Germany	Auditing firms and expert witnesses.	State license	Existing
Steuerberater	1930s	Germany	Tax practitioner	State license	Existing
Commissaires aux comptes #	1969	France		State license	Existing
OEC	1945	France	Tax practitioners	Professional body	Existing

Note:

†Chartered in 1974.

‡ Chartered in 1975.

Chartered in 1973.

†† In 1957, the members of incorporated accountants joined the three CA institutes: ICAEW, ICAS, and CAI.

The earliest certification was established in 1896 in New York. Other states followed later.

‡‡ The earliest two organisations of accountants were established in 1879 in Québec and Ontario. Organisations in other provinces were established later.

* Australia was founded in 1901, so there was no federation of Australia when IIAV was

established.

Statutory auditor is administered by the “Haut conseil du commissariat aux comptes”. Before registration, Candidates must get "certificat d'aptitude aux fonctions de commissaire aux comptes" or "diplôme d'expertise comptable" and have accumulated supervised working experience. After registration, an auditor must join Compagnie nationale des commissaires aux comptes or Conseil National de l’Ordre des Experts-Comptables to practise.

2.3.6.“Internal” accountants

The legacy of chartered accountants, as discussed in previous sections, can be traced back to their origins within the receivership branch of the legal profession (Carr-Saunders & Wilson, 1933), rather than as bookkeepers employed by organisations. Consequently, early accountants paid little attention to the internal management of enterprises. Their costing techniques primarily served financial reporting purposes rather than supporting management decision-making (H. T. Johnson & Kaplan, 1987). Meanwhile, management accounting techniques were primarily developed by engineers as a subset of engineering practices (Smallpiece, 1949).

i. Traditional in-house practitioner

As societal and technical advancements progressed, a new category of in-house accountants emerged: individuals who were not qualified as chartered accountants or engineers. These in-house accountants sought professional recognition through three distinct pathways:

1. Membership in an Inclusive Mainstream Professional Body: Some in-house accountants joined mainstream professional bodies that permitted their inclusion. An example is the Incorporated Institute of Accountants, Victoria, which welcomed in-house accountants (Carnegie & Edwards, 2001; Chua & Poullaos, 1993). However, this inclusiveness may have contributed to the organisation's failure to secure a charter, ultimately limiting its ability to dominate the Australian accounting market (Carnegie & Edwards, 2001; Chua & Poullaos, 1993).
2. Formation of a Rival Inclusive Professional Body: Other in-house accountants gravitated towards new professional bodies established as alternatives to dominant organisations. Notable examples include the predecessor of the Association of Chartered Certified Accountants in the UK (Carr-Saunders & Wilson, 1933) and the Certified General Accountants in Canada (Richardson, 2020). These bodies often emerged as challengers to existing hierarchies.
3. State-Regulated Dual Recognition Schemes: In some jurisdictions, governments introduced state-dominated frameworks to distinguish between

public and in-house accountants. For instance, the New Zealand Society of Accountants Act 1908 established two designations: "public accountants" for those in public practice and "registered accountants" for other qualified accountants (New Zealand Society of Accountants Act, 1908).

These approaches reflect the evolving nature of the accounting profession and the varying methods used to address the professional needs of in-house accountants within different socio-political contexts.

ii. The rise of a cost-accounting profession

During the Great War, the war economy necessitated uniform costing methods and the establishment of costing practitioners for purposes such as profit taxation and market price control (R. K. Fleischman & Tyson, 2000) (See **Table 3**). This period significantly impacted the accounting profession in two ways.

Firstly, mainstream accountants began to recognise the value of costing in professional practice. In the United States, some CPAs initiated efforts to create a dedicated forum for costing, which ultimately evolved into the Institute of Management Accountants, a professional body that endures today (R. Fleischman & Tyson, 2006). Similarly, Chartered Accountants established a subsidiary organisation in Canada to facilitate discussions about costing (Richardson, 2020).

Secondly, costing practitioners sought to secure their newly acquired social standing by forming independent professional bodies. A prime example is the establishment of the Institute of Cost and Works Accountants, which later became the Chartered Institute of Management Accountants.[17]

[17] In 1919, the Institute of Costs and Works Accountants was established in Britain. In 1975, after being granted a Royal Charter, it adopted its current name, the Chartered Institute of Management Accountants (CIMA). The organization remains headquartered in London but has grown into a globally recognised professional body with a diverse international membership spanning various industries and sectors.

Table 3
Management Accounting Bodies in the UK, the US, Canada, Australia, and New Zealand

Country	Original	Founding	Existing	Current	Note
UK	ICWA#	1919	Yes	CIMA	Affiliated with AICPA*
US	NACA	1919	Yes	IMA	
Canada	CSCA	1920	No	-	Merged into CPA Canada
Australia	AICA	1921	No	-	Merged into ASCPA†
New Zealand	NZICA‡	1944	No	-	Merged into NZSA

Note:

#: The original name, “Institute of Cost Accountants,” was quickly abandoned.

* Association of International Certified Public Accountants.

† Australian Society of Certified Practising Accountants.

‡ NZ Institute of Cost Accountants.

2.3.7.Summary

The accounting profession in different countries provided examples from three aspects:

i. Diversity in Accounting Functions Across Contexts

The roles performed by modern accountants have historically been undertaken by individuals from diverse backgrounds, working in various capacities—full-time or part-time, in-house or external, professional or informal. These functions have not always been tied to the designation "accountant." The term "accountant" has different meanings in English-speaking countries, depending on the country and professional body. An equivalent term for "accountant" might not exist in non-English-speaking regions, reflecting significant linguistic and cultural variations. Moreover, the organisation of accounting-related activities differs globally.

In the Anglosphere, accounting professions encompass various services, including assurance, financial accounting, tax compliance, tax planning, and management consulting. Conversely, many countries maintain distinct professional bodies for these functions. For example, Germany, Japan, and China often assign specific accounting-related roles to separate professional bodies, restricting assurance services to a single organisation. Given these variations, research into the accounting profession must prioritise the individuals performing accounting-related tasks rather than solely examining titles or professional organisations.

ii. Varied Formal Structures Across Societies

The formal structures governing the accounting profession—such as educational prerequisites, licensing exams, and professional bodies—differ significantly across societies. While the Scottish Chartered Accountant (CA) and New York Certified Public Accountant (CPA) models have been extensively studied and sometimes treated as ideal benchmarks, neither model is universally applicable. Even in regions like Australia and New Zealand, these frameworks are adapted rather than strictly followed. Consequently, evaluating accounting professionals through the lens of these specific formal settings risks excluding practitioners outside the UK and the US.

iii. Professional Status Beyond State Sanctioning

The international experience underscores that the status of accounting practitioners is shaped by various factors beyond formal state recognition. Expertise, branding, and the ability to project professionalism also play pivotal roles. Regardless of whether a profession is state-sanctioned, its actual treatment by society reflects the essence of professional recognition. This broader understanding highlights that professionalisation involves both formal and informal dimensions.

In conclusion, the review of accounting professions provides counterexamples to the current research paradigms of professions. Therefore, a generic framework is needed to study professionalisation, especially for the accounting profession.

2.4. A Generic Research Design for Studying Professions

2.4.1. Research methodology: Understanding professions as a phenomenon of humans

Most traditional studies on professions assume that membership in a professional body or possession of a licence defines the boundaries of a profession. According to this view, members and licensees are insiders, while all others remain outside the profession. While this simplification facilitates theoretical modelling, it fails to capture the nuanced reality of professions. This chapter highlights five dimensions—interests, social impact, governance, the transfer of professional knowledge, and non-practising members —that challenge the notion of rigid borders defined solely by membership.

- Interest

Articled apprentices, while not formal members, represent individuals with vested professional ties. Mentors invest in their apprentices and anticipate their eventual inclusion as formal members of the profession. Although apprentices lack voting rights within professional bodies, mentors leverage their influence to align the profession's policy with apprentices' interests (Garrett, 1961). Furthermore, apprentices are often registered with professional bodies, granting these organisations disciplinary authority over them. This dynamic suggests that apprentices are not merely outsiders awaiting admission but are already positioned on the profession's frontier, undergoing socialisation into its norms.

- Social Impact

In professions such as public accounting, practice is often organised within firms. Within these structures, partners and senior accountants influence public perception more than junior or ordinary accountants. In some countries, such as the UK, Canada, and New Zealand, licensing for public practice is distinct from membership. Ordinary members lacking these additional licences are barred from offering certain public-facing services reserved for more senior or specially licensed members.

- Governance

Traditional perspectives on professions often envision a sharp divide between insiders and outsiders, ignoring the complexities of governance. While this binary view may apply to British accounting professions, governance in many other professions and countries involves a mix of laypersons and professionals. For instance, in the US, the governance of Certified Public Accountants (CPAs) is a state responsibility but relies on professional bodies to administer examinations (Wilkinson, 1988). Similarly, the British General Medical Council incorporates representatives from the Privy Council, universities, and licensed professionals (Carr-Saunders & Wilson, 1933). The governance of British nursing is even more intricate, as it includes physicians among its members (Carr-Saunders & Wilson, 1933). These examples reveal that governance structures often involve insiders and outsiders, with some laypersons wielding significant influence over professional standards. As a result, the assumption of homogeneous membership does not reflect the reality of governance in many professions.

- Inter-Professional Links

Historical and contemporary inter-professional relationships further blur the boundaries between professions. For example, in the UK, universities were initially reluctant to offer accounting courses, leaving professional bodies and practising accountants to educate apprentices (Carr-Saunders & Wilson, 1933). Over time, however, university lecturers in many countries have taken over this educational role (Moores & MacGregor, 1992).

Additionally, historical evidence indicates that chartered accountants trained apprentices for their own professional body and other professional bodies, such as incorporated accountants and certified accountants (Garrett, 1961; Bakre, 2005). This cross-professional training highlights that accounting professionals do not solely engage in self-reproduction but also contribute to the development of other professions. Consequently, these inter-professional connections further obscure the boundaries of individual professions.

- Non-Practising Members

As highlighted earlier, many accountants holding public accounting designations left the public accounting sector and took on roles in listed companies, public institutions, or government cabinets. These individuals, while no longer engaged in traditional accounting practices, maintain their professional designations and affiliations. They form significant social connections with influential business leaders and policymakers through their new positions. These relationships grant them unique opportunities to influence the accounting profession, often leveraging their external roles rather than their membership within a professional body.

This capacity to impact the profession from outside traditional practice underscores the limitations of defining professions solely by membership. Non-practising members serve as conduits between the profession and broader societal structures, blurring the lines between insiders and outsiders and demonstrating the fluidity of professional influence.

Hence, this chapter proposes a structural framework for understanding professions: (1) a profession is a cloud in the social network with no clear boundary, (2) the nodes were connected by social relations such as shared membership, mentorship, employment, business partnership, and cooperating in regulating the professional body, (3) different nodes have different impact from other nodes; some nodes such as large firm partners or professionals working as politicians could exert more influence than ordinary apprentices.

This structural perspective moves beyond rigid membership definitions to highlight the human relationships and networks that underpin professional systems. By incorporating methodologies such as graph theory and quantitative analysis (Wellman, 1991), this approach provides a richer, more nuanced understanding of professions, focusing on the interplay between individuals, their networks, and the structural factors that shape professional dynamics.

2.4.2. Defining profession from the interactionism angle

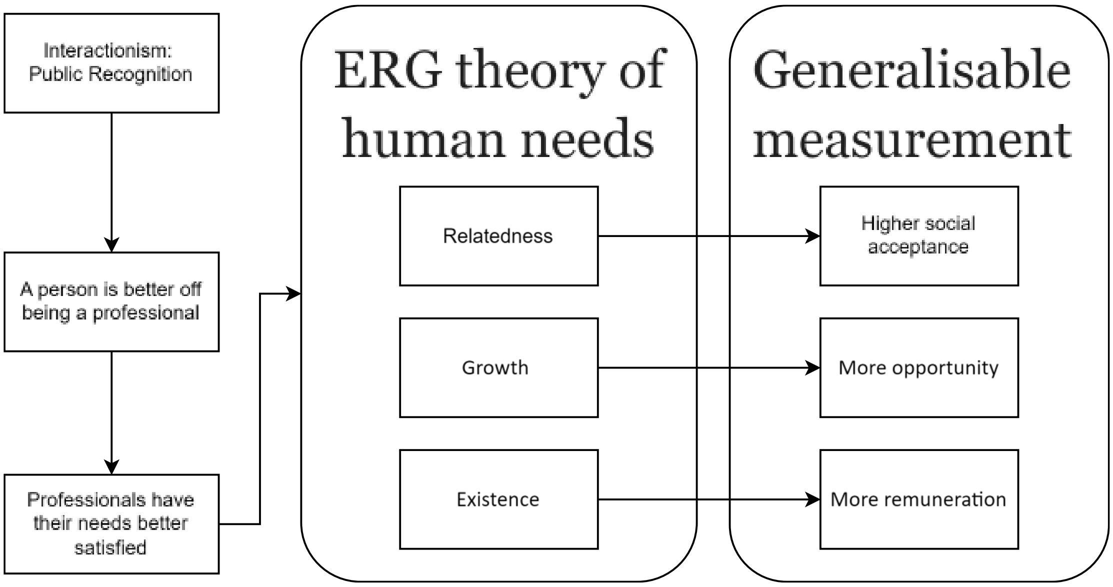
The original Interactionist definition of a profession characterises it as a group of practitioners recognised by the public as such (Becker, 1962; Hughes, 1963). While this definition is broad, it poses significant challenges for practical measurement. To address these limitations, this chapter redefines professional recognition by incorporating two key dimensions: formality and effect.

Regarding formality, professionals need to be perceived by the public as superior service providers compared to laypersons. Without this criterion, any privileged group with high incomes could be misclassified as a profession, making the term indistinguishable from a mere "privileged class." In terms of effect, professionals must enjoy a "better status" than laypersons. This status should correlate with their structural position within the professional network. For instance, core members of a profession should, on average, occupy a higher status than apprentices at the network's periphery. Without an observable effect, the designation "professional" could be misused to legitimise privilege without fulfilling its functional role (Goldner & Ritti, 1967), diverging from the foundational theories that link professions to de facto privilege. While the definition does not prescribe a specific "better status" form, it stipulates that at least one form must exist for a group to qualify as a profession.

This revised definition is both consistent with existing research and offers additional nuance. For example, it aligns with findings that professionals often invoke public interest to secure private benefits and limit competition (T. Lee, 1995). Moreover, it integrates Marxist and Foucauldian insights, highlighting the role of state-professional relationships. Moreover, these theories tend to oversimplify by treating professionals as a homogeneous group, neglecting internal structures. Neo-institutionalism, by contrast, attributes the elevated status of professionals to institutional frameworks, while Neo-Weberian theories emphasise the monopoly of specialised knowledge as a tool for market closure. This revised definition extends beyond traditional perspectives by rejecting the assumption that a knowledge monopoly is a prerequisite for professional status. Instead, it acknowledges that professionals can achieve elevated status through market differentiation without monopolising knowledge (Velayutham & Rahman, 2000). This broader framework provides a more flexible understanding of the complex dynamics underpinning professional recognition and status.

By refraining from prescribing the specific form of "better status," the framework allows diverse theoretical approaches to measure how practitioners are treated more favourably than ordinary individuals (**Figure 5**). Suitable theories for such measurement include motivation theories, need theories, and other sociological models. In this thesis, financial experts' unique historical and social context differs significantly from the contexts addressed by contemporary theories. Therefore, a broadly applicable theory, such as the need theory, was deemed appropriate. Among need theories, the ERG theory was selected as the theoretical foundation for this thesis due to its empirical support and its ability to address the diverse dimensions of professional status.

Figure 5
Interactionism to Generalisable Measurement.



2.4.3.Relatedness: Social acceptance

Social acceptance is assessed through the network attributes of financial officials within the social structures of the Sung Empire. As outlined in Chapter 2, the relatedness of financial officials can be evaluated based on the extent to which their peers socially accept them. While contemporary studies often employ questionnaires to capture participants' perceptions of social acceptance (e.g. Moffat et al., 2018), historical research lacks such methodological conveniences.

Two primary approaches are available to measure the social acceptance of financial officials: (1) analysing opinions documented in historical texts and (2) examining the recorded social relationships of officials, such as friendships and kinship ties. Both methods, however, are susceptible to survivorship bias. Historical records reflect selective documentation—opinions were only preserved if deemed noteworthy by the compilers, and social relationships were chronicled based on their perceived historical significance.

Despite content and form selection contributing to survivorship bias, the latter is comparatively more neutral regarding subjective opinions. Therefore, this thesis employs the recorded social relationships of financial officials as a proxy for measuring their social acceptance. This approach also indicates how well the need for relatedness was fulfilled among financial officials. If these officials were less connected to influential individuals than their peers, it would suggest lower social recognition within the bureaucratic hierarchy.

Social recognition of financial officials can be assessed through various analytical lenses. This study addresses the following research sub-questions, each aimed at capturing different dimensions of their social embeddedness within the elite bureaucracy of the Sung Empire:

1. The core of social network: Were financial officials integrated into the core of the broader social network of elite officials?
2. Community Cohesion: Did financial officials constitute a distinct and cohesive sub-community, formed through close ties with their kin, mentors, mentees, and friends?
3. Local Community Dispersion: Were financial officials socially represented across various local communities within the broader bureaucratic network?
4. Network Centrality: Did financial officials, on average, occupy positions closer to the centre of the overall social network compared to their non-financial counterparts?

To investigate the final question, the following hypothesis is formulated:

Hypothesis 1 (H1): The eigenvector centrality of an individual is not associated with their financial appointment.

2.4.4. Growth: Opportunity for appointment

The opportunity for appointment serves as an indicator of professional development. Traditional scholarship posits that certain professions facilitate social mobility (D. R. Matthews, 2017; Parry & Parry, 1976) and confer competitive advantages over non-specialist practitioners (T. Lee, 1995). In the context of the Sung Empire, officials' social mobility can be assessed through their opportunities to gain experience and advance within the bureaucratic ranks, particularly in financial roles (see Chapter 5).

As discussed in Chapter 3, the number of officials exceeded the available positions, necessitating a strategy to maintain political stability. Consequently, many officials struggled to secure stable employment. Greater access to appointment opportunities allowed officials to accumulate the necessary experience for promotion, fostering professional growth. However, not all appointments signified recognition of financial expertise. If financial officials were predominantly assigned to non-financial roles, such placements would reflect a valuation of general administrative experience rather than specialised financial skills. Recognition of financial expertise can only be inferred when candidates with financial backgrounds are preferentially selected for senior financial positions. Based on the key question, the following hypothesis is formulated:

> **Hypothesis 2 (H2)**: The number of junior-ranking financial positions held by an official is not correlated with the probability of their appointment to senior-ranking financial positions.

2.4.5. Existence: Salary ranks

One of the primary drivers of professionalisation is the pursuit of economic rewards, which can be secured through mechanisms such as legally-sanctioned monopolies (Saks, 2012, 2016) or market differentiation (Velayutham & Rahman, 2000). The remuneration of financial officials in the Sung Empire comprised a combination of salary and position-based stipends. While stipends were tied to specific terms of office, salary ranks (or pay grades) provided a stable, ongoing income. Thus, salary rank represents a critical measure of an official's economic security and, by extension, their professional "existence." If financial officials attained higher salary ranks than their non-financial counterparts, it would suggest that their economic needs were more effectively met. This, in turn, reflects the value attributed to their roles within the bureaucratic system. Therefore, this part of the research consists of two main research questions. First, were job stipends for financial positions comparable to or higher than those of senior officials in other functions? Second, was financial expertise correlated to higher salary ranks? To test the last question, the following hypothesis is formulated:

> **Hypothesis 3 (H3)**: Financial expertise is not related to the highest salary rank of an official.

Chapter 3. Understanding the Financial Experts of the Sung Empire in World History: A Geopolitical Analysis

3.1. Introduction.

> *The growth of the modern state, as measured by finances, is explained primarily not in domestic terms but in geopolitical relations of violence. (Mann, 1986, p. 490)*

This chapter aims to elucidate the historical significance of the bureaucrats undertaking financial positions for the Sung Empire by providing the reason that the Sung Empire went into the process of modernisation as a fiscal state far earlier than the Western world. Also, this chapter provides the context to understand the work of the bureaucrats undertaking financial positions. It indicates that these bureaucrats must learn financial skills and become financial experts.

The Eastern "early modern" period, spanning the late T'ang Empire, the Five Dynasties, and the Sung Empire, saw significant transformations in the relationships between rulers and their administrative staff (Miyakawa, 1955). Fixed-term bureaucrats replaced the potent aristocratic clans (Shih-tsu, 士族) (Miyakawa, 1955), centralised professional armies supplanted militias and regional forces led by military governors, and a fiscal state emerged to support these transitions (W. G. Liu, 2015). While numerous scholars have examined the causes of these changes, this chapter seeks to approach the topic from a geopolitical perspective. It argues that these institutional transitions were natural responses to shifts in the global geopolitical structure. The profound impact of these geopolitical changes rendered many traditional institutions untenable, driving the institutional evolution that followed.

The remainder of this chapter is structured as follows: Section 2 discusses the research background, including the position of the Sung Empire in global history, the framework of geopolitics, and Selectorate theory. Section 3 reviews the geopolitical structure of the Sung Empire. Section 4 analyses the geopolitical codes employed by the Sung Empire in response to its geopolitical structure. Section 5 explores the connection between these geopolitical codes and the status of financial experts. Finally, Section 6 concludes this chapter.

3.2. Background and Theory

3.2.1. Positioning the Sung Empire in global history

One of the most significant aspects of the Sung Empire in global history is its role as an early victim of the nomadic conquests originating from Inner Asia. The interaction between sedentary and nomadic societies represents a recurring theme in world history. From the Roman Empire to the Han Empire, sedentary civilisations frequently faced pressures from nomadic groups. Historical records document encounters with groups such as the Scythians (Sulimirski, 1954), Huns (Heather, 1995), and Xiongnu (Lin et al., 2019). Later, nomadic peoples such as the Mongols (Saunders, 2001), Jurchens (Schneider, 2011), Mughals (Fisher, 2015), and Turks (Brockett, 2014) established their empires through the conquest of sedentary populations. These pressures compelled sedentary societies to adapt and innovate. For instance, the Byzantine Empire developed new tactics and strategies to defend against nomadic groups such as the Arabs and Turks (Treadgold, 1995). Similarly, the Republic of Venice adapted its navy to maintain Mediterranean dominance against the Ottoman Empire (Dotson, 2001). The Sung Empire, unable to wait for industrial advancements, had to innovate by organising resources more effectively. It achieved this by creating a centralised professional army sustained by a fiscal state.

A fiscal state is a political system that levies taxes to fund public services, including national defence and infrastructure (Petersen, 1975). Although modern states commonly operate as fiscal states, this trend only re-emerged within the past five centuries (Petersen, 1975). Although the Roman Empire resembles a modern fiscal state by maintaining a standing army, the monetary wages for soldiers were often insufficient: Roman soldiers were compensated with land and citizenship as significant supplements to their pay (Treadgold, 1995). In much of the sedentary world, feudal manorial systems were developed as a means for rulers to control land and populations in economically constrained conditions (Grabowski, 1991; Cheyette, 2008), generating military powers without centralised tax systems. However, when the need for defensive power increased, the emergence of centralised standing armies necessitated alternative financial systems, with the fiscal state representing the most mature model. While this development was not deemed essential in the Western world until the 15th century, the sedentary polities of the East faced nomadic threats earlier, compelling them to transition to fiscal states more rapidly. The Sung Empire was among the first to establish a large, centralised standing army, successfully defending itself for three centuries until the “invincible” Mongols ultimately conquered it.

Unlike the feudal system, which could be implemented through relatively informal policies (Stephenson, 1941), a fiscal state requires a complex and systematic approach (W. G. Liu, 2015). Such a system necessitates sophisticated financial infrastructure, a skilled bureaucracy to manage resources, and a robust incentive structure to ensure vigilance and accountability among civil servants. The Western world did not develop comparable systems for its civil servants until centuries after the Sung Empire's innovations. Consequently, studying the Sung Empire provides valuable insights into the universal principles underlying the evolution of accountability mechanisms within human societies.

3.2.2. Existing History Research with Geopolitics

This study employs geopolitics as its research framework for two key reasons. Firstly, geopolitics provides a versatile lens for historical analysis, enabling diverse interpretations that are not confined to a single disciplinary perspective. Secondly, the military and its auxiliary activities were central to the Sung Empire, as a significant proportion of its stable income was allocated to military expenditures and supporting functions (汪, 1995).

Geopolitics, as an academic discipline, has evolved substantially over time. Initially introduced by Rudolf Kjellén as a theory that conceptualised the state as a geographical entity (Kjellén, 1906), it was expanded by scholars such as Halford Mackinder and Edmund Walsh slightly later in the early twentieth century to encompass broader international and strategic considerations (Cohen, 2015). Subsequent contributions by Geoffrey Parker and John Agnew reoriented geopolitics toward global issues, positioning states as the primary agents of analysis (Cohen, 2015). In more recent decades, the rise of globalisation and transnational threats, including terrorism, introduced new geopolitical agents such as non-governmental organisations (NGOs) and terrorist networks. This led to further adaptations of the discipline to account for the roles of organisations and individuals (Flint, 2021). Additionally, feminist and critical theories have enriched the field, offering alternative perspectives and fostering a subdiscipline focused on non-state actors (Flint, 2021). Today, geopolitics is a highly interdisciplinary domain, integrating insights from geography, political science, history, economics, anthropology, sociology, and other fields (Cohen, 2015). Drawing on Cohen's framework (2015), this study explores geopolitics through seven core themes: (1) key geopolitical agents, (2) geographic context, including physical geography, resources, and strategic locations, (3) historical context, (4) political and economic structures, (5) military capabilities, (6) international relations, and (7) cultural and ideological factors.

In Chinese-language scholarship, geopolitics has been a common framework for examining the T'ang and Sung Empires, often focusing on their diplomacy and military affairs. For example, Wu (吴晓萍) (2004) analysed the flexible geopolitical strategies—or codes—of the Sung Empire, while Li (李魏巍) and Wan (万晓波) (2018) examined the geopolitical codes of Tali, a neighbouring state of the Sung Empire. Scholars have also applied geopolitical perspectives to governance policies in different geographical regions (于, 2009; 刘晨曦, 2012; 田, 2014; 裴 & 张文, 2014; 闻, 2019). Sun (孫瓔珞) (2006) explored the influence of geopolitics on governmental structure. Zhao (赵天改) (2010) highlighted the geopolitical importance of the capital cities of these empires. Regarding the T'ang Empire, Li (李鸿宾) (2011) examined ethnic relations through a geopolitical lens, while Mu (穆渭生) (2002, 2006) focused on the military significance of strategic locations.

Beyond geopolitics, studies on human geography during the Sung Empire have also made notable contributions (王树连, 2002; 郑, 2011; 马, 2004, 2005). Trade policies have been another area of interest. Chan (2008) argued that geopolitical considerations, rather than ideological preferences, shaped the foreign trade policies of the Sung and Ming Empires. During periods of intense external pressure, such as the late Ming Empire and the Sung Empire, efficiency-driven trade policies were adopted to generate revenue. In contrast, the early Ming Empire pursued authority-focused trade policies when foreign threats were minimal (Chan, 2008).

Despite these valuable contributions, most studies have not explicitly linked the geopolitical codes of the Sung Empire to its internal political structures or the institutions that facilitated these codes. This chapter addresses this gap by examining the relationship between the Sung Empire's geopolitical strategies, domestic political settings, and the institutional frameworks that emerged.

3.2.3.The Selectorate Theory

The Selectorate theory, as articulated by Bueno de Mesquita et al. (2003), forms the analytical foundation for examining political dynamics in this chapter. According to this theory, an incumbent requires sufficient support from a Winning coalition to maintain power (**Table 6**). In democracies, the Winning coalition typically comprises the voters who back the incumbent. In non-democratic regimes, the Winning coalition consists of individuals who control the critical instruments necessary to sustain the incumbent's rule, such as feudal lords, generals, and tax collectors. Hence, a challenger can displace the incumbent if the incumbent loses enough members of the Winning coalition. Such defections generally occur when winning coalition members believe their position would improve under the challenger’s leadership.

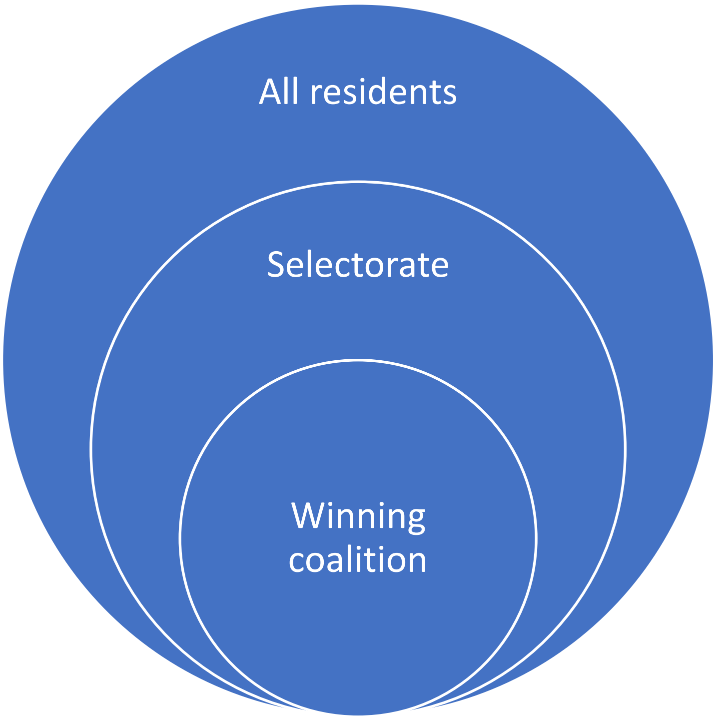
The group from which members of the Winning coalition are drawn is collectively referred to as the “Selectorate” (**Table 6**). If the Selectorate’s size closely mirrors that of the Winning coalition, the position of the coalition’s members is relatively secure. In this scenario, the same individuals will likely be relied upon for governance, irrespective of leadership changes. However, when the Selectorate is significantly larger than the Winning coalition, members of the coalition face greater uncertainty. A challenger has the flexibility to replace the members of the former Winning coalition with other Selectorate members, reducing the attractiveness of defection or increasing the cost to bribe the current Winning coalition to defect. Consequently, a low Winning coalition-to-Selectorate ratio enhances the stability of the incumbent’s rule by discouraging defections.

To maintain the loyalty of the Winning coalition, the incumbent must outcompete challengers in delivering benefits. These benefits typically consist of a mix of private and public goods. Private goods are exclusive to members of the Winning coalition and are often preferred when the coalition is small and identifiable. In such cases, allocating fiscal resources extracted from the broader population toward private benefits for the coalition is cost-effective. Conversely, funding sufficient private goods for all members becomes impractical when the Winning coalition is large. Instead, providing public goods, such as national security, infrastructure, and sound economic policies, becomes a more viable strategy.

As this thesis primarily focuses on historical non-democratic regimes, the provision of private goods holds particular relevance. Firstly, a stable and consistent inflow of fiscal resources was critical for the survival and development of the political order. Interruption of this flow, especially when royal treasuries were depleted, risked the collapse of governance as coalition members withdrew their support. Restoring a polity after its disintegration was often far more costly than maintaining it. Therefore, incumbents were incentivised to accumulate reserves and implement systems to ensure stable revenue streams.

Secondly, incumbents sought to lower the Winning coalition-to-Selectorate ratio to secure the loyalty of their coalition. This could be achieved by reducing the Winning coalition's size or expanding the Selectorate. Both strategies increased the incumbent’s leverage, ensuring a more stable rule by limiting the opportunities and incentives for defections within the coalition.

Figure 6
The Three Scopes of People in Selectorate Theory.



3.3. The Geopolitical Structure.

The analysis of the geopolitical structure in East Asia and Inner Asia before the 11th century is organised into four subsections, each addressing key aspects of geopolitics. The first subsection examines the geographic context, focusing on the enduring stability of physical geography despite changes in food production and the strategic significance of various locations. The second subsection explores the evolution of the most dynamic geopolitical agents in the region: the nomadic peoples. In contrast to the relatively stable geography, these groups played a pivotal and ever-changing role in shaping the geopolitical structure of Inner and East Asia. The third subsection delves into the historical context, particularly emphasising the T'ang Empire, which set the stage for subsequent regional developments. Finally, the fourth subsection addresses the remaining factors influencing the geopolitical structure of the Sung Empire and its predecessor, providing a comprehensive understanding of the interplay between geography, agents, and historical dynamics.

3.3.1.The Geography around the Sung Empire

i. To the North: Inner Asia and North-East Asia

Inner Asia encompasses Central Asia, the Tarim Basin, Mongolia, and adjacent areas, with Manchuria lying to its east. Characterised by a cold climate, much of Inner Asia is unsuitable for crop farming but is well-suited for pastoralism, providing expansive pastures for nomadic communities. The region's traversable terrain facilitated the development of trade routes connecting the Western world to the Tarim Basin, Mongolia, and Northeast Asia via the steppe (Di Cosmo, 1999). Until the maritime trade routes flourished during the T'ang Empire, these overland routes remained the primary linkage between the Western world and China Proper (Lattimore, 1950). Long-range trade was critical, complementing traditional economies based on animal husbandry and limited agriculture.

From a military perspective, the region's open terrain made it difficult to defend against southern neighbours equipped with sufficient resolve, a robust treasury, efficient logistics, and a cavalry-based expeditionary force (Long, 2019). However, it was rare for sedentary empires to meet all these conditions. Even when invasions were feasible, occupying and governing these areas proved economically inefficient, further limiting sustained military campaigns.

ii. North China

North China was the cradle of early Chinese empires, between the Great Wall and the southern river systems. The region's mild climate and the fertile plains nourished by the Yellow River provided abundant arable and habitable land for its occupants (Tregear, 1976). It can be divided into three regions: the North China Plain, the Ho-Lo area, and the Kuan-Chung Basin. **The North China Plain** is the region's largest expanse of cultivable land. Its flat terrain, devoid of mountains and complex river systems, makes it difficult to defend, which historically led to the unsustainability of smaller polities and a higher likelihood of unification under a single, large empire (Tregear, 1976). For much of history, the North China Plain served as a terminus for trade routes until overseas commerce with Korea, Japan, and the Ryukyu Islands expanded. **The Ho-Lo area**, situated between the western Kuan-Chung Basin and the eastern North China Plain, is a smaller, more defensible region due to its surrounding mountains and rivers (Tregear, 1976). However, its limited agricultural output meant that garrisoned armies often depended on supplies from nearby areas. Strategically positioned, the Ho-Lo area served as an ideal location for balanced capital, offering defensive advantages and ease of transportation. **The Kuan-Chung Basin**, located in the western part of North China, connects the Ho-hsi Corridor to the Ho-Lo area (Tregear, 1976). Surrounded by mountains, the basin offers excellent defensive capabilities. Its agricultural productivity historically supported medium-sized armies with food, clothing, and equipment when the climate was favourable. However, over-farming and climate change eventually reduced its agricultural capacity. As a trade hub, the Kuan-Chung Basin linked the Tarim Basin with the eastern regions, facilitating commerce between East and West.

The traditional staple crops in North China were millet varieties (Liao et al., 2022). Though more productive, wheat was initially considered inferior due to the lack of efficient processing and cooking technologies (Lu et al., 2019). The introduction of stone mills during the T'ang Empire gradually elevated wheat from emergency food to a staple, unlocking its high productivity (Lu et al., 2019). Advancements in water conservancy and irrigation further boosted wheat cultivation, transforming North China into a vital centre of food production, population growth, and cultural development. The region's **climate** played a significant role in shaping its economy and military strategy. During favourable conditions, the Kuan-Chung Basin could sustain a small royal army. However, colder climates led to agricultural declines, necessitating food imports from surrounding areas to sustain larger armies (Lu et al., 2019; Wang et al., 2010).

From a military standpoint, the Great Wall was a critical defensive structure maintained by sedentary empires to protect North China from northern invaders. The Yanyun area, located at the eastern end of the Great Wall, formed a strategic link between Manchuria and the North China Plain. This region, encompassing the mountains and rivers near Peking (Beijing), was a vital defensive point for many empires, including modern China (Chen, 2018). When controlled by a sedentary empire, the Yanyun area reduced the need for a significant defensive force along the Great Wall. Conversely, losing control of this region necessitated substantial garrisons on the southern plains and additional military engineering to fortify the terrain (Chen, 2018; Zhang, 2011).

iii. Southern parts

The southern regions of China were home to diverse Indigenous peoples and were distinguished by their traditional rice-based agriculture (X. Yang et al., 2017). Rice cultivation, typically conducted in lowlands with abundant water supplies, was gradually supplemented by Champa rice, which was introduced into the Chiang Huai region. With its early maturation, Champa rice mitigated the risks of autumn droughts associated with climate variability (Barker, 2011). This innovation and the expansion of agricultural practices contributed to the steady increase in food production, transforming southern China into the empire's primary food basket by the T'ang period.

In addition to rice, the southern regions were significant producers of tea, a luxury product essential to long-distance trade (Shi et al., 2020; Smith, 1991; 黎, 1995). During the Sung Empire, a thriving trade route emerged between the Ssu-chʾuan Basin and Tibet, exchanging tea for horses and other goods (Shi et al., 2020). Maritime trade also flourished, particularly from the T'ang Empire onwards, with many of the most prominent ports in southern China (Sen, 1996).

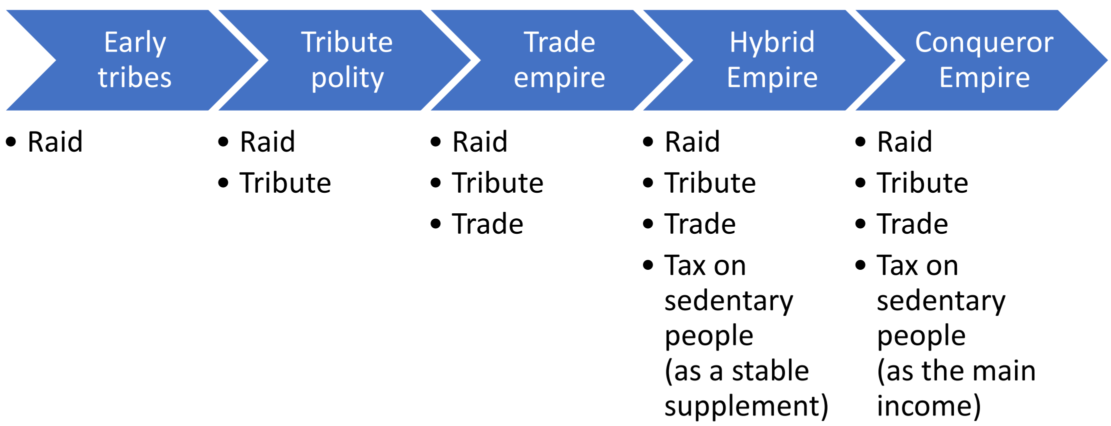
From a military standpoint, the southern terrain, characterised by scattered mountain ranges, hilly regions, and dense waterways, was naturally defensible, especially against cavalry incursions (X. Li, 2023).

3.3.2. The Evolution of Nomadic Peoples

The evolution of nomadic peoples is a critical factor in this analysis, bearing two essential dimensions. Firstly, from a global perspective, nomadic peoples exerted a profound and lasting influence on sedentary societies worldwide. Waves of invasions originating in the conflicts of Inner Asia often triggered domino effects, displacing populations and reshaping regions (Mackinder, 1904). For the sedentary peoples of Eurasia, defending against nomadic incursions became one of their most urgent and transformative challenges, fundamentally altering their societies (Mackinder, 1904). Consequently, any comprehensive geopolitical analysis of a historically sedentary polity would be incomplete without considering the pressures exerted by its nomadic neighbours.

Secondly, from a domestic standpoint, the Sung Empire devoted substantial resources and attention to countering the threats of nomadic peoples. This focus is evidenced by the vast budget allocated to national defence, the considerable tributes paid to maintain peace with nomadic neighbours, and the frequent wars fought against them (汪, 1995). Thus, understanding the evolution of nomadic peoples is essential to comprehending the Sung Empire's strategic priorities. Moreover, any interpretation of the shifts in the empire's geopolitical codes must account for the persistent pressures these nomadic neighbours impose.

Figure 7
The Evolution of the Political Order of Nomadic People.



i. From Raids to Early Polities

The conquests of nomadic peoples represent some of the most pivotal episodes in world history (Gommans, 2007). The Hsiong-nu nearly brought down the first emperor of the Han Empire (史記, ca. 91 BCE/n.d., 高祖本紀), while the Huns posed an existential threat to the Roman Empire and came close to besieging Rome itself (Heather, 1995). The Mongols created an empire stretching from the Pacific Ocean to Hungary (Saunders, 2001), and the Mughal Empire established dominion over India, enduring British influence until 1857 (Fisher, 2015). The Jurchens ruled much of continental East Asia until the fall of the Qing Empire in 1912 (Lieberman, 2008). Similarly, the Ottomans conquered the Byzantine Empire, controlled critical trade routes between East and West, laid siege to Vienna, and maintained their power until 1922 (Brockett, 2014). From the perspective of sedentary societies, nomadic peoples were often perceived as a formidable threat.

However, nomadic warriors were not invincible forces immune to hardship. On the contrary, they were acutely vulnerable to natural conditions, arguably even more so than sedentary populations (Di Cosmo, 1999). During periods of environmental stress or disaster, nomads faced stark choices: risk their lives raiding sedentary communities for resources or abandon weaker members of their tribes to survive (Di Cosmo, 1999). Raiding, therefore, became a form of “public good,” ensuring the collective survival of the community. However, once immediate crises were alleviated, the risks of further raids often outweighed the potential benefits. Early agricultural technologies yielded minimal surpluses, making repeated raids increasingly unproductive. Over time, this dynamic led to the de-escalation of conflicts, with nomadic tribes retreating to their traditional pastoralist lifestyle (Part 1 of **Figure 7**).

The political structure of nomadic tribes also reflected this precarious balance. Leaders maintain authority during crises by providing public goods in the form of organising collective raids. In stable times, however, they were compelled to shift to offering private goods to retain the loyalty of their Winning coalition. This necessitated a steady income to sustain political cohesion.

Sedentary societies exploited these vulnerabilities by manipulating the risks and rewards of raiding. Defensive structures such as long walls exemplified this strategy. These barriers increased the difficulty for opportunistic raiding parties, often poorly equipped for prolonged sieges. The Chin Empire’s decision to unify pre-existing fortifications into the Great Wall is a striking example of such measures, effectively raising the cost of nomadic incursions and altering the dynamics of confrontation.

ii. From Early Polities to Empires

As Di Cosmo (1999) suggests, the sources of income for nomadic polities extended beyond the volatile practice of raiding to include diplomatic tributes, long-range trade, and taxes levied on conquered sedentary populations. The ability of nomadic leaders to provide private goods to their Winning coalitions was crucial for maintaining power, making the stability of their income streams a determinant of both political cohesion and the overall strength of their polities. In subsequent sections, the hierarchical levels of nomadic polities are examined alongside the strategies employed by sedentary societies to counteract them.

The Era of Tribute (Part 2 of **Figure 7**).

Although influenced by the domestic economic and political conditions of tribute-paying states and rival empires' diplomatic campaigns, tribute income provided a more stable alternative to the uncertainties of raiding. This steady stream of resources supported the evolution of nomadic groups from temporary federations to stable tribal unions. The Hsiong-nu in ancient Mongolia exemplified a tribute-based polity (Brosseder, 2016; Di Cosmo, 1999). While they frequently raided the Han Empire, they also sought to coerce polities in the Tarim Basin to pay tributes and engage in trade.

The transition to a tribute-based system rendered traditional defensive measures, such as the Great Wall, insufficient to destabilise the Hsiong-nu. The Han Empire responded by projecting its influence into the Tarim Basin, establishing garrisons and forging diplomatic ties to shield smaller polities from Hsiong-nu incursions (Lattimore, 1950). This strategy disrupted the Hsiong-nu tribute network, effectively undercutting their economic stability. In addition to direct military and diplomatic efforts, the Han Empire adopted a peaceful approach by offering refuge to Hsiong-nu deserters, providing them with sustenance and security in exchange for peace and military support (Brosseder, 2016).

The Era of Trade (Part 3 of **Figure 7**).

The Turkic Empires (552–744 CE) exemplify a nomadic polity sustained by long-range trade, with their dominion spanning vast territories from the Black Sea to Manchuria. Notably, one of these empires supported the founding coup of the T’ang Empire, underscoring the strategic importance of trade alliances. While trade provided a more stable income source than raiding, it remained more volatile than agricultural economies.

Following the establishment of the T’ang Empire, relations with the Turkic polities soured. Like the Han before them, the T’ang pursued a dual strategy of military action and economic exclusion. Using a combination of a modest royal army and mercenary forces, the T’ang Empire attacked the Turkic empires and fortified garrisons in the Tarim Basin to block their access to lucrative trade routes (Lattimore, 1950; Long, 2019).

However, sedentary empires did not have to rely solely on warfare. After a decisive campaign that captured the khan of the Eastern Turkic Khaganate, the T'ang Empire opted for conciliation, accepting the submission of other Turkic leaders. Recognising the T'ang emperor as the "Tengri khagan," the Turkic elite were permitted to retain their traditional lands, while the T'ang generals assumed key administrative roles (Long, 2019). This conciliatory approach fostered a more cooperative relationship, as evidenced by the T'ang Empire's alliance with the Uyghur Empire. The Uyghurs not only provided military assistance to suppress the An Lushan Rebellion (安史之乱) but also engaged in frequent trade with the T'ang, exchanging silk, horses, and other goods.

The Era of the "Hybrid System" (Part 4 of **Figure 7**).

The Liao (辽) Empire was an early example of a "hybrid-system" nomadic empire that governed both nomadic tribes and sedentary territories. The Khitan people, initially residing along the Xar Moron and Laoha Rivers during the T'ang Empire's reign (澤本, 2008), rose to prominence as the T'ang Empire weakened. Under Abaoji's leadership, the Khitan transitioned from a tribal confederation to an emerging nomadic empire (*遼史*, ca. 1344/n.d., 本紀第一). Upon conquering the sedentary Bohai people, Abaoji established the puppet state of "East Khitan" (東丹), installing his eldest son as emperor to rule using Sinicised administrative methods (*遼史*, ca. 1344/n.d., 列傳第二). Eventually, this puppet state came under the direct control of the Khitan Empire, which expanded its dominion over additional sedentary lands. To manage its dual populations, the Liao Empire bifurcated its governance: the northern branch oversaw military affairs and nomadic tribes, while the southern branch administered sedentary populations, including tax collection and prefectural management (*遼史*, ca. 1344/n.d., 志第十五). During the early Liao period, Abaoji's second son, who succeeded him, employed a strategic balance of raids and conquests. The political fragmentation in the North China Plain after the T'ang Empire's decline offered opportunities for both. While conquest provided a more stable income, as seen in territories like the Bohai state and the Yanyun region, it required substantial efforts to maintain stability and effective administration (Staden, 2005).

Hybrid empires posed an unprecedented challenge to sedentary states. Firstly, the stability provided by agricultural taxes strengthened their political and military institutions, enabling sustained power projection (Di Cosmo, 1999). Unlike earlier nomadic polities weakened by internal conflicts, hybrid empires retained cohesion and directed their power outward. Secondly, their ability to govern sedentary populations incentivised long-term occupation over temporary raids (Staden, 2005). This increased capacity and determination to control sedentary lands exerted immense pressure on contemporary sedentary states like the Sung Empire. From this era onward, sedentary empires struggled to retain their territories, often succumbing to nomadic powers.

The Final Form of Nomadic Empires (Part 5 of **Figure 7**).

The ultimate evolution of nomadic empires culminated in the Mongol, Mughal, Ottoman, and Ch'ing empires. These polities controlled vast sedentary territories, including regions such as Minor Asia, South Asia, and China Proper. Their emperors extracted substantial resources from sedentary populations, ensuring the stability and longevity of their regimes. However, since the Mongol Empire emerged after the fall of the Sung Empire, this specific form lies outside the scope of this chapter.

Nomadic Warriors in Sedentary Polities

Beyond the formation of empires, many nomadic warriors served as auxiliaries in sedentary states. Comparable to the Auxilia of the Roman Empire, these foreign legions were integral to the military strategies of sedentary polities. The T'ang Empire famously employed foreign warriors and even appointed their leaders as regional military governors. Similarly, the Sung Empire relied on foreign auxiliaries (known as 蕃弓箭手) (*宋史*, ca. 1346/n.d., 志第一百四十三). However, as these warriors operated within the framework of sedentary states, their role is addressed in later discussions on the militarisation of the Sung Empire.

Reconciling with Traditional Historiography

The evolution of nomadic polities, from loose tribal confederations to empires, is documented in the historical texts of sedentary societies in East Asia. However, due to the influence of Sinocentrism, these developments were often mischaracterised as Sinicisation rather than an organic progression. While nomadic leaders did adopt certain despotic institutions from sedentary states, this was often interpreted as a superficial cultural assimilation. Di Cosmo (1999) argues that these actions represented genuine political adaptations to maintain control, embodying despotism in substance rather than mere form. Further, the evolution explanation is consistent with the generic worldwide development of political order (Fukuyama, 2011).

iii. Linking Nomadic Tribes to World History

The most critical aspect of this transformation was the escalation of the nomadic threat in both qualitative and quantitative terms. Nomadic motivations shifted from temporary raids to the permanent occupation of territories, while their military structure evolved from ad hoc raiding parties to organised, cavalry-based standing armies. Consequently, the traditional defence strategies of sedentary empires were no longer sufficient to deter or halt these emerging nomadic states. This necessitated the development of new strategies by sedentary polities, which, in turn, required comprehensive changes to their internal political structures (See **Table 4**). The following two subsections examine and compare the geopolitical dynamics before and after this pivotal shift.

Table 4
The Coevolution in Political Order by Nomadic and Sedentary Peoples.

Era of the Nomadic Polities	Nomadic Polities		Sedentary polities	
	Main Aim	Strategy	Main Aim	Counter Strategy
Nomadic Confederations	One-off gain of resources	Raid	Secured border.	Policing force
Trade empire	Secured trade route	Diplomatic control of trade routes (Protectorates)	Weaken nomadic people	Diplomatic sabotage. Retaliating expedition.
Hybrid empire	Easily control land.	Opportunistic invasion.	Controlled frontier.	Strong border garrisons.
Mature nomadic empire	Conquer	Determined invasion.	Independence	A large standing army.

3.3.3.The Geopolitical Legacy of the T’ang Empire

i. The Geopolitical Structure in the Early T’ang Era

Key Geopolitical Agents and Their Relations

In the 7th century CE, as the T’ang Empire emerged, the geopolitical landscape of East Asia featured key actors such as the Sui Empire, the Turkic Khaganate, the Uyghur people, southwestern tribes, and the Tibetan state. The T’ang Empire’s foundation began with a revolt led by a Sui general, supported by the nomadic Turkic Khaganate, resulting in the swift occupation of Chang’an, the heart of the Kuan-Chung Basin (舊唐書, ca. 945/n.d., 本紀第一). However, after diplomatic ties with the Turkic Khaganate soured, the T'ang Empire launched military campaigns that ultimately defeated them. Subsequently, the Uyghur people, formerly a protectorate of the Turkic Khaganate, became a key ally, securing the T’ang Empire’s northwestern borders. Relations with the Tibetan state were more complex, marked by a mix of arranged political marriages and recurring wars. To counter the Tibetan threat, the T’ang Empire fostered alliances with southwestern tribes, facilitating the rise of the Ta-meng (大蒙) state, which served as a buffer against Tibetan incursions.

Geographical Context

The T'ang Empire's geographical position offered strategic advantages. A continuous mountain range in the north and west shielded the empire from opportunistic raids. While wars with Tibet were intense, the rugged terrain and climate made sustained Tibetan incursions into the Kuan-Chung Basin difficult (*舊唐書*, ca. 945/n.d., 卷一百九十六上). Even when Tibetan forces penetrated the basin, the hot climate hindered occupation (*舊唐書*, ca. 945/n.d., 卷一百九十六上). Additionally, the canal and river systems constructed during the Sui era enabled the transportation of food from the North China Plain to the Ho-Lo region and, ultimately, to the Kuan-Chung Basin (全, 1995). This logistical infrastructure ensured the empire could sustain the soldiers needed for its defence (全, 1995).

Military and Economic Setting

The T'ang military and economic systems were underpinned by two integrated mechanisms: Chun-tien (均田, land allocation to militias) and Fu-ping (府兵, organised militia service) (Lewis, 2021). Male adults granted arable land by the imperial court were obligated to provide labour and military service. In peacetime, these militias underwent regular training organised by the regional military facility (Che-Chung Fu, 折衝府) (Lewis, 2021). Each regional military facility mobilised and sent its self-sustained militias to the designated commanders during wartime. After the campaigns, the militias were returned to their original regional military facility to be demobilised (Lewis, 2021).

This system, roughly resembling a feudal arrangement, limited the need for currency circulation: the imperial court exchanged land for military and labour services without relying on a monetary economy. Consequently, the early T'ang Empire required fewer financial administrators and avoided the complexities of managing monetary systems.

Ideology

Since the Chou era (周), various philosophical schools have debated governance principles. Daoism (道家) advocated laissez-faire policies, while "Legalism" (法家) emphasised strict control through rewards and punishments (Tang, 2022). Confucianism sought to transform the state into a Foucauldian panopticon, fostering self-regulation among the populace through socialisation and moral education. Early

Han emperors initially embraced Daoism to signal a departure from the harsh "Legalism" of the Ch'in Empire, but eventually adopted a hybrid model combining "Legalism" and Confucianism (Tang, 2022).

Under this model, Confucianism was used to inculcate ethical norms among the commoners, reducing the government's need for direct intervention. Legalism, in contrast, provided a framework for handling situations where Confucian socialisation failed. Local officials prioritised Confucian propaganda, often at the expense of bureaucratic efficiency. The rationale was that successfully instilling Confucian values would enable commoners to resolve disputes and fulfil their needs independently, reducing the burden on government resources. As a result, proficiency in Confucian theory was often deemed more important than practical administrative skills, such as financial or judicial expertise (Zuo, 2014). Consequently, financial skills were among the areas traditionally neglected by the bureaucracy.

Politics and Bureaucracy

The T'ang Empire inherited a hybrid bureaucratic recruitment system that combined the Ch'a chü (察舉) and Chiu p'in chung cheng chih (九品中正制) frameworks. Under the Ch'a chü system, local governors and designated recruiters identified suitable candidates for bureaucratic positions (Tang, 2022). This system favoured candidates from affluent, influential, and literate families who often maintained close personal ties with recruiters through collusion and corruption. This tradition, established during the Han Empire, enabled wealthy and educated families to dominate official positions, perpetuating a cycle of privilege and power (Tang, 2022).

The Chiu p'in chung cheng chih (九品中正制), introduced during the late Han era, formalised this practice by instituting a rigid "merit" system where a candidate's eligibility for office was determined primarily by their family background (Tang, 2022). This system effectively reserved high-ranking positions for members of the established families, transforming bureaucratic recruitment into a hereditary framework of collective privilege. Unlike a feudal system, the Chiu p'in chung cheng chih allowed individuals to inherit an entitlement to bureaucratic positions instead of a pre-determined fief. While the exact position was not passed directly from father to son, the system guaranteed that young men from influential families would occupy roles within a certain rank, reinforcing the entrenched power of the elite.

From the perspective of Selectorate theory, this system created a small Selectorate, resulting in a high Winning coalition-to-Selectorate ratio. This arrangement signified "power-sharing" by usurpers to gain support from senior civil officials. However, such a system was unsuitable for stronger emperors who founded new dynasties through military conquest and did not need to share power with civil officials. Powerful rulers often sought to expand the Selectorate to include ordinary citizens and generals, thereby lowering the Winning coalition-to-Selectorate ratio. This strategy increased the stability of their rule by broadening their base of support and diluting the influence of entrenched elites.

ii. Decentralisation: The New Geopolitical Code Responding to the Change in Geopolitical Structure

The Gradual Transformation in Geopolitical Structure. The geopolitical structure of the T'ang Empire evolved gradually due to a series of challenges. Firstly, communication across these remote regions became increasingly time-consuming and costly as the empire expanded to distant territories. Consequently, deploying militias to such areas proved inefficient (陈明光, 2006). Secondly, border conflicts grew prolonged, requiring soldiers to fight or remain garrisoned for extended periods. This pinned militias in their soldier roles, preventing them from returning to production to sustain themselves and support the empire (陈明光, 2006). Thirdly, the mobilisation and demobilisation of militias were slow, making them unresponsive to address new threats in remote regions.

Decentralisation for efficiency. The T'ang Empire introduced a system of military governors (節度使) as regional administrators in response to the change in geopolitical structure. These governors recruited full-time soldiers, collected local taxes, and oversaw military-agricultural colonies to support the armies within their jurisdictions (陈明光, 2006). Full-time garrisons replaced militias due to their superior responsiveness and combat effectiveness. The empire reduced the costs associated with interregional coin and food transport by using regional tax revenues to fund local garrisons and allocating local agricultural production to sustain soldiers. This "regional expenditure covered by regional income" model allowed the empire to function without deploying a large team of financial experts to centralise and redistribute resources.

Decentralisation as a political intrigue. The arrangement may have been a deliberate political manoeuvre to consolidate imperial authority. Historically, the Shih-tsu elite families monopolised bureaucratic expertise, creating a high Winning coalition-to-Selectorate ratio that weakened the royal family. To counterbalance this, emperors sought to lower this ratio by expanding the Selectorate to include military generals, thereby diminishing the dominance of the Shih-tsu (Lewis, 2021).

iii. The Risk of Decentralisation: From a Political View

Despite its operational efficiency, the military-governor system encountered profound accountability challenges. Military governors faced persistent difficulties in maintaining political stability within their regions. During times of peace, when the imperial court exerted firm control over the empire, organisational power sufficed for civil officials to govern effectively. Rebellions were promptly suppressed by the royal army, ensuring stability. However, during periods of chaos, military governors were compelled to adopt alternative strategies to secure the loyalty of their forces and maintain governance.

Selectorate Theory provides a useful lens through which to analyse these dynamics. Military governors needed to build and sustain a Winning coalition within their polities to secure their political survival. This coalition typically comprised the governor's staff and military commanders, whose loyalty was incentivised through the distribution of private goods. When regional income was insufficient to meet these demands, military governors often relied on personal reserves of wealth to fund their coalitions. This pressing political necessity created both incentives and justifications for military governors to redirect regional income into their personal reserves. From the incentive aspect, the funds were essential to satisfy and secure the allegiance of their coalition, ensuring effective governance. From the justification aspect, withholding regional income for military purposes could be rationalised as a critical measure to fulfil their duties to the imperial crown by maintaining regional stability. Thus, retaining regional income became both a pragmatic and defensible strategy, framed as essential to their broader responsibilities to the empire.

However, this arrangement also provided military governors with opportunities to defy the royal court. Their political survival depended more on delivering private goods to their Winning coalition than on complying with directives from the central government. This dynamic created a disastrous accountability structure, aligning closely with the fraud triangle theory (Schuchter & Levi, 2016), which posits that opportunity, incentive, and rationalisation are the key drivers of fraudulent behaviour. By offering the military governors both the means and motives to prioritise personal power over imperial directives, the system fostered conditions ripe for disobedience and rebellion. Ultimately, these accountability flaws undermined the empire's stability, as the military-governor system encouraged behaviour that destabilised the central authority it was meant to uphold.

iv. When the Risk in Decentralisation Materialised

In the early years, military governors were typically appointed for short-term assignments to oversee small, strategically important areas (陈明光, 2006): short-term assignments increased the difficulty of building strong loyalty ties between the military governors and their junior officers; limited resources from small regions were insufficient to support a large-scale rebellion. However, the situation became risky when a vast region was delegated to a military governor for an extended period. Catalysed by political intrigues and mistrust, the infamous **An-Shih Rebellion (安史之亂)** happened (*舊唐書*, ca. 945/n.d., 卷二百). The rebellion dealt a significant blow to the empire, as the elite royal guard suffered heavy losses in early confrontations with the rebels. To end the rebellion quickly, the emperors borrowed troops from Uyghurs and appointed additional military governors, often disregarding concerns about their loyalty (Lewis, 2021). This decision marked a turning point in the role of military governors. Military governors began encroaching on the empire's heartlands, and many of them became reluctant to send tax revenues back to the royal court (Lewis, 2021). As more governors withheld taxes, the court increasingly relied on a few governors in wealthy southern regions, such as the **Chiang Huai** area (Lewis, 2021).

3.3.4.The Changes in the Geopolitical Structure Before the Sung Empire

Seven key changes in geopolitical structure emerged during the transitional period between the T'ang and Sung Empires: (1) the rise of stronger nomadic neighbours and the breach of defence lines, (2) the loss of access to horse resources, (3) the deterioration of the canal system, (4) the shrinking power of the Shih-tsu bureaucracy, (5) the publication of Confucian classics through block printing and the rise of new centres of learning, (6) changes in food production methods, and (7) the flourishing of maritime trade. The following sections will examine each of these changes in detail.

i. Key Geopolitical Agents

Compared to the nomadic tribes of the T'ang Empire, the Khitan Empire (Liao) was more militarily capable and determined to occupy sedentary lands. The Tangut people also transitioned from mercenaries under the T'ang Empire to a potent and independent regional force. Fortunately for the Sung Empire, the Tibetan states were weakened, and the Tameng state evolved into the Tali (大理) state while maintaining good relations with the Sung. As a result, the primary defence focus shifted from the west to the north.

ii. Defence

Following the collapse of the T'ang Empire, the North China Plain was controlled by five short-lived dynasties in a successive order, collectively known as the "Five Dynasties." During this period, it became widely known among emperors and generals that the loyalty of military leaders was often in question (See **Table 5**). Consequently, emperors sought to pre-emptively arrest generals, while generals, in turn, considered pre-emptive rebellion as a viable response (See **Table 5**). This situation led to two significant implications.

The first, a political implication, was that the lack of loyalty became a normalised social context within the imperial court. Both emperors and generals were aware of this mutual distrust, meaning that the military system had to operate on a foundation of suspicion rather than trust.

The second implication was a military and geographical concern. When General Ching-t'ang Shih (石敬瑭) found himself in a dire situation, he sought assistance from the Khitan. Desperate, he promised to permanently cede the Yanyun area to the Khitan (*梁唐晉漢周書*, ca 974, 卷七十五), creating a significant breach in the defence line of the sedentary people. Though he had pledged allegiance as a protectorate of the Khitan emperor, he was unconcerned with defending against the Khitan Empire. However, later rulers of the sedentary states were not as inclined to maintain friendly relations with the Khitan.

The loss of the Yanyun area led to two significant geopolitical changes. Firstly, as mentioned earlier in the section on the evolution of nomadic peoples, the Khitans acquired a substantial portion of sedentary land, increasing their power relative to earlier nomadic empires. According to Selectorate theory, the stable agricultural revenue from the Yanyun region was crucial for the political survival of Khitan rulers, giving them a strong incentive to defend it (Staden, 2005). Secondly, the breach of the defence line, once maintained by the Yanyun area, left the sedentary empires vulnerable. Beyond any religious or ideological motivation to control sedentary territories, the sedentary states were now compelled to reclaim the Yanyun area to restore their former defensive posture.

Given the Khitans' determination to hold the Yanyun region and the sedentary empires' desire to reclaim it, achieving peace was increasingly unlikely. In hindsight, there is little evidence to suggest that the Liao Empire (Khitan) intended to launch a full-scale invasion of China Proper (P. A. Lorge, 1996; Staden, 2005), but contemporarily, placing too much trust in the goodwill of the Khitan was politically naïve. Ultimately, the Sung Empire inherited a weakened defence system and faced a strong, seemingly invincible northern neighbour.

Table 5
The Endings of T'ang and Five Dynasties

Polity	Ended	Ended by	Method
T'ang	907 CE	**Former General of the T'ang Empire**	**Coup d'état**
Late Liang	923 CE	**Former General of the T'ang Empire**	Civil war
Late T'ang	937 CE	**Former General of the Late T'ang Dynasty**	**Armed rebellion**
Late Chin	947 CE	Emperor Taizong of the Liao Empire (Khitan)	Alien Invasion
Late Han	950 CE	**Former General of the Late Han Dynasty**	**Coup d'état**
Late Chou	960 CE	**Former General of the Late Chou Dynasty**	**Coup d'état**

iii. Horses

Horses were indispensable power sources in ancient times, serving as crucial assets in various domains. Horses were essential for the cavalry, the core of medieval military forces (Xing, 2021). Even after the decline of cavalry as a dominant military force, horses remained vital as draft animals, particularly for the transport of military equipment and logistics, which continued to play a key role in military mobility during the Second World War (DiNardo & Bay, 1988; Moore-Colyer, 1995). Beyond their military significance, horses were also a cornerstone for agriculture and trade (Shi et al., 2020). For ancient armies, the absence of horses created a distinct tactical disadvantage, especially between cavalry and infantry-based forces before the advent of modern firearms and artillery. In battles, infantry armies typically struggled to secure decisive victories, as enemy cavalry could quickly disengage and regroup for future confrontations. Conversely, an infantry defeat was often catastrophic, with cavalry pursuing and eliminating fleeing soldiers.

Thus, acquiring high-quality horses was critical to sedentary empires' military and economic strength. The T'ang Empire benefited from the Yanyun region and the Hohsi corridor, which allowed it to breed or acquire horses. However, by the time of the Sung Empire's establishment, these key regions were no longer under control, and the sedentary populations of China Proper could no longer breed horses effectively. From the Han to the T'ang periods, horses were primarily sourced from Inner Asia (Creel, 1965). The loss of traditional trade routes meant the Sung Empire had to find alternative means to secure horses. Without sufficient domestic and imported horses, the Sung Empire's military, agricultural, and trade capabilities would have been severely compromised. Although the Sung Empire adopted a defensive strategy, relying on large infantry forces to secure numerous fronts rather than employing a mobile cavalry to exploit enemy weaknesses, a vast number of horses were still needed for reconnaissance, communication, and logistics. This dependency on horses thus necessitated governmental intervention that was more pronounced than in earlier empires.

iv. Canal

The T’ang Empire relied on the Grand Canal, a monumental infrastructure project initiated by the Sui Empire (Flückiger & Ludwig, 2019). This canal facilitated grain transportation via riverboats from the Jiang Huai and North China Plain regions to the Ho-Lo area (Flückiger & Ludwig, 2019). However, by the time the Sung Empire was founded, the western sections of the canal, particularly those beyond P’ien-Liang (汴梁), had fallen into disrepair due to ongoing wars and insufficient maintenance. As a result, transporting food from P’ien-Liang to the Ho-Lo area and the Kuan-Chung Basin became prohibitively expensive (Flückiger & Ludwig, 2019). This deterioration in infrastructure made it particularly costly to maintain garrisons west of P’ien-Liang, where local agricultural production could not meet the demand for sustenance. Climate change exacerbated the situation, hindering the ability to sustain these garrisons, particularly in the northwest.

v. Food Production

The warming climate during the early T’ang Empire was crucial in stabilising food production in the northern regions, alleviating food shortages in the empire's capital (Wei et al., 2014); however, this period of warmth ended during the Sung Empire (Su et al., 2014). The onset of a colder climate resulted in reduced agricultural productivity in the north and an increased frequency of droughts, particularly in the autumn months (Su et al., 2014). This shift led to lower rainfall and diminished harvests in northern China (Su et al., 2014). As in South China, the introduction of Champa rice marked another significant geopolitical development for the Sung Empire. This rice variety, which thrived in drier and less fertile soils, could be cultivated in terraced fields on hilly terrains (Barker, 2011). Additionally, it grew rapidly and was not sensitive to day length, enabling it to be harvested twice a year in favourable conditions. Early-maturing Champa rice also proved more resilient in years of drought, making it less vulnerable to autumn water shortages caused by the changing climate (Barker, 2011). Hence, with Champa rice, South China's agricultural output became increasingly important (Barker, 2011). Further, the significance of food production in the North China Plain and the Kuan-Chung Basin diminished, with agricultural output and population gradually shifting southwards (Duan et al., 1998). In the Sui Empire (AD 605), only 25 per cent of the population resided in South China; however, by the mid-eighth century, during the T’ang Empire, this proportion had risen to 46 per cent (Smith, 2004).

In addition to climate change and population growth, southern China, from the Jiang Huai region to the Min area (modern Fujian), became a hub for the development of a new class of literati during the Sui, T'ang, and T'ang-Sung interregnum periods (Clark, 2017). Under the Sui and T'ang Empires, southern China was treated much like a colony, with the central government extracting food from the region while offering few opportunities for local inhabitants to serve in the imperial administration (Clark, 2017). However, the emergence of local kingdoms during the T'ang-Sung interregnum provided career prospects for southern China's literati (Clark, 2017).

In addition to the geographic shift in food production and population from north to south, overall agricultural output also increased, partly due to the widespread adoption of wheat processing techniques (Lu et al., 2019). Wheat was previously considered an inferior crop because it was unpalatable without milling, while millet was more favoured despite its lower yield (Lu et al., 2019). However, the introduction of milling and fermentation technologies revolutionised wheat cultivation, improving its taste and making it a highly productive and desirable crop. This shift in wheat processing contributed significantly to increased food production, which enabled the Sung Empire to maintain a large standing army that was not dependent on local food production.[18]

In conclusion, the strategic importance of South China grew considerably before the Sung Empire, and the resultant increase in total production enabled the maintenance of a large standing army. By the early Sung Empire (AD 1080), the southern population had risen to 65 per cent; by the late Sung Empire, it had reached 71 per cent (Smith, 2004). Unlike earlier empires, which could afford to lose South China, the loss of this region would have been fatal to both the T'ang and Sung Empires. Thus, defending the capital, such as in the Kuan-Chung Basin, without securing South China was no longer viable. Moreover, with increased food production, it became feasible to station a standing army in South China for its defence.

vi. The "Aristocratic" Clans: Shih-tsu

The Shih-tsu (士族) were a significant geopolitical force in continental East Asia before the T'ang Empire. Beginning with the Han Empire (206 BCE to 220 CE), three distinct groups gradually merged into a cohesive community: bureaucrats, who wielded political power, connected with the royal courts, and possessed expertise in administration; landowners, who provided wealth; and Confucians, who contributed literacy and religious legitimacy (孙亚平, 1991). These three groups formed a self-made caste, with their members primarily linked through marriage and the transmission of knowledge. In

[18] However, the cooler climate in later years probably contributed to the diminution of the financial stability of the Sung Empire, leading to the failure of the militarisation strategy.

the absence of public schools, the Shih-tsu dominated literacy and the administrative know-how necessary for governance (孙亚平, 1991). As a result, for much of the period leading up to the T’ang Empire, most emperors relied on the Shih-tsu to govern effectively.

However, a profound shift occurred in the late T’ang Empire. When a non-Shih-tsu bureaucrat rose to the position of chancellor through a combination of luck and political manoeuvring, he sought to diminish the power of the Shih-tsu. One of his key strategies was to appoint military governors—mainly generals—to limit the Shih-tsu's access to military experience and success (Lewis, 2021). This political intrigue further exacerbated tensions between the Shih-tsu-controlled royal court and the military-dominated provinces (Lewis, 2021). Before long, the T’ang Empire was torn apart by infighting among competing generals. By the late T’ang period, the Shih-tsu's influence had waned for various reasons, including massacres by rebels and warlords (Ebrey, 1978; Johnson, 1977; 孙亚平, 1991). By the time the Sung Empire emerged, only a handful of Shih-tsu families remained.

vii. The New Literati

The rise of the Chin-Shih examination. Traditionally, civil officials in the T’ang Empire were drawn from the Shih-tsu. However, when an empress consort ascended the throne as the first empress, she found it necessary to recruit bureaucrats who were loyal to her, likely because the Shih-tsu remained more loyal to the male emperor (严, 1959). As a result, she attempted to diminish the privilege of Shih-tsu by reprioritising examinations. There were two major types of examinations: “Chin-Shih” (進士) and “Ming-Ching” (明經). The “Ming-Ching” (明經) exam tested the memory and interpretation of the Confucian classics. Candidates who succeeded in this exam typically began their studies in childhood, under the guidance of skilled teachers, memorising the correct interpretations of the classics. Consequently, those who excelled were usually from Shih-tsu families. In contrast, the "Chin-Shih" exam, which assessed literary talent, was more challenging, as literary ability was not simply a matter of diligence. Ancient Chinese literature, with its strict rules on rhyme and rhetoric, emphasised the use of concise, elegant expressions that implied rather than explicitly stated the central theme (严, 1959). This made the "Chin-Shih" exam accessible to individuals outside the traditional Shih-tsu families, provided they had a natural aptitude for writing. Therefore, by prioritising the "Chin-Shih" exam, the privilege of old clans was gradually reduced, and the court opened up opportunities for ordinary people to join the ranks of the new literati.

Block printing of Confucian classics. The earliest reliable record of block printing in continental East Asia originates from the T'ang Empire (宿, 1981). Block printing was initially employed primarily for the mass production of Buddhist texts and calendars. The first recorded instance of government-sponsored block printing for Confucian classics dates to 932 CE (*冊府元龜*, ca. 1013, *卷六百八*; *梁唐晉漢周書*, ca 974, 明宗紀九). Between 932 CE and 953 CE, Feng Tao (馮道) oversaw the official printing of nine Confucian classics (*五代會要*, ca. 963, 卷八; 梁唐晉漢周書, ca 974, 明宗紀九). This initiative significantly reduced the cost of Confucian texts (*宋史*, ca. 1346/n.d., 志第一百五十五). Block printing, being an operation that greatly benefited from economies of scale, enabled the large-scale production of Confucian texts under Feng Tao's administration at a cost far lower than what could be achieved by private printers producing books on other subjects. As books became more affordable, access to Confucian literature was no longer limited to individuals born into families with extensive heirloom collections or those willing to spend years copying texts by hand. This shift allowed the sons of wealthy landowners to begin studying Confucianism using government-printed texts. Consequently, these affluent families increasingly invested in cultivating literati within their ranks (肖, 2007).

Buddhism was an unexpected catalyst for this new class of literati. Introduced to China during the Han Empire in 67 CE, Buddhism continued to spread during the T'ang Empire, with Buddhist temples established in various mountains and cities. These temples served as centres for Buddhist teaching and as places for gaining literacy and other forms of knowledge (严, 1959). Interestingly, these temples utilised block printing to mass-produce Buddhist texts and stored various non-Buddhist books, including Confucian classics. As a result, many impoverished young men took refuge in these temples, where they could study under the monks, read the books in the temples, and share meals with the clergy (严, 1959). Beyond the books and intellectual resources, the natural beauty surrounding the temples likely contributed to the aesthetic sensibilities of the temple-raised candidates, enabling them to write more refined poetry for the "Chin-Shih" exam than their counterparts in urban areas, who were typically from Shih-tsu families (严, 1959). In this way, Buddhism played a crucial role in breaking Shih-tsu's monopoly on literacy, allowing ordinary individuals to become educated and prosperous bureaucrats.

viii. Trade

To the northeast, trade routes were accessible to the nomadic peoples through the Yanyun area. When the T'ang Empire controlled this region, it became a key trade hub, facilitating further routes to Manchuria and Mongolia. However, with the Khitan assuming control of the Yanyun area, they became the primary trade partner for the southern polities. Despite this, due to national defence considerations, the Khitan Empire hesitated to provide war-related resources such as horses (Staden, 2005). Nevertheless, the Khitan traded sheep and other goods in exchange for cloth and tea, primarily produced in South China. This trade was crucial due to the substantial profit from selling cloth and tea. Silk, in particular, served not only as a luxury item but also as a form of currency, with demand appearing virtually limitless (Creel, 1965). While the Sung Empire lacked the ability to procure military resources like earlier empires, the revenue from trading with northern peoples enabled it to allocate funds for diplomacy and national defence (汪, 1995).

To the northwest, trade routes passed through the Hohsi corridor into the Tarim Basin and eventually to Inner Asia and Europe. This route was occupied by the Tangut people, who initially served as obedient garrisons under the early Sung Empire but later declared independence and rebelled against the Sung (*宋史*, ca. 1346/n.d., 列傳第二百四十四). As a result, if the Sung Empire did not relinquish its claims to the Hohsi Corridor, the ongoing conflict would disrupt trade through this vital corridor and the Tarim Basin.

To the southeast, maritime trade had already been well established during the T'ang Empire. Although domestic shipbuilding in East Asia was initially unable to produce seaworthy vessels, foreign traders and leased foreign-built ships filled this gap, enabling the transportation of valuable goods across the South Sea (Lewis, 2021). By the time of the Sung Empire, domestic shipbuilding industries had expanded, allowing locally constructed ships to join the merchant fleet (Lewis, 2021). While foreign powers could not directly intervene in East Asian affairs until the 1800s, the profits from exports and the import of exotic goods significantly contributed to the Sung Empire's economy (Schottenhammer, 2017). This influx of wealth enabled the empire to maintain a large standing army disproportionate to its territorial size. Furthermore, the strategic importance of southern China—regions such as Canton, Min, and the ports near the Yangtze River delta—grew due to the wealth generated from trade. Historically, losing the North China Plain would have caused a geopolitical disaster. However, under the Sung Empire, the loss of this region was less damaging, as the empire retained control of maritime trade in the south.

In conclusion, the Sung Empire faced significant challenges, including (1) the rise of stronger, northern adversaries, (2) the collapse of the defensive lines that earlier empires had relied upon for geographic advantage, (3) the deterioration of the canal system, which could no longer support mass food transport to the northwest, including the Kuan-Chung Basin and the Helo area, and (4) the disruption of the supply of warhorses. However, from a more favourable perspective, the empire experienced increased overall food production, fiscal income, and population, with the centre of gravity shifting southward. Additionally, the demise of old aristocratic families gave rise to a new class of educated literati. These profound changes in geopolitical structure prevented the Sung Empire from adopting a geopolitical code similar to that of previous empires. Consequently, the Sung Empire was forced to develop a new geopolitical framework.

3.4. The Geopolitical Code

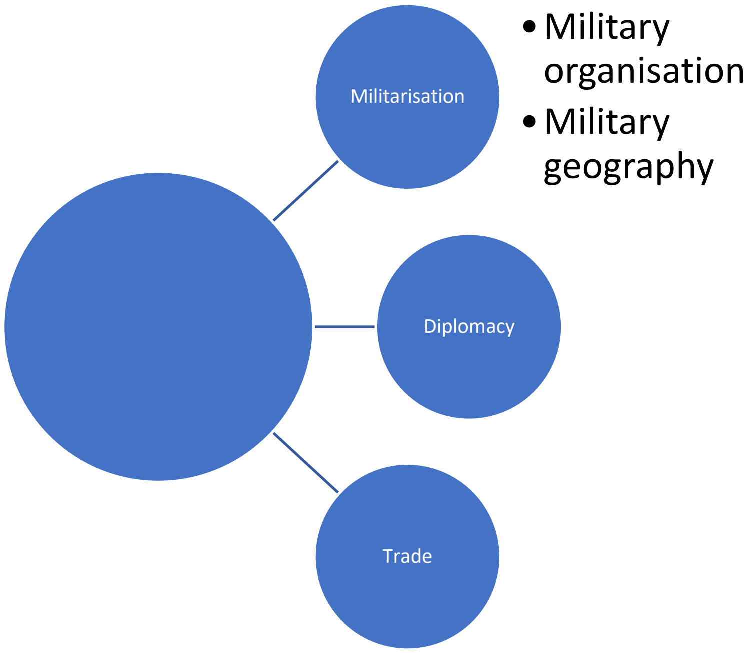
3.4.1. The Basic Assumption

While various hypotheses can be proposed regarding the preferences of emperors as individuals, it is reasonable to assume that, as human beings, their foremost desire was to ensure their survival. Without this instinct for self-preservation, they would have likely fallen victim to internal or external challenges. The pursuit of survival can be viewed from two key perspectives: externally, emperors needed to defend the empire against invaders, while internally, they had to safeguard their throne from coups and uprisings. These two facets of survival were often interconnected. For instance, a military strategy that effectively repelled nomadic invaders might simultaneously undermine political stability. Granting too much power to frontier generals, for example, could inadvertently empower them to stage a revolt. Consequently, emperors had to navigate a delicate balance between military strength and political security. In terms of external strategy, emperors sought solutions to fend off nomadic incursions, while internally, they needed to ensure the recruitment of sufficient human resources to support the military, all the while using political manoeuvres and bureaucratic structures to prevent potential coups from generals or officials. The following subsections will explore these two aspects in more detail.

3.4.2. External Codes

Even in the modern world, many geopolitical codes employed by contemporary nations have their roots in the practices of ancient polities. Among the most crucial geopolitical codes is **militarisation**, which aims to enhance military strength. The value of military power is clear: it serves to deter invasions, maintain international order, and even "persuade" weaker states to comply (Cohen, 2015). Militarisation also plays a significant role in internal strategy, as it helps enforce social control (Kaucz, 2022). The second geopolitical strategy explored here is the establishment of **formal diplomatic relations**. In the ancient world, cultural rituals—such as swearing oaths to gods, drinking blood, or casting iron ingots into the sea—strengthened diplomatic ties (Mosley, 1971). Over time, these rituals were replaced by more formal agreements, such as written treaties, joint communiqués, and memoranda of security assurances. The final geopolitical strategy is **trade**. Granting trade rights, imposing sanctions, negotiating tariff agreements, and establishing non-tariff barriers are ways economic power is leveraged to achieve geopolitical objectives or align economic interests among treaty members (Cohen, 2015). The Sung Empire, too, employed these strategies in its pursuit of survival (**Figure 8**). While this section covers all three strategies, the focus will be on militarisation, as it was a defining characteristic of the Sung Empire (P. Lorge, 2017).

Figure 8
The Geopolitical Codes of the Sung Empire



i. Militarisation

This section focuses on two key aspects of militarisation: military organisation and military geography (Figure 8).

Military organisation refers to the processes of establishing, structuring, supplying, and maintaining an army. There are six common paradigms of military organisation: part-time militias, feudal-like armies, centralised professional armies, mercenaries, armies supplied by allies, and modern conscription-based armies (see **Table 6**).

1. **The Allied Army** has been a common strategy since antiquity. For instance, Greek city-states often preferred forming defensive alliances over pursuing federalisation (Mosley, 1971). Similarly, the Roman Empire relied on Socii and Foederati units to supplement its legions (De Blois & Lo Cascio, 2007; Heather,

2006). In a modern context, an allied army is a practical choice for smaller NATO nations, which can depend on larger allies like the United States. However, this option was not viable for the Sung Empire, as there were no powerful, reliable allies beyond the Khitan. While the Khitan Empire was nominally an ally of the Sung, in practice, it was one of the most significant threats the Sung Empire faced.

2. **Mercenaries** were a feasible but often suboptimal choice in ancient Europe. The Roman Republic, for example, utilised Auxilia units to fill gaps in skillsets, such as light infantry and cavalry (Speidel, 1996). These auxiliary units sometimes became elite forces over time (Speidel, 1996). Carthage also relied heavily on mercenaries (Edwards, 1926), and the Byzantine Empire established royal guard sections filled with Slavic and other foreign soldiers (Treadgold, 1995). While mercenaries were used extensively throughout medieval Europe (Casparis, 1982), they were often unreliable due to a lack of personal stake in the conflict (Machiavelli, 2010). Consequently, mercenaries could supplement other military forces, but depending entirely on them for national defence was problematic.

3. **A Conscription-based Army** was a sensible choice for democracies or states with strong nationalist sentiments. Without patriotic fervour, soldiers' commitment to the cause could be questionable, and the likelihood of rebellion was high. The Byzantine Empire's experience illustrates this, as conscripts often rebelled or lacked the fighting capacity necessary for sustained campaigns, particularly when they had to seek alternative means of income for survival (Treadgold, 1995). Even if capable generals could maintain order, conscription could inadvertently train young people to become rebels or bandits, destabilising society. Thus, conscripts' lack of genuine fighting spirit posed a significant challenge to political stability.

4. **The Part-time Militia** was the default military choice for many ancient polities, as the motivation to defend one's own property was invaluable in a defensive war. Examples include the armies of the Ancient Greek city-states, the early Roman army before the reforms of Marcus Furius Camillus (Edwards, 1926; Meiklejohn, 1938), and the "theme" army of the East Roman Empire (Treadgold, 1995). Similarly, the T'ang Empire utilised a militia system (Graff, 2017). Under T'ang's control of the Great Wall, local garrisons could prevent small raids and delay larger invasions until the militia could be mobilised (Chen, 2018). However, militias were less motivated if they were not used for defending their own property. Also, militias could not devote their time to

coherent military training, undermining the accumulation of fighting experience. In addition, if militias were kept away from their peacetime jobs, production would be jeopardised. Thus, the Roman Republic shifted to paying soldiers to allow them to focus entirely on military duties, improving the army's overall fighting capacity by departing from the militia model (Edwards, 1926).

5. **The Feudal Army** offered the advantage of reduced administrative and logistical burdens, as decentralised governance allowed for greater efficiency in local resource management. Under the feudal system, taxes—whether in kind or currency—could be collected and consumed locally to sustain regional armies. This decentralisation reduced the need for frequent communication with the central government, cutting costs associated with transportation and administration. The T'ang Empire employed a system reminiscent of this approach by appointing military commissioners to govern regions. These commissioners were empowered to levy taxes, maintain local standing armies, and make autonomous decisions (陈明光, 2006). However, this autonomy came with significant risks. Local leaders often exploited their authority, either bribing soldiers to consolidate power or outright revolting against the central government (陈明光, 2006). This inherent vulnerability was starkly evident during the decline of the T'ang Empire (see Table 1). While the feudal model could provide short-term stability, the Sung Empire would have needed to weigh its potential effectiveness against the constant risk of rebellion.

6. **The Professional Army** was a concept with historical precedence long before the Sung era. For instance, the Marian reforms of 107 BCE in Rome introduced a fully-professional military system, where legionaries became salaried, full-time soldiers supplied and equipped by the state. Later, under Emperor Diocletian, the Roman Empire standardised military pay, further institutionalising the professional army (Treadgold, 1995). The benefits of this approach were clear: professional soldiers, freed from age, wealth, or class restrictions, were recruited, trained, and maintained under uniform standards. Continuous, standardised training and centralised organisation ensured these armies had superior fighting capabilities to undertrained militias or fragmented feudal forces. However, a professional army requires immense financial and bureaucratic resources to sustain. Salaries, supplies, and equipment had to be consistently provided, necessitating a well-developed state apparatus with steady monetary income. Professional armies risked devolving into poorly motivated and under-resourced conscript forces without these supports (Treadgold, 1995). Adopting a fully professionalised army would have posed a

significant burden for the Sung Empire, which faced numerous fiscal and administrative challenges. Thus, while this model offered unparalleled military readiness, it was a pragmatic choice only under stable governance and strong state finances.

Table 6
Possible Choices for National Defence.

Type	Defence risk	Rebel risk	Cost	Examples	Note
Allied army	N/A	N/Ac	N/A	Peloponnesian League, NATO	
Mercenary	High	High	High	Medieval Italian cities.	Expensive. Hardly reliable.
Conscription	Low	High	Low	USSR in WWII	High in numbers. Low morale. Disrupt the economy.
Part-time Militia	High	Low	Low	Early Roman Republic	Better training than conscripts. Disrupt the economy.
Feudal army	Medium	High	Low	Medieval Franks	Feudal lords may revolt. No standardisation. Low coordination.
Professional army	Low	Low	High	The modern US army	Expensive.

Military Geography

Military geography played a pivotal role in determining the defensive strategies of the Sung Empire, particularly in the location of the capital and the distribution of fortifications.

An ideal capital should be surrounded by natural barriers such as mountains and rivers, offering a defensible position and sufficient productivity to sustain a large population.

1. Historically, the Kuan-Chung Basin exemplified such a location. Both the Ch’in (秦) Empire and the early Han (漢) Empire chose this region as their capital due to its defensibility and agricultural productivity. However, changing circumstances diminished the basin’s suitability. Over time, its productivity waned (Su et al., 2014) while nomadic threats in the north grew more sophisticated. This shift meant that although the basin retained its defensible terrain, its ability to support a substantial army declined. As a result, the need

arose for a capital situated closer to fertile lands or with better access to food transportation networks.

2. One alternative was Lo-yang (洛陽) in the Ho-Lo area. The Sui (隋) Empire addressed its limited local resources by constructing the Grand Canal, linking Lo-yang with the empire's more productive eastern regions (Flückiger & Ludwig, 2019). However, subsequent periods of instability, including the late T'ang Empire and the Five Dynasties era, left the canal in disrepair. The compromised canal system could no longer reliably transport food to the capital. Additionally, the canal presented a strategic vulnerability: the capital could be starved into submission if enemy forces captured the canal. This risk was less pronounced during the Sui era when the Great Wall provided a buffer against northern incursions. However, with the loss of the Yanyun area, the Great Wall was rendered ineffective, and the canal's vulnerability became a pressing concern. One potential solution was overhauling the canal system and establishing fortified garrisons along its length. However, garrisons manned by professional soldiers would have been prohibitively expensive, while those staffed by militias would likely have been insufficient against a determined invasion. Furthermore, entrusting feudal governors with control over canal segments posed a different threat. These governors could disrupt the capital's food supply by closing the canal, leveraging their power to undermine the central government.
3. *Later Liang* (後梁) opted for a pragmatic approach by selecting Pien-liang (modern-day K'ai-feng) as the imperial capital. Situated in the east, Pien-liang reduced its reliance on the canal while avoiding the immense cost of restoring its western sections. As to the Sung Empire, remaining in Pien-Liang symbolised continuity, reassuring the coalition of influential officials who had supported the first emperor's ascent to power. This stability reinforced the political cohesion necessary for effective governance. However, Pien-liang was far from an ideal defensive capital. It lacked the natural fortifications of mountains or wide rivers, necessitating the stationing of a substantial standing army nearby. However, the position of Pien-liang in the east meant the garrison could also serve as the defence for southern China.

Therefore, supply is a priority since the militarisation code calls for a large professional army which needs enormous quantities of food, consumables, military equipment, and ammunition. Thus, to defend the supply source in the south and reduce the cost of supply, it is reasonable that Pien-liang was chosen as the capital of the Sung Empire. Discussions surrounding the relocation of the capital and its implications for defence and governance have persisted throughout history (Chen, 2018). The founding emperor of the Sung Empire, Taitsu, contemplated moving the capital from Pien-Liang to either the Ho-Lo area or the Kuan-Chung Basin. His reasoning centred on the possibility of disarmament, which would reduce the need for heavy taxation (*續資治通鑑長編, ca. 1184/n.d., 卷十七*). However, his younger brother—later the second emperor—and other key architects of the empire opposed this idea, citing logistical challenges.

Subsequent developments solidified the decision to retain Pien-Liang as the capital. One notable factor was the agricultural reform initiated by the third emperor, who championed the cultivation of Champa rice in the Chiang-Huai region (Barker, 2011). This high-yield rice significantly boosted production in the area, making it a crucial resource that the empire could not afford to forfeit. Despite various proposals to establish more robust defensive lines (Zhang, 2011), the capital remained firmly anchored in Pien-liang.

A robust and dispersed fortification strategy was essential to avoid the risks of concentrating all military defences around the capital. Defence in depth—where multiple defensive layers protect key areas—was historically preferred when resources allowed. During earlier periods, sedentary empires that controlled the Yanyun area could fortify it as the first line of defence, using the mountainous terrain of the Kuan-Chung Basin or the Ho-Lo area as additional defensive layers. Unfortunately, the Sung Empire lacked this advantage. Without control over the Yanyun region, the Sung had to fortify the fertile plains between the lost territories and the core of China Proper. Given the Khitan Empire's reliance on its formidable cavalry, one seemingly innovative strategy was transforming these plains into a network of ponds and paddy fields to hinder mounted manoeuvres (Zhang, 2011). However, the area's climatic and environmental conditions rendered this approach costly. During the North Dynasty era (960-1127 CE), a colder climate reduced rainfall, limiting water availability for such modifications. Meanwhile, high groundwater levels exacerbated salination, degrading the soil and rendering the once-fertile plains unsuitable for farming. As a result, these lands became an artificial wasteland incapable of supporting local garrisons through regional agriculture. Food and supplies had to be transported into the area, significantly increasing logistical costs. Maintaining a large professional army in such a region was prohibitively expensive. Consequently, the Sung Empire supplemented its forces with irregular troops, including foreign, mercenary-like “archers” (蕃弓箭手) and domestic, militia-like “archers” (漢弓箭手) (刁 & 贾铁成, 2012; 朱德军, 2010). While these troops reduced expenses, they lacked the cohesion and reliability of a fully professionalised army.

ii. Diplomacy

Beyond militarisation, the Sung Empire actively engaged in diplomatic relations with its northern neighbours, including the Khitan Empire (Liao), the Jurchen Empire (Chin), and the Tangut Empire (Hsia). These relationships operated on three distinct levels (Figure 8).

The first level involved covenants witnessed by divine entities. For example, when the Sung and Khitan Empires formalised a peace treaty, the agreement was framed as a tripartite covenant: each party called upon their gods to bear witness and invoked divine punishment upon themselves should they breach the terms (Wright, 1998). While modern observers might doubt the efficacy of such divine enforcement, the ritual symbolised sincerity and commitment within the cultural context of the time.

The second level was the tribute system. The Sung-Khitan peace treaty stipulated that the Sung Empire would provide the Khitan ruler with approximately four metric tons of silver and 200,000 bolts of silk annually (Wright, 1998). This arrangement proved advantageous for several reasons. First, tributes enabled the empire to avoid the greater expense of war and economic devastation. Secondly, peace fostered international trade, enabling the Sung Empire to profit from economic interactions with the Khitan. Lastly, the tribute was a political incentive for the Khitan rulers to maintain peace.

From the Khitan perspective, receiving tribute presented a compelling alternative to waging war. Tribute could be redistributed to the ruler’s political coalition, bolstering domestic stability. In a tribute interruption, the Khitan leader could mobilise his coalition for war to punish the Sung Empire, reinforcing his authority. Conversely, a decision to wage war without provocation carried risks: mobilising supporters for combat while sacrificing tribute income could invite criticism and undermine stability. While conquest might appear more lucrative than tribute, the Khitan rulers faced significant limitations. Maintaining control over captured territory required substantial garrisons due to the geography of the North China Plain, which lacked defensible features. Furthermore, the Khitan military, being cavalry-centric, excelled at offensive campaigns rather than sustained defence. Additional challenges arose from administrative delegation. Southern territories required supervisors to manage taxation and defence, creating agency risks where appointees could pursue personal agendas, such as secession or collusion with the Sung Empire. Thus, despite the relative stability of income from sedentary lands, the associated costs and risks often outweighed the benefits. Only nomadic leaders with advanced administrative systems and expertise could effectively integrate such lands. Consequently, tribute remained the more practical and politically stabilising option, enabling the Khitan to preserve peace with the Sung Empire for over a century.

The third level of diplomacy involved leveraging relationships to achieve broader strategic objectives. For instance, the Sung Empire exploited tensions between the Tangut and Khitan Empires to deter Tangut aggression. Similarly, during the Sung-Tangut war, the Khitan Empire acted as a mediator to broker a peace treaty. Although Khitan mediation was not without cost, prolonging the conflict would have been far more expensive.

Managing the tribute system required administrative oversight. Unlike typical diplomatic envoys, the Sung-Liao covenant specified that financial officials—not envoys—were responsible for delivering tributes to Hsiung Prefecture (Wright, 1998). The levy, transportation, administration, and delivery of thousands of silk bolts and silver coins necessitated a dedicated bureaucracy to ensure efficiency and compliance.

iii. Trade

As highlighted in the section on nomadic interactions, long-distance trade provided a vital source of income for nomadic leaders. By granting trade rights, the Sung Empire strategically aligned these leaders' economic interests with maintaining peace between the nomadic empires and itself (Figure 8). The Sung administration actively regulated trader qualifications and the quality of traded goods to support this policy. This bureaucratic oversight ensured that trade operations ran smoothly, reinforcing stability in the empire’s relationships with its northern neighbours. Also, the Sung Empire relied on trade as the primary way of sourcing good breeds of horses, making trade a part of the militarisation code.

iv. The Human Resources for the Geopolitical Codes

Through a combination of militarisation, diplomacy, and trade regulation, the Sung emperors secured the empire’s survival. However, these initiatives demanded an extensive bureaucracy to manage resources, oversee processes, and raise revenue. Consequently, the emperors faced a critical challenge: acquiring sufficient human resources to staff the burgeoning administrative system. The strategies for addressing this need are examined in the next section.

3.4.3. Internal Strategy

As outlined in the previous subsection, the Sung Empire's external strategy—encompassing militarisation, diplomacy, and trade—demanded a sizeable administrative structure capable of managing processes, coordinating personnel, and generating resources. While earlier empires operated with relatively small bureaucracies, the Sung Empire inherited a limited administrative framework from the

Late Chou Empire. However, this existing system was ill-suited to the requirements of the newly implemented geographic strategy. Consequently, the emperors faced the imperative of establishing a vast bureaucracy to support their geopolitical objectives.

Building such a system would require addressing two critical dimensions: political considerations and organisational design. **Politically**, expanding the bureaucracy meant increasing the Winning coalition's size, thereby increasing the Winning coalition-to-Selectorate ratio. This shift risked undermining the loyalty of Winning coalition members and destabilising the emperor's rule. To mitigate this, it was essential to enlarge the Selectorate, allowing the emperors to maintain or even reduce the coalition-to-Selectorate ratio while expanding the administrative bureaucracy. **Organisationally**, even if suitable candidates for the new Selectorate could be identified, the bureaucracy had to be carefully structured to ensure accountability. The following sections explore these two dimensions—politics and organisational design—in greater detail.

i. Politics: Expanding the Selectorate

The Selectorate of early empires typically comprised members of the royal family and the Shih-tsu. As previously noted, during the T'ang Empire, this group also included generals and leaders of foreign mercenaries. In some empires, eunuchs were incorporated into the Selectorate, as they were reliable agents for the emperors. However, these groups did not always prove advantageous or available. As a result, the emperor's Selectorate was not always restricted to these traditional groups; new members could be introduced to the selection process. In addition to loyalty, it was essential for members to be capable of governing an empire, with literacy being a fundamental requirement. In societies with low literacy rates, emperors who could not fund public education had to select from privately educated individuals. This section explores the potential candidate groups for the Selectorate of the early Sung Empire, both from a theoretical perspective and through historical application.

Candidate Groups for the Selectorate

Generals, who had been part of the Selectorate since the T'ang Empire and its successors, presented significant risks to emperors. As military leaders, they controlled armies and could easily incite coups or revolts. While it was essential for emperors to retain generals for "militarisation" within the geopolitical code, emperors sought to prevent generals from accumulating excessive power. Thus, the balance of military influence within the court was delicate.

Relatives, a widely used group of the Selectorate of ancient and modern monarchs and dictators, were also a double-edged sword. While influential relatives were valuable allies against external coups, their familial connections allowed them to build influential networks among themselves, the military, and bureaucrats. Moreover, male relatives often had claims to succession, making them potential rivals to the emperor. Consequently, while family ties provided support, they also threatened the emperor's rule.

The **Shih-tsu**, long an integral component of the Selectorate for over a millennium, were nearing extinction when the Sung Empire was established. Even if any remained, the Winning coalition to the Selectorate ratio would be dangerously high if Shih-tsu were exclusively used as candidates for bureaucrats. From a functional standpoint, the Shih-tsu possessed valuable expertise in finance and administration, which was crucial for managing the empire's geopolitical strategy. However, politically, it was imperative to broaden the Selectorate by incorporating additional individuals to reduce this risky concentration of power.

Eunuchs, though widely used throughout imperial history, were not an ideal choice for the emperor's inner circle. The castration of males was met with widespread revulsion, and recruiting literate eunuchs for high-ranking positions severely limited the available talent pool. Educating non-literate candidates before castrating them would require significant time and resources, further complicating their recruitment. Consequently, while eunuchs could fill specific roles, they were unsuitable for staffing a sizeable bureaucratic system.

Females, while a potential source of candidates, presented similar challenges. The literacy rate among females was low. Unless the emperors were willing to invest time and resources into educating them, educated women were too few to change the landscape of the Selectorate. Thus, the emperor's ability to incorporate women into the Selectorate was severely constrained, limiting their overall contribution to governance.

The sons and younger brothers of existing bureaucrats constituted a particularly precarious group. These individuals often maintained close personal ties to the bureaucratic elite and frequently learned valuable governance knowledge. Their recruitment could provide capable personnel, align the interests of current bureaucrats with the empire's long-term stability, and preclude potential rivals from co-opting their support. However, indiscriminate recruitment of such individuals posed significant risks. While they held the potential to perform effectively, their future performance could not be guaranteed. Consequently, the emperor faced the delicate task of balancing the risks associated with including these individuals in the Selectorate against the necessity of securing the broader loyalty of the bureaucratic class.

Male Commoner Confucians represented the final, arguably most crucial, group of candidates for the Selectorate. Historically, they were not considered viable candidates, as very few males outside the Shih-tsu were literate. However, as literacy rates among men increased (as discussed in earlier sections), commoners became more attractive options for inclusion in the Selectorate. They were far more numerous than the Shih-tsu and, importantly, would result in a significantly lower Winning coalition-to-Selectorate ratio.

The first emperors to recognise the potential of this group were those of the Sui Empire, who introduced a formal examination system to recruit bureaucrats directly from commoners, bypassing the traditional recommendation system that had primarily produced Shih-tsu candidates. Although the Sui Empire did not last long enough to recruit a significant number of bureaucrats through this system, its successor, the T'ang Empire, continued these practices successfully. However, the T'ang Empire did not fully utilise the examination system, likely due to resistance from the Shih-tsu. Candidates were often identified by the examiners beforehand, allowing them to use a variety of information—beyond just the exam answers—to assess the candidates. Unfortunately, this additional information often favoured the Shih-tsu, based on familial connections and status.

For the Sung Empire to fully harness the potential of commoners, it would have needed to reform the examination system to reduce bias towards bloodline. Such a reform would have been less complex than establishing public schools, but would still provide a viable path to expand the Selectorate. Moreover, reforming the examination system—rather than instituting public schooling—would maintain the advantages held by existing bureaucrats and the remaining Shih-tsu, who could afford private education. Thus, reforming the examination system, without widespread public education, represented a compromise between expanding the Selectorate and ensuring the loyalty of the existing Winning coalition.

Another advantage of incorporating commoners into the government was their relative social weakness. While Shih-tsu candidates inherited significant social capital through familial connections, and royal family members or bureaucrats could leverage their relationships with potent figures, commoners typically lacked such connections. In the event of a coup or rebellion, commoners were, therefore, much less likely to pose a threat due to their lack of influential allies. As a result, commoners presented a safer option for the emperor to integrate into the ruling structure.

In addition to political stability, Confucianism was naturally consistent with the geopolitical code of militarisation. Confucianism, especially the Confucian philosopher

Mencius, proposes a state intervention system to increase social welfare and expand production, commerce, and population while securing the population's goodwill towards the ruler. Compared with Daoism’s laissez-faire and Tacticianism’s (兵家) short-war cultism, Mencius focused on preparing sufficient resources and public support in peacetime[19], so that wars could be won by overwhelming power instead of relying on risky tactics. Therefore, recruiting Confucians could have saved much time indoctrinating geopolitical codes to recruits.

The Strategy Adopted by the Emperors (See **Figure 9)**

The founding emperor of the Sung Empire once remarked, "Since I have divided a province into smaller fractions to be governed by one hundred Confucians, even if all these Confucians were corrupted, they would cause less damage than a single general (who could control an entire province and potentially rebel)" (*續資治通鑑長編, ca. 1184/n.d., 卷十三*). This statement suggests that the emperor did not recruit Confucians as bureaucrats primarily based on their perceived “merit” or “ethics,” but instead because they were politically safer to utilise. Consequently, the Sung Empire swiftly reinstated the royal examination system to recruit bureaucrats from among the male commoners (鄧, 1993). While alternative recruitment pathways produced more bureaucrats than the royal examinations, the examination system opened the doors of power to commoners. It expanded the Selectorate to encompass all literate males (鄧, 1993). To ensure that a small group within the Selectorate did not monopolise the examination process, the system was carefully designed to minimise unfairness (鄧, 1993). For example, examiners were strictly locked up on nomination to prevent them from leaking exam questions (鄧, 1993). Candidates were also confined during the examination to prevent cheating (鄧, 1993), and designated scribes copied the answer sheets, removing any identifying marks or signals to ensure impartiality in grading (鄧, 1993). While it is debatable whether these measures produced more meritorious candidates in a strict sense, it is clear that they created a political environment in which commoners could aspire to join the Winning coalition. To further reinforce the image of the “emperor’s Winning coalition,” the final examination was overseen by the emperor himself, symbolising that successful candidates were personally “selected” by the emperor rather than by any other bureaucratic figures.

As mentioned earlier, the examination system was not purely a meritocratic process but a political tool designed to select a manageable Winning coalition and expand the Selectorate. Consequently, the examination system also accommodated various

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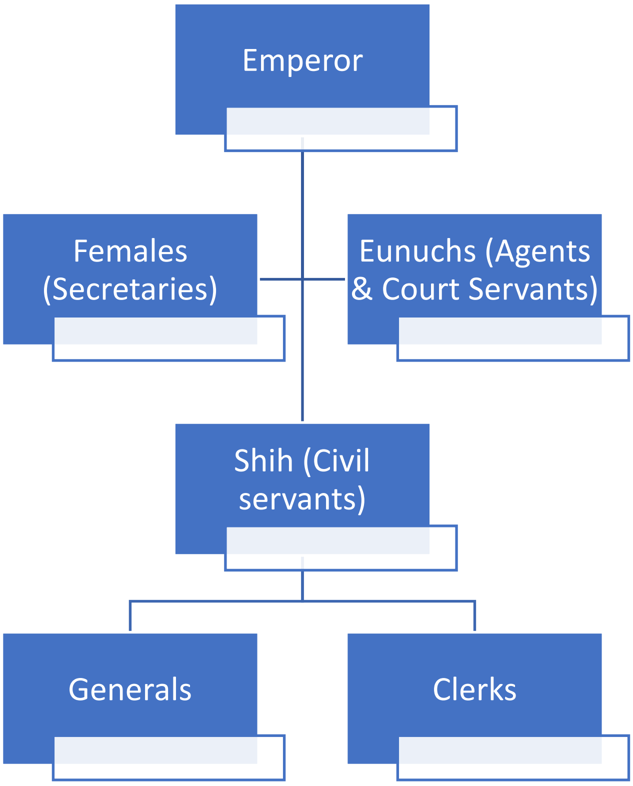
[19] Original text could be found in “孟子 梁惠王”.

political considerations. For instance, although the Shih-tsu were not directly favoured in the “Chin-shih” examination, alternative examinations that focused solely on Confucian classics provided an advantage to Shih-tsu members (鄧, 1993). However, candidates who succeeded in these alternative exams were discriminated against in terms of promotions (鄧, 1993), thereby maintaining the appearance of fairness. Similarly, senior bureaucrats were granted limited opportunities to nominate their sons or male relatives without passing examinations (鄧, 1993). In the interest of fairness, such nominations entailed longer waiting periods for appointments and slower promotion rates (鄧, 1993). Nonetheless, the design of the examination system was not intended to penalise members of the existing Winning coalition but rather to strike a compromise that would be acceptable to powerful political agents. As a result, bureaucrats who entered the system without passing the Chin-shih examination were still permitted to take part in future Chin-shih or other examinations to fast-track their promotion (鄧, 1993).

Beyond the typical male bureaucrats, other groups were also incorporated into the administrative structure, often to serve specific functions. Generals were tasked with command and military training (*宋史*, ca. 1346/n.d., 志第一百四十), eunuchs served as domestic servants and military overseers (程, 2014), some women acted as secretaries to the emperor (鄧, 2009), and many male clerks fulfilled civil service roles across various departments and bureaus (J. T. C. Liu, 1967). Maintaining a balance between these various groups was crucial for ensuring the political survival of the emperor.

Figure 9
The Political Structure of the Sung Empire



ii. Organisation: Structure, Accountability, and Segregation of Power.

With a well-established Winning coalition and Selectorate, the emperors needed to devise a system for implementing their geopolitical strategies.

The geopolitical objectives—militarisation, diplomacy, and trade—gave rise to three critical tasks: finance, military management, and non-military administration. Finance involved generating and managing the empire's revenues. Military management entailed equipping and maintaining the military, formulating war strategies, and appointing generals to lead forces. Non-military administration covered the management of trade and public works, ensuring justice and order, sustaining the bureaucratic system, and other essential functions necessary for the empire's survival and advancement.

Although various departments and bureaus could be established quickly to handle these tasks, effective coordination was crucial for the smooth flow of power and resources. If the emperor were to oversee every bureau directly, the sheer volume of information from all departments could overwhelm his capacity for decision-making. Conversely, if the emperor delegated all responsibilities to a single minister, that minister could amass too much power, potentially overshadowing the emperor and assuming control, much like prime ministers in modern constitutional monarchies.

Furthermore, improper delegation to two ministers, each managing separate functions, could lead to disastrous communication breakdowns and inefficiencies. Any coordination issues between the two branches would then need to be escalated, forcing the two most potent and overburdened ministers to resolve them. Therefore, striking the right balance between direct control and delegation and selecting the right individuals to handle specific tasks was crucial for political stability and operational efficiency.

Augmenting the Processing Capacity of Emperors: Private Secretary.

The design of the empire's power structure was constrained by the administrative capacity of the emperor. Naturally, the emperor could not personally address all matters of state. Thus, delegation became essential for filtering issues requiring his attention and managing the detailed implementation of his directives. However, entrusting these tasks to bureaucrats risks empowering them to manipulate the agenda and suppress dissent, consolidating excessive influence. This necessitated the involvement of individuals outside the bureaucratic framework.

One strategy to enhance the emperor's administrative capacity was the use of private secretaries. A key distinction between a secretary and a delegated minister lay in whether the secretary could act autonomously within the chain of command. Secretaries who built personal influence among bureaucrats effectively functioned as de facto ministers, a phenomenon historically evident in the rise of powerful eunuchs serving as imperial agents. To avoid this dynamic, the emperors of the Sung Empire adopted an approach by employing internally trained female secretaries (鄧, 2009).

These female secretaries were housed and trained within the palace but remained separate from the residential quarters of the emperor and his consorts (鄧, 2009). Documents flowed between bureaucrats and the emperor via eunuchs, with secretaries processing the content under the emperor's direction. Afterwards, the documents were returned to the bureaucracy, also through eunuchs (鄧, 2009). While these secretaries were known to bureaucrats, their signatures were prohibited on official documents (鄧, 2009). A mutual understanding between the emperor and the bureaucratic class ensured that the secretaries, being female, would not acquire personal influence.

This arrangement was meticulously designed to prevent the secretaries from leveraging their positions to gain power. As they neither interacted directly with bureaucrats or generals nor left their names on official documents, they were effectively insulated from building independent authority. Consequently, these secretaries served as ideal aides, significantly enhancing the emperor's administrative efficiency. With their assistance, emperors could process vast amounts of documentation, including reading letters from individual bureaucrats addressed directly to the throne, bypassing the bureaucratic filtration system.

Organising and reorganising functions: The Central Government.

Even with female secretaries, the emperor's capacity for processing information remained limited to his personal abilities.

The founding emperor, recognising the need to manage an empire effectively, organised functions into four categories, delegating (1) military affairs, (2) public finance, and (3) general administration to the bureaucrats, while retaining (4) the private treasury for himself (Kracke, 1953). This structure, however, presented challenges, particularly regarding coordination between the four functions. For instance, the military branch lacked knowledge of the resources controlled by the empire when making costly strategic decisions, necessitating direct coordination by the emperor. Regarding efficiency, as the decision-maker, the emperor had a comprehensive understanding of the entire empire. Regarding political stability, no one other than the emperor possessed full knowledge of the empire, reducing the likelihood of a successful coup. However, when an emperor was incapable, the complexity of coordinating across these four domains could overwhelm his abilities. Thus, regardless of an emperor’s intentions, he had no choice but to relinquish some power to preserve governmental efficiency if he could not maintain effective coordination.

After the first two emperors, both of whom had military experience, the succeeding emperors began to "temporarily" assign military administration to the general administration. This allowed one group of bureaucrats to handle coordination without formal reform. However, in 1080 CE, the emperor officially recognised the shift by approving a formal reform to restructure the cabinet. This reform integrated the three delegated functions into one cabinet with two senior and four junior ministers. Under the cabinet, the functions were organised into six departments, each headed by a “secretary”. The "cabinet" arrangement improved the capacity for managing state affairs while reducing the risk of a coup through mutual surveillance among the ministers.

Exerting Soft Power through Financial Control: The Private Treasury

Although the emperors had to relinquish some authority by allowing the cabinet to oversee government operations, they retained a critical source of power inherited from the first emperor: control of the private treasury (Hartwell, 1988; 汪, 1995). Since the first emperor's reign, the empire’s income had been divided into two categories. Some revenues were directed to the government to fund public expenses, such as military salaries, bureaucratic salaries, and equipment construction (汪, 1995). The rest was allocated to the royal treasury, the emperor's personal fund managed by eunuchs. This allowed the emperor to use the royal treasury for private expenses, court functions, or political rewards (汪, 1995). Given that the government typically operated with a deficit, the emperor often used the funds in the royal treasury as a political tool, leveraging them for political gain (汪, 1995).

Weakening the Bureaucracy: "Impermanence is Impotence"

Another strategy employed to keep the bureaucracy weak was the implementation of terms. Each bureaucrat was permitted to hold a single position for no longer than three years (Kracke, 1953). This ensured that before a bureaucrat could become entrenched in a role, develop expertise, or secure loyalty through bribery, they would be moved to a different position or left jobless until another vacancy arose. This constant rotation forced bureaucrats to remain transient and prevented them from long-term planning or consolidating significant power.

Segregation of Power for the Military: Private Agents and Bureaucrats

After peacefully removing his senior generals (范, 2006), the first emperor needed to keep new generations of generals under control: eunuchs were instrumental in overseeing the loyalty of military generals. Though eunuchs were not granted command authority like some bureaucrats, their power lay in their ability to ensure the generals remained loyal to the emperor (张其凡, 1992). Since eunuchs depended on the emperor to maintain their positions, they were naturally loyal and effective. In terms of military supply and payroll, the generals could not be entrusted with controlling the distribution of wages and provisions, as this would grant them power over the soldiers. Instead, civilian bureaucrats staffed the relevant bureaus to manage the flow of money and supplies to the military (汪, 1995; 范,2016).

Partial Decentralisation Balancing Efficiency and Stability: The Commissioner System

One of the failures of the T'ang Empire was the rise of regional separatists who acted in their own interests. In response, the Sung Empire took steps to prevent generals from controlling regional finance. Like the Byzantine emperor Diocletian's separation of military and civilian functions in distant provinces (Treadgold, 1995), the Sung Empire replaced military governors with circuit commissioners. Unlike military governors who had general power over a region, these commissioners only had functional power with limited staff and reported directly to the central government.

Fiscal commissioners were responsible for collecting taxes of both kinds and currencies. Judicial commissioners handled legal matters but also managed trade, royal enterprises, and grain storage. Trade commissioners were explicitly tasked with overseeing key commodities such as tea and salt. While the central government nominally controlled around 300 prefectures, most administrative functions were delegated to the provincial commissioners. Other commissioners could be responsible for internal security and so on. These commissioners operated as independent agents with specific responsibilities rather than as a unified team. Consequently, no single commissioner could dominate a province, and their separation of duties ensured that no individual had the power to spark a rebellion.

Centralised Human Resource Management for Regional Bureaucrats

In contrast to the T'ang Empire, where the royal court lost control over local appointments due to military governors' disobedience, the Sung Empire was determined to prevent such a failure. The central government directly appointed the staff in each prefecture and canton, with each prefecture de jure reporting to the central authority (汪, 1995). The introduction of the royal examination system enabled the recruitment of bureaucrats from the commoners, ensuring that the empire had sufficient human resources to staff the necessary bureaucratic apparatus for tax collection and accounting.

Oversupplying bureaucrats: The Shih Caste

As mentioned earlier, the royal examination system was not only a tool for controlling the Winning coalition and Selectorate but also for managing the loyalty of bureaucrats through non-examination pathways. These dual recruitment paths were kept open, regardless of whether there was a foreseeable demand for bureaucrats. While the supply of candidates was relatively stable, the demand fluctuated based on the empire's needs and the retirement of bureaucrats. To resolve this mismatch, the empire created a new group known as "Shih," with all members referred to as "Yuan." Once an individual passed the royal examination or was nominated by their bureaucrat father, they became a "Yuan"—a jobless candidate awaiting appointment (鄧, 1993). While unemployed, a "Yuan" retained several privileges, such as exemption from taxes (鄧, 1993). This system also helped to strengthen the bond between the people and the empire, as bureaucrats, even those temporarily or permanently removed from office for reasons such as filial mourning or illness, could continue receiving some payments as members of "Shih." The empire maintained flexibility in meeting political and administrative needs by decoupling bureaucratic positions from the "Shih" privileges.

A Multi-tiered Selection (Figure 10)

According to the Selectorate theory, society is not comprised of a single set of “Residents, Selectorate, and Winning coalitions” but includes many tiers of such sets (Bueno de Mesquita et al., 2003). From this perspective, the structure of civil officials can be understood as a five-tier system. The lowest tier, the residents, consisted of the general population, which included marginalised groups such as women, monks, criminals, and enslaved people. The second-lowest tier consisted of males with clean records who could become part of the "Shih" group, regardless of their entry pathway. The third tier included all males officially entering the "Shih" group. The fourth tier consisted of males holding actual bureaucratic positions. Emperors were motivated to reduce the ratio of the Winning coalition to the Selectorate at each level to consolidate their power. Allowing all males, except criminals and enslaved people, to participate in the royal examinations helped reduce the ratio of eligible males to Shih. Additionally, maintaining many more Shih than available positions further decreased the ratio of officials-in-positions to Shih.

An informal extra tier of ministers also existed, who wielded substantial power under the emperor but were not formally part of the selection process (鄧, 1993). If the emperor had to promote senior officials (a small Selectorate) to ministers (the Winning coalition), the ratio between the Winning coalition and the Selectorate would be much higher. However, the ratio between the members of the cabinet and potential candidates remained extremely low because the emperor could select any Shih (a large Selectorate).

Furthermore, if officials in positions could be guaranteed jobs for life or until retirement, they would feel secure. Hence, a fixed three-year term ensured the selection process was periodically reactivated, reminding the officials-in-position (the Winning coalition) that they could be replaced by any Shih (the Selectorate). Overall, the lack of formal promotion to ministers and the overstaffing of bureaucrats were key features that helped maintain political stability.

Figure 10

A Brief Illustration of the Population Structure According to the Political Status.

3.5. The Executors of the Geopolitical Codes: Financial Experts as a Prototype Profession

As previously discussed, the political framework and governance of the Sung Empire needed a specialised group of civil servants, the Shih group. Within this group, financial experts played a critical role in executing the empire's geopolitical strategies, such as militarisation, diplomacy, and trade. This section explores how this group's functional significance and political authority evolved into a professionalised domain. The first part addresses the Shih group as an overarching profession, while the second part focuses on financial experts within the Shih group. The Shih group already met the criteria for many professionalisation paradigms. Similarly to the clergy in pre-modern societies, the Shih group could have spawned various professions, including roles like physicians and lawyers. This section examines the potential for the accounting practitioners within the Shih group to establish their profession and identifies the factors that either encouraged or hindered their professionalisation.

3.5.1. The Shih Group as an Overarching Profession

In many respects, the Shih group functioned as a profession or showed significant potential to evolve into one. From a functionalist perspective, the Shih group embodied the characteristics of a profession, as its members performed critical state functions, upheld ethical standards, and were granted privileges such as social status and financial rewards. From an interactionist viewpoint, the public and the state widely accepted Shih's social status. In Marxist terms, the Shih group acted as agents of the ruling class, akin to Western professionals. A Foucauldian analysis suggests that the Shih underwent rigorous discipline in their path to professionalisation and formed the nucleus of “governmentality.” From a Fascist corporatist angle, the state rewarded the Shih with privileges in return for their support. A Neo-Weberian interpretation could highlight how the Shih group monopolised the bureaucratic market through their expertise in Confucianism. Finally, from a Neo-institutionalism perspective, the creation of the Shih group resulted from the newly established “Shih logic”—the notion that a state should be governed by meritocratic individuals, evidenced through examination success, rather than by experienced professionals or aristocrats.

However, the Shih profession differed from the stereotype of many professions, especially those whose functions are narrowly defined. In its overarching role, the Shih resembled the clergy in medieval societies. It provided religious services, managed extensive landholdings, collected rents and taxes, undertook significant building projects for cathedrals, and administered church bureaucracies. While modern civil servants also perform generalist functions, they typically do not engage in such a wide array of responsibilities. Contemporary governments rely on professionals from various specialised fields, either through employment or contractual arrangements, to fulfil specific roles. Additionally, the Sung Empire’s governance system encompassed functions no longer carried out by modern governments, particularly in privatisation and free trade. These policies freed the government from managing many sectors, contrasting with the Sung bureaucracy's more expansive role. Consequently, the bureaucratic structure of the Sung Empire carried out far more functions than that of modern civil servants in liberal democracies.

3.5.2.The Financial Experts

Unlike professions such as law and medicine, where practitioners eventually broke away from the broader clergy profession to form independent fields, the Shih profession did not foster the development of specialised professions. Financial and legal experts within the Shih group did not evolve into distinct roles like barristers or accountants; instead, they remained embedded within the Shih profession. Hartwell (1971) contended that these experts had already secured a privileged status within the

Shih group, which diminished their motivation to distinguish themselves by forming separate professions.

The emperor also had a vested interest in preventing the professionalisation of financial experts. According to the Selectorate theory, the emperors were incentivised to preserve the "generalist" model, as it aligned with the political stability of their reign. From the emperors’ perspective, senior financial officials were integral members of their Winning coalition, as these officials were essential for the smooth operation of the government. As a result, the pool of candidates for senior financial positions formed part of the Selectorate. If a more specialised model, which prioritised financial expertise akin to the modern accounting profession, were to emerge, it would necessitate appointing only financial experts to key financial roles. Such a shift would reduce the Selectorate from a broad pool of officials to a narrower group of financial experts, thus increasing the Winning coalition to Selectorate ratio and undermining political stability. To avoid this, the emperors favoured a mixed approach: providing sufficient rewards and social prestige to retain financial experts while maintaining the power to appoint non-experts to high-ranking financial positions.

Chapter 4. The Establishment of the Government and the Financial Works

4.1. Introduction

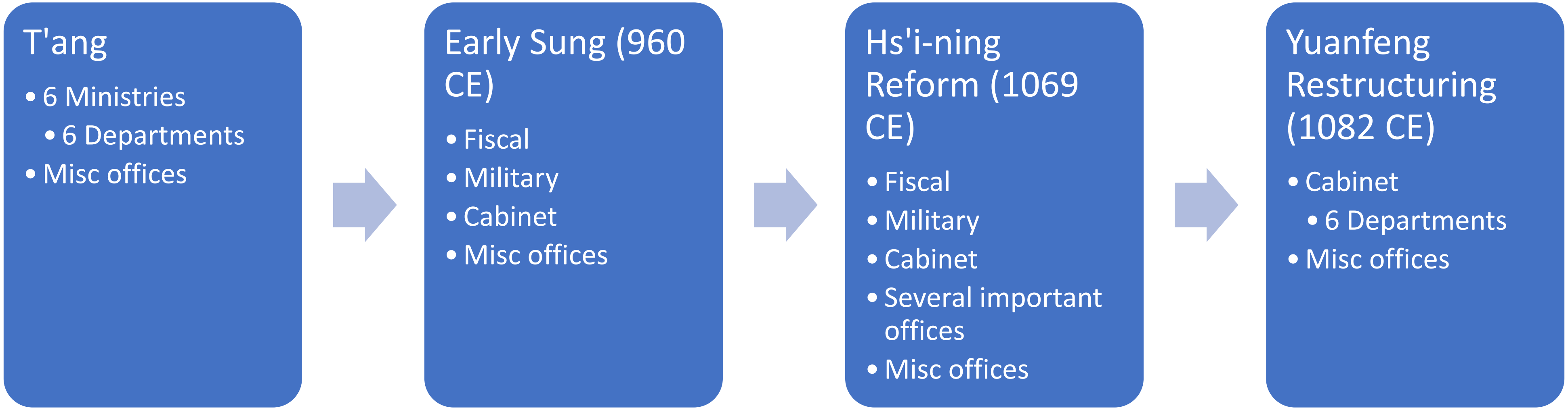
This chapter aims to define financial expertise and financial officials by examining the government structure of the Sung Empire. It is necessary to delineate "financial officials" in this context because the emperors and bureaucrats of the Sung Empire did not classify disciplines in ways comparable to modern categories. As Hartwell (1971b) suggests, political and social science disciplines were not distinct fields; knowledge was incorporated into historical analogies. Consequently, financial expertise may have been similarly integrated into broader bureaucratic skills rather than recognised as a separate discipline. Evidence indicates that, within the Sung Empire, there was no strict separation between officials working in financial, jurisdictional, or military capacities (鄧, 1993). Meanwhile, some instances also indicate that bureaucrats were somewhat aware of financial expertise, albeit without defining it as a distinct discipline (Hartwell, 1971a). Given this lack of historical definition, this chapter seeks to identify the official roles of financial experts by finding individuals occupying positions that involve financial tasks. Hence, this chapter reviews the governmental structure to locate functions associated with finance. With this definition of financial officials established, the empirical assessments in Chapters 6 to 8 are conducted to examine the extent to which the needs of these financial officials were met.

This chapter is organised into three parts to identify financial-related bureaus and their functions. Firstly, the central government is discussed in Section 2. Secondly, the regional government is discussed in Section 3. Thirdly, the most important financial tasks are discussed in Section 4. Section 5 concludes this chapter.

4.2. The Central Government

Efficiency is usually the norm in designing organisational structures in modern organisations. Thus, modern organisations were usually organised by products, regions, or functions. However, such efficiency was based on modern institutions such as law and ethics. Without modern institutions, the emperors had to balance efficiency and personal power. Therefore, segregation of power was always sought to prevent one person from gaining too much power in one field. As a result, the central government of the Sung Empire was not organised purely by function. Instead, it was organised to consolidate the power of the emperors while limiting the damage to efficiency. When the emperors were capable, the central government was segmented into many small bureaus that reported directly to the emperors. When the emperors were weak or had no personal keenness to manage the empire, different functions were coordinated by a group so that no one could monopolise the power. The Sung Empire did not create systems based on a vacuum; the names and concepts were usually borrowed from the ancient classics or established customs from the Later Chou Empire (後周). For example, the Hsi-ning Reform attributed many new functions to a new bureau named after an ancient bureau to boost the legitimacy of the reform. Similarly, the Yuanfeng reform re-arranged the functions based on the T'ang Empire. Thus, this section briefly introduces the early ideal of government before diving into the different eras of the Sung Empire (**Figure 11**).

Figure 11
The Eras Covered by Section 2



4.2.1.Legacy From Ancient Empires

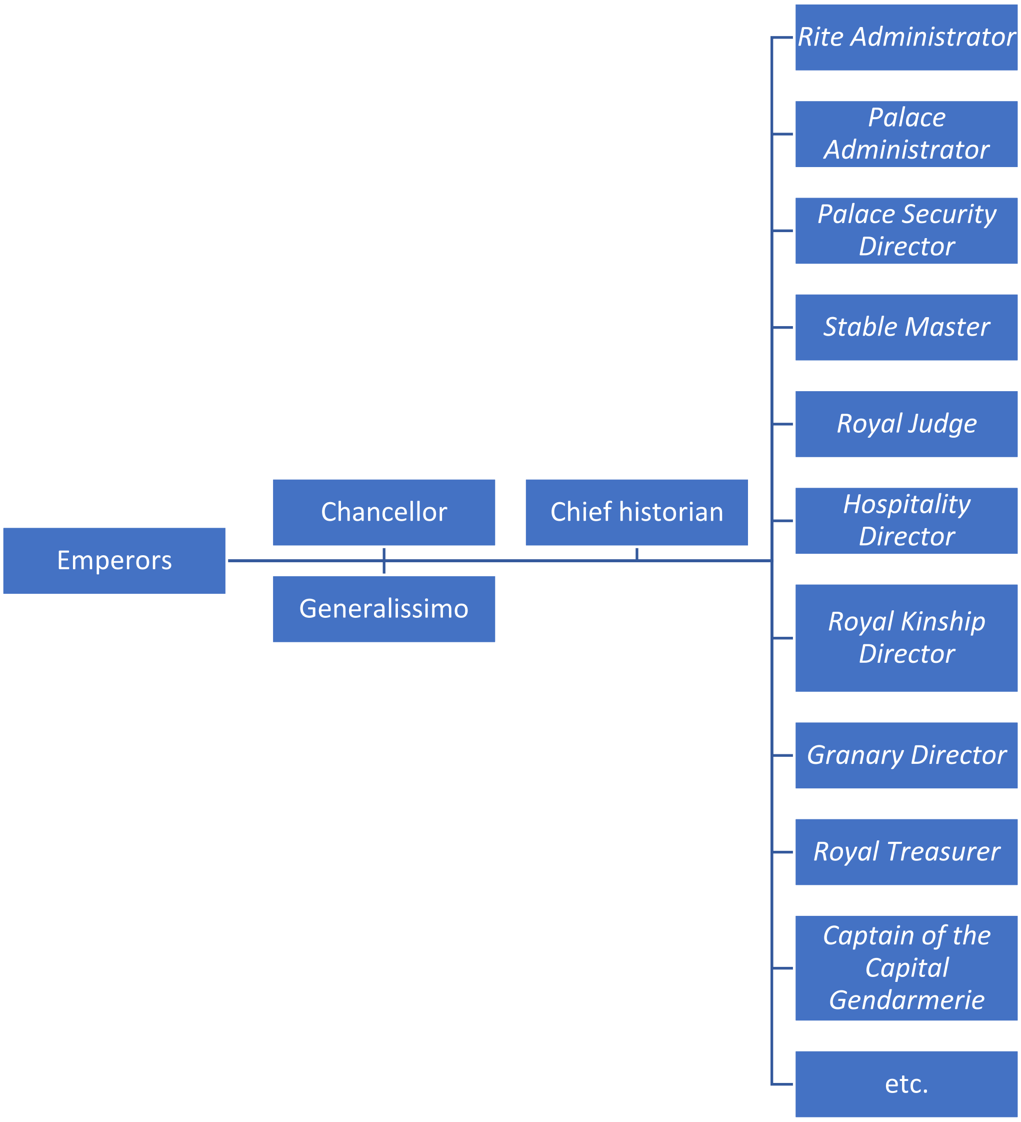
The names of official positions and the bureaus are necessary signals to be leveraged for political aims and functionality convenience. Using existing names showed a signal of continuity; inventing a name implicates reform, and adopting ancient names usually aimed to borrow ancient legitimacy. Therefore, the Sung Empire naturally borrowed the names of earlier empires. Still, this section presents descriptions drawn from canonical historical records that shaped the intellectual environment of the Sung Empire rather than an accurate account of bureaucratic evolution. While these records do not meet modern standards of historical reliability, they represent the material available to the bureaucrats and emperors of the Sung period.

Three-premier-nine-minister: Before the first century (Figure 12)

The Han Empire inherited a bureaucratic design but expanded it for convenience. The early Han Empire (West Han) used three premiers (三公) and several officials (九卿, literally nine officials).[20] The three premiers were the *Chancellor* (丞相/大司徒), the *Generalissimo* (太尉/大司馬) and the *Chief Historian* (御史大夫) (*漢書*, ca. 82 CE, 百官公卿表). The ministers were designed to fulfil their specific functions: *Rite Administrator* (奉常/太常), *Palace Administrator* (郎中令/光祿勳), *Palace Security Director* (衛尉/中大夫令), *Stable Master* (太僕), *Royal Judge* (廷尉), *Hospitality Director* (典客/大鴻臚), *Royal Kinship Director* (宗正), *Granary Director* (治粟內史/大司農), *Royal Treasurer* (少府), *Captain of the Capital Gendarmerie* (中尉) (*漢書*, ca. 82 CE, 百官公卿表). However, as the government grew, the emperor could no longer control all the ministers directly. Therefore, the emperors of the Later Han Empire (East Han) decided to add a small *Secretary Office* (尚書) to help them rule.

[20] In the ancient literature, "three" usually meant "a handful", while "nine" often meant "many". Thus, "nine ministers" could actually mean "a group of ministers".

Figure 12
The Ideal Government in the Early Han Empire



From the first century to Early T'ang (Part 1 of **Figure 11**)

While the East Han Empire had established a legacy of setting up a *Secretary Office* (尚書, literally "in charge of writing"), the newborn office was small, and its staff consisted of secretaries or clerks (後漢書, ca. 400 CE/n.d., 百官三)[21]. Thus, the Secretary Office (尚書) was not far from de facto secretaries to the emperors from its humble start. However, through hundreds of years of different empires, it grew to a large establishment with two hundred functionaries headed by the Chief Secretary (尚書令), the de facto chancellor in the Sui empire (隋書, ca. 636CE/n.d., 志第二十一).

[21] The staff of the secretary office included a chief secretary, a deputy secretary and a handful of secretaries, along with their assistant secretaries and clerks, probably fewer than 100 people in total. The salary of the chief secretary was one half of the top paid officials, and the others were paid like low-rank functionaries.

While the Secretary Office (尚書) had evolved into the central government as the Ministry of Secretary (尚書省), a new and small Internal Secretary Office (中書) was established to perform the original private secretary tasks for the emperors (隋書, ca. 636CE/n.d., 志第二十一). Also, the Sui empire established other top-rank bureaus, including Men-hsia (門下), Chi-shu (集書), Archival Office (祕書) (隋書, ca. 636CE/n.d., 志第二十一).

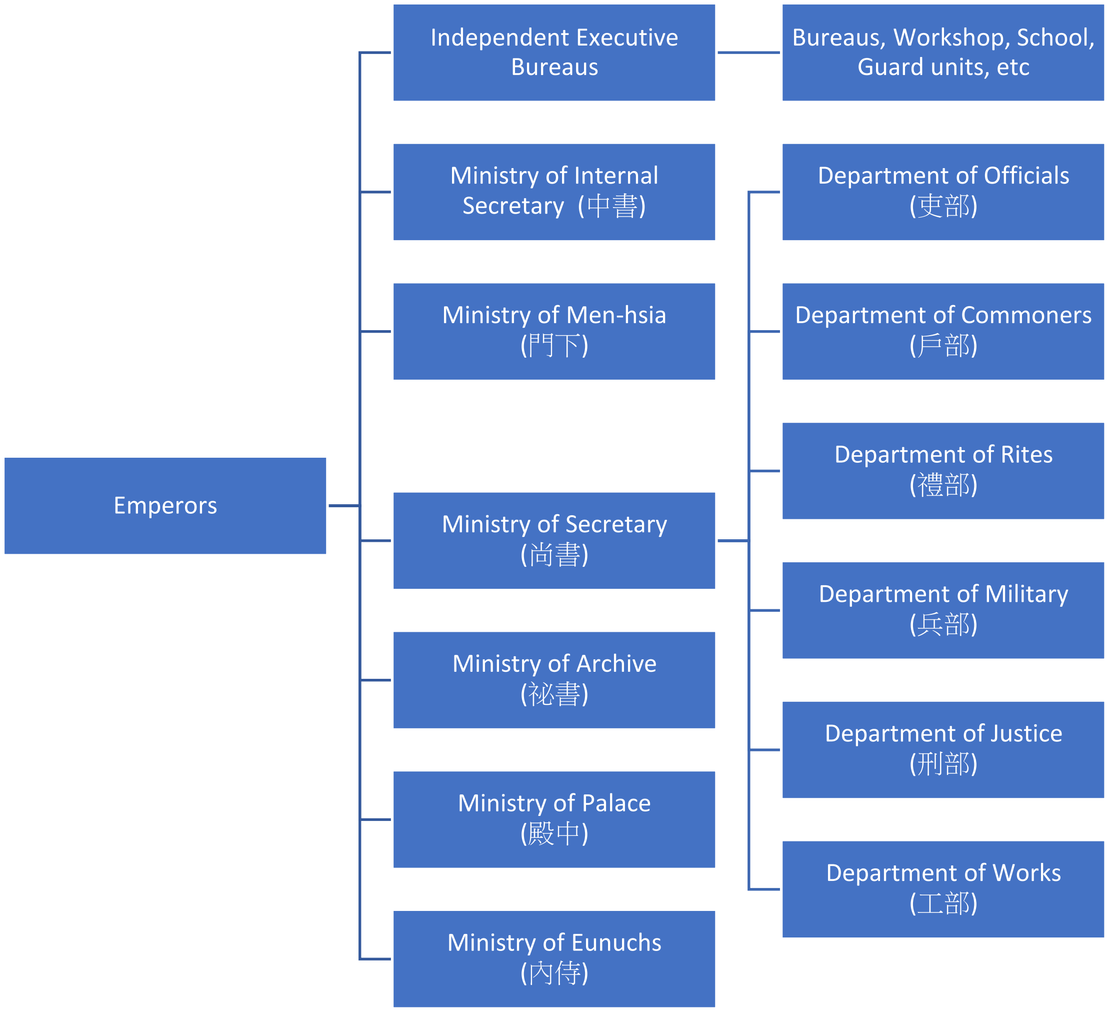
The T'ang Empire inherited the system of the Sui Empire and maintained a de jure three-premier-six-ministry-nine-bureaus system (**Figure 13**). The premiers were honorary (*舊唐書*, ca. 945/n.d., 志第二十二). The six ministries included the *Ministry of Secretary* (尚書省), the *Ministry of Men-hsia* (門下省), *the Ministry of Internal Secretary* (中書省), the *Ministry of Archive* (秘書省), the *Ministry of Palace* (殿中省), and the *Ministry of Eunuchs* (內侍省) (*舊唐書*, ca. 945/n.d., 志第二十二). Mirroring the nine-minister system, the nine executive bureaus of the T'ang empire were: *Rites Bureau* (太常寺), *Palace Administration* (光祿寺), *Palace Security* (衛尉寺), *Royal Kinship Office* (宗正寺), *Imperial Stable* (太僕寺), *High Court* (大理寺), *Hospitality* (鴻臚寺), *Granary Bureau* (司農寺), *Royal Treasury Agency* (太府寺)[22] (*舊唐書*, ca. 945/n.d., 志第二十二). Apart from these establishments, the empire had a *Workshop Authority* (將作監), a *Critique Office* (御史臺), an *Imperial Academy* (國子學), and fourteen *Imperial Guard* units (十四衛府) (*舊唐書*, ca. 945/n.d., 志第二十二). The nine bureaus and the workshop authority, the academy, and the guard units were the executive establishments coordinated by the *Ministry of Secretary* (尚書省) (*舊唐書*, ca. 945/n.d., 志第二十二). To coordinate so many independent executive bureaus, the Ministry of Secretary had six departments: the *Department of Commoners* (民部/戶部), the *Department of Works* (工部), the *Department of Officials* (吏部), the *Department of Rites* (禮部), the *Department of Military* (兵部), and the *Department of Justice* (刑部) (*舊唐書*, ca. 945/n.d., 志第二十三). However, this system was undermined soon after the establishment of the T'ang Empire. Initially, the head of the *Ministry of Secretary* (尚書省), the head of the *Ministry of Internal Secretary* (中書省) and the head of the *Ministry of Men-hsia* (門下省) were to form a cabinet to manage the empire. However, since a permanent establishment was a challenge to the power of the emperors, the emperors preferred to keep the cabinet unstable to consolidate their power. As a result, low-rank officials were seconded from their original jobs to the cabinet (*舊唐書*, ca. 945/n.d., 志

[22] The underlined characters showed the change of names from the Han Empire to the T'ang Empire.

第二十三). Therefore, the emperors could handpick the cabinet by arranging the secondment. Thus, while the six departments (六部) of the *Ministry of Secretary* (尚書省) were still functioning, the head office of the Ministry of Secretary (尚書省) could hardly be seen as functional.

Modern studies could criticise the canonical history books of the Sui and the T'ang empires for inaccuracy; however, these books were recognised by the Sung Empire as canonical history. Therefore, the information was the historical context of the Sung Empire when the emperors and bureaucrats criticised, designed, and reformed the structure of their government.

Figure 13
A Brief Illustration of The System of the T'ang Empire



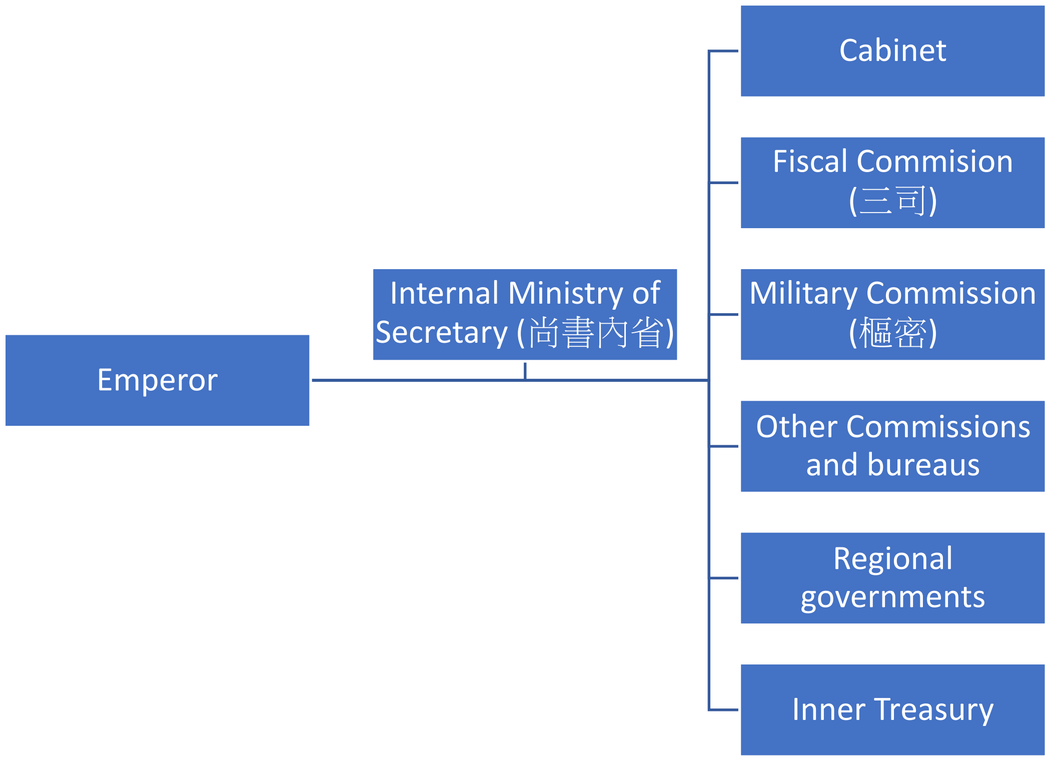
The design was functional and according to the ideals of the classics. However, the drastic geopolitical change during the late T'ang Empire dramatically changed the political and economic context, forcing the emperors to adapt by changing the system. Firstly, ad hoc private commissioners were widely used to overcome the establishment's low efficiency or fill the function gap. Secondly, many officials of the

Ministry of Secretary were seconded to work at newly-established commissions while receiving their original pay from the *Ministry of Secretary* (尚書省)[23]. Thirdly, from the late T'ang Empire to the five dynasties, public expenditure grew to exceed the function of the old treasury system, and, therefore, the state needed a highly efficient bureau to perform public finance and public expenditure functions. Thus, the fiscal commission emerged from such necessity and claimed power from the *Ministry of the Secretary* upon controlling the executive bureaus (李军, 2003). The fiscal commission finally grew into an establishment which overshadowed the *Ministry of Secretary* (尚書省). As a result, the old system was rendered powerless when the Sung Empire started.

4.2.2.The Central Government

i. Early Sung Empire (960 CE to 1069 CE)

Figure 14
The Structure of the Central Government of the Sung Empire before the Yuanfeng Restructure



The early Sung system started when the empire was founded in 960 CE and continued until the Yuanfeng Reform in 1080 CE (Part 2 of **Figure 11**). When the Sung Empire was founded, the old ministry, department system, and executive bureaus were already

[23] When new problems emerged, temporary task forces were often launched and headed by a commissioner handpicked by the emperors. If a problem was proven to be a new norm, the once-temporary task force would eventually evolve into a new standing bureau.

in ruins (**Figure 14**). Officials still wore the "secretary" titles from the *Ministry of Secretary* (尚書省) and its six departments (*宋史*, ca. 1346/n.d., 志第一百十四). However, they were already seconded to functional commissions (*宋史*, ca. 1346/n.d., 志第一百十四). The government of the early Sung had three significant establishments, many commissioners and their staff, and regional governments. The nexus of these establishments was the emperor, assisted by his private secretaries, the *Internal Ministry of Secretary* (尚書內省), staffed by female secretaries living in the royal palace (鄧, 2009). The three most essential establishments were the Cabinet, the *Military Commission* (樞密院), and the *Fiscal Commission* (三司) (*宋史*, ca. 1346/n.d., 志第一百十四). The *Military Commission* (樞密院) was responsible for military affairs, the Cabinet was responsible for civil affairs, and the *Fiscal Commission* (三司) was responsible for public revenue and public expenditure. Still, many functions were out of the control of the three establishments. A significant proportion of the empire's fiscal income went to the emperors' palace treasury, which the emperors controlled via eunuchs.

The head of the fiscal commission was *the Commissioner of Fiscal Commissions* (三司使). The three commissions were the *Commission of Commoners* (戶部), the *Commission of Salt and Iron* (鹽鐵), and the *Commission of Expenditure* (度支)[24]. In addition to the three component commissions, the fiscal commission had several auxiliary offices such as reviewing, compliance, collection and recovery, mailroom, and so on (汪, 1995). Although regional governments and circuit commissioners were responsible for collecting and remitting taxes to the *Fiscal Commission* (三司), regional governments and circuit commissioners were not subordinates of the *Fiscal Commission* (三司). The *Fiscal Commission* (三司) had no authority to appoint, reward, or dismiss circuit commissioners or governors of regional governments. Instead, the *Fiscal Commission* (三司) could only appeal to the emperor by writing recommendations for or filing complaints against certain regional commissioners or governors (汪, 1995). At the start of the Sung Empire, there was only one "*Imperial Treasury*" (左藏庫) controlled by the *Fiscal Commission* (三司) (Hartwell, 1988; 汪, 1995). In 965 CE, the first emperor built an *Internal Treasury* (內藏庫) in the Royal Palace controlled by himself via eunuchs (Hartwell, 1988; 汪, 1995). Therefore, by

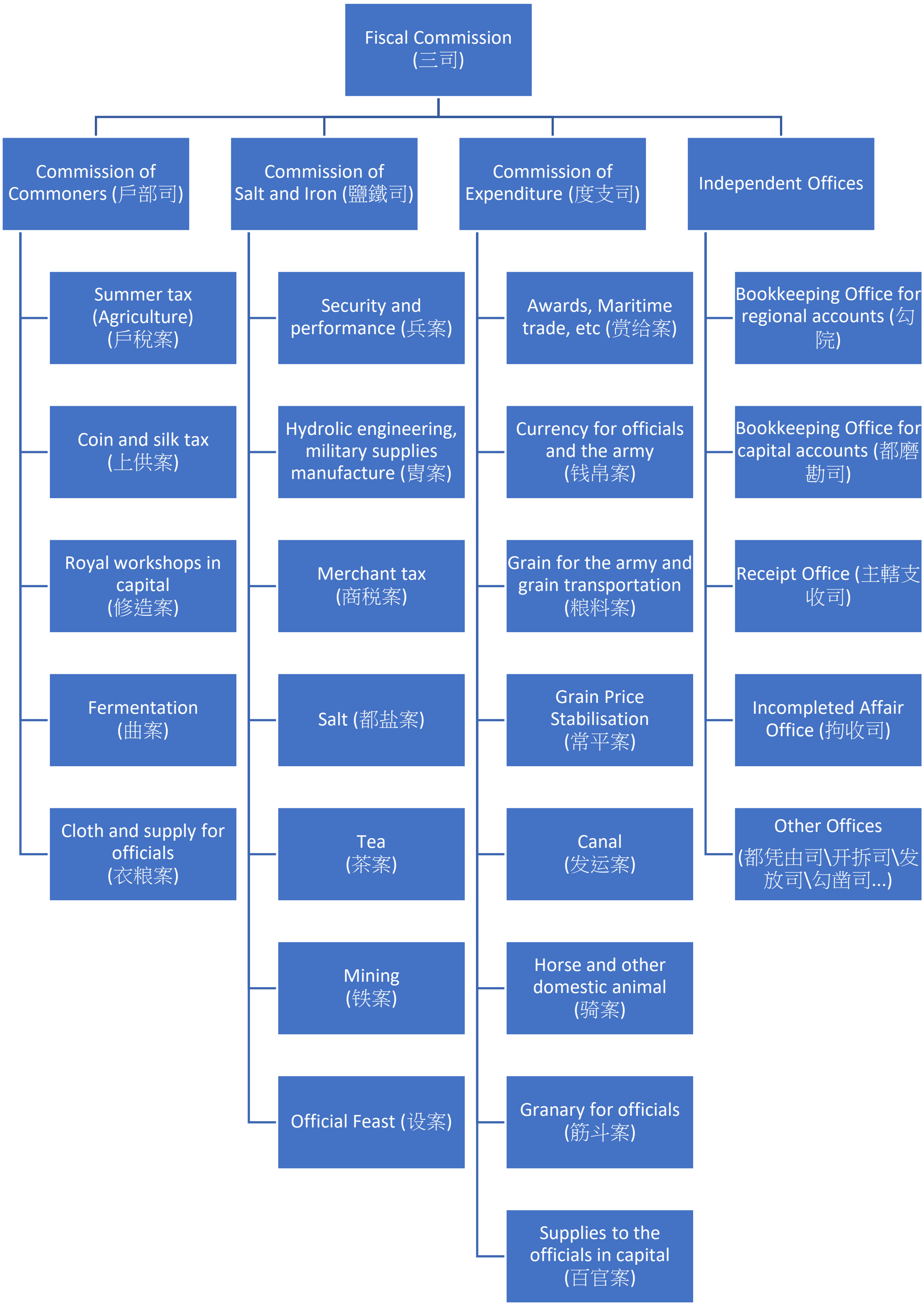
[24] Since the head of the "Fiscal Commission" held the title of Commissioner for the three commissions, the individual commissions in the fiscal commission were headed by deputy commissioners (汪, 1995). The fiscal branch of this system also experienced changes. In some years, the "Fiscal Commission" was split into "Left Fiscal Commission" and "Right Fiscal Commission" (汪, 1995).

redirecting surpluses from the "*Imperial Treasury*" (左藏庫) to the *Internal Treasury* (內藏庫), the emperor segregated the financial power of the *Fiscal Commission* (三司) into two groups: civil officials and himself.

Such a system was very demanding on the emperors, as they needed to make decisions and balance the needs and capabilities of the treasury, civil affairs, and the military. When the self-made founding emperor was capable, this system ideally functioned with the emperor coordinating the isolated functions (*宋史*, ca. 1346/n.d., 志第一百三十二; 汪, 1995; 鄧, 1993). Successor emperors were not guaranteed to be equally capable as the founding emperor. Also, as the territory and the official group grew, managing an empire became more burdensome. Thus, a team was needed to coordinate the military, fiscal, and administrative branches. Firstly, the emperor required the Military Commission to relay war reports to the Cabinet so that he could ask the Cabinet for advice (鄧, 1993). This temporary arrangement survived the war: Cabinet members were customarily seconded to *the Commissioner of Fiscal Commissions* (三司使) and the *Military Commissioner* (樞密使) (鄧, 1993). Therefore, restructuring the government to realign the functions under the Cabinet became possible.

The financial positions in this era were concentrated in the Fiscal Commissions, an overarching establishment that included almost all fiscal and expenditure functions (**Figure 15**). Outside of the capital, the financial positions included the *Fiscal Commissioners* (轉運使), the *Supply Commissioners* (發運使), and the staff of these commissioners. *Judicial Commissioners* (提點刑獄) were given tasks to review bookkeeping results, but they were not performing substantial financial tasks yet.

Figure 15
Organisation Chart of the Fiscal Bureau in the Early Sung



ii. Adding Functions: Hsi’ning Reform (1069 CE to 1082 CE)

As mentioned in the previous chapter, the Sung Empire was born in a coup d'état and quickly conquered much land beyond its original territory. Therefore, the political need to stabilise the empire undermined the early bureaucratic system. Incapable officials from the previous empire (Later Chou) were retained to avoid a counter-coup. Incapable officials from the conquered kingdoms (the small polities) were retained to pacify the locals. Many incapable and corrupt people were appointed due to the dire need to rule more lands. Sons and younger brothers of existing bureaucrats were given official positions to secure the loyalty of existing bureaucrats. To solve the problem, the emperor Jen-tsung in 1043 CE (慶曆三年) demanded a *junior minister* (参知政事) to provide a reform plan (*宋史*, ca. 1346/n.d., 列傳第七十三). The reform plan included ten initiatives: (1) linking performance to promotion, (2) reducing quotas for nominating relatives for officials, (3) reforming the examination, (4) increasing the appointment requirement for prefectural governors, (5) standardisation of the “official farms” for regional governors,[25] (6) public investment on agricultural infrastructure, (7) reinstatement of militia, (8) punishment on non-compliance by regional governors, (9) scrutiny of royal decrees before promulgation, (10) economic drive on regional governments (*宋史*, ca. 1346/n.d., 列傳第七十三). The first five and eighth initiatives were about the reform of the human resource management of the bureaucratic system. The ninth and tenth initiatives were about the internal procedure and establishment of the government system. Only two initiatives were about the state: the sixth was about economic development, and the seventh was about the military. Therefore, the reform was mainly about the bureaucrats and their jobs. The reform was often mentioned as the *Ch'ing-li Reform* (慶曆新政), as it was launched in the third year of Ch’ing-li. As the reform attempted to improve efficiency by pushing the bureaucrats who were the Winning coalition of the emperor, the reform deprived the Winning coalition of the private goods provided to them. Naturally, the emperor could not enforce the reform unilaterally, so the reform initiatives were soon discarded. However, the necessity of improving efficiency and rebalancing the revenue and expenditure still existed; therefore, the emperor left the problem to his successors by discarding the *Ch'ing-li Reform* (慶曆新政).

The second major reform was the *Hsi’ning reform* (熙寧變法), the second and most influential reform of the Sung Empire (Part 3 of **Figure 11**). After an abundant early era, the empire was troubled by increasing military expenses in the northwest and the

[25] These farms spread in different areas worked by tenant farmers. The outcome of these farms constitutes a part of the income of the regional govenors, providing them food and money.

increasing payroll of officials. The once magnificent treasury was dwarfed by the public expenditure of a near-modern state, and an empty coffer could lead to mutiny or a coup d'etat. Thus, the emperor "*Shen-Tsung*" (神宗) appointed an advisor, *Kuang Ssu-ma* (司馬光), to lead a task force investigating initiatives for an economic drive (*宋史*, ca. 1346/n.d., 志第一百三十二). After a few days, *Kuang Ssu-ma* (司馬光) reported that the royal life was too luxurious, the reward was too generous, royal relatives and officials were too numerous, and the army was filled with too many incapable personnel (*宋史*, ca. 1346/n.d., 志第一百三十二). *Kuang Ssu-ma* (司馬光) resigned and suggested that the emperor work personally with the *military commissioner* (樞密使), the cabinet, and the *Commissioner of Fiscal Commissions* (三司使) for years to devise a sophisticated plan (*宋史*, ca. 1346/n.d., 志第一百三十二). From a retrospective view, *Kuang Ssu-ma* (司馬光) became the anti-reformist leader after the reform was launched, and, therefore, he naturally presented his distrust of a possible reform. Therefore, the emperor had to disband the economic drive task force and appoint a low-rank official who supported reform, *Anshi Wang* (王安石), to be a junior minister to plan and execute a reform (*宋史*, ca. 1346/n.d., 列傳第八十六). *Anshi Wang* (王安石) agreed with *Kuang Ssu-ma* (司馬光) that reducing expenditure would be political suicide. Therefore, *Anshi Wang* (王安石) switched the focus to expanding revenue, strengthening the military, improving human resource management, and improving the efficiency of operations without reducing officials (*宋史*, ca. 1346/n.d., 志第一百三十二).

For the financial aspects, the reform included six primary policies. (1) The first was empire-wide procurement (均輸法) (*宋史*, ca. 1346/n.d., 列傳第八十六). Previously, the central government acquired non-monetary resources via taxes in kind or procurement from merchants in the capital. After the reform, the central government procured goods from the regions with the lowest price instead of the capital. (2) The second was to abolish corvée (免役法) (*宋史*, ca. 1346/n.d., 列傳第八十六). Monetary taxes were levied on the people to replace corvée with hired labour.[26] (3) The third was credit services for peasants (青苗法) (*宋史*, ca. 1346/n.d., 列傳第八十六). Local governments were required to lend peasants money to encourage productive investment. (4) The

[26] Originally, ordinary people were required to work for the state for a fixed number of days each year. However, this system proved to be economically inefficient. For individuals with low incomes, corvée labour was an advantageous tax because their time was inexpensive. In contrast, for high-income individuals, corvée became an unreasonable burden, as their time held greater value. By abolishing the corvée, high-income individuals could pay taxes instead of contributing time to government labour. Meanwhile, the government could utilise the tax revenue to hire low-wage workers from the market, thereby increasing the income of those with lower earnings.

fourth was establishing an Imperial Trade Office (市易法) with three primary businesses (*宋史*, ca. 1346/n.d., 列傳第八十六). The first business was the monopoly brokerage between merchants in the capital and merchants outside the capital. The second business was procuring goods when the price was low and selling the goods until the price became high to gain profits and calm the market fluctuation. The third business was to lend money to merchants competing with private creditors. (5) The fifth was irrigation (農田水利) (*宋史*, ca. 1346/n.d., 列傳第八十六). Local governments were responsible for building irrigation systems by levying labour and money from local people, and a loan from the central government would cover the deficit. (6) The sixth was the reform of agricultural tax (方田諸役) (*宋史*, ca. 1346/n.d., 列傳第八十六). Instead of a fixed tax, the cantonal officials were responsible for measuring the lands annually and adjusting the tax if needed.

Traditional financial officials did not welcome these measures. As the emperor was reluctant to authorise reformists to remove existing bureaucrats, the emperor authorised the reformists to establish new offices. In the capital, the reformists' headquarters were the "*Chih-chih-san-ssu-t'iao-li-ssu*" (制置三司條例司) (汪, 1995). Then, after the "*Chih-chih-san-ssu-t'iao-li-ssu*" was closed under political pressure, the functions were moved to the *Granary Bureau* (司農寺), which had a more plausible ancient name with a history of one thousand years (汪, 1995). Outside of the capital, the reform was performed by newly established *Trade Commissioners* (提舉常平) (*宋史*, ca. 1346/n.d., 列傳第八十六), and, in regions where the *Trade Commissioners* (提舉常平) were not appointed, the *Judicial Commissioners* (提點刑獄) were responsible for implementing reform policies (王晓龙 & 贾秋莹, 2010).

The policies of military reforms also had many fiscal implications. (1) The re-introduction of militia (保甲) (*宋史*, ca. 1346/n.d., 列傳第八十六) aimed to enable disarmament of the incapable units in the professional army to reduce military expenses. (2) By outsourcing horse husbandry, the reformists aimed to reduce the expense of the imperial horse service while increasing available warhorses. (*宋史*, ca. 1346/n.d., 列傳第八十六). (3) The reformist detached the military equipment procurement from the fiscal commission into an independent arsenal to manufacture military equipment (*宋史*, ca. 1346/n.d., 志第一百十八) and simplified the functions of the overcrowded Fiscal Commission.

The human resource management reform was not directly related to financial affairs, but it influenced the human resources of financial officials. The first was a new public school system. In the early era, public schools were few and unimportant since most candidates acquired knowledge from their family members or private tutors. Public schools were not considered qualification providers like modern schools (宋史, ca. 1346/n.d., 志第一百十). The reform established schools as an alternative pathway to the traditional royal examination (宋史, ca. 1346/n.d., 志第一百十). The top-ranked students were treated as equivalents to the successful candidates from royal examinations (宋史, ca. 1346/n.d., 志第一百十). However, such attempts did not last long, and graduates from public schools were not an essential source of officials (宋史, ca. 1346/n.d., 志第一百十). One possible reason is that the privileged disliked the public school system because the system redistributed education resources and improved social mobility. Although the public school system promised to produce experts, the school still focused on teaching Confucianism instead of professional knowledge. No surviving record shows that the schools ever taught financial knowledge. Thus, the financial establishments seemingly had no alternative to on-the-job training.

The reform faced a natural political weakness. Significant reforms typically impact the state, but bureaucrats were shielded from consequences because they formed the emperor's winning coalition. Any reform that threatened their interests was politically unacceptable. Moreover, since bureaucrats had relatives and friends within the system, their interests were easily affected, further restricting reform choices. Although the emperor wanted reform to save his empire in the long term, he had to keep his Winning coalition happy in the short term. He could not reform his Winning coalition unilaterally without launching a coup against them. However, weakening one's empire with a coup for long-term stability was risky for the emperor. Therefore, without a coup, the emperor could not oppress the anti-reformists. When the anti-reformists were fierce, the emperor stopped to consolidate the situation. Besides, promoting both reformists and anti-reformists prevented the reformists from monopolising the power, preventing the reformists from taking over the emperor's power. Therefore, the opportunistic reform was never easy, and the reform started a prolonged political battle between the reformists and the anti-reformists. After the emperor died, to win the support of officials, the queen regent appointed anti-reformist leaders as ministers, who revoked most reform measures immediately. However, since the empire needed fiscal income from the reform, the young emperor renominated the reformists into the cabinet and reinstated many measures after the regency era.

Successful or not, the reform created many new positions in financial affairs apart from the traditional system. Examples included the reinstated *Granary Bureau* (司農寺), the *Trade Commissioners* (提舉常平), and the *Judicial Commissioners* (提點刑獄).

iii. Yuanfeng Restructuring (1082 CE to 1127 CE)

The final stage of the Hsi-ning reform was the restructuring of the government (Part 4 of **Figure 11**). As mentioned above, civil officials were given official titles according to the old T'ang system and their pay was based on these titles. At the same time, they were seconded to different bureaus for their actual tasks. Although early emperors maintained the government structure of Later Chou, the emperor "Jen-tsung" decided to reinstate the six departments system (**Figure 16**). While reforms often faced strong opposition, the Yuanfeng Restructuring was widely welcomed. Politically, the existing government structure was too disorganised to be defended. Additionally, the restructuring led to salary increases for many officials, further contributing to its acceptance. The reform was ultimately completed in 1082 CE.

The critical issue of the reform was the restructuring of the six-department system. Firstly, a new and formal salary rank system replaced the titles granted by the six departments and the nine bureaus. Secondly, the functions of the pre-reform establishments were reorganised into six departments and nine bureaus. Thirdly, the status of the cabinet as the coordinator of all functions was rectified.

Therefore, the financial officials had new salary ranks and names for financial positions. Therefore, the most influential changes were listed as follows:

Firstly, the *Fiscal Commission* (三司) was disbanded. The *Department of Commoners* (戶部) took over the administration of agricultural and other traditional taxes and was also responsible for the *Imperial Treasury* (左藏庫). The *Department of Works* (工部) took over the administration of public works. The *Department of Justice* (刑部) took over the bookkeeping review.

Secondly, the *Granary Bureau* (司農寺) maintained its function as the controller of grain warehouses for price stabilisation (常平倉). However, the administrative functions added by the Hsi-ning reform were moved to the *Right Division of the Department of Commoners* (戶部右曹). These functions provided much revenue from the reform initiatives, and the revenue was remitted to a cabinet treasury located in the *Royal Treasury Agency* (太府寺). The *Right Division of the Department of Commoners* (戶部右曹) was headed by a *Deputy Secretary* (戶部右曹侍郎) who reported to the cabinet directly, independently from the *Secretary of the Department of Commoners* (戶部尚

書). Thus, the *Right Division of the Department of Commoners* (戶部右曹) should be considered a semi-independent department under the cabinet.

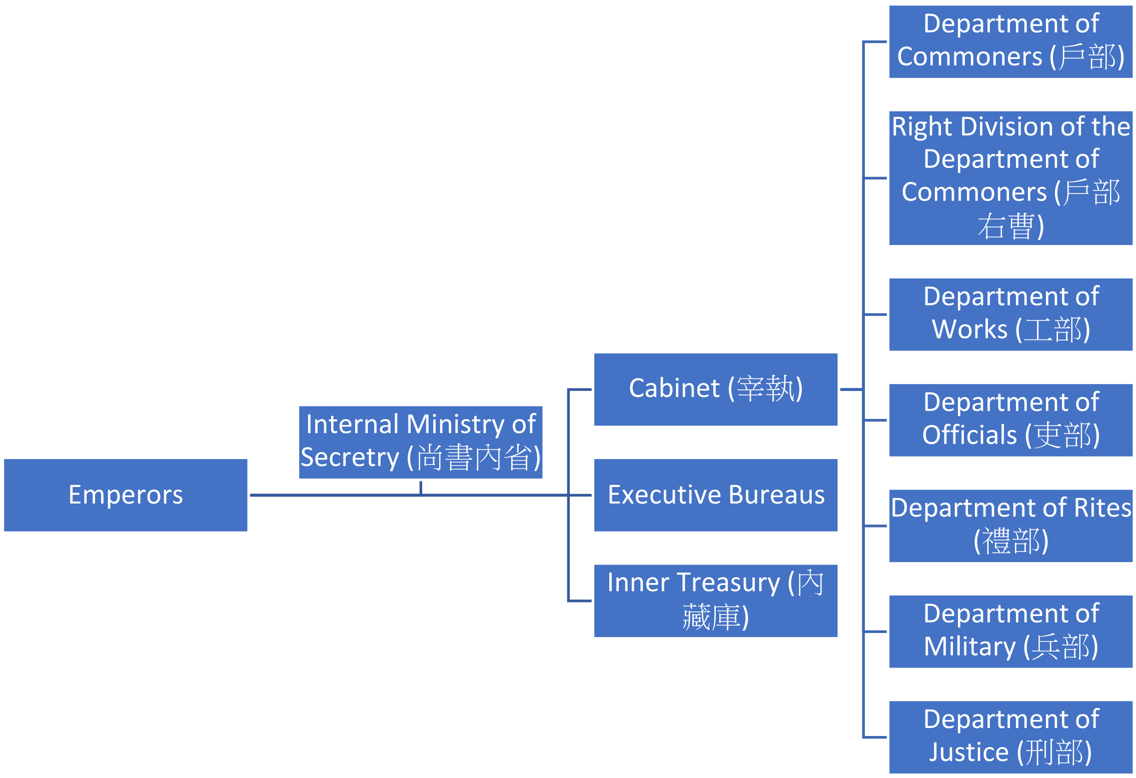
Thirdly, many executive functions went to the *Royal Treasury Agency* (太府寺). Also, the Cabinet's Treasury, as one of the executive functions, shared physical space with the *Royal Treasury Agency* (太府寺).

Apart from the financial aspect, the human resource management function was also reorganised from separate bureaus into one Department of Officials. The details are provided in the following chapter. The *Military Commission* (樞密院) was retained as a small team of advisors, while most of its functions were moved to the *Department of Military* (兵部).

The main implication of Yuanfeng restructuring was the name changes in salary rank and jobs. Before the restructuring, all the "secretary" titles were salary ranks, and the functions were the positions in the *Fiscal Commission* (三司) or the *Granary Office* (司農寺). After the restructuring, the "secretary" titles were aligned with the actual jobs, while the salary ranks had a new name.

Figure 16

Structure of the Central Government at the Capital of the Sung Empire after the Yuanfeng Restructure



iv. After Losing the North China Plain (1127 CE to 1279 CE)

The loss of the North China Plain led to defence and economic changes. On the military side, the defence line retreated from the northern edge of the North China Plain to the Huai River and the Chin Mountains. Although the defence was still not ideal, the mountains and rivers provided a relatively strong basis for defending against the cavalry-based Jurchen army. On the economic side, the loss of the North China Plain meant a loss of a significant proportion of the agricultural output of the Sung Empire (汪, 1995). In the early years of the Southern Sung, the seeding for wheat flourished in the remaining southern land as the officials escaped from the northern part of the empire and still favoured wheat-flour-based food, but wheat production reduced as soon as the food preference changed to rice (李根蟠, 2002). Also, cotton production was widely spread throughout the southern Sung empire and continued since the clothing industry always needed cotton. Since the taxable land shrank because of the loss of the North China Plain, the South Sung empire relied on the tea tax, salt tax and a combination of many small taxes (席, 1989).

The central government of the South Dynasty of the Sung Empire was rebuilt based on the example of the North Dynasty. However, the central government's control was comparatively weak, and the central government could no longer receive accounting records for review and control (汪, 1995). Due to a lack of historical records, there was less evidence about the operation of the South Dynasty.

v. Implications for the Following Chapters.

The two implications of the structure of the central government are to decide the scope of financial officials and the salary ranks.

The scope was established using different criteria before and after the restructuring. Before the restructuring, the bureaus which executed financial tasks included the "Fiscal Commission" (三司) and the *Granary Bureau* (司農寺). The Secretary titles in the pre-restructure *Department of Commoners* (戶部), *Department of Works* (工部) and *Department of Justice* (刑部) were merely titles for salary ranks instead of real jobs. Therefore, these titles should not be considered as financial experience. After the restructuring, the experience was deemed to be financial if one was awarded secretary titles in the following offices: the *Department of Commoners* (戶部), the *Right Division of the Department of Commoners* (戶部右曹), the *Department of Works* (工部), the *Section of Review under the Department of Justice* (刑部比部), and the *Royal Treasury Agency* (太府寺).

Before the restructuring, the salary rank of a person was his secretary title, and after the restructuring, the salary rank was in the new system. The historical data about positions, secretary titles, and post-reform salary titles were cleaned and transferred into a dataset for analysis. The details of the conversion between texts and numeric ranks are provided in Appendix A.

If there was no specific year of granting a secretary title, the granting was analysed based on the person’s situation. If a person was deemed to have retired or died by the reform, all his titles were treated as salary ranks under the pre-reform rule. If a person was deemed too young to join the government before the reform, his titles were treated as job positions under the post-reform rule. After using this method, only a few samples remain unclear and will not cause much analytical error.

4.3. The Establishments Outside of the Capital

As the Sung Empire was far more extensive than city-states, a group of officials living in the capital could only expect tax and other revenues to come to the capital with the help of regional officials. Thus, this section discusses the officials outside the capital.

Before the discussion, one concept must be introduced. Officials working in the regions were not equal to regional officials (州縣官) or hsüan-jen (選人). The Sung Empire had a system to send court officials (朝官) and capital officials (京官) to govern regions, just like the Roman Republic appointed former councils as provincial governors. These court and capital officials (京朝官) could expect a new job in the capital after their three-year terms ended. The bond between the royal court and the court officials was expected to overcome the bond between the governors' positions and the regions. In contrast, hsüan-jen (選人) were low-level officials who would not be appointed to job positions in the capital.

4.3.1.The Power Structures of Regional Governments

The officials in charge of the regional governments were highly independent, as they answered to the emperor (**Figure 17**). Officials outside the capital were recruited and appointed directly by the central government instead of local governments (鄧, 1993). Prefects were usually court officials seconded from the central government. It was normal to appoint ex-ministers to be prefects.[27] Although the circuit-level commissioners were responsible for monitoring the officials in regions and collecting money and financial records from the prefects, the circuit-level commissioners had no power to command, appoint, dismiss, or punish prefects (鄧, 1993). The main power of circuit-level commissioners officials was to recommend or criticise prefects to the emperor to inform the Department of Officials for performance assessment (鄧, 1993). Still, the pressure of criticism was a soft power. For example, *Trade Commissioners* (提舉常平) were seen as unimportant officials until they were given the same power to recommend or criticise regional governors (鄧, 1993). Similarly, the financial establishments in the central government could reward or remove a regional governor or a circuit commissioner on their own, and, therefore, soft power had to be resorted to.

Therefore, the prefectures were effectively "provinces". A bureaucrat who worked for a central government function could find themselves as a prefect after serving the current term, just like a Roman consul ended his term by moving to be a provincial governor. Relocating to remote areas was not necessarily a demotion but sometimes a promotion. These prefecture governors still retained their status of a "capital/court official" (京朝官) to find another position in the central government once their terms in the prefectures ended. This setting also helped the emperors to consolidate power. On one hand, no one functionary had the power to punish an official, and therefore, no one could ever be more powerful than the emperor. On the other hand, the emperor did not

[27] For example, An-shih Wang (王安石) was appointed to be prefectural governor of Chiang-ning (江寧府) after he was discharged from the ministerial position. Shih Su (蘇軾) was also treated as a junior minister when he was sent to govern the prefecture of Hang (杭州). Many similar examples are available in the History of Sung (*宋史*, ca. 1346/n.d., 列傳).

punish one by the power of a dictator but based on criticism from one's peers. In this way, the emperor could retain power while being apolitical.

With the understanding built in the previous paragraphs, from the view of the flow of tax, there are four levels of government. On the lowest level, cantonal governments collected money and taxes in kind from taxpayers and remitted them to the prefectures, while the prefectures surrendered these economic resources to the circuit-level commissions, and, in turn, the circuit-level commissions remitted the resources to the central governments (See **Figure 18** and **Figure 19**). The economic rewards to each official were determined and paid by the central government. The details are provided in the following sections.

Figure 17
The Power Structure of the Sung Empire, including Regional Governments.

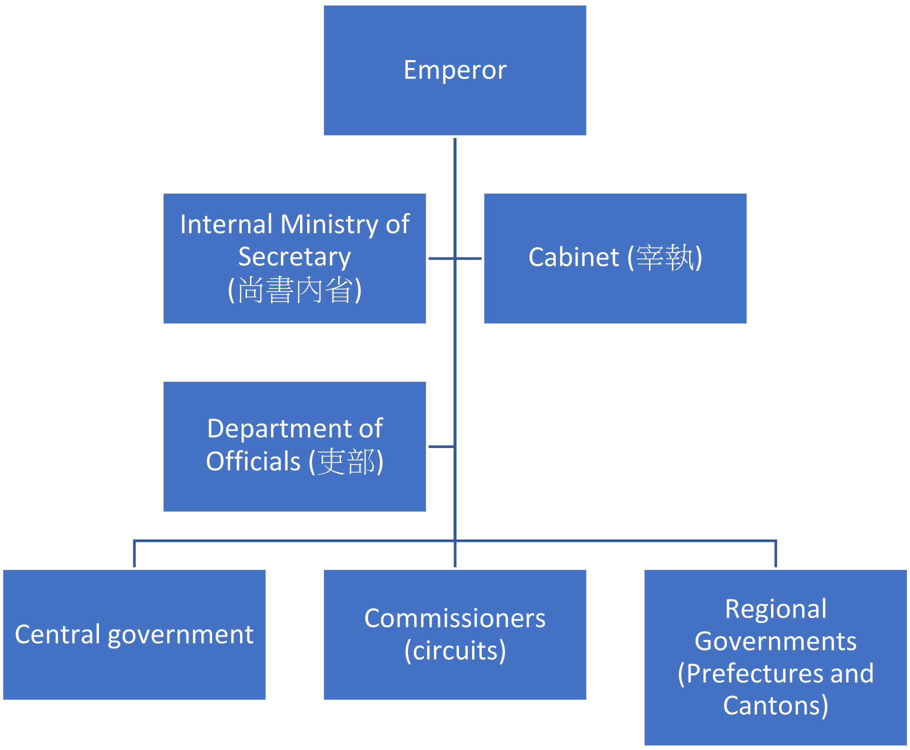


Figure 18

The Remittance Before Yuanfeng Restructure.

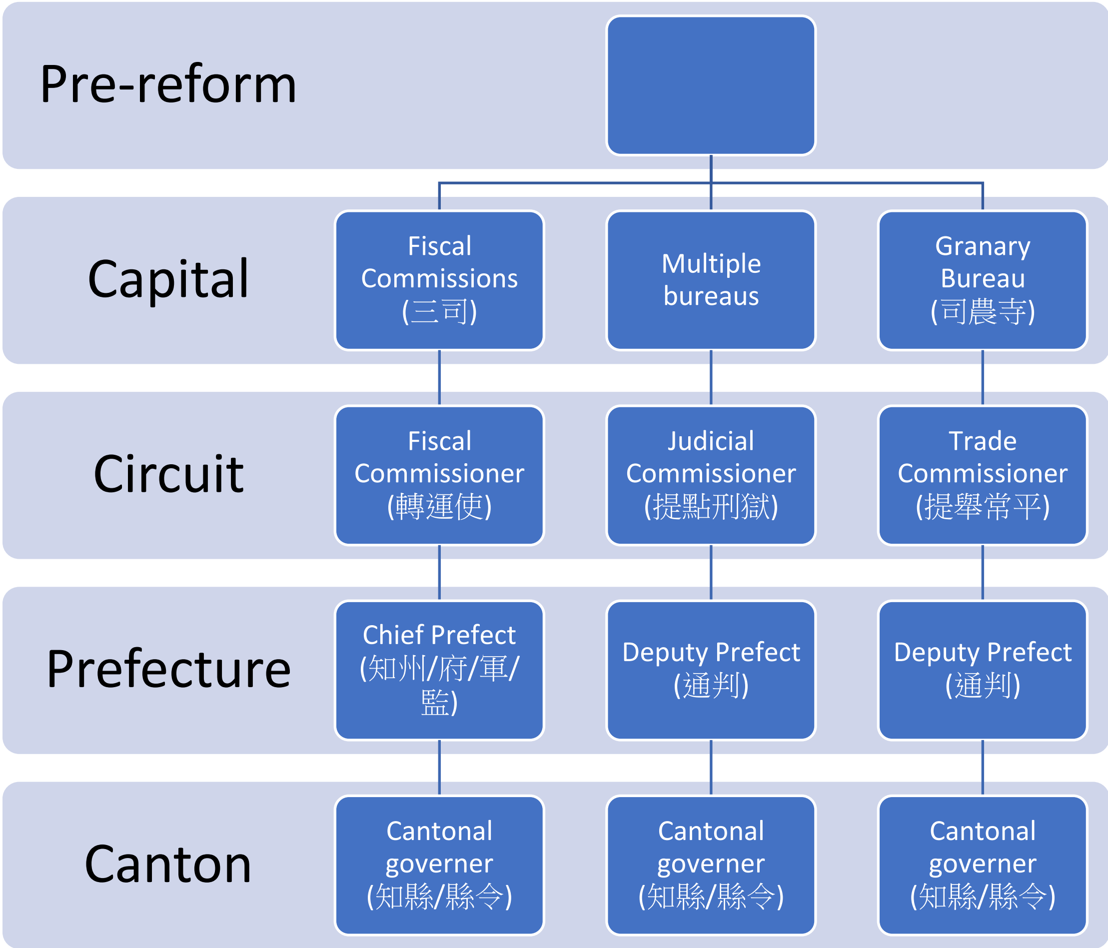
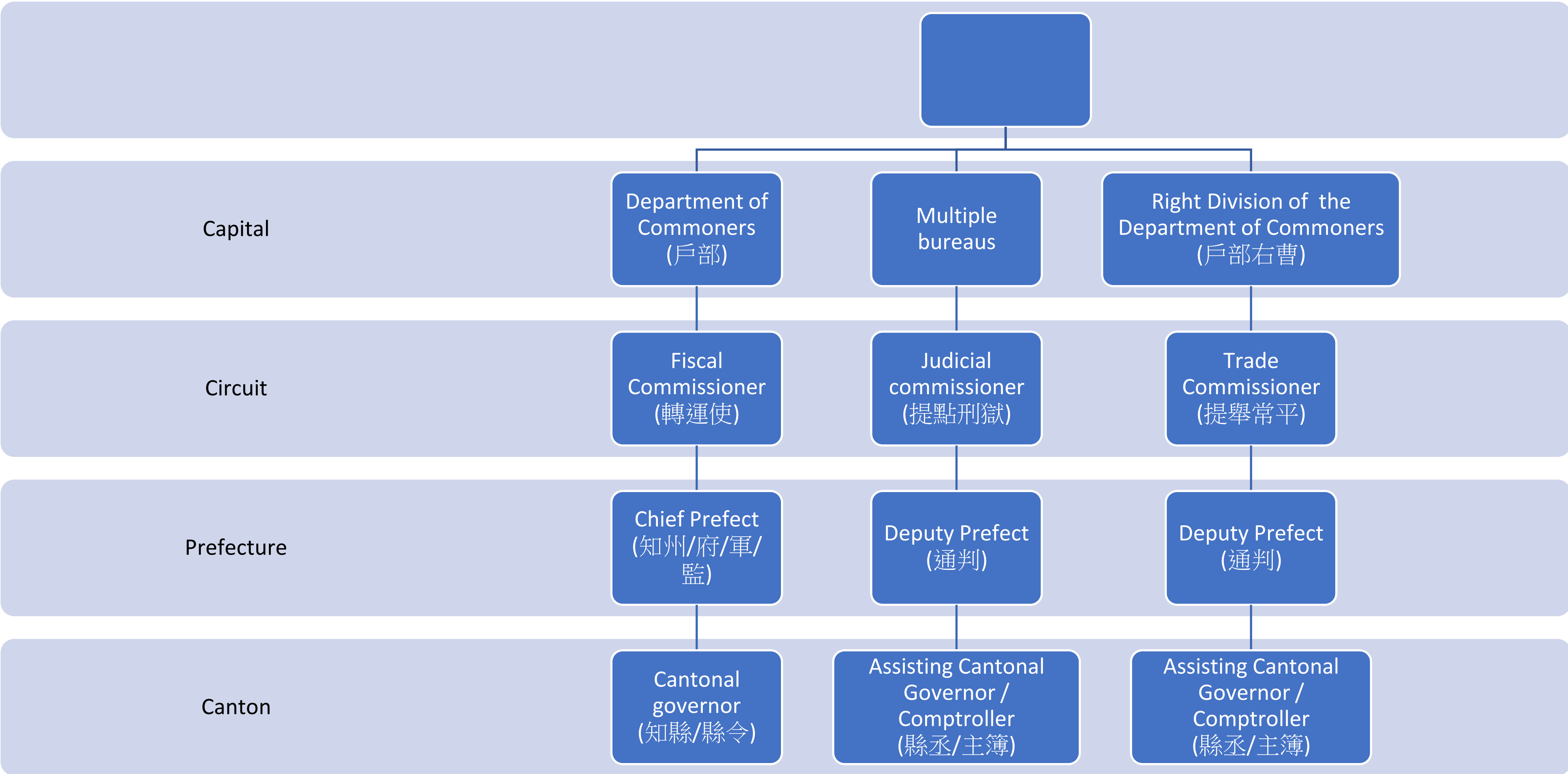


Figure 19

The Remittance After Yuanfeng Restructure.



4.3.2.Circuit Level

As mentioned in the previous chapter, the Sung Empire abolished the provincial government to prevent future rebellion. However, three hundred prefectures could easily overload the central government with substantial administrative tasks. Also, three hundred prefectural governors would need to be monitored in case of corruption, inefficiency, or rebellion.

Therefore, the emperor sent "commissioners" to act as his agents to tour several prefectures, later mentioned as *circuits* (路). Moreover, based on the tradition of segregation of power, he appointed several commissioners in charge of different affairs while reviewing each other. As commissioners, these officials did not have the power of permanent provincial governors and undertook much of the central government's burden.

The *Fiscal Commissioners* (轉運使) were responsible for collecting agricultural tax from prefectures' chief governors and monitored the bookkeeping of regional governments. In some circuits, the title was *Supplier Commissioner* (發運使), but the functions were almost identical.

The *Judicial Commissioners* (提點刑獄) were responsible for judicial reviews of the sentences from the prefectural courts. Important cases needed to be reviewed by Judicial Commissioners. To establish surveillance of every official, Judicial Commissioners were later given tasks of reviewing the accounting records and monitoring non-agricultural taxes (*宋史*, ca. 1346/n.d., 志第一百十; 方, 2015; 李坚, 2012). Also, Judicial Commissioners were responsible for price-stabilisation functions because the emperor worried about the *Fiscal Commissioners* (轉運使) abusing price-stabilisation grain reserves (方, 2015; 王晓龙 & 贾秋莹, 2010).

The *Trade Commissioners* (提舉常平) were responsible for supervising the implementation of reform policies such as monetised corvée, state-owned credit service, and so on (*宋史*, ca. 1346/n.d., 列傳第八十六). As financial establishments usually did not welcome reform initiatives, the reformists had to send their agents, *Trade Commissioners* (提舉常平), into the circuits to proceed with their reform agenda.

Many other types of commissioners could be responsible for chasing bandits, investigating disasters, monitoring frontier armies, etc. These commissioners were not directly responsible for financial affairs and do not need further discussion.

4.3.3.Prefectural Level

The prefectures were the most extensive regional areas that had a regional government. Based on their nature, these prefectures were given four different names: the militarily significant “Chün” (軍), the urbanised “Fu” (府), the industrialised “Chien” (監), and the ordinary Chou (州). Besides the usual rule, the nominal fiefs of an imperial prince were customarily upgraded to a Chün (軍) or a Fu (府). Therefore, in this section, all prefectural regions were mentioned as prefectures regardless of their original title.

Based on the tradition of segregation of power, the emperor appointed two governors for each prefecture (*宋史*, ca. 1346/n.d., 志第一百二十). Usually, the central government seconded a court official to be the *Chief Prefect* (知~州軍事) for three years (*宋史*, ca. 1346/n.d., 志第一百二十). The *Deputy Prefect* (通判) was often an official sent from the capital (*宋史*, ca. 1346/n.d., 志第一百二十). All major prefectural orders had to be signed off by both prefects (*宋史*, ca. 1346/n.d., 志第一百二十). Therefore, no prefect could manage a prefecture on his own.

The prefects were not dedicated to financial affairs. However, both prefects had to undertake some tasks for financial affairs, which was an essential part of their job. A *Chief Prefect* (主吏) was responsible for the traditional agricultural tax and remitting the tax revenue to the *Fiscal Commissioners* (轉運使) (*宋史*, ca. 1346/n.d., 志第一百二十). A *Deputy Prefect* (通判) was responsible for other revenues, such as the business taxes, and for remitting these revenues to the Judicial Commissioner or the *Trade Commissioner* (*宋史*, ca. 1346/n.d., 志第一百二十).

Promotion was linked to financial performance, such as extending arable lands (*宋史*, ca. 1346/n.d., 志第一百二十六) or trade performance (*宋史*, ca. 1346/n.d., 志第一百二十八). Thus, it is reasonable to assume that the prefectural governors were motivated to promote local production. However, the motivation was short-term since they would leave the job in three years.

Apart from the governors, each prefecture had a chief of staff (錄事參軍), who was responsible for supervising other staff members. Other members included the staff member responsible for the census, agricultural tax, and warehouse management (戶曹參軍), judge (司法參軍), and prosecutor (司理參軍) (*宋史*, ca. 1346/n.d., 志第一百二十). Of course, only large prefectures would have a full-scale staff, and smaller prefectures would allow some staff to undertake multiple roles (*宋史*, ca. 1346/n.d., 志第一百二十).

4.3.4. Cantonal Level

The cantons (縣) were the lowest level of the regional governments of the Sung Empire. Five types of officials worked in the cantons: the Governors, the Assistant Governors (縣丞), the Comptroller (主簿), and the *Constable* (縣尉). The title of the governor was either *cantonal governor* (縣令) when the governor was a "regional official" (選人) or *acting cantonal governor* (知縣) when he was seconded from the capital. The comptroller was responsible for tax and warehouse management, bookkeeping, and authorising payments, and therefore, the role was always needed. Thus, even the smallest canton had a *Comptroller* (主簿) responsible for the governor's tasks. A small canton may have a Governor also acting as the *Comptroller* (主簿). Medium-sized cantons could have both a Governor and a *Comptroller* (主簿). As the size increased, a canton could have one constable (縣尉) and up to two Assistant Governors (縣丞) added to the team. When royal enterprises existed in the canton, a Ch'ien-tang (監當) would be appointed to monitor the enterprise. The governors also worked part-time in financial affairs and were responsible for the results, reflecting on their promotion speed (*宋史*, ca. 1346/n.d., 志第一百二十六).

4.3.5. The Relationship between the Central Government and the Regional Governments

One of the critical issues in managing regional officials was the accountability setting. While the central government needed as many resources as possible, there were better approaches than taking all resources out of the hands of regional officials.[28] Firstly, if the resources were all remitted to the central government, the regional officials would have insufficient reserves for dealing with unexpected events. Secondly, as discretion in using resources is a type of power, regional officials could be disincentivised to increase the total revenue if their discretion in using resources was not linked with the revenue and all the resources were remitted to the capital. Thus, the Sung Empire later allowed regional treasuries for regional officials. For example, "*Kong-Shih-Ch'ien"* (公使錢) was a type of treasury controlled by commissioners at their discretion.[29]

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[28] The History of Sung recorded the Sung Empire concentrated army in the capital and left no treasury outside of the capital ("宋聚兵京師，外州無留財") (*宋史*, ca. 1346/n.d., 志第一百三十二).

[29] The regions were given Kong-Shih-Ch'ien (公使錢), which the governors customarily received for their personal use. ("方鎮別賜公使錢，例私以自奉") (*宋史*, ca. 1346/n.d., 志第二百二十三).

4.3.6. Implication

There are two implications of this section. Firstly, the scope of financial officials in regional government is clarified. As to full-time financial officials, only the circuit commissioners in charge of tax and trade were dedicated to financial functions. However, the judicial commissioners also play an essential role in financial functions. Thus, the judicial commissioners could still be considered critical financial officers. The prefectures and sub-prefectures also had their own level of financial jobs and, naturally, had the officials perform them. However, since these officials had a low rank and the central government did not recognise them, the government might not fully acknowledge their expertise. Therefore, in the tests of the following chapters, only the full-time circuit financial officials were deemed to be financial officials. Nevertheless, the part-time officials were added back to the financial officials in robustness tests to overcome potential bias.

The second implication was the explanation that some financial officials were sent to be prefects after their term in the central government had ended. A break in a financial career could be a disaster for a modern accountant, but such a break was not a demotion for the financial officials. On the contrary, the prefecture governor could be a promotion to allow the officials to gain experience in general management as decision-makers. Although there were descriptions for lower-ranking financial officials to be selected and cultivated early, exclusively in the financial bureaus in the capital, such descriptions could only be seen as one of the rules. The “career” concept differs between the Sung Empire and modern society. As a result, this thesis did not expect a continuous career for financial officials. Instead, the tests were designed to determine whether experience helped get new financial appointments.

4.4. Tasks of the Financial Officials

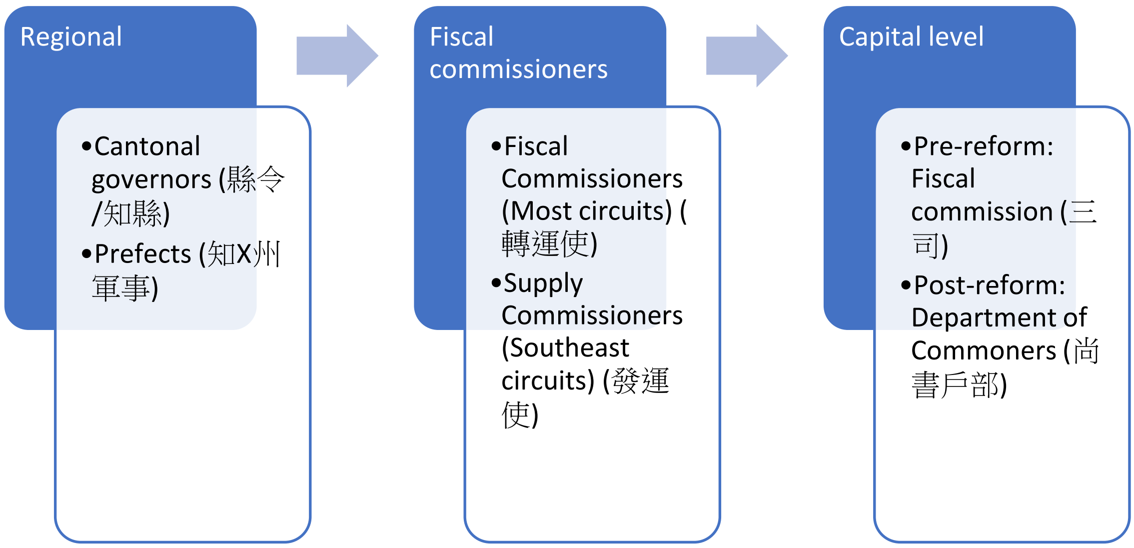
Although the tasks should have been elaborated from the beginning of this chapter, it is impossible to describe them in a meaningful and organised way apart from the bureaucratic structure. Therefore, the tasks could be described in detail after the previous sections introduce the structure. Although the system involved many managerial tasks, the most essential fiscal tasks were still collecting resources, dispensing resources, keeping records, and reviewing the records. Therefore, each part of this subsection discusses one type of task.

4.4.1. The Revenue System

There were four major types of revenues: (1) traditional taxes, including the agricultural tax; (2) profit from traditional royal enterprises located in remote regions and profit from schemes introduced by the reform; (3) royal revenue remitted from regions, and (4) royal revenue located in the capital. Revenues were classified by custom instead of logic or concept because the division of revenues resulted from political balance instead of intelligent design. Different revenues were remitted to the central government via different pathways as follows:

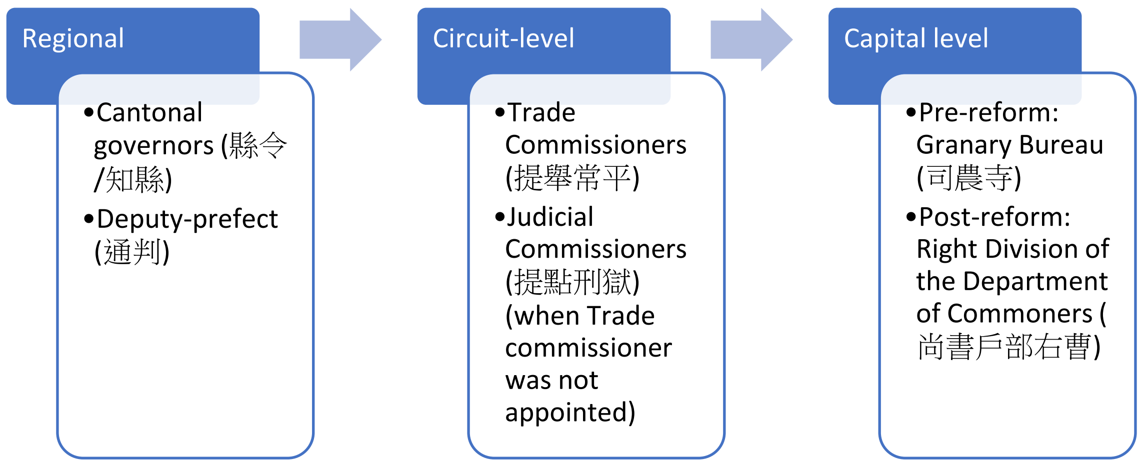
The traditional system transferred agricultural tax and some other traditional revenue. From the sender to the recipient, the pathway consists of (1) the *cantonal governor* (縣令/知縣), (2) the *Chief Prefect* (知 X 州軍事), (3) the *fiscal commissioner* (轉運使), (4) the pre-Yuanfeng Restructuring *Fiscal Commission* (三司) or the post-Yuanfeng Restructuring *Department of Commoners* (尚書戶部) (**Figure 20**). Apart from the flow of goods and money, the officials involved needed to prepare accounting ledger journal entries and reports. Pre-Yuanfeng Restructuring, these reports were reviewed by the *Bookkeeping Office for Regional Accounts* (三司勾院) in the *Fiscal Commission* (三司). After the Yuanfeng Restructuring, these reports were reviewed by the *Reviewing Section of the Department of Justice* (刑部比部). Circuit-level *Judicial Commissioners* (提點刑獄) were also required to review the accounting records and reports.

Figure 20
Remittance of Traditional Revenues (The Imperial Treasury)



The second system was built during the Hsi’ning reform. From the sender to the recipient, the pathway consists of (1) the *cantonal governor* (縣令/知縣), (2) the *Deputy-Prefect* (通判), (3) the *Judicial Commissioners* (提點刑獄) or *Trade commissioners* (提舉常平), (4) the pre-restructure *Granary Bureau* (司農寺) or the post-restructure *Right Division of the Department of Commoners* (尚書戶部右曹) (**Figure 21**). The different titles on the circuit level were due to the political changes. In some years, when there was no *Trade commissioner* (提舉常平), the *Judicial Commissioners* (提點刑獄) were responsible for this task. When *Trade commissioners* (提舉常平) were appointed, the *Trade commissioners* (提舉常平) were responsible for this task. The anti-reformists worked hard to abolish the *Trade commissioners* (提舉常平) because the *Trade commissioners* (提舉常平) were established by the reformists. As the political struggle between the reformists and anti-reformists continued for many years, the *Trade Commissioners* (提舉常平) were not continuously appointed. The final recipients were different in different eras. Before the Yuanfeng Restructuring, the final recipient was the *Granary Bureau* (司農寺). After the Yuanfeng Restructuring, the final recipient was the *Right Division of the Department of Commoners* (尚書戶部右曹).

Figure 21
Remittance of Revenue from Reform (The Cabinet's Treasury)



The third and fourth types of revenue were remitted to the Inner Treasury (內藏庫). However, these two pathways usually borrowed human resources from the bureaucratic system (朱鴻, 1991).

4.4.2.The Disbursement System

Three systems were designed to manage three different types of expenses.

The first type was paying outsiders, such as officers and soldiers. Firstly, the recipient filed an application to the *Fiscal Commission* (三司), listing the goods and money to be collected (張, 2018). Then, the *Logistic Administration* (糧料院) issued a voucher to the recipient and a payment request to the responsible warehouse (張, 2018). Then, the *Fiscal Commission* (三司) sent a confirmation letter to the warehouse to authorise the payment. When the recipient arrived at the warehouse, the warehouse keeper checked the voucher, the request, and the confirmation letter for consistency. If the three documents were consistent, the keeper paid the recipient according to the voucher, made payment records, and sent the records to the *Fiscal Commission* (三司) for review and record.

The second type was paying expenses for a bureau in the central government. Firstly, the bureau that needed payment applied to the *Fiscal Commission* (張, 2018). Then, the *Fiscal Commission* (三司) sent a payment confirmation to the responsible warehouse and issued a voucher to the applicant (張, 2018). When the applicant arrived at the warehouse, the warehouse keeper checked the voucher against the payment confirmation for any discrepancies (張, 2018). If the two documents matched, the keeper paid the recipient according to the voucher and made payment records before sending the records to the *Fiscal Commission* (三司) for final review and bookkeeping.

The last type was paying expenses for the emperor by the Imperial Treasury. Firstly, *the Exchequer of the Internal Ministry of Eunuch* (入内内侍省合同憑由司) authorises a payment request by issuing two vouchers: one was given to a eunuch, and the other was sent to the responsible warehouse (朱鸿, 1991). Then, the eunuch went to the warehouse with the voucher. If the warehouse keeper found that the voucher brought by the eunuch and the voucher sent by *the Exchequer of the Internal Ministry of Eunuch* (入内内侍省合同憑由司) were consistent, the warehouse keeper gave the goods written on the voucher to the eunuch (朱鸿, 1991). Afterwards, the voucher was sent back to *the Exchequer of the Internal Ministry of Eunuch* (入内内侍省合同憑由司) for formal authorisation. Then, if the warehouse was a part of the Imperial Treasury (左藏庫), the Fiscal Commission later compared the authorised voucher and the payment records from the warehouse and recorded the payment (朱鸿, 1991).

These descriptions were for the Imperial Treasury (左藏庫) during the early era. Later, after the central government was reformed, for the Imperial Treasury (左藏庫), the authorities of payment and responsibility of payment moved to the Department of Commoners (張, 2018). For the Cabinet's treasury, the authorisation of the Cabinet had to be sought before payment was made (汪, 1995). Still, the emperors' Internal

Treasury (內藏庫) was not managed by the officials, and little was known about the operation of the Internal Treasury (內藏庫) (朱鸿, 1991; 梅原, 1971). Nevertheless, the detailed operation was irrelevant to this thesis since civil officials did not operate the private treasury.

4.4.3.The Reporting System

i. Bookkeeping

No reliable record of double-entry bookkeeping was found during the Sung Empire. Some Chinese scholars argued that sentences such as “received something from somebody” were “double-entry bookkeeping” (李孝林, 1988). However, such an argument could easily be discredited by academic scrutiny. On the contrary, more prudent scholars (郭 & 张美红, 1993) argued that the native accounting method was still single-entry bookkeeping until the 15th century.[30] From a necessity point of view, while double-entry bookkeeping was needed for the banking sector, it was unnecessary and burdensome for many non-banking enterprises. Therefore, many sectors in Western countries have not adopted double-entry bookkeeping even after the spread of it (Baladouni, 1986; Robertson & Funnell, 2012). Therefore, assuming the Sung Empire had adopted double-entry bookkeeping without reliable evidence would be imprudent, considering the era and government accounting needs. In conclusion, it is sensible to believe that the financial officials of the Sung Empire worked with single-entry bookkeeping.

Nevertheless, during the Sung empire, single-entry bookkeeping had already matured. For example, the bookkeeping was divided into three steps: Ts'ao-liu (草流) as the original records, Jih-ch'ing-pu (日清簿) as the general journal, and the final general ledger (Lin, 1992). Although many scholars exaggerated the single-entry bookkeeping method as having an accounting equation, such “equation” was merely '“opening” (舊管) plus “receipt” (新收) less “payment” (開除) equal to “closing” (見在)”' (Lin, 1992).

ii. Reporting

On the financial accounting side, the Sung Empire had journals, ledgers, simple reports (方, 2004), and complex reports with comparable figures from previous years (陈扬, 2012). Lower-rank bureaus, such as the prefectural governments, usually kept journals and ledgers. At the same time, the simple reports were used as management tools by circuit commissioners and the central government (方, 2004). Historical records show

[30] About two centuries after the Sung Empire. The native Chinese bookkeeping was highly disputed by Chinese scholars for “double-entry” against “single-entry”, presumably for ultranationalism considerations.

that one emperor issued a decree asking for annual reports on assets from the "Fiscal Commission" (*宋史*, ca. 1346/n.d., 志第一百三十二). The financial records were deemed to follow the same format since the central government enforced such a format (方, 2004).

Financial officials usually compiled the most comprehensive report (會計錄) to present to the emperors the figures of the reporting year compared with some earlier years. However, such a report was far from being a modern financial report of the whole country. Firstly, the report was not compiled regularly. Still, on an ad hoc basis, on political needs such as justifying expenses or promoting an economic drive (陈扬, 2012), and, therefore, the compilation was biased. Secondly, the report was usually compiled based on the Department of Commons (戶部) data, and a significant proportion of revenues and expenses were omitted. Since the *Right Division of the Department of Commons* (戶部右曹) and the Royal Treasury Agency (太府寺) controlled the most surplus and a significant proportion of the revenue, omitting these two bureaus meant the report was a departmental report instead of an imperial comprehensive report.

Other ad hoc reports were also compiled for decision-making. For example, a report was compiled to compare wartime with peacetime concerning the incomes and expenses of frontier circuits (*宋史*, ca. 1346/n.d., 志第一百三十二). Presumably, this comparison helped the Sung Empire in decision-making for peace talks. Since this particular war cost more than annual tributes to the neighbour (Hsia), the Sung Empire accepted the peace treaty and paid tributes (*宋史*, ca. 1346/n.d., 志第一百三十二).

In 1074, the empire attempted to establish a *Reporting Commission of the Fiscal Commission* (三司會計司) led by one minister to compile annual reports of the whole empire on people, tax, rents, and profits from mines for managing the empire and the performance assessment of officials (*宋史*, ca. 1346/n.d., 志第一百三十二). However, this attempt was soon discarded (*宋史*, ca. 1346/n.d., 志第一百三十二).

iii. Auditing

Many Chinese scholars argued that the Sung Empire already had auditing practices, but their definitions of auditing are much more liberal than the term "auditing" used by the modern accounting industry. For example, the review and performance assessment by the "Fiscal Commission" was deemed to be "auditing"; the separated authorisation and custody were deemed to be "auditing" (方, 2017); even the normal supervisory performed by higher officials to junior officials was deemed to be “auditing” (李永卉, 2021). After eliminating these very liberal definitions, some tasks may be classified as internal auditing. For example, the judicial commissioners were responsible for checking the accounting records from the Chuan-yün-Shih on the same level as the judicial commissioners(方, 2015). Also, judicial commissioners were responsible for checking the compliance of the regional governments (方, 2015), similar to the tasks performed by modern internal auditors. The bureau most similar to modern auditing was the “*Bookkeeping Bureau*” (帳司), which was responsible for checking all the financial records for fraud detection (*宋史*, ca. 1346/n.d., 志第一百三十二). However, without modern techniques, the fraud detection initiative was disastrously inefficient. With 300 people costing 300 million coins during eight years, the fraud found was about 7.7 million coins (*宋史*, ca. 1346/n.d., 志第一百三十二). Unsurprisingly, the “*Bookkeeping Bureau*” (帳司) was abolished for its inefficiency (*宋史*, ca. 1346/n.d., 志第一百三十二).

In summary, the task of the financial officials was like that of bookkeepers and comptrollers in managing cash and goods, authorising and performing internal control in payment, bookkeeping, and reviewing. Although the activities were primitive, the aim and method were comparable to the accounting practices during the early industrial era.

Chapter 5. The Mechanism to Manage Financial Experts.

5.1. Introduction

This chapter aims to provide a fundamental understanding of the mechanism by which the officials were recruited, selected, assessed, promoted, appointed, and rewarded. As existing research shows, the Sung Empire was a fiscal state (Liu, 2015) defended by a centralised army funded by taxes levied and managed by financial officials (Hartwell, 1971). However, while appointing financial experts to financial positions would be an efficient arrangement, the lack of financial experts in a premodern world could also create political instability. According to the Selectorate theory (Bueno de Mesquita et al., 2003), restricting key positions (Winning coalition) to a small elite group generates a less stable state than opening key positions (Winning coalition) to more candidates. Therefore, the design of such a system was a balance between meritocracy and political stability. Also, to improve efficiency, the final solution would be a systematic system to recruit and select officials to be trained into financial experts and incentivise intelligent persons into a financial career.

Thus, to understand the basis of this fiscal state, the following parts of this chapter explain the human resource management related to financial experts. The second section introduces the organisation of the functions of human resource management. The third section introduces the recruitment of the officials. Subsequently, the fourth section discusses the appointment and experience (資敘) system, which decides the job positions of the officials. Then, the fifth section discusses the remuneration of officials. The last section discusses the implications of human resources management.

5.2. Human Resource Authorities

The bureaucratic establishment of human resource management must be discussed because the division of authority has profound implications for policymaking, recruitment, and post-recruitment management functions.

5.2.1. Human Resource Policy

The ultimate authority of all the functions of the state was naturally the emperor. However, the emperors customarily delegated human resource management to the *Cabinet* (宰執) [31](鄧, 1993a). The cabinet was one of the three branches: the administrative "*Cabinet*", the fiscal "three commissions" (三司), and the military

[31] Up to two senior ministers and four junior ministers.

commission (樞密). After the Yuanfeng Restructuring, the fiscal branch was reorganised, and the functions were absorbed by the departments under the Cabinet. Thus, in formality, the fiscal branch/bureaus had no direct control over their human resource.

5.2.2.Recruitment

The candidates for officials of the Empire (hereafter referred to as Shih) were usually divided into two types: the successful candidates of royal examinations and the non-exam candidates. Regular examinations were divided into three layers with respective authorities: regional examinations were administered by regional governors, *Departmental Examinations* (省試) were administered by the *Department of Rites* (禮部) under the supervision of the cabinet, and the *Court Exam* (廷試) was supervised by the emperors. During the *Hsi-ning Reform* (熙寧變法), the *Imperial Academy* (國子監/太學) was granted the power to insert their graduates into the regular pathways, bypassing at least the lowest two levels. Non-examination pathways were administered by the *San-ban Court* (三班院), which was reformed into the *Right Appointment Department of the Deputy Secretary* (侍郎左選) during the Yuanfeng Restructuring.[32]

5.2.3.Post-Recruitment Management

The Shih of the Sung empire could be roughly divided into six sub-groups: junior civil officials, senior civil officials, top-rank civil officials, junior military officers, senior military officers, and top-rank military officers. Each group was administered by one authority, and all the authorities were in the capital. The profiles of all the officials were stored in the capital, and performance assessments were also conducted in the capital. Therefore, the human resource management of the Sung Empire was fully centralised.[33]

The human resources were appointed by the respective bureaus following established rules. As shown in **Table 7**, before the Yuanfeng Restructure, the low-status civil officials, *Hsüan-jen* (選人), were managed by the *Office of Junior Officials* (流內銓), and the junior "military" officials were managed by the *San-ban Cour*t (三班院) (*宋史*, ca. 1346/n.d., 志第一百十).[34] After the reform, the *Office of Junior Officials* (流內銓) was

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[32] Details of Yuanfeng Restructuring was provided in Chapter 4.

[33] To accelerate the appointment procedure, some regional commissioners in remote areas were delegated to temporarily appoint local junior officials on behalf of the respective authority. Afterwards, the temporary appointment had to be ratified by the authorities which delegated the power (*宋史*, ca. 1346/n.d., 志第一百十二). Therefore, the regional commissioners were insufficiently empowered to operate human resource management in a decentralised manner.

[34] The "military" titles were merely a signal for their entry pathways, and many officials with "military" titles still performed civil jobs.

reformed into the *Left Office of the Deputy Secretary of the Department of Officials* (侍郎左選). The *San-ban Court* (三班院) was reformed into the *Right Office of the Deputy Secretary of the Department of Officials* (侍郎左選) (*宋史*, ca. 1346/n.d., 志第一百十).

The Office of Officials (審官院) managed the senior officials: the *East Court of the Office of Officials* (審官東院) was responsible for *Capital-Court officials* (京朝官); the *West Court of the Office of Officials* (審官西院) was responsible for "military" officials (*宋史*, ca. 1346/n.d., 志第一百十). During the *Yuanfeng Restructuring* (元豐改制), the *East Court of the Office of Officials* (審官東院) was reformed into the *Left Office of the Secretary of the Department of Officials* (尚書左選), and the *West Court of the Office of Officials* (審官西院) was reformed into the *Right Office of the Secretary of the Department of Officials* (尚書右選) (*宋史*, ca. 1346/n.d., 志第一百十).

The appointment of top-rank officials and officers was much more political. The top ranks were reserved for the emperor, advised by the *Cabinet* (宰執) for civil officials or the *Military Commission* (樞密院) for military personnel (*宋史*, ca. 1346/n.d., 志第一百十).

The actual changes of these authorities were much more complex (*宋史*, ca. 1346/n.d., 志第一百十六). However, the brief description is sufficient to provide a base for understanding the human resource processes described in the following sections. Also, another implication is that since human resource management was performed in a centralised manner, financial-related bureaus did not have control of the process of appointing candidates for financial vacancies.

Table 7
Human Resource Authorities and Their Purviews

	Civil		Military †	
Era	Pre-Yuanfeng	Post-Yuanfeng	Pre-Yuanfeng	Post-Yuanfeng
Top Ranks	Cabinet (宰執)		Military Commission (樞密院)	
Senior type	East Court of the Office of Officials (審官東院)	Left Office of the Secretary of the Department of Officials (尚書左選)	West court of the office of Officials (審官西院)	Right Office of the Secretary of the Department of Officials (尚書右選)
Junior type	Office of Junior Officials (流內銓) #	Left Office of the Deputy Secretary of the Department of Officials (侍郎左選)	San-ban Court (三班院)	Right Office of the Deputy Secretary of the Department of Officials (侍郎右選)

Note:

The Office of Junior officials managed *Hsüan-jen*, a type of official who worked mainly in regional areas.

† Many officials under the purview of the military human resource authorities did not serve in the army.

5.3. Recruitment

The entrance was probably the most critical event of a man in the Sung Empire, second only to his birth and death. By entering the Shih (士) group, one was given lifelong privileges such as living tax-free and receiving respect (Kracke, 1953; 鄧, 1993a).[35] Among those privileges, the core was the opportunity to be appointed to an official position. As mentioned in the previous chapter, the entry was a political design, and, as a result, there were many entry pathways to achieve different political aims. The most important pathways included regular written examinations (科舉), ad hoc examinations (制舉), military examination (武舉), quota from existing officials (恩蔭), experience as a clerk or military success as an officer, and by special events (Kracke, 1953; 鄧, 1993a). In addition, the regular written examinations consisted of the most prestigious Chin-Shih examination and other themed examinations (Kracke, 1953; 鄧, 1993a).

[35] A Shih was also referred as a Yüan (員).

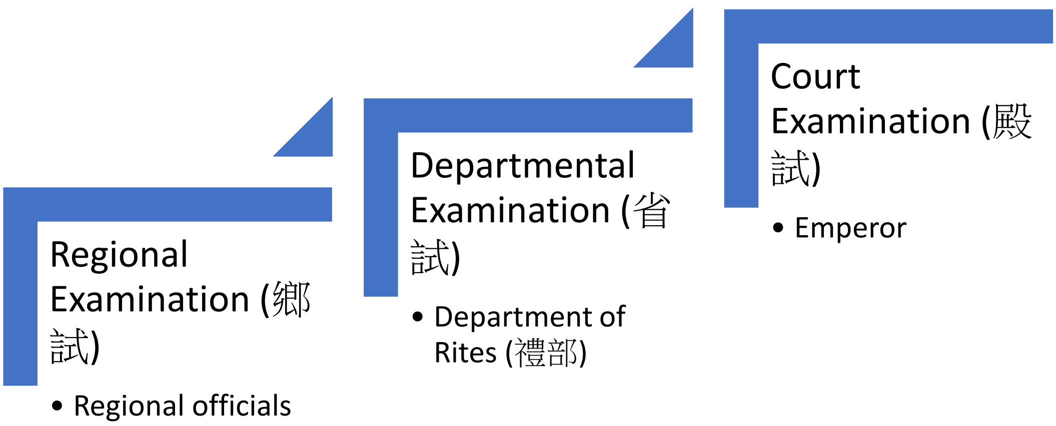
5.3.1.Regular Written Examinations (科舉)

Regular written examinations were held every three years. The examinations included Chin-Shih and other courses. The Chin-Shih examination was most valued, and the candidates who passed it were usually treated exceptionally well.

i. Chin-Shih Examination (進士科)

The Chin-Shih was the cream of the bureaucratic system. Arising from the T'ang empire, Chin-Shihs were widely used to fill senior official positions, as they were the most powerful assistants of the emperors. Therefore, the Chin-Shih exam was the most comprehensive of all written examinations. Candidates were expected to write poems (詩), rhythmic narrations (賦), essays (論), problem-oriented discussions (策), and explanations of Confucian classics (Kracke, 1953; 鄧, 1993a). The planning of examinations was careful. Firstly, the examiners of the departmental examination were isolated in a designated accommodation upon nomination (鄧, 1993a). Even close family members could not see the examiners until they were released after the examination (鄧, 1993a): the arrangement aimed to remove the opportunity to lobby the examiner. Secondly, designated clerks scribed copies of the answering sheets so that the examiner could only access the copies (鄧, 1993a). Therefore, these copies had no original name or calligraphy (鄧, 1993a). Thus, the candidates could not leave secret marks to identify themselves, and the examiner could not recognise the candidate by the calligraphy style (鄧, 1993a). In addition, the examining hall was also well guarded to minimise the risk of cheating.

Figure 22
The Structure of the Imperial Examination



The examination was organised into three main layers (**Figure 22**). The first was *regional examinations* (鄉試) supervised by regional officials. This was a natural extension of the original responsibility of regional officials to recommend local elites to the royal court. Although the regional examination was preliminary in form, it was still impactful. In some cases, emperors would grant a “courtesy pass” (特奏名) to a candidate who passed the regional examination but did not pass the departmental examination (*宋史*, ca. 1346/n.d., 志第一百八).

The second was the departmental examination (省試) supervised by the *Department of Rituals* (禮部). In the early T’ang empire, the newly established examination system was naturally under the purview of the Department of Officials. Nevertheless, due to some contemporary reasons, a *Court of Examination* (貢院) was established under the *Department of Rites* (禮部) (*國史補*, ca. 806-821, 卷下). This setup achieved a healthy segregation of power: the Department of Rites had the power to recruit officials. In contrast, the Department of Officials (吏部) had the power to appoint recruits to proper official positions. Still, it is difficult to tell whether the segregation was intentional or incidental. However, this segregation created a legacy that the Sung empire later followed. The *departmental examination* (省試) was the final examination for the T’ang Empire, and even after the Sung Empire added a new final examination supervised by the emperor, the departmental examination was still crucial because passing the departmental examination usually led to a successful result, as illustrated in the following paragraph.

The *court examination* (殿試) was introduced by the Sung Empire. The court examinations were supervised directly by the emperor. This examination could be seen as a new version of the “question and answer” (策問) process when the emperors ask questions to evaluate the candidates recommended by regional officials (朱鸿, 2014). This question-and-answer session was essential for emperors to decide whether the recommended candidate was suitable for filling vacancies because there would be no examination except for the “question and answer” (策問) (朱鸿, 2014). While the formal departmental examination replaced the question-and-answer session, the Sung empire reintroduced a final session named the *court examination*, for probably two reasons. Firstly, the court exam (殿試) could be used to detect whether the departmental exam (省試) was functioning in selecting candidates. If, during the court exam (殿試), the emperor found that successful candidates from the departmental exam (省試) were of low quality, the emperor could require the *Department of Rites* (禮部) to reform the exam. Secondly and maybe more importantly, the court examination could signal to the candidates that they were chosen by the emperor’s grace, and they should have exclusive gratitude to the emperor instead of to the departmental examiners. However, the court examination created a side effect: if a candidate failed the exam, the candidate would feel like he was overlooked and might never get a job until the emperor changed. If the emperor was already old, the candidate might try again later, but the situation became desperate if the emperor was still young. As a result, a later emperor set a rule to pass all candidates (*宋史*, ca. 1346/n.d., 志第一百八). However, the court examination had to be impactful to reach its original goal. Therefore, the court examination decided the positions of the candidates. The first tier, with one person, and the second tier, with two persons, were given an official position immediately, skipping the waiting time and the pre-job examination held by the Department of Officials. These three candidates per examination were called "*Chih-Shih-Chi-Ti*" (進士及第). The third tier included the regular candidates who could enjoy privileges in promotion and appointments. These candidates were granted the status of being a regular Chih-Shih (進士出身). The fourth tier was the "failed" candidates. They were put into an inferior "elite equivalent" status (同進士出身), which was still better than other pathways. Sometimes, the emperors used their discretion to grant certain persons an "elite equivalent" (同進士出身), even though the receivers did not pass the elite examinations. Thus, in most years, passing the Departmental Examination guaranteed "elite equivalent", which was very helpful for a candidate in pursuing his career.

ii. Classics (諸科)

Since the capacity to recite classics is much easier to train than Chinese creative writing, the exam of classics posed many more opportunities for young men from established families who could afford to train their children from an early start (嚴, 1959). Hence, the exams testing classics were necessary for an emperor to satisfy his supporters. Hence, the exams of classics (諸科) from early empires were not abolished immediately (邢, 2012). These exams of classics (諸科) only required mastering specific classics. Since it was widely accepted that the courses were more straightforward than the Chin-Shih exam, successful candidates from special courses were discriminated against for appointment and promotion (鄧, 1993a). Despite discrimination, the examinations were chosen by many candidates because the exams were more straightforward, so that the candidates could become Shih at an early age (鄧, 1993a).

After the first hundred years, these courses were abolished in the Hs'i-ning reform, as these exams contributed little to recruiting capable bureaucrats (*宋史*, ca. 1346/n.d., 志第一百八). However, as mentioned above, these courses were continued for political aims; therefore, completely removing the straightforward course would be politically damaging. Therefore, a new subtype of Chin-Shih examination was established, replacing literature with classics (*宋史*, ca. 1346/n.d., 志第一百八). Although Chin-Shih might be more challenging than special examinations, the difficulty was compensated for as successful candidates would be equal to the typical Chin-Shih.

Apart from the classics, one new course, *Ming-fa* (明法), was created during the Hsi-ning reform to recruit people with legal studies, while the old *Ming-fa* was abolished with other courses. Successful candidates for the new Ming-fa exam were treated even better than Chin-Shih candidates (*宋史*, ca. 1346/n.d., 志第一百八) due to the shortage of legal expertise. However, the reformed *Ming-fa*, like other reform measures, was also criticised by the anti-reformists and, as a result, was not as influential as the widely accepted Chin-Shih exam.

Since the examination type is essential in promotion and appointment, this factor should be controlled for in regression tests.

5.3.2.Ad Hoc Examinations (制舉)

Ad hoc examinations were held when the government needed human resources with specific expertise (*宋史*, ca. 1346/n.d., 志第一百九). Compared with the regular examinations for political stability, the ad hoc examinations focused on recruiting people with merit. Some examinations only enrolled Shih, while others allowed commoners to attend (*宋史*, ca. 1346/n.d., 志第一百九). Successful candidates of these ad hoc examinations usually enjoyed good career opportunities like the Chin-Shih (*宋史*, ca. 1346/n.d., 志第一百九). Since the ad hoc examination could place non-Chin-Shih officials on the Chih-Shih pathway, the officials who passed ad hoc examinations should be reclassified, and such factors must be controlled for in regression tests.

5.3.3.State-operated Public Schools (學校)

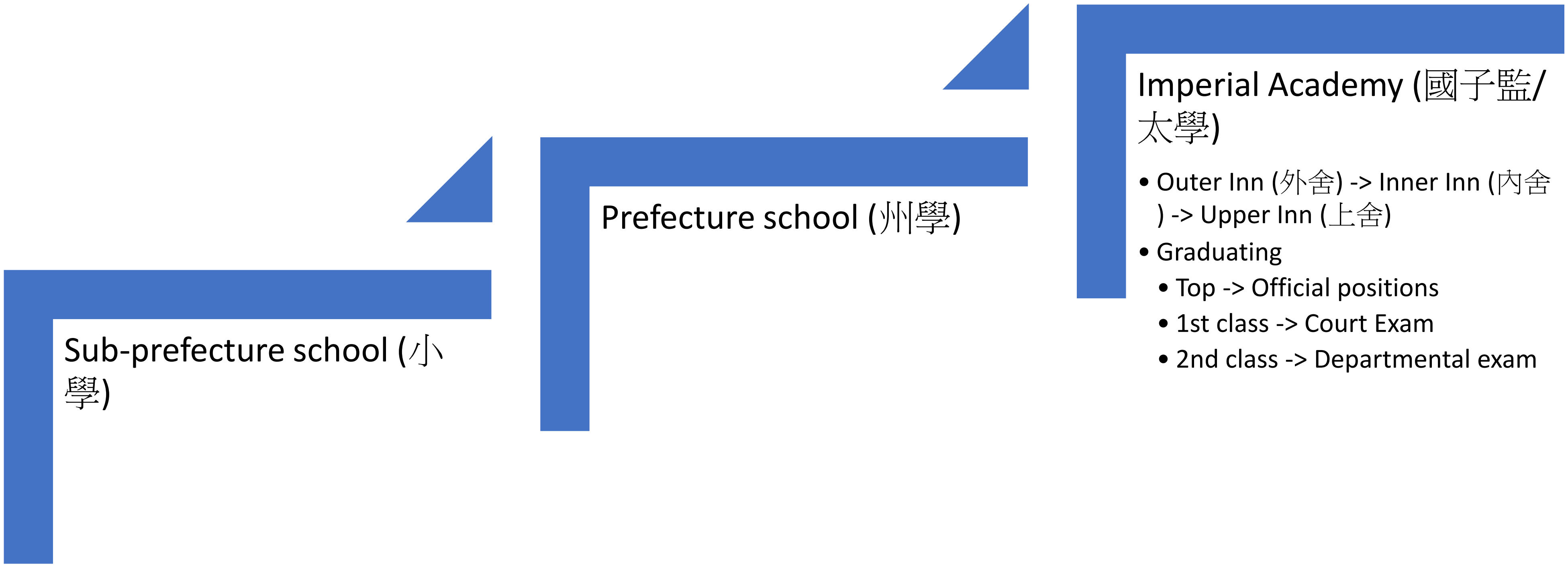
Traditionally, knowledge was taught in lineage schools supported by Shih-tsu families to educate a close circle of young people. Some early empires also built state-operated public schools to educate the relatives of the royal family and the senior officials. Compared with the one-off examination, school education was seen by many senior officials as a better method of cultivating capable officials. However, as public schools would challenge the monopoly of knowledge by lineage schools controlled by wealthy and powerful families, public school was a controversial method of recruiting officials.

The *Ch'ing Li reform* (慶曆新政) established a school system with sub-prefecture schools and prefecture schools. It required candidates for examinations to study in schools before attending the regular written examinations. However, the reform was resisted by the establishment and measures introduced by the reform were not consistently enforced. Later, the *Hsi'ning reform* (熙寧變法) reinstated the school system and introduced new syllabi. However, as the anti-reformist and reformist-controlled power in different eras, the school system was frequently changed.

In the mature era of the school system, a typical candidate studied in regional schools for a brief period. According to the Chih 110 of History of Sung (*宋史*, ca. 1346/n.d., 志第一百十), a candidate would start from the cantonal schools and, upon graduation, enter the prefecture school (**Figure 23**). Then, he could choose to attend the examination directly or to enter the Imperial Academy. If he entered the Imperial Academy, he would attend a placement examination to be placed into one of the three grades: the *Outer Inn* (外舍), the *Inner Inn* (中舍), and the *Upper Inn* (上舍) (**Figure 23**). During the period of study, students had to take a final examination. Upon passing the final exam, Outer Inn students could be upgraded to the Inner Inn, and Inner Inn students could be upgraded to the Upper Inn. Retake was allowed, but repeated failure would result in rustication. Upper Inn students would graduate based on their final examination. The handful of top graduates, *Shang-She-Chi-Ti* (上舍及第), would be appointed to an official position immediately, just like the top three candidates of the Chin-Shih examination (*Chin-Shih-Chi-Ti*, 進士及第) (*宋史*, ca. 1346/n.d., 志第一百十). The first class of graduates would be sent to the court exam (*宋史*, ca. 1346/n.d., 志第一百十), bypassing the departmental exam (省試). As mentioned in the regular examination section, the court exam would award the attendees no worse than "Chin-Shih equivalent" (同進士出身); hence, the first-class graduates were given secured opportunities to become a Shih. The second-class graduates would be allowed to attend the departmental exam, skipping the regional exams (*宋史*, ca. 1346/n.d., 志第一百十).

The most important implication of the Imperial School system was Shang-She-Chi-Ti (上舍及第). Every year, the top two students were awarded Shang-She-Chi-Ti (上舍及第). The top two students were considered the top three candidates in the Chin-Shih examination. Therefore, *Shang-She-Chi-Ti* (上舍及第) should be treated like Chin-Shih. For other students, since they still attend the standard examination procedure and could gain the Chin-Shih title, they would not distort statistical tests.

Figure 23
The Structure of the Public School System.



5.3.4. Other Examinations

i. Examination for the Clerks

Apart from political initiatives, some pathways were opened for other bureaucratic aims. The first type was recruiting from the clerks (Kracke, 1953). As mentioned in the previous chapter, clerks were hired by individual bureaus permanently. These clerks learned from their fathers and mentors for a long time and had the opportunity to stay in their positions to accumulate experience. Therefore, experienced clerks usually had much more knowledge and expertise in government operations than the bureaucrats who only stayed in each position for three years. The exam for clerks mainly tested the expertise in regulation instead of Confucian classics or literature, but the anti-cheat methods resemble the regular examination (*宋史*, ca. 1346/n.d., 志第一百十). Those who passed the written exams attended the oral exams, another layer of the anti-cheat measures (*宋史*, ca. 1346/n.d., 志第一百十).

ii. Pre-appointment Examination as a Pathway

Usually, candidates from every pathway had to attend a pre-appointment examination held by the human resource authorities before being appointed (鄧, 1993a). This examination was also used as the entry pathway for informal recruits in an emergency. Although the oversupply of Shih was a feature of the Sung Empire, supply shortages of capable Shih still existed locally or temporarily. Hence, local elites were temporarily appointed as local governors (Kracke, 1953). After these people finished the term of their emergency appointment, they could attend the pre-appointment examination and receive a regular Shih status (出身) if their exam results were good (*宋史*, ca. 1346/n.d., 志第一百十一).

5.3.5. Non-examination Pathways

The *San-ban Court* managed the non-examination pathways before the *Yuanfeng Restructuring* (元豐改制) and the *Left Office of the Deputy Secretary of the Department of Officials* (侍郎右選) after the *Yuanfeng Restructuring* (元豐改制) (*宋史*, ca. 1346/n.d., 志第一百十一).

i. Yin (蔭)

As other contemporary polities were mostly still domain states, these states leveraged hereditary systems to align the state and the future of the local rulers. However, after the examination became the method of selecting the people who could earn a salary and power on their merits, nothing was guaranteed for the sons of existing bureaucrats. Therefore, to realign the interests of bureaucrats and the state, the empire developed a

Yin (蔭) system, allowing the offspring of existing bureaucrats to become Shih without examination. Similar mechanisms had existed in earlier empires, but the mechanism was never as crucial as in the Sung empire because earlier empires had not relied on examinations to recruit bureaucrats. As mentioned in the earlier chapter, candidates from the Yin system were discriminated against for promotion and appointment to compensate for the lack of examination (鄧, 1993a). Officials from this pathway were usually given a pseudo “military” title, but they were still effectively civil officials who were discriminated against for appointment and promotion. Probably half of all officials gained status from this pathway (鄧, 1993a).

ii. Generals

Gaining Military success was another way to receive the status of a Shih (Kracke, 1953). Although soldiers and commanders were well paid and permanently employed, being a Shih was still an attractive reward for safety and a higher salary.

5.3.6. Re-entry

As mentioned, the Shih who entered the system via the Yin pathway were discriminated against. However, the examination system allowed current Shih to attend. One could become an official to accumulate experience via non-examination pathways while taking regular examinations to end discrimination. Also, if a young person lost his father and the family was poor, he was incentivised to utilise the quota to start earning money, and, after securing a low-ranking official position, he was also incentivised to attend examinations to become a well-recognised Chin-Shih. After successfully passing the examinations, the official changed his background from Yin to Elite examination passer, and the Yin background would no longer jeopardise the future promotion. Therefore, in regression tests, if a person had both entry pathways from a preferred type, such as Chih-Shih, Ad hoc exam or Imperial Academy, and a non-preferred type, such as Yin, the person should be classified as entered through the preferred type.

5.4. Experience System and Appointment.

5.4.1. Initial Appointment

Except for the top three, successful candidates of the Chin-Shih exam had to attend the evaluation by the *Department of Officials* (吏部). The same exam also applied to candidates from other pathways. Fresh officials were usually used to fill the staff of regional governments, and their pathways usually determined the importance of their job (an example is provided in **Table 8**). For example, a fresh Chin-Shih could be appointed to a third-grade prefecture or a canton near the capital. Other people could be appointed to a lower-grade prefecture or a remote and poor canton (*宋史*, ca. 1346/n.d., 志第一百十一). Still, there were many detailed rules. Many examples show that a *Chin-Shih-Chi-Ti* (進士及第, one of the top three candidates of the Chin Shih exam) might be appointed to be a Canton Governor, bypassing the Cantonal staff level (*宋史*, ca. 1346/n.d.). Similarly, an official who passed an ad hoc examination might be appointed directly into a higher-ranking position. Overall, the entry pathway determined the initial importance of one official's job.

For fresh officials, it was not easy to gain an appointment. Firstly, fresh officials had to take examinations before being eligible for an appointment. Secondly, recommendations from other officials were needed. Sometimes, persons with recommendations could avoid specific pre-appointment examinations (*宋史*, ca. 1346/n.d., 志第一百十一). Persons without recommendations would be sent to inferior positions (*宋史*, ca. 1346/n.d., 志第一百十一). Therefore, being in the *top three in the Chih-Shih exam* (進士及第) or *top two in Imperial Academy* (上舍及第) was massively helpful, as these officials could, at least, avoid waiting and attending for the pre-appointment exam.

Table 8
Examples of Initial Appointments for Hsüan-jen by Entry Pathway

	The region the candidate should work in when he assumed the role of:	
Pathway	判、司 Prefectural Staff	簿、尉 Cantonal Comptroller / Cantonal Constable
進士 Chin-Shih examination	望州 3rd-grade prefecture#	次畿 Near-capital Canton
九經 Nine-classics examination	緊州 4th-grade prefecture	望縣 Huge Canton (>4000 households)
五經、三禮、通禮、三傳、三史、明法 Most regular exams, except the Chin-Shih and Nine-classics examination	上州 5th-grade prefecture	緊縣 Large Canton (3000~4000 households)
學究有出身 Hsüeh-chiu Exam	中州 6th-grade prefecture	上縣 Upper Canton (2000~3000 households)
太廟齋郎 Yin (high pathway)	中下州 6th or 7th grade prefecture	中縣 Medium Canton (1000~2000 households)

郊社齋郎、試銜無出身人 Yin (low pathway) & Misc.	下州 7th prefecture	中下縣 Lower-Medium Canton (<1000 households)
諸司入流人 Clerk Exam	下州 7th prefecture	下縣 Small Canton

Note:

The table is extracted from the *History of Sung* (宋史, ca. 1346/n.d., 志第一百九). The table shows that Hsüan-jen entered from different pathways, starting from different ranks of job positions.

The deputy prefect and staff positions in the top two grades of prefectures (輔州 and 雄州) were reserved for experienced officials.

5.4.2.The "Career" of officials

i. Regular Career

Unlike modern workers who could change jobs frequently, the officials of the ancient empires did not have the luxury of gaining promotion by changing employers. Empires usually had a larger pool of "permanent employees" than the number of available positions to have a human resource reserve for smooth operation. The government had to choose a seemingly fair mechanism to appoint idle employees to job positions. Otherwise, unappointed employees would resent the government's decision, questioning its fairness (鄧, 1993a, 1993b). Although the emperors could resort to their authority to oppress dissensions, ruling an empire without a dissenting Winning coalition was usually more favourable than otherwise. Thus, the government had to build a system based on rigidly measurable factors instead of subjective decisions to present fairness in form. As a result, the Sung Empire inherited and developed a system of employment and advancement based on years of experience in specific jobs. A typical new official started working at the deputy canton level for two terms (six "experience years") (鄧, 1993a, 1993b). Then, he would work at the canton level for two terms (six "experience years") (鄧, 1993a, 1993b). Usually, the first term would be in an unimportant canton, and the second would be in an important one (鄧, 1993a, 1993b). Afterwards, he would work at the deputy prefect level for two terms (six "experience years") (鄧, 1993a, 1993b). Similarly, the first term would be in an unimportant prefecture, and the second would be in an important one (鄧, 1993a, 1993b). Then, he would work at the prefect level for two terms (six "experience years") (鄧, 1993a, 1993b). Again, the first term would be in an unimportant prefecture, and the second would be in an important one (鄧, 1993a, 1993b). By reaching the second term at the prefect level, he would have completed the normal promotion process in 24 years. If a young person passed the exam when he was 35, took six years' mandated bereavement leave, three years for each parent, and were idle for about five years, he would have been near the retirement age upon completing the regular promotion. Yin officials could be appointed upon reaching adulthood; however, their idle time could be longer because Chih-Shih were usually favoured for being appointed. Still, an incompetent official could complete the promotion before retiring, and in many cases, they were assigned to unimportant positions such as Administrators of Imperial Temples. However, unlucky persons could have reached the end of their lives before completing the regular promotion. Nevertheless, many junior official positions required human resources to fill them. Therefore, many officials were appointed to these positions, and their "experience years" in capital positions were deemed equivalent to the "experience years" they should have accumulated in regional positions. The "experience years" (考) were not calendar years. If an official performed exceptionally well, he could be awarded extra "experience years" (鄧, 1993a). Therefore, excellent candidates who passed exams when younger than 35 and received many "experience years" as rewards could still have many years of lifetime to be commissioned into fiscal commissioner roles and other important jobs in the capital (鄧, 1993a). Still, while the experience as a Prefect was required for promotion, it does not mean that higher officials could not be re-appointed as prefects. Many ministers were sent out to govern important prefectures after their terms as ministers ended. While regional governors cooperated with the circuit commissioners in managing the empire, they were not subordinate to the circuit commissioners.

If an official was fortunate, he could continue his career with the regular promotion. No matter whether he was a prefect or a Judicial commissioner, he would serve on a circuit level for another term as a Judicial commissioner or a deputy fiscal commissioner (鄧, 1993a). Afterwards, he could get a better title, such as removing the "deputy" or adding "grand" before the title "fiscal commissioner", or he could move to a more important circuit (鄧, 1993a). In addition, if he had worked in an important circuit, his next term might be in the capital, in charge of one of the three commissions of the Fiscal Commission with the title "deputy commissioner" (鄧, 1993a). He might even be picked by the emperor into the Cabinet, but such a move was never a foreseeable part of the career. Still, in the remaining years of service, he might occupy some non-financial positions or serve several additional terms as prefect.

Table 9 is only an example of the experience system for a typical official working in a region. There were many assistant or staff positions in the regions, and many functional positions in the capital. The years working in positions not in **Table 9** were deemed equivalent to those in **Table 9**. For example, Shih Su (蘇軾) had only three years of experience in regional positions before being appointed to the central government. Then, when he was sent out to regions, he was appointed as a Deputy Prefect of an important prefecture (*宋史*, ca. 1346/n.d., 列傳第九十七), skipping all years needed at the cantonal level and the first three years as a Deputy Prefect.

Table 9
A Brief Illustration of the Experience System

Type	Regular Job Title	Type of position	Year †	Examples of Alternative Jobs
Special Commission #	Fiscal Commissioner (轉運使/都轉運使)	Any circuit (including important)		
	Judicial Commissioner (3rd Term) (提點刑獄)	Any circuit	3	Fiscal Commissioner (轉運使) in ordinary circuits / Deputy Fiscal Commissioner (副轉運使) in important circuits
	Judicial Commissioner (2nd Term) (提點刑獄)	Any circuit	3	Deputy Fiscal Commissioner (副轉運使)
	Perfect (知某州軍州事)	Important prefecture	3	Judicial Commissioner (1st Term) (提點刑獄)
		Unimportant prefecture	3	
	Deputy Prefect (通判)	Important prefecture	3	Assistant to Fiscal Commissioner (轉運判官) / Trade Commissioner (提舉常平)
		Unimportant prefecture	3	
	Cantonal governor (知縣/縣令)	Important canton	3	
		Unimportant canton	3	
Regular promotion	Sub-Cantonal Position		6	

Note:

A new ordinary official had to start from the lowest rank (the bottom of the table) and seek promotion (to the top of the table) by accumulating enough experience. Jobs not listed in the table provided equivalent experience to those in the table. For example, an official working in the capital could work in any job, and their experience would be recorded as the equivalent to the years in the experience system (鄧, 1993b). However, certain senior positions required “real” experience as governors or prefects, instead of equivalent experience (鄧, 1993b).

The prefects were the terminal position for officials seeking regular promotions. Officials needed to secure special commissions to be promoted to circuit positions.
† "Experience year" could be earned by servicing calendar years or be received as a reward for good performance, while also being deprived punitively for poor performance.

ii. The Career of Financial Officials

In original texts, financial officials were not explicitly distinguished from other officials. The career of a senior financial official could start with him as a regular official following the regular promotion (the lower half of **Table 9**) and have him complete his second term as a prefect. Then, he could start to accumulate financial expertise from his first term as a *Deputy Fiscal Commissioner* (轉運副使) in a less critical circuit. Subsequently, in his second term, he would be responsible for a more important circuit like Ho-pei (河北), Shaan-hs'i (陝西) or Ho-tong (河東). Afterwards, he might be promoted to a *Grand Fiscal Commissioner* (都發運使) to be responsible for a substantial proportion of the agricultural revenue from the Chiang Huai (江淮) area. Afterwards, the typical official might be promoted to the "Fiscal Commission" (三司) before the reform as a *Deputy Commissioner* (三司副使). After the reform, the official would be promoted to the *Department of Commoners* (戶部) as a *Deputy Secretary* (侍郎). There were differences between *deputy commissioners* (三司副使), too. The *Commission of Salt and Iron* (鹽鐵司) were at the top, followed by the *Commission of Expenditure* (度支司) and the *Commission of Commoners* (戶部司) at the bottom. Thus, if the *Deputy Commissioner of Salt and Iron* (鹽鐵副使) left his job, it was likely that the *Deputy Commissioner of Expenditure* (度支副使) would fill the vacancy. Then, the new vacancy for *Deputy Commissioner of Expenditure* (度支副使) would be filled by the *Deputy Commissioner of Commoners* (戶部副使). However, there was no guarantee that a *Deputy Commissioner* (三司副使) could be promoted to the *Commissioner responsible for the Fiscal Commission* (三司使) since the chief commissioners could be appointed for political reasons (周藤, 1966).

Still, the steps mentioned above could be substituted for work experience in the capital. One senior official described an arrangement that a fresh official could serve one year as a deputy prefect before being inserted into the staff of the *Department of Commoners* (戶部) in charge of an office (司) (鄧, 1993a). The first two years would be a probation appointment, followed by four years of regular appointment in the same position (鄧, 1993a). Then, after completing the seventh year, he would be relieved with the experience equivalent to the second term of a circuit commissioner (鄧, 1993a). Afterwards, he might be promoted to a senior official in the *Department of Commoners* (戶部) (鄧, 1993a). Otherwise, he could take a position in a different department or region. While this pathway was more logical for developing a financial expert, it remains unclear—without empirical evidence—whether this claim reflects the author's ideal or a historical reality.

Still, it is most likely that no one ever completed the typical career of a financial expert without departures. For example, Chin-Shih or successful candidates from Ad hoc Examinations could skip many steps in the regular promotion process. Another example is when a vacancy emerged without proper candidates, the human resources authority had to ignore requirements to appoint somebody to fill the vacancy, and such action meant someone was accelerated in their career. Also, mandated bereavement leave would interrupt one's career for years. In addition, although the Cabinet would have preferred financial positions to be filled by capable officials with financial experience so that the job could be done efficiently, there was no written regulation observed strictly by the human resource authorities to prevent officials without financial experience from being appointed to financial-related jobs. Furthermore, as mentioned in the previous chapter, both prefects and deputy prefects had financial-related tasks, so most officials, at least, had part-time experience in financial affairs. Therefore, appointing these officials to dedicated financial positions was not an absolute blunder. Moreover, while officials without financial expertise might be appointed to dedicated financial positions, financial officials also could be appointed to non-financial positions. Thus, a continuous career could hardly be expected. However, if financial expertise were recognised, it should have been preferred in appointing senior financial official positions. Such preferences should at least be statistically significant.

5.4.3.The Appointment process.

i. Regular Processes for Lower-Ranking Officials

An appointment for low-ranking official positions started when the HR authority found a vacancy according to the requirements (鄧, 1993a). Then, the HR authority finds suitable ideal officials to fill the vacancy, but usually, the candidate could refuse the appointment with proper excuses (*宋史*, ca. 1346/n.d., 列傳第八十六). If the HR authority could not find suitable candidates, it reduced the requirements by one level so more candidates could be considered (破格闕) (鄧, 1993a). If no one was available, the HR authority removed all requirements and opened the vacancy to any idle official (殘零闕) (鄧, 1993a). Sometimes, an idle official was so high that no job at that rank was vacant. The human resource bureaus would encourage him to occupy a lower rank position as a temporary solution (權) (鄧, 1993a). Sometimes, there was a consistent lack of human resources in certain areas, such as the fiscal commissioner in the South Sung era. Then, the HR authorities would (1) leave the regular position vacancy, (2) appoint appropriate officials to assistant positions, and (3) delegate the power of the regular position to the assistants (鄧, 1993b). The job was organised into three-year terms; if an official could not secure another job before his term ended, he would have to wait for another vacancy (Kracke, 1953; 鄧, 1993a). A term could also be ended by punishment or mandated bereavement leave [36](Kracke, 1953; 鄧, 1993a). If an official lost his job before the end of a term, he could not accumulate sufficient experience for a promotion to the position. Of course, as mentioned above, if there was a lack of human resources, the official with insufficient years in the previous job could be appointed for the following position with a probation period (鄧, 1993a). However, if no higher vacancy existed, the official with an incomplete term would have to start another term at the same level to accumulate sufficient years to be promoted later (鄧, 1993b). The three-year terms prevented officials from fostering personal loyalty with their clerks and hindered them from developing expertise unless they were assigned a series of roles with similar functions.

ii. High-ranking Officials

Still, as mentioned above, the appointment to senior civil positions was under the purview of the Cabinet, and the senior military positions were under the purview of the *Military Commission*. In turn, the Cabinet or *Military Commission* was filled by candidates handpicked by the emperors. Standard procedures did not bind these high authorities. Thus, the emperor could insert lower-ranking officials into the Cabinet and discharge ministers before their terms ended (*宋史*, ca. 1346/n.d., 列傳第八十六).

While these appointments were not under standard procedures, statistical tests could help find the emperor's unwritten preference. If the emperor valued financial expertise, a statistically significant relationship between the senior positions and financial experience should be found.

iii. Extraordinary Process

Three exceptions exist for the job system. The Cabinet could override the process and appoint any Shih to a lower-rank job, ignoring the rank requirements (堂除). A senior official on specific tasks could nominate any Shih as a staff member, ignoring the

[36] Confucians need to mourn their parents for three years. In practice, the officials needed to resign and stay at home for 24 months before taking another job.

requirements (辟舉)[37] (鄧, 1993a). These pathways could help a low-ranking official gain invaluable experience in certain positions and, therefore, help a person gain an exceptional advantage in promotion. Also, it is possible that one person gained important financial jobs not from his experience but from such extraordinary arrangements. Therefore, a person's social network needs to be controlled for any statistical test related to promotion and appointment.

5.4.4. The Implications of Excessive Supply of Shih

Countless discussions were recorded in the History of Sung about the oversupply of Shih. One argument was that the oversupply resulted from the over-generous Yin quota, which allowed many sons to become Shih without attending an examination. However, the oversupply could also result from the mismatch of human resource demand and the supply from the imperial examination. The oversupply of officials had not changed during the Sung Empire, probably due to political reasons. According to the Selectorate theory, the incumbent had to keep the Winning coalition-to-Selectorate ratio low to consolidate his power over his Winning coalition. As to the officials, the ratio was in two tiers. The first tier was the ratio between those who had the status of Shih and the people who could acquire the status of Shih. Using imperial examination to level the playing field for commoners to compete with the powerful clans, the emperors increased the Selectorate to reduce the Winning coalition-to-Selectorate ratio. Therefore, the emperors could not suspend the imperial examination. The second tier was the ratio between the officials on the job and all the Shih. By increasing the number of the Shih, the emperors could reduce the Winning coalition-to-Selectorate ratio to ensure that the officials on the job knew they were replaceable. Thus, the oversupply of Shih should be seen as a design feature to ensure political stability instead of a failure in management.

However, as mentioned earlier in this section, since the oversupply was a feature of the bureaucratic system, waiting for a job was the norm in the Shih community. It is possible that a Shih could not accumulate sufficient experience to be promoted. Therefore, if someone, such as a financial official, could secure a job before his term ends or not long after, this person should have been much appreciated for his loyalty or expertise.

Also, as described in this section, it was relatively rare for officials to start their careers in full-time financial jobs since most officials should have started from regional or non-financial jobs in the capital. Therefore, an official had three opportunities to gain initial

[37] The Ministry of Officials would complete the appointment processes without checking the rank of the nominee.

financial expertise. Firstly, some officials were fortunate to join the financial function in the central government as low-ranking functionaries. They could start at any time. Secondly, the official started as the assistant to the fiscal commissioners in a circuit. In this case, the official should have completed the cantonal and first deputy prefect experience and have spent three to nine years working for the state. Thirdly, the official could have completed his prefect experience requirement and become a circuit commissioner, probably as a judicial commissioner or a deputy fiscal commissioner. The officials would have worked for over 12 years before being appointed to a full-time financial position.[38] Therefore, judging from a modern view, the system was more like the Japanese "salarymen" setting instead of a professional setting where employees spent ten years on general training before they specialised.

5.5. Remuneration and Reward

5.5.1. Overview of the Rewards

The emperors were rather generous to their officials to satisfy the Winning coalition. In many cases, senior officials argued that excessive generosity strained the imperial financial system, compromising the government's sustainability (宋史, ca. 1346/n.d., 列傳第七十三). Still, since the Winning coalition was the life support of the emperors, the reward to officials was increased during the North Sung era (*宋史*, ca. 1346/n.d., 志第一百二十四). The rewards were decided mainly by salary ranks (pay grade), job positions, and "scholarly titles".

According to the history of the Sung, the rewards included the following items:

- Salary paid by coins and cloth (奉祿匹帛) (*宋史*, ca. 1346/n.d., 志第一百二十四),
- Salary paid by grain (祿粟) (*宋史*, ca. 1346/n.d., 志第一百二十四),
- Job Position Stipend paid with coin (职钱) (*宋史*, ca. 1346/n.d., 志第一百二十四), additional stipend (增给) (*宋史*, ca. 1346/n.d., 志第一百二十五),
- Servants Expense Reimbursement (傔人衣粮) (*宋史*, ca. 1346/n.d., 志第一百二十四),
- Rent from designated government land (职田) (*宋史*, ca. 1346/n.d., 志第一百二十五),
- Quota of Yin (蔭) (*宋史*, ca. 1346/n.d., 志第一百二十三).

[38] For example, Anshi Wang worked in regional positions for 16 years before being appointed as an assistant commissioner in the expenditure commission (度支判官).

- Tea, Wine, and Kitchen Miscellaneous (厨料) (*宋史*, ca. 1346/n.d., 志第一百二十四),
- Firewood, Fodder, and Miscellaneous (薪炭诸物) (*宋史*, ca. 1346/n.d., 志第一百二十四),

Salary ranks determined the salary paid in coins, cloth, and grain. Job positions decided the stipends, servants' expenses, and rent from designated government land. "Scholarly titles" primarily awarded additional stipends and servants' expenses, adding to existing remuneration.

5.5.2.The Salary Rank

The salary rank (寄祿官) resulted from the evolution of a bureaucratic system instead of a celebrated design. As mentioned in the previous chapter, the T'ang Empire organised officials into six departments and multiple bureaus, and each position was designated according to rank and salary. However, as new functions were needed, many officials were seconded to these new positions (鄧, 1993a). Still, for the convenience of management, the officials were salaried with their original de jure positions in the departments and bureaus. During the following five dynasties, the secondment became so widely adopted that few officials still worked in their de jure positions. Therefore, the de jure official positions were usually referred to as Salary Rank (寄祿官) (鄧, 1993a). However, the Salary Ranks using ancient official positions as names of ranks were challenging to understand, and, therefore, in the Yuanfeng Restructure, Salary Ranks were renamed with the names borrowed from the system officials without appointments of the previous emperor (鄧, 1993a). Thus, the ambiguity was reduced after the restructuring.

The salary rank system was a rewarding system for continuous service. Fresh officials started from a lower rank in either the *capital-court* (京朝) course or the *Hsüan-jen* (選人) course. Then, the official got a promotion following his promotion course (鄧, 1993a). One must accumulate sufficient "experience years" to be promoted to a higher rank (鄧, 1993a). While the capital-court course could be continuously climbed to the top, the *Hsüan-jen* course was limited in ranks (鄧, 1993a). Thus, an official in *Hsüan-jen* course aiming for high ranks had to *Switch* (改官) himself to the *capital-court* (京朝) course (鄧, 1993a). The Switch and each promotion required the applicant to submit a predetermined number of recommendations underwritten by other officials. Especially for a Switch, at least one recommendation should be underwritten by an official in a capital-court rank (鄧, 1993a). A recommendation was not an informal letter but a formal undertaking of the capability and loyalty of the recommended. If the recommended committed a severe crime, the undertaker would be punished. Still, officials who failed to secure sufficient recommendations could exchange three more years of service for the shortfall of one recommendation. Therefore, securing sufficient recommendations was vital for the speed of promotion. However, the top several ranks were out of the purview of the bureaucratic system. Only the emperors could promote officials into these ranks by imperial decree.

As mentioned above, the system seems instead focused on time rather than performance, which is also a concern of contemporary people. However, the emperor could achieve his goal with the base system. For example, the emperor rewarded officials with "months" or "years" of experience to allow capable officials to be promoted faster. Also, Chih-Shih and a small group of equivalents could skip the lowest ranks upon their entry and skip one rank upon every promotion, while other officials had to follow the course from the bottom. Thus, Chin-Shih could be promoted twice as fast as other officials. In addition, capable persons could be left idle for less time, allowing them to accumulate more years than those who had to wait for a job appointment. The last and most direct reward was to reward promotion directly. For example, when An-shih Wang was dismissed from the Cabinet, the emperor promoted Wang to nine ranks in one promotion (*宋史*, ca. 1346/n.d., 列傳第八十六). Although such a promotion was exceptional, this example at least shows that the emperor could use the base ranking system radically. Also, the example shows that if the emperor valued financial expertise, he could accelerate the promotion of officials with financial expertise, enabling them to receive more money and recognition.

As to financial officials, if they were promoted faster than other officials, they could receive a higher salary even when they temporarily left financial positions.

5.5.3.The Position-based Remuneration

In addition to the salary, a significant proportion of remuneration was based on positions. After the Yuanfeng Restructuring, officials were more equal in their payment with respect to functions, and financial officials were treated differently from other officials before the restructuring.

Before the Yuanfeng Restructuring, three points were important for financial officials. Firstly, some unique positions have special pay schemes, ignoring the salary rank (See **Table 10**). The top financial official, the Fiscal Commissioner, was treated as equal to Junior Ministers (no more than four) and Deputy Military Commissioners (usually one).

Thus, the Fiscal commissioner was usually among the top ten salaried officials.[39] Also, the Deputy Fiscal Commissioners were paid more than an official in the middle salary ranks, making the position far from that of a low-ranking manager.

Secondly, some official positions offered additional payments (See **Table 10**). For example, while the Acting and Junior Acting Fiscal Commissioner could not receive the payment as a formal Fiscal Commissioner, they could receive additional payment to their regular salary rank, boosting the total salary of these officials. The additional payments were significant. For example, the “additional payment” in coins to all staff in the fiscal commission was 20 “thousand” per month, which was already two times as much as the total coin salary of a canton governor of a small canton.[40]

Thirdly, as to grain and servants, both Acting Fiscal Commissioner and Junior Acting Fiscal Commissioner had exceptional grain salaries other than their salary rank. Also, while many official positions did not reimburse servants, all officials in the fiscal commission were given a quota of five servants.

In summary, financial officials were paid more position-based remuneration than ordinary officials.

[39] Some salaried honorary titles (e.g., 節度使，使相) provided more salary but they were not equivalents to officials.
[40] A canton governor of a small canton could receive 10 “thousand” coins per month (*宋史*, ca. 1346/n.d., 志第一百二十四).

Table 10
Position-Based Payment for Senior and Financial Positions.

Positions			Coins	Silk Twill	Silk Normal	Cotton	Silk Thin	Grain	Servants
Translation	Original	Branch	錢*	綾#	絹#	綿†	羅#	祿粟‡	傔人衣糧**
Minister, Military Commissioner	宰相樞密使	Minister-level	300	40	60	100	1	100	70
Junior Minister, Deputy Military Commissioner, Fiscal Commissioner	參知政事 樞密副使 三司使		200	20	30	50	1	100	50
Acting Fiscal Commissioner	權三司使	Fiscal commission	SR+100	SR+10	SR+17	SR+50	SR+1	70	30
Junior Acting Fiscal Commissioner	權發遣(三司使)公事		SR+50	SR+10	SR+17	SR+50	SR+1	35	15
Deputy Fiscal Commissioner	三司副使		50	7	30	50	1	-	5
The staff of the fiscal commission	判官, 子司主判……[41]		SR +20	SR +10	SR +17	SR +50	SR +1		5
Grand Chief Staff of the Military Commission	樞密都承旨	Military Commission	40	8	30	50	1		10
Grand Deputy Staff of the Military Commission	副都承旨		30	8	30	30	1		7
Deputy Staff of the Military Commission	副承旨		30	8	30	30	1		7

41 （三司）判官並權及發遣，以至子司主判，河渠勾當公事，同管勾河渠公事。

Positions			Coins	Silk Twill	Silk Normal	Cotton	Silk Thin	Grain	Servants
Translation	Original	Branch	錢*	綾#	絹#	綿†	羅#	祿粟‡	傔人衣糧**
Deputy Staff of each section of the Military Commission	樞密院諸房副承,		30	8	30	30	1		7
Junior Deputy Staff of each section of the Military Commission	逐房副承旨		30	8	26	30	1		5
Secretary Officer in charge of five sections	中書堂後官提點五房公事		30	8	26	30	1		7
Secretary Officer	中書堂後官		20	-	20	50	1		2
Chief Secretary & Supervisors in the Military Commission	中書、樞密主事		20	-	20	50	1		2
The staff of the Military Commission	錄事、令史		2	-	20	30	1		1

Note: The source of this table is the *History of Sung* (*宋史*, ca. 1346/n.d., 志第一百二十四/志第一百二十五).
SR: Based on the salary rank of the official.
*: Measured by "千", which is literally translated to "thousand" but did not mean one thousand. Instead, it is a unit that exchanges differently at different times. Sometimes, one unit counted about 700 coins, and at other times, the unit counted about 600 coins (*宋史*, ca. 1346/n.d., 志第一百二十四).
#: Measured by bolts (匹).
†: Measured by "兩", which is about 40g.
‡: Measured by "石", which is about 67 litres.
**: Measured by the number of persons.

5.6. A Summary of Implications for the Following Chapters.

This chapter provides a basic understanding of the study of financial officials of the Sung Empire from the human resource management aspect. Firstly, the fiscal bureaus did not have direct control over their human resources. Therefore, the preference of financial officials in remuneration came from the central government as a state policy. Secondly, fiscal bureaus did not have a recruitment process, so financial experts were trained on the job instead of in educational facilities. Thirdly, financial experts were expected to occupy many general but important regional positions to receive general training. Fourthly, financial positions provided better position-based remuneration to encourage officials to apply. Overall, financial experts of the Sung Empire were not yet a modern profession which trained its apprentices and monopolised a function. However, like a modern profession, financial experts have already received a degree of recognition for their expertise and were rewarded better than normal generalists. Quantitative studies are performed in the following three chapters to confirm the understanding of this chapter.

Chapter 6. The Social Acceptance of Financial Officials: A Study via the Lens of Network Analysis

6.1. Introduction

As outlined in Chapter 2, the recognition of financial officials is assessed through three key dimensions, one of which is their social acceptance, measured via their social networks. This chapter evaluates the social networks of financial officials in the Sung Empire using two methodological approaches: egocentric analysis and whole-network analysis (Wetherell, 1998). The remainder of this chapter is structured as follows: Section 2 reviews the relevant literature on social networks and network analysis. Section 3 outlines the data cleaning methods and provides descriptive statistics on financial officials. The method for the identification of financial positions is based on Chapter 4. Section 4 presents findings from the egocentric analysis of financial officials, while Section 5 applies whole-network analysis. Finally, the chapter concludes with a summary of the findings and their implications.

6.2. Methodology

Traditional quantitative research methods often categorise individuals into distinct groups to investigate differences across categories (Smith, 2003), such as gender, social class, education level, or professional affiliation. While these methods provide a sensible starting point for understanding group-based distinctions, they frequently overlook the interrelationships between individuals that form the social structure. In such analyses, individuals are often treated as isolated and indistinguishable within their respective groups. By contrast, structural or network analysis enables researchers to examine social relationships at theoretical and methodological levels (Wellman, 1991). This approach is particularly relevant for this chapter, as financial officials in the Sung Empire lacked an established professional body. Instead of comparing members inside and outside a professional body, this study focuses on understanding the social status and network position of financial officials within the broader social structure of the Sung Empire.

Network analysis comprises two principal research approaches: (1) egocentric analysis and (2) whole-network analysis (Wetherell, 1998). Both are employed in this chapter to investigate the social networks of financial officials.

The egocentric method examines the immediate social relationships surrounding specific individuals. Historically, its simplicity and low data and computational requirements made it widely adopted before developing advanced mathematical methods and computational tools. For instance, Bol (2018) used egocentric analysis to compare the social networks of two ancient scholars. However, egocentric methods are limited in that they do not provide a comprehensive, community-wide perspective of social networks.

The whole-network methods, which involve all nodes and relationships within a network, became more prevalent with the advent of specialised software and computational capabilities (Freeman, 2004). Although sociologists initially developed these methods, historians have increasingly adapted them to study historical communities. For example, Wetherell (1998) demonstrated the utility of network analysis in historical research using a 19th-century European peasant community as a case study. The method has also been applied to other contexts, such as North American and Alpine communities (Morrissey, 2015). However, whole-network analysis is time-intensive due to the extensive effort required to collect and clean raw data (Wetherell, 1998). Notable historical applications include Mazanec's (2018) construction of a social network of poets and officials based on "*Exchange Poems*" (830–960 CE) and Wang's (2022) use of *The Complete Prose of Sung* (全宋文) to analyse kinship networks among Sung financial officials.

6.3. Data Processing and Descriptive Statistics

6.3.1.Data Source

The data utilised in this study is sourced directly from the China Biographical Database (CBDB), with the database file last updated on 29th January 2022.[42] The Chinese Biographical Database offers a significant resource for such analyses, having been developed through collective efforts by historians. Initially conceived by Robert Hartwell, a historian, the CBDB contained information on 521,442 individuals as of August 2022, primarily spanning the 7th to 19th centuries (The CBDB project, n.d.). The database facilitates sharing biographical details and enables large-scale historical research (Armitage & Guldi, 2015). Scholars have already used CBDB to produce valuable insights. For example, Huang (2013) created a social network map of two ancient Chinese families. Huang and Luo (2018) utilised a signed graph model and an innovative group partitioning algorithm to illustrate social dynamics. Li et al. (2017) also developed a visual toolkit for analysing social relationships among Chinese historical figures. These studies exemplify the potential of CBDB as a robust tool for network analysis in historical research.

[42] The database could be found at https://projects.iq.harvard.edu/cbdb/home. It is updated by the maintainer of the team of CBDB with its collaborators. https://projects.iq.harvard.edu/cbdb/collaborator.

Data extraction is conducted using *Structured Query Language* (SQL)[43] through *Python*[44] , leveraging the *pandas* library[45] (The *pandas* development team, 2020) and *SQlite3*[46] (Häring, 2022). For subsequent data processing and analysis, scientific computing libraries such as *SciPy*[47] (Virtanen et al., 2020) and *NumPy*[48] (Harris et al., 2020) are employed.

The primary dataset was created by extracting individuals from the main biography table (*BIOG_MAIN*) with a filter to include only those associated with the Sung Empire (condition: *c_dy = 15*[49]). This process identified 73,458 individuals, comprising 69,589 males and 3,859 females.[50] It is important to note that not all these individuals were officials. Females and most males who were not officials were recorded due to their connections to emperors or officials. The records for males are concentrated primarily between 1010 CE and 1260 CE, as indicated by the Index Year field (Table 11).[51] However, 39% of the male records lack a valid Index Year, reflecting a common issue of incomplete historical documentation. Predictably, relatively few individuals were recorded during the early stages of the Sung Empire, as the empire's establishment limited the availability of noteworthy records. Similarly, after the empire's fall in 1279 CE, almost no individuals were recorded as being affiliated with the empire.

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[43] SQL is a domain-specific language used to manage data. More information is available on https://www.iso.org/standard/76583.html.

[44] Python is a programming language. More information is available on https://www.python.org/.

[45] Pandas is a software library written for Python programming language. More information is available on https://pandas.pydata.org/.

[46] Sqlite3 is a software library written for Python programming language. More information is available on https://www.sqlite.org/.

[47] SciPy is a software library written for Python programming language. More information is available on https://scipy.org/.

[48] NumPy is a software library written for Python programming language. More information is available on https://numpy.org/.

[49] The "c_dy" column records a code for dynasties, and "15" is the code assigned to the Sung empire.

[50] The sample sizes different tests are different due to the scope of tests and data availablity. A reconciliation between the total number and each test can be found in Appendix G.

[51] The algorithm of index year is available at https://projects.iq.harvard.edu/cbdb/cbdb-sources.

Table 11
The Number of Persons of the Sung Empire in CBDB by Index Year.

Index year #			
From	To	Male	Female
860	910	216	21
910	960	1,693	94
960	1010	3,615	252
1010	1060	6,612	409
1060	1110	8,273	841
1110	1160	8,163	564
1160	1210	8,550	698
1210	1260	5,120	440
1260	1310	25	0
Unknown †		27,322	550
Total		69,589	3,869

Note

Index year is a variable representing the person's birth year or the best estimate for the birth year by the team of CBDB.[52]

†: Including 13 people with probably incorrect index year.

6.3.2.Sample Distribution by the Way of Entering the Shih Group.

The *entry pathway* specifies the pathway by which individuals became officials. As discussed in Chapter 5, the most prestigious entry pathway was the *Chin-Shih* examination. Other regular examinations followed, but the *En-yin* pathway, which required no examination, offered a privileged alternative. The examinations for clerks, however, were far less reputable, resulting in sparse historical records of individuals entering through this pathway. Entry pathways are a useful proxy for assessing an individual's ability or intelligence in navigating the examination system. Furthermore, as highlighted in Chapter 5, the chosen entry pathway significantly influenced an official's career trajectory, particularly in terms of promotion speed and access to key positions.

The entry data for this analysis was sourced from the *entry_data* table in the CBDB, with definitions of entry codes extracted from the *entry_code* table. Among the 69,589 males recorded, 34,705 individuals had no associated entry code, indicating that

[52] See https://projects.iq.harvard.edu/cbdb/supporting-documents for more information.

historical records did not document their entry into officialdom. Of the remaining individuals, 34,111 had a single, valid entry code, seven had an invalid entry code,[53] and 766 had multiple entry codes. As discussed in Chapter 5, the presence of multiple entry codes reflects historical reality rather than data errors. It was not uncommon for officials to initially enter via a less prestigious pathway, such as Yin, and later pass an examination, such as Chin-Shih, to attain a more esteemed status.[54]

To address multiple entry codes and standardise the dataset, the following rules were applied to remove duplicates:

1. The primary sequence of preference:
    a. *Chin-Shih* pathway,
    b. *Ad hoc* examination,
    c. Regular examinations other than Chin-Shih,
    d. Recruited by recommendation,
    e. Public school pathway,
    f. Clerk, military, *Yin*, and others. [55]

    If multiple entry records existed for an individual, the record with the earliest position in this sequence was retained. This prioritisation reflects the likelihood that individuals first entered via a less prestigious pathway and subsequently sought to enhance their status through examinations or other means.[56]

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[53] Some codes were not explained by the database, probably due to legacy records which was no longer maintained. The total number of people with invalid codes is small, and therefore they were removed in analysing routes.

[54] "It may not prove useful to think of Entry as a singular event: some people are granted eligibility for office through yin privilege but then go on to pass the jinshi examination. Some begin through yin but are awarded the status of having passed the jinshi. Some people enter and leave service through a variety of circumstances throughout their lives. Hartwell attempts to capture these variations through his codes, but it may prove useful—depending on the data—to allow a person more than one Entry event." https://projects.iq.harvard.edu/cbdb/structure-cbdb

[55] Standard Chih-Shih routes were the fastest route for promotion (宋史, ca. 1346/n.d., 志第一百二十二). Candidates who passed *Ad hoc* examinations would be put into a status no worse than Standard Elite route. Standard non-elite route was never a better route than other examinations. Recommendations were seldom and not considered as good as candidates passed examinations. Two types of school graduates existed. The first type is the distinct graduates who were deemed successful candidates for Standard Elite exam and the type was treated as the Standard Chih-Shih exam type. Other school graduates were deemed merely passer of the normal exams. Clerks and military officers could enter with special routes, but these routes were never preferred. Yin was always despised for incapability. Other records were entries such as "failed in examinations" and this type should give way to other records.

[56] Examples include K'uo Shen (沈括) (宋史, ca. 1346/n.d., 列傳第九十). More details are available in the book of Deng (鄧, 1993a).

2. Preference for detailed records:
   The most detailed record is retained if multiple records exist within the same entry type.

After applying these rules, 766 unique and valid records were identified, representing the highest-status pathway achieved by individuals with multiple entry codes. Consequently, after cleaning the dataset, 34,877 records were finalised for further investigation, as detailed in the subsequent sections of this chapter. (A reconciliation between the number of entry data and the number of total records is provided in Appendix G.)

Among the 34,877 males analysed, the majority (87%) entered officialdom through examination pathways, while the remainder entered via alternative pathways such as *Yin* or special awards (see **Table 12**, **Table 13**, **Figure 24**, and **Figure 25**). However, this proportion does not align with historical evidence suggesting that the *Yin* pathway was the predominant entry method for officials (Chou, 2012; 鄧, 1993a). This discrepancy likely stems from biases inherent in the compilation of historical texts. Firstly, prominent officials were more likely to be recorded in historical documents, and those who entered via the *Chin-Shih* pathway were often deemed significant due to their roles within the bureaucratic system and their demonstrated intellectual capabilities. Secondly, if an individual did not enter through the *Chin-Shih* pathway, the specific entry method may have been omitted from historical accounts. Consequently, such individuals were often categorised under "entry data missing" or "entry data not available."

Table 12
Recorded Officials of the Sung Empire by Entry Pathways.

Entry pathways	Number of Persons	(%)
Chin-Shih Examinations	26,565	76.17
Regular Examination	3,968	11.38
Yin Privilege	1,263	3.62
Decree of Special Grace	828	2.37
Kinship	579	1.66
Chü-jen Examinations	364	1.04
Students in Schools	323	0.93
Military Merit	176	0.50
Recommendation	163	0.47

Entry pathways	Number of Persons	(%)
Recruitment	140	0.40
Other Methods of Entry	508	1.46
Total	34,877	100.00

Figure 24
Recorded Officials by Entry Pathways.

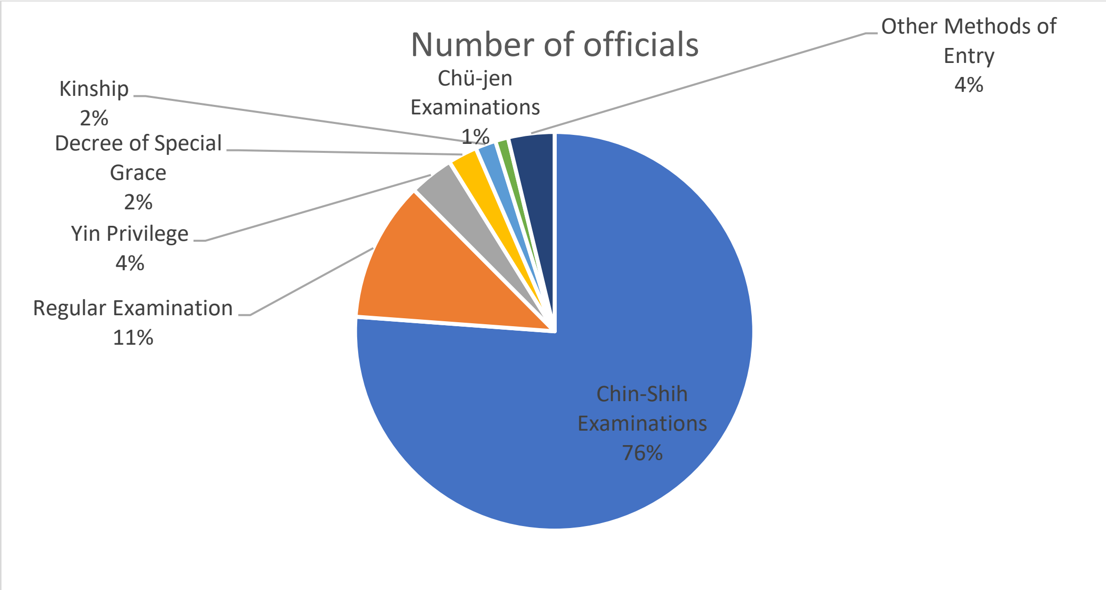


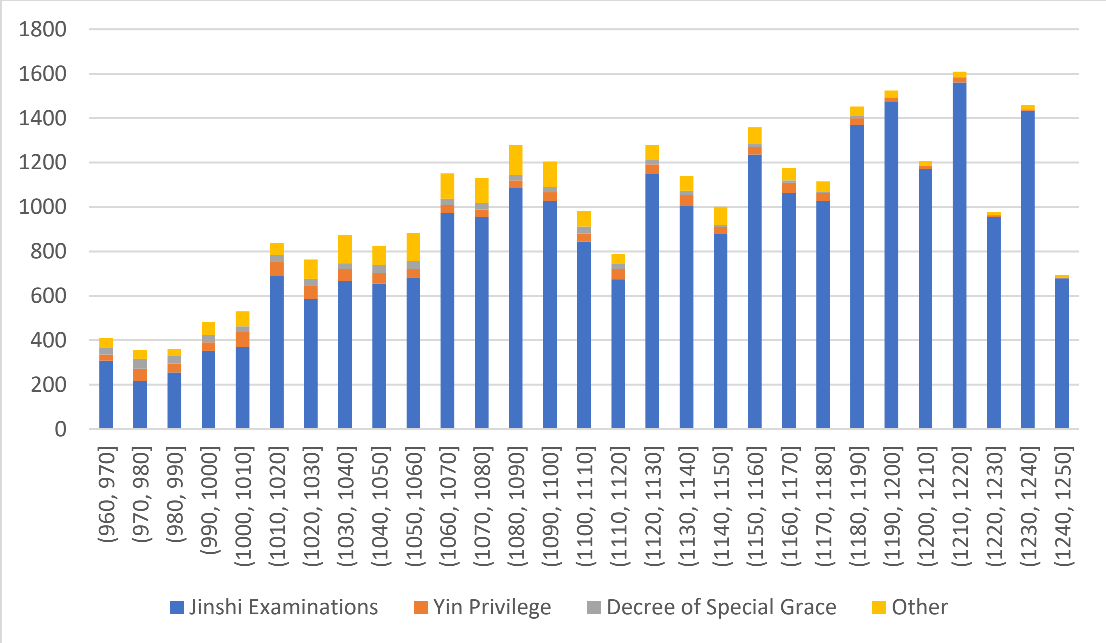
Table 13
Recorded Officials of the Sung Empire by Index Year and Entry Pathway

Index year #							
From	To	Chin-Shih	Other Regular Examination	Yin	School	Other	Total
960	1010	854	39	49	0	83	1,025
1010	1060	2,122	115	44	0	96	2,377
1060	1110	3,802	416	12	54	105	4,389
1110	1160	4,738	788	33	144	152	5,855
1160	1210	5,167	1,132	35	36	144	6,514
1210	1260	6,620	1,218	17	46	68	7,969
1260	1310	2,034	107	2	11	28	2,182
Unknown		1,228	153	1,071	32	2,082	4,566
Total		26,565	3,968	1,263	323	2,758	34,877

Note: #: Index year is a variable representing the person's birth year or the best estimate for the birth year by the team of CBDB.

Figure 25

Male Records by Index Year and Entry Pathway.



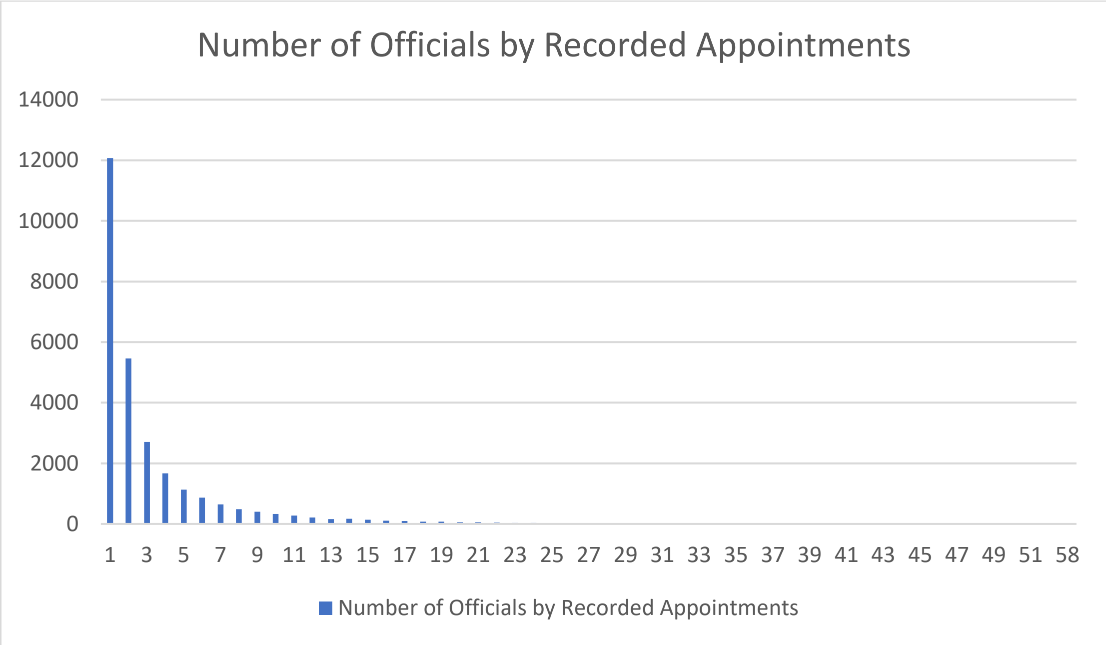
6.3.3.Sample Distribution of Official Positions and Appointments

Complete records of incumbents for official positions are unavailable, except for members of the Cabinet. However, incumbents of other positions can be identified by tracing individual appointment records in biographical data. The CBDB maintainers have extracted and recorded position-person mappings from various historical sources in the *posted_to_office_data* table. Each record in this table links an individual to an official position, salary rank, or honorary title. While some records include specific entry and exit years, many lack precise timing information. For this study, appointment data were extracted from the *posted_to_office_data* table by filtering for the *person_id* values identified in the earlier analysis. Among the 69,589 males, 27,513 individuals had 94,054 recorded appointments. The individuals with the most appointments held 58 positions, while most individuals held just one (see **Table 14** and **Figure 26**). Individuals without recorded appointments were naturally excluded from the *posted_to_office_data* table.

Table 14
Descriptive Statistics of the Number of Appointments by Each Official

	count	mean	std	min	0.25	0.5	0.75	max
Appointments per official	27,513	3.418	4.480	1	1	2	4	58

Figure 26
Number of Officials by Recorded Appointments



The mean number of appointments per individual was 3.4; the third quartile was four. Assuming all appointments corresponded to official positions, typically with a maximum tenure of three years (鄧, 1993a), the average recorded working tenure would amount to approximately ten years. However, since the appointment data also includes records of salary ranks and honorary titles, the actual recorded working years are likely much fewer than ten. This discrepancy suggests that many, if not most, appointments to official positions were not documented in historical records.

The 94,054 recorded appointments spanned 2,813 distinct official positions (See **Table 15**). Among these, 931 positions were associated with only a single appointment. The position of "Prefect" accounted for the most significant number of appointments, with 22,775 recorded. This category included 17,143 ordinary prefects (*知某州軍州事*), 3,487 prefects overseeing major cities (*知某府軍府事*), 2,122 prefects responsible for major garrisons (*知某軍事*), and several similar roles. "Canton Governors" (*知某縣事/縣*

令) recorded 7,423 appointments, while other positions generally accounted for fewer than 2,000 appointments.

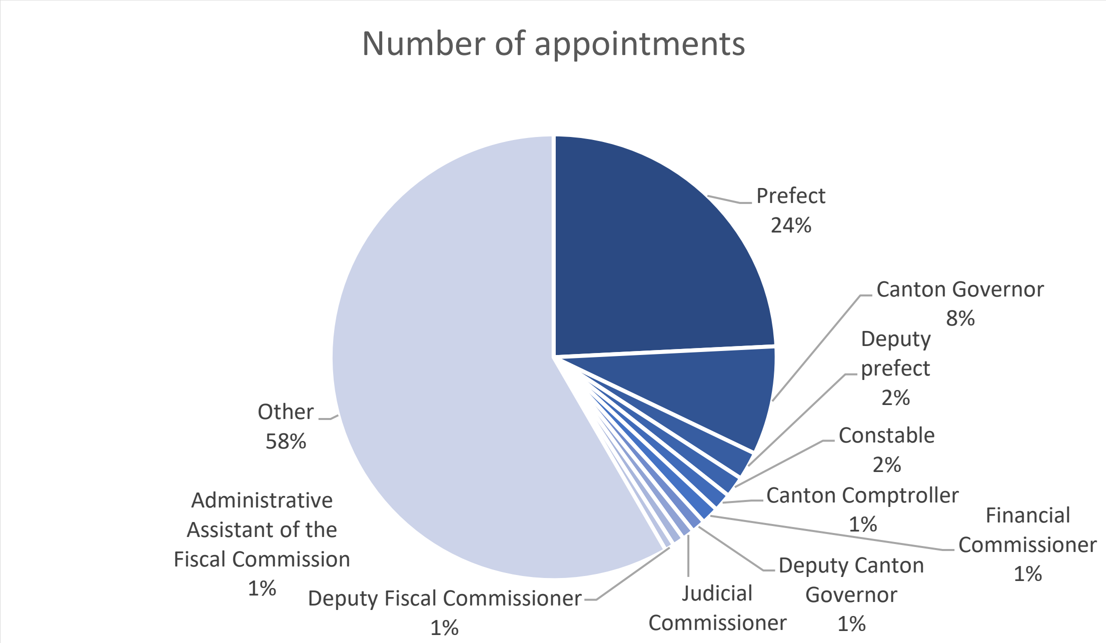
Table 15
Descriptive Statistics of the Number of Incumbents for Each Job Position

	count	mean	std	min	25%	50%	75%	max
Number of Incumbents	2814	33.42	359.14	1	1	3	13	17,143

Of the 94,054 recorded appointments, 10,254 (10.9%) were classified as finance-related positions. The most prominent subset of these roles comprised fiscal and supply commissioners and their staff, who managed intermediary financial functions between the prefectures and the central government. Notable examples include 1,265 financial commissioners (*轉運使*), 114 supply commissioners (*發運使*), and 638 deputy financial commissioners (*轉運副使*) (See **Figure 27**). The remaining finance-related appointments were spread across the Fiscal Commissions (*三司*), the Department of Commoners (*戶部*), the Department of Works (*工部*), and executive bureaus such as the Mint and Foundry, the Royal Treasury Agency (*太府寺*), and others.[57] In addition to revenue generation, modern finance ministries typically oversee public expenditure control—a function similarly mirrored in the Sung administration through responsibilities tied to Palace Buildings, the Royal Armoury, and Waterways. At the lower levels, financial roles were often part-time and distanced from the core centres of financial power. Cantonal comptrollers (*縣主簿*) and prefectural comptrollers (*司戶參軍*) were junior officials tasked with bookkeeping, expense authorisations, warehouse management, household censuses, and other administrative duties. Beyond these roles, non-financial bureaus, branches of the central government, state-financed temples, and other institutions also employed comptrollers for bookkeeping and miscellaneous tasks. However, these comptrollers were not considered dedicated financial officials comparable to their counterparts in higher-ranking positions. Indeed, such roles were often assigned to underperforming officials, relegating them to minor branches where their shortcomings were less likely to disrupt critical government operations (*宋史*, ca. 1346/n.d., 志第一百六十七).

[57] Detailed explanation of the structure of the bureaucratic system is provided in Chapter 4.

Figure 27
Appointments Recorded in CBDB by Type.



6.3.4. Methods of Identifying Financial Positions and Descriptive Statistics of Financial Positions

After extracting the data, appointments in the central government were categorised by their nature: salary ranks or functional positions. As outlined in Chapter 4, the Yuanfeng Restructuring presented a significant analytical challenge, as the nomenclature of official positions was overhauled entirely during this reform. Before the restructuring, secretarial titles primarily denoted salary ranks rather than functional roles (鄧, 1993a). Following the Yuanfeng Restructuring, secretarial titles were restored to functional roles, while a new hierarchical system was introduced to denote salary ranks (鄧, 1993a). For example, the title "Secretary of Commoners" did not signify a financial role before the Yuanfeng Restructuring, but the same title post-reform represented a financial position. Consequently, it was necessary to distinguish between "salary ranks" and "job positions" to classify financial and non-financial roles accurately. This classification was carried out using the following methodology (summarised in **Table 16**):

1. The Ambiguity of Secretarial Titles: Appointments with titles such as Secretary (*尚書*), Assistant Secretary (*侍郎*), Senior Staff (*郎中*), and Junior Staff (*員外郎*) of the Department of Commoners (*戶部*), Department of Works (*工部*), and Department of Law (*刑部*) were deemed "ambiguous," as their classification depended on the timing of the appointment.[58]

[58] Details are available in Appendix F.

2. Date-Based Classification: For ambiguous appointments with known dates:
    - If the appointment occurred before 1080 (the year of reform), it was classified as a "non-financial position."
    - If the appointment occurred after 1080, it was classified as a "financial position."
3. Age-Based Classification: For ambiguous appointments with known dates:
    - If the appointment occurred before 1080 (the year of reform), it was classified as a "non-financial position."
    - If the appointment occurred after 1080, it was classified as a "financial position."
4. Classification of Remaining Ambiguities: Two types of ambiguous appointments remained unclassified:
    - Type 1: 126 appointments with unknown dates where the officials were born between 1010 and 1050.
    - Type 2: 255 appointments with unknown dates for officials with unknown birth years.

    These appointments were conservatively classified as financial based on the following reasoning: (a) The Sung Empire spanned 960–1279, and if the ambiguous appointments were evenly distributed over time, only 37.6% would likely be non-financial; (b) The scale of the official bureaucracy expanded significantly over the Empire, with earlier appointments being fewer than later ones.

Therefore, the actual proportion of non-financial appointments among the ambiguous cases would likely be much lower than 37.6%. By classifying all remaining ambiguities as financial, fewer than 143 appointments would be misclassified—a potential error rate of less than 2% of all financial appointments. This margin of error is acceptable given the inherent inaccuracies in historical data and the expectation that sampling bias exceeds 2%.

Table 16
Identification Process of Ambiguities in Secretary Titles

<table>
<tr><th></th><th></th><th colspan="3">The Date of Appointment</th></tr>
<tr><th></th><th></th><th>Before 1080 CE</th><th>After 1080 CE</th><th>Unknown</th></tr>
<tr><td rowspan="4">The Birth of Appointee</td><td>Before 1010 CE †</td><td rowspan="4">Non-financial</td><td rowspan="4">Financial</td><td>Non-financial</td></tr>
<tr><td>Between 1010 CE and 1050 CE</td><td>Treated as financial #</td></tr>
<tr><td>After 1050 CE ‡</td><td>Financial</td></tr>
<tr><td>Unknown</td><td>Treated as financial #</td></tr>
</table>

Note:

† Presumably, they had retired/died before 1080 CE and, thus, they received secretary titles before 1080 CE.

‡ Presumably, they were too young to receive a secretary title before 1080 CE, and, thus, they received secretary titles after 1080 CE.

The incorrect number is estimated to be less than 2% of financial appointments.

After resolving ambiguities, 10,254 appointments were identified as related to financial tasks (see **Table 17**). Within the central government, 785 appointments were recorded before the Yuanfeng reform, compared to 1,533 appointments documented following the reform. These post-reform appointments were distributed across the Department of Commoner Affairs (*806*), the Department of Public Works (*644*), and the Department of Justice (*83*).

At the circuit level, 2,966 appointments were related to financial matters, 937 to judicial responsibilities, and 472 to trade. At the prefectural level, 256 appointments were recorded for overseeing financial and storage-related duties, while the cantonal level accounted for 1,228 such appointments. However, these officials often had broader roles, and only in larger prefectures and cantons were such specialised positions consistently observed (*宋史*, ca. 1346/n.d., 志第一百二十). Consequently, prefectural and cantonal officials were only included in the analysis as separate categories whose roles were distinctly financial.

Table 17
The Number of Recorded Appointments by Financial or Non-financial Functions.

Type of Financial Positions	Original Characters	Core	Note	Number of Appointments	(%)
Financial appointments					
The Fiscal Commission	三司	Y	1	785	0.83
The Department of Commoners	戶部	Y	2	806	0.86
Maritime Trade Bureau	市舶	Y	3	166	0.18
Financial / Supply Commissioners	轉運/發運	Y	4	2,966	3.15
Palace Buildings & Armory & Waterways	將作/軍器/都水	Y	5	613	0.65
Mint & Foundry	監冶場務	Y	6	55	0.06
Judicial commission	提點刑獄	Y	8	937	1.00
Trade Commissioners	提舉常平	Y	7	472	0.50
Regional monitors of monopoly		Y		182	0.19
Royal Treasury Agency	太府/內藏	Y	9	541	0.58
The Department of Works	工部	Y	2	644	0.68
Granary Bureau	司農寺	Y	10	289	0.31
Review Section of the Department of Justice	刑部比部司	Y	11	83	0.09
Comptroller in the bureaus of the central government	主簿（諸寺/司）	N		169	0.18
Cantonal Comptroller	主簿（縣）	N		1,228	1.31
Prefecture Comptroller	司戶參軍	N		256	0.27
Other		N		62	0.07
Total financial appointments				**10,254**	**10.90**
Non-financial appointments				83,800	89.10
Total Appointments				94,054	100

Note:

1. The “Fiscal Commission” was the central government's fiscal branch reporting directly to the emperors. After the reform, the tasks were split and given to different branches of the central government.[59]

2. The Department of Commoners and the Department of Works were two of the six departments reporting to the Cabinet. During the reform, most tasks of the Fiscal Commission were allocated to the two departments.

3. Four Maritime Trade Bureaus were responsible for maritime trade in each area. In the early era, the jobs were usually supervised by fiscal commissioners. Later, the emperors sent designated commissioners to control the bureaus.

4. “Fiscal / Supply Commissioners & staff” were designated commissioners in charge of a circuit to collect money and food from prefectures to be sent to the capital. Usually, they also served as supervisors of the regional governors and enterprises.

5. Palace Buildings Bureaus were responsible for civil engineering projects. Armoury Bureaus were in charge of producing weapons, armour, and other military equipment. Waterways Bureaus were in charge of constructing and building canals and dikes for flood control.

6. Mint & Foundry was responsible for coinage.

7. Bureaus were established in local regions to monitor the Tea, Salt, and Alcohol monopolies.

8. Judicial commissioners were first used to monitor financial compliance, but later were delegated to monitor non-agricultural fiscal incomes.

9. The Royal Treasury Agency was the manager of the royal treasury, real estate, coinage, and paper money. This agency was activated to take over the tasks of executing the policy of the central government during the Yuanfeng Restructuring (*宋史*, ca. 1346/n.d., 志第一百十八).

10. The Granary Bureau was traditionally responsible for the price-stabilising granary. After the Hsi’ning reform, the Granary Bureau was in charge of the incomes created by the reform. After the Yuanfeng reform, the income was transferred to the “Right Section of the Department of Commoners”.

[59] Details of the reform are provided in Chapter 4.

11. The “Review Bureau” of the Department of Justice reviewed financial compliance after the Yuanfeng Restructuring. This task was performed by the “Three Commissions” before the Yuanfeng Restructuring.

The trends of recorded appointments of financial positions and other appointments were almost identical: during the early years, the appointments increased, but as the empire came to an end, the recorded appointments decreased (**Table 18**).

Table 18
The Number of Appointments of the Known Year by Semi-century

Year of appointment From	To	Non-Financial	Financial (Excluding Comptroller)	Financial (Comptroller)	All
960	1010	2,284	510	6	2,800
1010	1060	3,985	621	17	4,623
1060	1110	4,802	1,144	16	5,962
1110	1160	5,954	1,026	20	7,000
1160	1210	5,338	244	32	5,614
1210	1260	4,049	200	28	4,277
1260	1279	996	56	7	1,059
Total		27,408	3,801	126	31,335

Note:

The records of financial appointments increased as the empire grew geographically and in complexity. However, financial appointments decreased significantly after losing northern China in 1127 CE.

Most of the appointments had no record of the duration. According to availability, known records are either the first or the last year. Since the difference between the first and last years was no more than three years, choosing the first or last year would not create significant errors for spans of 50 years.

For each era, the starting year is not included, and the end year is included.

The 10,254 financial appointments were related to 5,965 officials (**Table 19**). Most persons only took one financial appointment, but a significant proportion (36%) had been repeatedly appointed to financial positions, indicating their expertise in financial affairs might be valued.

Table 19
The Number of Persons by the Number of Financial Positions Taken.

Financial appointments taken during life	Number of persons	%
1	3,768	63.17
2	1,218	20.42
3	450	7.54
4	235	3.94
5	142	2.38
6	78	1.31
7	41	0.69
8	15	0.25
9	11	0.18
10	4	0.07
11	2	0.03
14	1	0.02
Total	5,965	100

Note:

Most officials who worked in a financial position had only one record in financial functions. However, more than 2,000 officials had multiple records in financial functions, suggesting that some of them probably had a career as financial experts.

Most financial officials were either from the Chin-Shih pathway or without the entry pathway recorded, but a significant proportion of financial officials still entered service via the Yin privilege (Table 20). Nevertheless, a controlled test is performed to unveil the relationships between the pathway and the probability of being appointed to financial positions.

Table 20
The Number of Financial Officials per Entry Pathway

Positions	Financial	Non-Financial	Total
Entry type			
Chin-Shih Examinations	2,573	23,992	26,565
Regular Examination	145	3,823	3,968
Yin Privilege	449	814	1,263
Other	331	2,750	3,081
No record	2,467	32,245	34,712
Total	5,965	63,624	69,589

Note:

Although a significant proportion of financial officials were from the elite, Chin-Shih, pathway, almost the same number of financial officials did not have a recorded pathway.

Table 21
The Number of Financial Officials and Non-Financial Officials by Entry Pathway and Types

	Pathway of Entry						
Type	Chin-Shih Exam	Regular Exams	Yin	Other	Unknown / Data Missing	Total	%
Financial functions							
The Fiscal Commission	155	6	8	27	97	293	0.42
The Department of Commoners	169	3	12	17	143	344	0.49
Maritime Trade Bureau	27	2	6	4	46	85	0.12
Fiscal / Supply Commissioners	622	30	69	65	649	1435	2.06
Palace Buildings & Armory & Waterways	132	5	79	24	146	386	0.55
Mint & Foundry	14	1	3	0	22	40	0.06
Judicial commission	253	7	24	29	231	544	0.78
Ch'ang p'ing	142	2	17	14	86	261	0.38
Regional monitors of monopoly	37	3	28	19	51	138	0.20
Royal Treasury Agency	110	2	21	22	215	370	0.53
Department of Works	198	5	20	18	214	455	0.65
Granary Bureau	91	5	14	10	65	185	0.27
Review Section of the Department of Justice	9		4	1	53	67	0.10
Comptroller in the bureaus of the central government	83	1	12	7	39	142	0.20
Cantonal Comptroller	403	60	96	60	349	968	1.39
Prefecture Comptroller	119	12	24	12	45	212	0.30
Other	9	1	12	2	16	40	0.06
Total Financial Officials	2,573	145	449	331	2,467	5,965	8.56
Add: Males other than Financial Officials	23,992	3,823	814	2,750	32,245	63,624	91.43
Total Male	26,565	3,968	1,263	3,081	34,712	69,589	100.-

When financial appointments are analysed by entry pathways and functions, it becomes evident that the **Chih-Shih** officials predominantly occupied positions in the

Fiscal Commissions, the Department of Commoners, and the Department of Works (see **Table 21**). These three departments represented the highest bureaucratic echelons in financial administration. While many financial officials entered service through the **Yin** pathway, their roles were somewhat confined to regional positions, such as managing royal enterprises and serving in regional Fiscal or Supply Commissions. Consequently, despite their higher overall proportion in financial appointments, **Yin** officials rarely held financial roles within the central government.

The data from the CBDB indicates that the proportion of lower-ranking officials was not overwhelmingly greater than that of high-ranking officials (see Figure 28 and **Figure 29**). This distribution suggests that many lower-ranking officials may have been omitted from historical records. Nevertheless, data for ranks up to 34 in the pre-Yuanfeng era and up to rank 17 in the post-Yuanfeng era are relatively abundant compared to those for lower ranks.

For financial officials, excluding regional comptrollers, the majority occupied middle salary ranks, with comparatively few at either the highest or lowest ranks. The scarcity of financial officials at the lower ranks is understandable, as full-time financial positions were limited within the bureaucratic system. Consequently, those appointed to such roles were often already at a middle salary rank. Similarly, the small number of financial officials at the highest ranks is due to the overall low absolute number of positions available at that level.

The irregular distribution of officials across salary ranks is also reasonable. Firstly, salary ranks were primarily designed to determine remuneration and were not directly tied to specific job positions. Secondly, as salary rank progression was cumulative, officials could reach the same rank at different points in their careers and retire at varying times from the same rank.

Figure 28
Officials by Personal Highest Salary Rank (Pre-Yuanfeng)

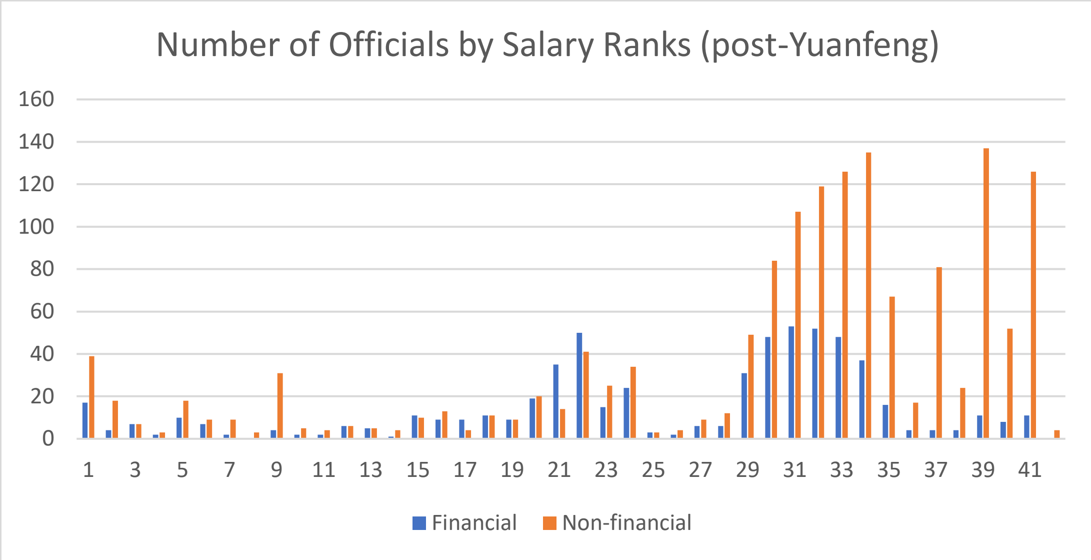
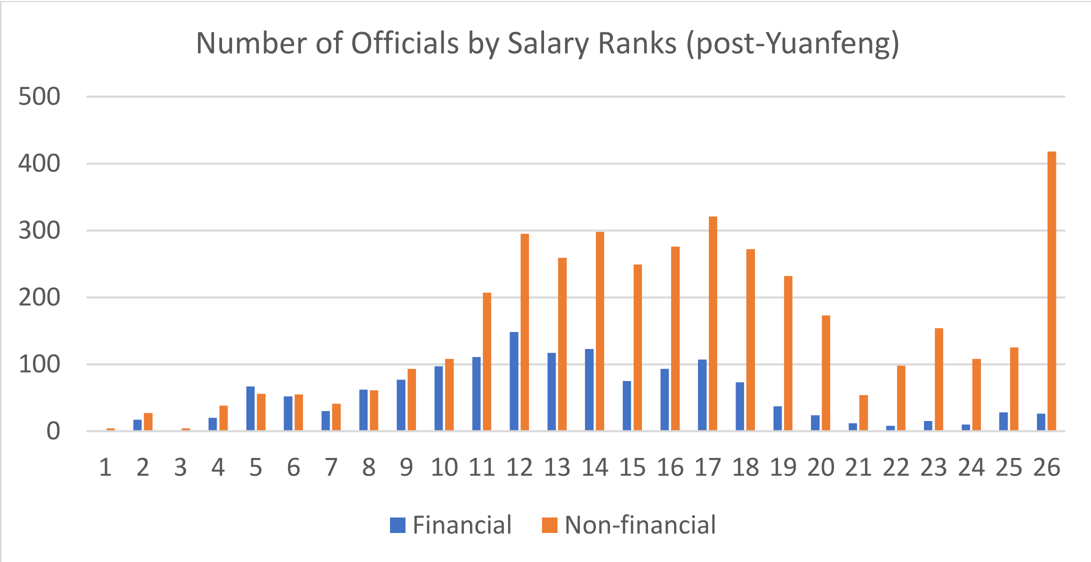


Figure 29
Officials by Personal Highest Salary Rank (Post-Yuanfeng)



This section briefly explains the method of retrieving data and descriptive statistics of the official positions and appointments. The following two sections describe the social network with egocentric or whole-network methods.

6.4. Egocentric Method and Results

This section employs egocentric methods to analyse financial officials' social relationships and test whether they maintained more connections than other officials.

As outlined in the literature review, egocentric methods focus on the relationships surrounding selected individuals rather than uncovering patterns across an entire network (Wellman, 1991). These methods are typically used to qualitatively describe or compare key individuals based on their social connections (Wellman, 1991). They are also cost-effective in terms of both data collection and computational requirements (Wellman, 1991). However, their findings often do not represent the broader network (Wellman, 1991).

Consequently, this section uses egocentric methods primarily as a preliminary tool to provide a concise overview of the social relationships of financial officials. The following section will then explore these relationships more comprehensively within the context of a wider social network analysis.

6.4.1. Descriptive Statistics on Social Relationships

The data for kinships and associations are extracted from two tables in the CBDB by restricting the *person_id* to the officials of the Sung Empire using the method described in the previous section. The two tables are *kin_data* and *assoc_data.*

As to kins, 27,999 (40%) officials had kinship records, while 3,692 (62%) of the financial officials had kinship records (See **Table 22**). Regarding associations,[60] 18% of officials had association records, while 51% of financial officials had association records (See **Table 23** and **Figure 30**). Financial officials are proportionally high for each number of Kins other than zero.

[60] Associations include patronages, friendships, coalition fellows, teacher-student, supporter-supported, shared school of thought, being a staff member, raised-raised by, peers in studying, retainers, suffered purge collectively, work/fought/travel together, blood brothers, giving-receiving names, master-servant, family friendships.

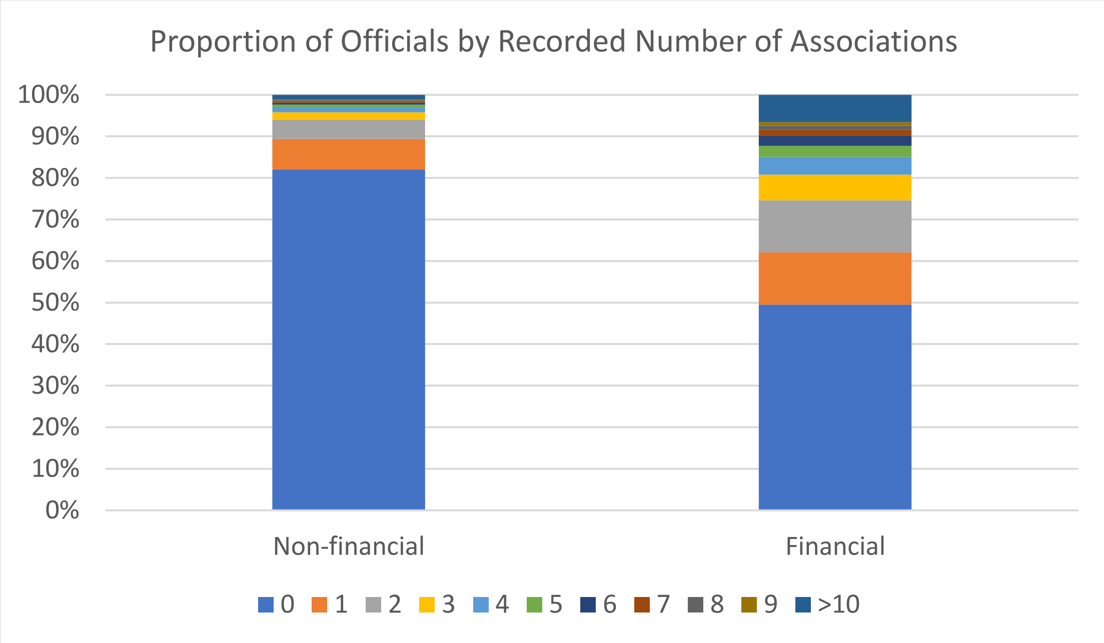
Table 22
The Number of Officials by Recorded Number of Kins.

	All officials		Financial officials	
Number of Kins	Number of Persons	%	Number of Persons	%
0	41,590	59.77	2,273	38.11
1	11,576	16.63	1,096	18.37
2	6,927	9.95	696	11.67
3	4,132	5.94	484	8.11
4	1,995	2.87	375	6.29
5	1,215	1.75	255	4.27
6	653	0.94	185	3.10
7	384	0.55	136	2.28
8	254	0.37	99	1.66
9	211	0.30	80	1.34
>10	652	0.94	286	4.79
Total	69,589	100	5,965	100

Table 23
The Number of Officials by Recorded Number of Associations.

	All officials		Financial officials	
Number of Associations	Number of Persons	%	Number of Persons	%
0	57,093	82.04	2,952	49.49
1	5,106	7.34	751	12.59
2	3,207	4.61	747	12.52
3	1,274	1.83	368	6.17
4	806	1.16	256	4.29
5	470	0.68	158	2.65
6	335	0.48	141	2.36
7	214	0.31	90	1.51
8	154	0.22	57	0.96
9	126	0.18	51	0.85
>10	804	1.16	394	6.61
Total	69,589	100	5,965	100

Figure 30
Proportion of Officials by Number of Associates Recorded in CBDB.



6.4.2.Comparison between Financial officials and Non-financial officials

T-tests and ANOVA tests compare kinship and association records between financial and non-financial officials.

The t-test shows that the social relationships of the financial officials were significantly better recorded than those of non-financial officials for all officials from each type of entry pathway. Besides those from unknown entry pathways, financial officials had more recorded associations (**Table 24**). Still, the difference between financial and non-financial officials from unknown entry pathways was slight (**Table 24**). Financial officials also had more recorded kin (**Table 25**). Adding both associations and kinship, financial officials still had more recorded social relationships than other officials (**Table 26**) within each major group of entry pathways.

Table 24

Comparison of Number of Association Records between Financial and Non-financial Officials Using t-Tests, Stratified by Pathway of Entry

	Financial officials		Non-financial officials			
Pathways of Entry	mean	n	Mean	n	T	p
Chin-Shih Examinations	10.888	2,573	0.687	23,992	19.600	0.000
Regular Examination	2.290	145	0.133	3,823	14.805	0.000
Yin Privilege	4.679	449	1.948	814	3.343	0.001
Other	11.559	331	1.650	2,750	7.456	0.000
Unknown entry	0.737	2,467	0.395	32,245	7.653	0.000
Total	6.051	5,965	0.564	63,624	24.593	0.000

Table 25

Comparison of Number of Kin Records between Financial and Non-financial Officials Using t-Tests, Stratified by Pathway of Entry

	Financial officials		Non-financial officials			
Pathways of Entry	mean	n	Mean	n	T	p
Chin-Shih Examinations	3.396	2,573	0.706	23,992	60.268	0.000
Regular Examination	3.228	145	0.304	3,823	27.835	0.000
Yin Privilege	4.367	449	2.830	814	8.187	0.000
Other	3.876	331	2.608	2,750	4.593	0.000
Unknown entry	0.822	2,467	0.932	32,245	-3.422	0.001
Total	2.427	5,965	0.906	63,624	52.526	0.000

Table 26

Comparison of Number of Association and Kin Records between Financial and Non-financial Officials Using t-Tests, Stratified by Pathway of Entry

	Financial officials		Non-financial officials			
Pathways of Entry	mean	n	Mean	n	T	p
Chin-Shih Examinations	14.284	2,573	1.394	23,992	24.040	0.000
Regular Examination	5.517	145	0.437	3,823	26.110	0.000
Yin Privilege	9.047	449	4.779	814	4.920	0.000
Other	15.435	331	4.258	2,750	8.040	0.000
Unknown entry	1.558	2,467	1.327	32,245	4.002	0.000
Total	8.478	5,965	1.470	63,624	30.283	0.000

The CBDB data shows financial officials had more recorded associations than non-financial officials. However, the number of associations does not necessarily convert to the importance of a social network, which is discussed in the following section.

6.5. Whole Network Methods

This section employs the whole network method to uncover four key patterns within the social network of officials in the Sung empire: network centrality, the network's core, the density of connections among officials, and modularity communities. These methods incorporate advanced measurements from graph theory to reveal additional insights by constructing networks that encompass all selected members of a community.

- **Network centrality** highlights the connectivity of individuals within the network, indicating their relative importance (Bonacich, 1987).
- **K-core analysis** identifies the most interconnected members within the network, forming its structural core (Giatsidis et al., 2011).
- **Density** measures the average level of connections across the network, offering insight into its overall cohesiveness (Shulman, 1976).
- **Modularity community detection** identifies smaller subgroups within the network where members are more closely connected among themselves than to those outside their subgroup (Clauset et al., 2004; Newman & Girvan, 2004).

Each of these methods is explored in greater detail in the following subsections.

6.5.1. K-core

This section employs the K-core method—a well-established network analytic technique—to delineate the core region of the Sung Empire officials' social network and assess the inclusion of financial administrators within that core. A k-core is formally defined as the maximal subgraph in which each node maintains at least k connections to other nodes in the same subgraph (Seidman, 1983; Giatsidis et al., 2011). The identification procedure begins with the entire network, then iteratively removes any node whose current degree is less than k, recalculating node degrees after each pruning step. This process continues until all remaining nodes meet the threshold of at least k neighbours, resulting in a structurally cohesive subgraph.

Membership in a k-core indicates that an individual is embedded within a densely interconnected subnetwork, having a minimum of k links to others in that group. The parameter k serves as a proxy for structural centrality: an actor included in a 5-core, for instance, has at least five ties to fellow core members, whereas being part of a 10-core denotes far deeper integration. Accordingly, higher k values mark progressively denser and more central network layers, while lower k values reflect more peripheral or loosely connected strata.

The distinction between high and low core levels carries substantive interpretive weight. Individuals located within a high-k core occupy a structurally elevated position, characterised by multiple, redundant connections that suggest both influence and resilience within elite social circles. Conversely, individuals in a low-k core are more structurally marginal, maintaining minimal ties that suffice to remain within the network but do not confer centrality or significant cohesion.

A noteworthy advantage of the K-core method is its robustness to missing or under-documented nodes, a common problem in historical network data (e.g., survivorship bias). Peripheral nodes—those with few connections—are naturally eliminated early in the core extraction process. Consequently, the final high-k cores consist of actors with well-documented and substantial relational visibility, such that the absence of lesser-known individuals does not materially alter the core composition. Hence, K-core decomposition is particularly stable against omissions at network boundaries, preserving its ability to reflect central structural properties even under incomplete sampling.

i. Method

The network was constructed using the methodology outlined in the previous section, incorporating all available data. Subsequently, the *k_core* function from the *NetworkX* library (Hagberg et al., 2008) was employed with varying *k* parameters, starting from *k=2* and incrementally increasing until no core could be identified. The highest *k*-core was determined, and its members were classified based on their highest financial positions.

ii. Result

At lower k-core thresholds, the identified core still includes many peripheral members, so the proportion of financial officials within the core mirrors their representation across the entire network (See **Table 27**, second column). The result shows that the core remains too inclusive at these lower thresholds to yield meaningful differentiation between financial and non-financial actors.

However, as the k value increases, peripheral nodes—primarily non-financial officials—are iteratively removed. Consequently, the fraction of financial officials within the residual core steadily rises, signalling that non-financial officials are more prevalent in the network's outer layers (See **Table 27**). When the analysis reaches k = 11, it identifies a densest subgraph in which financial officials make up the majority (See **Table 27**, last column). No 12-core exists, indicating that the concentration of interconnected actors cannot support that higher threshold.

These results indicate that financial officials occupy structurally central positions; they are not merely part of an insular financial clique but are deeply embedded within a broader network of elite, crawled connections. Their integration within cores at high k values implies sustained, reciprocal ties with diverse non-financial officials. In short, financial administrators are part of the network's social backbone, maintaining influential connections across administrative domains.

Crucially, the persistence of financial officials at high-k values underscores the resilience of this finding to missing data. K-core extraction progressively filters out peripheral nodes—those least likely to appear in incomplete historical records—leaving the most robust segment of the network intact. Accordingly, even if some peripheral non-financial officials are lost due to gaps in the dataset, the core structure remains a valid representation of central relational ties, reinforcing confidence in these conclusions.

Table 27
The Number of Persons in a K-Core by Functions, Presented by the Value of K.

K parameter / Type of financial officials	2	3	4	5	6	7	8	9	10	11
Financial officials:										
Three Commissions	117	83	42	24	22	14	13	8	5	3
The Department of Commoners	115	73	31	21	13	10	10	5	5	4
Maritime Trade Bureau	24	10	5	2	1	1	1	1	0	0
Fiscal / Supply Commission	509	308	161	85	57	37	30	19	13	10
Palace Buildings & Armory & Waterways	185	117	58	44	31	23	17	11	9	7
Mint & Foundry	13	4	2	1	0	0	0	0	0	0
Judicial commission	288	191	103	68	45	28	18	16	11	10
Trade commission	149	87	43	27	17	9	5	3	2	2
Regional monitors of monopoly	87	49	25	10	7	6	6	4	3	3
Royal Treasury Agency	155	91	46	23	16	5	5	3	1	1
Department of Works	227	155	91	55	37	25	18	11	9	8
Granary Bureau	131	78	40	27	16	10	7	5	2	2
Review Section of the Department of Justice	16	11	5	0	0	0	0	0	0	0
Comptroller in the bureaus of the central government	80	51	23	14	11	10	9	7	5	5
Cantonal Comptroller	471	261	112	53	35	28	20	17	14	11
Prefecture Comptroller	120	70	31	17	10	6	5	2	0	0
Other	33	19	11	7	6	3	3	1	1	1
Total Financial officials	2,720	1,658	829	478	324	215	167	113	80	67
Other Persons	12,544	5,291	1,064	465	274	181	105	71	49	44
Total Persons In the K-core	15,264	6,949	1,893	943	598	396	272	184	129	111
Proportion of Financial Officials in the Core	17.82	23.86	43.79	50.69	54.18	54.29	61.40	61.41	62.02	60.36

6.5.2.Density (Connectivity)

This subsection investigates how closely financial officials were connected among themselves compared to the general connectivity among all officials. The *k*-core analysis revealed that financial officials did not dominate the core network, as half of the core members had no financial experience. Such a result raises the possibility that financial officials were well-connected to non-financial officials but had fewer interconnections among themselves. To assess this hypothesis, **network density** is used as a metric.

Network density measures the proportion of actual connections in a network relative to the total possible connections. This metric, widely employed before the 1970s (Shulman, 1976), continues to be a popular tool across disciplines for evaluating the connectivity of nodes within a network (Han et al., 2020; Jones et al., 2020; Prochnow et al., 2020; Siette et al., 2021). By comparing the density of the entire network with that of the financial officials' network, this analysis seeks to uncover the extent of connectivity among financial officials during the Sung empire.

i. Method

To evaluate the internal connections of financial officials, two types of networks were constructed for comparison with the overall network:

1. **Extended Network**: Includes relationships where at least one party was a financial official.
2. **Basic Network**: Considers only the relationships between financial officials.
3. **Whole Network**: Represents all individuals and relationships. This network is used as a benchmark.

ii. Comparing the network of financial officials and the whole network

The density of the three networks is summarised in the "Both Dynasties" row of **Table 28**. The "Basic Network" of financial officials exhibits significantly higher density compared to the "Whole Network", indicating that financial officials were far more interconnected than the average connections within the overall social network.

The result suggests that financial officials maintained stronger mutual connections or were historically significant enough to have their social relationships more extensively recorded. Such findings highlight the tightly knit nature of the financial officials' network, even as they remained integrated into the broader administrative structure.

Table 28

Network Density Comparison for the Whole Sung Empire

		Whole Network #		Extended Network †		Basic Network ‡	
Era	Years (CE)	Number of nodes	Network Density (*10-04)	Number of nodes	Network Density (*10-04)	Number of nodes	Network Density (*10-04)
Both Dynasties	960-1279	27,808	1.209	12,864	2.591	2,799	14.585

Note:

#: Including all available persons.

†: Only financial officials and their kin and associations are included.

‡: Only financial officials are included.

iii. Compare networks between the North and South Dynasties.

The Sung Empire comprised two distinct dynasties, commonly referred to as the North Sung (北宋) (960–1127 CE) and the South Sung (南宋) (1127–1279 CE). The North dynasty was established following a coup led by a minor military commander in the Chinese heartland, eventually unifying China Proper except for the region surrounding present-day Beijing. The dynasty ended in 1127 CE when the Jurchens captured the emperor during a brief siege. One of the emperor's sons fled south and reconstituted the empire as a new dynasty (the South Sung), governing only the territories not occupied by the Jurchens.

The Southern Sung relied more heavily on paper currency and trade than its northern predecessor (汪, 1995). The destruction caused by the Jurchen invasion also resulted in significant losses among officials, necessitating the reconstruction of the bureaucratic system with remaining officials and recruits from the southern territories. These shifts may have resulted in different attributes and social relationship patterns among financial officials across the two eras. Consequently, this section compares financial officials from the North Dynasty and those from the South Dynasty.

Table 29
Network Density Comparison for Both Dynasties

		Whole Network #		Extended Network †		Basic Network ‡	
Era	Years (CE)	Number of nodes	Network Density (*10-04)	Number of nodes	Network Density (*10-04)	Number of nodes	Network Density (*10-04)
North Dynasty	960-1127	17,190	1.846	8,185	3.892	1,855	20.656
South Dynasty	1127-1279	19,922	1.545	8,542	3.597	1,792	20.072
Difference (%)			-16.31		-7.58		-2.83

Note:

#: Including all persons.

†: Only financial officials and their kin and associations are included.

‡: Only financial officials are included.

The division between the two eras is based on each individual's index year and death year, as recorded in the CBDB. For individuals without a recorded death year, it was estimated as 62 years old, the average lifespan during the Sung period (吴志浩, 2017).[61] The method proceeds as follows:

1. Define the start and end years for each era.
2. For each relationship, if both individuals lived during the era, include the relationship in the network. Here, "lived" means that the individual's index year predates the era's end year, and their death year follows the era's start year.
3. If one individual lived during the era and their counterpart died before the era, include the relationship in the network[62].
4. Use the relationships from steps 2 and 3 to construct a network and calculate its density.

As shown in **Table 29**, the overall network density for officials during the Southern Sung was 16% lower than in the Northern Sung, reflecting the impact of war and the subsequent restructuring of the bureaucracy. However, the network density of financial officials did not decline as sharply, indicating that their connectivity remained relatively resilient despite the broader administrative upheavals.

[61] The death age was far larger than death age in medieval society because the samples only include the Shih who were at a higher rank of the society and did not count deaths of minors. Therefore, although this death age is not representative of the whole population of the Sung empire, it is still useful for proxying the death age of the officials in this research.

[62] For example, A was a friend of B; C is a son of B; B died before the era. In this case, the social relationship could still exist between A and C.

6.5.3.Modularity Communities of the Network

This subsection addresses the final question: Were financial officials a cohesive and isolated group, or were they dispersed across various smaller, interconnected communities? The modularity community method was employed to investigate this. This approach, developed for analysing the internal structures of large networks (Clauset et al., 2004; Newman & Girvan, 2004), systematically divides a network into distinct "communities" by removing certain edges. These communities represent regions of higher connection density within the overall network.

For each Sung dynasty (Northern and Southern), networks were constructed using the methodology outlined in Section 6.5.2.iii. The *greedy_modularity_communities* function from the *NetworkX* library (Hagberg et al., 2008) was then applied to identify communities using the greedy modularity maximisation method.

The analysis revealed that the social network of the Northern Sung could be divided into 1,088 communities, while the Southern Sung network consisted of 1,673 communities. Among these, 33 Northern Sung communities contained more than 100 individuals (see Table 30). For comparison, Table 30 also includes the 33 largest Southern Sung communities, of which only 25 exceeded 100 members.

The findings demonstrate that no major community excluded financial officials. Financial officials were present in all large communities, representing a significant—though not dominant—proportion within each. These results indicate that financial officials were not isolated from other officials. Instead, they shared the network's core and local modularity communities with non-financial officials.

Table 30
Top Modularity Communities for Both Eras of the Sung Empire.

	North Sung				South Sung			
No.	Number of Financial officials	Number of Cmpt†	Total members	% of financial officials	Number of Financial officials	Number of Cmptl†	Total members	% of financial officials
1	580	158	2,665	27.69	593	218	3,361	24.13
2	168	36	1,812	11.26	200	72	1,595	17.05
3	71	35	750	14.13	138	58	950	20.63
4	34	12	463	9.94	33	28	469	13.01
5	28	9	371	9.97	30	8	360	10.56
6	52	15	331	20.24	33	9	299	14.05
7	54	10	287	22.30	43	14	287	19.86
8	23	10	285	11.58	26	8	274	12.41
9	33	10	277	15.52	31	16	273	17.22
10	19	6	244	10.25	16	5	257	8.17
11	18	7	242	10.33	16	5	203	10.34
12	20	5	226	11.06	10	8	177	10.17
13	34	8	226	18.58	16	8	172	13.95
14	24	5	196	14.80	5	7	164	7.32
15	14	4	178	10.11	12	8	163	12.27
16	39	7	177	25.99	15	6	156	13.46
17	29	13	175	24.00	13	11	154	15.58
18	26	4	174	17.24	13	2	152	9.87
19	32	12	173	25.43	12	7	138	13.77
20	18	3	163	12.88	8	5	134	9.70
21	20	7	155	17.42	14	4	121	14.88
22	11	1	151	7.95	16	4	116	17.24
23	18	9	145	18.62	6	2	110	7.27
24	20	4	140	17.14	13	10	109	21.10
25	27	5	139	23.02	10	3	103	12.62
26	10	9	130	14.62	3	3	92	6.52
27	9	1	120	8.33	9	3	85	14.12
28	7	9	119	13.45	5	2	84	8.33

	North Sung				South Sung			
No.	Number of Financial officials	Number of Cmpt†	Total members	% of financial officials	Number of Financial officials	Number of Cmptl†	Total members	% of financial officials
29	21	6	115	23.48	2	2	84	4.76
30	12	2	115	12.17	5	2	83	8.43
31	6	5	107	10.28	12	2	62	22.58
32	17	5	104	21.15	1	2	56	5.36
33	13	1	102	13.73	3	1	50	8.00

† The number of officials who never worked as financial officials but assumed positions like Canton Comptrollers or Financial Assistants to Prefects.

6.6. Network Centrality

This section investigates whether financial officials were more centrally positioned within the Sung Empire's social network than their non-financial counterparts. **Network centrality** measures a node's proximity to a network's centre (Bonacich, 1987). Centrality is typically assessed through three metrics:

1. **Betweenness centrality**, which measures the number of shortest paths passing through a node (Freeman, 1977), is defined to identify individuals who act as bridges between others.
2. **Closeness centrality**, the reciprocal of a node's distance to all other nodes (Bavelas, 1950), highlights those who can efficiently reach others in the network.
3. **Eigenvector centrality**, calculated based on the centrality of a node's neighbours (Bonacich, 1987), has two significant advantages: (a) even less-connected neighbours of an important node can score highly, reflecting real-world social dynamics, and (b) it is computationally faster than other methods. These features have made eigenvector centrality a popular choice in network analysis since the late 20th century (Bihari & Pandia, 2015; Debreceny et al., 2017; Ibarra, 1993).

Given its advantages, this subsection adopts **eigenvector centrality** to assess the connectivity of officials.

6.6.1.Method of Calculating Network Centrality

Network Centrality is calculated in the following manner:

1. Data Extraction: Social relationship data was extracted from CBDB following the method described in Section 4.
2. Network Construction: Individuals (male and female) were represented as nodes (vertices),[63] and positive social relationships were represented as edges.[64]
3. Centrality Calculation: Using the NetworkX package (Hagberg et al., 2008), a social network was built, and the eigenvector centrality of each node was calculated and normalised to a standard distribution.

The resulting eigenvector centrality values are used for T-tests and linear regression analyses in the following sections.

6.6.2.T-tests

T-tests revealed that financial officials exhibited significantly higher centrality scores across all entry pathways than non-financial officials (see **Table 31**). The result suggests that financial officials were more central within the social network.

Table 31
Comparison of Normalised Eigenvector Centrality between Financial and Non-financial Officials Using t-Tests, Stratified by Pathway of Entry

	Financial officials		Non-financial officials			
Pathways of Entry	mean	n	mean	n	T	*p*
Chin-Shih Examinations	0.731	2,147	0.014	6,444	18.508	0.000
Regular Examination	0.228	100	-0.069	320	4.990	0.000
Yin Privilege	0.398	421	0.072	706	5.730	0.000
Other	0.842	265	-0.010	1,969	12.158	0.000
Unknown entry	0.076	674	-0.141	11,492	15.190	0.000
Total	0.564	3,607	-0.072	20,931	34.071	0.000

6.6.3.Linear Regression

Linear regression was conducted to test whether financial officials were more central while controlling for entry pathways and bureaucratic significance (hypothesis). As

[63] The word “vertex” is usually used in graph theory while, while “node” is also often used in network analysis.
[64] Also often mentioned as “links” or “lines”.

noted in previous sections, entry-level positions for financial officials were rare, with most recorded financial officials assuming full-time financial roles only after achieving circuit-level ranks. This bias towards high-ranking officials was further corroborated by preliminary findings (Ma & Li, 2019), showing that salary rank is positively associated with network centrality. To address this survivorship bias, bureaucratic rank was controlled using salary rank as a proxy for bureaucratic importance. Salary rank is directly tied to official rewards and reflects both tenure and recognised performance (鄧, 1993). The analysis confirms that financial appointments are positively associated with network centrality, even after accounting for rank-related factors.

Hypothesis 1 (H1): The eigenvector centrality of an individual is not associated with their financial appointment.

To test the null hypothesis, the following regression model is constructed:

Model:

$$\begin{aligned} &SocialAcceptance \\ &\quad = \alpha + \beta_1 FinancialOfficial \\ &\quad + \beta_2 BureacraticImportance + \beta_3 ChinShihRoute \\ &\quad + \beta_4 YinRoute + \varepsilon \end{aligned} \qquad \textit{(Model 1)}$$

Social Acceptance:

- Represents an official’s acceptance within the social network, proxied by their eigenvector centrality score in the complete Sung Empire dataset from CBDB.
- Centrality scores are normalised before being inserted into the model to ensure comparability and ease of interpretation. (See Section 6.3.1 for details)

Financial Official: A binary (dummy) variable indicating whether the individual held at least one financial position during their career.

- 1: Held at least one financial position.
- 0: Did not hold any financial positions.

Bureaucratic Importance:

- Captures the significance of an official’s rank within the bureaucratic hierarchy, measured by their salary rank, as salary rank is positively correlated to centrality in the social network of bureaucrats (Ma & Li, 2019).

- Salary ranks are treated as continuous variables.
- For pre-Yuanfeng restructuring, ranks range from *0* (lowest) to *41* (highest).
- For post-Yuanfeng restructuring, ranks range from *0* (lowest) to *25* (highest).
- Details regarding rank determination are provided in Appendix A.
- Because salary rank scales differ between the two eras, separate regression analyses are conducted for the pre-Yuanfeng and post-Yuanfeng restructuring periods.

Elite Pathway: A binary variable indicating whether an official entered the bureaucracy by passing the prestigious Chin Shih (進士) examination. (See Section 6.3.1 for details)

- 1: Passed the Chin Shih examination.
- 0: Did not pass the Chin Shih examination.

Yin Pathway:

A binary variable indicates whether an official entered the bureaucracy using the Yin privilege, which granted office appointments based on familial connections rather than meritocratic examinations. (See Section 6.3.1 for details)

- 1: Entered through the Yin system.
- 0: Did not enter through the Yin system.

The descriptive statistics for the pre-Yuanfeng samples are provided in **Table 32**, and those for the post-Yuanfeng samples are provided in **Table 34**. The mean of *social acceptance* was not zero since not all persons in the social network had sufficient data to be inserted into the model. While bivariate correlations are statistically significant, the correlation coefficient was low, so regression tests could be performed (See **Table 33** for pre-Yuanfeng samples and **Table 35** for post-Yuanfeng samples).

The test results (**Table 36**) indicate a statistically significant correlation (p-value < 0.01) between the financial position dummy and network centrality for both the pre-Yuanfeng and post-restructure periods. Consequently, the null hypothesis is rejected based on the CBDB data. These findings suggest that financial officials were more centrally positioned within the social network of the Sung Empire, even after controlling for salary ranks and entry pathways. Besides, the dynasties (North vs South) are inserted as a dummy variable into the model for the Post-Yuanfeng era, and the finding remains the same.

Table 32
Descriptive Statistics for Pre-Yuanfeng Samples.

Variable	n	M	SD	Min	25%	50%	75%	Max
Social Acceptance	1519	0.241	1.210	-0.245	-0.237	-0.147	0.237	17.991
Bureaucratic Importance	1519	14.482	11.273	0	7	11	21	41
Financial Official	1519	0.330	0.470	0	0	0	1	1
Chin-Shih	1519	0.504	0.500	0	0	1	1	1
Yin	1519	0.106	0.308	0	0	0	0	1

Note:

Social Acceptance: Eigenvector network centrality in the whole network.

Bureaucratic Importance: Salary rank.

Financial Official: Dummy variable. *1* for financial, *0* for other.

Chin-Shih: *1* for officials who passed the Chin-Shih exam. *0* for Otherwise.

Yin: *1* for officials commissioned via the En Yin pathway. *0* for otherwise.

Table 33
Spearman Correlation Matrix of Key Variables for Pre-Yuanfeng Samples.

Variable	1	2	3	4
1. Social Acceptance				
2. Bureaucratic Importance	0.061 **			
3. Financial Official	0.189 ***	0.248 ***		
4. Chin-Shih	0.217 ***	0.060 **	0.223 ***	
5. Yin	0.026	-0.102 ***	-0.005	-0.347 ***

Note:

Sample size: 1,519.

Social Acceptance: Eigenvector network centrality in the whole network.

Bureaucratic Importance: Salary rank.

Financial Official: Dummy variable. *1* for financial, *0* for other.

Chin-Shih: *1* for officials who passed the Chin-Shih exam. *0* for Otherwise.

Yin: *1* for officials commissioned via the En Yin pathway. *0* for otherwise.

Table 34
Descriptive Statistics for Post-Yuanfeng Samples.

	n	M	SD	Min	25%	50%	75%	Max
Social Acceptance	3389	0.490	2.139	-0.245	-0.236	-0.101	0.480	60.425
Bureaucratic Importance	3389	10.496	6.142	0	7	11	15	25
Financial Official	3389	0.399	0.490	0	0	0	1	1
Chin-Shih	3389	0.509	0.500	0	0	1	1	1
Yin	3389	0.106	0.308	0	0	0	0	1

Note:

Social Acceptance: Eigenvector network centrality in the whole network.

Bureaucratic Importance: Salary rank.

Financial Official: Dummy variable. *1* for financial, *0* for other.

Chin-Shih: *1* for officials who passed the Chin-Shih exam. *0* for Otherwise.

Yin: *1* for officials commissioned via the En Yin pathway. *0* for otherwise.

Table 35
Spearman Correlation Matrix of Key Variables for Post-Yuanfeng Samples.

Variable	1	2	3	4
1. Social Acceptance				
2. Bureaucratic Importance	0.212 ***			
3. Financial Official	0.281 ***	0.240 ***		
4. Chin-Shih	0.075 ***	0.220 ***	0.133 ***	
5. Yin	0.135 ***	-0.107 ***	0.102 ***	-0.350 ***

Note:

Sample size: 1,519.

Social Acceptance: Eigenvector network centrality in the whole network.

Bureaucratic Importance: Salary rank.

Financial Official: Dummy variable. *1* for financial, *0* for other.

Chin-Shih: *1* for officials who passed the Chin-Shih exam. *0* for Otherwise.

Yin: *1* for officials commissioned via the En Yin pathway. *0* for otherwise.

Table 36

Regression Analysis of Network Centrality by Period: Officials Before vs. After Yuanfeng Restructuring

	Pre-Yuanfeng	Post-Yuanfeng
Variable	β	β
Financial Official	0.376***	0.024***
Bureaucratic Importance	0.007***	0.384***
Chin-Shih Pathway	0.327***	0.410***
Yin Pathway	0.060	0.210*
Intercept	-0.162**	-0.096
F	22.216***	24.672***
Adj. R^2	0.053	0.027
N	1519	3389

Note:

Financial Official: Dummy variable. *1* for financial, *0* for other.

Bureaucratic Importance: Salary rank.

Chin-Shih Pathway: *1* for officials who passed the Chin-Shih exam. *0* for Otherwise.

Yin Pathway: *1* for officials commissioned via the En Yin pathway. *0* for otherwise.

***: p-value less than 0.01 **: p-value less than 0.05 *: p-value less than 0.10

6.6.4. Robustness Tests with Structural Equation Modelling

The model remains unchanged for robustness checks but accounts for residual correlation between the financial dummy and salary rank. The results are presented in **Table 37**, **Table 38**, **Figure 31**, and **Figure 32**. The findings demonstrate a positive correlation between centrality and the financial dummy in both the pre-Yuanfeng period (**Table 37**, Row 0) and the post-Yuanfeng period (**Table 38**, Row 0), even when residual covariances between the financial dummy and salary rank are incorporated (**Table 37** & **Table 38**, Row 3). In conclusion, the results align with those of the base tests, confirming their consistency.

Table 37
Path Coefficients from SEM Analysis of Network Centrality: Officials, Before Yuanfeng Restructuring

	lval	op	rval	Estimate	SE	*Z*	*p*
0	Social Acceptance	~	Financial	0.221	0.031	7.105	0.000
1	Social Acceptance	~	Bureaucratic Importance	0.040	0.030	1.329	0.184
2	Social Acceptance	~	ChinShih	0.156	0.029	5.379	0.000
3	Financial	~~	Bureaucratic Importance	0.355	0.023	15.405	0.000
4	Social Acceptance	~~	Social Acceptance	0.900	0.037	24.062	0.000

Note:

Sample size: 1,519

Social Acceptance: Eigenvector network centrality in the whole network.

Bureaucratic Importance: Salary rank.

Financial: Dummy variable. *1* for being a financial official, *0* for otherwise.

Chin-Shih: *1* for officials who passed the Chin-Shih exam. *0* for Otherwise.

lval: Left variable.

rval: Right variable

op: Operation. ~ for correlation. ~~ for residual covariance.

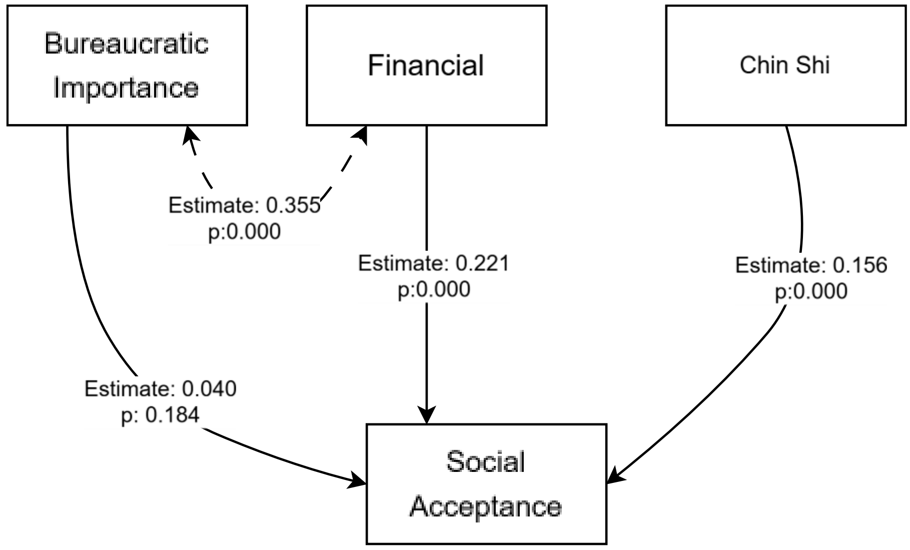
Estimate: Estimated Coefficient.

SE. Standardised error.

Z: Z-score

p: *** for p-value <0.01 ** for p-value < 0.05

Figure 31
Model Structure of the SEM Analysis of Network Centrality: Officials, Before Yuanfeng Restructuring



Note:

Sample size: 1,519

Social Acceptance: Eigenvector network centrality in the whole network.

Bureaucratic Importance: Salary rank.

Financial: Dummy variable. *1* for being a financial official, *0* for otherwise.

Chin-Shih: *1* for officials who passed the Chin-Shih exam. *0* for Otherwise.

Table 38
Path Coefficients from SEM Analysis of Network Centrality: Officials, After Yuanfeng Restructuring

	lval	op	rval	Estimate	SE	*Z*	*p*
0	Social Acceptance	~	Financial	0.344	0.020	17.533	0.000
1	Social Acceptance	~	Bureaucratic Importance	0.086	0.020	4.248	0.000
2	Social Acceptance	~	ChinShih	0.099	0.019	5.185	0.000
3	Financial	~~	Bureaucratic Importance	0.336	0.017	20.191	0.000
4	Social Acceptance	~~	Social Acceptance	0.835	0.024	34.943	0.000

Note:

Sample size: 3,389

Social Acceptance: Eigenvector network centrality in the whole network.

Bureaucratic Importance: Salary rank.

Financial: Dummy variable. *1* for being financial officials, *0* for others.

Chin-Shih: *1* for officials who passed the Chin-Shih exam. *0* for Otherwise.

lval: Left variable.

rval: Right variable

op: Operation. ~ for correlation. ~~ for residual covariance.

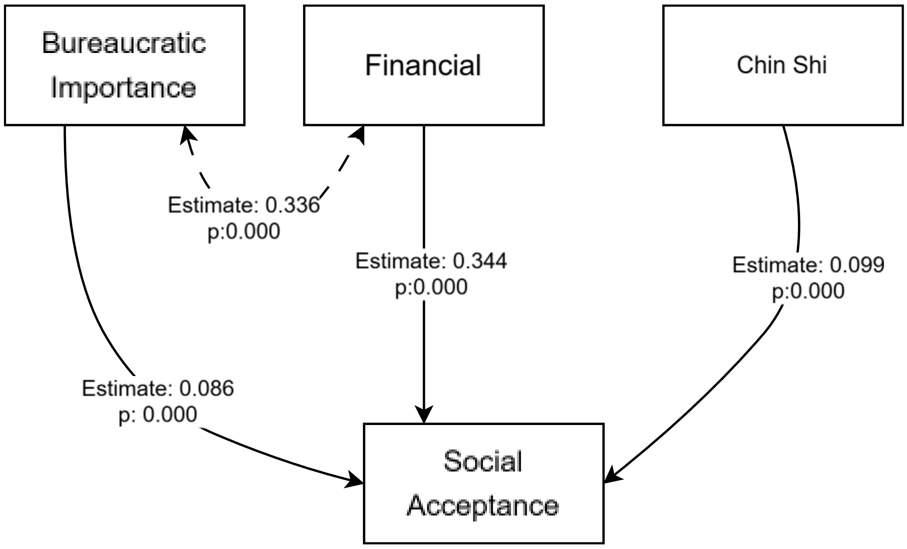
Estimate: Estimated Coefficient.

SE. Standardised error.

Z: Z-score

p: *** for p-value <0.01 ** for p-value < 0.05

Figure 32
Model Structure of the SEM Analysis of Network Centrality: Officials, After Yuanfeng Restructuring



Note:

Sample size: 3,389

Social Acceptance: Eigenvector network centrality in the whole network.

Bureaucratic Importance: Salary rank.

Financial: Dummy variable. *1* for being financial officials, *0* for others.

Chin-Shih: *1* for officials who passed the Chin-Shih exam. *0* for Otherwise.

6.7. Summary

This chapter employed five network analysis methods to examine the social connections of financial officials and their status within the broader network of officials in the Sung Empire. The findings reveal that: (1) financial officials had more recorded social relationships; (2) they occupied central positions in the social network, even after controlling for ranks and entry pathways; (3) financial officials integrated with other officials to form the network's core and local communities; and (4) they were better interconnected compared to ordinary officials. Consequently, disregarding potential record-survival biases, financial officials had richer social relationships than their peers. Considering the survivorship bias, their social relationships were more extensively documented. In either case, financial officials were not marginalised or scorned by their contemporaries.

These results have two implications. Firstly, financial officials may have been socially favoured, enabling them to form connections easily. Alternatively, they might have intentionally cultivated these relationships, although evidence supporting this deliberate networking is lacking. Secondly, the extensive documentation of their social ties could be attributed to the significance of their connections—if their associates were deemed historically important, this coincidental factor might have led to their relationships being better preserved. Nevertheless, this explanation still implies that financial officials were well-connected to influential figures, underscoring their ability to engage and mobilise key individuals.

From a professional perspective, financial officials exhibited traits reminiscent of early proto-professionals in their social relationships. Their existence in the privileged class and close ties with other important characters parallel the roles of pre-modern accountants (Carr-Saunders & Wilson, 1933) and lawyers (Lemmings, 2003). Regardless of the underlying explanation, the recorded social relationships demonstrate that financial officials were far from being dismissed as mere "specialists" or "technicians." Instead, they aligned more closely with the emerging middle-class professional archetype of their time.

Chapter 7. The Preference for Expertise for Financial Positions.

7.1. Introduction

This chapter aims to unveil the relationship between financial expertise and opportunities for senior financial positions. From the framework introduced in Chapter 2, the relationship is evidence that financial experts were recognised and had more opportunities for personal development because of their expertise.

In modern contexts, the recognition of professional expertise is often evident through mechanisms such as legal sanctions granting exclusive practice rights,[65] licensing systems,[66] Professional bodies, or a demonstrated preference for professionals in procurement decisions.[67] However, recognition of expertise can also be implicit, requiring more nuanced analysis. To uncover such implicit recognition in the Sung Empire, this chapter employs logistic regression to investigate the relationship between financial expertise and the likelihood of appointment to senior financial positions. Here, financial expertise is defined by prior experience in junior financial roles.

The expected finding is that officials with financial expertise—identified through their prior financial job experience—were more likely to be appointed to senior financial positions. The positive correlation should suggest that the bureaucratic system recognised and valued financial expertise, mirroring the development of other proto-professional groups.

The structure of this chapter is as follows: Section 2 contextualises the research and discusses the measurement of expertise. Section 3 outlines the research method and hypothesis. Section 4 presents descriptive statistics, and Section 5 applies logistic regression to test the hypothesis. The final section summarises the findings and concludes the chapter.

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[65] For example, veterinarians had exclusive rights to provide prescriptions to animals.
[66] For example, Scottish "qualified" receivers were recognised by local judges before they eventually became "chartered accountants" by incorporating professional bodies (Carr-Saunders & Wilson, 1933), and New York accounting practitioners were already recognised by the market before the CPA licensing (Zeff, 2003a)
[67] For example, the brand "chartered accountant" is exclusively used by some accountants, while many other accountants could also provide same services as chartered accountants.

7.2. Background

As reviewed in Chapter 5,[68] officials in the Sung Empire were not strictly divided by functions or assigned to specialised bureaus. In principle, any official could be appointed to any function (鄧, 1993a). However, practical considerations often diverged from this principle due to efficiency demands and political factors. One critical consideration was an official's experience, regardless of the function they had previously performed (鄧, 1993b). However, a rigid system based solely on experience was impractical given the complexity of administrative functions and the multifaceted nature of governance. To address these challenges, the system incorporated flexibility and exceptions, such as "equivalents to experience," creating implicit rules that historical texts struggled to document thoroughly.

Classifying experience by function is a reasonable method to select candidates for specific roles. Modern professions, for instance, generally require relevant prior experience to qualify for advanced positions (Carr-Saunders & Wilson, 1933). Historical accounts suggest that financial experience was considered a prerequisite for senior financial appointments in the Sung Empire (Hartwell, 1971a). If financial expertise held significant value, officials with prior financial experience would likely have been preferred for senior financial roles. This preference would lead to a group of officials specialising in financial tasks, accumulating expertise, and possibly forming a prototype professional class. Conversely, no such group of experts would emerge if appointments to financial positions were made arbitrarily.

Scholars have debated this issue. Hartwell (1971a) argued that financial officials were expected to have experience in financial affairs, while Sudō (周藤, 1966) contended that such officials lacked specialised expertise. These conflicting views may arise from discrepancies in the historical records.

In addition to experience, modern professions often evaluate expertise through education and formal examinations (Carr-Saunders & Wilson, 1933). However, the Sung Empire's education system primarily consisted of private test preparation services, and the imperial examinations focused on writing skills and Confucian doctrine (*宋史*, ca. 1346/n.d., 志第一百八; 鄧, 1993a). Thus, experience was the only feasible metric for assessing candidates' qualifications for senior financial positions.

[68] Officials were mainly divided by their status: Hsüan-jen, or Court-capital officials. On the contrary, clerks were employed by respective bureaus.

Not all senior financial officials were expected to have financial expertise. In other words, a rigid financial system that only utilises financial experts undermines political stability, and hence, flexibility is needed. This flexibility stemmed from the dual imperatives of maintaining the empire’s functionality and ensuring the political survival of the emperors. As discussed in Chapter 3, the efficiency of the financial system was essential for the empire’s stability. However, the emperors also needed to prioritise their political survival, often at the expense of administrative efficiency.

Selectorate theory (Bueno de Mesquita et al., 2003) provides insight into this dynamic. Senior financial officials were critical to the emperor’s survival, forming a "Winning coalition" within the fiscal domain of the empire. If senior financial positions were reserved exclusively for officials with financial expertise, this group would become the de facto "Selectorate" for those roles (**Table 39**, Scenario 1). This scenario would result in a higher Winning-coalition-to-Selectorate ratio than a scenario where the emperor could appoint any official to senior financial positions (**Table 39**, Scenario 3). Since “all officials” (Scenario 3) constituted a larger Selectorate than the subset of “officials with financial expertise” (Scenario 1), the emperor’s political stability was better ensured under a lower Winning-coalition/Selectorate ratio (**Table 39**, Scenarios 2 and 3).

Balancing these considerations, emperors likely sought a compromise. They prioritised political stability by occasionally appointing non-expert officials to financial positions while favouring financial experts to preserve the empire’s functionality (**Table 39**, Scenario 2). Therefore, this chapter hypothesises (1) a significant proportion of non-expert senior financial officials for political stability and (2) a preference for financial experts in senior financial roles to ensure the empire’s administrative survival. Scenario 2 represents this delicate balance between efficiency and political expediency.

Table 39

Three Scenarios Regarding the Appointment Policy for Senior Financial Positions.

Scenario	Policy of appointment for senior financial positions.	Winning coalition	Selectorate	Size of the Selectorate	Winning coalition to Selectorate ratio	Survivability: Empire (Bureaucratic Efficiency)	Survivability: Emperors (Political stability)
1	Exclusive to experts	Senior financial officials	Officials with financial experience	Small	High	High	Low
2	Experts were favoured, while non-experts could be appointed.	Senior financial officials	All officials	Large	Low	Medium	High
3	Expertise not considered	Senior financial officials	All officials	Large	Low	Low	High

7.3. Research Design

As mentioned before, the expertise of financial officials was a disputable issue in the research of the Sung Empire. Although some text evidence shows the concept of expertise existed (Hartwell, 1971), evidence showing many financial officials did not have financial expertise also exists (周藤, 1966). Hence, a quantitative study is needed to test contradictory conclusions about financial officials. Quantitative methods have a long tradition of being employed in historical research (Anderson & Anderson, 1971; Berkner et al., 1975; Chassonnery-Zaagouche et al., 2018; Franzosi et al., 2021; Hanssen, 2018; Kovalchenko, 1991; B. Laslett, 1980; P. Laslett & Wall, 1972; Lemercier & Zalc, 2019; Mironov, 2016; Nani, 2021; Parming, 1979).

7.3.1. Determine Senior Financial Positions.

As outlined in the previous section, the recognition of expertise is assessed through the relationship between junior and senior financial appointments. Junior financial appointments serve as proxies for expertise, while senior appointments reflect service procurement. To analyse this relationship, it is crucial to categorise positions into senior and junior roles. This classification is based on three fundamental rules:

1. **Entry-Level Positions as Junior Roles**:
   Positions explicitly designated for entry-level officials are classified as junior financial positions. For example, circuit-level deputy commissioners and lower-ranking central government staff are treated as junior positions because officials typically filled these roles with no prior experience in specialised financial positions (鄧, 1993b). While circuit commissioners in "important" circuits might be considered senior compared to those in "unimportant" circuits, a lack of detailed data on specific circuits prevents such distinctions.

2. **Seniority within Bureaus**:
   Seniority within a bureau is determined by official titles. For instance, a commissioner (使) ranks higher than a deputy commissioner (副使), while a senior commissioner outranks an assistant officer (判官). Similarly, in central administrative hierarchies, a secretary (尚書) is senior to a deputy secretary (侍郎), who, in turn, ranks above senior staff (郎中) and junior staff (員外郎).

3. **Alignment Across Bureaus**:
   Seniority across different bureaus is aligned based on comparable experience

requirements. For example, Hartwell (1971a) noted similarities between the experience needed for circuit commissioners and deputy secretaries, which form the basis for their alignment in this analysis.

Using these rules, officials were categorised into different classes based on seniority for systematic analysis.

The most senior categories comprise the heads and deputy heads of financial affairs (see **Table 40**). In the early eras of the Sung Empire, the "Commissioner of the Fiscal Commission" oversaw nearly all financial matters and reported directly to the emperor. This role was considered the apex of financial authority. However, following the Yuanfeng Reform, financial responsibilities were redistributed among various bureaucratic establishments, such as the Department of Commoners, which managed only a portion of financial functions and reported to the Cabinet rather than the emperor. Consequently, after the reform, no single position held equivalent authority to the "Commissioner of the Fiscal Commission."

Below the top categories were the heads and deputy heads of specific branches of financial affairs (see **Table 40**). Before the Yuanfeng Restructuring, these roles included the commissioners and deputy commissioners of the "three commissions." After the reform, newly created departments and bureaus took on these functions as the Fiscal Commission’s responsibilities were subdivided.

Beneath these four senior categories, staff positions supporting heads or circuit commissioners and other lower-ranking roles are classified as junior financial positions. These distinctions enable a nuanced analysis of financial expertise and its relationship to career progression in the Sung Empire.

Table 40
The Leadership of Fiscal Functions

		Central government (Pre-Yuanfeng Restructuring)	Central government (Post-Yuanfeng Restructuring)			
Type	Level	The Fiscal Commission	The Granary Bureau	Departments of the Ministry of the Secretary	Royal Treasury Agency	Regional
1	Head of Fiscal Affairs	The Commissioner of the Fiscal Commission and equivalents[69] (三司使)				
2	Deputy Head of Fiscal Affairs	Deputy commissioner (副使，同判)				
3	Head of a branch	The commissioner in charge of each branch of the fiscal commission (戶部使，鹽鐵使，度支使)	Chief of the Granary Bureau (司農司卿)	Secretary of the Department of Commoners (戶部尚書)/ Secretary of the Department of Works (工部尚書)[70]	Chief of the Royal Treasury Agency (太府寺卿)	Grand Commissioners (都轉運使, 發運使)
4	Deputy head of a branch	Deputy commissioner in charge of each branch of the fiscal commission (戶部副使，鹽鐵副使，度支副使)	Deputy Chief of the Granary Bureau (司農司少卿)	Deputy Secretaries (戶部侍郎/工部侍郎，判)	Junior Chief of the Royal Treasury Agency (太府寺少卿)	Commissioners (轉運使/ 提點刑獄/ 提舉常平)

[69] 三司使，三部使，三計使，三司總計度使，三司左計使，三司右計使。
[70] As mentioned in Chapter 4, the Deputy Secretary in charge of the Right Section of the Department of Commoners (戶部右曹侍郎) should be at this level, however, there is no record for this position in CBDB.

Note:
The column "type" is used in the regression tests to identify senior financial officials. During a period, one member of the Cabinet was given the title of "the commissioner of State Expenditure" (國用使). However, this title was mainly used to signal that "the official had authority in fiscal affairs" instead of representing an actual job position dedicated to financial affairs. Thus, although at a senior rank, this title was not considered a senior financial position.
In identifying financial officials, financial appointments include acting titles. Acting titles were given to officials when they were deemed to lack experience. For a mild case, the word "tentatively" (權) is added as a prefix to the job title. Otherwise, "very tentatively" (權發遣) is added instead. Since this research focuses on the appointment to financial positions and expertise, the tasks in the official positions were the substance, and the titles were merely a form. Thus, acting titles are not distinguished from ordinary titles.
The central government controlled local workshops and coinage via the regular circuit commissioner system (李坚, 2012). Therefore, no designated senior officials other than the existing establishment, such as the Fiscal Commission, are available. Maritime trade was either managed by prefectural governors or fiscal/supply commissioners (王兴文, 2003). Thus, these types of financial officials are not considered senior officials.
The governors of prefectures and cantons were responsible for organising local taxes. However, they were not full-time financial officials.
The official financial positions not mentioned in this table were lower-ranking assistants and staff members.

7.3.2.Hypothesis

During the Sung Empire, there were no formal apprenticeships or schools dedicated to financial affairs. As a result, financial officials were required to acquire their knowledge and skills on the job. As discussed in previous chapters, a typical career trajectory for a financial official began with part-time financial tasks in regional positions. Over time, officials could progress to circuit-level positions as full-time financial officials. Initial appointments were typically in less critical circuits, with subsequent roles in more significant circuits. Thus, lower-ranking financial positions functioned as "entry-level" roles that did not necessitate prior experience, leaving senior-ranking financial positions as the primary domain where experience might act as a barrier to entry.

It is plausible that emperors deliberately appointed individuals without financial experience to senior positions to maintain balance within the financial bureaucracy. This tactic would prevent experts from dominating the financial system, undermining imperial authority (Bueno de Mesquita et al., 2003). However, such "balancing" efforts were likely constrained by the need to maintain administrative efficiency. If these efforts disrupted the natural progression from junior experience to senior appointments, it could indicate that emperors did not prioritise financial expertise, treating financial officials as general functionaries instead.

Furthermore, because junior financial positions were necessarily filled by officials with minimal financial experience, a similar lack of expertise in senior appointments would suggest that financial positions were open to any official, regardless of prior experience. In this scenario, financial officials would not constitute a distinct professional group but would simply be general officials temporarily occupying financial roles.

Based on this reasoning, the central hypothesis of this chapter is that the number of junior-ranking financial positions held by an official is correlated with the probability of their appointment to senior-ranking financial positions. Hence, the null hypothesis for statistical tests is:

> **Hypothesis 2 (H2)**: The number of junior-ranking financial positions held by an official is not correlated with the probability of their appointment to senior-ranking financial positions.

The subsequent sections test this hypothesis using various control variables and data from different periods of the Sung Empire.

7.4. Data Source and Descriptive Statistics

7.4.1. Data Source

The dataset for this study is derived from the **Chinese Biographical Database (CBDB)** (Harvard University et al., 2018). The data was queried using *Structured Query Language* (SQL) and processed through ***pandas*** (The pandas development team, 2020) and ***SQLite3*** (Häring, 2022). Consistent with the methodology of the previous chapter, biographical data were extracted from the main biography table (*BIOG_MAIN*), with the filter to include only individuals from the Sung Empire (with the condition *c_dy = 15*). Entry pathways were retrieved from the *Entry_data* table and processed as described earlier, while job appointments were drawn from the *posted_to_office_data* table. Financial and non-financial appointments were manually labelled based on the functional classifications outlined in Chapter 4, following the approach previously described. Salary ranks were determined using the methodology detailed in Appendix A.

7.4.2.The Spread of Financial Officials

A higher number of appointments to **the Commissioner of the Fiscal Commission** were recorded compared to those for the **Secretary of the Department of Commoners,** despite the latter's more extended operational history (see **Table 41**).[71] Additionally, numerous records were available for secretaries of the **Department of Works**. The most frequently documented senior financial officials were **fiscal or supply commissioners**, as each circuit required at least one such commissioner.

On average, officials appointed to senior financial positions were more comprehensively documented than in other roles, including junior and non-financial appointments. The differences in the quantity of records between senior financial officials and their counterparts are statistically significant. This disparity might reflect the elite status of senior financial officials compared to the broader, lower-ranked groups.

The data (**Table 42**) shows that an official who served in senior leadership in financial functions usually had some experience in junior financial positions, assuming most officials were not later demoted to junior positions. The number of junior financial appointments of the most senior financial officials is significantly higher than that of the most senior administrative officials (**Table 43**). Still, many senior financial officials had no recorded prior junior financial appointments (**Table 44**). While some omissions could be attributed to incomplete records, the proportion of senior officials who seemingly bypassed junior financial positions is consistent with the observation of Sudō (周藤) (1966).

Table 41
The Number of Recorded Appointments of Senior Financial Officials by Function.

	Number of Appointment Records				
Bureaus	Head	Deputy head	Head of a Branch	Deputy head of a Branch	All level
Fiscal commission	65	9	34	141	249
Department of Commoners	--	--	7	43	50
Fiscal/Supply Commission	--	--	68	1,338	1,406
Royal Treasury Agency	--	--	51	98	149
Department of Works	--	--	97	234	331

[71] The Fiscal Commission: 960 CE to 1080 CE. The Department of Commoners: 1081 CE to 1279 CE.

Judicial Commission	--	--		852	852
Granary Bureau	--	--	55	104	159
Trade Commission	--	--	17	292	309
Total	65	9	329	3,102	3,505

Note:

After the Yuanfeng Reform, the fiscal commission was disbanded, and, hence, there were no longer senior officials who served as the head of the fiscal function (Columns 1 and 2). Instead, fiscal responsibilities were spread to many bureaus (Columns 3 and 4).

Table 42
The Number of Senior Officials by the Number of Junior Appointments

		Average experience in the following types of positions				
The Most Senior position in the financial function	n	Deputy Head	Head of a Branch	Deputy head of a Branch	Other Financial Position	All
Head	35	0.020	0.306	1.408	0.714	2.449
Deputy Head	3	--	0.143	1.143	0.429	1.714
Head of a Branch	130	--	--	0.842	0.466	1.308
Deputy head of a Branch	787	--	--	--	0.398	0.398

Table 43
Comparing the Number of Appointments between the Heads of Financial and Administrative Functions.

	Head of Financial Function		Head of the Administrative function			
	mean	n	Mean	n	T	p
Financial Appointments	3.469	49	0.831	89	5.352	0.000

7.4.3. Experience of Financial Officials

Sudō (周藤, 1966) contended that Commissioners of the Fiscal Commission (三司使) in the early Sung period often lacked substantive financial expertise, and that in the later period, their bureaucratic roles were largely ceremonial, affording them limited influence over actual fiscal governance. This interpretation aligns with a broader historical and political pattern in which non-expert political figures are appointed to oversee domains managed by technical specialists—a phenomenon observable even in modern bureaucracies. However, evidence derived from the Chinese Biographical

Database (CBDB) offers a more nuanced view that partially diverges from Sudō's assessment. As shown in **Table 44**, 82 per cent of Fiscal Commissioners had previously held financial appointments, indicating a substantial degree of relevant administrative experience. Moreover, more than half of these individuals had served in at least three junior financial positions, suggesting that many had acquired practical exposure to fiscal administration prior to assuming higher office. While it is accurate that some commissioners lacked deep specialisation in financial matters, brief service in junior posts does not necessarily constitute a financial career per se. The data suggest that, although not uniformly expert, a significant proportion of these officials had meaningful engagement with financial administration.

Other senior financial officials (**Table 44**) also exhibited high levels of prior financial experience, though financial **commissioners** (*轉運使*) were notable exceptions, with only 52.3% having previous financial appointments. Those circuit commissioners without such experience appear less specialised than their peers in senior financial roles.

Table 44
The Number of Senior Financial Officials by Rank, Branch, and Past Experiences (Pre-Yuanfeng Bureaus)

Branch	Fiscal Commission (960 CE to 1080 CE)				Circuit financial/supply commissioner (960 CE to 1279 CE)	
Type of position / App't in Junior positions	Head	Deputy head	Head of branch	Deputy head of a branch	Grand Financial. Commissioner. / Supply. Commissioner †.	Financial Commissioner
0	6	2	5	29	8	380†
1	5	1	6	32	7	170
2	9	1	2	26	10	129
3	8	1	2	10	8	58
4	5	1	1	4	3	38
5	6		3	1	2	11
6	3	1	3		8	5
7	4				3	3
8	2		1		4	1
9						1
10			1		1	

Branch	Fiscal Commission (960 CE to 1080 CE)				Circuit financial/supply commissioner (960 CE to 1279 CE)	
Type of position / App't in Junior positions	Head	Deputy head	Head of branch	Deputy head of a branch	Grand Financial. Commissioner. / Supply. Commissioner †.	Financial Commissioner
11	1					
>11					1	
Total	49	7	24	102	55	796
Fin Exp #	43	5	19	73	47	416
Fin %	87.8	71.4	79.2	71.6	85.5	52.3

Note:

Fin Exp #: Appointees with financial experience in junior positions.

Fin %: Percentage of appointees with financial experience in junior positions.

† The circuit-level financial commissioner was almost an entry-level financial job, but "Grand financial commissioner" (都轉運使) or "Supply commissioner" (發運使) were given to officials with experience in financial commissioner jobs.

In the post-restructuring era (1081–1297 CE), financial expertise among senior officials remained prevalent. For instance, all secretaries in the Department of Commoners had financial experience, as did four out of five deputy ministers (**Table 45**). In contrast, the Royal Treasury Agency demonstrated a lower rate of financial expertise than the pre-reform commissions, though it continued the tradition of requiring financial experience for its chief positions. The Department of Works, the least "financial" of the restructured departments, primarily inherited construction and expenditure tasks from the pre-reform "three commissions," which explains its comparatively lower emphasis on financial expertise. About one-half of the leadership in the Office of Agriculture and the Trade Commission had recorded junior financial positions, consistent with the task performed by the two types of bureaus (**Table 46**). In contrast, 63% of the judicial commissioners had no records in junior financial positions. As illustrated in Chapter 5, the position of judicial commissioners was in the early stage of a career compared with that of financial commissioners. Hence, it is understandable that many prefects were promoted directly into judicial commissioner roles without full-time financial experience.

Table 45
The Number of Senior Financial Officials by Rank, Branch, and Past Experiences (Post-Yuanfeng Bureaus)

Branch / Type of position / App't in Junior positions	Department of Commoners (1081 CE to 1279 CE)		Royal Treasury Agency (1081 CE to 1279 CE)		Department of Works (1081 CE to 1279 CE)	
	Head	Deputy	Head	Deputy	Head	Deputy
0		8	19	35	38	92
1	3	8	7	16	22	36
2	1	14	6	11	7	9
3	2	5	5	7	9	3
4		3	8	2	3	
5		1	3	2	1	1
6		2	2			1
7	1			1	1	
11					1	
Total	7	41	50	74	82	142
Fin Exp #	7	33	31	39	44	50
Fin %	100.0	80.5	62.0	52.7	53.7	35.2

Note:

Fin Exp #: Appointees with financial experience in junior positions.

Fin %: Percentage of appointees with financial experience in junior positions.

Table 46
The Number of Senior Financial Officials by Rank, Branch, and Past Experiences (Bureaus from Hsi-ning Reform)

Branch	Office of Agriculture (960 CE to 1279 CE)		Judicial commissions (960 CE to 1279 CE)	Trade Commission	
Type of position / App't in Junior positions	Head	Deputy		Grand	Normal
0	17	38	379	5	103
1	15	25	127	3	56
2	9	2	46	2	29
3	2	6	34	1	10
4	3		8		3
5		1	3	1	1
6	2		1		
7				1	
Total	48	72	598	13	202
Fin Exp #	31	34	219	8	99
Fin %	64.6	47.2	36.6	61.5	49.0

Note:

Fin Exp #: Appointees with financial experience in junior positions.

Fin %: Percentage of appointees with financial experience in junior positions.

The two periods were analysed separately to account for potential variations between the Northern Sung and Southern Sung dynasties (see **Table 47**). While the proportion of senior financial officials with prior experience declined slightly during the Southern Sung, the institutional continuity between the two periods underscores the enduring importance of financial expertise in junior roles. This consistency highlights the Sung Empire's sustained commitment to institutional legacies and the perceived value of experience in financial positions.

Table 47
The Number of Senior Financial Officials by Rank, Experience, and Eras.

Era	North Dynasty (960 CE -1127 CE)		South Dynasty (1127 CE -1279 CE)	
Type of position / App't in Junior positions	Head of a branch	Deputy head of a branch	Head of a branch	Deputy head of a branch
0	28	225	31	310
1	26	168	20	139
2	16	119	13	72
3	10	60	11	31
4	8	38	5	6
5	8	10		4
6	9	7	1	1
7	4	4		
8	4	1		
9		1		
10	1			
11	1			
12	1			
Total	116	633	81	563
Fin Exp #	88	408	50	253
Fin %	75.86	64.45	61.73	44.94

Note:

Fin Exp #: Appointees with financial experience in junior positions.

Fin %: Percentage of appointees with financial experience in junior positions.

7.5. Findings

7.5.1.T-tests

The first analysis compares the financial experience of individuals appointed to senior financial positions with that of those who were not. The results show a statistically significant difference: senior financial officials, on average, held 3.5 junior financial positions, compared to only 0.4 positions for other officials (**Table 48**). Given the absence of a clear demarcation between senior and junior financial officials, additional robustness tests were conducted. These tests reclassified intermediate financial officials by progressively shifting them from the "junior" group to the "senior" group. This process was repeated across three variations (**Table 49**). In conclusion, the data robustly support the observation that senior financial officials had substantially more financial experience than their counterparts.

Table 48
Comparison of Financial Appointment Counts Between Senior Financial and Other Officials Using t-Tests

	Officials with Type 1 † jobs.		Other Officials			
	mean	n	Mean	n	T	*p*
Financial Appointments	3.469	49	0.394	27464	22.508	0.000

Note: † The jobs are listed in Table 40.

Table 49
Comparison of Financial Appointment Counts Between Senior Financial (with extended definition) and Other Officials Using t-Tests

	Officials with Type 1 and 2 † jobs.		Other Officials			
Robustness Test 1	mean	n	Mean	n	T	*p*
Financial Appointments	3.304	56	0.394	27457	22.798	0.000
	Officials with Type 1, 2, 3 † jobs.		Other Officials			
Robustness Test 2	mean	n	Mean	n	T	*p*
Financial Appointments	2.179	335	0.366	27178	36.194	0.000
	Officials with Type 1~4 † jobs.		Other Officials			
Robustness Test 3	mean	n	Mean	n	T	*p*
Financial Appointments	0.933	2314	0.214	25199	50.012	0.000

Note: † The jobs are listed in Table 40.

7.5.2.Logistic Regression

A logistic regression model was employed to examine the relationship between experience in junior financial positions and the likelihood of being appointed to senior financial roles.

i. Model

$$
\begin{aligned}
&FinancialAppointment \\
&\qquad = \alpha + \beta_1 FinancialExperience \qquad \text{(Model 2)} \\
&\qquad + \beta_2 NonFinancialExperience + \varepsilon
\end{aligned}
$$

Sample:

The dependent variable, *FinancialAppointment,* is a dummy variable that reflects whether the sample was an appointment to financial or non-financial positions.

Two independent variables were included in the base model:

- **Financial Experience:** The number of junior financial positions held by an individual.
- **Non-Financial Experience:** The number of non-financial positions held by the individual, used as a proxy for overall bureaucratic importance to account for historical record biases favouring prominent figures.

The dependent variable was a binary indicator:

- **Financial Position:** A dummy variable where one indicates the individual was appointed to a senior financial position and zero otherwise. The senior financial position is defined as all four types in **Table 40**. Other definitions of senior financial positions are tested in robustness tests.

ii. Descriptive statistics

Of all appointments analysed, 8.4% were classified as senior financial positions (**Table 50**). While some bivariate correlations are statistically significant, the correlation coefficient was low, so regression tests could be performed (See **Table 51**).

Table 50
Descriptive Statistics of Logistic Regression

Variable	n	M	SD	Min	25%	50%	75%	Max
Financial Appointment	27,513	0.084	0.278	0	0	0	0	1
Non-financial Appointments	27,513	3.016	4.010	0	1	2	3	49
Junior Financial Appointments	27,513	0.275	0.691	0	0	0	0	9

Note:

Junior Financial Appointments: The Number of junior financial appointments one sample had.

Non-financial Appointments: Number of non-financial appointments one sample had.

Table 51
Spearman Correlation Matrix of Key Variables for all Appointments.

Variable	Financial position	Non-financial Appointments
Non-financial Appointments	0.234	
Junior Financial Appointments	0.245	0.137 ***

Note: Sample Size: 27,513

Junior Financial Appointments: The number of junior financial appointments that the appointee served.

Non-financial Appointments: The number of non-financial appointments that the appointee served.

iii. Results

The base logistic regression model finds a statistically significant ($p < 0.01$) and positive relationship (β=0.658) between the number of junior financial appointments and the likelihood of obtaining a senior financial position (**Table 52**). These results reject the null hypothesis, affirming that junior financial experience is correlated with an increased probability of senior financial appointments.

Table 52
Logistic Regression Analysis of Appointments

Variable	β
Junior Financial Appointments	0.658 ***
Non-financial Appointments	0.138 ***
Intercept	-3.267 ***
$R^2_{McFadden}$	0.157
n	27,513

Note:

Dependent Variable: *1* for an appointment was to financial positions, *0* for otherwise.

Junior Financial Appointments: The number of junior financial appointments that the appointee served.

Non-financial Appointments: The number of non-financial appointments that the appointee served.

***: p-value < 0.01

7.6. Robustness Tests

Several robustness tests were conducted to validate these findings (**Table 53**):

1. **Robustness Test 1:** The definition of senior financial officials was narrowed to include only heads and deputy heads of the Fiscal Commission. These roles existed exclusively before 1080 CE, so the analysis was limited to individuals from the pre-1080 CE period.

2. **Robustness Test 2:** The definition of senior financial positions was expanded to include the first three categories of financial roles. The index year restriction was lifted to include individuals without a recorded index year.

3. **Robustness tests 4–8:** Salary rank was introduced as a control variable for bureaucratic importance. The analysis was further stratified into pre-1080 CE and post-1080 CE datasets to account for changes in the salary ranking system following the 1080 reforms.

The results across all tests consistently supported the base model, demonstrating that the observed relationship between junior financial experience and senior financial appointments holds across different periods, definitions of seniority, and model specifications.

Table 53
Summary of Robustness Tests with Logistic Regression Analysis of Appointments, Changing the Definition of Senior Financial Positions and Adding Controlling Variables

Test No.	Controlling variable	Definition of “Senior” †	Era	n	sig
1	Non-financial Appointments	1 & 2	Before 1080 CE	4,540	***
2	Non-financial Appointments	1 & 2 & 3	All	27,513	***
3	Non-financial Appointments, Salary rank	1 & 2	Before 1080 CE	2,103	***
4	Non-financial Appointments, Salary rank	1 & 2 & 3	Before 1080 CE	2,103	***
5	Non-financial Appointments, Salary rank	1 & 2 & 3 & 4	Before 1080 CE	2,103	***
6	Non-financial Appointments, Salary rank	3	After 1081 CE	5,456	***
7	Non-financial Appointments, Salary rank	3 & 4	After 1081 CE	5,456	***

Note:

Dependent Variable: *1* for an appointment to a financial position, *0* for otherwise.

Independent Variable: The number of junior financial appointments that the appointee served.

Controlling variables:

Non-financial Appointments: The number of non-financial appointments that the appointee served.

Salary rank: The pay grade in the bureaucratic system. From *0* to *41* before 1080 CE and from *0* to *25* after 1081 CE.

† The dependent variable is defined as the types of financial officials denoted in Table 40.

*** p-value < 0.01.

7.7. Summary

The null hypothesis is not supported by data across different eras and models, indicating a consistent relationship between appointments to senior financial positions and experience in junior financial roles, as demonstrated by the CBDB data. Hence, the finding is consistent with historical assertions that financial experience was a key consideration in such appointments (鄧, 1993a). Moreover, this finding challenges the Confucian ideal that senior positions should be reserved for generalists while experts were relegated to functional roles (Zuo, 2014). If the correlation were due to causality, the finding would suggest that the Sung Empire adopted a more pragmatic approach, valuing specialised expertise—such as financial experience—when making appointments to senior positions. Hence, despite the absence of a formal institute of accountants to distinguish professionals from laypersons, financial experts were effectively identified and valued by the empire's human resource mechanisms. Hence, the lack of a formal professional body did not equate to a lack of professional status. This situation is analogous to the pre-charter era of accountancy in Scotland, where judges—rather than chartered institutions—conferred professional recognition on receivers (Carr-Saunders & Wilson, 1933).

Chapter 8. The Economic Rewards of Financial Officials.

8.1. Introduction

This chapter focuses on the dimension of *existence* outlined in Chapter 2 by evaluating the preference for financial expertise as evidenced by rewards. The concept of high rewards for professionals is not novel; indeed, private rewards have historically served as a primary motivation for establishing professional practices, even in the absence of monopolistic control (T. Lee, 1995; Velayutham & Rahman, 2000). Thus, private rewards provide a reliable indicator of professional status.

In the context of the Sung Empire officials, financial rewards primarily comprised salaries and job stipends. Among these, the salary rank (寄祿官) stood out as a marker of personal achievement, distinct from the specific job held by an official. Hence, salary rank is an excellent proxy for both personal recognition and economic reward. Accordingly, this chapter investigates the relationship between financial experience and salary ranks among Sung Empire officials, employing linear regression analysis using data from the Chinese Biography Database.

The following parts are organised in the following manner. Section 2 introduces the hypothesis, and Section 3 describes the research design. Afterwards, Section 4 provides descriptive statistics before Section 5 provides the results from linear regression with the basic model. Section 6 provides two robustness tests and one additional test based on different methods and settings. Then, the final section concludes this chapter.

8.2. Hypothesis

As discussed in Section 5 of Chapter 4, the salary rank system of the Sung Empire determined the rank-based remuneration of officials. Recruits typically entered the system at the lowest rank and advanced through promotions based on work experience, performance, recommendations, and occasionally, rewards (鄧, 1993a). These factors were not rigid but deeply intertwined with officials' professional and personal lives. For instance, officials who consistently held positions could accumulate work experience and performance records more rapidly than those who struggled to secure appointments. Similarly, a lack of recommendations, often tied to personal relationships and trust with influential figures, could hinder an official's prospects for promotion.

If financial experts' expertise were recognised by the bureaucratic system, they would have preferential access to financial positions requiring specialised knowledge. Additionally, if the broader community of officials valued financial expertise, financial experts would likely receive more substantial endorsements. Beyond these considerations, if financial expertise were indeed recognised, it would be logical for the system to incentivise officials to serve in junior financial roles by offering faster promotions.

The salary ranks in the Sung Empire ranged from approximately 20 to 40 levels across different eras. Given the customary requirement of three years of experience per promotion and a standard retirement age of 70, officials would be unlikely to reach the higher salary ranks if they advanced at a regular pace. Thus, an official's final salary rank would largely depend on the speed of their promotions. Overall, if financial experts were recognised as indispensable human resources warranting better compensation, they would be assigned higher salary ranks, assuming all other factors remain equal. Therefore, testing the relationship between financial experience and salary rank offers a meaningful measure of the recognition accorded to financial experts in the Sung Empire. Based on this premise, the hypothesis for this chapter is that financial expertise is related to the highest salary rank of an official. Hence, the null hypothesis for regression tests is as follows:

Hypothesis 3 (H3): Financial expertise is not related to the highest salary rank of an official.

8.3. Research Design

8.3.1.Model

$$Rewards = \alpha + \beta_1 FinancialExpertise + \beta_2 NonFinAppointments + \beta_3 ChinShihRoute + \beta_4 YinRoute + \beta_5 SocialNetwork + \beta_6 Age + \varepsilon \qquad \text{(Model 3)}$$

Sample: Each sample represents an official.

Dependent Variable:

- The highest salary rank attained by an official
- It is independent of the abundance of historical records.
- Given that the salary rank system underwent a significant transformation during the Yuanfeng Restructuring, the dataset is divided into pre- and post-restructuring samples for separate analysis.

Independent Variables:

1. Financial Expertise: Proxied by two measures:
    - *Proxy 1: Number of financial appointments*: This variable correlates with record abundance.
    - *Proxy 2: Rank in financial functions*: Positions are ranked from *0* (obscure roles) to *4* (highest rank, e.g. commissioners of the "Three Commissions"). This variable is independent of record abundance.
2. Non-Financial Appointments:
    - Controls for bias in historical records, as officials with higher salary ranks are more likely to have extensive records.
3. Entry Pathways:
    - *Chin Shih privilege*: Officials entering through the Chin Shih examination were promoted twice as quickly as others (鄧, 1993a).
    - *Yin privilege*: Accounts for entry through hereditary or other special pathways.
4. Social Network:
    - Proxied by normalised eigenvector centrality within the social network of the Sung Empire. Social networks, shown to correlate with salary rank (Ma & Li, 2019), are controlled to isolate the effects of financial expertise from those of political connections.
5. Age:
    - The death age of an official. The number is capped at the customary retirement age (70). Premature death due to illness, plague, or accidents often curtailed promotions. This variable controls for such factors.

By incorporating these controls, the model evaluates the influence of financial expertise on an official's highest salary rank, isolating its effects from other confounding variables.

8.3.2.Data

The data for this study was extracted from the China Biographical Database (CBDB) (Harvard University et al., 2018) using Structured Query Language (SQL) via *Python*, employing a combination of pandas (The pandas development team, 2020) and *SQLite3* (Häring, 2022). The age data was obtained from the main biography table

(*BIOG_MAIN*). Information on entry pathways was sourced from the *Entry_data table* and manually classified.[72] Job appointments were extracted from the *posted_to_office_data* table, with financial and non-financial appointments labelled manually.[73] Official ranks were determined following the method outlined in Appendix A. Finally, the network centrality score was calculated using the *NetworkX* package in *Python.*[74]

8.4. Descriptive Statistics

The dataset comprises 775 samples from the pre-Yuanfeng Restructuring era (**Table 54**) and 1,225 from the post-restructuring era (**Table 55**). Historically, it is expected that many officials would remain in lower salary ranks; however, the sample is not skewed towards the lower ranks. This sample spread suggests that officials who retired at lower ranks were less likely to be recorded than their higher-ranking counterparts. In both eras, more than a quarter of the officials held at least two financial appointments (**Table 54**, **Table 55**), a proportion significantly higher than the general representation of financial officials (**Table 21**). This discrepancy arises because many non-financial officials and some financial officials were excluded due to missing data, such as age at death. To address this issue, robustness tests were conducted to include these excluded officials (see Section 8.6). Analysis of the rank distribution of financial positions reveals that although many officials served in financial roles, only a few attained senior positions. The proportion of Chin Shih officials was 57.9% before (**Table 54**) and 52% after the restructuring (**Table 55**), which aligns with historical expectations. However, the proportion of Yin officials was notably low (13.4% pre-Yuanfeng, 20% post-Yuanfeng), indicating that Yin officials were poorly documented (**Table 54**, **Table 55**). The mean age was 59 years pre-Yuanfeng (**Table 54**) and 66 years post-Yuanfeng (**Table 55**), with the third percentile reaching 70. The age spread suggests that a significant proportion of officials in the dataset retired rather than died in office.

[72] Details are available in Chapter 6.
[73] Details are available in Chapter 6 Section 6.3.4.
[74] Details are available in Chapter 6.

Table 54
Descriptive Statistics for Pre-Yuanfeng Restructuring Data (excluding Samples without Network and Age Data)

	n	M	SD	Min	25%	50%	75%	Max
Reward (Salary rank)	775	15.808	11.918	0	7	12	23	41
Proxy 1: Financial appointments	775	1.437	1.917	0	0	1	2	12
Proxy 2: Rank of financial positions	775	0.492	0.895	0	0	0	1	4
Chin Shih (Dummy)	775	0.579	0.494	0	0	1	1	1
Yin (Dummy)	775	0.134	0.341	0	0	0	0	1
Non-Financial appointments	775	9.159	7.541	0	4	7	12	48
Social Network	775	0.549	1.595	-0.24	-0.17	0.05	0.54	18
Age *	775	59.290	11.299	23	53	62	70	70

Note:

Financial appointments: Number of financial positions occupied by one sample.

Seniority in financial functions: *Rank in financial functions* from *4* (top leadership) to *0* (ordinary staff).

Chin Shih: *1* for Officials who passed the Chin-Shih exam. *0* for Otherwise.

Yin: *1* for officials who were commissioned via the En Yin pathway. *0* for otherwise.

Non-Financial Appointments: Number of positions occupied by one sample.

Social Network: Eigenvector Network Centrality.

Age: Age of Death, capped at 70.

Table 55
Descriptive Statistics for Post-Yuanfeng Restructuring Data (excluding Samples without Network and Age Data)

	n	M	SD	Min	25%	50%	75%	Max
Reward (Salary rank)	1225	10.82	6.55	0	6	11	15	25
Proxy 1: Financial appointments	1225	1.02	1.65	0	0	0	2	14
Proxy 2: Seniority in financial functions	1225	0.30	0.59	0	0	0	0	4
Chin Shih (Dummy)	1225	0.52	0.50	0	0	1	1	1
Yin (Dummy)	1225	0.20	0.40	0	0	0	0	1
Non-Financial appointments	1225	9.50	8.20	1	4	7	13	49
Social Network	1225	1.24	3.32	-0.24	-0.06	0.38	1.27	60.42
Age *	1225	65.67	12.06	21	58	67	70	70

Note:
Financial appointments: Number of financial positions occupied by one sample.
Seniority in financial functions: *Rank in financial functions* from *4* (top leadership) to *0* (ordinary staff).
Chin Shih: *1* for Officials who passed the Chin-Shih exam. *0* for Otherwise.
Yin: *1* for officials who were commissioned via the En Yin pathway. *0* for otherwise.
Non-Financial Appointments: Number of positions occupied by one sample.
Social Network: Eigenvector Network Centrality.
Age: Age of Death, capped at 70.

Bivariate correlations: Spearman's correlation test revealed statistically significant relationships between the independent variables. However, the coefficients were sufficiently low to avoid multicollinearity concerns (see **Table 56** and **Table 57**).

Table 56
Spearman Correlation Matrix of Key Variables for Pre-Yuanfeng Restructuring Samples.

Variable	1	2	3	4	5	6	7
1. Reward (Salary rank)							
2. Financial Appointment	0.367***						
3. Rank of Financial Positions	0.401***	0.733***					
4. Chin-shih Pathway	0.074**	0.233***	0.224***				
5. Yin Pathway	-0.115***	-0.020	-0.105***	-0.462***			
6. Non-Financial Appointments	0.520***	0.420***	0.378***	0.240***	-0.083**		
7. Social Network	0.022	0.141***	0.092**	0.201***	-0.032	0.292***	
8. Age	0.322***	0.219***	0.262***	-0.005	-0.108***	0.287***	-0.013

Note: n = 775

Financial appointments: Number of financial positions occupied by one sample.

Seniority in financial functions: *Rank in financial functions* from *4* (top leadership) to *0* (ordinary staff).

Chin Shih Pathway: *1* for officials who passed the Chin-Shih exam. *0* for Otherwise.

Yin Pathway: *1* for officials commissioned via the En Yin pathway. *0* for otherwise.

Non-Financial Appointments: Number of positions occupied by one sample.

Social Network: Eigenvector Network Centrality.

Age: Age of Death, capped at 70.

Table 57

Spearman Correlation Matrix of Key Variables for Post-Yuanfeng Restructuring Samples.

Variable	1	2	3	4	5	6	7
1. Reward (Salary rank)							
2. Financial Appointment	0.340 ***						
3. Rank of Financial Positions	0.316 ***	0.707 ***					
4. Chin-shih Pathway	0.320 ***	0.161 ***	0.153 ***				
5. Yin Pathway	-0.193 ***	0.011	-0.047 *	-0.511 ***			
6. Non-Financial Appointments	0.603 ***	0.418 ***	0.358 ***	0.356 ***	-0.148 ***		
7. Social Network	0.186 ***	0.153 ***	0.155 ***	0.167 ***	-0.098 ***	0.344 ***	
8. Age	0.184 ***	0.065 **	0.108 ***	0.111 ***	-0.085 ***	0.098 ***	0.107 ***

Note: Sample size: 1225

Financial appointments: Number of financial positions occupied by one sample.

Seniority in financial functions: *Rank in financial functions* from *4* (top leadership) to *0* (ordinary staff).

Chin-Shih Pathway: *1* for officials who passed the Chin-Shih exam. *0* for Otherwise.

Yin Pathway: *1* for officials commissioned via the En Yin pathway. *0* for otherwise.

Non-Financial Appointments: Number of positions occupied by one sample.

Social Network: Eigenvector Network Centrality.

Age: Age of Death, capped at 70.

8.5. Result

8.5.1. Proxy 1: The Number of Financial Appointments

Using the number of financial appointments as a proxy for financial expertise, the results (**Table 58**) show a significant correlation between financial expertise and salary rank both before (β=0.432, $p<0.05$) and after the Yuanfeng Restructuring (β=0.427, $p<0.01$). The number of non-financial appointments is used as a proxy to control for bureaucratic importance, but its high beta value calls for more investigation for the Pre-Yuanfeng era. Further tests are performed with Structural Equation Modelling in Section 8.6.2, and with different eras in Appendix H.

Table 58
Regression Analysis of Salary Rank by Period: Before vs. After Yuanfeng Restructuring, with Financial Expertise Proxied by Financial Appointments

	Pre-Yuanfeng	Post-Yuanfeng
Variable	β	β
Financial appointments	0.432**	0.427***
Chin Shih	-2.524***	2.277***
Yin	-3.222***	-0.471
Non-Financial appointments	0.766***	0.368***
Social Network	-0.892***	-0.209***
Age	0.140***	0.086***
R^2	0.287	0.365
R^2_{Adj}	0.282	0.362
F	51.568***	116.551***
n	775	1225

Note:

Dependent Variable: Salary Rank

Financial appointments: Number of financial positions occupied by one sample.

Chin Shih: *1* for Officials who passed the Chin-Shih exam. *0* for Otherwise.

Yin: *1* for officials who were commissioned via the En Yin pathway. *0* for otherwise.

Non-Financial Appointments: Number of positions occupied by one sample.

Social Network: Eigenvector Network Centrality.

Age: Age of Death, capped at 70.

p: *** for p-value <0.01 ** for p-value < 0.05

8.5.2.Proxy 2: The Seniority in Financial Functions

When seniority in financial functions is used as the proxy for financial expertise, a significant correlation with salary rank is observed (**Table 59**) before (β=1.803, p<0.05) and after the Yuanfeng Restructuring (β=0.931, p<0.01).

Table 59
Regression Analysis of Salary Rank by Period: Before vs. After Yuanfeng Restructuring, with Financial Expertise Proxied by Seniority in Financial Functions

	Pre-Yuanfeng	Post-Yuanfeng
Variable	β	β
Seniority in financial functions	1.803***	0.931***
Chin Shih	-2.527***	2.303***
Yin	-3.106***	-0.323
Non-Financial appointments	0.734***	0.380***
Social Network	-0.941***	-0.209***
Age	0.133***	0.086***
R^2	0.298	0.361
R^2_{Adj}	0.293	0.358
F	54.450***	114.904***
n	775	1225

Note:

Dependent Variable: Salary Rank

Seniority in financial functions: *Rank in financial functions* from *4* (top leadership) to *0* (ordinary staff).

Chin Shih: *1* for Officials who passed the Chin-Shih exam. *0* for Otherwise.

Yin: *1* for officials who were commissioned via the En Yin pathway. *0* for otherwise.

Non-Financial Appointments: Number of positions occupied by one sample.

Social Network: Eigenvector Network Centrality.

Age: Age of Death, capped at 70.

p: *** for p-value <0.01 ** for p-value < 0.05

For financial proxies, the hypothesis is not supported for all three models during the Sung Empire. Therefore, it could be concluded that financial experience is related to the final salary rank of the officials. However, the centrality in the social network is negatively correlated with salary rank. This unexpected result indicates significant survivorship bias: a person was recorded either because he was important to the bureaucracy, and hence was in a higher salary rank, or because he was related to many other persons and appeared in other persons' biographies.

8.6. Robustness Tests

8.6.1. Linear Regression

As noted in the base model, the limited data availability significantly reduced the sample size, disproportionately excluding low-rank and non-financial officials. To address this, certain variables were omitted to enable the inclusion of additional samples (**Table 60**). Even with these adjustments, the results remained consistent with those of the base model.

Table 60
Summary of Robustness Tests with Regression Analysis of Salary Rank, with Different Control Variables.

Era†	Sample Size	*F* sig ‡	Fin sig #
Number of financial appointments			
Additional Control for Network and Age ††			
Pre	775	***	**
Post	1225	***	***
Additional Control for Network ††			
Pre	1519	***	**
Post	3327	***	***
Only basic controls ††			
Pre	2103	***	***
Post	5392	***	***
Seniority in financial functions			
Additional Control for Network and Age ††			
Pre	775	***	***
Post	1225	***	***
Additional Control for Network ††			
Pre	1519	***	***
Post	3327	***	***
Only basic controls ††			
Pre	2103	***	***
Post	5392	***	***

Note:

†: "Pre" for samples before the Yuanfeng Restructuring and "Post" for samples after the Yuanfeng Restructuring.

††: Non-financial appointments and Entry-pathway are always controlled for.

‡: p-value for *F*-test. * For p<0.1; ** for p<0.05; *** for p<0.01

#: p-value for the correlation between financial expertise and salary ranks. * For p<0.1; ** for p<0.05; *** for p<0.01

8.6.2.Structural Equation Modelling

i. Test Design

Additional robustness tests were conducted using structural equation modelling (SEM). As outlined in the research design, the "abundance of records" is a significant source of bias in this study’s data. Therefore, isolating this bias improves the reliability of the results.

In this chapter, the dependent variable is minimally influenced by the "abundance of records," while the independent variables—such as the number of financial appointments, total appointments, and network centrality—are directly affected by it. To mitigate this bias, the variance of "abundance of records" in financial appointments was isolated from its variance in overall appointments and network centrality. To achieve this, the model allows:

1. Residual correlation between overall appointments and the number of financial appointments.
2. Residual correlation between the number of financial appointments and network centrality.

By isolating the shared variance of "abundance of records" within these correlations, the model becomes more robust, reducing the impact of data bias. The variables and residual correlations are illustrated in the figures and tables referenced (Figure 33 and Figure 34; **Table 61** and **Table 62**).

ii. Result

Due to changes in the ranking system following the Yuanfeng Restructuring (1080 CE), the dataset was split into pre-Yuanfeng and post-Yuanfeng periods for separate tests (results in Tables 60 and 61).

The findings demonstrate that salary rank correlates significantly with financial expertise ($p < 0.01$), supporting the argument that financial experts received better rewards (**Table 61** and **Table 62**, Line 0). The control variables also exhibit correlations with rank, as anticipated (**Table 61** and **Table 62**, Lines 1–4). Residual covariance between correlated variables is significant and aligns with expectations (**Table 61** and **Table 62**, Lines 5–6). The unexplained variance of the dependent variable (residual covariance of salary rank) is within acceptable limits (**Table 61** and **Table 62**, Line 7). For clarity, the results from **Table 61** are visualised in Figure 33, and those from **Table 62** in Figure 34.

Table 61
Path Coefficients from SEM Analysis of Salary Rank: Officials Before Yuanfeng Restructuring

	lval	op	rval	Estimate	SE	*Z*	*p*
0	Reward	~	Financial	0.401	0.040	10.081	0.000
1	Reward	~	Social Network	0.085	0.035	2.431	0.015
2	Reward	~	Appointments	0.208	0.043	4.852	0.000
3	Reward	~	Age	0.176	0.032	5.519	0.000
4	Reward	~	Entry pathway	0.260	0.036	7.290	0.000
5	Financial	~~	Network	0.129	0.027	4.738	0.000
6	Financial	~~	Appointments	0.575	0.020	28.218	0.000
7	Reward	~~	Reward	0.688	0.036	19.066	0.000

Note:

Sample Size: 775

Reward: Salary Rank

Financial: Number of financial appointments

Social Network: Eigenvector Network Centrality

Age: Age of Death, capped at 70.

Entry pathway: Different entry pathways are treated as groups.

lval: Left variable.

rval: Right variable

op: Operation. ~ for correlation. ~~ for residual covariance.

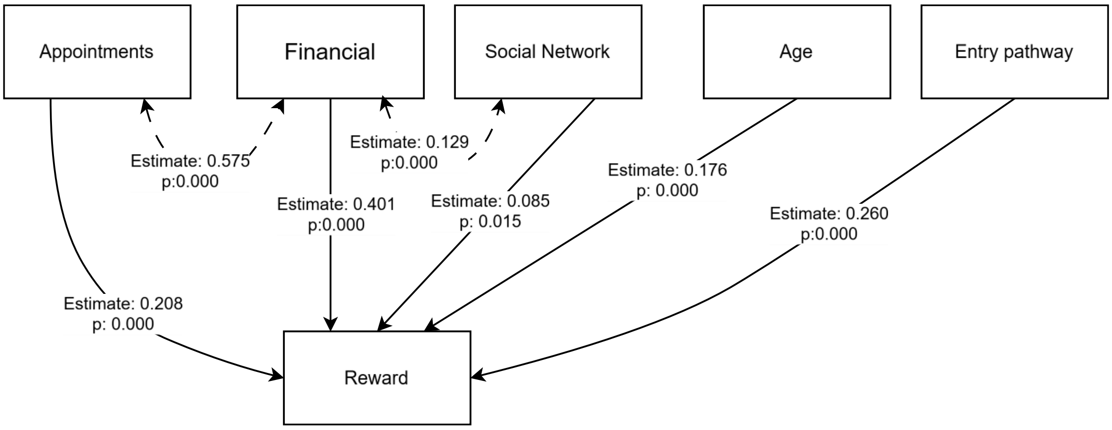
Estimate: Estimated Coefficient.

SE. Standardised error.

Z: Z-score

Figure 33

Model Structure for SEM Analysis of Salary Rank: Officials Before Yuanfeng Restructuring



Note:

Sample Size: 775

Reward: Salary Rank

Financial: Number of financial appointments

Social Network: Eigenvector Network Centrality

Age: Age of Death, capped at 70.

Entry pathway: Different entry pathways are treated as groups.

Table 62
Path Coefficients from SEM Analysis of Salary Rank: Officials Before Yuanfeng Restructuring

	lval	op	rval	1	SE	*Z*	*p*
0	Reward	~	Financial	0.257	0.030	8.547	0.000
1	Reward	~	Social Network	0.124	0.029	4.295	0.000
2	Reward	~	Appointments	0.186	0.034	5.529	0.000
3	Reward	~	Age	0.134	0.026	5.099	0.000
4	Reward	~	Entry pathway	-0.096	0.029	-3.257	0.001
5	Financial	~~	Network	0.106	0.024	4.496	0.000
6	Financial	~~	Appointments	0.515	0.018	28.203	0.000
7	Reward	~~	Reward	0.736	0.031	23.738	0.000

Note:

Sample Size: 1225.

Reward: Salary Rank

Financial: The number of financial appointments that the individual had served.

Social Network: Eigenvector Network Centrality

Age: Age of Death, capped at 70.

Entry pathway: Different entry pathways are treated as groups.

Appointments: The number of all appointments that the individual had served.

lval: Left variable.

rval: Right variable

op: Operation. ~ for correlation. ~~ for residual covariance.

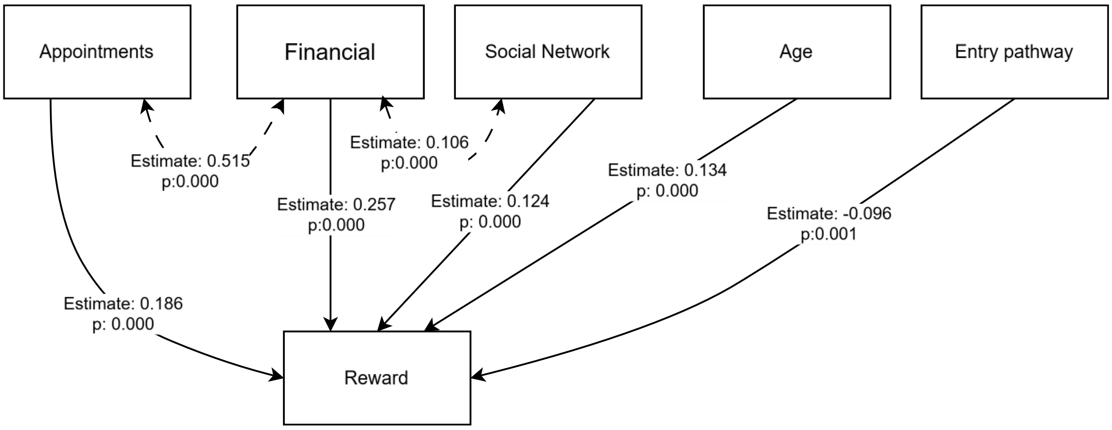
Estimate: Estimated Coefficient.

SE. Standardised error.

Z: Z-score

Figure 34

Model Structure for SEM Analysis of Salary Rank: Officials After Yuanfeng Restructuring



Note:

Sample Size: 1225

Reward: Salary Rank

Financial: Number of financial appointments

Social Network: Eigenvector Network Centrality

Age: Age of Death, capped at 70.

Entry pathway: Different entry pathways are treated as groups.

8.6.3.Additional Tests

As discussed in Chapter 4, financial officials included not only those in circuit and central government positions but also canton comptrollers, bureau comptrollers, and prefectural staff overseeing financial and warehouse affairs. Although these roles had less influence on the financial system, they can be considered lower-tier financial practitioners.

Additional tests were conducted to include these officials. Results (**Table 63**) indicate that, before the restructuring, experience in comptroller positions did not significantly impact salary rank, whereas regular financial positions did. However, after the restructuring, the comptroller's experience correlated significantly with the salary ranks. This result suggests that the restructuring might have increased the importance of comptroller roles within the financial hierarchy.

Table 63
Summary of Additional Tests with Regression Analysis of Salary Rank, Treating Low-Rank Comptrollers as Financial Officials.

Era †	Sample Size	*F* sig ‡	Fin sig #
Control for Network and Age ††			
Pre	775	***	
Post	1225	***	***
Control for Network ††			
Pre	1519	***	
Post	3327	***	***
Only basic controls ††			
Pre	2103	***	
Post	5392	***	***

Note:

†: "Pre" for samples before the Yuanfeng Restructuring and "Post" for samples after the Yuanfeng Restructuring.

††: Non-financial appointments and Entry-pathway are always controlled for.

‡: p-value for *F*-test. * For p<0.1; ** for p<0.05; *** for p<0.01

#: p-value for the correlation between financial expertise and salary ranks. * For p<0.1; ** for p<0.05; *** for p<0.01

8.7. Summary

This chapter employs linear regression and structural equation modelling to investigate the relationship between financial expertise and economic rewards. Financial expertise is proxied by experience in financial positions and seniority in leadership roles, while economic rewards are measured by the highest salary rank attained.

The data extracted from the CBDB rejects the null hypothesis, confirming a statistically significant relationship between financial expertise and salary rank. This result demonstrates that financial officials were rewarded more favourably for their expertise than their non-financial peers, although the causality could not be established. These findings align with prior theories suggesting that accounting professionals pursued professionalisation to advance private interests (T. Lee, 1995).

Chapter 9. Conclusion, Contributions, and Limitations.

9.1. Conclusion

This thesis sought to investigate the differences in treatment between financial officials and generic bureaucrats in the Sung Empire. Through quantitative analyses of social networks, appointment opportunities, and salary ranks, it has been demonstrated that financial experts effectively received different treatment than generic bureaucrats. The findings, structured around the ERG (Existence, Relatedness, Growth) framework, reveal several key insights.

Firstly, concerning relatedness, Chapter 6 established that financial experts were highly connected, forming the core of social networks alongside other influential officials. Secondly, regarding growth opportunities, Chapter 7 highlighted a clear link between financial expertise and access to senior financial positions, probably demonstrating the career advantages financial experts had enjoyed. Finally, in terms of existence, Chapter 8 showed that financial experts were well-compensated, both in job stipend and salary, reflecting their valued role within the administrative hierarchy. Taken together, these findings suggest that financial experts enjoyed a status comparable to that of a professional class, as they were recognised and rewarded for their expertise by the society of the time.

From the perspective of ERG theory, financial experts' needs for existence, relatedness, and growth were better satisfied than those of generic bureaucrats. According to the interactionism framework discussed in Chapter 2, the satisfaction of these needs supports the view that financial experts functioned as a de facto professional group akin to modern-day professional accountants. This conclusion aligns with the qualitative findings of Hartwell (1971a), which suggested financial experts held substantive professional recognition. However, this thesis also identified an important limitation: there was no formal system of appointing financial experts exclusively to financial positions. As shown in Chapter 7, many senior financial roles were also filled by officials without prior financial expertise. This finding corroborates the conclusions of Sudō (周藤, 1966) and aligns with predictions from Selectorate Theory, as outlined in Chapter 3.

This duality reveals a nuanced relationship between financial expertise and imperial politics. While emperors valued the contributions of financial experts and took measures to satisfy their needs, they deliberately avoided formalising professional designations for financial experts. This reluctance was rooted in the political imperative to maintain control over appointments and avoid empowering a professional group that could monopolise financial administration. By resisting formal professionalisation, emperors preserved their authority and prevented the emergence of a financial expert class that could undermine their political stability.

In summary, this thesis concludes that, although without formal professional recognition, financial experts in the Sung Empire occupied a status akin to modern professionals in substance. This conclusion reflects a balancing act between the “experts” narrative proposed by Hartwell (1971a) and the “generic bureaucrats” narrative posited by Sudō (周藤, 1966). It explains how the Sung Empire incentivised financial experts to perform their critical roles in executing geopolitical strategies and building a sustainable fiscal state without undermining political stability.

Moreover, this study provides a broader historical insight into the Sung Empire’s unique trajectory toward fiscal modernisation. It highlights how the empire transitioned from a pre-modern polity to a fiscal state without adopting the representative tax bargaining mechanisms that characterised the rise of modern democracy in the West. By successfully centralising fiscal power while preserving imperial control, the Sung Empire exemplifies an alternative path to fiscal modernisation, deeply embedded in its socio-political context.

9.2. Contributions

9.2.1. Extend the Knowledge of the Sung Empire

From the direct aspect, this thesis extends the knowledge of the Sung Empire. Although existing literature has already noticed the importance of financial officials, the social connection, appointment opportunity, and salary are unknown except for isolated records describing the mechanism. Hence, this thesis overcomes the possible ideological bias from isolated records by examining the biographies of thousands of officials with modern qualitative methods. Hence, the result was more reliable than plain descriptions. The result shows that contrary to the unsophisticated understanding of Confucianism, gentlemen should be generalists, and financial experts were much valued for their expertise. Hence, this thesis shows that the Sung Empire operated according to political realism instead of Confucian fundamentalism. Therefore, this thesis helps form a different angle of understanding the Sung Empire and the history of the Chinese civilisation.

9.2.2. Tracing the origin of the modern Chinese institution

This thesis also sheds light on the political mechanisms employed by the Sung Empire to transition into a fiscal state without relying on the consent of taxpayers. By leveraging the expertise of financial officials who efficiently collected taxes, managed monopoly businesses, and oversaw other fiscal matters, the empire circumvented the need for mechanisms such as parliaments or *États généraux* to negotiate with taxpayers for effective tax collection. This distinctive approach—relying on financial officials rather than feudal lords or representative bodies—distinguished the Sung Empire from other contemporary polities. Unlike Western states that developed systems of checks and balances involving the church, feudal lords, or legislative assemblies, the Sung Empire operated under a centralised and unchallenged authority. In doing so, it established a legacy of absolutist monarchy that not only defined its governance but also influenced subsequent Chinese polities and shaped the prevailing political structure in East Asia.

While financial officials did not directly create absolutism, their expertise economically facilitated its development.[75] According to Selectorate Theory, rulers' provision of private goods ensures their political survival. Hence, by efficiently extracting economic resources from the population and channelling them into private goods for the rulers, the Sung Empire's financial experts enabled the necessary political stability. This stability allowed the Sung monarchy to consolidate power, fundamentally transforming China's institutional framework: from an institution that required Confucians to constructively oppose unfavourable decisions by monarchs to a new doctrine that prioritised unquestioning obedience to the emperor's commands.

This institutional shift has left a lasting impact on Chinese society.[76] The principle of "unquestioning obedience" from absolutism facilitated the seamless imposition of political influence across all sectors of society. Over time, this principle, coupled with contemporaneous political forces, became a social norm that shaped the identity of modern Chinese. In this framework, obeying orders is regarded as the highest moral virtue, superseding personal consistency or integrity. This Chinese moral virtue, obedience, contrasts sharply with Western professionalism, which often emphasises moral consistency and integrity as core values. Consequently, the divergence between the local institution and the professional values originating from the Western world has created significant challenges for Chinese professionals in forming a

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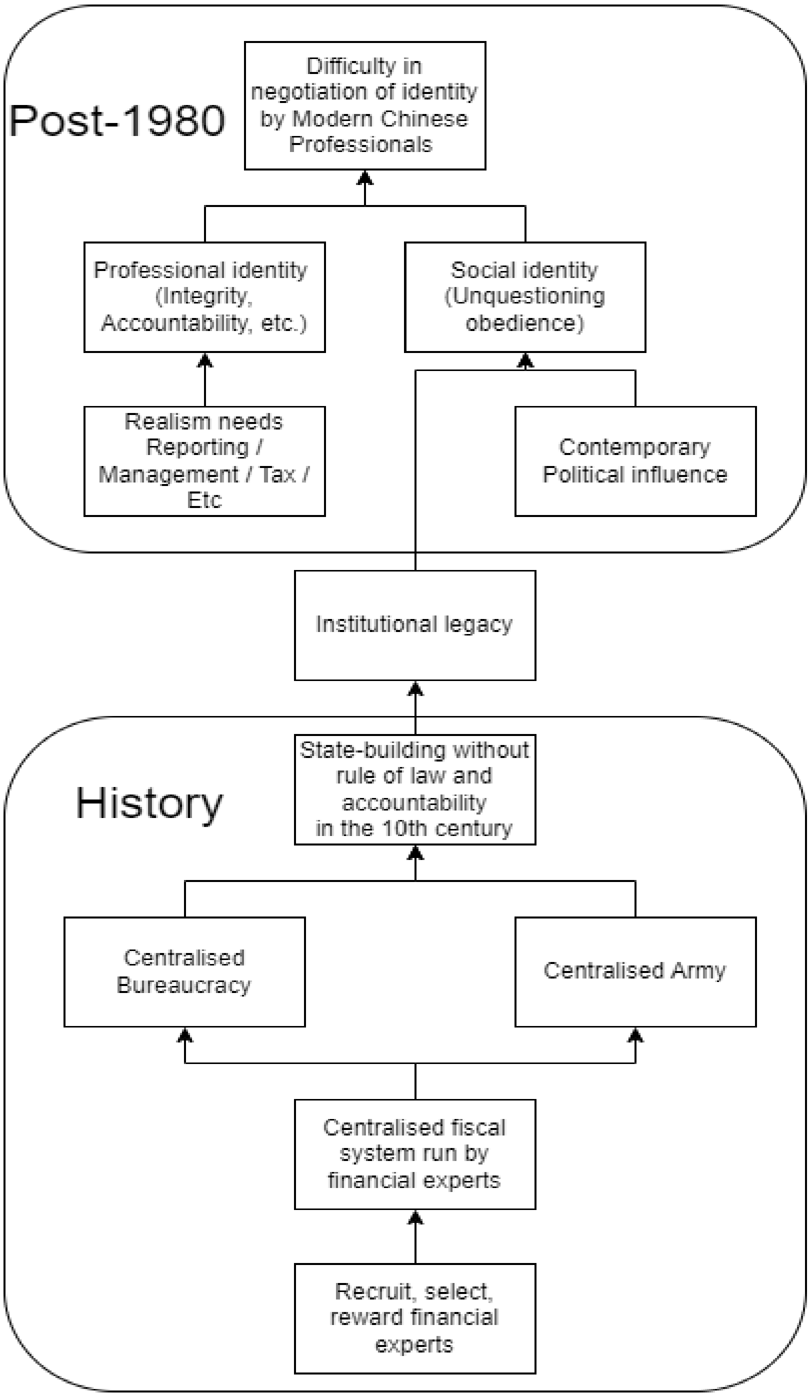
[75] This paragraph is depicted in the lower section of **Figure 35**.
[76] This paragraph is depicted in the upper section of **Figure 35**.

proper professional identity and making decisions in public practice. This thesis helps to understand the origin of such divergence in the behaviours of Chinese professional accountants from those of their Western counterparts.

Figure 35

Institutional Influence of the Financial Experts



9.2.3. Establishing a Generic Framework of Professions based on Interactionism

The second contribution of this thesis is the development of a novel interactionist framework for defining and researching professions. Drawing on traditional interactionism, modern need theory, and structural analysis, this framework provides a versatile approach that can be applied to professions across diverse geographic regions and historical periods. While no definition is entirely free from bias, this framework offers a more inclusive and practical tool for understanding professions within the Anglosphere and other cultural and historical contexts.

9.2.4. Finding "Partial-Profession" as a State-Expert Relationship

As established in Chapter 7, the emperor did not exclusively appoint financial experts to financial positions, thereby preventing the professionalisation of financial expertise within the administration. This strategy also secured financial experts' loyalty by limiting their autonomy. Furthermore, Chapter 8 revealed that the emperor compensated financial experts generously to ensure their gratitude and continued allegiance. This compromise functioned as a control mechanism, securing loyalty through strategic appointments and financial incentives. In a pre-modern political context, where institutional checks and balances were weak or absent, such a political agenda led to the emergence of what can be termed "partial-profession." Experts were selectively valued and rewarded, yet laypersons continued to be appointed to roles requiring expertise. This phenomenon is not confined to historical polities but is also observable in modern organisations under autocratic leadership, including corporations with weak governance structures.

9.2.5. Applying the Selectorate Theory to Eastern Polities

Chapter 7 corroborated the prediction made in Chapter 3, grounded in Selectorate Theory, that emperors would pursue a strategy balancing administrative efficiency with political stability. As demonstrated in Chapter 8, while the emperor exhibited a preference for rewarding financial experts over general bureaucrats, he nonetheless maintained a large Selectorate. The large Selectorate setting ensured financial experts, as integral members of the winning coalition, remained loyal to the imperial court. These findings underscore the effectiveness of Selectorate Theory in predicting political strategies within a pre-modern Eastern society.

With regard to nomadic polities, Selectorate Theory provides a fundamental framework for understanding the evolution of their political structures. Moreover, it explains why even a relatively small sedentary population could profoundly influence the political stability of nomadic regimes. Additionally, Selectorate Theory elucidates the role of tribute and trade as mechanisms for fostering peace: since these economic exchanges enabled nomadic leaders to distribute private goods to their key supporters, any disruption in tribute and trade threatened political stability. Consequently, the necessity of maintaining such economic flows created incentives for nomadic leaders to uphold peace agreements.

Regarding sedentary societies, Selectorate Theory sheds light on the dynamics between emperors and various categories of potential supporters. In particular, it offers a compelling explanation for the Sung Empire's extensive recruitment of officials, far exceeding administrative necessity. Whereas traditional historical narratives often portray this over-recruitment as a strategic miscalculation, Selectorate Theory interprets it as a deliberate political mechanism designed to enhance stability by expanding the emperor's base of support.

9.2.6. Positioning the modernisation of Chinese civilisation in world history

By integrating Selectorate Theory into a geopolitical framework, this study extends Di Cosmo's (1999) nomadic evolution framework into a coevolutionary model, situating the development of Chinese political order within the broader context of world history. Rather than relying on assumptions of Eastern exceptionalism, this analysis demonstrates that China's political evolution follows rational decision-making patterns consistent with state formation processes observed globally.

As outlined in Chapter 3, the Sung Empire confronted a nomadic adversary that had developed into a significantly more formidable force than its predecessors. As a result, Sung emperors were compelled to maintain a standing army, driven both by the rapid mobility of nomadic incursions and the absence of natural defensive barriers. This necessity, in turn, demanded a robust fiscal system capable of generating consistent revenue to support military expenditures. To achieve this, the state deployed personal agents, who in turn relied on subordinates to manage tax collection efficiently (Chapter 4). Over time, these administrative structures consolidated into a centralised fiscal apparatus. Moreover, to secure the loyalty of these agents, the emperor had to ensure that they were both well-compensated

(Chapter 8) and easily replaceable (Chapter 7), thereby reinforcing their dependence on imperial favour.

The entire system, therefore, emerged as the outcome of a series of rational decisions dictated by geopolitical imperatives, rather than being solely shaped by Chinese cultural or religious traditions. While cultural and religious elements undoubtedly influenced the broader political landscape—such as Confucianism facilitating the recruitment of literati at low cost—the overarching trajectory of political evolution can largely be explained through pragmatic decision-making processes.

9.3. Limitations and Future Research Opportunities.

First and foremost, although the application of modern research methods to historical data is valuable for supporting or challenging existing historical interpretations, the findings of this study should not be interpreted in the same manner as those from contemporary social science research. In particular, causal inferences should not be drawn from statistical associations. Rather, the results should be interpreted in light of established historiographical hypotheses concerning the development of the Sung Empire's bureaucracy, where causality is grounded in contextual historical analysis rather than inferred solely from quantitative data.

From a historical perspective, this study is confined to the context of the Sung Empire. While the transition from traditional imperial governance to a nascent fiscal state arguably began as early as the late T'ang period, this research does not address the financial officials of the late T'ang or the Five Dynasties periods, who also played important administrative roles and merit further scholarly attention. Moreover, the methodology employed herein may be extended to other historical or regional contexts, provided that comparable biographical and relational data are available.

In terms of data limitations, several issues must be acknowledged. First, the study is affected by survivorship bias inherent in historical sources. Although the Chinese Biographical Database (CBDB) constitutes a comprehensive and well-curated corpus of biographical records, it necessarily reflects the preservation and selectivity of extant sources. (1) A systematic bias exists in favour of historically prominent individuals: high-ranking officials, those with substantial salaries, or those embedded within elite networks are more frequently and extensively documented. Conversely, lower-level officials or peripheral figures may be underrepresented or entirely absent. While network-based methods such as k-core analysis are relatively robust against missing data, parametric techniques like linear and logistic regression are more vulnerable to the distortions introduced by these omissions.

(2) Using recorded social relationships for network analysis introduces additional limitations. Historical records of interpersonal relationships are often fragmentary and unsystematic, lacking the methodological rigour of modern data collection. Furthermore, modelling relationships as equal-weighted edges in a network graph necessarily oversimplifies the qualitative differences among ties. For example, the emotional proximity within a friendship or the strength of kinship bonds cannot be adequately quantified, and their relative significance is inherently context-dependent and unmeasurable from the available sources.

(3) Finally, the presence of outliers and the limited sample size in subgroups restricts the statistical power of regression analyses. These constraints may obscure underlying historical patterns or inflate the variance of coefficient estimates, thereby limiting the extent to which quantitative models can illuminate complex institutional dynamics.

From a theoretical point of view, this research adopted Interactionism as the theoretical foundation for developing its analytical framework. As discussed in Chapter 2, numerous competing theories exist for defining a profession. The research design and findings might differ significantly if alternative frameworks were applied. For instance, adopting theories that prioritise attributes such as formal education or Western-style legislation would likely exclude financial officials of the Sung Empire from being classified as professionals.

Beyond these limitations, the research methods employed in this thesis could be applied to other empires and eras, provided that sufficient biographical data can be collected. While non-agricultural taxes played a less significant role in subsequent Continental Asian empires, officials were still required to oversee the collection and allocation of agricultural taxes. Hence, it is possible to extend this methodology to explore administrative domains of other empires.

From a historical perspective, while this thesis concentrates on financial expertise, the Sung Empire also relied heavily on another crucial area of expertise: judicial officials. Dedicated circuit commissioners and a robust central government structure supported the judicial functions of the empire. Moreover, judicial education and examinations were a key component of the Hsi-ning Reform, highlighting their institutional significance. The shortage of judicial experts was a concern among senior officials, and individuals with judicial expertise were often favoured for appointments. These judicial officials likely contributed to the Sung Empire's transformation into a rule-by-law state, albeit without adopting the rule-of-law principles understood in modern legal frameworks.

Given that the rule-by-law tradition has been reintroduced in contemporary China, further research into the judiciary officials of the Sung Empire could yield valuable insights. Their contributions to the establishment of a rule-by-law legacy remain an intriguing and underexplored aspect of the empire's administrative evolution.

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Glossary

Terms used in this paper	Theme	Original characters	Explanation
AAPA	Accounting		American Association of Public Accountants (1887-1916, changing name to ICPAUSA)
ACA	Accounting		1. Associate Chartered Accountant (a title for members of ICAEW, or a member of the Associate Chartered Accountant College of NZICA) 2. Association of Certified Accountants (The former name of ACCA, 1971-1984)
ACCA	Accounting		1. Association of Certified and Corporate Accountants (1939-1971). One of the former names of ACCA [2]. 2. Association of Chartered Certified Accountants (1996 – present). A multi-national professional body headquartered in Britain. 3. Associate Chartered Certified Accountants (a title for members of ACCA)
Accounting Licence (China)	Accounting	会计从业资格证	The license to practice in accounting services.
Acting cantonal governor	Regional government	知縣	The acting governor of a canton by a Ching-chao-kuan. Chao Kuan was only appointed to large cantons, while Ching Kuan can be appointed to small cantons.
Administrator of the Relatives of the Emperor	Government	宗正	The administrator of the records and tombs of the royal family.
AIA	Accounting		1. American Institute of Accountants (1917). 2. Association of International Accountants, Ltd. (British)
AICPA	Accounting		American Institute of Certified Public Accountants.
Apprentice	Accounting		A trainee in accounting working under the supervision of a chartered accountant or a chartered certified accountant.
Armory Bureau	Government	軍器監	Armoury Bureaus were in charge of producing weapons, armour and other military equipment.

Terms used in this paper	Theme	Original characters	Explanation
Articled	Accounting		Registered with a professional body as a trainee, gaining experience. Examples include English solicitors and chartered accountants. Experience without being articled is not recognised by many professional bodies as fulfilling the experience prerequisite for admission. It is named “by-law service” for Incorporated Accountants.
ASCPA	Accounting		1. American Society of Certified Public Accountants (1921). A former name of AICPA. 2. Australian Society of Certified Practising Accountants (1990-2000). A former name of CPA Australia
ASME	Non-accounting professions		American Society of Mechanical Engineers
Assistant Governors	Regional government	縣丞	Assisting the governor of a canton. Only appointed for large cantons.
Association	Accounting		Association of Chartered Certified Accountants
By-law service	Accounting		Registered with the Society of Incorporated Accountants as a trainee, gaining experience.
By-law student	Accounting		Student registered for practice experience accumulation under the bylaw of SIA or, later, SIAA—equivalent to an articled pupil in CA.
CA	Accounting		Chartered Accountant
CAA	Accounting		Central Association of Accountants (1933 - 1941). Merged with ACCA[1].
CAANZ	Accounting		Chartered Accountants Australia and New Zealand
CACA	Accounting		Chartered Association of Certified Accountants (1984-1996). A former name of ACCA[2].
Cantonal governor	Regional government	縣令	The governor of a canton who was a Hsüan jen.

Terms used in this paper	Theme	Original characters	Explanation
Captain of the Capital Gendarmerie	Government	中尉	The commander of the royal guard in charge of the security of the capital.
CCAB	Accounting		Consultative Committee of Accountancy Bodies (UK). The members of CCAB are accounting professional bodies. CIMA left CCAB in 2011.
Certified Asset Valuers	Accounting	注册资产评估师	The designation of practitioners in valuation.
Certified Tax Agents (China)	Accounting	注册税务师	The designation of practitioners in tax compliance/assurance in China. These practitioners were tax agents before 2005, but gained the monopoly in tax assurance between 2005 and 2015.
CGA	Accounting		Certified General Accountant (Canada)
Ch’ao kuan	Human resource	朝官	The most senior of the three major types of formal officials. The letter literally means Court Official, but the officials did not necessarily work in the Court. They were often appointed to be circuit commissioners, prefects, and co-prefects.
Ch'a chü	Human resource	察舉	A recruiting system required designated officials to find suitable candidates and recommend candidates to the central government.
Chancellor	Government	大司徒	One of the "Three Premiers". In charge of civil government.
Ch'ang p'ing kuan (Trade commissioner)	Financial bureaus	常平官/提舉常平	The official on the circuit level responsible for managing the revenues from the Hsi-ning Reform.
Chang’an	Geography	長安	The ancient capital located in the Kuan-Chung Basin
Chiang-Huai	Geography	江淮	The plain on the bank of the Huai River and the Yangtze River.
Chief historian	Government	御史大夫	One of the "Three Premiers", in charge of history recording as well as criticising the two executive branches.

Terms used in this paper	Theme	Original characters	Explanation
Chief Prefect	Regional government	知 XX 軍州事	Including the four types of prefectural Chief-governor
Ch'ien T'ang	Regional government	監當	Supervisors of local manufacture, mining, coinage, and other affairs.
Chih chien	Regional government	知監	The Chief-governor of a Chien. The name Chien could be given to both prefectures and Cantons, which had important resources, such as mines and forges.
Chih chih san ssu t'iao li ssu	Financial bureaus	制置三司條例司	A bureau in charge of the Hs'i-ning reform. Abolished after the reform.
Chih chou	Regional government	知州	The Chief-prefect of a Chou. Important orders must be seconded by the Co-prefect to be effective. Chou was one of the four types of prefectures of the Sung Empire. A Chou was a normal prefecture without special traits.
Chih chün	Regional government	知軍	The Chief-prefect of a Chün. Important orders must be seconded by the Co-prefect to be effective. Chün was one of the four types of prefectures of the Sung Empire. This type of prefecture was usually of military or ritual importance.
Chih fu	Regional government	知府	The Chief Prefect of a Fu. Important orders must be seconded by the Co-prefect to be effective. Fu was one of the four types of prefectures of the Sung Empire. Fu was only given to the prefecture covering huge cities.
Chin shih	Human resource	進士	The most prestigious examination with the most topics to be tested.
Ching Chao Kuan (Court and capital officials)	Human resource	京朝官	The collective name of both Ching Kuan and Chao Kuan.
Ching Kuan (Capital official)	Human resource	京官	One of the three major types of formal officials. A Ching Kuan could automatically become a Ch'ao Kuan during regular promotion. The letter literally means Capital Official, but the officials did not necessarily work in the capital.

Terms used in this paper	Theme	Original characters	Explanation
Chiu p'in chung cheng chih	Human resource	九品中正制	A system that measured candidates by their family and personal merits to decide which level of vacancies one candidate could fill. However, in many empires, the personal merits were effectively ignored.
Chuan-yün-Shih	Financial bureaus	轉運使	The officials on the circuit level were responsible for monitoring the transportation of resources, such as money and food.
CIC	Accounting		Controllers' Institute of Canada (detached from cost accountants, later became the Canadian branch of FEI)
CICA	Accounting		Canadian Institute of Chartered Accountants. The federal body of Chartered Accountants in Canada. Merged into CPA Canada.
CIMA	Accounting		Chartered Institute of Management Accountants (1986-current. 2016 associated with AICPA[1] forming AICPA[2] as an affiliate)
CIPFA	Accounting		Chartered Institute of Public Finance and Accountancy (1973-present)
CMA	Accounting		Certified Management Accountant (issued starting from 1972 by NAA, then by IMA) (US)
CNCC	Accounting	Compagnie Nationale des Commissaires aux Comptes	The auditing regulator of France.
Commission of commoners	Financial bureaus	戶部司	A commission of the “three commissions”, responsible for agricultural tax, etc.
Commission of Expenditure	Financial bureaus	度支司	A commission of the “three commissions”, responsible for public expense control, etc.
Commission of Salt and Iron	Financial bureaus	鹽鐵司	A commission of the “three commissions”, responsible for monopolised state-owned enterprises such as salt and iron mining and processing, etc.

Terms used in this paper	Theme	Original characters	Explanation
Commissioner of the Fiscal Commission	Financial bureaus	三司使 Including, 三司使，三部使，三計使，三司總計度使，三司左計使，三司右計使.	The chief financial officer reporting directly to the emperor.
Comptroller	Regional government	主簿	The comptroller. Comptrollers were appointed to the cantons, bureaus in the central government, and royal temples.
Constable	Regional government	縣尉	Constable of a Canton. Only appointed for large cantons.
Corporation of Accountants	Accounting		A Scottish accounting body, 1891 – 1939. Merged with LACA to form ACCA[1]
CPA	Accounting		1. Certified Public Accountant (the US) 2. Chartered Professional Accountant (Canada) 3. Certified Practising Accountant (Australia)
CPA Australia	Accounting		Certified Practising Accountants Australia
CPA Canada	Accounting		Chartered Professional Accountant Canada. A union of provincial chartered professional accountants' bodies. Ontario and Québec bodies left the union in December 2024.
CSCA	Accounting		The Canadian Society of Cost Accountants 1920-1930 (changed to CSCAIE)
CSCAIE	Accounting		The Canadian Society of Cost Accountants and Industrial Engineers, 1930-1948 (changed to SICAC)
CTAI	Accounting		Corporate Treasurers' and Accountants' Institute (1885-1901, renamed to IMTA)
Department of Commoners	Government	戶部	A department of the Ministry of Secretary, responsible for the household census and agricultural tax. The Sung empire re-established this department in 1080, but also established an independent new bureau named “Right Division of the Department of Commoners” which did not report to “the Department of Commoners”.

Terms used in this paper	Theme	Original characters	Explanation
Department of Justice	Government	刑部	A department of the Ministry of Secretary, responsible for law and enforcement.
Department of Military	Government	兵部	A department of the Ministry of Secretary, responsible for military affairs.
Department of Officials	Government	吏部	A department of the Ministry of Secretary, managing the officials, including appointment and performance assessment.
Department of Ritual	Government	禮部	A department of the Ministry of Secretary, responsible for ritual and ceremonies.
Department of Works	Government	工部	A department of the Ministry of Secretary, supervising public expenditures.
Fa-yün-Shih (Supply commissioner)	Financial bureaus	發運使	The officials on the circuit level responsible for monitoring the transportation of resources, such as money and food.
FCA	Accounting		Fellow Chartered Accountant (a title for senior members of some CA institutes)
FEI	Accounting		Financial Executives International (US and Canada)
Fiscal commission	Financial bureaus	三司	A branch of the government supervising all three commissions related to fiscal affairs. The three commissions were, (1) Commission of commoners, (2) Commission of Salt and Iron, (3) Commission of Spending. This branch reported to the emperors directly.
FSPA	Accounting		Federation of Societies of Public Accountants (1902-1905, merged with AAPA) (US)
Generalissimo	Government	大司馬	One of the "Three Premiers", in charge of military affairs.
Granary Director	Government	治粟內史/大司農	The official responsible for agricultural revenue and the grain warehouse.

Terms used in this paper	Theme	Original characters	Explanation
Hang-chou	Geography	杭州	The de facto capital of the Sung empire during the southern era. Officially, it was mentioned as the (temporary) residence (hsing tsai, 行在) of the emperors instead of a capital.
Hohsi-corridor	Geography	河西走廊	The narrow plain links the Kuan-Chung Basin and Tarim Basin.
Ho-Lo	Geography	河洛	The plain between the Kuan-Chung basin and the North China Plain.
Hospitality Director	Government	典客/大鴻臚	The official responsible for hospitality and foreign affairs.
Hsüan jen	Human resource	選人	One of the three major types of formal officials. They were Junior rank officials who only worked in the regional governments. Could not be promoted to senior positions unless successfully switched to Ching Chao Kuan.
IA	Accounting		1. Incorporated Accountants (a title for members of SIAA, SIA, and, later, a title for the IAs who joined ICAEW, ICAS, and ICAI without getting CA). 2. Institute of Accounts (US 1882)
ICA	Accounting		Institute of Cost Accountants (1919-1919 Renaming to ICWA immediately)
ICAA	Accounting		Institute of Chartered Accountants of Australia. Merged into CAANZ.
ICAEW	Accounting		Institute of Chartered Accountants in England and Wales
CAI	Accounting		Chartered Accountants Ireland
ICAS	Accounting		Institute of Chartered Accountants of Scotland
ICMA	Accounting		Institute of Cost and Management Accountants (1972-1986, Renamed to CIMA)
ICPA	Accounting		Institution of Certified Public Accountants (1903 – 1933). Renamed to Central Association of Accountants in 1933.
ICPAUSA	Accounting		Institute of Certified Public Accountants in the United States of America (1916-1917, renamed to AIA[1])
ICWA	Accounting		Institute of Cost and Works Accountants (1919 – 1972, Renamed to ICMA)

Terms used in this paper	Theme	Original characters	Explanation
IDW	Accounting	Institut der Wirtschaftsprüfer in Deutschland	The association of Public Auditors in Germany.
IFoA	Non-accounting professions		Institute and Faculty of Actuaries
IIAV	Accounting		Incorporated Institute of Accountants, Victoria (Victoria was later merged into Australia)
IMA	Accounting		Institute of Management Accountants (1991-present) (US)
IMTA	Accounting		Institute of Municipal Treasurers and Accountants (1901-1973, renamed to CIPFA)
INFORMS	Non-accounting professions		Institute for Operations Research and the Management Sciences
Inns	Non-accounting professions		Inns of Court
Internal Ministry of Secretary	Government	尚書內省	The secretary service of the emperors, staffed by females living in the inner court. This bureau was not considered one of the three branches.
Judicial commissioner	Financial bureaus	提點刑獄公事	The official on the circuit level responsible for judicial review and financial compliance. Later on, also responsible for monitoring non-agricultural revenues.
Kao	Human resource	考	The unit used for measuring the experience of an official. Usually, an official can receive one Kao annually. However, Kao can be used as a reward or a punishment. Therefore, a bad performance may render one to have no Kao per year, and a good performance may earn many Kao in a year. One must accumulate sufficient Kao to be promoted.

Terms used in this paper	Theme	Original characters	Explanation
Keirishi	Accounting	計理士	The accounting designation awarded by the accounting certification scheme held by the Japanese government before WWII. Few designation holders worked in the public accounting sector.
Kouninkaikeishi	Accounting	公認会計士	The public accounting designation awarded by the Japanese government after WWII.
Kuan-Chung	Geography	關中	A basin that was situated in the capital of Chin (221BC–207BC), the West Han Empire (202 BC - 9 AD) and the T'ang Empire (618–907).
LAA	Accounting		London Association of Accountants (1909 – 1933, changing name to LACA)
LACA	Accounting		London Association of Certified Accountants (1933 – 1939, merged with Corporation of Accountants to form ACCA[1])
Liu wai	Human resource	流外	The people who performed the tasks as officials, but were not formal officials. Discriminated in the case of promotion and could not be promoted to senior ranks.
Lo-yang	Geography	洛陽	The ancient capital located in the He-Lo area
Lu shih ts'an chün	Regional government	錄事參軍	The Chief of the Staff to a prefect team. Responsible for general affairs and supervising other staff members.
Maritime Trade Bureau	Government	市舶	The officials responsible for maritime trade. Many reforms were introduced during the Sung Empire. Sometimes, the maritime trade was managed by the local governors of the ports as a part-time task, and sometimes, maritime trade was managed by circuit-level officials or other officials.
Men-hsia	Government	門下省	One of the six ministries of the T'ang Empire. Responsible for criticising the other two branches. The Sung empire adopted this name in 1080 CE, only in form.
Ministry of Internal Secretary	Government	中書省	One of the six ministries of the T'ang Empire. This bureau originally served as the secretary to the emperor to issue orders to the executive bureaus when the Minister of Secretary became the de facto central government. The Sung empire adopted this name in 1080 CE, only in form.

Terms used in this paper	Theme	Original characters	Explanation
Ministry of Secretary	Government	尚書省	The earliest Secretary bureau created in the Han Empire. This bureau originally served as the secretary to the emperor to issue orders to the executive bureaus, but later on, it evolved into the central government. The Sung empire adopted this name in 1080 CE, only in form.
Mo k'an	Human resource	磨勘	The mechanism for promoting officials for chi lu kuan.
NAA	Accounting		National Association of Accountants (1957-1991, renamed to IMA) (US)
NACA	Accounting		National Association of Cost Accountants (1919 – 1957, renamed to NAA) (US)
Nei ts'ang k'u	Government	內藏庫	The private treasury of the emperors. Usually controlled by the eunuchs. Sometimes, this treasury acted as the final lender to bail out the Imperial treasury.
Nine-Office system	Government	九寺	An ideal bureaucratic system of the ancient Chinese states. The Early Sung Empire did not use this method of organisation, but the titles were kept as salary ranks.
North China Plain	Geography	華北平原	The main plain in north China, surrounded by the Yan Mountains, the T'aihang Mountains, the Chinling Mountains, the Yangtze River, the Bohai Bay, the Yellow Sea and the East China Sea.
NZICA	Accounting		1. NZ Institute of Cost Accountants (1944-1966). Merged with NZSA. 2. NZ Institute of Chartered Accountants. Merged to CAANZ.
NZSA	Accounting		New Zealand Society of Accountants. A former name of NZICA[2]
OEC	Accounting	Ordre des Experts-Comptables	A professional accounting body in France.
Office of Hospitality	Government	鴻臚寺	One of the nine Offices in the Nine-Office system, providing hospitality service to foreigners, including alien monks and priests.
Office of justice	Government	大理寺	One of the nine Offices in the Nine-Office system, in charge of legal affairs.

Terms used in this paper	Theme	Original characters	Explanation
Office of Security	Government	衛尉寺	One of the nine Offices in the Nine-Office system, protecting the royal family.
Office of Stable	Government	太僕寺	One of the nine Offices in the Nine-Office system, royal stable management.
Office of Supplies	Government	光祿寺	One of the nine Offices in the Nine-Office system, providing supplies and food for the royal family
Office of the Agriculture	Government	司農寺	One of the nine Offices in the Nine-Office system, in charge of agricultural revenue and money. In the early Sung Empire, this Office was almost inactive. During the Yuanfeng Restructuring, this Office was rebuilt to manage the incomes from the Hsi-ning Reform.
Office of the Rituals	Government	太常寺	One of the nine Offices in the Nine-Office system, in charge of ritual and ceremonies.
Office of the Royal family	Government	宗正寺	One of the nine Offices in the Nine-Office system, administrating records and tombs of the royal family
Office of Trade	Government	太府寺	One of the nine Offices in the Nine-Office system, in charge of the trade and payroll of the officials. In the early Sung Empire, this Office was inactive. During the Yuanfeng Restructuring, this Office was rebuilt to perform the tasks previously performed by the Commission of Salt and Iron.
ORS	Non-accounting professions		Operational Research Society
Palace Administrator	Government	郎中令/光祿勳	The administrator in charge of supplies and food for the royal family.
Palace Buildings Bureau	Government	將作監	Palace Buildings Bureaus were responsible for civil engineering projects.

Terms used in this paper	Theme	Original characters	Explanation
Palace Security Directors	Government	衛尉/中大夫令	The director responsible for the security of the royal palace(s).
Pien-Liang	Geography	汴梁	The capital of the Sung empire during the northern era.
Registered Accountant (China)	Accounting	注册会计师	The designation of public accountants in China. The official translation is Certified Public Accountant.
Registered Auditor (China)	Accounting	注册审计师	A former designation given to auditors in China. The association was merged with the public accountants by the government to form a unified accounting profession.
Review Section of the Department of Justice	Government	比部司	A section under the Department of Justice. Responsibilities included authoring payments and reviewing accounting records.
RIA	Accounting		Registered Industrial Accountant 1941-1985 (A member of CSCAIE)
RICS	Non-accounting professions		Royal Institute of Chartered Surveyors
Ritual Ceremonies Administrator	Government	太常	The official in charge of ritual and ceremonies.
Royal Judge	Government	廷尉	The official in charge of legal judgment.
Royal Treasurer	Government	太府/少府	The official responsible for non-agricultural revenue and the warehouse.
Salary Rank	Human resource	寄祿官	The rank which determined salaries.

Terms used in this paper	Theme	Original characters	Explanation
Sanssu Changssu	Financial bureaus	三司賬司	A temporary bureau responsible for auditing accounting books for fraud detection. Abolished after eight years because of its inefficiency.
Sanssu K'uaiChissu	Financial bureaus	三司會計司	A bureau responsible for management accounting for the state. Abolished before functioning.
Secretary of the Department of Commoners	Government	戶部尚書	The head of the Department of Commoners. Before 1080, this was only a signal indicating the rank of an official instead of the real job. After 1080, this was the title of the head of the Ministry of Commoners.
Selectorate	Politics		The persons who could become a part of the Winning coalition according to the Selectorate Theory.
Shih	Human resource	士	Privileged people emerged in the Sung empire and monopolised the official positions.
Shih-tsu	Human resource	士族	A group of privileged people originated from the Han Empire and became extinct during the late era of the T'ang Empire.
SIA	Accounting		Society of Incorporated Accountants (1954-1957. Disbanded, members transferred to ICAEW, ICAS, ICAI.) A multi-national professional body headquartered in Britain.
SIAA	Accounting		Society of Incorporated Accountants and Auditors (1908-1954, changing name to SIA). A multi-national professional body headquartered in Britain.
SIAC	Accounting		The Society of Industrial Accountants of Canada (1968-1977)
SICAC	Accounting		Society of Industrial and Cost Accountants of Canada (1948-1968) (changed to SIAC)
SMAC	Accounting		The Society of Management Accountants of Canada 1977-2014 (merged to CPA[2] Canada)
Society	Accounting		Society of Incorporated Accountants and Auditors / Society of Incorporated Accountants

Terms used in this paper	Theme	Original characters	Explanation
Ssu hu ts'an chün	Regional government	司戶參軍	A member of the staff of a prefect team responsible for census, agricultural tax, and warehouse management.
Stable Master	Government	太僕	The official in charge of the royal stable.
The deputy secretary of the Right Division of the Department of Commoners	Government	戶部右曹侍郎	The de facto head of the Right Division of the Department of Commoners, reporting directly to the Cabinet instead of the Secretary of the Department of Commoners.
The Right Division of the Ministry of Commoners	Government	戶部右曹	A division under the Department of Commoners. It was a de facto independent department reporting directly to the cabinet. This department was responsible for the fiscal revenues created by Hsi-ning reform.
Three-premiers	Government	三公	The three highest royal advisors. During the Sung Empire, these titles were merely honorary or salary ranks.
T'ung p'an	Regional government	通判	The Co-governor of a prefecture. Important orders from the Chief-governor must be seconded by the co-governor to be effective.
Tzu hsü	Human resource	資敘	The experience one had in the official system. Usually, the experiences were organised into ranks. Tzu hsü decided whether one can get experience-required jobs and titles when one gets a job in the ministry.
Waterways Bureau	Government	都水監	Waterways Bureaus were in charge of constructing and building canals and dikes for flood control.
Winning coalition	Politics		The necessary supporters for a political leader to rule according to the Selectorate Theory.
WPK	Accounting	Wirtschaftsprüferkammer	The professional body of Public Auditors in Germany.

Terms used in this paper	Theme	Original characters	Explanation
Yanyun	Geography	燕雲	The area around the Yan mountains and the city of Peking.
Yin / Yin privilege	Human resource	蔭 恩蔭	A mechanism allowing important persons to nominate their relatives to be members of Shih. These important persons included the imperial concubines and senior officials. The nomination quota was based on the seniority of the nominator.
Zeirishi	Accounting	稅理士	The tax agent profession established by the Japanese government after WWII.
Zuo ts'ang k'u	Government	左藏庫	The Imperial Treasury, responsible for the empire’s expenditures. Usually controlled by civilian officials.

Appendices

Appendix A. Deciding Salary Rank of the Officials

This section describes the method used to decide the highest salary rank for an official.

Step 1: Data source

Extract the main biography table (*BIOG_MAIN*) and post table (*posted_to_office_data*) from CBDB using *Python* and *SQLite3*.

Step 2: Deciding on the era

For each post, it is necessary to decide whether it is a salary rank before the Yuanfeng Restructuring or a real post after the Yuanfeng Restructuring. Therefore, it is necessary to decide the era of the post. The following method is used.

- For a post with a recorded year:
  - If the year is earlier than 1080, the appointment is deemed a pre-reform appointment.
  - Otherwise, the appointment is deemed to be a post-reform appointment.
- For posts without a recorded year:
  - If the person died before 1080, the appointment is deemed a pre-reform appointment.
  - If the person reaches 70 before 1080, the appointment is deemed a pre-reform appointment.
  - The remaining appointments are all deemed to be post-reform appointments.

Step 3: Deciding the rank

Label all appointments with rank using the following tables. For pre-reform appointments, use Table I. For post-reform appointments, use Table I. If the appointments are not on the table, the appointments are not salary ranks and are ignored. Some salary ranks might be omitted in the tables due to the limitations of this research.

Step 4: Deciding the personal rank

For each person, the highest rank of all his appointments is deemed to be his salary rank.

Appendix Table A1
Ranks before the Yuanfeng reform

Office_id (CBDB)	Office_pinyin (CBDB)	c_office_chn (CBDB)	c_office_trans (CBDB)	Rank_pre (Manual)
733	tai shi	太師	Grand Preceptor (Hucker)	1
734	tai wei	太尉	Defender-in-chief (Hucker)	2
729	tai fu	太傅	Grand Mentor (Hucker)	3
715	tai bao	太保	Grand Guardian (Hucker)	4
709	si tu	司徒	Minister of Education (Hucker)	5
750	tai zi tai shi	太子太師	Grand Preceptor of the Heir Apparent (Hucker)	5
691	si kong	司空	Minister of Works (Hucker)	6
749	tai zi tai fu	太子太傅	Grand Mentor of the Heir Apparent (Hucker)	6
748	tai zi tai bao	太子太保	Grand Guardian of the Heir Apparent (Hucker)	7
559	shang shu you pu ye	尚書右僕射	Right Vice Director of the Department of State Affairs (Hucker)	8
746	tai zi shao shi	太子少師	Junior Preceptor of the Heir Apparent (Hucker)	8
561	shang shu zuo pu ye	尚書左僕射	Left Vice Director of the Department of State Affairs (Hucker)	9
745	tai zi shao fu	太子少傅	Junior Mentor of the Heir Apparent (Hucker)	9
744	tai zi shao bao	太子少保	Junior Guardian of the Heir Apparent (Hucker)	10
451	li bu shang shu	吏部尚書	Minister of the Ministry of Personnel (Hucker)	11
142	bing bu shang shu	兵部尚書	Minister of the Ministry of War (Hucker)	12
37	shang shu sheng hu bu shang shu	尚書省戶部尚書	Minister of the Ministry of Revenue (Hucker)	13
856	shang shu sheng xing bu shang shu	尚書省刑部尚書	Minister of the Ministry of Justice (Hucker)	14
434	li bu shang shu	禮部尚書	Minister of the Ministry of Rites (Hucker)	15
27	shang shu sheng gong bu shang shu	尚書省工部尚書	Minister of the Ministry of Works (Hucker)	16
2383	shang shu sheng zuo cheng	尚書省左丞	Left Assistant Director of the Department of State Affairs (Hucker)	17
2384	shang shu sheng you cheng	尚書省右丞	The Right Assistant Director of the Department of State Affairs (Hucker)	17
452	li bu shi lang	吏部侍郎	Vice Minister of the Ministry of Personnel (Hucker)	18
2510	shang shu sheng bing bu shi lang	尚書省兵部侍郎	Vice Minister of the Ministry of War (Hucker)	18
39	shang shu sheng hu bu shi lang	尚書省戶部侍郎	Vice Minister of the Ministry of Revenue (Hucker)	19
2527	xing bu shi lang	刑部侍郎	Vice Minister of the Ministry of Justice (Hucker)	19
28	shang shu sheng gong bu shi lang	尚書省工部侍郎	Vice Minister of the Ministry of Works (Hucker)	20
437	li bu shi lang	禮部侍郎	Vice Minister of the Ministry of Rites (Hucker)	20
326	men xia sheng ji shi zhong	門下省給事中	Supervising Secretary (Hucker)	21
741	tai zi bin ke	太子賓客	Adviser to the Heir Apparent (Hucker)	21
979	zhong shu she ren	中書舍人	Secretariat Drafter (Hucker)	21
486	mi shu sheng jian	秘書省監	Director of the Palace Library (Hucker)	22
899	you jian yi da fu	右諫議大夫	Right Grand Master of Remonstrance (Hucker)	22
1025	zuo jian yi da fu	左諫議大夫	Left Grand Master of Remonstrance (Hucker)	22

Office_id (CBDB)	Office_pinyin (CBDB)	c_office_chn (CBDB)	c_office_trans (CBDB)	Rank_pre (Manual)
283	guang lu si qing	光祿寺卿	Chief Minister of the Court of Imperial Entertainments (Hucker)	23
2385	shang shu sheng zuo si lang zhong	尚書省左司郎中	Director of the Left Office of the Department of State Affairs (Hucker)	23
2386	shang shu sheng you si lang zhong	尚書省右司郎中	Director of the Right Office of the Department of State Affairs (Hucker)	23
488	mi shu sheng shao jian	秘書省少監	Vice Director of the Palace Library (Hucker)	24
722	tai chang si shao qing	太常寺少卿	Vice Minister of the Court of Imperial Sacrifices (Hucker)	24
2955	shao fu jian jian	少府監監	Director of the Directorate for Imperial Manufactories (Hucker)	25
701	si nong si qing	司農寺卿	Minister of the National Granaries (Hucker)	26
284	guang lu si shao qing	光祿寺少卿	Vice Minister of the Court of Imperial Entertainments (Hucker)	27
702	si nong si shao qing	司農寺少卿	Vice Minister of the National Granaries (Hucker)	28
825	wei wei si shao qing	衛尉寺少卿	Vice Minister of the Court of Imperial Regalia (Hucker)	28
2454	shang shu sheng li bu lang zhong	尚書省吏部郎中	Director of the Bureau of Appointments (Hucker)	29
2459	si feng si lang zhong	司封司郎中	Director of the Bureau of Honors (Hucker)	29
2462	si xun si lang zhong	司勳司郎中	Director of the Bureau of Merit Titles (Hucker)	29
2465	shang shu sheng li bu kao gong si lang zhong	尚書省吏部考功司郎中	Director of the Bureau of Evaluations (Hucker)	29
2512	bing bu lang zhong	兵部郎中	Director of the Bureau of Military Appointments (Hucker)	29
2517	zhi fang si lang zhong	職方司郎中	Director of the Bureau of Operations (Hucker)	29
2520	jia bu si lang zhong	駕部司郎中	Director of the Equipment Bureau (Hucker)	29
2523	ku bu si lang zhong	庫部司郎中	Director Bureau of Provisions (Hucker)	29
3784	bing bu si lang zhong	兵部司郎中		29
3855	bing bu si lang zhong	兵部司郎中		29
3923	qian xing lang zhong	前行郎中		29
2475	hu bu si lang zhong	戶部司郎中	Director of the Census Bureau (Hucker)	30
2477	hu bu zuo cao lang zhong	戶部左曹郎中	Director of the Left Section of the Ministry of Revenue (Hucker)	30
2479	hu bu you cao lang zhong	戶部右曹郎中	Director of the Right Section of the Ministry of Revenue (Hucker)	30
2482	shang shu sheng hu bu du zhi si lang zhong	尚書省戶部度支司郎中	Director of the Bureau of General Accounts (Hucker)	30
2485	shang shu sheng hu bu jin bu si lang zhong	尚書省戶部金部司郎中	Director of the Treasury Bureau (Hucker)	30
2488	shang shu sheng hu bu cang bu si lang zhong	尚書省戶部倉部司郎中	Director of the Granaries Bureau (Hucker)	30
2528	shang shu sheng xing bu xing bu si lang zhong	尚書省刑部刑部司郎中	Director of the Bureau of Judicial Administration (Hucker)	30
2533	shang shu sheng xing bu du guan si lang zhong	尚書省刑部都官司郎中	Director of the Criminal Administration Bureau (Hucker)	30
2535	shang shu sheng xing bu bi bu si lang zhong	尚書省刑部比部司郎中	Director for the Bureau of Review (Hucker)	30
2539	shang shu sheng xing bu si men si lang zhong	尚書省刑部司門司郎中	Director of the Transit Authorization Bureau (Hucker)	30
3717	hu bu zuo cao lang zhong	戶部左曹郎中		30
3720	hu bu you cao lang zhong	戶部右曹郎中		30
3922	zhong xing lang zhong	中行郎中		30
2494	shang shu sheng li bu si lang zhong	尚書省禮部司郎中	Director of the Headquarters Bureau (Hucker)	31
2497	shang shu sheng li bu ci bu si lang zhong	尚書省禮部祠部司郎中	Director of the Bureau of Sacrifices	31

Office_id (CBDB)	Office_pinyin (CBDB)	c_office_chn (CBDB)	c_office_trans (CBDB)	Rank_pre (Manual)
2501	shang shu sheng li bu shan bu si lang zhong	尚書省禮部膳部司郎中	Director of the Catering Bureau (Hucker)	31
2543	shang shu sheng gong bu gong bu si lang zhong	尚書省工部工部司郎中	Director of the Headquarters Bureau (Hucker)	31
2546	shang shu sheng gong bu tun tian si lang zhong	尚書省工部屯田司郎中	Director of the State Farms Bureau (Hucker)	31
2548	shang shu sheng gong bu yu bu si lang zhong	尚書省工部虞部司郎中	Director of the Bureau of Forestry and Crafts (Hucker)	31
2550	shui bu si lang zhong	水部司郎中	Director of the Bureau of Waterways and Irrigation (Hucker)	31
3628	shang shu sheng er shi si si lang zhong	尚書省二十四司郎中		31
3764	shang shu sheng li bu zhu ke si lang zhong	尚書省禮部主客司郎中		31
3921	hou xing lang zhong	後行郎中		31
2456	shang shu sheng li bu yuan wai lang	尚書省吏部員外郎	Vice Director of the Bureau of Appointments (Hucker)	32
2460	si feng si yuan wai lang	司封司員外郎	Vice Director of the Bureau of Honors (Hucker)	32
2463	si xun si yuan wai lang	司勳司員外郎	Vice Director of the Bureau of Merit Titles (Hucker)	32
2466	shang shu sheng li bu kao gong si yuan wai lang	尚書省吏部考功司員外郎	Vice Director of the Bureau of Evaluations (Hucker)	32
2500	shang shu sheng li bu zhu ke si yuan wai lang	尚書省吏部主客司員外郎	Vice Director of the Bureau of Receptions (Hucker)	32
2514	bing bu si yuan wai lang	兵部司員外郎	Vice Director of the Bureau of Military Appointments (Hucker)	32
2518	zhi fang si yuan wai lang	職方司員外郎	Vice Director of the Bureau of Operations (Hucker)	32
2521	jia bu si yuan wai lang	駕部司員外郎	Vice Director of the Equipment Bureau (Hucker)	32
2524	ku bu si yuan wai lang	庫部司員外郎	Vice Director Bureau of Provisions (Hucker)	32
3920	qian xing yuan wai lang	前行員外郎		32
510	qi ju lang	起居郎	Imperial Diarist	33
511	qi ju she ren	起居舍人	Imperial Diarist	33
667	shi yu shi	侍御史	Attendant Censor (Hucker)	33
2476	hu bu si yuan wai lang	戶部司員外郎	Vice Director of the Census Bureau (Hucker)	33
2478	hu bu zuo cao yuan wai lang	戶部左曹員外郎	Vice Director of the Left Section of the Ministry of Revenue (Hucker)	33
2480	hu bu you cao yuan wai lang	戶部右曹員外郎	Vice Director of the Right Section of the Ministry of Revenue (Hucker)	33
2483	shang shu sheng hu bu du zhi si yuan wai lang	尚書省戶部度支司員外郎	Vice Director of the Bureau of General Accounts (Hucker)	33
2486	shang shu sheng hu bu jin bu si yuan wai lang	尚書省戶部金部司員外郎	Vice Director of the Treasury Bureau (Hucker)	33
2489	shang shu sheng hu bu cang bu si yuan wai lang	尚書省戶部倉部司員外郎	Vice Director of the Granaries Bureau (Hucker)	33
2531	shang shu sheng xing bu xing bu si yuan wai lang	尚書省刑部刑部司員外郎	Vice Director of the Bureau of Judicial Administration (Hucker)	33
2534	shang shu sheng xing bu du guan si yuan wai lang	尚書省刑部都官司員外郎	Vice Director of the Criminal Administration Bureau (Hucker)	33
2536	shang shu sheng xing bu bi bu si yuan wai lang	尚書省刑部比部司員外郎	Vice Director for the Bureau of Review (Hucker)	33
2540	shang shu sheng xing bu si men si yuan wai lang	尚書省刑部司門司員外郎	Vice Director of the Transit Authorization Bureau (Hucker)	33
3716	hu bu zuo cao lang zhong yuan wai lang	戶部左曹郎中員外郎		33

Office_id (CBDB)	Office_pinyin (CBDB)	c_office_chn (CBDB)	c_office_trans (CBDB)	Rank_pre (Manual)
3718	hu bu zuo cao yuan wai lang	戶部左曹員外郎		33
3719	hu bu you cao lang zhong yuan wai lang	戶部右曹郎中員外郎		33
3721	hu bu you cao yuan wai lang	戶部右曹員外郎		33
3919	zhong xing yuan wai lang	中行員外郎		33
600	dian zhong shi yu shi	殿中侍御史	Palace Censor (Hucker)	34
904	you si jian	右司諫	Right Recomnstrator (Hucker)	34
1028	zuo si jian	左司諫	Left Recomnstrator (Hucker)	34
2387	shang shu sheng zuo si yuan wai lang	尚書省左司員外郎	Vice Director of the Left Office of the Department of State Affairs (Hucker)	34
2388	shang shu sheng you si yuan wai lang	尚書省右司員外郎	Vice Director of the Right Office of the Department of State Affairs (Hucker)	34
2495	shang shu sheng li bu si yuan wai lang	尚書省禮部司員外郎	Vice Director of the Headquarters Bureau (Hucker)	34
2498	shang shu sheng li bu ci bu si yuan wai lang	尚書省禮部祠部司員外郎	Vice Director of the Bureau of Sacrifices	34
2502	shang shu sheng li bu shan bu si yuan wai lang	尚書省禮部膳部司員外郎	Vice Director of the Catering Bureau (Hucker)	34
2544	shang shu sheng gong bu gong bu si yuan wai lang	尚書省工部工部司員外郎	Vice Director of the Headquarters Bureau (Hucker)	34
2547	shang shu sheng gong bu tun tian si yuan wai lang	尚書省工部屯田司員外郎	Vice Director of the State Farms Bureau (Hucker)	34
2549	shang shu sheng gong bu yu bu si yuan wai lang	尚書省工部虞部司員外郎	Vice Director of the Bureau of Forestry and Crafts (Hucker)	34
2551	shui bu si yuan wai lang	水部司員外郎	Vice Director of the Bureau of Waterways and Irrigation (Hucker)	34
3630	shang shu sheng liu bu zhu si lang zhong yuan wai lang	尚書省六部諸司郎中員外郎		34
3918	hou xing yuan wai lang	後行員外郎		34
716	tai chang si bo shi	太常寺博士	Erudite of the Court of Imperial Sacrifices of the Court of Imperial Sacrifices (Hucker)	35
906	you zheng yan	右正言	Right Exhorter (Hucker)	35
1032	zuo zheng yan	左正言	Left Exhorter (Hucker)	35
718	tai chang si cheng	太常寺丞	Assistant Director of the Court of Imperial Sacrifices (Hucker)	36
999	mi shu sheng zhu zuo lang	秘書省著作郎	Editorial Director (Hucker)	36
1012	zong zheng si cheng	宗正寺丞	Director of the Court of the Imperial Clan (Hucker)	36
398	jie du pan guan	節度判官	Administrative Assistant to the Military Commissioner (Hucker)	37
751	tai zi xian ma	太子洗馬	Librarian of the Heir Apparent (Hucker)	37
756	tai zi zhong yun	太子中允	Companion of the Heir Apparent (Hucker)	37
1476	tai zi zhong she ren	太子中舍人	Secretary of the Heir Apparent (Hucker)	37
272	guan cha zhi shi	觀察支使	Surveillance Commissioner's Agent (Hucker)	38
400	jie du zhang shu ji	節度掌書記	Prefectural Secretary (Hucker)	38
1001	zhu zuo zuo lang	著作佐郎	Assistant Editorial Director (Hucker)	38
1103	fang yu pan guan	防禦判官	Assistant of the Defence Commission (Hucker)	38
1104	tuan lian pan guan	團練判官	Assistant of the Militia (Hucker)==	38
277	guang lu si cheng	光祿寺丞	Assistant Director of the Court of Imperial Entertainments (Hucker)	39
411	jun shi pan guan	軍事判官	Administrative Assistant for Military Affairs	39
843	xian ling	縣令	District Magistrate (Hucker)	39
1107	jie du tui guan	節度推官	Prefectural Judge (Hucker)	39

Office_id (CBDB)	Office_pinyin (CBDB)	c_office_chn (CBDB)	c_office_trans (CBDB)	Rank_pre (Manual)
1108	guan cha tui guan	觀察推官	Surveillance Circuit Judge (Hucker)	39
3332	guan cha pan guan	觀察判官	Surveillance Assistant (Hucker)	39
477	lu shi can jun shi	錄事參軍事	Administrative Supervisor (Hucker)	40
3047	da li si ping shi	大理寺評事	Case Reviewer of the Court of Judicial Review (Hucker)	40
3138	fang yu tui guan	防禦推官	Judge of the Defence Commissioner (Hucker)	40
3333	jian pan guan	監判官	Supervisor of the Administrative Assistants (Hucker)	40
3334	jun pan guan	軍判官	Administrative Assistant=	40
3335	tuan lian tui guan	團練推官	Military Training Judge	40
5749	jun shi tui guan	軍事推官	Military Judge (Hucker)	40
6036	zhi lu shi can jun shi	知錄事參軍事		40
685	si fa can jun	司法參軍	Judicial Administrator	41
688	si hu can jun	司戶參軍	Administrator in Charge of Revenue==	41
693	si li can jun	司理參軍	Administrator for Public Order (Hucker)	41
844	xian wei	縣尉	District Defender (Hucker)	41
989	xian zhu bu	縣主簿	Assistant Magistrate (Hucker)	41
2680	tai chang si feng li lang	太常寺奉禮郎	Court Gentleman for Ceremonials of the Court of Imperial Sacrifices (Hucker)	41
2681	tai chang si tai zhu	太常寺太祝	Great Supplicator of the Court of Imperial Sacrifices (Hucker)	41
487	mi shu lang	秘書郎	Assistant in the Palace Library (Hucker)	42
489	mi shu sheng jiao shu lang	秘書省校書郎	Editor of the Palace Library (Hucker)	42
490	mi shu sheng zheng zi	秘書省正字	Proofreader of the Palace Library (Hucker)	42

Appendix Table A2

Ranks after Yuanfeng reform

Office_id (CBDB)	Office_pinyin (CBDB)	c_office_chn (CBDB)	c_office_trans (CBDB)	Rank_pre (Manual)
415	kai fu yi tong san si	開府儀同三司	Commander Unequalled in Honor (Hucker)	1
759	te jin	特進	Lord Specially Advanced (Hucker)	2
401	jin zi guang lu da fu	金紫光祿大夫	Grand Master of the Palace with Golden Seal and Purple Ribbon (Hucker)	3
402	zuo zi jin guang lu da fu	左金紫光祿大夫	Left Grand Master of the Palace with Golden Seal and Purple Ribbon (Hucker)	3
403	you zi jin guang lu da fu	右金紫光祿大夫	Right Grand Master of the Palace with Golden Seal and Purple Ribbon (Hucker)	3
3925	zuo you jin zi guang lu da fu	左右金紫光祿大夫		3
890	yin qing guang lu da fu	銀青光祿大夫	Grand Master of Imperial Entertainments with Silver Seal and Blue Ribbon (Hucker)	4

891	zuo yin qing guang lu da fu	左銀青光祿大夫	Left Grand Master of Imperial Entertainments with Silver Seal and Blue Ribbon (Hucker)	4
892	you yin qing guang lu da fu	右銀青光祿大夫	Right Grand Master of Imperial Entertainments with Silver Seal and Blue Ribbon (Hucker)	4
3383	yin jiu jian wu	銀酒監武	/	4
278	guang lu da fu	光祿大夫	Grand Master for Splendid Happiness (Hucker)	5
280	zuo guang lu da fu	左光祿大夫	Left Grand Master for Splendid Happiness (Hucker)	5
282	you guang lu da fu	右光祿大夫	Right Grand Master for Splendid Happiness (Hucker)	5
862	xuan feng da fu	宣奉大夫	Grand Master of Court Service (Hucker)	5
863	zuo xuan feng da fu	左宣奉大夫	Left Grand Master of Court Service (Hucker)	5
864	you xuan feng da fu	右宣奉大夫	Right Grand Master of Court Service (Hucker)	5
932	zheng feng da fu	正奉大夫	Grand Master for Proper Service (Hucker)	5
933	zuo zheng feng da fu	左正奉大夫	Left Grand Master for Proper Service (Hucker)	5
934	you zheng feng da fu	右正奉大夫	Right Grand Master for Proper Service (Hucker)	5
3926	zuo you yin qing guang lu da fu	左右銀青光祿大夫		5
3927	zuo you guang lu da fu	左右光祿大夫		5
789	tong feng da fu	通奉大夫	Grand Master for Thorough Service (Hucker)	6
790	zuo tong feng da fu	左通奉大夫	Left Grand Master for Thorough Service (Hucker)	6
791	you tong feng da fu	右通奉大夫	Right Grand Master for Thorough Service (Hucker)	6
936	zheng yi da fu	正議大夫	Grand Master for Proper Consultation (Hucker)	6
937	zuo zheng yi da fu	左正議大夫	Left Grand Master for Proper Consultation (Hucker)	6
938	you zheng yi da fu	右正議大夫	Right Grand Master for Proper Consultation (Hucker)	6
799	tong yi da fu	通議大夫	Grand Master for Thorough Council (Hucker)	7
800	zuo tong yi da fu	左通議大夫	Left Grand Master for Thorough Council (Hucker)	7
801	you tong yi da fu	右通議大夫	Right Grand Master for Thorough Council (Hucker)	7
737	tai zhong da fu	太中大夫	Superior Grand Master of the Palace (Hucker)	8
738	zuo tai zhong da fu	左太中大夫	Left Superior Grand Master of the Palace (Hucker)	8
739	you tai zhong da fu	右太中大夫	Right Superior Grand Master of the Palace (Hucker)	8
967	zhong da fu	中大夫	Grand Master of the Palace (Hucker)	9
5752	ya zhong da fu	亞中大夫	Lesser Grand Master of the Palace (Hucker)	9
5926	you zhong da fu	右中大夫	Right Grand Master of the Palace (Hucker)	9
5927	zuo zhong da fu	左中大夫	Left Grand Master of the Palace (Hucker)	9
968	zhong feng da fu	中奉大夫	Grand Master for Palace Attendance (Hucker)	10

969	zuo zhong feng da fu	左中奉大夫	Left Grand Master for Palace Attendance (Hucker)	10
970	you zhong feng da fu	右中奉大夫	Right Grand Master for Palace Attendance (Hucker)	10
972	zhong san da fu	中散大夫	Grand Master of Palace Leisure (Hucker)	10
973	zuo zhong san da fu	左中散大夫	Left Grand Master of Palace Leisure (Hucker)	10
974	you zhong san da fu	右中散大夫	Right Grand Master of Palace Leisure (Hucker)	10
3929	zuo you zhong feng da fu	左右中奉大夫		10
3930	zuo you zhong san da fu	左右中散大夫		10
7114	zhong san lang	中散郎		10
173	chao yi da fu	朝議大夫	Grand Master for Court Discussion	11
174	zuo chao yi da fu	左朝議大夫	Left Grand Master for Court Discussion	11
175	you chao yi da fu	右朝議大夫	Right Grand Master for Court Discussion	11
638	feng zhi da fu	奉直大夫	Grand Master for Forthright Service (Hucker)	11
639	zuo feng zhi da fu	左奉直大夫	Left Grand Master for Forthright Service (Hucker)	11
640	you feng zhi da fu	右奉直大夫	Right Grand Master for Forthright Service (Hucker)	11
3931	zuo you chao yi da fu	左右朝議大夫		11
161	chao qing da fu	朝請大夫	Grand Master for Court Audiences (Hucker)	12
162	zuo chao qing da fu	左朝請大夫	Left Grand Master for Court Audiences (Hucker)	12
163	you chao qing da fu	右朝請大夫	Right Grand Master for Court Audiences (Hucker)	12
167	chao san da fu	朝散大夫	Grand Master for Closing Court (Hucker)	13
168	zuo chao san da fu	左朝散大夫	Left Grand Master for Closing Court (Hucker)	13
169	you chao san da fu	右朝散大夫	Right Grand Master for Closing Court (Hucker)	13
155	chao feng da fu	朝奉大夫	Grand Master for Court Service (Hucker)	14
156	zuo chao feng da fu	左朝奉大夫	Left Grand Master for Court Service (Hucker)	14
157	you chao feng da fu	右朝奉大夫	Right Grand Master for Court Service (Hucker)	14
164	chao qing lang	朝請郎	Gentleman for Court Audiences (Hucker)	15
165	zuo chao qing lang	左朝請郎	Left Gentleman for Court Audiences (Hucker)	15
166	you chao qing lang	右朝請郎	Right Gentleman for Court Audiences (Hucker)	15
3933	zuo you chao qing lang	左右朝請郎		15
170	chao san lang	朝散郎	Gentleman for Closing Court (Hucker)	16
171	zuo chao san lang	左朝散郎	Left Gentleman for Closing Court (Hucker)	16
172	you chao san lang	右朝散郎	Right Gentleman for Closing Court (Hucker)	16

3934	zuo you chao san lang	左右朝散郎		16
158	chao feng lang	朝奉郎	Gentleman for Court Service (Hucker)	17
159	zuo chao feng lang	左朝奉郎	Left Gentleman for Court Service (Hucker)	17
160	you chao feng lang	右朝奉郎	Right Gentleman for Court Service (Hucker)	17
633	cheng yi lang	承議郎	Gentleman for Discussion (Hucker)	18
634	zuo cheng yi lang	左承議郎	Left Gentleman for Discussion (Hucker)	18
636	you cheng yi lang	右承議郎	Right Gentleman for Discussion (Hucker)	18
630	feng yi lang	奉議郎	Court Gentleman Consultant (Hucker)	19
631	zuo feng yi lang	左奉議郎	Left Court Gentleman Consultant (Hucker)	19
632	you feng yi lang	右奉議郎	Right Court Gentleman Consultant (Hucker)	19
186	cheng zhi lang	承直郎	Gentleman for Fostering Uprightness (Hucker)	20
802	tong zhi lang	通直郎	Court Gentleman for Comprehensive Duty (Hucker)	20
803	zuo tong zhi lang	左通直郎	Left Court Gentleman for Comprehensive Duty (Hucker)	20
804	you tong zhi lang	右通直郎	Right Court Gentleman for Comprehensive Duty (Hucker)	20
3935	zuo you tong zhi lang	左右通直郎		20
6862	zuo cheng zhi lang	左承直郎		20
532	ru lin lang	儒林郎	Gentleman Confucian (Hucker)	21
859	xuan de lang	宣德郎	Court Gentleman of Manifest Virtue (Hucker)	21
860	zuo xuan de lang	左宣德郎	Left Court Gentleman of Manifest Virtue (Hucker)	21
861	you xuan de lang	右宣德郎	Right Court Gentleman of Manifest Virtue (Hucker)	21
3936	zuo you xuan de lang	左右宣德郎		21
6850	zuo ru lin lang	左儒林郎		21
827	wen lin lang	文林郎	Gentleman-litterateur (Hucker)	22
871	xuan yi lang	宣議郎	Court Gentleman for Manifesting Rightness (Hucker)	22
872	zuo xuan yi lang	左宣義郎	Left Court Gentleman for Manifesting Rightness (Hucker)	22
873	you xuan yi lang	右宣義郎	Right Court Gentleman for Manifesting Rightness (Hucker)	22
5974	zuo wen lin lang	左文林郎	Left Gentleman-litterateur (Hucker)	22
5975	you wen lin lang	右文林郎	Right Gentleman-litterateur (Hucker)	22
180	cheng shi lang	承事郎	Gentleman for Managing Affairs (Hucker)	23
181	zuo cheng shi lang	左承事郎	Left Gentleman for Managing Affairs (Hucker)	23
182	you cheng shi lang	右承事郎	Right Gentleman for Managing Affairs (Hucker)	23
199	cong shi lang	從事郎	Gentleman for Attendance (Hucker)	23
3400	you cong shi lang	右從事郎	Right Gentleman for Attendance (Hucker)	23

3401 zuo cong shi lang	左從事郎	Left Gentleman for Attendance (Hucker)	23
3937 zuo you cheng shi lang	左右承事郎		23
7112 cong shi lang	從仕郎		23
177 cheng feng lang	承奉郎	Gentleman for Attendance (Hucker)	24
178 zuo cheng feng lang	左承奉郎	Left Gentleman for Attendance (Hucker)	24
179 you cheng feng lang	右承奉郎	Right Gentleman for Attendance (Hucker)	24
200 cong zheng lang	從政郎	Gentleman for Governmental Participation (Hucker)	24
796 tong shi lang	通仕郎	Gentleman for Thorough Service (Hucker)	24
6092 you cong zheng lang	右從政郎		24
6888 zuo cong zheng lang	左從政郎		24
183 cheng wu lang	承務郎	Gentleman for Rendering Service (Hucker)	25
184 zuo cheng wu lang	左承務郎	Left Gentleman for Rendering Service (Hucker)	25
185 you cheng wu lang	右承務郎	Right Gentleman for Rendering Service (Hucker)	25
219 deng shi lang	登仕郎	Court Gentleman for Promoted Service (Hucker)	25
857 xiu zhi lang	修職郎	Gentleman for Good Service (Hucker)	25
3445 zuo xiu zhi lang	左修職郎		25
3446 you xiu zhi lang	右修職郎		25
223 di gong lang	迪功郎	Gentleman for Meritorious Achievement (Hucker)	26
372 jiang shi lang	將仕郎	Court Gentleman for Ceremonial Service (Hucker)	26
3131 zuo di gong lang	左迪功郎	Left Gentleman for Meritorious Achievement (Hucker)	26
3132 you di gong lang	右迪功郎	Right Gentleman for Meritorious Achievement (Hucker)	26

Appendix B. Major Polities in Continental East Asia

	Time	Occupier of North China Plain	Occupier of South China	Notes
Chou 周	1046–256 BCE	Warring tribes	Indigenous peoples	Warring tribes with a symbolic leader.
Ch'in 秦	221–207 BCE	Ch'in Empire		The first empire controlled all of China proper.
Han 漢	202BCE – 220 CE	"West" Han (202 BCE - 9 CE) "East" Han (25 CE to 220 CE)		
Three Kingdoms	220–280 CE	Wei (魏)	Shu & Wu (蜀 & 吳)	Warlords fighting each other.
Chin (West) 晉	266–316 CE	"West" Chin		Chin lost North China in 315 CE
Sixteen Kingdoms	304–439 CE	Nomadic tribes	"East" Chin	Chin was rebuilt in South China and was replaced by another ruling family in 420 CE.
			"Liu" Sung (420-479) 劉宋	
		"North" Wei (386-534) 北魏	"South" Ch'i (469-502) 南齊	
North vs South era	420–589 CE	"West" Wei (535-557) vs "East" Wei (534-550)	"South" Liang (502-557) 南梁	Two warring empires split North China.

	Time	Occupier of North China Plain	Occupier of South China	Notes
		(東魏 vs 西魏)		
		"North" Chou (557-581) vs "North" Ch'i (550-577) (北周 vs 北齊)	"South" Ch'en (557-589) 南陳	Two warring empires split North China.
Sui 隋	581–618 CE	Sui Empire		
T’ang 唐	618–907 CE	T’ang Empire		
Five Dynasties and Ten Kingdoms	907–979 CE	See Appendix C		
				Liao (遼) (916–1125 CE) controlled Yanyun, but most of its territory was in Northeast Asia. "West" Hsia (西夏) (1038–1227) only controlled the Ho-hsi corridor.
		"North" Sung (960-1127) (北宋)		**Sung had China Proper, except for Yanyun.**
Liao-Chin-Sung-Hsia	**916-1279** CE	Chin (1115-1127–1234) 金	**South Sung (1127–1279) (南宋)**	Chin (金) originated from Northeast Asia. It controlled North China in 1127.

	Time	Occupier of North China Plain	Occupier of South China	Notes
Yuan 元	1271–1368 CE	Yuan Empire		
Ming 明	1368–1644 CE	Ming Empire		
Ch'ing 清	1636–1912 CE	Ch'ing Empire		
Republic of China 中華民國	1912–1949 CE	Pei Yang Regime (1912 – 1928 CE) (北洋政權) Kuomintang Regime (1928 – 1949 CE) (國民黨政權)		The Kuomintang Regime was established in 1923 CE.
People's Republic of China 中華人民共和國	1949 CE – present			Communist China at present. 1949-1976 Mao era 1976-present Reform and Open Era

Appendix C. A Simplified Timeline of the Five Dynasties and Ten Kingdoms

Year (CE)	T'ang, Five Dynasties, Sung	Wu /South T'ang	Wuyüeh (吳越)	Min (閩)	South Han (南漢)	Former Shu (前蜀)	Chingnan (荊南)	Ch'u (楚)	North Han (北漢)
			Occupier of remote regions						
618									
893			Ack'd by T'ang	Ack'd by T'ang					
896	T'ang 唐							Ack'd by T'ang	
902		Wu Kinged by T'ang							
905					Ack'd by T'ang				
907			Kinged by Later Liang		Kinged by Later Liang	Self-proclaimed Emperor		Kinged by Later Liang	
909	Later Liang 後梁			Kinged by Later Liang					
917					Self-proclaimed Emperor				
919		Self-proclaimed King							
923	Later T'ang 後唐								
924							De facto Independent		

Year (CE)	T'ang, Five Dynasties, Sung	Occupier of remote regions							
		Wu /South T'ang	Wuyüeh (吳越)	Min (閩)	South Han (南漢)	Former Shu (前蜀)	Chingnan (荊南)	Ch'u (楚)	North Han (北漢)
925						Conquered by Later T'ang			
927		Self-proclaimed Emperor							
931						Replaced by Later Shu (後蜀)			
933				Self-proclaimed Emperor					
937		Wu was succeeded by South T'ang							
945	Later Chin 後晉			Conquered by South T'ang					
946				Local warlord revolt					
947	Later Han 後漢								
951	Later Chou							Ended by a civil war	Self-proclaimed Emperor

Year (CE)	T'ang, Five Dynasties, Sung	Wu /South T'ang	Wuyüeh (吳越)	Min (閩)	South Han (南漢)	Former Shu (前蜀)	Chingnan (荊南)	Ch'u (楚)	North Han (北漢)
958	後周	Relinquish de jure independence.							
960	Sung 宋								
963							†	†	
965						†			
971					†				
976		†							
978			‡	‡					
979									†

Note:

1. Ack'd by T'ang: Acknowledged by the T'ang empire as a de jure official and de facto warlord controlling a part of the land.
2. Self-proclaimed Emperor: Declared as an emperor.
3. Self-proclaimed King: Declared as a King without the emperor's consent.
4. Kinged by: Declared as a de jure king by an emperor.
5. In 936 AD, the first emperor of Later Chin ceded Yanyun 16 prefectures to the Khitan empire in exchange for military aid during the civil war. Later Chin was effectively a vassal state in the Khitan empire.
6. †: The polity was conquered by the Sung Empire.
7. ‡: The polity surrendered to the Sung Empire.

Appendix D. Major Affairs of the Sung Empire

Year (CE)	Emperor	Events
960	太祖	The founder of the Sung empire launched a coup against the “Later” Chou empire, grasping the power and changing the name to Sung. Most generals and civil officials were retained.
979	太宗	Sung unified China Proper except for the Yanyun area.
979-1004	太宗	The First Sung-Liao War.
1012	真宗	Champa rice was introduced to Chiang Huai.
1023	仁宗	The first paper money backed by the state (官交子) was issued.
1038-1044	仁宗	The First Sung-Hsia War.
1064	英宗	The Second Sung-Hsia War.
1069	神宗	Hsi’ning Reform (熙寧變法). Modernisation concerning fiscal practice, military and human resource management.
1071-1082	神宗	The Third Sung-Hsia War.
1073	神宗	Conquered the Ho’hsi corridor.
1080-1081	神宗	Yuanfeng Restructuring.
1085	高太皇太后攝政	Hsi’ning Reform ended. Although some initiatives were revoked, some profit-generating initiatives remained.
1093	哲宗	The revocation of Hsi’ning reform measures was revoked.
1096-1099	哲宗	The Fourth Sung-Hsia War.
1107	哲宗	Chiaotzu (官交子) devaluation was uncontrollable. The state issued Ch'ien yin (錢引) to replace Chiaotzu in most circuits.
1114-1125		The Chin-Liao War. (Sung-Chin allied against Liao in 1120.)
1122-1125	徽宗	The Second Sung-Liao War.
1114-1119	徽宗	The Fifth Sung-Hsia War.

Year (CE)	Emperor	Events
1125-1141	徽宗	The First Sung-Chin War. The Chin Empire occupied North China, ending the North Dynasty in 1127.
1127	高宗	A royal prince of Sung reinstated a central government in south China. The South Dynasty started.
1160	高宗	The state issued Hui tzu (會子) as the official paper money.
1161-1164	高宗	The Second Sung-Chin War.
1206-1207	寧宗	The Third Sung-Chin War.
1216-1219	寧宗	The Fourth Sung-Chin War.
1211-1234		The Mongol-Chin War. (The Mongol Empire and Sung Allied against Chin in 1232.)
1233-1234	理宗	The Fifth Sung-Chin War. Chin was conquered by the Mongol Empire in 1234.
1234	理宗	Sung invaded the Mongol-controlled former territory of Chin.
1235-1241	理宗	The First Sung-Mongol War. Mongols launched a retaliatory war against Sung in 1235.
1253-1259	理宗	The Second Sung-Mongol War.
1268-1279	度宗	The Third Sung-Mongol War. Sung was conquered in 1279.

Appendix E. Model-building Considerations

The data was inevitably biased due to at least two reasons. The first is on the individual level. Only some people were recorded in historical records, probably due to their historical importance and also probably because they had a good connection with historically important characters who were recorded. The second is at the record level. Not all the personal details were recorded for all the persons.[78] Although the bias cannot be removed entirely, it can be reduced by carefully selecting model variables.

The individual level is less influenced than the record level by survivorship bias. The individual-level record was under the selection of the record compilers. It could be believed that many junior officials were omitted because they were not deemed to be historically important. However, it is less likely that senior officials were omitted because they would appear in the biographies of other officials as colleagues, friends, or political rivals. Thus, senior officials would inevitably be mentioned when writing some officials' biographies, even if they did not have their own biographies.

Meanwhile, the record level was highly influenced by survivorship bias since if a person were not deemed necessary, especially when his biography was merely an appendix to his historically important father,[79] he would have few records in his biography. Also, if a person was merely mentioned in others' biographies, his record was incomplete. Still, there were two aspects at the record level: the number of records and the quality shown in available records. For example, the number of official positions or the number of relationships was a number that was directly influenced by the abundance of records, which led to a significant bias. Meanwhile, the qualitative attributes, such as salary rank, gender, and age, are not significantly influenced by the abundance of records. Even if only one record of the salary rank of a person survives, the record would suggest the salary rank of the person. Although the recorded rank might not be the final rank, which could be higher, the recorded rank was not directly correlated to the abundance of records. In summary, survivorship bias for senior officials should be low, but high survivorship bias for

[78] For example, it is common that a piece of biography of Person A was written like "In year X, Person A worked as Deputy Prefect with the Person B who was the Prefect". As could be known from other parts of the biography, Person A was promoted later, so he was important that the details were kept about when he was in low-rank positions. But it is likely that Person B, who did not have his own biography, was an unimportant person recorded coincidentally in the biography of A.

[79] This phenomenon is common in the history of Sung (*宋史*, ca. 1346/n.d., 列傳).

junior officials is expected. A person's qualitative attributes are more independent of the abundance of records, while quantitative attributes are more influenced.

- Highly influenced: The number of records was linked with survivorship bias. These variables include network centrality, number of appointments, and salary rank markings. There is a linear relationship between the abundance of records and these variables. Therefore, the variance of “abundance of records” is expected to be a significant part of these variables.
- Less influenced: Variables such as the salary rank of officials, the seniority of the highest financial positions, and the death age were not highly influenced by the abundance of records. For example, important and unimportant officials would have one record of their highest salary rank, and more records did not change their salary rank linearly. Also, dummy variables such as “had financial experience” or “passed ChinShih exam” are resistant to the influence of the abundance of records. Therefore, the variance of “abundance of records” is not expected to be a significant part of these variables.

Based on the variance of “abundance of records”, there are three types of models. First and foremost, both independent and dependent variables were expected to be less significantly influenced by the abundance of records. In this case, the bias was only survivorship bias at the individual level. In this case, the abundance of records hardly influences the result. Therefore, the model used in Chapter 8 is as follows.

$$Y_{Inherent} = \alpha + \beta_1 X_{Inherent} + \varepsilon$$

Secondly, the dependent variable is correlated with the abundance of records, but the independent variables were not correlated with the abundance of records. In this way, the variance of the observed dependent variable contains two components: the real dependent variable's variance and the “abundance of records”. Hence, although this model is imperfect, it could still provide some insights into the question. The β factor consists of two components: the correlation between the independent variable and the ideal dependent variable, and the correlation between the independent variable and the “abundance of records”. Since “abundance of records” is a component representing the bias of conceptual “historical importance”, the correlation between the independent variable and the “abundance of records” is the factor that the independent variable is related to historical importance. Therefore, the results could be interpreted as the independent variable influencing at least one of the two factors: the dependent variable or historical importance. This type of model is used in Chapter 6.

$$Y_{Inherent*Abundance} = \alpha + \beta X_{Inherent} + \varepsilon$$

Thirdly, the dependent variable is not correlated with the abundance of records, but each independent variable is correlated with the abundance of records. In this situation, the β factor also consists of two components: the correlation between the independent variable and the ideal dependent variable and the correlation between the dependent variable and the "abundance of records". Therefore, a variable representing the same abundance is introduced to control for the abundance. This type of model is used in Chapter 7.

$$Y_{Inherent} = \alpha + \beta_1 X_{1\ Inherent*Abundance} + \beta_2 X_{2\ Abundance} + \varepsilon$$

Fourthly, the abundance of records highly influenced both the dependent and independent variables. In this case, controlling and isolating the influence of "abundance of records" is difficult. Therefore, the studies avoid inserting variables highly influenced by the "abundance of records" into independent and dependent variables.

$$Y_{Inherent*Abundance} = \alpha + \beta_1 X_{1\ Inherent*Abundance} + \varepsilon$$

Also, structural equation modelling in robustness tests minimises the abundance of variables. The details are provided in the respective chapters.

Appendix F. Secretarial Titles in Fiscal-related Departments

Rank	Title	The Department of Commoners	The Department of Works	The Department of Law
正三品 (Standard Third Rank)	尚書 (Secretary)	戶部尚書	工部尚書	刑部尚書
正四品下 (Lower Standard Fourth Rank)	侍郎 (Assistant Secretary)	戶部侍郎	工部侍郎	刑部侍郎
從五品上 (Upper Associate Fifth Rank)	郎中 (Senior staff)	戶部司郎中	工部司郎中	刑部司郎中
		度支司郎中	屯田司郎中	都官司郎中
		金部司郎中	虞部司郎中	比部司郎中
		倉部司郎中	水部司郎中	司門司郎中
從六品上 (Upper Associate Sixth Rank)	員外郎 (Junior Staff)	戶部司員外郎	工部司員外郎	刑部司員外郎
		度支司員外郎	屯田司員外郎	都官司員外郎
		金部司員外郎	虞部司員外郎	比部司員外郎
		倉部司員外郎	水部司員外郎	司門司員外郎

Appendix G. Reconciliation between Sample Sizes

This appendix provides reconciliation between the total records in CBDB and the sample sizes for tests or tables.

Table G1
Number of Persons by Gender and Entry Pathway Availability

	n	Note
Total Records of Persons	73,458	
Less: Female	-3,869	Table 11
All Males	69,589	Table 11 Table 22 Table 23
Less: Males without Entry Pathway data	-34,712	
Male with Entry Pathway Data	34,877	Table 12, Table 13

Table G2
Number of Males by Pathway Availability and Appointment Record Availability.

	Entry pathway Available	Entry pathway Unavailable	Total	Note
Person with an appointment record	9,633	17,880	27,513	Table 14 Table 50, Table 51, Table 52.
Person without an appointment record	25,244	16,832	42,076	
Total	34,877	34,712	69,589	Table G1

Table G3
Number of Appointments by Date Availability and Functions

	n	Note
Total Number of Appointments	94,054	Table 17
Appointment without a known year	-62,719	
Appointment with a known year	31,335	Table 18
Total Number of Appointments	94,054	Table 17
Less: Non-financial Appointments	-88,186	
All financial appointments	5,868	
Less: Low-rank financial appointments	-2,363	
Senior-level financial appointments:	3,505	Table 41

Table G4

Number of Financial and Non-Financial officials by Entry pathway.

	Type of Officials			
Entry type	Financial	Non-Financial	Total	Note
Chin-Shih	2,573	23,992	26,565	Table 21
Regular Examination	145	3,823	3,968	Table 21
Yin Privilege	449	814	1,263	Table 21
Other	331	2,750	3,081	Table 21
No record	2,467	32,245	34,712	Table 21
Total	5,965	63,624	69,589	Table 21
Note	Table 19 Table 22 Table 23	Table 24 Table 25 Table 26	Table G1	

Table G5

Number of Persons Concerned with Different Social Relationships

	n	Note
All persons	73,458	Table G1
Less: Persons without association or kin	-45,650	
All persons with social relationships	27,808	Table 28
Less: Persons without a link to financial officials	-14,944	
Financial official and their association and kin	12,864	Table 28
Less: associations and kin of financial officials and financial officials who had no relationship with financial officials	-10,065	
Financial officials with social relationships with each other	2,799	Table 28
All persons with social relationships	27,808	Table 28
Less: Female	-3,270	
All males with social relationships	24,538	
Including:		
Financial	3,607	Table 31
Non-Financial	20,931	Table 31

Table G6
Number of Persons Concerning Different Social Relationships For Each Dynasty

	North	Note	South	Note
All persons with social relationships	17,190	Table 29	19,922	Table 29
Less: Persons without a link to financial officials	-9,005		-11,380	
Financial official and their association and kin	8,185	Table 29	8,542	Table 29
Less: Associations and kin of financial officials and financial officials who had no relationship with financial officials	-6,330		-6,750	
Financial officials with social relationships with each other	1,855	Table 29	1,792	Table 29

Note: The social networks of the North Dynasty (960 – 1127 CE) and South Dynasty (1127 -1279 CE) had mutual members.

Table G7
Sample Size of Regression Tests for Appointments

	Total	Note	Less: Not in the social network	Sample for tests	Note
Total Male	69,589	Table G1			
Less: Males without Salary Rank records	-62,030				
Male with Salary Rank Records	7,559				
Including:					
Had pre-Yuanfeng Salary Rank	2,103	Table 53 Table G8	-584	1,519	Table 32, Table 33, Table 36, Table 37, Figure 31
Had post-Yuanfeng Salary Rank	5,456	Table 53 Table G8	-2,067	3,389	Table 34, Table 35, Table 36, Table 38, Figure 32

Table G8

Sample Size of Regression Tests for Salary Rank

Had Salary Rank	Pre-reform	Note	Post-reform	Note
	2,103	Table G7	5,456	Table G7
Less: Death Age is 0			-64	
Persons with appointments	2,103	Table 63	5,392	Table 60, Table 63
Less: Persons not in the social network	-584		-2,065	
Samples Control for Network	1,519	Table 63	3,327	Table 60, Table 63
Less: Persons without a death age	-744		-2,102	
Samples Control for Network and Age	775	Table 54, Table 56, Table 58, Table 59, Table 60, Table 61, Table 63, Figure 33	1,225	Table 55, Table 57, Table 58, Table 59, Table 60, Table 62, Table 63, Figure 34

Appendix H. Tests on Different Eras

H1. Regression Tests for the North Dynasty

During the formative years of the Sung Empire, the initial cohort of supporters played a crucial role in government operations, leaving a lasting institutional imprint through placing their offspring within the administrative apparatus. At this early stage, the bureaucratic system was still immature and lacked the stability required for meritocratic advancement. As a result, the influence of financial officials may have been overshadowed by the prominence of military leaders—particularly generals—who had supported the founding emperors. In this context, the bureaucratic system was not yet conducive to elevating financial officials based on technical expertise.

To examine this evolution, officials were categorised into four generational cohorts. The first cohort (see Table H1, Cohort 1) consisted of individuals born prior to 930 CE who had reached the age of 30 by the time of the empire's founding during a brief coup. These individuals largely comprised the original supporters of the founding emperors as well as officials from the Late Chou dynasty who continued their service under the new regime. Statistical analysis indicates that, within this group, financial experience did not exhibit a statistically significant correlation with salary rank.

The second cohort included those born between 930 and 960 CE—individuals who attained the age of 30 after the establishment of the empire in 960 CE (see Table H1, Cohort 2). This group may be understood as the direct descendants of the founding generation, as well as among the earliest successful candidates of the imperial examination system. The third cohort comprised officials born after the coup and who likely entered the bureaucracy after three decades of institutional development (see Table H1, Cohort 3). For both the second and third cohorts, no statistically significant relationship was found between financial experience and salary rank.

In contrast, the fourth cohort consisted of officials born after 990 CE who assumed office before the Yuanfeng reform (see Table H1, Cohort 4). Representing the bureaucratic maturity of the pre-reform Sung state, this group provides evidence of a significant positive correlation between financial expertise and salary rank. This finding suggests that the institutional recognition of financial competence was a gradual process that emerged only after the empire had achieved a certain level of administrative consolidation.

Table H1
Regression Analysis of Salary Rank by Period: Officials of the North Dynasty

Cohort	1		2		3		4	
	β	p	β	p	β	p	β	p
Financial Appointments	-0.533		0.573		0.153		0.688	**
Chin Shih Pathway	-2.882		0.025		-0.185		-2.851	***
Yin Pathway	-0.917		4.883		-1.680		-1.946	
Non-Financial Appointments	0.644	***	0.693	***	0.695	***	0.830	***
Social Network	3.734		1.323		-0.074		-0.713	***
Age	0.310	**	0.053		-0.059		0.091	**
Intercept	-0.971		8.277		14.374	***	1.441	
R^2	0.201		0.204		0.204		0.445	
R^2_{Adj}	0.132		0.167		0.180		0.436	
F	2.932	**	5.482	***	8.594	***	46.576	***
n	77		135		208		355	

Note:
Dependent Variable: Salary Rank
Financial Appointments: Number of financial positions occupied by one sample.
Chin Shih: *1* for Officials who passed the Chin Shih exam. *0* for Otherwise.
Yin: *1* for officials who were commissioned through the En Yin pathway. *0* for otherwise.
Non-Financial Appointments: Number of non-financial positions occupied by one sample.
Social Network: Eigenvector Network Centrality.
Age: Age of Death, capped at 70.
p: *** for p-value <0.01 ** for p-value < 0.05

Regression Tests for the South Dynasty

As with the early years of the Northern Sung, the Southern Sung dynasty also experienced prolonged periods of instability. Accordingly, this section divides the officialdom into five generational cohorts, each comprising individuals born within 30 years, to capture the changing political and military contexts.

Cohort 1 (see Table H2, Cohort *1*) includes those born between 1097 and 1127 CE. These officials were likely already in service under the Northern Sung or had entered the bureaucracy during the transitional phase following the fall of the Northern capital. Their careers peaked during two major conflicts: the First Sung–Jurchen War, which marked the end of the North Sung Dynasty, and the Second Sung–Jurchen War (1129–1131), a protracted and destabilising campaign. Regression analysis reveals no statistically significant correlation between financial expertise and salary rank within this group. This result is likely attributable to the institutional disruptions of the period, wherein officials with military or logistical responsibilities were prioritised due to the pressing existential threats to the regime.

Cohort 2 (see Table H2, Cohort *2*), comprising individuals born between 1127 and 1157 CE, entered officialdom during a time of relative peace and bureaucratic consolidation. The correlation between financial expertise and salary rank becomes statistically significant, with financial appointments exhibiting a notably higher beta coefficient than non-financial roles. This suggests that, in the absence of immediate military crises, technical competence in financial affairs was increasingly recognised and rewarded within the administrative hierarchy.

Cohort 3 (see Table H2, Cohort *3*), born between 1157 and 1187 CE, pursued careers during a tumultuous period marked by four major conflicts: the Third (1206–1207), the Fourth (1216–1219), the Fifth (1233–1234) Sung–Jurchen War, and the First Sung–Mongol War (1235–1241). The latter, in particular, was devastating for the Southern Sung. Within this cohort, the relationship between financial experience and salary rank again becomes statistically insignificant, underscoring the wartime reorientation of bureaucratic priorities away from fiscal governance.

Cohort 4 (see Table H2, Cohort *4*), born between 1187 and 1217 CE, experienced a more stable environment. Although the Second Sung–Mongol War (1253–1259) occurred during their careers, the conflict was geographically distant—centred in the western frontier—and did not result in a major Mongol victory. For this cohort, financial expertise regained significance in determining salary rank, with a strong beta coefficient for financial appointments relative to non-financial ones.

Cohort 5, born after 1217 CE, entered service during the terminal years of the South Sung Dynasty. Their careers coincided with the final Mongol campaign, which culminated in the conquest of the dynasty. Due to the limited number of officials in this cohort and the short timespan of their careers, the sample size ($n = 15$) is insufficient for meaningful regression analysis ($F = 1.917$).

In sum, while the relationship between financial experience and salary rank is generally observable in the Southern Sung period, it lacks stability across all cohorts. The correlation appears to fluctuate in accordance with the larger military context: during periods of peace, financial competence is rewarded; in times of war, bureaucratic priorities shift towards officials involved in military and strategic operations.

Table H2
Regression Analysis of Salary Rank by Period: Officials of the North Dynasty

Cohort	1		2		3		4	
	β	p	β	p	β	p	β	p
Financial Appointments	-0.154		0.999	***	0.050		1.264	**
Chin Shih Pathway	2.951	***	3.222	***	6.448	***	1.993	
Yin Pathway	-0.141		-0.229		2.386	*	-0.970	
Non-Financial Appointments	0.536	***	0.397	***	0.398	***	0.298	***
Social Network	-0.136		-0.282	***	0.266		-0.099	
Age	0.148	***	0.086	**	0.113	*	0.002	
R^2	0.509		0.475		0.555		0.460	
R^2_{Adj}	0.493		0.458		0.527		0.404	
F	32.635	***	27.718	***	20.147	***	8.108	***
n	196		191		104		64	

Note:
Dependent Variable: Salary Rank
Financial Appointments: Number of financial positions occupied by one sample.
Chin Shih: *1* for Officials who passed the Chin Shih exam. *0* for Otherwise.
Yin: *1* for officials who were commissioned through the En Yin pathway. *0* for otherwise.
Non-Financial Appointments: Number of non-financial positions occupied by one sample.
Social Network: Eigenvector Network Centrality.
Age: Age of Death, capped at 70.
p: *** for p-value <0.01 ** for p-value < 0.05