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The Fundamental Institutions of China's Reforms and Development

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China's economic reforms have resulted in spectacular growth and poverty reduction. However, China's institutions look ill-suited to achieve such a result, and they indeed suffer from serious shortcomings. To solve the "China puzzle," this paper analyzes China's institution—a regionally decentralized authoritarian system. The central government has control over personnel, whereas subnational governments run the bulk of the economy; and they initiate, negotiate, implement, divert, and resist reforms, policies, rules, and laws. China's reform trajectories have been shaped by regional decentralization. Spectacular performance on the one hand and grave problems on the other hand are all determined by this governance structure. (*JEL* O17, O18, O43, P21, P25, P26)

1. *Introduction*

Chinese economic reforms, which have been in flux for three decades, have more than doubled China's economic growth, from an average of 4.4 percent annually before 1978 to an average of 9.5 percent after 1978. Even more impressively, the contribution of TFP to the growth has increased from 11 percent before 1978 to more than 40 percent afterwards (Dwight H. Perkins and Thomas G. Rawski 2008). This process has transformed the world's largest developing country from a centrally planned economy into a

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mixed market economy, while simultaneously reducing poverty at a scale unparalleled in world history (World Bank 2002). During the reform period, the Chinese per capita GDP increased by almost eight-fold, and China has transformed from one of the poorest countries in the world into a major economic power.[1] Today's China is the world's largest producer and largest consumer of many conventional industrial staples and high-tech products, such as steel, cars, television sets, personal computers, cell phones, and internet usage. (National Statistical Bureau 2006b) and has the world's largest foreign reserves. The current size of the Chinese economy, in terms of GDP, is larger than the sum of eighty-three countries in Eastern Europe, the CIS, and all of Africa (the author's calculation based on Maddison 2003). This makes a research on China more imperative for understanding the world economy.

However, in sharp contrast to this spectacular performance, it has been reported that, from the viewpoint of standard wisdom, such as the Washington Consensus or the recent empirical literature of cross-country studies, Chinese institutions in government, corporate governance, law, and finance look notoriously weak. Moreover, Chinese reform policies are often unconventional and sometimes even look diametrically opposed to "standard" policy suggestions (Martin L. Weitzman and Chenggang Xu 1994; Dani Rodrik 2006).[2]

According to conventional wisdom, the government should protect private property rights, enforce contracts, and separate itself from business (Douglas C. North 1981; Daron Acemoglu and Simon Johnson 2005; Rodrik 2006). Yet, the Chinese government is deeply involved in business, and there is no clear separation between government and business. Using commonly applied standards, China is, in general, below average on most measurements of the application of the rule of law or for governance quality (Franklin Allen, Jun Qian, and Meijun Qian 2005) and is among the most corrupt countries in the world.[3] Moreover, throughout most of the three-decade reform process, there was no constitutional protection of private property rights until recently (the 2004 constitutional amendment). To summarize, China's weak institutions are ill suited to achieve economic development. Thus, the Chinese reforms pose great challenges to standard economic theories. Can economic theory explain China's reforms? Is the Chinese reform a miracle? This paper will tackle these challenges through a unified conceptual framework that synthesizes existing literature.

Recently, a growing amount of literature on institutions and reforms demonstrate a general consensus among economists and policymakers that a set of institutions must be in place to make markets function well. Therefore, a market-oriented reform should focus mainly on institution building to protect property rights. Nevertheless, a vital challenge faced by all transition economies and developing economies is how to build these requisite institutions and how to carry out the reforms. A simplistic, yet fairly popular view is that markets will form as long as private

[1] At the outset of the reform, China's per capita GDP was about the same as that of Zambia, which was lower than half of the Asian average or lower than two-thirds of the African average, and its size was about one half of the Soviet Union (Angus Maddison 2003). Moreover, it had almost no trade with other countries.

[2] In comparing Chinese and Indian reforms with Washington Consensus policies, Rodrik (2006) said: ". . . their policies remained highly unconventional. With high levels of trade protection, lack of privatization, extensive industrial policies, and lax fiscal and financial policies through the 1990s, these two economies hardly looked like exemplars of the Washington Consensus. Indeed, had they been dismal failures instead of the successes they turned out to be, they would have arguably presented stronger evidence in support of Washington Consensus policies" (p. 975).

[3] China has a "Corruption Perception Index" level of 5, which is similar to Indonesia, Iraq, Myanmar, Nigeria, Sudan, and Somalia (Jacob Svensson 2005).

property is well protected through proper institutions. However, lessons drawn from numerous historical and contemporary cases show that markets and economic development do not develop spontaneously, ownership protection is not created independent of market development, and private ownership alone is insufficient for the market economy to function (Ronald H. Coase 1992; Adam Smith 1763, 1776). Without government functioning beyond the protection of property rights, markets often do not develop; even worse, disorder can destroy markets as easily as dictators. Yet, failures of market-oriented reforms launched by governments are ubiquitous. This is a fundamental dilemma faced by any institution-building reform and echoes Coase's famous question: what is the boundary of the firm? (Coase 1937). As I argue in this paper, the lessons of China's reforms suggest that an answer to this fundamental question is ultimately determined by the trade-offs between costs and benefits of different forms of the government. The trajectory of China's reforms, reform strategies, outcomes, achievements, and problems are mainly determined by China's political and economic institutions.

Following the theoretical literature of institutional analysis (Coase 1992; Joseph E. Stiglitz 2002; Leonid Hurwicz 2007), in this paper the word "institution" refers to those basic and stable mechanisms that govern the incentives of agents and coordinate activities in major political and economic games. Thus, "institutional foundations" in this paper refer to those basic and stable mechanisms that determine the incentives of the most important players in China's reform and development.[4]

Based on a large body of literature, I argue that China's fundamental institution that deeply affects executives' incentives and behaviors, which in turn impact society, is what I call the *regionally decentralized authoritarian (RDA) regime* (section 2). The RDA regime is characterized as a combination of political centralization and economic regional decentralization. On the one hand, the national government's control is substantial in that the Chinese political and personnel governance structure has been highly centralized. Subnational government officials are appointed from above, and the appointment and promotion of subnational government officials serve as powerful instruments for the national government to induce regional officials to follow the central government's policies. This feature fundamentally distinguishes the Chinese RDA regime from federalism, where governors or mayors are elected and they are supposed to represent and be accountable to their constituents. On the other hand, the governance of the national economy is delegated to subnational governments. Regional economies (provinces, municipalities, and counties) are relatively self-contained, and subnational governments have overall responsibility for initiating and coordinating reforms, providing public services, and making and enforcing laws within their jurisdictions. This feature qualitatively differentiates the Chinese economy from a typical centrally planned economy.

China's RDA regime evolved before and during the post-Mao reforms, and some of its important features can be traced back to much earlier in China's history. There are two critical historical factors that make China's

[4] These mechanisms are endogenous in that they are created through the strategic interactions of agents. Thus, institution may also be regarded as the equilibrium of the game in the economic and political world (Avner Greif 2006). A popular definition of institution is given by North (1990, p. 3) that "institutions are the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction." However, this definition is too abstract to be operational.

RDA regime somewhat unique. First, China is the only country in the world that has more than two thousand years of imperial history, which had a unique governance structure, and today's RDA regime inherits some important elements from this governance structure. Second, the Cultural Revolution is unique in the history of world communist movements. The ensuing destruction of the communist institutions and society has led to disillusion with the communist ideology, a change of the legitimacy base of the Chinese Communist Party, and weakened resistance to reforms, and has shaped the basic characteristics of the RDA regime, paving the road for the post-Mao reforms.

In the RDA regime, subnational governments have influence or even direct control rights over a substantial amount of resources, such as land, firms, financial resources, energy, raw materials, and others.[5] Subnational governments are major players in the bulk of the Chinese economy. Under the supervision of the central government, they initiate, negotiate, implement, divert, and resist reforms, policies, rules, and laws. They drive, influence, or hamper regional/national economic development, macroeconomic conditions, environmental conservation or degradation, social stability, etc. China's reform trajectories have been shaped by centrally controlled regional decentralization. Spectacular performance on the one hand and grave problems on the other hand are all created or closely associated with this governance structure.

At the early stages of the reforms, the central government delegated more autonomous power and provided stronger incentives to subnational governments in order to encourage them to try out reforms and promote economic growth. Thus, regional competition has been a major component of China's three decades of reform (section 3). When a region has a higher growth rate than others, the head of the region will enjoy greater power and will be more likely to be promoted. One of the most important initiatives taken by many subnational governments was the development of nonstate firms, including FDI and indigenous firms (e.g., the township–village enterprises), which has been the most important engine of China's economic growth since the mid-1980s.

Chinese subnational governments not only compete against quantifiable targets, such as GDP growth rate, but, they also often compete in initiating or testing new reform policies, i.e., regional reform experiments (section 4). They have been given considerable responsibility for regional coordination, and such decentralized coordination has facilitated regional reform experiments; since subnational governments are closer to experimenting sites, they are much better informed about local information than the central government and can therefore coordinate more effectively. Regionally based coordination makes economywide coordination failures less likely when there are external shocks. This also makes it easier to experiment with institutional changes locally without causing disruption to the rest of the economy. Most importantly, by incorporating regional experiments as an essential part of the central decision-making process, the political risks of advancing reforms are substantially reduced, and political opposition to reforms is significantly weakened (sections 2 and 4). Indeed, almost all successful reforms in the past three decades were introduced through local experiments (section 5).

Nevertheless, the intrinsic deficiencies of an authoritarian regime, such as the lack of an independent judiciary, rent-seeking behavior, and a failure to respond to citizens'

[5] "In effect, it is the sub-national levels of Government that implement China's national development agenda. Nearly 70 percent of total public expenditure in China takes place at the sub-national level (i.e., provincial, prefecture, county, and township), of which more than 55 percent takes place at sub-provincial levels" (World Bank 2002).

preferences, are important parts of the characteristics of China's RDA regime, without exception (section 6). Although some of these problems might be mitigated when subnational governments face fierce regional competition, regional competition may lead to other problems, such as regional protection. Moreover, many problems inherent in the RDA regime may be worsened when the effectiveness of regional competition is weakened, e.g., when subnational governments face multiple tasks, they strategically chose to ignore some tasks in the competition. Also, regional competition may lead to "races to the bottom" for some tasks, which can be much worse than simply being ignored. China's future depends on how those problems are resolved and, given that they are deficient outcomes of the RDA regime, an ultimate solution lies in a fundamental transformation of the institution itself.

Although determined by its distinctive history, China's RDA regime is itself unique, there are still some general lessons that can be drawn from China's reforms and development for other developing countries. These are discussed in the concluding section.

One of the major purposes of this paper is to address the so-called "China Puzzle." It is undisputed among economists that the quality of institutions is important for reform and development because they determine incentives for executives and all the players in an economy. China is regarded in cross-country study literature as having poor institutions, such as poor legal protection of property rights, poor corporate governance, lack of democratic accountability, and an absence of the rule of law. The resulting forecast is that Chinese officials will be corrupt, will not work hard, and will not collect and report information correctly, all of which are partly correct empirically. However, much more importantly, this theory would also suggest that, under poor institutions, executives in China would block reforms, therefore preventing economic development. Nevertheless, the overall performance of China's reforms and development appears not only magnificent but unparalleled in world history in its gigantic scale and prolonged rapid growth. This incredible contrast between "poor" institutions and China's spectacular performance challenges our general understanding of the mechanics of institutions and our understanding of "institutional quality."

First, there appear to be conceptual misunderstandings about what exactly constitutes an institution in the literature. The so-called institution is sometimes improperly defined or misinterpreted in certain popular empirical or policy studies. One of the most widespread approaches is to label a set of narrowly defined measurements as the perfect "institution" based on some observed features of developed market economies, e.g., the United States. Then, all other countries' practices are measured against this standard to see the imperfections of those countries' institutions. Although the empirical findings that follow from that approach could be useful in a narrow scope, serious problems may arise when this approach is generalized. Without a thorough understanding of the working mechanisms of institutions in developed and developing economies, such mechanical and narrow interpretations of institution ignore the essence of these institutions. This kind of research, to some extent, is not only at odds with the theoretical literature on institutions (a la North 1990, Coase 1992, Stiglitz 2002, Hurwicz 2007, etc.), but also can be misleading in general. [6] For instance, the concept of, and the mechanism by which, the rule of law

[6] "The value of including such institutional factors in the corpus of mainstream economics is made clear by recent events in Eastern Europe. These ex-communist countries are advised to move to a market economy, and their leaders wish to do so, but without the appropriate institutions no market economy of any significance is possible. If we knew more about our own economy we would be in a better position to advise them" (Coase 1992, p. 714).

affects economies has been the subject of many debates. However, most of the popular empirical cross-country studies apply a narrow definition of the rule of law and ignore the debates on the subject, such that the United States is often taken as the ideal (or almost ideal) model in those studies. Yet, if we look at the widespread financial fraud and the deep corruption from the grassroots to the top executives on Wall Street revealed throughout the 2008 financial crises and the Enron–WorldCom scandal in 2002 etc., the contrast between this illusion and reality is striking.

Moreover, very often the empirical measurements used in cross-country studies are too narrow to capture the functioning of institutions in developing economies, such as in China. As a result, all the functioning institutions that are beyond the scope of those narrow definitions are ignored, as if they did not exist. Consequently, China's performance becomes inexplicable and it becomes either an outlier to be ignored or a puzzle in cross-country studies.

The empirical study of the protection of private property rights and contract enforcement is a concrete example. It is true that in China there was no formal or constitutional protection of private property until 2004, and commercial codes related to contracts were not enacted until the late 1980s, and moreover remained unimportant until the late 1990s. However, there was semiformal and informal protection of private property, and contract enforcement mechanisms were exercised by some subnational governments under a special social context in Chinese history or by social norms. Yet, these institutions often are unaccounted for in almost all cross-country studies. Even worse, according to some "standard" policy advice, these more informal institutions might be regarded as obstacles that should be replaced by "standard" institutions as quickly as possible, even though setting up "standard" institutions may be very difficult, time-consuming, or even counterproductive under certain political conditions.

How should a country transform a centrally planned economy into a market economy? What are the most important and effective reforms for economic development? How can a reform motivate subnational governments and at the same time coordinate and control them? These subjects have been debated by economists, political scientists, historians, sociologists, and others for decades, both in general and in the context of China. Their viewpoints are, however, scattered, and very often scholars in different disciplines do not talk to each other. This paper attempts to develop a coherent conceptual framework that synthesizes a multidisciplinary discussion on China's institutions, reforms, and development. In addition to improving our understanding of China's reforms and economic development, by doing so, I also hope to deepen our general understanding of political and economic institutions, and on the evolution of these institutions.

This paper is not an attempt of an exhaustive literature survey. Such a full-scale survey would require multiple volumes. Therefore, many important contributions are not covered due to space restrictions and my ignorance on the subject, particularly beyond the field of economics. For this reason, I have only discussed some of the very serious problems that China is facing briefly. For many others, I have only mentioned them without elaboration, such as problems of election, judiciary, corruption, social security, and the environment.

2. *The Fundamental Institution: Regionally Decentralized Authoritarianism*

Transformation from a centralized economy to a market economy requires both institutional support and institutional change. In

addition, developing from an agrarian economy into a modern market economy also entails creating better institutions. However, reforms have never started from an institutional vacuum. All reforms have to begin with existing institutions, and any institutional change has to be initiated and implemented by agents within these existing institutions (even in the case of a revolution, existing institutions still have profound long-run impacts). For all of these reasons, historically inherited institutions have far-reaching impacts on an economy, sometimes long after those institutions have been changed or abandoned (Richard R. Nelson and Sidney G. Winter 1982; North 1990). No major distinctive features of an economy—including reforms and subsequent changes—can be properly understood without understanding the fundamental institutions that underpin the economy; moreover, this is especially true when considering China's spectacular and prolonged growth on the one hand, and its serious socioeconomic problems on the other.

In this section, I introduce the fundamental institution of China, which I call the *regionally decentralized authoritarian (RDA) system*.[7] The RDA system is characterized by highly centralized political and personnel controls at the national level, and a regionally decentralized administrative and economic system. Both decision making and policy implementations in the RDA regime, from national strategic issues to concrete local matters, are deeply influenced by this combination of political centralization and economic decentralization. These features qualitatively differentiate China's regime from a federal state, a unitary state, and a totalitarian regime.

2.1 *Decentralized Economic Governance: Regional Decentralization*

A salient feature of the Chinese governance structure is the relatively hands-off approach taken by the national government with respect to most of the national economy, while subnational governments are deeply involved in the economies within their jurisdiction, including regional firms. The Chinese government consists of a region-based multilevel hierarchy. Below the central government, there are four levels of subnational governments: the provincial level, the municipal level (or prefecture level), the county level, and the township level. The central government directly controls only a small proportion of the Chinese economy. The largest economic sector that the central government controls directly is industry, and even within this industry the central government directly employed less than 4 percent of all the industrial employees nationwide (National Statistical Bureau 2006a).

Most government functions are carried out by subnational governments. Although by constitution China is not a federal state, in many important economic issues Chinese subnational governments are more powerful than their counterparts in federal countries around the world since they are responsible for much broader regional matters than simply fiscal issues. Unfortunately, almost all the empirical papers in the literature of decentralization look at only fiscal decentralization since there is no well-accepted methodology to measure broadly defined regional decentralization. In the context of China's decentralization, although fiscal decentralization is sometimes a reasonable proxy for decentralization more generally, other times regional decentralization in other dimensions is more important than fiscal decentralization. Thus, focusing on fiscal decentralization alone can

[7] The concept of *regionally decentralized authoritarianism* was coined to characterize China's institution in 2006 in the first draft of this paper. In 2009, I read Pierre F. Landry (2008), where he uses the word *decentralized authoritarianism*. Although looks similar on the surface, the meaning of RDA is substantially different from the words of Landry (2008) just like the extensive differences between this paper and his book.

TABLE 1
ANNUAL GROWTH OF CHINA'S GDP, FIXED CAPITAL, LABOR, AND TFP, 1951–2005

	Annual growth of inputs					Percentage shares of GDP growth attributable to		
			Labor input					
Period	GDP	Fixed capital	Raw labor	Education enhanced	Average TFP growth	Fixed capital	Education enhanced labor	TFP
		K	L	H		K	H	
1952–2005	7.0	7.7	1.9	2.6	2.1	47.7	21.4	30.9
1952–1978	4.4	5.8	1.9	2.5	0.5	56.3	32.7	11.0
1952–1957	6.5	1.9	1.2	1.7	4.7	12.7	14.9	72.4
1957–1978	3.9	6.7	2.0	2.7	−0.5	73.7	39.7	−13.4
1957–1965	2.4	5.2	1.5	2.1	−1.0	93.1	49.5	−42.6
1965–1978	4.9	7.7	2.4	3.1	−0.2	67.7	36.7	−4.4
1978–2005	9.5	9.6	1.9	2.7	3.8	43.7	16.2	40.1
1978–1985	9.7	9.2	3.4	4.5	3.2	40.6	26.6	32.8
1985–1990	7.7	6.9	2.5	2.9	3.1	38.8	21.5	39.7
1990–1995	11.7	9.1	1.4	1.9	6.7	33.3	9.5	57.3
1995–2000	8.6	10.5	0.9	1.6	3.2	52.7	10.5	36.8
2000–2005	9.5	12.6	1.0	1.8	3.1	57.1	10.6	32.3

Source: Perkins and Rawski 2008.

be misleading (this will be elaborated in later sections).

China's governance structure does not fit neatly into standard conceptions of authoritarian regimes. According to cross-country studies, fiscal decentralization is closely linked with democracy. However, China's authoritarian regime is one of the fiscally most decentralized countries in the world. Contrasting China's fiscal decentralization with its counterparts in the rest of the world during the early 2000s, the total expenditure of Chinese subnational governments accounted for about 70 percent of the national total, which was far larger than that of the world's largest federal countries such as the United States (46 percent), Germany (40 percent), and Russia (38 percent) (Christine P. W. Wong 2006).

Figure 1 depicts the governance structure of the Chinese economy. The statistics in the figure reflect the situation in the year 2005, though the structure has been stable throughout the reform era.[8] This governance structure is the result of a half-century of political development (Perkins 1977, 1988; Elizabeth J. Perry and Wong 1985; David Granick 1990; Barry J. Naughton 1995; Guoguang Liu et al. 2006; Jinglian Wu

[8] The total number of central state-owned enterprises (SOEs) listed in figure 1 is 2,128, which is from the NSB. However, according to the SASAC (State-owned Asset Supervision and Administration Commission), the number should be less than 170 in 2005 and 151 in 2007 (http://www.sasac.gov.cn/zyqy/qyml/default.htm). The latter is the total number of parent companies controlled directly by the central government, which supervises a large number of subsidiary companies; whereas the former is the total number of all establishments managed by the central government.

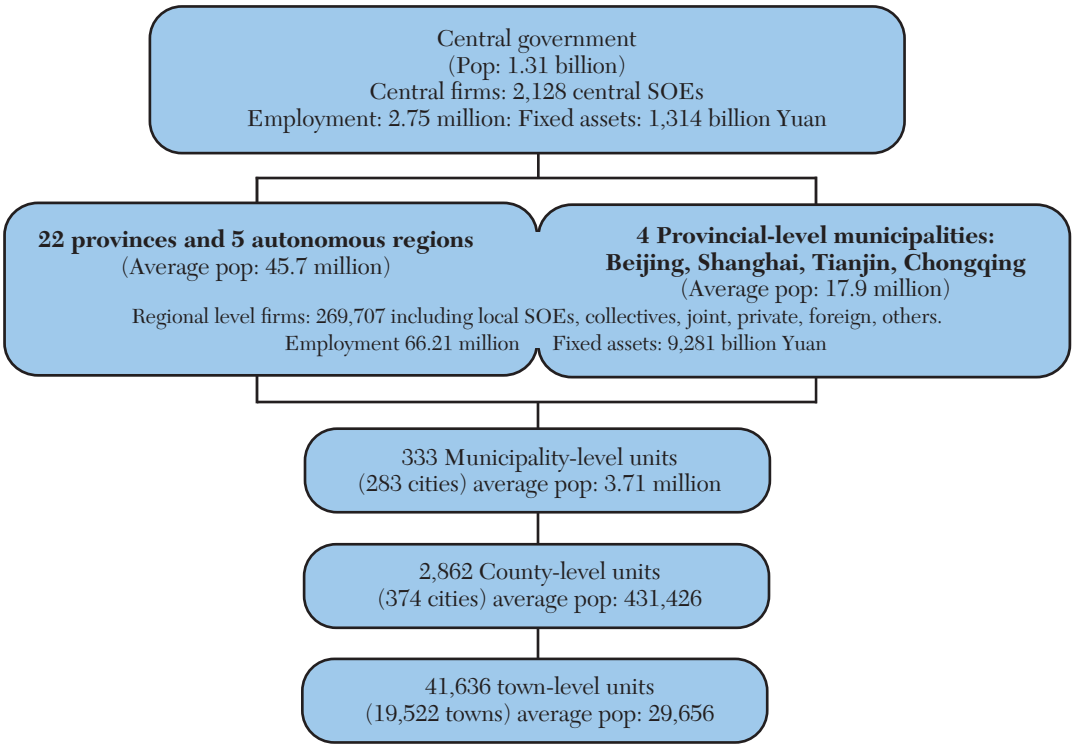

Figure 1. Regional Governance Structure of Chinese Economy

Source: National Statistical Bureau, 2006a, 2006b, 2006c.

2009); moreover, many important features of it can be traced back to imperial times (to be further discussed later). Not long after a full-scale transplantation of the Soviet model in the early 1950s, there were two major campaigns that lead to vast waves of decentralizations at extremely high costs. The first started in the late 1950s (the Great Leap Forward (GLF)), and the second in the late 1960s (the Cultural Revolution) (Susan L. Shirk 1993; Liu et al. 2006).[9]

During the GLF campaign, central ministries handed over most centrally controlled SOEs to subnational governments. As a result, the subnational governments' tax revenue increased from 20 percent of the national total in 1958 to 76 percent in 1959 and 79 percent in 1961, much higher than those in the post-Mao reform period (table 2). Central planning was replaced by regional competition. Subnational governments were encouraged to compete with each other to overfulfill planning targets, to establish "communes" earlier or at a larger

[9] The GLF established the People's Commune, thus the Commune-Brigade Enterprises (the predecessor of the TVEs); and expanded local industries under state and collective ownership. An essential part of the human cost of the GLF is the Great Famine (see Justin Yifu Lin 1990 and Wei Li and Dennis Tao Yang 2005).

TABLE 2
Evolution of Chinese Fiscal Decentralization, 1953 to 2005

Year	Subnational/ total revenue	Subnational/ total expenditure	GDP/capita	GDP/capita grw	Institutional changes
1953	17.0%	26.1%	554	3.2%	1st five year plan
1958	19.6%	55.7%	693	8.8%	
1959	*75.6%*	*54.1%*	*697*	*0.6%*	*Great leap forward*
1961	*78.5%*	*55.0%*	*673*	*0.0%*	
1966	*64.8%*	*36.9%*	*753*	*6.7%*	*Cultural revolution*
1975	*88.2%*	*50.1%*	*874*	*4.5%*	
1978	84.5%	52.6%	979	9.4%	Reform starts
1980	75.5%	45.7%	1,067	2.6%	Fiscal reform starts
1984	59.5%	47.5%	1,396	10.4%	
1988	67.1%	66.1%	1,816	6.4%	
1993	78.0%	71.7%	2,277	8.5%	
1994	44.3%	69.7%	2,475	8.7%	Fiscal sharing rule
2004	45.1%	72.3%			
2005	47.7%	74.1%			

Sources: *China 50 Years' Statistics*; GDP/capita: 1990 international dollars, Maddison (2003).

scale, to close down markets, etc. They were also encouraged to try out different commune organizations, different ways of organizing production and collective life (e.g., public canteen systems in communes), etc. The central government's bureaucracy was trimmed; supervision of most state-owned enterprises was delegated from the ministries to provinces and cities, and subnational governments' responsibilities were substantially enlarged. Reflecting the first wave of decentralization in the late 1950s, the subnational fiscal revenue to total national fiscal revenue ratio jumped from 20 percent in 1958 to 76 percent in 1959 (table 2).[10]

Corresponding with the second wave of decentralization in the "Cultural Revolution," the subnational fiscal revenue (expenditure) to national fiscal revenue (expenditure) ratio increased from 65 percent (37 percent) in 1966 to 88 percent (50 percent) in 1975 (table 2).

As a result, China had already established hundreds of relatively self-contained regional economies at the outset of the reforms. The majority of the two thousand counties had SOEs producing agricultural machinery, while 300 counties had steel plants. Small regional SOEs produced 69 percent of China's total fertilizer output and 59 percent of its total cement. More than twenty provinces had SOEs producing automobiles or tractors (Xu and Juzhong Zhuang 1998).

[10] By disturbing central planning and destroying markets, while simultaneously removing local financial responsibility, these campaigns degenerated into competitions of exaggerations and lies among subnational officials, which ended up in chaos and eventually created one of the worst catastrophes in world history, in which about 40 million people died of starvation between 1959 and 1961 (Roderick MacFarquhar 1974, 1983, 1997).

This is in sharp contrast to all other formally centralized economies in which specialization and monopoly are hallmarks. With greatly reduced responsibilities, the Chinese central government was much smaller than its counterparts in other centralized economies. When the Chinese reforms started, the number of products directly under the central plan was only 791 (the number was never more than one thousand in the Chinese centrally planned system) and the number of ministries at the center was less than thirty (Yingyi Qian and Xu 1993).[11]

When the reforms took place, after the end of the Cultural Revolution, subnational governments already de facto controlled a great deal of resources in China. Given this inherited governance structure, for both political and economic reasons, granting more autonomous powers to subnational governments is one of the major strategies in the post-Mao reforms, particularly during the first fifteen years of the reforms (Xiaoping Deng 1980, 1986; Shirk 1993; Liu et al. 2006; Wu 2009). Subnational governments were given strong incentives and were directly involved in managing or setting up firms, forming joint ventures with domestic or foreign investors, etc. Many subnational governments have granted de facto property rights to local SOEs and collectively owned firms (COEs) within their jurisdictions (Granick 1990), which account for most of the firms in the nation. Moreover, subnational governments have become more important in all regional affairs, from land allocation, business development, infrastructure construction, and fiscal matters, to law making and law enforcement. Fiscal decentralization reached its peak in 1993, during which time the subnational fiscal revenue (expenditure) to national fiscal revenue (expenditure) ratio was 78 percent (72 percent) (table 2).

To analyze the economic incentive and coordination mechanisms of the Chinese RDA system, the governance structure is modeled as a stylized multiregional governance form (*M*-form) (e.g., Qian and Xu 1993; Eric Maskin, Qian, and Xu 2000; and Qian, Gerard Roland, and Xu 2006, 2007). In the *M*-form hierarchy, every region is controlled by the central government politically, whereas each region not only enjoys a certain degree of autonomy but also is self-contained in its functions.[12] Figure 2 depicts a highly stylized Chinese regional governance structure in which each region is self-contained (in contrast to specialization): each subnational government controls major functions within its jurisdiction, such as personnel, finance, industry, and agriculture. As a comparison, specialized ministries control industrial firms and the central government is responsible for coordinating the complementary tasks of various ministries in other formally centralized economies.

2.2 *Centralized Political Governance*

Although highly decentralized economically, China is neither a de jure nor a de facto federal state. The backbone of China's RDA regime is the Chinese Communist Party (CCP), which controls the personnel matters of subnational governments and commands high economic sectors (e.g., banking, energy, telecommunication, railway, etc.), as well as controlling ideology and the mass media.

The dominant role of the CCP makes the RDA regime of China fundamentally

[11] As a comparison, in the Soviet Union the central planning system was based on the principle of functional specialization, and the central government directly controlled most of the SOEs. In the late 1970s, there were sixty-two ministries under the Gosplan, which were responsible for 48,000 plan "positions" or twelve million products (Alec Nove 1983).

[12] The term *M*-form was first used by Alfred D. Chandler (1967) and Oliver E. Williamson (1975) to characterize multidivisional structure of large corporations, where divisions are self-contained and are granted autonomous power, while division chiefs are appointed by the headquarters.

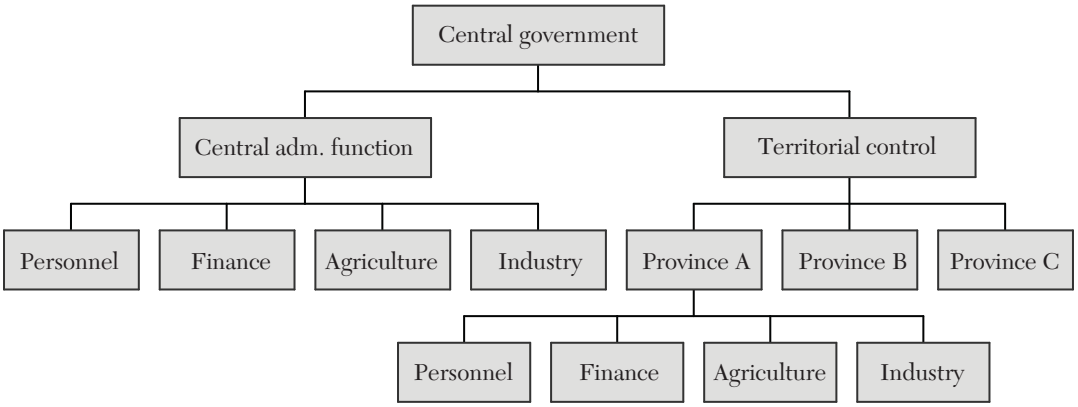

Figure 2. Stylized Governance Structure of China

different from a federal system. Firstly, by constitution, China is not a federal state. The Chinese constitution has been amended during the reforms, reflecting the changes of Chinese political and economic institutions. However, both the prereform version and the latest version of the Constitution stipulate that regions have no inherent power, and regional power is granted by the central authorities. The central government is empowered to delegate power to regions and also to rescind this power (for the PRC Constitution 1975 Amendment, see Chongde Xu 2005; for PRC Constitution Amendment, see Falv Chubanshe 2009).

Secondly, China's RDA regime is not a de facto federal state either. Within the RDA regime, Chinese regional leaders are appointed by upper-level governments through the CCP system—not by regional elections—despite devolution of much power over economic matters to the subnational governments. While subnational governments obtain highly autonomous economic power, the central government maintains its influence on regional officials' incentives by determining their career paths (Yasheng Huang 1996b; Landry 2008). In practice, the central government makes decisions on appointment and removal of provincial leaders, e.g., governors. Similarly, most municipal leaders, e.g., mayors, are directly controlled by corresponding provincial governments. This nested network extends the central government's personnel control to officials of all levels of regions, from provincial to municipal, then to county until the bottom of the hierarchy, township government (John P. Burns 1994). Moreover, reshuffling and cross-region rotation of regional leaders is a common practice to keep central control over subnational officials. From 1978 to 2005, 80 percent of provincial regions have experienced rotation of governors imposed by the central government (Xianxiang Xu, Xianbin Wang, and Yuan Shu 2007). This personnel control approach is the major instrument used to make regional officials comply with the central government's policy and also to provide incentives for regional experimentation, which I will elaborate on in a later section. Moreover, personnel control allows the central government to achieve some macro control, such as controlling inflation (Huang 1996b). Furthermore, through this mechanism, the central government has maintained

considerable influence in consensus building with subnational governments in order to push through policies that are favorable to the central government (Naughton and Dali L. Yang 2004). Nevertheless, it must be pointed out that, although this approach worked sometime on high priority issues, it frequently failed on many other important issues (section 6 further discusses this).

2.2.1 *Evolved Decision-Making Process of the Central Leadership*

In this subsection, I will discuss how the decision-making process of the CCP central leadership evolved and how it works. In the post-Mao era, China's central leadership sees economic growth as a life and death matter for the regime. It is important to point out that they are not unique among socialist leaders in this aspect. In discussing the general features of socialist systems, Janos Kornai (1992, pp. 160–61) explains that the socialist leaders promise to "eliminate the backwardness very quickly." And the promise "rests on a belief that they can catch up with the developed countries quite fast by virtue of the socialist system's superiority. This belief is a major constituent of the official ideology. The leaders insist on fast growth because it will provide further evidence of that superiority." There is a large literature on "forced growth" in former socialist economies (Kornai 1971, 1992; Gur Ofer 1987). Indeed, many speeches by Deng (e.g., 1987) and other Chinese central leaders concerning the central importance of growth echo those of Josef V. Stalin and Nikita S. Khrushchev.[13] Yet, the promise of fast growing was not fulfilled in the last fifteen years of their reforms in former Soviet Union and Central-Eastern Europe until the collapse of the system (Kornai 1986, 1992). What makes China different is that they have transformed the system into a mixed economy with an overwhelming private sector and integrated into the global economy

However, this transformation evolved and is not designed by anyone. On the surface, China's reform looks like a "pure" economic reform without a major corresponding political change.[14] Nevertheless, as a matter of fact, the post-Mao reform started from astonishing political changes, which resulted in the change of the central leadership and the change of the central decision-making process of the CCP. After three decades' evolution, today's RDA regime is fairly different from the CCP regime during the Mao era, although the political changes were restricted to those necessary for enabling economic reform, with focuses on establishing the party rules, on personnel changes to weaken those who might block reforms, and on the selection mechanism of leadership succession.

In the prereform era, the central decision making of the CCP was dominated by a charismatic figure, Mao Zedong. In the revolutionary era, the CCP was fairly decentralized in that many important decisions were jointly made between central and regional leaders, or made by regional leaders. Regional power was a very strong element in the

[13] Stalin (1931 [1947, p. 356]) said "One feature of the history of the old Russia was the continual beatings she suffered . . . for her backwardness . . . We are fifty or one hundred years behind the advanced countries. We must make good this distance in ten years. Either we do it or they crush us." Khrushchev (1959, pp. 76–77) claimed that the socialist system will outcompete the Western world by faster growth and eventually bury them.

[14] Given the nature of communist ideology and the radical practice of the CCP in the Mao era, if there was indeed no important political change then China's market reform would indeed look puzzling. Shirk (1993) notes that " . . . the Chinese strategy of economic reform without political reform appeared to have worked . . ." (p. 4); "The overall economic success of the Chinese economic reform experience is surprising because we usually think of communist political institutions as rigid and hostile to innovation" (p. 5); and "We expect communist party and government officials to defend their vested interests in the command economy by blocking market reforms" (p. 399).

central decision-making body of the CCP.[15] Soon after the CCP took power in 1949, a dramatic political centralization took place. Although a region-based organizational structure was kept, the most influential regional leaders were "promoted" as central leaders and were physically moved to Beijing in the early 1950s.[16] Simultaneously, China transplanted the Soviet central planning regime and the first five year-plan of China was instituted. This centralization served to establish a centrally planned economy and was welcomed by the CCP elites. As in the Soviet Union, the objective of the CCP was "to build a strong socialist economy" [the 8th National Congress of the CCP in 1956, see Research Center of CCP History 2009]; and most SOEs were controlled centrally by ministries.

Through significantly weakening regional leadership, this centralization substantially strengthened Mao's personal control over the party, from personnel matters to the central decision-making process.[17] Mao managed to strengthen the cult of his personality by transforming the central decision-making process into a series of political games in which his potential rivals were weakened through fighting with each other. Without any rival at the subnational level, Mao launched campaigns that delegated substantial power to subnational governments, thus further weakening the power of his rivals in the central government (MacFarquhar 1974, 1983, 1997). The personal control and campaigns mutually reinforced each other, and the influence of the campaigns was far reaching. In addition to changing the behaviors of the subnational officials, it deeply affected the governance structure of the party and of the state.

With an extremely ambitious economic growth plan for speeding up China's transition to a Communist society, the Great Leap Forward (GLF) and the People's Commune Campaigns were launched in the late 1950s. Not only did the campaigns once again dramatically decentralize the economy as discussed previously, they also changed the central decision-making process. Since then, the Chinese economy has sharply deviated from the classical Soviet central planning model.

The "Cultural Revolution" (CR), launched in 1966, is much more than another wave of decentralization. To a large extent, it unintentionally prepared the necessary political and institutional conditions for post-Mao reforms. The CR campaign mobilized the masses and CCP leaders at all subnational levels to follow Mao directly to fight against party and government bureaucrats.[18] There was an anarchy-type of decentralization through which party/government organizations at the central and subnational levels were replaced by mass organizations. The mobs enforced strict censorship that any idea different from Mao's was absolutely not tolerated. During this period, with the slogan "down with capitalist runners," most of the party apparatuses and central government bureaucracies were dismantled; most party/state/social elites were purged, including the president of the country; regional "revolutionary rebellions," with self-proclaimed loyalty to Mao

[15] For example, in 1949, eight out of the fifteen Politbureau members of the 7th CCP Central Committee were regional leaders.

[16] The most prominent figures include Deng—became the CCP General Secretary and was purged in 1967, Gao Gang—became the vice President of China and was purged/died in 1954, Chen Yi—became vice Premier and was purged in 1967, Xi Zhongxun—became vice Premier and was purged in 1962, and Deng Zihui—became vice Premier and was purged in 1962.

[17] In China's imperial history, during the onset of each dynasty, it was typical that a new emperor would centralize power to weaken powerful regional rivals, such as warlords, for the sake of consolidating the regime. Mao discussed this issue many times.

[18] Two years before launching the CR, Mao warned subnational officials including county level officials that they should refuse to follow and should resist the revisionist central leadership (Quanxing Xu 1995).

were supported by Mao's lieutenants and "seized powers (*duoquan*)" at all levels of subnational governments from the CCP, sometimes through civil wars (MacFarquhar and Michael Schoenhals 2006); and finally, subnational governments became the most important level of government for managing the economy, given that most ministries closed down.[19] The devastation awakened the majority of the party and social elites and the legitimacy of the CCP was deeply shaken through the CR's overwhelming destruction. All of these paved the road to making major changes, to changing the decision-making rules and the objectives of the CCP after the death of Mao.[20]

The coup d'état of 1976, a few weeks after the death of Mao, in which Madam Mao and her lieutenants were arrested, eliminated those who insisted on continuing the CR from both the central leadership and subnational levels. Consequently, a large number of CCP high officials, who were purged during the CR and were keen to make a radical change, returned to power, and propaganda campaigns were launched to change the ideology of the CCP from one of class struggles to one of economic development.[21] The CCP central leaders forged a new consensus on the following major issues: (a) the monopolistic political power of the CCP must not be challenged; (b) within the confines of, and to strengthen, condition (a), economic development should be interpreted as the essence of socialism, and thus of the utmost importance; and (c) regarding the central decision-making process, personalistic regime should be replaced by party rule, i.e., a consensus-based collective decision-making process (Deng 1984; Ziyang Zhao 2009; Rui Li 2008; Zemin Jiang 1997).[22] This was a watershed period in which the CCP began to transform itself from a personality-ruled party into "a system governed by rules, clear lines of authority, and collective decision-making institutions" (Shirk 1993, p. 399). Moreover, economic development has become the objective of the party and the state.

These critical personnel and ideological changes were consolidated in the Third Plenum of the 11th CCP Central Committee in December 1978.[23] The communiqué of this plenum became the official manifesto for political, ideological and economic change. Consequently, the "Four Modernizations,"

[19] The self-contained and self-sufficient regionally decentralized structure was further reinforced in the early 1970s when most of the counties in the nation were encouraged to setup small industrial firms in five major sectors (Wong 1987).

[20] A failed attempt to change the central focus of the CCP before Mao's death is more than a prelude of the post 1978 reform. There was a belief among the top CCP leaders that the CR has brought the Chinese economy to the verge of collapse and refocusing the central task of the CCP to the economy is a matter of life and death to the party (in later years Deng repeated these arguments many times, e.g., 1980, to justify the changing of the central task of the CCP). In 1975, the premier Zhou Enlai, together with Deng, a deputy premier after being purged for many years, launched the so-called "Four Modernizations" (modernization of agriculture, industry, science and technology, and defense) campaign. This campaign represented a rising consensus among most CCP elites. More importantly, they underlay a competing legitimacy for the future party leadership. Challenging the revolutionary theme of the CR, this de facto reform incited intensive political fights as part of the succession of the CCP's leadership. Although this reform attempt was crushed politically by the left-wing faction with formidable support from Mao, this aborted agenda became a platform for changing the CCP and it reminded the CCP reformist elites that a pure economic reform would be blocked without political change.

[21] Before Deng returned to power in late 1978, most of the major changes were lead by Hu Yaobang, the minister of the CCP personnel department and the de facto head of the Central Party School (Jiwei Hu 2008, 2009).

[22] The following argument of Deng (1994b) well represents the goal of the CCP: "to build socialism it is necessary to develop the productive forces . . . Not until . . . we have reached the level of the moderately developed countries, shall we be able to say that we have really built socialism and to declare convincingly that it is superior to capitalism. We are advancing towards that goal."

[23] Although the Third Plenum of the 11th Central Committee of the CCP officially changed the objective of the CCP to economic development under the slogan "the Four Modernizations," reform was not in the agenda of the Plenum (Hu 2009).

the slogan of the Third Plenum of the 11th Central Committee of the CCP, and later "Reform and Open-up," which replaced the "Four Modernizations" after the 13th Congress of the CCP in 1987, emerged as the official objective of the CCP.

To some extent changing the foundation of legitimacy of the CCP to one of economic development does not contradict communist ideology and is not unique to the post-Mao CCP, although this may be at odds with other types of dictatorships.[24] Perhaps more important than ideology, economic development is regarded as essential for the survival of the regime. Yet, the much more challenging issue is to find a way to fulfill the objective of economic development. Essential issues of how to reform the economy and through which approach the economy should be or can be developed were indeed highly contentious among the top CCP leaders (Zhao 2009). Should the economy be developed by restoring the Soviet central planning model, as China did in the first five-year plan? Or should it be developed by transforming the economy into a market system? Should the political system be reformed together with economic reforms? What should be the direction for a political reform? There were sharply different views on these issues among the CCP central leaders; more importantly, there were power struggles associated with these differing views.[25]

Given the inherited RDA institution, dealing with political risk and technical uncertainty, a general reform strategy, marked by a local experiment-based collective central decision making process, emerged. Decision-making powers for trying out concrete measures were delegated to subnational governments, whereas the central government kept control of strategic political and economic issues (Deng 1984). This approach makes a consensus-building-based decision making more progressive.[26] Therefore, most strategic decisions on China's market reform were

[24] According to Marx, one respect in which socialism is better than capitalism is its higher capacity for advancing "productive forces." Thus, in order to prove the validity of the communist party's doctrine, it is necessary to deliver a higher growth rate than those of capitalist economies. For this reason, most communist leaders in Soviet Union and Eastern Europe, even including Mao in the 1950s, tried hard to make their economies to grow faster, although they all failed eventually. The following argument of Deng (1994b) well represents the ideology of the post 1978 CCP, "to build socialism it is necessary to develop the productive forces . . . Not until . . . we have reached the level of the moderately developed countries, shall we be able to say that we have really built socialism and to declare convincingly that it is superior to capitalism. We are advancing towards that goal." Indeed the multiple decades' unsuccessful reform efforts in Soviet Union and Eastern European countries were all driven by their attempts to regain growth impetus in those economies. The collapse of the Soviet Union and the whole Eastern Bloc made the CCP top leaders feel that continued economic development was crucial for the survival of the regime. For example, former vice premier Tian Jiyun attributed the collapse of Soviet Union and the Eastern Bloc to their decades' failures in improving their productivities (Mingming Du and Qingquan Xu 2009). Yet it should be noted that, in both communist ideology and policy, neither "advancing productive forces" nor pursuing high growth rates implies social welfare maximization in the sense of neoclassical economics. In reality, all socialist economies have substantially smaller shares of consumer consumptions in their GDPs than those of market economies. This indicates that growth maximization of socialist economies is divorced from pursuing social welfare. For further analysis and more details on forced growth in socialist economies, see Kornai (1980, 1992).

[25] Deng, Zhao Ziyang, and Hu Yaobang etc. shared a pro-market approach, whereas Chen Yun, Li Xiannian, Bo Yibo, and Hua Guofeng etc. had a strong view insisting on central planning (Deng 1984; Zhao 2009; Li 2008). On political aspects, Hu and Zhao pushed for political pluralism within the one-party system as a part of the reform. Sometimes Chen Yun also proved more amenable to other views for maintaining the party rule rather than promoting political pluralism. However, Deng, Li, Bo, and most other elder CCP top leaders had strong views insisting on strict ideological control combined with repression of political dissidents (Zhao 2009; Li 2008; Tong Bao 2009). Here, ideological control is essentially about the compliance to the voice of the CCP central leadership, rather than any particular theory or doctrine.

[26] "The Chinese government bureaucracy . . . always made decisions by consensus." "Consensus decision making institutions tend to be conservative because radical departures from the status quo are blocked by vetoes from groups who stand to lose" (Shirk 1993, p. 15).

made "collectively" in the form of compromises among the top CCP leaders in a trial-and-error process. "Collective" here has a broad meaning in that it includes also subnational officials' contributions through their local policy experiments.

Political challenges and resistance to a reform are weakened when a new reform is tried only in a few regions as experiments, such as the special economic zone experiments (to be further discussed in section 4.2). More importantly, for reforms bearing high political risks, the reformist central leaders could be vague without making an explicit decision when local experiments were allowed without an official endorsement, which implies a central leader will not take serious responsibility if something goes wrong with the experiment. The process of the land reform in the early 1980s and privatization in the late 1990s, which were major breakthroughs if we compare them with the two decades' reforms in CEE–FSU before 1989, are illustrations of the advantage of local experimentation (to be elaborated in sections 4.2 and 5.4). It is also pragmatic because the CCP top leaders, including those who pioneered market reform in China, knew little about how to transform the Chinese economy into a market economy (Zhao 2009). It was much safer for them to follow some successfully tested reform measures than to implement some designed programs.

Moreover, regional competition helps to contain the impact of conservative ideology, and thus is a de facto selection mechanism in local experiment-based central decision making. Indeed, not all central and subnational officials are pro-market reformists and not all local experiments are market reform trials. Just as Chinese regions are heterogeneous, there were all kinds of experiments being tried, from egalitarian collectives to private businesses. However, outcomes of market reform experiments often dominated other experiments in regional competitions, and most of the time what matters most in the decision-making process is performance.

This local experiment-based central decision-making process also makes reform progress more stable, since the early reforms created strong interest groups not only among central leaders but also among subnational officials, particularly those who initiated "their own experiments." Through the basic operating mechanisms of the RDA regime, the built-in interests and pro-reform interest groups among subnational officials became a valuable stabilizer for the reform policies. Another important decision process, which establishes the continuity of reform policies in the long run, is the way the future central and subnational leaders are selected (I will discuss this in the next part when I deal with the central–regional relationship). Economic development as the base of legitimacy for the CCP central leadership has been reinforced during decades of reforms. As a result, this objective is codified into the amended constitutions of the Party and the state. Capitalist entrepreneurs are officially regarded as part of "advanced social productive forces" and are recruited into the party (the CPC Constitution, the 16th CPC Congress 2002) (see Bruce J. Dickson 2003). The Chinese constitution has also been amended to protect private property rights (Constitutional Amendment 2004).

2.2.2 *Personnel Control*

Personnel control is a major channel through which the central government controls, coordinates, and motivates subnational officials. With this instrument, the Chinese RDA regime implements a centrally controlled decentralization in which most tasks of reforms and economic development are carried out by subnational governments. On the one hand, regional officials control huge amounts of resources and they enjoy

fairly broad autonomies within their jurisdictions; on the other hand, their career paths are controlled by the central government. Specifically, appointments, promotions, and demotions (or more severe punishments, such as imprisonment for serious violations of the rules) of subnational officials in China are ultimately determined by the central government, and their career paths are tied to the performance of their jurisdictions. This makes Chinese economy fundamentally different from a federal system.[27]

This personnel control system is a nested network in which the center directly controls the key positions at provincial level and grants each tier of subnational government the power to appoint key officials one level below it. Each level of subnational government oversees the appointment, evaluation, promotion, and dismissal of its subordinate-level regional leaders.

A set of performance criteria for leading officials at subnational governments is stipulated by the level of government above it. Regional officials are assessed in accordance with the important tasks and targets laid down by their superior level of governments. Level by level, each level of subnational government negotiates with their subordinate subnational government for performance targets. Then, regional officials at different levels sign target responsibility contracts with their superiors. The targets for the tasks to be attained as well as rewards/penalties contingent on the fulfillment of those targets are specified in those contracts (Kai-yuen Tsui and Youqiang Wang 2004). For example, in a scheme for provincial leading officials, 60 percent of these leaders were assigned to targets related to economic construction (Tsui and Wang 2004). In general, performance criteria are broader for leading officials at higher-level subnational governments, while the targets set for leading officials at lower level subnational governments tend to be more precisely defined. According to a handbook issued by the Party, work achievement accounts for 60 to 70 percent of the evaluation of regional officials, while other aspects, such as political integrity, competence and diligence together account for the rest, 30 to 40 percent (Maria Edin 2003).

It is also documented that county governments control township and village officials by linking their performance to promotion (Susan H. Whiting 2000). In field works at township-level governments, it has been found that party secretaries and township heads sign performance contracts with the county level. In these contracts, township officials pledge to achieve targets established by county officials, and are held personally responsible for attaining those targets. Performance targets are ranked in three categories: soft targets, hard targets, and priority targets with veto power. Hard targets tend to be economic, such as an economic development plan and tax revenue, whereas priority targets are often political, such as keeping social order. Fulfilling hard targets is important for bonuses and for political rewards, whereas completion of priority targets affects personnel decisions (Edin 2003).

Moreover, competition between regional officials among the same level, such as at the county level or township level, is an essential part of the cadre management system. As discovered in fieldwork in one county, leading cadres of the first three ranked townships in the annual evaluation were recognized as "advanced leaders," whereas the bottom 5 percent of officials on the list were disgraced. To be a top-ranking township leader and

[27] It is interesting to note that this governance structure of Chinese government, i.e., a combination of a centralized personnel control and a decentralized operation/implementation, shares some similarities with the Japanese corporate governance structure, particularly before the 1990s (Masahiko Aoki 1990).

to be awarded with the title of "advanced leader" enhances the chances for promotion substantially, and thus it is regarded as a "political bonus." Indeed, some first-ranked township officials were promoted within the county (Edin 2003).

To enhance the effectiveness of the personnel control system, rotation and cross-region transfer are also deployed. The practice of rotating provincial-level officials has always existed, and it has been further institutionalized since the 1990s. The Central Committee of the CCP has issued Party decrees on the rotation system in 1990, 1994, 1999, and 2006. The Party decrees announce that a major purpose of rotating regional officials is to promote economic development through diffusion or duplication of regional reform experiences (Xu, Wang, and Shu 2007).[28] Directed by this policy, during the period between 1978 and 2005, about 80 percent of governors were promoted or transferred from other provinces, i.e., many of them were not promoted within the same province. The average duration of their tenures within a given province is close to four years, while ranging from as little as one year to as many as ten years (Xu, Wang, and Shu 2007).

It has been documented that, during the reform era, rotation was often combined with promotion. The rotation/promotion combination was frequently used to promote mayors of successful municipalities to be governors of other provinces, particularly underperforming provinces. This promotion path creates incentives for regional leaders to work hard. Moreover, this may also serve as a mechanism to diffuse successful regional experimentation (I will further discuss regional experiments in section 4). For example, between 1998 and 2004, three former party secretaries of Suzhou, one of the best-performing municipalities in China, were promoted to become provincial governors of Jiangsu, Shaanxi, and Jilin. Between 1998 and 2002, a former mayor of Wenzhou, another top-performing municipality, was appointed as vice-governor and then governor of Sichuan (Shiuh-Shen Chien and Litao Zhao 2007).

[28] Historically, rotation was a common practice in the Chinese Empire to prevent regional officials from cultivating strong political power bases within their jurisdictions.

2.3 *The Central–Regional Relationship*

The central–regional (or central–local) relationship has always been one of the most important issues when considering China's governance. Although the formal structure is hierarchical between central and regional governments, the authority of the central government is endogenized insofar as the power of the national leadership depends on the collective support of the regional leaders as well. This sophisticated structure plays important roles in the operation of the RDA regime, such as continuing effective national macroeconomic policies, encouraging regional initiatives, and balancing central–local interests.

One of the most important governance mechanisms of the RDA regime is the selection process for the future central and subnational leaders. The process includes nominations and approvals. Nomination by top leaders is necessary for anyone to become a central leader candidate, but nomination alone provides no guarantee for the future of the candidates. A nominee must convince most of the top leaders that he both shares their core values and principles, and he has the capability to perform. As such, excellent performance at the provincial level becomes necessary for anyone to be nominated and eventually promoted as a top leader. Although this requirement may not be codified formally, without a single exception, from 1992 to 2008 every president, every premier, and every newly elected Politbureau Standing Committee member of

the four CCP congresses[29] during this period was promoted from a provincial position; i.e., none of them were from a ministerial or other central agency position. The appointment of subnational level officials follows a somewhat similar consensus-based selection process, with intensive interactions between upper and lower-level governments. In addition to major impacts on both the subnational officials' career paths and the pool of future top national leader candidacy, these procedures also act as institutions that balance national and regional interests.

Supported by commonly shared collective interests among most national and subnational officials, the central leadership enjoys considerable authority over potentially disobedient regional leaders. With this authority, the central government takes a tough stand to make the subnational governments comply on the most important issues, such as national (or political) unity and macro stability. Personnel control is often used as the last resort for enforcement to guarantee the implementation of central policies.[30]

At the same time, as previously discussed, the central government is often fairly hands-off on regional economic issues. Subnational governments are granted sizable de jure control rights and endowed with even greater de facto control rights over most economic issues and resources within their jurisdictions. Together with a highly incomplete personnel control regime—although it is highly structured and effective, it is ambiguous on many issues and there are gaps in other issues—the delegation of power to regional governments is also highly incomplete (a la Katharina Pistor and Xu 2003). For most issues, as long as the central government does not have an explicit policy, by default the regional governments would be in the position to make decisions within their jurisdiction. However, the central government retains the power to intervene. The incompleteness of personnel control and power delegation is partly a result of compromises and partly a design for encouraging more local initiatives from local governments, while still remaining open to central control. At the same time, this regime also makes it possible for subnational governments to maneuver against, rather than to simply comply, with policies of the central government.

To understand the distinctive feature of China's RDA regime, such as the enablement of local governments, it is worthwhile to point out its origin and its robustness in history. The basic governance structure of China's RDA regime originated from the birth of the Chinese empire and has evolved over two thousand years, which has supported the empire to last so much longer than all other empires in world history,[31] and has a long lasting impact on the governance of today's China.[32]

Designed at the beginning of the Qin Dynasty (221 BC), subnational government

[29] A common practice of the CCP is to put the selected next top leader(s) into the Politbureau Standing Committee.

[30] When a few regional leaders defy the central government and challenge the power of the central government, they are punished severely. Recent examples include the dismissal and imprisonment of the former mayor of Beijing, Chen Xitong, in 1995, and the former mayor of Shanghai, Chen Liangyu, in 2006.

[31] It is well known that institutions of most of the countries in the world have a European origin through their imperial histories, e.g., the United Kingdom and France; or colonial histories, e.g., the Americas, Africa, and South Asia; or voluntary adoptions of the European institutions, e.g., Russia, Japan. But it is well noticed that China has neither been colonized by Europe nor adopted European institutions systematically before the 1950s, when it adopted an institution from the Soviet Union. This is the underlying reason why, on many facets, China looks inconsistent with the regularities discovered in cross-country studies.

[32] Indeed Mao frequently referred to the governance approach of imperial times, perhaps more than his discussions on Marxism and the Soviet system.

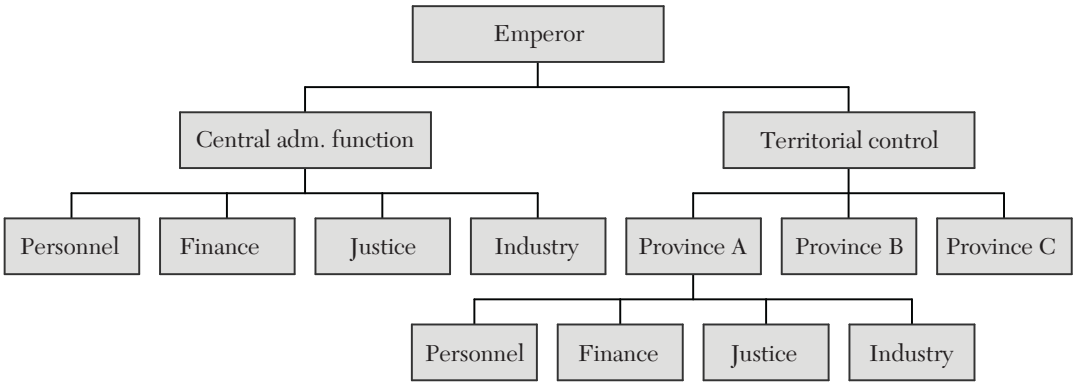

Figure 3. Stylized Governance Structure of Imperial China

officials were appointed by the Emperor (Qian Sima 1993 [109 BC]). This assures the emperor's strategic control over the nation. Given the primitiveness in communication and transportation at that time, most local affairs were delegated to subnational governments, conditional on their loyalty to the Emperor. To enable subnational governments' effective control, they are assigned with self-contained functions that each of them was able to coordinate operations within its jurisdiction. This is true at all levels of subnational governments. To illustrate the self-contained governance structure at every level of subnational governments, figure 3 depicts a stylized structure similar to that of imperial China during the Ming and Qing dynasties (1368–1910) in which the empire divided the central government's functions into six ministries. The most important ministry was Personnel (*li bu*), which determined the appointment and promotion of central and provincial officials. This structure extends to the bottom administrative level, the county level. Just like in the central government and at the provincial level, a typical county (*xian*) government controlled the six corresponding offices within its jurisdiction (Gang Bai 1996).[33] A caveat is in order that during imperial times there was no political party, such as the CCP, which makes today's RDA regime historically unique.

The consensus-based decision-making process and personal control system of the RDA regime provide mechanisms for upholding a balance between economic decentralization and political compliance. These mechanisms allow the regime to evolve while keeping the central–regional relationship basically stable.[34] There were deep worries that delegating economic powers to regions undermined the capacity of the central power (Shaoguang Wang 1995). And in the early period of the reform, the

[33] The six ministries at the central government are Ministries of Personnel (*li*), Finance (*hu*), Civil Service Exam and Foreign Affaires (*li*), Military (*bing*), Justice (*xing*), and Manufacturing (*gong*), i.e., *li-hu-li-bing-xing-gong liu-**bu***. The six similar offices at each county government are *li-hu-li-bing-xing-gong liu-**fang***. Here, ***bu*** and ***fang*** are in bold to highlight the difference between the central government (six ministries, *liu-**bu***) and a local government (six offices, *liu-**fang***).

[34] It has been reported that during the reform era, in a period of more than two decades, the provincial share in the Politburo of the CCP increased slightly; meanwhile, the provincial share in the Central Committee of the CCP declined by a similar magnitude (Yumin Sheng 2005).

time associated with much regional decentralization, the central government's share of national total fiscal revenue declined substantially. When the economy was growing rapidly and some regional governments enjoyed high surpluses, the national government ran deficits and had to borrow from some provinces. Moreover, central power could be further weakened by the enfranchisement of regional leaders in Party institutions during national-level successions (Shirk 1993).[35] It was argued that capacity of the central government was undermined so severely during the reform era that this weakened capacity threatened Chinese political unity in a manner similar to the situation before the disintegration of Yugoslavia (Wang and Angang Hu 2001). Responding to the worsened central fiscal capacity and weakened central control over bank lending—which led to central government deficits, excessive lending, and inflation in the early 1990s—the central government increased its political and administrative control over provincial government leaders to coordinate and implement national economic policies (Huang 1996a, 1996b; Naughton and Yang 2004; Landry 2008). During this time, the central government took away some powers from subnational governments. Tax collection was recentralized in 1994, and control over bank lending was also shifted away from subnational governments (Tsui and Wang 2004). However, this fiscal recentralization did not fundamentally change the RDA regime and did not terminate regional decentralization. These should instead be viewed as efforts to maintain a balance between the interests of national and subnational governments. Regional governments' losses in tax revenue were compensated by other means, such as extra-budgetary and nonbudgetary revenues (Wong 1997), and their losses in controlling bank lending were compensated by stronger controls over land and state assets within their jurisdictions (subsection 6.1 discusses the consequences of these changes).

[35] Shirk (1993) argues that the content and sequencing of China's economic reforms are determined by the ongoing succession struggles of the Party, whereas devolution gave central politicians the opportunity to win the gratitude and the political support of officials from the provinces.

2.4 *General Remarks*

The decision-making process of China's RDA regime relies on building consensuses among the top leaders—often including provincial leaders—and regional experiments, which keeps a balance between national and regional interests. This mechanism generates outcomes that are somewhat similar to what occurs through negotiations in a legislative body. Moreover, together with the selection process of national and subnational leaders, these mechanisms nurture interest groups of market-oriented and growth-oriented reforms within the party, which contributes to stable market reforms over several decades.

Although China's RDA regime is evolved from China's unique history (e.g., the longest imperial history in the world and the unprecedented events of the Cultural Revolution), which makes its policy lessons less relevant directly for other countries, there are important general lessons for debates on decentralization. Firstly, for developing and transition economies, focusing on fiscal decentralization can be misleading for both understanding and policies. Secondly, extreme decentralization in general may not be optimal. If China went down a path of extreme decentralization in which all provinces became completely autonomous except in military and foreign affairs, even assuming away potential political instability, without an active central government all the benefits from the combination of collective decision making and regional experimentation would disappear; negative externalities across regions would become prevailing; and no one would take care of positive externalities

across regions. Moreover, the nature of regional competition and regional experiments would be fundamentally weakened (to be discussed in sections 3 and 4).

3. *Regional Competition and Subnational Governments' Incentives for Reforms*

A distinctive feature of China's reform is the vital roles played by highly motivated subnational governments. Governors Zhao Ziyang of Sichuan and Wan Li of Anhui initiated land reform experiments in a few localities within their jurisdictions in the late 1970s when the national policy, including the Party's "reform" manifesto, did not allow any ownership change to collective farming. Similarly, governor Xi Zhongxun of Guangdong proposed the special economic zone reform while some top central leaders were hostile to this reform plan (sections 4 will elaborate on this below). Later, when those locally initiated reforms were endorsed by the central government as national policies, the reforms were implemented by all levels of government nationwide. After the initial success of the regional reforms, these reform pioneers were all promoted to national level posts. Zhao and Wan became the premier and executive deputy premier of the state council, respectively, responsible for national reform; Xi became a vice Chairman of the National People's Congress.

As the pioneers and architects of regional reform, the political risks they faced were substantial. The key issue I will address in this section is how subnational government officials are motivated to initiate and to implement reforms. Without a solution to incentive problems of government officials at all levels of government, reform would not be carried out successfully or potentially not even be attempted. There is no question that some reformists have intrinsic personal motivations (a la Canice Prendergast 2007) to push forward reforms. For those officials with intrinsic motivations to reform, the only incentive that needs to be devised is to give them the power to initiate and to implement reforms. However, extra incentives, i.e., extrinsic incentives, are necessary for most subnational officials to take risks and to work hard for reforms. Furthermore, very often well-devised extrinsic incentives can induce stronger intrinsic incentives and vice versa, so that the two incentives often reinforce each other at equilibrium (a la Roland Bénabou and Jean Tirole 2003). By the same logic, poorly devised or destructive extrinsic incentives could weaken or even destroy intrinsic motivations for reforms. In this section, I will focus on the extrinsic incentives provided to Chinese subnational officials. My major argument is that interregional competition has motivated subnational officials to push forward reforms. Chinese regions (provinces, municipalities, counties, and townships) compete against each other for performance rankings and regional officials' careers are linked to their performance in the "tournaments." [36]

As bureaucrats appointed by their upper level governments, most Chinese subnational officials are very much motivated by their career concerns, which are basically about climbing ladders within the government hierarchy. Through this channel, the central government affects the ultimate incentives of the subnational officials. It is noteworthy that this mechanism is fundamentally different from the well-known jurisdictional Tiebout competition, or in general fiscal jurisdictional competition in the fiscal federalism

[36] The most popular performance indicators used in regional rankings are GDP (total or per capita), GDP growth rate, and FDI. In addition, some other indicators, such as regional competitiveness in various aspects, are also widely reported. For example, in a recent ranking, Shanghai, Beijing, and Guangdong were ranked as the first, second, and third most competitive regions in China in 2007, which is unchanged from those in 2006; whereas inland provinces Anhui and Hubei improved their rankings significantly (Xinhua 10/03/2008).

literature. The latter has nothing to do with the internal promotion of the local government officials. Instead, local officials are driven by their fiscal motives, e.g., maximizing property values within their jurisdictions by attracting additional residents (Charles M. Tiebout 1956; Wallace E. Oates 1999) or by winning votes from their constituencies (Dennis Epple and Allan Zelenitz 1981).

3.1 *The Institutional Foundation for Regional Tournament Competition*

In this subsection, I elucidate how China's RDA institution creates the conditions for regional competition, as well as the tradeoffs of this regional competition. When the reform era started in the late 1970s, regional governments were encouraged to find ways to develop faster than other regions. Policies on special economic zones and other economic development zones were implemented, enabling subnational governments' competition for investments. Regions compete for economic growth and for attracting FDI, etc. Since the mid-1980s, many better-performing counties were upgraded to the municipal level, which further enabled and empowered these local governments. At the same time, this city status upgrading also provides high incentives to all the county governments to compete for the opportunity to be promoted. Government statistics and mass media regularly publish rankings of regional performance, which become an important part of evaluations for determining the promotions of subnational government officials.

In contrast to the prevalence of regional competition and initiatives taken by subnational governments in Chinese reforms, officials in other reforming countries or other transitional economies were not given similar competitive incentives and they were, in general, less active in taking initiatives than their Chinese counterparts. Yet, decentralization does not automatically create strong incentives to regional officials for regional economic growth, as can be seen in most other countries. What makes China special in providing strong incentives to regional officials for economic development? Furthermore, there are serious potential problems associated with decentralization, such as regional protection and regional environment problems. What are the conditions under which regional competition leads to desirable outcomes?

To address the first question, let me start with a summary of the major features of Chinese institutions that facilitate regional competition. First, Chinese subnational officials are subject to incentive schemes managed by the central government. With centralized personnel management for subnational officials, regional competition under this institutional structure is qualitatively different from fiscal federalist regional competition in which local officials are elected (Epple and Zelenitz 1981). Second, the Chinese national government not only possesses superior powers of appointment, promotion, and dismissal of subordinate government officials, but it is also strong enough to eliminate collusions between lower level subnational governments. This preserves tournament-like regional competition since collusion among subnational officials can make competition impossible. Third, Chinese regions, particularly county-level or higher-level regions, have historically been and remain relatively self-sufficient in that each region contains multiple economic sectors. Therefore, most Chinese regions are alike in their economic structures, which is a critical condition for tournament like competition to function (discussed in more detail below). Moreover, this greatly weakens interdependence among Chinese regions and enables subnational governments to coordinate most of the economic activities within their jurisdictions. Finally, Chinese subnational governments are both enabled

and empowered to take responsibility for economies within their jurisdictions. They are granted a fairly high degree of autonomy on economic activities. Enablement and empowerment themselves are vital sources of incentives. Ultimately, incentives for officials can play important roles only when those officials are enabled and empowered to take reform initiatives or growth-enhancing measures, etc.

The theoretical model of Maskin, Qian, and Xu (2000) highlights the relationship between China's RDA regime and high-powered incentives associated with regional competition, which includes tournament-like competition.[37] The stylized hierarchical organization modeled by Maskin, Qian, and Xu captures the feature of the RDA regime.[38] There are two types of authoritarian structures considered in the model: a multiregional organizational form (*M*-form), such as China, in which there are two unspecialized subnational regions, each of which is assigned to manage similar tasks such as manufacturing and agriculture; and a unitary form (*U*-form), such as the former Soviet Union before 1991, in which there are two specialized subnational units—ministries—each of which is assigned with managing a specialized task such as manufacturing or agriculture. In contrast with China, in those economies there were no ministerial or regional competitions in reform measures or growth-enhancing efforts, even though they started reforms much earlier than China. The Maskin, Qian, and Xu model focuses on incentive issues of subnational officials in order to address the following questions: What is the specific mechanism that makes regional competition effective in China? And what prevented the FSU-CEE countries from deploying a similar approach?

As in any incentive theory, the outcomes of the tasks are determined jointly by the managing efforts of the relevant officials and outside random factors. The officials' efforts are not observable to others and are costly to them; therefore, when there is no proper incentive scheme, there will be no reform efforts. It is known that when facing unobservable efforts, tournament competition can motivate agents better than other incentives schemes (e.g., Edward P. Lazear and Sherwin Rosen 1981). However, an effective tournament competition requires that the tasks of the agents should be similar and that the outside random factors faced by the agents should follow the same distribution. The rigidness of these conditions makes these models hard to apply directly to real-world institutions.

The Maskin, Qian, and Xu model extends the basic idea of tournament competition to different institutions organized in different ways, which determines how tasks are assigned and how information is used by each official. These in turn determine the effectiveness of different incentive schemes for the officials in the regime. Given that Chinese regions are alike in their economic compositions, which implies that shocks to regions are highly correlated, by assigning similar tasks to regional officials and delegating power to them in order to carry out regional reforms, regional competition among them can serve as an effective incentive scheme. To understand the mechanism, let us suppose a governor performs poorly and tries to blame the outcome on bad luck in his region. This excuse is unconvincing, however, if all other similar regions are prospering. Therefore, facing the comparison (or competition) with other regions should force every governor to work hard.

[37] Interpreting the Maskin, Qian, and Xu model as a mechanism of the RDA regime is my personal view.

[38] In addition to authoritarian regimes, the Maskin, Qian, and Xu model also applies to large corporations. This is not coincidental as the Chinese authoritarian regime is sometimes regarded as corporate technocrat-ship or corporatism in the literature (e.g., Jean C. Oi 1999).

On the contrary, if subnational units are highly specialized so that they are not comparable or if tasks assigned to every official are idiosyncratic, which implies that shocks to these tasks are not correlated, such as ministries in former Soviet Union and Central-Eastern Europe before 1989, it is easy for a minister to blame a poor outcome on bad luck in his industrial sector and it is difficult to object to his excuse, given that performance is imperfectly correlated with officials' efforts. That is, ministerial tournament will not be efficient when tasks and information of ministries are sufficiently different from each other. Therefore, although distributions of industry-specific shocks and of region-specific shocks are exogenous, they affect officials' incentives differently under different organizational forms.

Two types of incentives are analyzed in the Maskin, Qian, and Xu model: the absolute performance incentive, which ties an official's compensation to his own outputs, and the relative performance incentive, which links an official's compensation to other's outputs in a negative way. The absolute performance incentive is inversely related to the noise level of each official's own performance, while the relative performance incentive is positively related to the correlation between the performances of two officials. In summarizing the two factors, the incentives of officials in any regime depend on the variance–covariance matrices of the exogenous random shocks. Fortunately, the essential information of variance–covariance matrices can be sufficiently compressed into a scalar, the conditional variation measurement. A smaller conditional variation implies a smaller variation and a larger correlation, i.e., a higher quality of information for incentive purposes.

In a highly simplified version of the model, for an economy organized in *U*-form, the middle officials will be ministries responsible for industries 1 and 2; and the corresponding industrial shocks are denoted as ε_1 and ε_2. The information relevant to the incentives of the two ministers is summarized by the conditional variances $\mathrm{Var}(\varepsilon_1|\varepsilon_2)$ for minister 1 and $\mathrm{Var}(\varepsilon_2|\varepsilon_1)$ for minister 2. For an economy organized in *M*-form, the middle officials are governors responsible for regions *A* and *B*, and the corresponding regional shocks are denoted as ε_A and ε_B. The information relevant to the governors' incentives is summarized by the conditional variances $\mathrm{Var}(\varepsilon_A|\varepsilon_B)$ for governor *A* and $\mathrm{Var}(\varepsilon_B|\varepsilon_A)$ for governor *B*.

Therefore, if $\mathrm{Var}(\varepsilon_1|\varepsilon_2) > \mathrm{Var}(\varepsilon_A|\varepsilon_B)$, then the information quality for evaluating governor *A* in the *M*-form is higher than that for minister 1 in the *U*-form. In general, if $\mathrm{Var}(\varepsilon_i|\varepsilon_j) > \mathrm{Var}(\varepsilon_r|\varepsilon_s)$ (hereafter this condition will be referred to as condition *A*), for all $i, j = 1, 2$ and for all $r, s = A, B$, we will conclude that, everything else being equal, regional competition with relative performance evaluations under the *M*-form is more effective than ministerial competition under the *U*-form. Therefore, the *M*-form will be able to provide better incentives to their governors than the *U*-form for ministers. Of course, if condition *A* is reversed for every pair-wise comparison, the conclusion will be reversed. Therefore, ultimately, whether regional decentralization is more beneficial than a centralized regime is an empirical matter, and the Maskin, Qian, and Xu model provides a methodology to test it.

3.2 *Evidence*

Three forms of systematic evidences on the relationship between China's RDA regime and regional competition will be presented in this subsection. The first evidence concerns whether or not China's RDA regime provides better conditions, in terms of condition *A*, for jurisdictional competition than a centralized authoritarian regime. Then, I survey evidence that regional competition provides incentives to regional officials. The

last evidence suggests that China's RDA regime has made a significant contribution to China's growth.

Using a firm-level dataset of Chinese state-owned enterprises from 1986 to 1991, Maskin, Qian, and Xu find that Chinese regions are indeed "alike" in the sense that regional competition should work better than ministerial competition. The dataset contains industry classification codes and location codes for each firm, and industry-specific shocks and region-specific shocks are estimated by running the log-linear Cobb–Douglas production function. This allows for calculation of regional and industrial conditional variations. In their sample, 70 percent of the results satisfied condition *A* and there is no single case that the condition *A* is reversed.

To address the question of whether relative performance evaluations are actually used in China, Maskin, Qian, and Xu investigate the relationship between the promotion of regional officials and regional economic performance. They use regional representation in the CCP's Central Committee as a proxy for the promotion chances of officials in that region and measure the economic performance of a region by its growth rate in national income. Then they investigate how the improvement of a region's performance relative to other regions would later affect the promotion of this region's officials. Specifically, they constructed a national ranking index of each province's representation at the 11th Party Congress in 1977 and in the 13th Party Congress in 1987, and constructed a national ranking index of provincial economic performance lagged by one year, as measured by growth rates in the year before the Party Congress, that is, in 1976 and in 1986. The evidence shows that officials from relatively better-performing regions have a better chance of being promoted, suggesting that tournament-like regional competition is at work.

Similarly, using data covering 344 top provincial leaders (187 party secretaries and 157 governors) from China's twenty-eight provinces for the period from 1979 to 2002, Ye Chen, Hongbin Li, and Li-An Zhou (2005) find that provincial officials' performances relative to the national average and to their immediate predecessors had significant impacts on their promotions (columns 5 and 6 in table 3). The left-side variable of all the regressions in the table 3 is turnover, i.e., the probability of termination, staying at the same level, or promotion.

Using a panel dataset covering 254 provincial leaders (provincial party secretaries and governors) who served in twenty-eight Chinese provincial units from 1979 to 1995, Li and Zhou (2005) find that regional officials' promotions are determined by the performance of their jurisdiction relative to the national average. Everything else being equal, for those provinces that surpass the average growth rate by one standard deviation from the mean, their leader would increase the probability of his promotion by 33 percent of the average probability of promotion; and those that performed worse than the mean by one standard deviation would increase the probability of termination by 30 percent of the average probability of termination (columns 3 and 4 in table 3). In the table, the punishment for the worst performers is shown as an estimated coefficient with cut-off point 1. Overall, the marginal effects of growth performance on turnover are large.

By separating provincial party secretaries from governors, Sheng (2009) finds evidence that provincial GDP growth mattered for the political fortunes of governors but not those of party secretaries. This may capture the division of labor between party secretaries and governors in the RDA regime given that the former were responsible for party affairs, such as personnel control, whereas the latter were put in charge of running the provincial

TABLE 3
THE EFFECT OF ECONOMIC PERFORMANCE ON THE TURNOVER OF PROVINCIAL LEADERS
(*Ordered probit regressions*)

	Dependent variable: turnover (0 = termination, 1 = same level, 2 = promotion)					
	(1)	(2)	(3)	(4)	(5)	(6)
Provincial annual GDP growth rate	1.615**	1.581*				
	(2.05)	(1.87)				
Provincial average GDP growth rate			4.727***	4.540***		
			(4.34)	(3.90)		
Provincial average per capita GDP growth rate (A)					3.001**	
					(2.10)	
Provincial average per capita GDP growth rate of the immediate (B) predecessor (B)					−3.584**	
					(2.36)	
(A)−(B)						3.309***
						(3.41)
Age		−0.026*		−0.023*	−0.071***	−0.070***
		(−1.91)		(−1.68)	(6.81)	(6.77)
Age 65		−0.974***		−0.976***	−0.303**	−0.303**
		(−5.27)		(−5.25)	(2.07)	(2.07)
Education		0.154		0.187	0.183	0.184
		(0.96)		(1.17)	(1.48)	(1.50)
Central connection		0.384***		0.404***	0.082	0.085
		(2.79)		(2.89)	(0.74)	(0.77)
Tenure		−0.053*		−0.055*	−0.062**	−0.062**
		(−1.74)		(−1.78)	(2.44)	(2.45)
Lagged per capita GDP (million yuan)		0.080		0.010		
		(0.43)		(0.05)		
Cutoff point 1	−1.320***	−3.162***	−2.850***	−2.850***	−6.992***	−6.929***
	(−3.67)	(−2.98)	(−2.64)	(−2.63)	(8.42)	(8.66)
Cutoff point 2	1.621***	0.106	0.455	0.455	−3.736***	−3.662***
	(4.63)	(1.01)	(0.43)	(0.43)	(4.64)	(4.70)
Number of observations	864	864	864	864	1,227	1,227

Notes: The numbers in parentheses are *t*-ratios based on robust standard errors. The significance levels of 1 percent, 5 percent, and 10 percent are noted by ***, **, and *. All regressions include the provincial and year indicators. Columns (1)–(4) are based on Li and Zhou (2005). Columns (5) and (6) are based on Chen, Li, and Zhou (2005).

economy. Nevertheless, considering the fact that most provincial party secretaries served previously as governors, their records on provincial economic performance must have already played a role in their promotion to become secretaries.

Of course, the promotion of regional officials is not solely determined by their performances in economic affairs. In most columns of table 3, many of the noneconomic performance factors are controlled. One of them is the impact of regional officials' connections with the central government on their promotion, which is measured by their previous or current work experience in the central government. The central connection indicator has a positive and significant impact. Comparing columns 3 and 4 with columns 1 and 2 of table 3 indicate that promotion and termination appear more sensitive to the average growth rate than to the annual growth rate. They suggest that the long-run or average measure weigh more in turnover decisions than those of short-term shocks.

In addition to providing incentives through appointment and promotion within the hierarchical structure, the decentralization-based reforms also further delegate autonomies to subnational governments through various channels. One of those is the city status upgrading scheme. In the city status upgrading scheme, municipal governments are granted more administrative authority and the political position of a city is raised, thus more strongly incentivizing its officials. One of these kinds of practices is to upgrade some county governments as city governments (county-to-city upgrading). From 1983 to 2001, 430 county-level cities were established, mostly by upgrading (Lixing Li 2011). Another method is to upgrade some prefecture level municipalities to the deputy provincial rank city, which is officially called separately itemized cities (*jihua danlie*), meaning that they enjoy substantial autonomy and are treated separately from the province in which they are located. Since 1984, fourteen cities have obtained deputy provincial rank (Yupeng Shi and Zhou 2007).

Using a large panel data set covering all counties in China from 1993 to 2004, after controlling for the official upgrading requirements, such as industrialization, population, and fiscal strength, Li (2011) finds that, everything else being equal, counties with a higher growth rate were more likely to get city status. He interprets this as evidence that upgrading is used by the central government as an incentive mechanism to align regional interests with the national ones. Shi and Zhou (2007) show that everything else being equal, cities obtaining deputy provincial rank, i.e., a greater degree of autonomy, increased per capita GDP by an additional 9.3 percent, per capita FDI by more than 50 percent, and per capita investment by about 80 percent. This indicates that enabling and empowering subnational governments by granting them more autonomy power together with high-powered incentives enhances regional economic growth effectively.

All of the above surveyed papers do not pay special attention to the potential reverse causality problem, except for applying some time lags. One might challenge these findings by imagining that a governor who was already picked to assume important positions in the central government in the future being assigned to a province with fast economic growth to show his performance. That is, instead of career concern motivating regional development, the findings may be interpreted as placing favorable future leaders into easy performing regions to justify their later promotion.

Indeed, a clear-cut econometric study that rules out a reverse causality has yet to be done. Nevertheless, if we combine all the results from the literature, the overall picture should be reasonably convincing that a reverse causality is not most likely. First,

to improve the chance of being promoted, a governor not only should perform better than average (Li and Zhou result); but also should be better than his/her immediate predecessor (Chen, Li, and Zhou results), which makes the reversed causality argument uneasy. Second, if a governor performed really poorly for several years, the likelihood of his/her losing the governorship is substantially increased. It is hard to imagine that poor performance for many years is unrelated to this governor's own actions.

Finally, in the analysis and evidence discussed in sections 3.1 and 3.2, the government is focused on economic growth or growth-enhancing reforms. Under this condition, tournament-like regional competition creates powerful positive incentives to subnational officials. However, when the government's task is expanded to many other potentially conflicting tasks, such as managing inequality, protecting environment, and maintaining social stability, regional competition may create strong negative effects. This is discussed in section 6.

3.3 *Chinese Regional Competition and the Debate on Fiscal Federalism*

There is a large literature that debates whether the quality of public fiscal policy can be improved through regional competition or fiscal federalism in general. The seminal Tiebout model (1956) shows that jurisdictional competition among subnational governments can make the provision of public goods more efficient. Along this line of thinking, a market-preserving fiscal federalism develops an argument that says that, under certain conditions, fiscal federalism is self-enforcing and is market preserving. The core mechanism is the commitment mechanism created by certain fiscal federalism that prevents the national government from intervention, which in turn provides proper incentives to government officials at all levels to encourage market growth (Barry R. Weingast 1995). China is often seen as a major example of market-preserving fiscal federalism (Gabriella Montinola, Qian, and Weingast 1995; Qian and Weingast 1997; Hehui Jin, Qian, and Weingast 2005).

At the same time, there is also a fairly sizable literature that challenges fiscal federalism on many aspects. First, interjurisdictional competition for capital may lead to a "race-to-the bottom" in local tax rates or in reduced provision of some local public goods (Michael Keen and Maurice Marchand 1997). It may prompt local governments to exploit possible spillover to other jurisdictions, exporting taxes or pollution to their neighbors (Roger H. Gordon 1983; Oates and Robert M. Schwab 1988), and central government intervention may be necessary to solve such problems (John H. Cumberland 1981; Gordon 1983; Alice M. Rivlin 1992; David E. Wildasin 1989). Without a strong central government, fiscal federalism alone will not lead to efficient results and will not be market preserving (Olivier Blanchard and Andrei Shleifer 2001). Second, interregional competition for capital may encourage subnational governments to act in ways that corrode the capacities of the central state such that fiscal federalism will not be market preserving (Hongbin Cai and Daniel Treisman 2004, 2005).

Evidence from cross-country studies is mixed: fiscal federalism in many countries often is found to be inefficient (Francesca Fornasari, Steven B. Webb, and Heng-fu Zou 1999; Jonathan Rodden 2002; Rodden and Susan Rose-Ackerman 1997). Furthermore, arguments have been made and evidence has been found to show that Chinese fiscal decentralization is neither self-enforcing nor market preserving (Wong 1991; Cai and Treisman 2005; Tsui and Wang 2004).

However, this kind of debate could be misleading if one ignores the fundamental difference between the Chinese RDA regime and a federal state. In the Tiebout branch of fiscal federalism theory, the economic gains to

subnational officials from attracting additional residents is central (Tiebout 1956; Oates 1999), voice or exit. In a more general version of fiscal federalism, subnational government officials are elected and they are accountable to their constituencies (Epple and Zelenitz 1981). In contrast, Chinese officials face no pressure due to voice, exit, or election, suggesting they should perform poorly. Yet, they face strong incentives to meet the promotion criteria defined by higher officials. Under certain conditions, these promotion incentives could be strong enough to replace the incentives derived from voice, exit, or election. But this is not always the case as some later sections will discuss.

Moreover, the condition of market-preserving fiscal federalism requires that "[t]he allocation of authority and responsibility has an *institutionalized degree of durability* so that it cannot be altered by the national government" (Montinola, Qian, and Weingast 1995, p. 55).[39] This requirement "provides for credible commitment to the federal system and thus for limits on the national government's discretionary authority. Not only must there be decentralization, but that decentralization must not be under the discretionary control of the national government" (Montinola, Qian, and Weingast 1995, p. 55). This is "a necessary component of federalism's market-preserving qualities" (Montinola, Qian, and Weingast 1995, p. 57). However, under the Chinese constitution and in line with general Chinese government policies—both de jure and de facto—the central government preserves its discretionary power over regions, and this power has been exercised during the reform era (PRC Constitution 1982 Amendment, see Xu 2005; PRC Constitution 2004 Amendment, see Chubanshe 2009; Andrew C. Mertha 2005). A prominent example in which this basic condition of market-preserving fiscal federalism is violated is the recentralization of tax-collection power after more than a decade of fiscal decentralization. Facing a decline on the central government's fiscal revenue while the economy was growing rapidly (Wong 1991), in 1994 a reversal of the fiscal decentralization took place in central government's attempts to overcome this problem (Tsui and Wang 2004). As a result, the share of subnational governments' tax revenue in national tax revenue was reduced substantially from 70 percent to 40 percent (World Bank 2002). This implies there is no commitment to limiting the central authority's power in fiscal policy.

In addition to the nature of the basic institution, there is an important technical assumption necessary for Tiebout competition to work: factor mobility. Similarly, one of the five fundamental conditions of market-preserving fiscal federalism requires that "[t]he national government has the authority to police the *common market* and to ensure the mobility of goods and factors across sub-government jurisdictions" (Montinola, Qian, and Weingast 1995). However, when reforms started regions competed fiercely without factor mobility, and factors gradually became more mobile as a result of the reform—not as a starting point of the reform. For example, labor in China has only become partially mobile since the mid 1990s (John Whalley and Shunming Zhang 2004). Moreover, capital is even more immobile than labor, and segmentation of capital markets is still a problem today (Gordon and Li 2003). Although the direction of the trend of trade barriers across regions and the direction of the trend of factor mobility are debatable subjects, the existence of severe factor immobility and regional trade barriers in China is indisputable (Alwyn Young 2000; Naughton 2003; Chong-En Bai et al. 2004).

Within the theoretical framework of fiscal federalism, a violation of factor mobility

[39] Kellee S. Tsai (2004) argues that China violates basic assumptions of market-preserving federalism.

makes interjurisdictional competition among regions impossible. Without factor mobility, citizens would not be able to "vote with their feet," and thus there would be no Tiebout competition. Similarly, in the framework of market-preserving fiscal federalism, interjurisdictional competition would fail to serve as an important incentive device without a national common market and factor mobility (Jin, Qian, and Weingast 2005). However, economic development and the development of a national common market could be characterized as something of a chicken-or-egg dilemma. Therefore, a recipe for economic development conditional on the existence of a common market or factor mobility would be difficult to apply usefully to real-world situations.[40]

What happened during the Chinese reforms is that when factors were highly immobile, i.e., when Tiebout conditions were violated, Chinese regions started to compete fiercely with each other. Moreover, not only did the RDA regime manage regional competition in a growth-enhancing manner, but also allowed factors gradually to become more mobile, thus encouraging the evolution of a national common market. The key point here is that factors became more mobile as an outcome of the reforms, rather than as a precondition for them.

Finally, it is important to note that fiscal federalism theory is based on the very feature of market economies that requires that the economic roles of local governments be restricted to fiscal policies. Thus, the key issues of fiscal federalism theory revolve around fiscal policies such as taxation and the provision of public goods by local governments. However, Chinese subnational governments are responsible for much broader roles in the economy, of which fiscal policies are only a subset. Therefore, applying fiscal federalism models that focus on fiscal policy alone will miss large parts of the reforms and will not be able to explain China's economic reform and growth. This point is also valid for most transition economies, at least during the process of transforming the economy into a market economy.

4. *Regional Institutional Experiments*

Regional experimentation is an essential part of the central decision-making process in China (section 2.2.1). Starting from 1978, almost every major step on the path of reform was tried out by a few regions first before being launched nationwide. This is well echoed by the well-known "slogan" of the Chinese reforms: "crossing a river by touching the stones." To some extent, the "stones" are reform measures and these "stones" are "touched" through regional experiments.

Subnational governments play a critical role in attempting reforms due to the uncertainty of new reforms. One of the major uncertainties is related to the challenges of political resistance because reforms create winners and losers in changing institutions. The political economy of institutional changes affects paths and strategies of reforms. Under certain conditions, regional reform experiments are used as a strategy to weaken political resistance and to reduce the uncertainties that come from a new reform. A successful experiment outcome not only provides information on which reform program works but also can be used to support the reform and to persuade the unconvinced. Moreover, compared with a nationwide full-scale reform, when a regional experiment fails the drawbacks may be contained to the experimenting region. In addition, some compromise policies or compensation schemes aimed at opponents of a given

[40] In almost all developing economies, factor mobility is limited and a national common market has yet to be developed; this makes people doubt the usefulness of the fiscal federalism model for economic development (Pranab Bardhan 2002).

policy may be attempted as a way to ease the opposition toward starting a reform. That is, the option value carried with regional experimentation may bear weight to tip the political balance in favor of those reforms that may otherwise have been discarded.

However, it seems that China is unique in deploying regional experimentation as a reform strategy, while it is usually agreed that Eastern Europe and the former USSR followed the "big bang" strategy. Moreover, this difference of approach is usually regarded as an explanation of why China's reforms performed so differently than those of Eastern Europe (John McMillan and Naughton 1992; Jeffrey D. Sachs and Wing Thye Woo 2000). Yet, the experimental approach was in fact utilized in the pre-1989 reforms in Eastern Europe and the Soviet Union, but failed miserably.[41] Those failures led to a discrediting of the experimental approach in reforms and to the adoption of the big bang approach. Ironically, to a large extent, China followed many of Eastern European-style gradual reforms with experiment as an essential ingredient in the earlier stages of its reforms. A fundamental question is: what are the conditions that make China special in deploying regional experiments successfully? And, what makes the experimental approach work in China but not in Eastern Europe?

The key potential benefit of experimenting is to reduce the uncertainties of reforms. However, this potential benefit will be realized only when results can be obtained through experiments that do not disturb the rest of the economy, particularly in case of experiment failures. It turns out that how an experiment is coordinated determines whether an experimental approach will be fruitful and, in turn, the way experiments are coordinated is determined by the way the economy and the government is organized.

Conventional economic wisdom may lead people to wonder why a market should not be used to coordinate a reform experiment. However, it has been argued that many essential coordination tasks often have to be carried out through nonmarket mechanisms, even in developed market economies (Coase 1937; Weitzman 1974; Williamson 1975). For economies carrying out reforms aimed at transforming a centrally planned economy into a market economy, this is particularly true since markets there have yet to be developed. In his Nobel Lecture, Coase (1992) argued that the function of management in a firm "was to co-ordinate" beyond the markets. He asked: "Why was it needed if the pricing system provided all the coordination necessary?" His answer was that "[t]o have an efficient economic system it is necessary not only to have markets but also areas of planning within organizations of the appropriate size." When an organization is large, such as a multinational company or a national government, a related key issue is "the appropriate size" of the suborganization that coordinates, or who should coordinate what within an organization. In the spirit of Coase, to some extent different ways of allocating authorities within a government, or different ways of decentralization, is an institutional design issue that addresses the question: what is the boundary of different levels of government?

In reality, the success or failure of coordinating reform experiments is deeply entangled with the political economy of

[41] An interesting example is Khrushchev's "*Sovnarkhoz*" reform (decentralization reform) launched in 1957 and 1958 through a trial-and-error process, which eventually established 105 "*Sovnarkhozes*" in the territory of the USSR (Howard R. Swearer 1959). The reform delegates full authority to regional party secretaries over appointing SOE directors in their jurisdictions (William B. Ballis 1961). Regional leaders were encouraged to try reform measures and strong incentives are linked to their performance (Swearer 1962). But this "*Sovnarkhoz*" reform failed due to serious cross-region coordination failures (Paul R. Gregory and Robert C. Stuart 1998), which leads to the removal of Khrushchev in 1964. Andrei Markevich and Ekaterina Zhuravskaya (2011) document this failed reform.

reforms. To make the analysis tractable, in the following subsection I simplify important political economy issues into a reduced form as parameters of a model. This allows me to focus on analyzing coordination problems. Then, in subsection 4.2, I bring political economy issues back to real cases of regional experimentation.

4.1 *The Institutional Foundation for Regional Experiments*

Appropriately devised and implemented reform experiments may reduce uncertainties substantially. However, a reform experiment often involves several complementary subprograms, so a reform experiment will fail if its related subprograms are not coordinated satisfactorily.[42] The role of the government, particularly local governments, in initiating and coordinating local experiments is particularly vital in cases where many markets are missing or ill functioning.

There are many reasons why it is important to let local governments initiate and coordinate local experiments. These are best seen by exploring an alternative approach, which would be to let the central government initiate and coordinate reforms. "Local knowledge" and "local information" (Hayek) are the basic reasons why decentralized experimentation is superior to centralized experimentation. The central government does not know every thing; without information on local preferences, local technology, and local institutional conditions, it is hard for a centralized regime to come up with a concrete, implementable idea that satisfies local demand (preferences). Moreover, implementing a reform requires detailed local knowledge. As a matter of fact, in China's thirty years of reform, most reform ideas did not come from the central government.

A closely related disadvantage of centralized experimentation is the incentive problem. Without autonomous power, unmotivated local officials would be passive at the best and would not take initiatives to observe and to resolve potential problems. Delegating the power to conduct reform experiments to local governments converts local officials into entrepreneurs. A major feature of China's economic reforms is that local officials make efforts to find market niches, initiate inventive ideas, try new approaches, etc. Without this widespread entrepreneurship and their institutional innovations, most of China's successful reforms would not have been attempted.

However, not all governance structures are conducive to regional reform experiments. A challenging question to be addressed here is the institutional foundation for coordinating regional experiments. As discussed previously, a typical Chinese region is relatively self-contained and a subnational government is responsible for most economic activities within its jurisdiction. That is, subnational governments are assigned with the power and the resources to initiate and to coordinate regional reform experiments. Moreover, given that interregional dependence is relatively weak in China, when a regional experiment fails, its impact on the rest of the national economy is minimal (Qian and Xu 1993).[43]

Qian, Roland, and Xu (2006; also 1999, 2007) developed a theory to explain how the Chinese RDA regime creates conditions that alleviate coordination problems in reforms

[42] Here, the central importance of complementarity among different reform dimensions is in odds with the simplistic view that a single factor determines economic development.

[43] Provincial officials of Anhui and Guangdong argued that a failed experiment in an isolated locality would not affect the province's performance when they initiated regional experiments related to land reform and special zone reform in the late 1970s (for more details, see section 4.2).

and that allows for flexible experimentation.[44] In this theory, a reform program is consisted of some complementary subprograms. Each subprogram of the reform is characterized by its own individual attributes, and these complementary subprograms must ultimately fit together in order to be integrated properly. A reform is completed successfully only if the characteristics of each attribute of the various subprograms are matched successfully. A failure in the matching of attributes implies a breakdown of economic order, i.e., a drastic failure. To simplify the matter, suppose a reform program is ex ante well designed in the sense that all the attributes are matched by those in the blueprint of the program. However, some of the attributes may not suit local conditions ex post, and adjusting these attributes may lead to mismatches with the attributes of other tasks, which will then require further adjustments.

To illustrate the basic idea, let us look at the following example. Suppose a reform has two subprograms: an enterprise restructuring program (involving a lay-off of excess workers) and the creation of a social safety net (involving unemployment benefits). The attributes of the enterprise restructuring program include the number of laid-off workers and their individual characteristics, such as: age, seniority, family composition, length of residence, sex, type of contract, current wage, and history of employment. The attributes of the unemployment benefits in the social safety net include the rules of eligibility, such as length of employment, special circumstances (i.e., veterans), the status of enterprises, the rules of the benefits (such as size and length), the types of benefits (monetary or not), the technical support of computers, administration, and budget. If some attributes of the two tasks are not matched, many laid-off workers may not be compensated appropriately, so they may strike and the ensuing social disorder will make the reform a failure.

Therefore, a successful reform requires both a good reform blueprint and proper implementation (i.e., coordination). The uncertainty of the quality of a reform program can be reduced to form an expression of two factors: (a) the political support for, or resistance to, a reform and (b) the technical quality of the proposed reform. A program with many political challenges is more uncertain, and a reform program that incites strong political opposition will fail in spite of how "good" the program looks from an outsider's perspective. Therefore, a program without political support will be regarded as bad regardless of how good the program is in theory or in practice in another country. In addition, a program can be technically uncertain. For example, a mechanical transplantation of the case law from the United States to China would be highly technically uncertain given the linguistic, historical, and cultural differences between the two countries. In a simplified theory, a bad reform program always leads to a failure, however well coordinated in the implementation. Yet, without a test it is not known for sure ex ante whether a reform program is good or not.

On the other hand, a good reform program needs to be implemented or coordinated correctly. The quality of coordination depends on the quality of the information available to decisionmakers in the organization. Regional officials enjoy a local information advantage (a la F. A. Hayek 1945), in that they have firsthand observations on the site; whereas for others, any onsite information would require communication, which is subject to imperfect transmission. The Qian, Roland, and Xu framework assumes that information transmission is imperfect. To capture the reality fully, this assumption

[44] In the Qian, Roland, and Xu papers, Chinese economy is modeled as an *M*-form organization. All the political economy interpretations associated with the RDA regime discussed here may or may not be shared by my coauthors.

should be interpreted as a reduced-form expression of two noises: (a) political noise and (b) technical noise. Political noise occurs when information is transmitted through political skeptics or opponents, while technical noise arises from the fact that two officials can have different knowledge and different interpretations of the same message, or for some other technical reasons.

In China's RDA regime, where each region is self-contained and regional officials are assigned the power to coordinate, reform experiments can be coordinated locally. Relying on firsthand local knowledge directly, without involving upper-level officials, local coordination will not be subject to political interference and technical noises, and will be easier to accommodate. Most importantly, flexibility in reform experiments makes it possible to try a reform in one region (or a few regions) first and extend the experiment to other regions later if the first experiment is a success. In the case of a failure, although the failed experimenting region's payoff will be reduced, the payoff for the nonexperimenting regions will remain constant. This flexibility weakens resistance to reform proposals and encourages attempts of many different reforms, which may otherwise not be tried at all.

In contrast, in an economy where specialized ministries are responsible for implementing tasks, because ministries are complementary, reform experiments have to be coordinated by the central officials. This inevitably involves both political and technical noise, thereby making coordination failure more likely. One of the worst features of this economy is its rigidity, which prevents a regional experiment or a small-scale experiment from being beneficial. A fundamental institutional problem here is that, because complementary tasks are grouped separately into specialized ministries, coordination across ministries must be provided by the center. In coordinating a small-scale experiment, the central government has to carry it out in multiple steps involving all relevant ministries. These complications in coordinating regional experiments not only incur deadweight losses (as shown rigorously in Qian, Roland, and Xu), but also make it easy to sabotage an experiment in the process.

In general, when there are more political suspicions surrounding a reform program and when political opposition within the government is stronger, therefore causing coordination failure to occur more often, the advantage of the RDA regime becomes more apparent. These points are illustrated by case studies in the following subsection.

4.2 *Regional Experiments on Land Reform and Special Economic Zones*

China's land reform and special economic zone (SEZ) reform were both made possible by the efforts of reform-oriented subnational governments facing stiff political resistance at national level. Successful regional reform experiment outcomes created bases for forging consensus among the central leaders, which made large-scale diffusion of the reform programs possible at a later date. Ex ante the reduced uncertainties of regional experiments gave reformers better chances to try controversial programs. Ex post successful experiment outcomes—even those that were only partially successful—could be used as evidence to convince undecided politicians and to accumulate momentum and political support for the reforms.

Chinese land reform started in the late 1970s and is officially known as the household responsibility system (HRS). It is regarded as "a major social experiment in the design of institutions in which a system emphasizing social values has been replaced by a system relying on economic incentives" (McMillan, Whalley, and Lijing Zhu 1989, p. 782). During the period of the HRS reform between 1978 and 1984,

output in the Chinese agricultural sector increased by over 61 percent. Seventy-eight percent of the increase in productivity in Chinese agriculture in this period of time was due to the changes brought about by the HRS reform (McMillan, Whalley, and Zhu 1989). By examining many other factors, Lin (1992) disentangled the contribution to output growth of the HRS reform from those of other reforms, as well as from that of increased input availability. He confirms that the dominant source of agriculture output growth during 1978–1984 was the change from the production-team system to HRS, which was directly responsible for 49 percent of the output growth. Moreover, the change in crop patterns, from grain to nongrain crops, also had a positive impact.

Although it may be a bit of an exaggeration to call the introduction of the HRS "the design of institutions," it is pretty accurate to regard this process as "a major social experiment." A key point I want to highlight here is that this major social experiment was initiated and carried out by subnational governments without a design at the national level; this is the way to overcome the political resistances and risks associated with land reform.

Similar to what happened in Central-Eastern Europe before the 1989 reforms, or in the former Soviet Union during *perestroika*, political/ideological resistance to land reform were strong in China. Any change that could lead to decollectivization was seriously challenged, and any failure associated with land reform would be utilized by the conservatives for political reasons. Thus, minimizing the political and technical uncertainties of land reform was critically important for the survival of the reform, as well as the reformers themselves.

In the late 1970s, "proto-types" of the HRS were tried by a handful of local officials in a few provinces such as Anhui, Sichuan, and Guangdong. One of the best-known examples of initiative by local government was in Xiaogang village in Fengyang county of Anhui. In those localities, land and output quotas were contracted out from local governments (communes) to individual households. The experiments were carried out under high risks, given that people who were involved in the 1960s' land reform were heavily penalized not long ago.[45] At that time, land reform was unconstitutional (as stated in the 1978 Constitution of China), and was officially banned by the Communiqué of the Third Plenum of the 11th Central Committee of the CCP, which is often quoted officially and in the literature as the first milestone of the post-Mao reform (Daniel Kelliher 1992; Naughton 1995). The State Council and the Party's newspaper, the *People's Daily*, issued decrees and commentaries on behalf of the central government to stop any land reform attempts with political threats based on the ban of the Communiqué (Wu 2009). The supreme leader Deng was quiet until some obviously successful experimental results came out.

Facing the daunting challenges of carrying out the land reform, in 1979 Zhao Ziyang and Wan Li, then the governors of Sichuan and Anhui respectively, decided to experiment with different land contracting schemes in a few counties within their jurisdictions. According to Tian Jiyun, a Vice-Premier of the State Council between 1983 and 1993, Dangtu county was one of the counties picked up by Wan in 1979 and about 17 percent of rural households there participated in the land contracting experiment.[46] All of the land reform experiments were coordinated locally.

[45] Land reform was tried in many Chinese regions during the early 1960s but reforms were banned, and officials and peasants involved in the experiments were punished severely during the CR.

[46] Similar experiments were also carried out in Guangdong in 1978 under the leadership of governor Xi Zhongxun at that time but were stopped due to political pressure from the conservatives in the central government (Dongshi Cai et al. 2008).

In 1980, validated by the successful regional experiment results, Wan and Zhao reported to the central government and rallied for expanding reform experiments into more regions throughout the nation. Supported by their successful experiment results, the central government decided to allow for regional land reform experiments to spread out nationwide in late 1980. Zhao and Wan were promoted to be the Premier and Vice-Premier of the State Council, respectively, in order to carry out the nationwide reform experiments (Tian 2008). After this, the nationwide land reform experiment propagated quickly, so that in 1981 about 45 percent of rural households participated in the reform. Subsequently participation increased to 80 percent in the next year, and finally, reached 99 percent in 1984 (Lin 1992). Thereafter, agricultural reforms in general and land reform in particular were consolidated through numerous further reform measures. Similarly, most of those are based on successful regional experiment results.[47]

In sharp contrast, at the onset of Soviet/Russian reforms, all Soviet farming tasks were coordinated by the central government through specialized ministries (e.g., Ministries of Agriculture, Trade, Cereal and Grain Production, Tractors and Farm Machinery, Food Industry, Rural Construction, Fertilizer, Land Reclamation and Water Resources, and Fruit and Vegetable Farming, etc.). The tasks of providing inputs to the farmers, of managing their operations, storage, processing, transport, and road infrastructure were all allocated to separate agencies over which neither collective farms nor regional governments had any control, and thus it would have been extremely difficult to experiment without support from all relevant ministries. In 1989, Gorbachev launched his comprehensive agriculture reform in a manner such that all relevant ministries were included. In the reform, peasants could lease land with long-term contracts. Although the goal seems similar to the Chinese reform, the farmers encountered grave coordination problems. As a result, there were serious problems in implementation, such as waste during the storage, transport, and processing stages due to failures in coordination between production units, transport, and storage (Karl-Eugen Wädekin 1992).

Another famous Chinese reform is the SEZ development and the subsequent meteoric rise in foreign direct investment (FDI). Thanks to this reform, even though China started with virtually zero FDI and almost negligible trade and foreign reserves in 1978, in a quarter of a century China has become one of the largest FDI recipient countries in the world, with the world's largest foreign reserves, and also one of the largest trading countries in the world. Table 4 clearly shows that FDI in China and Chinese exports are essentially driven by the SEZs. When China first opened up and began attracting FDI and trade, 37 percent of FDI was located in SEZs in 1985, and 89 percent of the national exports came from the SEZs in 1985. In 2005, when China became the largest FDI recipient country in the world, 93 percent of FDI was located in SEZs, and 93 percent of China's exports came from the SEZs. It is not an exaggeration to claim that it is the SEZ that made China the country with the largest foreign reserves in the world, as well as the country with the largest trade surplus with the United States and the European Union.

[47] Although rural households enjoy the residual income and residual control rights over what they do with the land, under the HRS the control rights of allocation and management of land resources are kept with the local officials. Thus, most cultivated land in rural China remains partially collectively owned. Hanan G. Jacoby, Guo Li, and Scott Rozelle (2002) show the existence of inefficiencies caused by this partial privatization.

TABLE 4
The Impacts of SEZs on National FDI and Exporting

Year	Number of SEZs	Nat'l exports (mil US$)	SEZ exports (mil US$)	SEZ share of exports	Nat'l FDI (mil US$)	SEZ FDI (mil US$)	SEZ share of FDI
1980	4	18,119	278	1.5%	145	51	34.9%
1985	77	27,350	24,327	89.0%	1,956	728	37.2%
1990	290	62,091	44,602	71.8%	3,487	2,551	73.2%
1995	341	148,780	124,692	83.8%	37,521	33,694	89.8%
2000	341	249,203	228,779	91.8%	40,715	38,796	95.3%
2005	342	761,953	709,373	93.1%	60,325	56,397	93.5%

Sources: China statistical yearbooks 1986-2006; China Urban Statistical yearbook 1986–2006; China Urban Forty years; Provincial Statistical yearbooks 1996–2006; State Council documents.

Therefore, among all the Chinese reform measures, the SEZ has had the greatest direct impact on the global economy.

Although by conventional wisdom it seems obvious to suggest SEZ reform policies in order to improve trade and attract FDI, initiating and carrying out these reforms was a great challenge at the beginning of the reform era. There was strong political opposition to the idea of renting land to foreign firms or multinational firms, as these kinds of practices were regarded as "selling the nation." Indeed this kind of reform was unconstitutional at that time. The political risk would be too high for a reformer to bear if one had to confront the convention of the planning apparatus at a national level or to confront the constitution head-to-head. Thus, those concerned with how to attract FDI to China faced tremendous political and economical difficulties and uncertainties. Moreover, when the constitution (including the Party's constitution) did not protect private property rights, how would one convince foreign investors to invest? When imports/exports were all controlled by government agents—national and regional—how could China accommodate foreign and domestic firms to develop trade-intensive businesses?

Facing these tough constraints, the central leadership was, at best, not able to build a consensus to move forward (Cai et al. 2008; Zhao 2009). The idea of setting up SEZs to attract FDI and to develop export-oriented industries was initiated and experimented by subnational governments. The strategy of regional experimentation played a vital role in dealing with the ensuing difficulties and uncertainties. According to the archives (Cai et al. 2008), the idea of conducting municipal experiments to attract FDI was proposed by officials of Guangdong province in 1979. The proposal suggested to authorize Shenzhen and Zhuhai as experimenting municipalities, and required that conditional on the success of the first experiment other cities will follow similar experiments in the next step. A major part of the experiment involved trying new sets of institutions, legislation, and rules for the purpose of attracting FDI, and furthermore municipality governments were made responsible for implementation. Moreover, the proposal asked for greater regional

autonomy, particularly for decision-making power in regional experiments.

The skepticism toward the SEZs was strong at the top level of the central government (Jianhui Zeng 1984). There had been fierce debates in the central government and within the party apparatus on the desirability and the nature of SEZs, and on the paths of development the SEZs should take.[48] As a compromise, approval was given by the State Council for small-scale experiments in four remote cities in 1979 (The Central Government Circular No. 50, 1979, *Zhongfa (1979) 50*, cited by Zeng 1984).

Together with authorizing the experiments for SEZs, the central government also granted the Guangdong government, and particularly the experimenting municipal governments, more autonomy in regional planning, in enterprise management, and in policies related to FDI. In August 1980, the People's Congress approved the State Council's proposal of setting up four SEZs in Guangdong and Fujian and passed the first legal rule on the SEZs: "the Regulation for Guangdong SEZs." This was the first kind of regional law tested, which was drafted with the help of legal experts sent from the central government (Cai et al. 2008). When the experiment was expanded into other provinces, they also adopted and modified this law accordingly.

Supported by the initial achievements of the first group of SEZs in 1984, the central government endorsed another fourteen cities to experiment with SEZs, and the experiment was further expanded to more cities in 1985. In the early 1990s, the extremely fast growth of export and FDI validated the success of the SEZs. The opposition to the SEZs is subdued and encouraging SEZ development becomes a national policy. In 1992, SEZs comprised all the capital cities of inland provinces and autonomous regions, fifteen free trade zones, thirty-two state-level economic and technological development zones, and fifty-three new- and high-tech industrial development zones. Currently, SEZs encompass more than one hundred national economic and technological development zones, fifteen national bonded areas, and fourteen border trade and cooperation regions in the broadest sense.

One of the major features of the small-scale regional experiments, such as the HRS and SEZ reforms, is that for a certain period of time the nonexperimenting regions remain unchanged until diffusion commences. The coexistence of two systems, experimenting versus nonexperimenting or reforming versus nonreforming, in the reform process is sometimes called "the dual track system." The dual track system has been used to describe both small-scale and full-scale reform experiments in which all regions implement a reform experiment at the same time, while keeping the nonexperimenting system for a certain period of time. A major example of a full-scale experiment is the dual track price system. The most important benefit of the dual track system is to reduce resistance to a reform by substantially reducing the number of losers through keeping the nonreforming system at earlier stages of the reform (Lawrence J. Lau, Qian, and Roland 2000). However, there are essential conditions to be satisfied to make the dual track approach beneficial in reforms. If the state is weak in enforcement and, as a result, parties are able to siphon resources away from low-priced existing transactions to high-priced new transactions, the dual track approach may fail to function (Jiahua Che and Giovanni Facchini 2007). Thus, the subnational governments' enforcement capability to regulate firms' strategies is vital in

[48] Chen Yun, a top leader of the CCP, cast deep doubts on the SEZs. The idea of setting up the SEZs was regarded as equivalent to a "rented territory" or "the selling of the nation," which would be a revival of the semi-colonial era. The other objection charged that the SEZs would exacerbate inequalities (Zhao 2009).

order for the dual approach to be efficiency improving.

In addition to locally initiated reform experiments, almost all important reforms sponsored by the central government in the past three decades were also tried and implemented through regional experiments, such as the state sector reforms (Sebastian Heilmann 2008). The bankruptcy reform in the mid 1990s illustrates this phenomenon. Although there was collective support from the top leaders for restructuring the state sector drastically through enforcing the bankruptcy law, there was no consensus on how to do it. After it issued general guidelines on the basic priorities and general approaches in 1994, the central government encouraged local governments to experiment with innovative solutions for debt restructuring, mergers, closures, and employee resettlement. Eighteen municipalities were picked up by the central government "to test new methods for dealing with the resettlement of employees in insolvent industrial enterprises." Each experimenting municipality was responsible for coordinating all the relevant aspects within its jurisdiction, such as land-use rights and using the proceeds for resettling the laid-off workers (Heilmann 2008). This reform finished in the mid 2000s.

4.3 *Incentives of Experimenting*

Regional experimentation is a major strategy for moving a reform forward before central decisionmakers are able to build consensus for the reform. Experimenting involves high risks for regional officials who conduct the experiments, and it also creates large positive externalities at the costs of experimenting regions. Moreover, conducting reform experiments often requires officials take initiatives and make extra efforts to deal with unexpected contingencies. Without the initiative to solve problems, experiments would easily fail. Therefore, in addition to previously discussed conditions, setting up proper incentives is essential for inducing subnational officials to conduct experiments.[49]

It is relatively straightforward to design incentives for central government-sponsored local experiments. Often, the central government provides generous compensation to experimenting local governments (Heilmann 2008). However, for locally initiated experiments, the incentive mechanism is subtler. It turns out that the regional competition-based promotion system is one of the mechanisms that create motivations for regions to be entrepreneurial in experimenting. In the RDA regime, regional officials are appointed, and initiating or implementing successful regional experiments can lead to substantial promotions. Thus, although experimenting involves risks and externalities, experimenting also creates chances not only to outperform others, but also more importantly, to lead others, which implies getting unusual promotion opportunities. That is, the benefits associated with promotions will correct disincentives from positive externalities.

In addition to the costs of experiments, another critically important issue is who decides what to experiment and who conducts the experiment. By being granted a broad range of control rights over regional economic affairs, the regionally decentralized structure converts many regional bureaucrats into entrepreneurial officials. Regional officials are active in identifying reform experiment opportunities. If, after someone's initiative, other regions follow an experiment, it implies that this reform experiment was a success, and therefore the chance of getting a substantial promotion is higher. Perceiving this, officials with greater

[49] In a Tiebout federal system, where officials are elected from their constituencies, the value dilution due to the positive externalities will disincentivize regional officials and lead to too few experiments (Gordon 1983; Cai and Treisman 2005).

career ambitions would initiate reform experiments on their own, sometimes even taking high risks. That is, the centralized personnel control may internalize some of the externality problems of regional experiments. The HRS and SEZ experiments discussed in the previous subsection are the most visible examples of this process. In those examples, the pioneers of the HRS and SEZ reforms were promoted substantially when the experiments were recognized by the central government as models for the nation to follow.

Moreover, it is observed that a common practice in reform era is to promote officials from more developed municipalities, where many reform experiments were tried out earlier, to leading provincial posts, particularly in less developed regions. Chien and Zhao (2007) document that, from the late 1990s to the early 2000s, there were three former heads of Suzhou city who were promoted to become governors of Jiangsu, Shaanxi, and Jilin respectively; a former Shenzhen mayor was appointed as the governor of Hunan, and a mayor of Wenzhou became the governor of Sichuan. These three cities pioneered many reform experiments on their own and are among the best reforming municipalities in China.

By using a panel data consisting of thirty provincial regions between 1978 and 2005, through a diff-in-diff approach to control for groups with and without transfer of governors and before and after transfer of governors, Xu, Wang, and Shu (2007) found that, everything else being equal, cross-regional governor transfer increased regional GDP growth rate by 1 percent. In the more recent period of 1992 to 2005, the effect was enlarged to 2 percent. By constructing a panel data consisting of thirty provincial regions between 1978 and 2004, with a similar approach, Jun Zhang and Yuan Gao (2007) find that the effect of cross regional governor transfer on regional GDP growth rate was significant for the period of 1990 to 2004.

5. *Regional Competition and Regional Experiments in Some Major Reforms*

This section discusses some major economic reforms that have had substantial impacts on China's economic growth over the past three decades. This discussion serves two purposes: first, it is important to understand the mechanisms by which these reforms operate for their own sake and, second, these reforms act as concrete examples of the conceptual discussions above about the mechanisms of regional competition and regional experimentation.

5.1 *The Township–Village Enterprises (TVEs) and the Nonstate Sector*

Large-scale entry and fast development of the nonstate sector is a distinctive feature of China's reforms.[50] The pace of growth of the nonstate sector is so quick that the state sector is unable to compete. Without a conventional form of privatization of the state sector, i.e., privatizing existing SOEs, the market share of China's state sector in the national economy shrunk from 78 percent in 1978 to 53 percent in 1991. The most important nonstate sector until the mid-1990s was the TVE. By the early 1990s, TVEs accounted for about four-fifths of the output of the nonstate sector. Between 1981 and 1990, the total industrial output of TVEs grew at an average annual rate of 28.1 percent, while the rate for the state sector was 7.7 percent. As a comparison, China's average annual GDP growth rate was 8.7 percent between 1979 and 1991. Moreover, TVEs had sub-

[50] To some extent, Hungary, Poland, and Vietnam are the other transition economies that shared this feature and they all enjoyed better performances than other transition economies.

stantially higher TFP growth rates than the state sector in those years (Xu 1995).

More importantly, the TVE actually served as a major stepping-stone in changing China's institutions. A typical TVE is a collectively owned enterprise located in a township/village. All the people in the township/village that "sets up" the TVE own the firm collectively. The community government of the township/village "represents" the communal collective owners and is the de facto executive owner of the TVE (William A. Byrd and Qingsong Lin 1990). The property rights of the TVE are vaguely defined. From a viewpoint based on "conventional wisdom," the governance of these firms appears deficient and should result in unproductive firms. Therefore, the spectacular performance of the TVE sector poses major challenges to economics (Weitzman and Xu 1994). This is particularly true before the mid-1990s.

Several complementary explanations are proposed in the literature, and most focus on the role of the community government. The strong incentives created by regional competition are one of the institutional reasons for the rapid development of TVEs. Moreover, the relatively self-contained nature of regional economies gave TVEs opportunities to grow. There are broad ranges of products that the TVEs can produce to meet local demand, and there are often sufficient local semiproducts to supply to TVEs as inputs. Close links between TVEs and local SOEs often facilitated the transfer of technology and management know-how (Xu and Zhuang 1998).

Concerning the relatively effective governance of the community government over TVEs, most conceptual discussions emphasize the second-best nature of TVEs when there is weak or no legal protection of private property rights (Chun Chang and Yijiang Wang 1994; David D. Li 1996; Oi 1999). That is because township–village governments had access to resources, whereas community citizens did not. Moreover, when the firm is owned by the community government, the community government faces less state expropriation because part of the revenue is used to finance the local provision of public goods, which addresses the state's concerns and also enhances the firm's future earning potential (Che and Qian 1998). These arguments are supported by empirical evidence collected from villages (Hongyi Chen and Rozelle 1999).

Another major feature of the TVEs is the prevailing of the informal institutions, such as implicit contractual relationships between community governments and TVEs, between TVE employees, and between TVEs. Weitzman and Xu (1994) conjectured that local cultural or social norms may be an important factor behind informal institutions. This conjecture shares the same spirit of the evolutionary repeated game theory of social norms (Robert Axelrod 1984; Drew Fudenberg and Maskin 2008) and is closely related to the literature on the evolution of social norms, culture, and human behavior. Empirically, it sheds light on substantial regional differences in TVE development, including powerful informal institutions in post-TVE developments (Xu and Xiaobo Zhang forthcoming), which reflect the diverse history of China's regional economic development.[51]

As protection of private property rights improved (Donald Clarke, Peter Murrell, and Whiting 2006) and asset markets developed, many benefits of TVEs are diminished. Moreover, associated with large-scale

[51] Most TVE employees and managers lived in the same community for generations when there was almost no migration before the early 1990s. Under certain conditions, close long-term interactions among community members (virtually infinitely repeated overlapping-generation relationships) might foster a social norm within the community that may facilitate informal institutions. In contrast, SOEs are not organized based on natural communities, such as villages; therefore, many of the informal mechanisms found in TVEs would not function in SOEs.

migration since the mid-1990s, an increasing number of TVE employees, including TVE top managers, have become migrant workers. This also contributes to changes in the governance of TVEs.[52] A large percentage of TVEs were privatized since the mid-1990s (James Kai-Sing Kung and Yi-Min Lin 2007; Albert Park and Minggao Shen 2003; Li and Rozelle 2004).

Although TVEs have declined, the institutional legacy of TVEs in China's economic development and corporate governance is extensive. Important mechanisms that prevailed in TVEs, e.g., the intimate involvement of community governments in business and informal institutional arrangements, are still at work today, and their impacts on the rise of entrepreneurship in China are far-reaching, such as on the fast growth of clusters of large numbers of small private firms in coastal provinces.

With clustering of a vast number of small specialized firms, many Chinese townships have become national or world "factories" for certain products. It is these townships that made China "the world's factory."[53] In a typical industrial cluster, thousands of highly specialized family-owned entrepreneurial firms are worked together with infrastructural and regulatory support of township governments. The small firms in a cluster are closely coordinated, similar to workshops within an integrated firm, whereas they are also highly competitive, as in markets. These specialized small firms are linked together by networks of informal arrangements, such as implicit contracts, so that every final product is jointly produced by a collection of many firms. Repeated interactions among the workshops and among the agents help reduce the monitoring and enforcement costs. The township government affects the overall and long-run strategic direction of the cluster without direct involvement in the daily operations of the thousands of small workshops.[54] To a large extent, some important features of TVE institutions, particularly the importance of entrepreneurial local governments to local business development, remain in this post-TVE development. The clusters are strategically managed by township governments, although they have no ownership of the assets of the workshops and are not involved in their financing, except for most of the land and some of the buildings. They provide infrastructure, secure property rights, regulate quality, train laborers, and provide favorable policies.

All of these make the township government similar to the headquarters of a conglomerate. Moreover, to a large extent, due to the way that they coordinate with each other, the behavior of those privately owned specialized workshops are more like workshops within an integrated large firm than independent small firms in a market (Xu and Zhang forthcoming).

The evolution of TVEs and the subsequent clustering of modes of production are institutional responses created by entrepreneurs, including local entrepreneurial officials, to overcome constraints such as weak legal protections for property rights, weak contract enforcement, and credit and technical constraints. When the political, legal, and

[52] In the terminology of evolutionary game theory, there were lots of mutants that invaded the repeated games and that would change the equilibrium strategy of the game (Fudenberg and Maskin 2008).

[53] For example, Datang township makes one-third of the world's socks; 40 percent of the world's neckties are made in Shengzhou township; more than 70 percent of the buttons for clothes made in China come from Qiaotou township; Songxia township produces 350 million umbrellas every year; and Puyuan township produced 60 percent of China's cashmere sweaters, of which China is the world's largest producer (Xu and Zhang forthcoming).

[54] Take Puyuan Township (Zhejiang province), the largest cashmere sweater production center in the world, as an example. There were six thousand family-owned highly specialized workshops and three thousand private trading shops in the cluster coordinated strategically by the township government (Xu and Zhang forthcoming).

economic conditions improve, a firm's organization and organizational structure may change as well. Less viable forms of organizational structures are eliminated through competitive pressures in a decentralized setting, whereas it will be hard to prescribe the optimal path of firm evolution beforehand. This makes regional experiment-based decision making important. Overall, the success of TVEs and post-TVE developments is due to the regional decentralization that allows for the full use of individual talents through introducing various institutional and organizational innovations to cope with constraining factors.

5.2 *State Sector Reform: Centrally Sponsored Local Experiments*

Similar to other transition economies, the Chinese economy was dominated by the state sector at the onset of the reform and, therefore, state sector reform was the most important. Yet, as opposed to other transition economies, most of the SOEs in China were "owned" by subnational governments. China's state sector reforms have been very much driven by regional competition and regional experiments. Two major aspects of early SOE reforms have been discussed in the literature. The first aspect concerns appointment or selection of SOE managers. Before privatization (to be discussed later), subnational governments were responsible for selecting SOE managers within their jurisdictions. Under the pressure of regional competition and the importance of local SOEs to regional economies, subnational officials became very performance conscious when considering the appointment of SOE managers (Theodore Groves et al. 1995). The second aspect of the early reforms involved managerial incentives (Groves et al. 1994; Zhuang and Xu 1996).

As regional SOEs were owned by regional governments, to a certain extent, a region's state sector is like a state-run regional conglomerate in which subnational governments functioned like the headquarters of regional conglomerates (Oi 1999). This is particularly true for municipalities and counties. The regional governments, functioning like the personnel department of a regional conglomerate, selected managers, made decisions on promotions and demotions, maintained dossiers, and tracked managerial records, etc. In response to regional competition, also under the encouragement of the central government's reform guidelines, subnational governments experimented with various "managerial responsibility systems" in which managers were delegated power to make many decisions, and employees were given financial incentives tied to enterprise performance.

By using firm-level panel data, Groves et al. (1994, 1995) and Li (1997) evaluated the outcomes of some major SOE reform experiments in the 1980s. In their sample, over 80 percent of the managers were appointed by subnational governments, and their careers were determined by the evaluations of their bureaucratic superiors; the majority of SOEs were in the regional experiments delegating more authority to SOE managers, which allowed SOEs to keep a large proportion of their profits and to use the retained funds for worker bonuses, worker welfare facilities, and enterprise investment, etc. Moreover, performance responsibility contracts for SOE managers were experimented with in many regions. The contracts specified performance indicators, such as profit, reinvestment, and compensation structure. Most of the SOEs' managers in the Groves et al. sample signed the contracts. Groves et al. (1994) investigated how SOE managers responded to their increased autonomy and how firm productivity was affected. They found that with more autonomy in output decisions and with higher marginal profit-retention rates, SOEs increased their use of bonuses and hired more fixed-term contract

workers. Moreover, the strengthened incentives were positively correlated with higher productivity.

Another important experimental SOE reform was the system of management selection by competitive auctions. About 14 percent of the managers in the Groves et al. sample were selected through competitive auction. The usage of this reform peaked in the late 1980s—1987 and 1988 accounted for 57.4 percent of the competitive auctions in the Groves et al. sample. Auction procedures varied among regional experiments. In general, a typical SOE was put up for auction by its superior municipal government. The most important part of a bid was the promise of profit to the municipal authority in the near future. In most cases, bidders also made promises to reinvest, etc. The municipal government as the owner of the SOE then chose the winning bidder on the basis of promised profit delivery and the management plan, etc. The top manager often signed a management contract and frequently was required to put up a security deposit, which could be forfeited if the manager failed to meet the promised performance.

Based on their firm level data, Groves et al. indicated that the managerial labor market was functioning in China's state sector such that SOE managers changed jobs frequently. They found both demotion/promotion of the previous manager and the conditions of the new manager's appointment can be partially explained by the corresponding firm's performance. Moreover, they found that SOE managers' total compensation is positively related to firm profits. In their sample, overall, SOE per worker output rose 67 percent (in constant prices) for the decade of the 1980s. As a result, in that period of time TFP growth contributed to 73 percent of output growth; moreover, over 87 percent of the TFP growth was attributable to improved incentives, intensified product market competition, and improved factor allocation (Li 1997), which is confirmed by researches based on national census data (Gary H. Jefferson, Rawski, and Yuxin Zheng 1996).

Nevertheless, the early SOE reforms failed to solve some basic problems of the state sector. While productivity was increased, facing fierce competition from the nonstate sector and losing monopolistic position in most product markets, the financial performance of the state sector worsened rapidly. The total losses in the state sector kept worsening between 1993 and their peak in 1998, when the state sector made a net loss of 285 billion RMB (table 4) and the government kept pumping financial aid into this sector for bailouts.[55] The record-breaking losses of the state sector led to an unprecedented number of nonperforming loans (NPLs) in China's banking sector. These were manifestations of a serious soft budget constraint syndrome (SBC), a major moral hazard problem prevalent in all centralized economies and transition economies.[56] The severe SBC problem and the well-known consequences of SBC created deep worries about

[55] Groves et al. (1994, 1995) reported no evidence that budget constraints for state-owned firms were hardened in the 1980s. In studying the "fiscal contracting system" operating between the central and provincial governments from 1980–93, Jin, Qian, and Weingast also found that the central government was not able to keep its commitment to restrain from offering ex post subsidies to subnational governments.

[56] Yet, the TVEs did not suffer much from the SBC syndrome, as millions of them went bankrupt in 1989, even though they were supported by community governments and many of them also had policy burdens for community employment and social security. This is because at the bottom level of the hierarchy, community governments, as well as local branches of rural credit cooperatives, have limited financial resources available in their disposal. Moreover, their access to subsidies and credits from the central government is restricted by law. These limitations have prevented community governments from bailing out loss-making TVEs (Qian and Xu 1993). Moreover, given local governments' limited financial resources, they face high opportunity costs for bailing out failing firms. When regional competition is tougher, the opportunity cost becomes higher and local governments would be less willing to bailout their failing firms (Qian and Roland 1998).

TABLE 5
Losses and Layoffs in the State Sector, 1991 to 2005

	Losses (bil)	Profits (bil)	Layoffs (mil)	Net profits (bil)
1991	92.6	167.1		74.5
1992	75.7	171.2		95.5
1993	47.9	214.6		166.7
1994	62.5	223.3		160.8
1995	80.2	227.2		147.0
1996	112.7	200.4	5.42	87.7
1997	142.1	196.1	6.34	54.0
1998	306.7	328.0	5.95	21.3
1999	214.5	329.1	6.53	114.6
2000	184.6	468.0	6.57	283.4
2001	199.4	480.5	5.15	281.1
2002	180.3	558.9	4.10	378.6
2003	282.0	758.9	2.60	476.9
2004	306.1	1,042.9	1.53	736.8
2005	242.6	1,200.6	0.61	958.0

Note: Losses: the total losses in the state sector; Profits: the total profits from the profitable SOEs; Layoffs: the accumulated number of employees laid-off by the state sector.

Sources: Finance Yearbook of China, 1996–2006; China Accounting Yearbook, 1995–2006; China Labor and Social Security Yearbook, 2006; China Labor Economic Yearbook, 1997–98.

the sustainability or even the survivability of the Chinese regime. The SBC syndrome is caused by the lack of a credible commitment from the government to allow loss-making SOEs to fail (Kornai 1980, 1992; for surveys see Maskin and Xu 2001; Kornai, Maskin, and Roland 2003).[57] The key to hardening a budget constraint is to make bankruptcy threats to SOEs credible.

To a large extent, since the late-1990s, the state sector bankruptcy reforms and privatization (to be discussed in section 5.3) have hardened budget constraints, which turned the state sector to profitability since the year 2000 (table 5). The effectiveness of these reforms constitutes a big surprise for many experts.[58] Indeed, as it is for other transition economies, hardening budget constraints and bankruptcy reform were some of the

[57] Concurrent with increased state sector losses, between 1993 and 1995, inflation also worsened. A loss of control over monetary policy due to decentralization in credit control was blamed as the cause (Wang 1991; Huang 1996b). Sharing a similar perspective, Loren Brandt and Xiaodong Zhu (2000) argue that facing competition from the nonstate sector, the central government was forced to rely on money creation to finance the state sector, since the central government supports the employment and investment of the state sector. This not only softened budget constraints of the state sector but also caused inflation.

[58] Around that time, some authoritative China experts, such as Nicolas R. Lardy (1998), worried that with a continued increase of the number and value of NPLs, the Chinese financial system would collapse soon, which would lead to economic disaster.

most difficult reforms in China. Given the close interrelation between SOE debt and the state banking system, and between SOEs and social safety nets, radical bankruptcy reform or SOE restructuring could lead to massive social unrest and bankruptcy of state banks (Charles Booth 2004; Heilmann 2008). Moreover, state firms carry many types of policy burdens, such as employment and social security, etc. (Shleifer and Robert W. Vishny 1994; Lin, Fang Cai, and Zhou Li 1997). With the policy burdens, the state is accountable for the losses incurred from policy burdens, and thus it has to bailout insolvent SOEs (Lin and Guofu Tan 1999).[59]

There were intense political controversies in drafting, updating, and finalizing the bankruptcy law from the 1986 version to the final 2006 version (Booth 2004).[60] Facing vast difficulties and political risks, China's bankruptcy reform was carried out through local experiments to deal with the social and fiscal consequences of SOE insolvencies, and was used by central policymakers in their debates, decisions, lawmaking, etc. (Heilmann 2008).

One of the most contested political and legal issues in China's bankruptcy reform was about who should be assigned with priority protection in the liquidation of assets. Should that be given to creditors (state banks, i.e., government assets) or to employees (the source of potential social unrest) (Heilmann 2008)? The first bankruptcy law, the "Experimental Bankruptcy Law" passed in 1986, was more creditor-friendly. Instead of being a law to be enforced nationwide, however, this law only served as a guideline for central-government-sponsored local experiments. Very importantly, in experiments, local governments deviated from the law substantially. To prevent local social problems, the administrative practice of local governments in dealing with insolvent enterprises favored employees (Heilmann 2008). The early reform progressed fairly slowly, so that between 1989 and 1993, among tens of thousands of chronicle loss-making SOEs, there were only 1,150 bankruptcy cases nationwide.

Pressured by rapidly growing SOE debts and mounting state-bank-held NPLs, bankruptcy reform emerged as a top-priority issue in the 1990s. The central government sponsored new waves of local bankruptcy experiments.[61] In the peak years of restructuring and bankruptcy reforms from 1996 to 2001, every year there were more than 5 or 6 million SOE employees laid off nationwide relatively peacefully (table 5). Summarizing local experiment practices, the 2002 and 2004 versions of the bankruptcy law gave workers first priority over the rights of secured creditors; and the burden of providing compensation to the employees of insolvent enterprises was put on local governments. As a result, the state sector was significantly transformed, total loses were reduced from 306.7 billion RMB in 1998 to 184.6 billion RMB in 2000, net profits were increased from 21.3 billion RMB in 1998 to 958 billion RMB in 2005, when bankruptcy and layoffs became negligible (table 5). SOE productivity in the corresponding period also

[59] In this logic, Lin and Zhiyun Li (2008) argue that even privatization will not necessarily harden budget constraints. This is because bearing policy burdens, to provide the same policy service a private enterprise will demand more ex post subsidies from the government than an SOE due to more agency problems between the state and private firms.

[60] Controversies revolved around safeguarding state assets in liquidations; containing the social and financial consequences of SOE insolvencies; dealing with unemployment and rearranging the social safety net function of the SOEs (pensions, health care, housing, etc.) (Heilmann 2008).

[61] In 1994, the State Council issued a circular on trial implementation of new insolvency procedures and sponsored experiments in eighteen cities. Two years later, trial implementations of new merger and insolvency procedures were tested in 56 cities. In the next year the State Council sponsored experiments in 117 cities for trial implementation of merger, bankruptcy, and reemployment procedures.

improved significantly (Brandt, Chang-tai Hsieh, and Zhu 2008; Jefferson, Rawski, and Yifan Zhang 2008).[62]

Experimental bankruptcy reform processes helped "to conceal and manage fundamental political-ideological controversies that were at the heart of the delayed law making. Policy experimentation over twenty-three years allowed recurrent adaptations in the application of the basic priority scheme and thereby helped to avoid open policy conflicts" (Heilmann 2008). When the bankruptcy reform was carried out by local experiments, the law was only "provisionary" and formal bankruptcy proceedings in courts played a minor role. Generally, corporate rescue measures were undertaken through a variety of flexible, inconsistent, but less painful policies that were experimented with locally (Heilmann 2008). The final version of the Bankruptcy Law (2006) was not passed until the reform experiments were over and the number of bankruptcy cases dropped drastically. However, the final version of the law goes back to the protection of creditors and did not retain those policies in favor of protecting workers vis-à-vis creditors.

5.3 *Privatization: Locally Initiated Experiments*

Although there is no empirical work that decomposes factors contributing to the turnaround of the state sector from chronicle loss-making to a profitable sector, perhaps the most effective reform was privatization, which sold most of the loss-making firms to private owners. In sharp contrast to other transition economies, where privatization was pushed through by the central governments as a high priority at the beginning of the transition, privatization was and is a highly controversial subject in China due to ideological and political reasons. As a result, privatization has been postponed by the Chinese government as much as possible. Moreover, the Chinese privatization scheme is not based on a rational design; instead, it is a result of political games given existing institutions. Due to this delay, at the time of privatization, even though the state sector was loss making and was deeply in debt, the national economy was in a better shape and conditions for privatization were more ready than all other transition economies when they launched privatization. The nonstate sector had already surpassed the state sector in the national economy, while the market had already replaced most of the planning related to resource allocation, including the product, capital, labor, and managerial labor markets. Moreover, the improved productivity of the state sector through earlier reforms, as discussed in section 5.2, might also have played an important role in making the transition smooth. Furthermore, the Chinese privatization has been carried out by municipal governments at their discretion under regional competition for economic growth. That is, they have opted not to privatize if doing so would hurt their regional growth. As a result, China is an exceptional case among all transition economies that did not suffer from recessions as CEE–FSU economies did during their privatizations (Saul Estrin et al. 2009). Instead, China's privatization is associated with a high growth rate.

Privatization was officially banned and, in practice, it was not encouraged by the central government until the late 1990s. However, given the local "ownership" of most of the Chinese SOEs and pressures faced by local governments, de facto privatization was tried quietly without official permission from the central government in the

[62] Of course, given that many reform measures were taking place in the same period of time, such as privatization, layoffs, change of corporate governance, market competition, large scale FDI, and lower interest rates, it is a challenge for researchers to find out what specific reform measure has exactly contributed by how much to the improvements of productivity and profitability of Chinese firms.

process of restructuring local SOEs before the mid-1990s. Even in the late 1990s, it is still a city government's decision whether or not to privatize and how to privatize within their jurisdictions (Ross Garnaut et al. 2001, 2005; Jie Gan, Yan Guo, and Xu 2010). Moreover, even by then, due to political and ideological constraints, privatization has occurred in a camouflaged form such that the term "privatization" is officially disguised as "transforming the system" or "*gaizhi*" in Chinese (Garnaut et al. 2001, 2005). Nevertheless, in 2005, about two-thirds of the Chinese SOEs and COEs with annual turnover of more than 5 million RMB Yuan (about $620,000) have been privatized and the total asset value involved in the process was about 11.4 trillion RMB (or 1.63 trillion USD) in 2005 (Guo, Gan, and Xu 2008). [63] Due to its recentness and the lack of data, the research on China's privatization is still very limited (Estrin et al.).

One of the early major reforms attempted by many cities in the late 1980s, and which lead to privatization later, was the leasing of SOEs. The top managers of small- or medium-sized SOEs leased the firms by paying the subnational government a fixed proportion of the firms' profits. This reform gradually led to de facto privatization, since after some years of leasing the share value of a manager would outweigh that of the city government, the "state owner." The other major reform initiative, which facilitated privatization later, was incorporation. Although officially incorporation was restricted to the exchange of shares among the SOEs, private shareholding was allowed in some cities. The first reported cases were in Guangzhou in the late 1980s, when employees of some SOEs bought a substantial amount of shares of the firms where they worked. Under severe political and ideological constraints, to contain the risks of privatization, a prevailing privatization strategy chosen by most Chinese city governments is to sell the ownership of SOEs and COEs to their employees. This is because employee ownership is the least controversial politically and ideologically.

Similar to the situation of the bankruptcy reform, the most important impetus for privatizing SOEs was the large amount of debt built up by the state sector in the 1990s. Distinctively different from the central government's sponsorship of the bankruptcy reform, however, privatization was initiated by city governments. The central government tolerated this by turning a blind eye to the actions of city governments. One of the first regional privatization experiments was in Zhucheng, a city in Shandong province. In that city, more than two thirds of the SOEs were loss-making in 1992, with losses amounting to the city government's total fiscal revenue over eighteen months. The city government sold many SOEs to their employees. Another representative example is the municipal government of Shunde in Guangdong. The Shunde city government also encountered a serious debt problem when it privatized most of its state and collective firms in 1992 (Garnaut et al. 2005).

As a result of successful local experiments with privatization and the severity of SBC problems in the state sector, privatization was gradually accepted by the central government through several steps, from an explicit "tolerance" policy to some proactive guidelines on privatization.[64]

[63] Based on the data collected from a nationwide random survey of all Chinese industrial firms conducted in 2006.

[64] In 1993, the Third Plenum of the 14th CCP Congress endorsed the creation of a modern enterprise system, which approved the development of diversified forms of ownership including private ownership. Although much of the political constraints on privatization were still in place, this created a more tolerable environment for local privatization experiments. In 1995, the central government announced the policy of "retain the large, release the small" (*zhuada fangxiao*), i.e., the state was to keep the largest few hundred SOEs in strategic industries and to give local governments full control rights to local SOEs.

Finally, a green light was given by the CCP's 15th Congress, 1997 (see Research Center of the CCP History 2009), which granted de jure ownership of local SOEs to local governments. By default, this implies that the center has authorized the 'owners,' mostly city governments, of smaller SOEs to try everything on their own, including privatization, although this has never been explicit. With this major change, the scale of privatization gradually enlarged after 1997.

China's regional experiments on privatization have adopted multiple approaches. These approaches include share issue privatization (SIP), joint ventures with foreign firms, management buyouts (MBO), and sales to outsiders. Privatization in China has created concentrated private ownership and about half of privatized firms in China were sold to managers, i.e., through MBO, which has greatly changed corporate governance and corporate performance (Gan, Guo, and Xu 2010).

Not every privatization approach was effective. Based on their nationwide random sampling survey data, by controlling for privatized and not privatized firms; before privatization and after privatization, based on a nationwide random survey, Gan, Guo, and Xu (2010) found that, among all privatization methods, only MBO had statistically significant positive impacts to the restructuring, corporate governance and performance. One of the most important changes associated with MBO is that the state has retreated from firms after privatization. That is, after buying out the firm, owner-managers became the decisionmakers of their own firms on issues like hiring, layoffs, wages, compensation, production, marketing, and investments. Moreover, MBO firms substantially restructured in a deeper way than other privatized firms. As a result, MBO had a statistically significant positive impact on improving firm performance.[65] In contrast, governments still kept substantial controls over those firms privatized through other methods, and these privatization strategies failed to improve performance (Gan, Guo, and Xu 2010).

It is the decision of a given municipal governments whether to privatize and, if so, how to privatize. According to a nationwide random survey, MBO was chosen mostly by those cities that had stronger fiscal discipline and/or were less concerned about shedding labor, such as fast growing coastal cities like Ningbo, Wenzhou, Hangzhou, Changzhou, and Wuxi. Meanwhile, non-MBO approaches were chosen mainly by those city governments that had weak fiscal discipline and a concentration of the state sector, such as heavy industrial cities like Changchun, Jinzhou, Handan, and Xian (Gan, Guo, and Xu 2010).

The process of privatization illustrates the importance of regional experiments in advancing China's reforms. To make this picture sharper, it is important to point out that MBO was never favored by the central government. In fact, the mass media, which has been tightly controlled by the central government, was hostile to MBO. In contrast, the central government-sponsored major ownership reforms, such as share issuing privatization, failed to improve the performance of SOEs.[66]

[65] Without differentiating between MBO and non-MBO privatization, by examining formerly state-owned large and medium-size enterprises for the period from 1994 to 1999 nationwide, Jefferson and Jian Su (2006) found that privatization increased productivity and investments in research and development. Similarly, based on firm level data collected from one city, Xiao-yuan Dong, Louis Putterman, and Bulent Unel (2006) found that privatization has significantly improved productivity and profitability for urban firms.

[66] It has been shown that China's share issue privatization has failed to contain costs and improve profitability (Qian Sun and Wilson H. S. Tong 2003; Jianping Deng, Gan, and Jia He 2008).

5.4 *The Impacts of Regional Decentralization on Growth*

It is a major challenge to study the impact of regional decentralization on economic growth empirically. One of the most difficult issues is how to measure regional decentralization. The Chinese regional decentralization involves much more than simply fiscal decentralization. But how to measure statistically nonfiscal elements of regional decentralization is an unsettled subject. Moreover, regional decentralization captures only part of the operations of China's RDA regime. The effectiveness of regional experiments and regional competition is often conditioned on effectiveness of central control. That is, centralization is an essential part of the picture. In addition to the conceptual and theoretical problems in the literature, the lack of statistics on broadly defined decentralization is another major problem yet to be resolved. Given the difficulties, most of the empirical literature concerning the impacts of regional decentralization on growth is restricted to fiscal decentralization.

Lin and Zhiqiang Liu (2000) and Jin, Qian, and Weingast (2005) found that fiscal decentralization contributed to regional growth in general, and to the development of the regional nonstate sector in particular. Tao Zhang and Zou (1998) found a negative relationship between fiscal decentralization and regional economic growth in China, but Lin and Liu and Jin, Qian, and Weingast suggested potential data and methodological problems in Zhang and Zou.

Lin and Liu use provincial data from 1970 to 1993 to study the impact of fiscal decentralization on regional economic growth. Their regressions are based on a Solow type of growth model. Economic growth is decomposed into growth of per capita investment and growth of total factor productivity. All the major reforms included in the regression models are related to regional decentralization. The major focus of the paper is fiscal decentralization. In addition, other reforms included in the regression model are the HRS reform; and the share of non-SOEs' output in the total industrial output. As discussed in previous sections, the HRS reform and nonstate sector development are all consequences of regional decentralization. Therefore, together with fiscal decentralization these variables capture a large part of regional decentralization. At the same time, their regression models also control for the growth rate of per capita investment, the financial strength of a region, the impacts of urbanization and the size of the population on economic growth, and price liberalization. All of these control variables have insignificant impacts to regional growth.

Lin and Liu discovered that, everything else being equal, the growth rate of per capita provincial GDP would increase by 3.62 percent in response to an increase of the marginal retention rate of regional fiscal revenue from 0 to 100 percent. Moreover, the impact of the HRS on regional growth rates was similar to that of the fiscal decentralization. Furthermore, among all regional decentralization variables, the one with the largest impact was the nonstate sector development. Everything else being equal, the regional GDP growth rate would increase by 14.2 percent if the share of the nonstate sector increased from 0 to 100 percent.

Consistent with Lin and Liu, by using provincial data from 1980 to 1993, Jin, Qian, and Weingast found that stronger fiscal incentives are associated with faster development of nonstate enterprises and with greater reforms in state-owned enterprises. Furthermore, Jin, Qian, and Weingast found provincial governments in China faced stronger ex post fiscal incentives after the reform. Specifically, they found a strong correlation between the current provincial budgetary revenue and its expenditure for the period of 1982–91 when the "fiscal

contracting system" was implemented. The Jin, Qian, and Weingast discovery is echoed by a literature that argues that the different fiscal federalist approaches used by China and the FSU are related to well/poorly defined tax rights for subnational governments and strong/weak fiscal incentives for subnational governments. Some of this literature claims that these shed light on the performance gap between China and Russia (Shleifer 1997; Daniel Berkowitz and Li 2000; Zhuravskaya 2000).

However, the results of both Lin and Liu and Jin, Qian, and Weingast are based on data up to 1993. As discussed previously, fiscal policy was substantially recentralized after 1994. This makes these results vulnerable to challenges (Tsui and Wang 2004; Mertha 2005).

Nevertheless, the Lin and Liu–Jian, Qian, and Weingast evidence constitutes a valuable step in understanding the impacts of regional decentralization on regional growth. After all, fiscal decentralization is an important part of regional decentralization, which includes land reform, SEZs, and nonstate sector development. The period before 1994 is one in which fiscal decentralization is fully consistent with regional decentralization in general. Thus, fiscal decentralization may be a good proxy for regional decentralization in that period of time. However, the contribution of nonfiscal reforms to economic growth is pooled together with fiscal decentralization so that the contribution of each remains entangled. That is, the identification problem has yet to be resolved in this literature.

Last but not least, it should be pointed out that although taxation has been recentralized since the mid-1990s, it is not clear that regional decentralization has been reversed completely in general. Firstly, in the same period of "fiscal recentralization" subnational governments gained more power in some nonfiscal spheres. Endorsed by the 15th Party's Congress in 1997, subnational governments' de facto ownership over regional SOEs has been transformed into de jure or nearly de jure ownership.[67] Together with other major changes, this endorsement paved the road for subnational governments to privatize SOEs and COEs (Garnaut et al. 2005). Moreover, subnational governments were authorized to sell land within their jurisdictions. Secondly, these changes in turn have had impacts on fiscal matters, so that the revenues of subnational governments in more developed regions created through privatization and selling land in the past years could sufficiently offset losses of their tax revenue. Control rights over land give subnational government important leverage over regional development, regional industrial policy, and macro control of the region (to be further discussed in section 6.1). To summarize, although the share of subnational governments' tax revenue in national tax revenue was reduced substantially, subnational governments' importance in regional governance and in national economic development remains essential. The central government still relies on subnational governments to govern the bulk of the Chinese economy and subnational governments still dominate regional economic affairs, including fiscal and nonfiscal matters, such as allocating critical resources to firms, dealing with contract enforcement, and property rights protection.

6. *Trade-Offs of Regional Decentralization*

Rent-seeking behavior and general conservatism are inherent features of an authoritarian regime, therefore making them difficult to reform. However, under the RDA regime,

[67] In 2005, subnational governments owned about thirty-one thousand SOEs plus control of a huge number of COEs (NSB 2006b) whereas the central government owned 166 firms (the State-Owned Assets Supervision and Administration Commission, or SASAC: http://www.sasac.gov.cn/gzwgk/gzwgk_jj.htm).

rents could be eliminated if subnational governments face fierce regional competition: given the importance of winning the competition, if losing a competition implies losing a position, which is the necessary condition for enjoying rents. Moreover, as discussed in section 2, regional experimentation and regional competition can alleviate the problem of conservatism, enabling reforms to move forward.

However, regional competition and regional experimentation are effective only when subnational governments' tasks can be summarized by a single indicator, e.g., economic growth. If subnational governments face multiple tasks that cannot be encompassed under a single objective, regional competition and regional experiments may become focused on tasks, which are more measurable, while less measurable tasks are ignored. In that case, high-powered incentives created through regional competition may lead to undesirable consequences. Even worse than this, subnational governments may be induced to race to the bottom, i.e., regions may compete in or may experiment on some policies that may benefit regional officials but damage most other citizens, or may benefit the region but damage other regions.

At earlier stages of the reform, it was commonly agreed by the central government, subnational governments, and citizens that economic growth was the most important objective of China's economic reform. Under that consensus, other objectives can be overlooked so long as the economy grows rapidly. Thus, regional competition and regional experiments faced easier tradeoffs. Moreover, at earlier stages of the reforms, most growth-enhancing policies and institutional changes avoided immediate conflicts among stakeholders. The land reform (HRS reform) distributed land equally among rural households. The TVE development and other nonstate sector developments, including SEZs, were less intrusive to rural stakeholders' interests, such as land.

However, after a quarter century's fast economic growth, the multitask nature of subnational governments' duties has become more pronounced and the general consensus on the importance of economic growth has broken down. Many major growth-enhancing reforms implemented since the mid-1990s generated immediate conflicts among stakeholders. A prominent example is firm restructuring and privatization, which started in the 1990s. In those reforms, a large number of SOE employees were laid off, whereas new private owners obtained huge amounts of wealth through management buy-outs. Another example is associated with large-scale rapid urbanization, which converts arable land for nonagricultural developments and creates a great number of landless peasants. This often leads to sharp conflicts between those who lost land without receiving proper compensation, and property developers who profited immensely from the transactions, and are usually closely associated with subnational governments.

6.1 *Law and Regulation*

Under the RDA regime, Chinese subnational governments play significant roles in both law enforcement and law making. The aforementioned provincial law on SEZs, "the Regulation for Guangdong SEZs," illustrates that subnational legislation can also serve as the experimental basis for new national legislation. Subnational governments were endowed with law-making power since the PRC's founding in 1949. Although most of their de jure law-making power was taken away during the centralization movement of the 1950s, subnational governments kept some de facto law-making powers. At the onset of the reform, subnational governments regained much of their law-making power (http://www.china.com.cn/zhuanti2005/txt/2003-02/27/content_5283965.htm), and

these gains were institutionalized by the 1982 constitutional amendment. In addition, the central government from time to time experimented with giving additional law-making powers to subnational governments, such as "authorized law-making power" (*shouquan lifa*) or "beforehand law-making power" (*xianxing lifa*). As a result, more than six thousands laws have enacted by subnational governments nationwide since 1978. Conflicts that arise between regional laws and national laws are one of the major concerns of this system, although, in principle, whenever there are conflicts the national law overrules.

However, the starting point of China's legal reform is among the weakest of all transition economies, since during the CR China dismantled its formal legal system. As a result, China has had to build its legal system virtually from scratch during the reform era. Moreover, ideological and political constraints delayed major legal reforms, such as the protection of private property rights. Together with the lack of judiciary independence, China was in a weaker position than average transition economies in terms of legal reforms. It is not surprising that a lack of proper law and law enforcement can lead to serious problems, and I will discuss some of the most serious problems related to Chinese law later in this subsection. However, the coexistence of very fast-growing businesses, including the private sector, and a very weak formal legal sector is puzzling. The solution to this puzzle lies in the fact that regionally decentralized administrative measures step in as substitutes for law and law enforcement (Pistor and Xu 2005).[68] In the past, this has sometimes helped avoid governance vacuums, as private businesses were at times disguised by subnational governments. Indeed, many of the initiatives and protections provided by subnational governments to private firms flew in the face of the constitution. Thus, strong incentives given to subnational governments played essential roles for them to take the risks associated with their unconstitutional actions.

The roles of the municipal governments of Taizhou and Wenzhou of Zhejiang province in developing private sectors ahead of relevant legal developments illustrate this point. The municipal governments offered "red heads" to private firms within their jurisdiction to conceal their vulnerable legal status, thereby giving the outsiders the illusion of official government sanction. Thanks to this kind of development in many regions where subnational governments provided similar protections, the private sector in China experienced double-digit growth for more than a decade without full legal protection. To some extent it is this spectacular development of the private sector that catalyzed the legalization of private property rights. When the constitutional protection of private property rights was enacted in 2004, the private sector was already the dominant sector in Zhejiang and one of the largest sectors in China.

Concerning regulation, given its weakness in legal institutions, under the RDA regime, China introduced an administration-based regulatory decentralization scheme. In this scheme, the central regulatory authorities break down the regulatory tasks and delegate them to subnational governments. Together with regional competition, this system sometimes is able to implement some national

[68] It is worthwhile to note that there are many cases in which business practice preceded relevant laws in European and American history. For example, important securities laws (US 1933/34 Acts) were developed decades behind major developments in U.S. securities markets. However, in Europe and the United States, there were functioning legal systems that effectively enforced general laws, such as contract law and tort law, on new business practices (Xu and Pistor 2006). But in Chinese reforms, a basic functioning legal system itself is under construction. Thus, subnational governments are essential as substituting mechanisms to fill in the governance gap (Pistor and Xu 2005).

regulatory goals, but sometimes fails to do so. The regulatory scheme that evolved during the last twenty years relies essentially on subnational governments' assistance and cooperation for enforcement of its regulations (Julan Du and Xu 2008). In this system, one of the major instruments that are deployed is the quota system.

The bank credit quota system, which was utilized by the People's Bank of China (PBC) to control the aggregate money supply until 1998, is an example of one such quota (Du and Xu 2008). The PBC formulated the national credit plan and allocated credit quotas to the headquarters of all major state banks, which in turn reallocated these to their regional branches and subsidiaries. The regional allocation of bank credit quotas depends largely on regional banking performance, measured in ways such as the amount of deposits taken by regional banks in the previous year; regional economic performance; and a variety of other metrics. The bank credit quota system was a major instrument for implementing macroeconomic policies in general and monetary policy in particular until market-based credit allocation mechanisms were somewhat deployed in the late 1990s.

Another major example is the evolution of Chinese financial market regulation. China's securities markets, the Shanghai and Shenzhen stock exchanges, initially emerged as self-regulated regional markets with supervision from the corresponding municipal governments (Stephen Green 2003). The quota system of equity share issuance was introduced to the Chinese equity market in 1993, and was designed to control the size of financial markets to maintain balance among the regions and to preserve the dominant position of public ownership. The central government would determine the total number of shares to be issued in the nation and then would allocate stock issuance quotas to regions and ministries. Subnational governments in turn would allocate quotas to selected SOEs for going public through IPOs or to listed companies seeking SEOs. The subnational governments would collect information on these firms and submit it to the China Securities Regulatory Commission (CSRC), the national regulatory agent. After reviewing the company information, the CSRC would give its approval to companies to issue shares in the public equity markets. The quota system was officially in place from 1993 to 2000; however, it actually governed financial markets up until around 2003 (Pistor and Xu 2005).

Although the quota system was not designed for dealing with informational or incentive problems, several bodies of evidence indicate that it has played a significant role in creating incentives for regional competition and decentralized information collection in stock issuance. Based on the data of all listed firms from 1993 to 2004, after controlling for political factors, macro variables, etc., Du and Xu (2008) find that firms located in regions with better performance obtained more quotas in subsequent periods. In explaining firm-level quotas by provincial performance, this result essentially rules out the possibility of reverse causality, since none of the firms in the sample were large enough to affect provincial performance. In addition, the data demonstrate that everything else being equal, listed firms from provinces that disclosed information better were rewarded with more stock quotas in the ensuing periods. Moreover, the quality of regional information disclosure was substantially more important than other factors, such as regional corporate or macro performances, in determining how quotas were allocated. These findings suggest that provinces that performed better in various aspects previously would be given a higher stock issuance quota later from the central government. That is, the quota allocation functioned as a de facto incentive device

that induced subnational governments to select better-performing firms for initial public offerings (IPOs) or seasoned equity offerings (SEOs). Finally, detailed evidence from twenty-three provincial-level regions suggests that the majority of IPO firms selected by subnational governments had been better-performing state-owned enterprises before they went public (Julan Du and Chenggang Xu 2009). This further indicates that the Chinese regulatory decentralization is somewhat effective at the IPO stage.

However, administration-based regulatory decentralization is not always effective, and it is not a long-term substitute for law enforcement. There are several conditions that must be met for decentralized admin measures to function well as a substitute for conventional legal institutions. Firstly, subnational governments must have substantial control rights over the regulatory subjects; otherwise, subnational governments would not play a major regulatory role (e.g., the quota system does not work effectively for non-state-owned firms and cannot ensure adequate corporate governance of listed companies). Secondly, subnational governments must have strong vested interests in the subjects of regulation; otherwise, subnational governments would not be motivated to participate. Finally, the central government must have direct control over the resources to be allocated by a quota system; otherwise information problems will disable the system. For example, the quotas systems used for bank credit control and for environment protection did not work well since these quotas are nominal, the financial resources of local banks or local branches of national banks and pollutant emissions are directly controlled by local governments, and they can easily manipulate the information.

In order to prevent excessive conversion of arable land for nonagricultural uses, the Chinese government has applied a land quota system to regulate local governments' land conversion. Each region is allocated a land-use quota for each year and regions violating the land-use quota would face a deduction in future quota allocation, together with other penalties. Moreover, an official's compliance with quotas is taken as part of the criteria for evaluating his work. However, because this quota system violates all the three aforementioned conditions, the land quota system fails to work.

In fact, the land problem is one of the most serious social problems in China and it can be used as an illustration of how China's RDA system makes trouble for the economy. Deeply-flawed laws governing land ownership and fiscal recentralization "collectively" incentivize local governments to ignore the quota system (Kung, Xu, and Feizhou Zhou forthcoming). Arable land in China is de jure collectively owned and, in this system, the commune authorities before the reform, and the village authorities afterwards, represent the collectives. Although rights of use and income over land have been reassigned to the farm households since the land reform of the early 1980s, the farmers have no right to alter the land's usage or to transfer it to another party. The crucial right to transfer these rights has remained in the hands of the state and, in part, of the village authorities. Yet, the collective owners have no right to convert arable land into nonarable usages. Nationalization has been the only legal mechanism by which farmland can be converted into nonarable usages since any nonarable usage of collective farmland requires a change from collective to state ownership (Articles 63 and 43 of the Land Management Law of 1999). Moreover, the law confines farmers' rights in land to basically an "agrarian" usage when land use is changed to nonagrarian and ownership converted (from collective to state). In other words, farmers would only be compensated according to the value of crop production after conversion, even though the land postconversion may be far more valuable. Apart from the minimal

compensation that is legally protected, China's farmers are subject to the whims of local authorities in the process of land conversion (Kung, Xu, and Zhou forthcoming).

As discussed previously, the fiscal recentralization of 1994 reduced the share of local governments' entitlement to most tax sources. To compensate local governments for the losses, local governments were assigned greater control rights over revenues generated by land sales within their jurisdictions. From 2002 onwards, the central government further proposed to appropriate 50 percent of the enterprise profit tax, which greatly disincentivizes local governments' efforts to improve enterprise efficiency. The fiscal recentralization, together with the *monopoly* right assigned to local governments over the conversion of farmland to nonarable uses, has induced local governments to switch from a passion for industrialization to "urbanization" frenzy (Kung, Xu, and Zhou forthcoming).

Blessed with escalating land prices (especially for commercial and real estate developments in premium locations) on the one hand and artificially low compensations on the other, many local governments, particularly those in the rapidly developing coastal areas, have pocketed "windfall profits" from this urbanization process. Attracted by the huge "windfall profits," land conversion has accelerated after 1999. In 2003, the state became worried that China would soon deplete its arable land below its threshold required for food self-sufficiency. In an attempt to slow down the conversion of farmland, since 2001 the central government has set land conversion quotas for all provinces for each year. But with seriously distorted incentives, the land quota assignment did not work. Much worse, in the process of land conversion, local authorities have triggered serious conflicts with the farmers, as a large number of farmers lost their primary source of livelihood with minimal compensation. They feel that they have been robbed of the bundle of rights assigned to them at the outset of the reform. Opposite to the harmonious atmosphere at the era of land reform, i.e., the early 1980s, land expropriation by local governments now becomes one of the worst sources of social conflicts in China (Xiaolin Guo 2001; Lianjiang Li and Kevin J. O'Brien 2008). This illustrates that, without a properly developed legal system, many problems cannot be resolved by regional competition, regional experimentation, personnel control, and other methods deployed by the RDA regime.

6.2 *Regional Protections*

Regional decentralization alone may not automatically guarantee growth-enhancing regional competition. Without checks of the central government, subnational officials may restrict cross-regional trade to protect firms within their jurisdiction. Indeed, it is oft-cited that subnational governments opt to put up barriers to shield local firms and industries from competition. It was documented that, in the mid-1980s, many subnational governments tried to retain low priced raw materials, such as wool or silk, within their jurisdictions in order to favor local manufacturers (Andrew Watson, Christopher Findlay, and Yintang Du 1989; Thomas P. Bernstein and Xiaobo Lu 2000), and this was also widely reported by both domestic and international mass media coverage.[69]

If there are no effective central-government policies to keep barriers in check, in addition to making factors immobile as most often emphasized in the literature, regional

[69] For example, a *New York Times* report illustrated trade barriers among Chinese regions. To protect their local made car manufacturers, "Tianjin local officials barred taxi companies in the city from buying Geelys," which are produced by a Zhejiang-based car manufacturer (*New York Times*, November 17, 2006). Casual observations confirm this as a general phenomenon that most taxi cabs in many major cities, e.g., Beijing, Tianjin, Shanghai, Changchun, and Guangzhou, are made locally.

protection could destroy regional competition itself, one of the basic mechanisms that drive China's reform and development. Moreover, interregional trade barriers and regional protectionism can eventually lead to serious political problems, such as disintegration of the country.

Recognizing the seriousness of the problem, the Chinese central government has battled against regional protectionism repeatedly during the whole reform period. The central government has issued decrees in 1982, 1990, and 2001 to curb regional protectionism (Carsten A. Holz 2009). A State Council circular of 10 April 1982 states: "regional or departmental (trade) blockages . . . are extremely harmful to China's economy in total." The State Council clarified that enterprises had the authority to sell their above-plan output anywhere in the country they wanted, and subnational governments were not to interfere in the distribution of the above-plan output. In 1990, the State Council issued a circular on breaking interregional blockades. It requires that all regional trade checkpoints must be rectified, and differential tax rates based on product origin were prohibited. The State Council issued another regulation in 2001 to deal with issues of the malfunctioning of the "market order," including regional trade barriers. It contains detailed stipulations for eliminating specific kinds of regional trade barriers (Holz 2009). The great efforts of the central government in containing regional protectionism demonstrate the stubbornness of the problem and the determination of the central government to contain the problem. It also underscores the "checks-and-balances" between the central government and subnational governments in the context of regional competition.

Whether or not the central government's efforts in confining regional protectionism and whether or not regional fragmentation has worsened during the reform have been debated intensively in the literature. There is abundant literature about, statistical evidence of, and mass media coverage of the fast growing interregional trade (Holz 2009). Indeed, one of the most important early reforms in the early 1980s was the legalization of cross-region trade carried out by state and nonstate merchants, including private traders. Lau, Qian, and Roland (2000) contend that the "dual-track system," introduced during the reforms, promotes interregional trade because, under this system, local officials can "sell" the rights to purchase a certain percentage of raw materials and final products at lowered planned prices. Since opening up the market to other regions may significantly increase the market price, this system is beneficial for local officials.

In an ideal situation with perfect national markets, all factors would be mobile, and therefore their productivities across regions would be equalized; regional economies would utilize their comparative advantages, their production would be specialized, and regional prices for the same products would converge. Based on this idea, taking the first best case as the benchmark, it has been argued that the Chinese economy has become fragmented regionally and that the situation was getting worse. Young (2000) reported widespread convergence in the regional structure of production during the reform period, and a rise in the interregional variation of prices during the 1980s. Moreover, there was a divergence of regional relative factor allocations and labor productivities. These findings were interpreted as evidence of industrial duplication across regions caused by regional barriers. Based on this, he claimed that regional protection in China was worsening and that Chinese reforms resulted in a fragmented internal market with fiefdoms controlled by local officials. To some extent, similarly, by studying capital mobility across provinces, Genevieve Boyreau-Debray and Shang-Jin Wei (2005)

found great discrepancies in regional marginal capital productivities and from this concluded that the Chinese financial system was regionally fragmented.

However, by using more diverse and recent data than that of Young (2000), Bai et al. (2004) found that regional specialization has increased and has become dominant over the forces of regional protection in recent years. Moreover, with a data set that consists of 93 products in thirty-six cities over more than ten years, C. Simon Fan and Xiangdong Wei (2006) provided evidence of market integration during the reform period. They found an overall price convergence in China that indicates that markets across different cities are indeed integrated. Furthermore, they found that the products for which interregional trade was more likely to be restricted by local officials for rent-seeking purposes tended to converge to a greater degree of *absolute* price parity. This finding suggests that local protectionism might be a less important obstacle to interregional trade in China than some other factors, such as transportation costs.

Yet, there are serious concerns regarding the methodologies used to study trade barriers. Specifically, focusing on measuring regional specialization alone may not be most helpful in understanding regional protection since it does not have the warrant of a theoretical foundation. As Naughton (2003) points out, without an underlying theory and without a cross-country comparison, i.e., without knowing proper benchmarks, looking at one country's regional specialization alone might be misleading. Indeed, state manufacturing sectors in the United States, an integrated national economy, became less specialized than before 1987, and they became more similar than they were in the past (Sukkoo Kim 1995). Moreover, by using a similar approach, Holz (2009) finds that Chinese provinces are similar to American states in their degree of regional specialization. Echoing this finding, Fan and Wei (2006) also find the convergence trend in China is similar to those discovered in the United States and Canada. In these three economies, many prices follow relative price convergence rather than absolute price convergence. Obviously, it will not be convincing to claim that market development in China is at a similar level of the United States given this evidence. However, it would be even harder to claim, based on this methodology, that Chinese economic reforms have moved the economy further away from markets.

In fact, it is quite likely that applying a similar approach, regional specialization in Russia, or more generally in the CIS and Central–Eastern European countries, is much higher than that in China before 1990. But it would be misleading to interpret this as evidence for more-developed markets in these locations. Indeed, based on the theories discussed in sections 3 and 4, an economy with overly specialized regions would hamper regional competition and experimentation. Of course, in those theories, the composition of regional economies is exogenous. A more complete theory has yet to be developed to analyze dynamics of regional competitions when both the composition of regional economies and scale economies are endogenously chosen by players.

6.3 *Regional Disparity*

In light of record-breaking rapid and prolonged growth, the quickly increasing disparity of wealth in China has become a major concern. It is commonly agreed in the literature that inequality in China has substantially worsened since the reforms, mainly in the past two decades. Based on household data from nine provinces, Dwayne Benjamin et al. (2008) find that the overall (combined urban–rural) Gini coefficient of China probably exceeds 0.50, which is approaching that of some of the most unequal countries in the world, e.g., South

America. Based on provincial level aggregate data, Ravi Kanbur and Zhang (2005) found that, associated with the increase of GDP and trade, the Gini coefficient has increased from 0.29 in 1978 to 0.37 in 2000. To what degree regional decentralization has contributed to this increased inequality is a hotly contested subject in the literature.

The relationship between growth and inequality is a subject of debate in the literature (for a survey sees Philippe Aghion, Eve Caroli, and Cecilia Garcia-Penalosa 1999). In the classical view, inequality is regarded as necessary and transitional in the process of industrialization or growth (Simon Kuznets 1955). Moreover, an increase of inequality may not be so bad even for the poor when an economy grows quickly, since the poor benefit more from increasing aggregate growth than from reducing inequality through redistribution (David Dollar and Aart Kraay 2001). China's rapidly increasing per capita income came together with rises in inequality and is used as a major example to illustrate the above point (Danny Quah 2003). This line of thought would argue that the reform policy in the first two decades of Chinese reforms enabled some people to become rich first. Driven by this policy and implemented within the framework of regional decentralization, arguably, in the last quarter century, China has experienced the largest scale of poverty reduction in human history. The Chinese population in absolute poverty (defined as $1/day income) has dropped from 50 percent to 7 percent in twenty years, while the number of individuals in absolute poverty was reduced by almost 400 million. This number is nearly three-quarters of poverty reduction in the whole developing world (World Bank 2003).

On the other hand, however, it is argued that inequality has impacts on politics, investment, etc., which in turn can harm stability and growth in general (e.g., Alberto Alesina and Rodrik 1994); and high levels of inequality can even lead to the disintegration of a nation (Patrick Bolton and Roland 1997). Concerning China's growing inequality, it has been warned that increased regional inequality in China may threaten economic and political stability, and national unity (Hu, Wang, and Xiaoguang Kang 1995). Is the Chinese duo of high growth and increasing disparity a "normal" development path prescribed by the well-known Kuznets curve? Will worsening inequality hurt China's economic growth? To what extent is the widening disparity related to regional decentralization? These are issues still under debate in the literature.

Although empirical findings unequivocally show rapidly increasing inequality, particularly during the recent twenty years of reforms, findings on the relationship between inequality and reforms, including decentralization, are divided. Based on a Chinese household survey dataset with about one million households in the period between 1980 and 2002, Martin Ravallion and Shaohua Chen (2007) found that inequality was not always related to growth-enhancing reforms, and that there was no overall evidence of an aggregate growth-equity tradeoff in China. They found that higher growth in rural areas, which corresponds well with HRS reform and TVE development, brought inequality down. It reduced inequality within both urban and rural areas, as well as between them. Moreover, provinces with worse disparities, both within rural areas and between urban and rural areas, were less able to speed up rural economic growth. However, urban economic growth was positively correlated with inequality. Moreover, they found that the increases in public spending reduced poverty but not inequality. And, the increases in public spending tended to come from subnational governments, not the central government. Finally, they found substantial regional variations such that

provinces with a more rapid rise in inequality usually made less progress in poverty reduction.

Based on rural household-level data collected in nine provinces during 1986 to 1999, Benjamin, Brandt, and John Giles (2005) made qualitatively similar conclusions. They found that initial inequality affects growth, whereas rising inequality is not related to the growth trajectory. Specifically, they found that villages with higher inequality initially—i.e., in 1986—in their sample, grew more slowly over the next thirteen years. However, in village fixed-effects specifications, there is no statistical relationship between inequality and growth. They believe this suggests that the mechanism linking growth to inequality operates "in the long run." They also found that more unequal villages had the slowest nonagricultural development. Part of the explanations for the long-run impacts of inequality on growth may be related to their other findings. That is, low inequality is related to the effect of village education, which leads to higher income growth, especially of nonfarm incomes.

Yet, worries over ever-increasing inequality are increasing, and the impact of regional decentralization on inequality has been hotly debated. Some scholars even argue that the rapid widening of regional disparity caused by regional decentralization can lead to the disintegration of China (Hu, Wang, and Kang 1995). Kanbur and Zhang (2005) claim that fiscal decentralization is responsible for the rise of nationwide inequality.

Based on provincial level aggregate data, Kanbur and Zhang (2005) use the GE (the generalized entropy index) inequality coefficient, which increased from 0.14 in 1978 to 0.25 in 2000, and decompose Chinese inequality into three components: inland–coastal and rural–urban. They suggest that regional decentralization has contributed to about one-third of Chinese inequality. Consistent with some earlier literature (e.g., Tsui 1993; Jian Chen and Belton M. Fleisher 1996; Zhang and Kanbur 2001), they contend that regional disparity in general, and inland–coastal disparity in particular, is a key dimension of increased inequality in the reform era. From 1978 to 2000, the inland–coastal GE component increased by nine times, from 0.4 percent in 1978 to 3.8 percent in 2000. They argue that this rapid widening of the gap between coastal and inland regions is mainly due to FDI and trade since the two regions have different opportunities. On the other hand, the rural–urban GE coefficient component increased from 11 percent in 1978 to 13.9 percent in 2000. Although this raise looks marginal, there was an inverse trend, as the number had bottomed out at 6.4 percent in 1984 when the HRS reform was completed.[70] They argue that the worsening of the rural–urban disparity was also related to FDI and exporting.

Based on provincial-level data, Lin and Peilin Liu (2005) and Fleisher and Chen (1997) also claimed that widened regional disparities were related to regional decentralization. Lin and Liu (2005) emphasize different subnational governments' strategies and their effectiveness in economic development, whereas Chen and Fleisher (1996) attribute the widened disparity to the central government's policies of favoring the development of coastal regions, as most important reform policies favoring coastal regions are FDI- and export-related policies. Similarly, Shujie Yao and Zongyi Zhang (2001), Sylvie Demurger (2001) and Xiaolan Fu (2004) all claim that these reforms contribute to regional inequality. They report that both exports and FDI have significant and positive impacts on growth in coastal regions, but not in inland regions.

Fiscal recentralization was proposed as a policy remedy to ease regional disparities.

[70] Ravallion and Chen (2007) report a similar trend of rural–urban disparity over this period of time.

However, based on county-level data, Tsui (2005) and Zhang (2006) find that the regional fiscal disparities have worsened since the 1994 fiscal recentralization. Regional disparities in per capita fiscal expenditures (and by implication, the provision of services) are extraordinarily large across rural governments, and they were persistent since the peak reached in the late 1990s. Among the 2,800 county-level jurisdictions, in 2003 the richest spent forty-eight times as much as the poorest—a gap that is unusually large compared to that of other countries (Wong 2007).

Yet, one has to be careful about real mechanisms behind the so-called fiscal decentralization or fiscal centralization as most of the empirical work in the literature is based on aggregate data and is carried out in a reduced form. As we discussed previously, at certain times fiscal decentralization is concurrent with regional decentralization such that a correlation with fiscal decentralization in such a period could capture some things other than fiscal decentralization. On the other hand, since the mid-1990s, in addition to fiscal recentralization there have been many changes in regional decentralization. Thus, further research should be done to study the impacts of regional decentralization and various specific reforms on inequality.

Based on household data from nine provinces, Benjamin et al. found that the contribution of regional disparities to household inequality was increasing and peaked in the mid-1990s, when fiscal policy was recentralized, and since then it has declined. They find that, after the mid-1990s, most of the inequality in China is *within* the villages and cities in which Chinese households live and work; that is, most of the inequality was due to differences of income among households in the same province.

Concerning the disparity between coastal and interior regions, Benjamin et al. found that, during the 1990s, the difference in average incomes between the two regions widened considerably. However, much of the increase in the gap appears to be the result of a growing difference in incomes between *rural* households in the coastal and interior provinces. By 2000, rural incomes in the coastal provinces were about 50 percent higher than they are in the interior, whereas the urban income gap between the two regions did not widen much. Consistently, inequality in the coastal provinces increases only slightly (from 0.35 to 0.39), whereas increases are larger in the interior (from 0.39 to 0.48). The significantly larger increase in the interior is attributed to the increase in inequality in rural areas in the interior (increases from 0.40 to 0.49) compared to the coastal provinces, which remains under 0.40; and a widening rural–urban income gap in the interior (which widened from 1.58 to 1.85) compared to the coastal areas (which fell from 1.60 to 1.32).

Benjamin et al.'s findings suggest a strong link between inequality and regional decentralization, but due to a different mechanism than many others proposed. Instead of regional disparity, they argue that economic opportunity for citizens varies across regions, and this affects the development of rural areas. Thus, local institutions and differences in the opportunities for people living in the same community explain most of the rising inequalities. Concretely, they contend that at the outset of the reforms, the role of the state sector was significantly more important in the interior than in the coastal provinces. During the reform, the growth of the nonstate sector in the interior provinces has been much slower. This has handicapped the growth in rural incomes in both the urban and rural sectors. In contrast, growth in the nonstate sector in coastal provinces has provided opportunities to rural households, which has prevented a sharp deterioration in rural inequality like that observed in the interior.

6.4 *Resolving China's Institutional Problems*

The lack of an independent judiciary, rent-seeking behavior, and unresponsiveness to citizens' preferences are some of the intrinsic deficiencies of an authoritarian regime, and China's RDA regime is no exception. As discussed previously, some of those problems might be mitigated under the RDA regime when economic growth is an overwhelming objective because the multiple tasks of a regional government can be effectively converted into a single task, achieving a high GDP growth rate. Under this condition, regional competition can alleviate many problems.

However, when there are many tasks that are not well defined by quantitative targets, regional competition may lead to problems, such as regional protection and ignoring tasks that are not directly growth enhancing. It has been widely reported that there has been a severe deterioration of China's environment as a result of its rapid economic growth. SO_2 emissions increased from 19.9 million tons in 2000 to 25.5 million tons in 2005, making China the largest emitter of SO_2 (World Bank 2007). Moreover, this deterioration was closely related with a lack of interest from subnational government officials, who found that enforcing environmental regulations detracted from their ability to provide regional economic growth (Wanxi Li 2006).

Theoretically, if all tasks and their outcomes could be well measured, then by assigning a policy weight for each task it might be possible to construct a comprehensive index to summarize an official's achievement of all tasks. In this way, a multitask problem could be reduced into a single-task problem, and regional competition and experimentation over the comprehensive index would function well. The "Green GDP" proposal of the Chinese government is an endeavor in this direction (Elizabeth Economy 2007). However, most provincial governments who initially joined this "Green GDP" project have withdrawn from it due to a conflict of interests (between growth and other objectives) and disagreements on technical issues related to its measurement. Indeed, this idea is fundamentally flawed and the problem can be traced back to the Lange versus Hayek debate on the feasibility/infeasibility of centralized information collection. The GDP measurement is market-based and, therefore, market transactions have already solved a large share of the associated incentive and information problems. The difficulties in measuring nonmarket activities, i.e., beyond GDP measurement, are notoriously difficult due to incentive and technical problems. If there existed a general way to measure economic activities without using markets or to measure nonmarket activities accurately and efficiently, a centralized economy would be able to resolve all incentive and information problems at least as well as a market economy.

It is known that assigning high-powered incentives, through methods such as tournament competition, to subnational officials can be harmful when they are responsible for multiple tasks (Bengt Holmstrom and Paul Milgrom 1991). However, without regional competition, subnational officials under the RDA regime would not make efforts to initiate reforms or undertake growth-enhancing activities, which would deeply affect China's future development. In the following, I briefly discuss some principles to handle this dilemma.

First, the multitask problem can be mitigated by redefining tasks assigned to ministries and provincial governments. The scope of tasks to be carried out by subnational governments should be narrowed down. For example, responsibilities for activities with strong cross-region externalities should be centralized and regulated by ministries. Moreover, to reduce the multitask problem

at the central level, tasks to be handled by the central government should be handled by specialized ministries, special courts, and specialized regulatory bodies. Second, many monitoring and law enforcement functions, including regulation, should be separated from subnational governments, i.e., should be carried out by an independent press and an independent judiciary. This will not only reduce the multitask problem of subnational governments effectively, but also greatly enhance neutrality, objectiveness, justice, and thus effectiveness in monitoring and law enforcement. Third—and this would further entrench reforms—most market activities should be carried out by firms and should be separated from subnational governments. This will not only narrow the tasks of subnational governments, but it would also preserve strong incentives for firms for economic development even when incentives of subnational governments are weakened.

I must make it clear that some of the most serious and fundamental problems intrinsic to the RDA regime cannot possibly be resolved without a fundamental institutional change. The multitask problem faced by subnational governments is fundamentally associated with the fact that officials are accountable to their bosses, who face inherent and difficult informational problems in performance evaluation, not to mention the legitimacy problems of the central leadership (section 2). The ultimate solution to those problems lies in transforming the RDA regime into a democratic federal system in which subnational officials are elected and are accountable to their constituencies, so that their multitask problem will be converted into a single-task election problem. Arguably, to some extent this transformation is on its way, but very slowly, in a bottom-up fashion. In the past decade, most village heads (O'Brien and Li 2000, 2006) and some township heads (Li 2002) in China were elected; and systematic evidence shows that elected officials provide better public services and are more harmonious with their constituencies than appointed ones (Brandt and Matthew Turner 2006; Renfu Luo et al. 2010). If China is unable to meet the serious challenges of managing the institutional transformation into a democratic federal system, China's political stability and long run development could be put in jeopardy.

Another closely related, fundamental, and challenging problem China has faced is law and law enforcement. To some extent, by deploying a regulatory decentralization regime as a substitute, China has mitigated or postponed serious problems associated with the absence of the rule of law, and has therefore won itself some time to reform its law and legal institutions. However, arguably, reform in this area is among the slowest and weakest, and this slow pace has caused and will continue to cause severe socioeconomic problems. As the private sector and markets become fundamentally important to the economy, the negative impacts of bad laws and the absence of the rule of law will become even more manifest. The lack of an independent judiciary is one of the most serious problems; additionally, this is an intrinsic problem of the RDA regime and, therefore, an ultimate resolution depends on institutional transformation. Following successful experiences in previous reforms, China should start to establish an independent judiciary system at the county level—the bottom subnational level—and expand the reform upwards. Without substantial legal reforms, the absence of the rule of law could lead entrenched interest groups, particularly corrupt officials, to block the reform, obstruct development, and even threaten the political stability of the nation.

7. *Concluding Remarks*

In this paper, I argue that the regional competition and experimentation governed

by China's *regionally decentralized authoritarian* (RDA) regime have effectively alleviated potential incentive and informational problems. By linking regional performance to officials' promotion, tournament-like regional competition provides high-powered incentives to subnational officials to initiate and to implement market-oriented reforms, while simultaneously limiting corruption (section 3).[71] Therefore, to some extent, competition among subnational governments encouraged or forced them to create implicitly the institutions essential for a well-functioning market (section 5). Furthermore, by incorporating regional experimentation into the central government's decision-making process, reforms are less likely to be blocked, and the political and technical risks of reforms are greatly reduced (section 4).

Nevertheless, the very same institution, the RDA regime, and the solutions created and implemented by the RDA regime—as highly imperfect substitutes for "standard" solutions—also have created serious problems (section 6). Yet, given the political and economic context of China's reforms (section 2), many "standard" approaches were and are politically and institutionally infeasible, and it could be even worse for China's reforms if a reform fails as a result of implementing an infeasible approach. In this sense, the regional competition and regional experiments implemented by the RDA regime are second-best solutions.

To highlight the major features of the RDA regime, the following table 6 compares the characteristics of China's RDA regime with the federal state and the Soviet system.

As it evolved from a unique history, China's RDA regime is itself somewhat unique. Therefore, many reform policies that fit with this regime could not be easily transplanted as a package to other countries. However, there are still some general lessons that can be drawn from China's reforms and development for other developing countries.

The first general lesson is our understanding of "institutions" and their relationship with development. During its process of transition and development, China has changed its institutions at a large scale and has created market-supporting institutions in an evolutionary way, i.e., new institutions have gradually replaced old institutions when the new is ready. It would be mistaken to advise transition economies or developing countries to abandon their existing institutions in a rush by copying stylized "best practice" or "good" institutions without a careful understanding of the operation of both inherited and new institutions. As a matter of fact, the sophisticated market-supporting institutions observed in today's developed world were not created overnight; instead, they historically coevolved with markets.[72] Thus, for a country with many missing "good institutions" like China, it is inevitable to use existing institutions, such as the government, as a starting point to pave the road for institutional evolution.

Overly simplistic, black-and-white views of government are detrimental to reforms and economic development. There is a popular view that reforms in transition and developing economies should focus on confining the government, such that the role of the government should be restricted to the protection of property rights and contract

[71] My prediction is if there was no fierce regional competition, corruption would lead to the collapse of the Chinese government and Chinese economy.

[72] Ironically, the ongoing catastrophic financial crisis makes it crystal clear how problematic the legal (regulatory) and financial institutions are in the most advanced market economies. If we economists had a standard universal recipe on the shelf for institutional building, as offered to transition and developing economies, why do we not apply the recipe to fix these problems in advanced market economies?

TABLE 6
Characteristics of China's RDA Regime Compared with Other Regimes

	China's RDA regime	Soviet system	Federal State
Composition of national decision-making body	Central, regional and ministerial officials	Central and ministerial officials	Federal legislature representing regional constituencies
Decision-making process	Central-regional bargaining; consensus building; local experiments as a strategy	Top-down; SOE-Ministry bargaining	Voting in legislation; federal-state bargaining
Subnational officials' incentives	Promotion: absolute and relative performance; accountable to superiors; personnel control	Promotion: absolute performance; accountable to superiors; personnel control	To be elected; independent from the federal government; accountable to local constituencies
Regional competition	Tournament-like competition; competition affects governor's promotion	Not important	Fiscal (Tiebout) competition; competition affects governor's re-election
Regional experiment	Local experiments as part of central decision-making; experimental results may become national policy	Not important	States are "laboratories" for policy; voluntary adoption of experiments by states

enforcement. However, it has been well argued that reform and economic development involves complementary institutional changes to be carried out by the government. China's reforms in particular, and the experience of East Asian development in general (Japan, South Korea, Taiwan, Singapore, Hong Kong) illustrate this (Lin 2007); the history of market development in pre–Industrial Revolution Britain also illustrates this (Smith 1763). The government is the most important institution in any country (Stiglitz 1989) and its involvement is essential for market development (Smith 1776), and this has been borne out yet again during the market reforms in China. In addition to macro and political stability, national reform strategies, a functioning national government also determines effectiveness of decentralization, which is the next point I want to make.

The second general lesson is to use regional decentralization as an approach to solve incentive problems imbedded in reforms. China's reforms illustrate that the ability to reform institutions is endogenized as a result of the incentives of the stakeholders of existing institutions; while existing institutions are endogenized as a result of a country's history, social norms, culture, endowment, technology, etc. These facts make institutional reform and policy design fundamentally different from engineering design. The primary reason why many reforms with comprehensive plans failed was a lack of understanding of details of existing institutions, and of stakeholders' incentive problems with newly designed institutions, particularly when those were designed by outside "experts," who are not informed on those incentive problems. A thorough understanding of the details of existing institution

in general, and the incentive problems of the stakeholders of a reform program in particular, is the foremost factor in determining the fate of a given reform.

Although there may exist commonly agreed-on goals for reforms or economic development at an abstract level, it is often not very helpful to prescribe a universal policy recipe in detail. This is because any effective policy recipe must take into account the interests of stakeholders in the existing institution, which varies from country to country and from context to context. When China "ignored" standard advice, what they ignored was mainly the details, particularly when these were not incentive-compatible with Chinese stakeholders and thus would not work. Sometimes they have also "ignored" basic principles of standard advice due to political considerations, which is another type of incentive compatibility problem. Most of the details of Chinese reform policies were not designed ex ante, but instead evolved during the process of the reforms when incentive problems were resolved.

The importance of decentralization is not only due to heterogeneous local preferences, (Oates 1999) but also due to heterogeneous local incentive problems and local institutional arrangements that can be handled more properly locally. Economic reforms and economic development are path-dependent, and this is true not only at the national level but also at the subnational level. A local history determines what interests stakeholders have nested into the existing institution there and how those affect institutional reforms in the locality. The typical approaches deployed in Chinese reforms evolved as a result of dealing with local incentive-compatible problems explicitly.[73] Regional competition and regional experiments facilitate this approach, thus making reform easier. A large number of reforms in China were locally initiated responses to local problems. The greatest benefit of this decentralized approach is that it evolves within the existing institutional framework. Therefore, it is easier for a reform to be incentive-compatible, the reform will fit better with local conditions, and when new problems arise, officials will have better incentives and information to find solutions.

However, what is the limitation of decentralization? Or what is the boundary of a national government? Pushing decentralization to the limit, if every city is completely decentralized and becomes an independent country, each city-state will have substantial powers and responsibilities and each will be subject to a hard budget constraint. Is this optimal? Applying the analytical framework of this paper (sections 2, 3, and 4), I would argue that, in addition to social costs of breaking up of a nation (depending on the procedure these costs may vary from extremely high, e.g., anarchy or a civil war, to almost zero, e.g., a peaceful referendum and an orderly change), there are "pure" economic reasons that, under certain conditions, an integrated nation with regional decentralization can dominate a nation's breaking up. This is because the central government in an integrated nation is in a good position to address externalities among regions, such as strong positive externalities created by a few local experiments in a nation.

The last, but not the least, general lesson from China's reform is the importance of subnational governments. Decentralization is important for reforms and economic development in all countries except city-states. To make decentralization work, subnational governments should not only be empowered but also enabled. The literature on decentralization and federalism

[73] The Pareto-improving requirement (a la Lau, Qian, and Roland 2000) is the strongest criterion, whereas the incentive-compatible requirement is weaker and more general.

emphasizes empowering subnational governments but hardly discusses enabling subnational governments. Enablement does not come automatically with empowerment. Without enablement, subnational governments would not be able to take policy actions and decentralization would not work even when they are legally empowered. Moreover, enablement is a necessary condition for commitment to, and institutionalization of, decentralization. This point illustrates again that the overly simplistic view of confining government's resources and functions without a careful study of the context can be harmful to policy. Indeed, in many decentralized developing economies, subnational governments are not enabled. For example, underfunding of required expenditures on local infrastructure or social services has been common in most decentralized developing countries (Bardhan 2002; Bardhan and Mookherjee 2006). In contrast, all major reforms were initiated and carried out by Chinese subnational governments since they not only had the incentives to do so, but also they have the resources to proceed even if a given reform was not fully endorsed, i.e., not completely empowered.[74] This may explain partly why "China is the only country [in the world] where the local governments have played a leading role in increasing rates of growth" (Bardhan and Dilip Mookherjee 2006, p. 48). A country's history determines to what extent subnational governments are enabled and which government is enabled. This implies that, except for general principles, standard policy recipes may not work uniformly even within a country. This is another reason to support decentralization.

[74] Many Chinese local governments in less-developed regions also suffered severe underfunding problems for local public services, particularly after the 1994 fiscal recentralization (Wong 2007).

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