

行政院國家科學委員會專題研究計畫 成果報告

中國之經濟停滯（1450--1900）

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行政院國家科學委員會補助專題研究計畫 ☒ 成果報告
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Abstract

During the Song Dynasty (960 – 1279), China experienced unprecedented economic growth, with per-capita GDP increasing from \$450 to \$600 (in 1990 dollars), according to estimates by Maddison. In sharp contrast, per-capita GDP remained more or less constant at \$600 during the subsequent Ming-Qing period (1368 – 1911). This raises a major question in political economy: “Why did China’s early Industrial Revolution of the Song Dynasty give way to a stagnant agrarian economy during the Ming-Qing period?” I argue a change in China’s political institutions early in the Ming Dynasty weakened industrial property right system, which reduced the incentives to invest in industry and develop new technologies.

Keywords: Political economy, institutions, property rights, federalism and economic development.

摘要

在宋代（西元 961—1279 年），中國歷經了空前的經濟成長，依據 Maddison 的估計，當時每人 GDP 從 450 美元增加到 600 美元。相對地，明清朝時期（西元 1368—1911 年）的每人所得，則均僅維持在 600 美元左右。如此強烈的對比現象，衍生出政治經濟學中一個相當有趣的研究議題，即「為何宋代早期的工業革命，到明清朝時會變成停滯的農業經濟體制？」

本研究擬從財產權制度的角度對此議題進行研究，上述「從成長到停滯」問題的產生，可能是由於明朝初期，中國政治制度的改變，削弱了工業財產權體制，使得工業投資以及技術創新的誘因降低所致。

關鍵詞：政治經濟、制度、財產權、聯邦制、經濟發展

1. Introduction

My recent research project was supported through a grant from the NSC over the past year. Much progress was made during this past year. My theory of political institutions and property rights has improved through a more detailed comparison of institutional features across Chinese dynasties. The quality of my answer to the fundamental question addressed in this research project has notably improved as a result of progress made this past year.

My research project is entitled, “China’s economic stagnation, 1450 – 1900.” This research addresses an important question in political-economic development: “Why did China’s early Industrial Revolution during the 1000 – 1250 period give way to a stagnant agrarian economy during the 1450 – 1900 period?” My research proposal is to perform a systematic study of Chinese economic and institutional history that compares the Song Dynasty (960-1279) to the Ming-Qing period (1368-1911) in order to propose a new answer to this important question. I will develop my theory that an identifiable change in political institutions led to a change in the property right system, which in turn discouraged technological innovation and investment. Output resulting from this research project will include two journal articles, which will subsequently appear as chapters in a book.

This final report presents descriptions of various aspects of my research project as well as the results and conclusions from this past year. The remainder of this report is organized as follows. Section 2 presents a literature review, section 3 presents an outline of the research project’s goals, section 4 describes the research methodology used and section 5 presents the results and conclusion.

2. Literature Review

The related literature on this topic touches upon three branches of social science: political economy, Chinese institutional history, and economic growth and development. First, there is a vast literature on political economy that analyzes the role of the state in long-run economic development. Of most relevance is the literature within this tradition on property rights. Some recent examples of this research include, Grief (1998), North and Thomas (1973), North and Weingast (1989), and Weingast (1995), all of which share two common characteristics. First, their analysis is based on institutional history. Second, they seek to identify a mechanism that links political

institutions to property rights. Grief (1998) suggests that in the case of Genoa, a balance of power among clans within government limits intrusive policies. North and Thomas (1973) argue that population pressure in Western Europe gave rise to competition over land and efficient property rights emerged setting England off on an Industrial Revolution. North and Weingast (1989) argue that the separation and balance of powers within the English central government was the key to keeping the state from expropriating wealth. Finally, Weingast (1995) argues that in the cases of English and American history, political institutions were irreplaceable in preserving markets.

In all the existing literature, very few mechanisms that link political institutions and property rights systems have been proposed. Furthermore, there is little consensus that the few proposed are the key features in constitutions that largely determine property right systems. Barry Weingast, one of the main scholars on constitutional federalism, has recently commented, “One of the central limits of the literature is that few scholars actually provide a complete analysis of any mechanism purported to provide property right protection. We remain remarkably ignorant about how constitutions affect credible commitments to secure economic rights and, more generally, limited government.”¹ It is important to point out that this is a very fundamental issue – how constitutions operate and how they provide incentives for officials and groups in society that result in the rule of law. Virtually all of the existing literature has focused on the United States or European institutions. It should not be surprising that the oldest country in the world, China, with the best institutional time series data spanning over two millennia should offer some possibilities as to the relation between political institutions and property rights systems. Indeed, as will be described below, I have identified – in a preliminary way – features in Chinese institutional history that suggest a mechanism linking political institutions to property rights.

The second branch of related literature is Chinese institutional history. In the years since the Second World War, there has been an explosion of research in Chinese history, much of it on dynastic histories. There has been some comparative work done across dynasties. However, a vast majority of the research has been confined to specific topics within a single dynasty. There are a number of studies on various aspects of government institutions by dynasty. Of particular interest are sources for government institutions and fiscal systems. Some notable recent examples include 汪堅鋒 (1995), 楊樹藩 (1987), 黃仁宇 (2001), 張治安 (1999), Wang (1973), and 郭松義, 李新達, 李尚英 (2001). 汪堅鋒 (1995) presents a systematic study of the

¹ See Weingast (1995), p. 3.

fiscal institutions and practices of the Song Dynasty. 楊樹藩 (1987) gives a detailed description of the central government in the Song Dynasty. 黃仁宇 (2001) provides detailed analysis of the fiscal system during the Ming Dynasty. 張治安 (1999) outlines the details of government institutions during the Ming Dynasty. Wang (1973) estimates the levels of fiscal taxation and outlines main features of the fiscal system for the Qing Dynasty. 郭松義, 李新達, 李尚英 (2001) describe numerous features of Qing Dynasty government institutions. These and many other dynastic histories on institutions form the basis for comparative work across China's dynasties.

Some comparative work has already begun. Modern work in this direction began earlier with work such as 錢穆 (1952), which made a political institutional comparison across all of China's dynasties. More recently, there have been studies considering government in general or concentrated on one aspect of governance or society in making comparisons across dynasties. Some examples include 姜文奎 (1987) and 商文立 (1981). 姜文奎 (1987) provides a general comparison of government institutions from the Western Zhou (c.a. 1100 B.C.), through every Chinese dynastic period and up to and including the Chinese Republic (1912 – 1949). Similarly, 商文立 (1981) focuses on local government systems in comparison from the Shang Dynasty (c.a. 1750 – c.a. 1100 B.C.), through every Chinese dynasty and up to and including the Chinese Republic. The appearance of studies such as these clearly shows that the available data on Chinese institutions is vast and that it covers an extremely long continuous period. Very little modern work has sought to discover the main features of political institutions that affect the property rights system. Almost all of this work has been conducted outside of China and focused on the West. Although modern research on political economy tends to focus on contemporary international comparisons or the last several centuries of Western development, a comparative study of China's institutions between the Song Dynasty (960 – 1279) and Ming-Qing period (1368 – 1911) is clearly feasible and offers a very high potential reward in terms of revealing important mechanisms linking political institutions and property rights.

There is a third branch of literature – economic growth and development – which also relates to my proposal. This work exclusively focuses on economic features. Many scholars have touched upon the topic of China's economic stagnation, and scholars in related fields have proposed ideas but not pursued them. Many ideas from studies of Western economies are imported to China's case and generally discussed. Very little specific work on this important question has been done. One notable exception, a study by Mark Elvin, addresses the same question that is addressed in this project – namely, “Why did China's early Industrial Revolution during the Song Dynasty give way to a stable agrarian economy during the Ming Qing period?” Elvin

(1973) argues that China hit an agricultural technology barrier, which only industrial-scientific inputs could surpass, and that population pressures led China into a “high-level equilibrium trap.” There is a branch of modern economic growth theory related to this research proposal, which emphasizes the importance of the development of new technologies and investment in human capital. Lucas (2002) and Prescott (1998) have recently argued that these are features of major importance in long-run economic growth for the technological leading country. My theory seeks to explain total factor productivity. Lastly, recent research by Acemoglu, Johnson, and Robinson (2004) has explicitly emphasized the role of government institutions in long-run economic development.

This research proposal merges several branches of research in addressing an important question in economic development: “Why did China’s early Industrial Revolution of the 1000 – 1250 period give way to a stable agrarian economy during the 1450 – 1900 period?” In a preliminary way, I have identified key changes in political institutions in Chinese history. These changes took place during the reign of the founding emperor of the Ming Dynasty (1368 – 1644) and eventually stabilized around the mid-fifteenth century. 黃仁宇 has studied these constitutional changes in both the central and provincial governments. However, there has been little if any work that aims to relate these constitutional changes to other changes. Some important consequences of these constitutional changes include: changes in imperial policy toward maritime trade, changes in the nature of local village administration and a difference in the resulting property right system. These features are described in a scattered collection of various studies. My research plan involves clarifying and systematically documenting these historical features in light of the theory that I am developing.

3. Research Goals

My research project addresses an important question in political-economic development: “Why did China’s early Industrial Revolution during the 1000 – 1250 period give way to a stagnant agrarian economy during the 1450 – 1900 period?” The research goal of this project has been to develop a theory that can account for China’s dramatic change in long-run economic performance. Over this past year my theory improved considerably.

It will be helpful at this point to briefly outline my theory. I will first describe a key feature in the property right system and then describe how political institutions affect this feature and thus the property right system. My theory implies that different

political institutions give rise to different property right systems. I begin by describing the main groups involved, of which there are three: the state, local elites and potential entrepreneurs. The role of local elites is the focus of the analysis. This group is in a position to restrict the property rights of other groups including potential entrepreneurs. To get a sense of their importance, consider the number of state officials in a typical county. During the 12th century, a typical county covered an area of several hundred square miles, had a population of about 70,000 people and was staffed with only three county magistrates. It was physically impossible to govern this many people in such a vast area without the help of the local elites – to govern, to collect taxes, enforce rules and maintain order. Counties were divided into villages and other local subunits. Local elites served in various roles within the local administration and as the intermediaries between the people and the state. This placed them in a position to influence the property right system in their own interests. It is my contention that the local elites restricted the property rights of other groups, particularly potential entrepreneurs who might introduce new technologies or invest in industry. The local elites were motivated to maintain their power and privileged position in local society. The main basis for power is wealth. By restricting the wealth of potential threats to their authority, they maintain the status quo. My theory shows how different political institutions can affect the ability of local elites to restrict the property rights of others.

Since the Warring States period (453 – 221 BC), Chinese states have been composed of unions of regional governments or provinces. Provinces have two main levels of administration, upper and lower. The upper, or provincial level administration manages the affairs of the lower, or county administrations. These provinces formed the building blocks of states in China – a union of provinces, where the central government managed affairs of the provinces. I consider two types of provincial governments: Provinces where the upper level of administration has considerable authority over its constituent counties are called strong provinces. Those without such authority are called weak provinces. During the Song Dynasty, China had strong provinces. Note that much of the provincial administration during the Song Dynasty was on behalf of the central government. For instance, much tax revenue was forwarded to the Song court. This was an important part of the “centralization” during the Song Dynasty. However, during the Ming-Qing period, China had weak provinces. I argue that this constitutional change affected the local property rights system.

My thesis is that the primary mechanism at work is one of administrative pressure. As more authority is yielded to higher levels of government, administrative demands increase. A regular and efficient functioning administration cannot tolerate

delays and tends to require the reduction of irregularities in favor of a more uniform management. The administrative demands of the Song state passed a high level of administrative pressure down to the local governments. I argue that it was this administrative pressure that limited the ability of local elites to restrict the property rights of others. Increases in administrative activity, particularly resource mobilization, increase the level of social conflict. County administrations are limited in their capacity to mediate problems. The increase in administrative demands places constraints on the ability of local elites to shift their tax burdens and request special privileges. The general acceptance of this authority among the populace is what places these limits on the local elite. During the Ming-Qing period, when weak provinces were in place, the administrative pressure on the local governments dropped dramatically. The local elites, or gentry, gained the ability to limit the property rights of other groups and dominate local society. Their behavior in tax burden shifting, fiscal delays and demands for special privileges caused deterioration in administrative efficiency. However, these local inefficiencies could be tolerated since the administrative demands placed on them were relatively light.

During the Song Dynasty, the strong provinces passed a high level of administrative pressure down to county and the local administrations. I argue that this administrative pressure limited the ability of the local elite to restrict the property rights of others. In this way, entrepreneurs could increase their investments and develop new technologies. The result was industrialization and increased technological innovation. During the Ming-Qing period, the weak provinces passed a low level of administrative pressure down to county and local administrations. The limits on local elites behavior were removed since increased inefficiency in governance could now be tolerated. I argue that local elites successfully restricted the property rights of other groups, which led to limited industrialization and technological innovation. The result was gentry dominated local society and a stagnant agrarian economy.

There is a body of indirect evidence that suggests a high level of administrative pressure was placed on the local governments and special privileges were reduced during the Song Dynasty but not during the Ming-Qing period. During the Song Dynasty, the state effectively extended considerable control into the rural areas throughout China. Local village officers had considerable authority to manage tax collection, audit property registrars, perform police functions, and enforce laws. During the Song Dynasty there were major efforts to register the population and land for taxation purposes. This local fiscal control contributed to the ability of the central government to make budget predictions, estimate future revenue and expenditures. It

has been estimated that the Song central government tax revenue totaled around 15% of total GDP. The central government also increased control over maritime port cities. The number of officially sanctioned maritime port cities increased to nine during the Song Dynasty. Government port officials collected maritime trade tariffs, managed trade and protected property rights.

There was a tendency during the Song Dynasty toward the reduction of special privileges for many groups. The most important social group was government officials, which had the greatest social status and the most privileges. These privileges were reduced and their landholdings restricted in many cases. Other groups including imperial relatives, Buddhist and Taoist clergy, widows, and the aged and childless also had tax exemptions and special privileges reduced. There was a general trend toward an equalization of privileges in Song society. Wealth alone tended to determine one's social status.

I argue that the concentration of local authority in the hands of village officers and the reduction of special privileges was a consequence of the greater administrative pressure that was placed on local administrations.

There is also indirect evidence suggesting that during the Ming-Qing period the low level administrative pressure passed down from weak provinces had important consequences in local administration and in the degree of special privileges enjoyed by the local elite. The authority that during the Song Dynasty was concentrated in the hands of local village officers was, during the Ming-Qing period, spread out among the local elite, minor officials, clerks and runners, and militia leaders. Numerous local elite, called gentry, gained considerable authority in local affairs during this period. They commonly participated in tax collection and under some circumstances led the local militia. The role played by the gentry in local administration and judicial affairs was widely accepted by the local population, even though it was extra-legal. Only a small share of tax revenue was regularly mobilized by the state. It has been estimated that the central government's tax revenue during the Ming-Qing period was only 3-4% of GDP, which is much smaller than the 15% share controlled by the Song central government. In addition, the central government during the Ming-Qing period reduced the number of officially sanctioned maritime port cities to two and severely limited growth in overseas trade.

The local gentry also played a dominant role in local society. They enjoyed numerous special privileges relative to other groups in society and commonly interfered with administration, delayed tax payments and shifted various fiscal burdens onto those less able to pay or resist.

I argue that during the Ming-Qing period, the weak provinces and the low level of administrative pressure that was passed down to local administrations were largely responsible for the diffusion of local authority and the prevalence of special privileges among the local elite.

Summing up my theory, the county administrations had limited ability to handle problems related to governance. Increased administrative activity, particularly resource mobilization, increased social conflict. The tolerance threshold for social resistance in various forms was correspondingly low due to increased administrative pressure. During the Song Dynasty, the local elite were limited in their ability to restrict the property rights of others. Such activities were inconsistent with the efficiency requirements of an administration with high demands placed on it. Consequently, many groups enjoyed a measure of property right protection. People could invest in industrial enterprises and develop new technologies. The result was industrialization and technological innovation in the Song Dynasty. Furthermore, I argue that it was the weakening of provinces and the consequent reduction in administrative pressure that allowed local elite during the Ming-Qing period to restrict the property rights of others. Investment and the development of new technologies were severely limited. The result was a stagnate agrarian economy dominated by local elites.

In sum, my research proposal has been to develop an answer to an important question in economic development: “Why did China’s early Industrial Revolution of the Song Dynasty give way to a stagnant agrarian economy during the Ming-Qing period?” There is a vast amount of dynastic history that had made a comparison between the Song Dynasty and the Ming-Qing period feasible. The many aspects of my theory have developed and improved considerably over this past year. I believe my research goal in this project has clearly been met. Furthermore, the impact of the papers resulting from this research project will be the best indication of the quality of my theory on this important question in political economy.

4. Research Methodology

The method of research involved in this proposal is simple. It required systematically researching numerous books and articles that discuss the aspects of administration and property rights in a comparison of the Song Dynasty with the Ming-Qing period. This was an extremely labor intensive project, which required research assistance.

The aspects that were systematically researched included: maritime trade policy, local village authority structure, the extent of special privileges, historic examples of the role of the local elite, the emergence and activities of guilds and other aspects of the property rights system. In addition, further work elaborating the key features of provincial institutions in a comparison between the Song Dynasty and the Ming-Qing period and their transition was done. A detailed comparative analysis of these aspects over the past year laid the ground work for improvements in my theory.

5. Results and Conclusion

This research project addresses an important question in political-economic development: “Why did China’s early Industrial Revolution during the 1000 – 1250 period give way to a stagnant agrarian economy during the 1450 – 1900 period?” Important progress was made over the past year through a more detailed comparison of various aspects across China’s Song, Ming and Qing dynasties. A clearer theory has emerged and more historical evidence has been discovered to make the argument more convincing. Given the importance of this question, a proposed high quality answer that accounts for the change in China’s long-run economic performance offers the potential of highly influential publications. Two papers will result from this year’s work for publication in journals. Later, a book will appear that will be related to these two papers.

In conclusion, I would like to make a comment regarding a possible improvement in my mechanism that relates political institutions to property rights systems, which resulted from my comparative analysis over this past year. The heart of my theory argues that the local elite, both in the countryside and urban areas, restrict the property rights of others in order to protect their power. In the theory that I began with – indeed as presented in my original research proposal – argued that the key feature that limited the ability of the local elite to restrict the property rights of others is “administrative pressure.” One important observation from the comparative analysis done this past year is that from the late Tang Dynasty through the early Song Dynasty there was an increase in the level of market activity generally throughout China. Indeed the state increasingly turned to commercial taxes as a source of tax revenue, which fundamentally depended on the market activity. This observation leads me to consider another aspect that may also contribute to the weakening of the local elite’s ability to restrict the property rights of others – market activity. It may be that the nature of market activity, relative to a self-sufficient economy, provides physical constraints on the local elite’s ability to restrict the property rights of others.

Consider two situations: a growing market economy and a largely self-sufficient agrarian economy. In an expanding market economy, there is a continual movement of people and goods in all localities. Furthermore, the nature of relations among various firms, workers and consumers becomes more complex and fluid in a market economy relative to a self-sufficient agrarian economy. It may be that the nature of movement of people and goods as well as the increased complexity and fluidity of relations among a growing number of firms and households makes restricting individual property rights more difficult as compared to a largely self-sufficient agrarian economy. In a largely self-sufficient agrarian economy there is a relative lack of movement of people and goods. Production organization relations with suppliers of inputs and consumers of outputs are relatively simple and stable. Under this situation it may be easier for the local elite to restrict property rights of individuals who challenge their power. It seems that market activity may play an important role in breaking the power of the local elite. This is an important improvement in my theory that resulted from this past year's comparative research.

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