

State Sector Reform and Agriculture in China*

Scott Waldron, Colin Brown and
John Longworth

ABSTRACT China's state sector reform process is examined through the key sector of agriculture. A preview of aggregate statistics and broader reform measures indicate the declining role of the state. However, a systematic analysis of administrative, service and enterprise structures reveal the nuances of how the state has retained strong capacity to guide development of the agricultural sector. State and Party policy makers aim not only to support the livelihoods of hundreds of millions of farmers, but also to pursue agricultural modernization in the context of rapid industrialization. These goals are unlikely to be achieved through a wholesale transfer of functions to the private sector, so the state has maintained or developed new mechanisms of influence, particularly in the areas of service provision and enterprise development.

Orthodox liberal economists argue that economic transition requires and will result in a rapidly diminishing role for the state.¹ Apparently conforming to this transition orthodoxy, China's state sector has undergone a series of dramatic reforms since 1979.² However, the incremental, strategic and sometimes superficial nature of these reforms also demonstrates China's unorthodox approach to economic transition.³

Ascertaining the extent and nature of state sector reform across the economy is problematic for two major reasons. First, major differences arise across economic sectors in China's multi-sector

* This article draws upon research for a series of projects for which the authors would like to thank the Australian Centre for International Agricultural Research and Meat and Livestock Australia for funding and the Research Centre for the Rural Economy, the Chinese Academy of Agricultural Sciences, the Chinese Academy of Social Sciences and the Chinese Ministry of Agriculture for collaboration. Special thanks are due to Lu Xiaoping and Zhao Yutian for comments and clarifications and to Stephanie Cash for research support.

1. The transition orthodoxy literature is reviewed in Peter Nolan and Wang Xiaoqiang, "Beyond privatization: institutional innovation and growth in China's large state-owned enterprises," *World Development*, Vol. 27, No. 1 (1999), pp. 169–200.

2. One way of interpreting these reforms is through the rubric of the "New Public Management" which emphasizes the transfer of economic functions from the public to the private sector, and an increasingly managerial or entrepreneurial style of public management even within a communist regime and with indistinct boundaries between the private and public sectors. Peter Nan-Shong Lee and Carlos Wing-Hung Lo, "Remaking China's public management system: problem areas and analytical perspectives," in Peter Nan-Shong Lee and Carlos Wing-Hung Lo (eds.), *Remaking China's Public Management* (Westport: Quorum Books, 2001).

3. See for example John Burns, "'Downsizing' the Chinese state: government retrenchment in the 1990s," *The China Quarterly*, No. 175 (2003), pp. 623–856; Kjeld Erik Brødsgaard, "Institutional reform and the *bianzhi* system in China," *The China Quarterly*, No. 170 (2002); and Hon Chan, "Cadre personnel management in China: the nomenklatura system, 1990–1998," *The China Quarterly*, No. 179 (2004), pp. 702–734.

economy.⁴ Secondly, official data do not fully reflect the nuances of state sector reform.⁵ In light of these problems, this article examines China's state sector reform process through a detailed qualitative analysis of one particular important economic sector, agriculture.

Most studies on the role of the state in Chinese agriculture are concerned with policy-making and market reforms, and are confined to the grains sector.⁶ Such a focus on what the state *does* can be enhanced by a more complete understanding of what the state *is*.⁷ This article focuses on the latter and addresses developments in the agricultural sector as a whole. The amalgamation of such sectoral studies may help build a more complete picture of the role of the state in China's economy.⁸

The article is organized in terms of the three components of the state: administrative units, service units and enterprise units. A stylized structural diagram of the state sector is presented in Figure 1 and is referred to and explained throughout the article.

4. Louis Putterman, "Dualism and reform in China," *Economic Development and Cultural Change*, Vol. 40, No. 3 (1992), pp. 467–493. In establishing a four-sector model of the Chinese economy, agriculture is treated separately from the state-owned, township and village and private enterprise sectors in Wang Yijiang and Chang Chun, "Economic transition under a semifederalist government: the experience of China," *China Economic Review*, Vol. 9, No. 1 (1998), pp. 1–23.

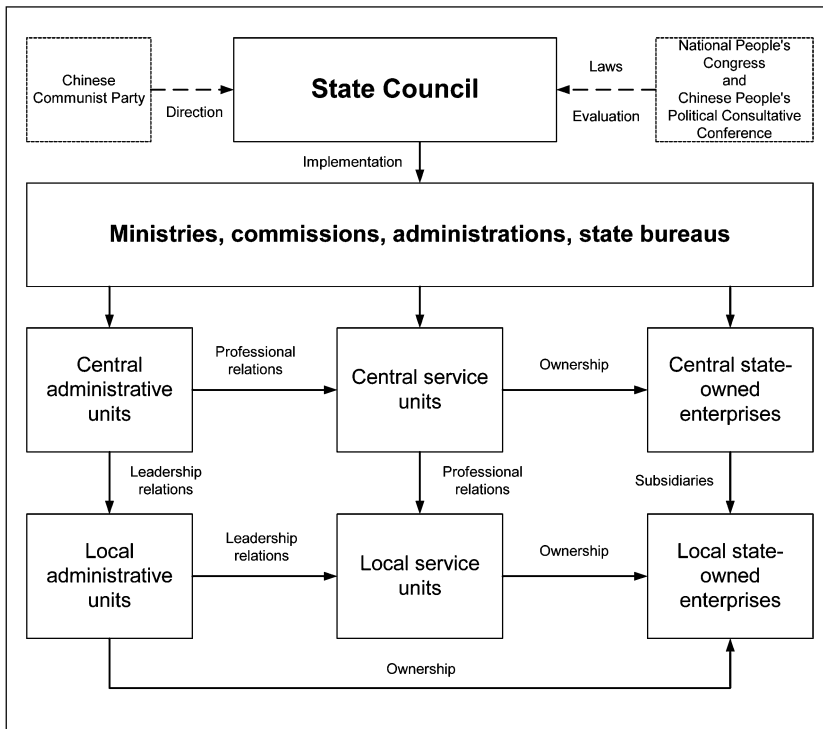
5. Some problems with the official data are highlighted in Damian Tobin, "Economic liberalization, the changing role of the state and 'Wagner's Law': China's development experience since 1978," *World Development*, Vol. 33, No. 5 (2005), pp. 729–743. For an example of more disaggregated data on state staffing not widely available in yearbooks see Brødsgaard, "Institutional reform," and Burns, "Downsizing the Chinese state."

6. See Scott Rozelle, Albert Park, Huang Jikun and Jin Hehui, "Bureaucrat to entrepreneur: the changing role of the state in China's grain economy," *Economic Development and Cultural Change*, Vol. 48, No. 2 (2000), pp. 227–252; Terry Sicular, "Redefining state, plan and market: China's reforms in agricultural commerce," in Andrew Walder (ed.), *China's Transitional Economy* (Oxford: Oxford University Press, 1996); and Zhou Zhangyue and Tian Weiming, "Developments in China's grain policies," in Zhou Zhangyue and Tian Weiming (eds.), *Foodgrain, Feedgrain and World Trade* (Aldershot: Ashgate, 2005). For analysis of institutional structures in particular agricultural industries see Scott Waldron, Colin Brown and John Longworth, *Rural Development in China: Insights from the Beef Industry* (Aldershot: Ashgate, 2003); Colin Brown, Scott Waldron and John Longworth, *Modernizing China's Industries: Lessons from Wool and Wool Textiles* (Cheltenham: Edward Elgar Publishing, 2005); and Scott Waldron, Colin Brown, John Longworth and Zhang Cungen, *China's Livestock Revolution: Agribusiness and Policy Developments in China's Sheep Meat Industry* (Wallingford: CAB International, forthcoming 2006).

7. Under the tenants of the "New Institutional Economics," high-level institutional structures forge lower-level and faster-changing activities (such as policy- and law-making) which, in turn, forge the way that economic activity and individual transactions take place. Oliver Williamson, "The new institutional economics: taking stock, looking ahead," *Journal of Economic Literature*, Vol. 38 (2000), pp. 595–613.

8. Examples of other sectoral studies include Emily Yeh and Joanna Lewis, "State power and the logic of reform in China's electricity sector," *Pacific Affairs*, Vol. 77, No. 3 (2004), pp. 437–466; Damian Tobin and Sun Laixiang, "Capitalist entrepreneurs or bureaucrats left to their own devices? The role of bureaucratic entrepreneurs and the rapid growth of China's telecom sector," CeFiMS Discussion Papers, DP53 (2005); Kwong-leung Tang and Raymond. Ngan, "China: developmentalism and social security," *International Journal of Social Welfare*, Vol. 10, No. 4 (2001), pp. 253–59; and Scott Rozelle, Huang Jikun and Zhang Linxiu, "Poverty, population and environmental degradation in China," *Food Policy*, Vol. 22, No. 3 (1997), pp. 229–251.

Figure 1: Simplified Structure of the State Sector



Administrative structures in agriculture have been downsized and restructured, but it is highly significant that agriculture is one of the only economic sectors to have retained administrative capacity for direct intervention. Service units have belatedly undergone reform but are still operated in a top-down manner and used as an instrument of policy. Similarly, enterprises in the agricultural sector have been enmeshed in the broader enterprise restructuring process but, regardless of ownership structures, the state remains influential through vertically integrated and corporatist structures.

Notionally, all components of the state sector governing agriculture have undergone reform in ways similar to other economic sectors and as could be expected for an economy in transition. More detailed examination, however, reveals that the state remains a powerful actor in agriculture both through mechanisms carried over from the central planning era and those that are a product of a new era. In this regard, agriculture is treated not just as an economic sector but also as one with important strategic and welfare functions.⁹ The reasons for the

9. This is hardly surprising given that nearly one-half of China's labour force – 313 million people – still worked in agriculture in 2003, and that the *san nong* (“three rural” – rural areas, rural people and agriculture) problem has been cited as the greatest challenge facing China at all high profile occasions in recent years. Ministry of Agriculture, *China Agriculture Yearbook* (Beijing: China Agriculture Press, 2004).

ongoing strong role of the state in agriculture and why this can be expected to continue into the longer-term future, even under rapid industrialization, conclude the article.

State Staff and Expenditures

As background to a more detailed examination of changes in the state structures in agriculture, this section provides an overview of broad changes in state personnel numbers and government expenditures. These indicators suggest a gradually diminishing but still important role for the state in agriculture. Unless otherwise stated, data in this section are derived from the China Statistical Yearbook.¹⁰

The yearbook reports that for China as a whole, the number of state employees declined from 83 million in 1999 to 69 million in 2002 while, as a reflection of the imprecision of the data, the official press routinely refers to a figure of 40 million.¹¹ State personnel are categorized into those that work in administrative and Party units (17 per cent of the total), service units (48 per cent) and state-owned enterprises (35 per cent).¹² Importantly, 98 per cent of the cadres work at the local level, namely county and below.¹³

Considerable attention has been given to the increase in the number of state staff in the 1980s and most of the 1990s.¹⁴ As could be expected under conditions of economic development, the increase occurred in the area of service provision, especially in telecommunications, utilities, health, education, social services, infrastructure and finance. In contrast, state staff numbers in economic sectors such as manufacturing, mining and construction have decreased rapidly, especially in recent years.

Numbers of staff in the agricultural sector (including cropping, livestock, fisheries and forestry) also decreased from 7.3 million in 1990 to 4.1 million in 2002. These decreases have taken place in all components of the state system governing agriculture – administrative, service and enterprise – especially since the year 2000. Nevertheless, the number of state staff in the agricultural sector is far higher than most economic sectors (including mining, trading, and construction and finance) and only lower than manufacturing because of the large number of workers in state-owned enterprises. State staff numbers in manufacturing are decreasing at a much faster rate than in

10. Zhongguo tongji ju/Guojia tongji ju (State Statistical Bureau/National Bureau of Statistics), *Zhongguo tongji nianjian* (*China Statistical Yearbook*) (Beijing: China Statistical Publishing House, various years).

11. One of the reasons for the imprecision is that employees of the state may be taken off the state payroll if their unit becomes part of the privatized or decentralized sector, even if their functions do not change. Conversely, for political and social reasons, state employees can remain on the payroll even if they do not work for the unit. See Tobin, "Economic liberalization."

12. Kjeld Erik Brødsgaard, *China's Cadres: Professional Revolutionaries or State Bureaucrats?*, EAI Background Brief No. 94 (2001).

13. Thanks to an anonymous referee for pointing this out.

14. Tobin, "Economic liberalization."

agriculture, as most state staff in agriculture are employed in service units, a sector that has only recently been subject to reform. Indeed, the number of state staff in agriculture is comparable to service sectors such as health, sports and social services (combined), and transport, storage, and post and telecommunications (combined) and only overshadowed by the education sector. The large numbers of state staff in agriculture is particularly significant given that the sector represents a relatively small and diminishing part of the economy.¹⁵

Another partial indicator of the role of the state is government expenditure. Total government expenditures in China have increased enormously both in absolute terms (often more than 20 per cent annually since 1990) and as a proportion of GDP (from 12 per cent in 1995 to 21 per cent in 2003). China's 1.3 million service organizations account for between one-third and one-quarter of state budgetary expenditures.¹⁶

State expenditures for agriculture (for supporting agricultural production, capital construction, science and technology, and rural relief) totalled RMB 175 billion in 2003. This amounted to 7 per cent of total government expenditures, compared with 10 per cent in 1990. The state spends another RMB 62 billion on policy-related subsidies, mainly price subsidies for grain, cotton and edible oil. Together, these expenditures are higher than for national defence and rank only after major items such as capital construction, health and education, and administration. Again, the expenditures are particularly high in proportion to the low levels of government revenues derived from agriculture.¹⁷

*Administrative Units*¹⁸

Administrative structures in China have roots in and are evolving from the central planning era, where government departments at

15. Agriculture contributed 30% of China's GDP in 1985, 24% in 1992 and 15% in 2003. However, in 2003, 62% of value from the light industry sector was derived from products that use agricultural inputs. The proportion of farmers in China's total workforce was 62% in 1985, 59% in 1992 and 49% in 2003. Ministry of Agriculture, *China Agriculture Yearbook*.

16. Carlos Wing-Hung Lo, Jack Man-Keung Lo and Kai-Chee Cheung, "Service organizations in the environmental governance system of the People's Republic of China," in Lee and Lo, *Remaking China's Public Management*.

17. The proportion of agricultural and livestock taxes to total taxation receipts was 4.3% in 2003. Ministry of Agriculture, *China Agriculture Yearbook*.

18. It is important to note that non-state structures also play an important role in Chinese agriculture. The Chinese Communist Party (CCP) has a special relationship with rural China and remains acutely aware of the need to head off rural unrest, maintain food security, keep its citizens fed and clothed and deal with natural disasters. Thus there are specific institutional links between the CCP and the agricultural sector, including through the "central rural work meeting," the "agricultural work meeting." The Rural Division of the CCP Central Policy Research Centre, and where State Councillors in charge of agriculture also hold high-level concurrent posts in the CCP. There are local equivalents, and Party members are embedded at village level where most agricultural production takes place. Similar linkages with agriculture also exist in the National People's Congress and the Chinese People's Political Consultative Conference. The Party has been reluctant to allow the development of farmer co-operatives because of the representation this would entail, although a Co-operative Law is being drafted by the National People's Congress.

central level took jurisdiction over particular sectors of the economy and maintained control through “a distinct chain of command to individual ministries at the local level.”¹⁹ These structures were beset with problems including replication and gaps in jurisdiction between government units.

Replication was rife in the 1970s when China had more than 100 ministries and commissions, many of which had economic functions.²⁰ As power and revenue could be generated from control over economic sectors, government bodies entered into intense “turf wars” with each other. This is one of the reasons for the replication of economic activity and over-capacity that remains endemic in China.²¹

The problem of administrative replication was and still remains particularly pronounced in agriculture. Lu *et al.* cite 14 government departments involved in agriculture: eight in quality and safety of farm produce, eight for agricultural investment, six for farm produce processing and distribution, and five for management of agricultural production materials.²² Problems arise not just from overlapping jurisdictions but also from artificial distinctions between them. In the planned economy era and well into the 1990s, sectoral activities such as agricultural production, marketing and processing were distributed along administrative fault lines.²³ As a result, government bodies did not have responsibility for administering the industries or sectors as a whole. The effects on industry fragmentation are well recognized in China.²⁴

19. A. Doak Barnett and Ezra Vogel, *Cadres, Bureaucracy, and Political Power in Communist China* (New York: Columbia University Press, 1967).

20. Lu Liangshu, Liu Zhicheng, Wang Dongyang and Zhu Lizhi, “Agricultural administration system reform for acceleration of modern agriculture development,” in Tiangeng Liang (ed.), *Proceedings of International Workshop on Agricultural Administration* (Beijing: China Agricultural Science and Technology Press, 20–23 November 2003), pp. 193–99.

21. For a discussion of over-capacity in multiple sectors of China’s economy see Joe Studwell (ed.), *China Outlook Survey 2003* (2002).

22. This replication arises in part because many government departments contain an agricultural portfolio, such as the Agricultural Economy Department within the Development and Reform Commission and the Department of Rural and Social Development within the Ministry of Science and Technology. Lu *et al.*, “Agricultural administration” also state that even within the Ministry of Agriculture, ten departments and 12 semi-government agencies are concerned with the quality and administration of farm produce, and argue the need for further internal streamlining.

23. Kenneth Lieberthal and Michel Oksenberg, *Policy Making in China: Leaders, Structures, and Processes* (Princeton, NJ: Princeton University Press, 1988).

24. See Niu Ruofeng, “Nongye chanye yitihua jingying de lilun kuangjia” (“A theoretical framework for agricultural vertical integration management”), *Zhongguo nongcun jingji* (*Chinese Rural Economy*) (1997). As a solution to administrative fragmentation, leading groups comprised of departments related to specific projects or programmes are established in all sectors of the economy, including agriculture. For example, Ya’an prefecture in Sichuan province established a leading group for “straw for beef” consisting of a prefecture vice-governor, and heads or deputy heads of the Agricultural Commission, Animal Husbandry Bureau, Finance Bureau, Agricultural Bank, Science and Technology Commission, Planning Commission, Industry and Commerce Administration Bureau, Grains Bureau and Tax Bureau.

Although many of these problems persist today, especially in the agricultural sector, administrative reforms have sought to address them. These reforms began in 1980, stalled after the mass demonstrations of 1989, but resumed with the sixth round between 1993 and 1996, the seventh between 1998 and 2001 and another round that commenced at the Tenth National People's Congress in 2003. The aims of both the sixth and seventh rounds of reform were: to strengthen the macro-economic management functions of the state; to abolish government departments with economic production functions and transfer these functions to enterprises; and to downsize government.²⁵ Reform measures in 2003 were consistent with these aims with some significant refinements and additions.²⁶

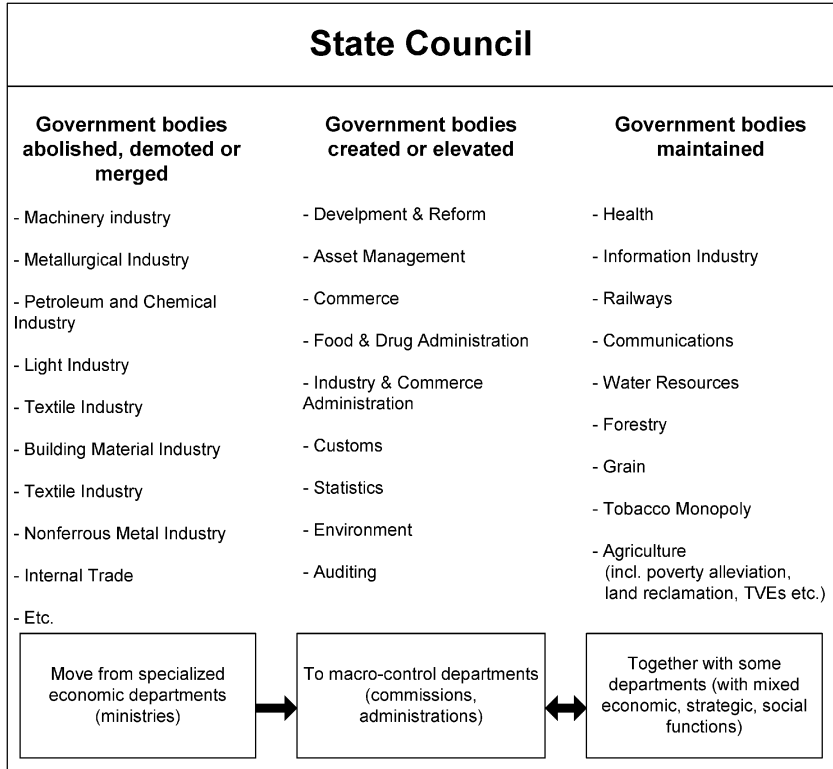
Conforming to the principles of the reform programme, 11 "specialized economic departments" were demoted to bureau status under the State Economic and Trade Commission (SETC) before being abolished altogether in the 1998 reforms or turned into associations in 2000. The abolition of specialized economic departments (ministries) occurred in parallel with the rise in power of "macro-control departments" (commissions or administrations), under the *bugaiwei* (部改委) programme. A selected summary of the reorganisation in horizontal structures from 1993 to 2003 appears in Figure 2.

Administrative reforms have generally facilitated a shift away from direct state intervention in particular economic sectors, especially in sectors where specialized economic departments were disbanded. In comparison, macro-control departments play a more passive role in providing "management, monitoring and guidance" functions in the economy. However, these departments wield a range of instruments (including subsidies, bank loans and preferential policies) that can and are used to stabilize the market, facilitate the pace of modernization and strategically pursue development. Unger and Chan argue that China's government reform process has been influenced by the Japanese model, where powerful government bodies such as the Ministry of International Trade and Industry were able to

25. Luo Gan, "The explanatory notes of the program of the institutional reform of the State Council delivered at the First Session of the Ninth National People's Congress (March 6, 1998)," *Chinese Law and Government*, Vol. 36, No. 1 (2003), pp. 18–29. In the 1998 State Council reforms, new departments were classed into four groups: macro-control; specialized economic management; education, science, culture, social security and resource management; and state administration. John Burns, *The Civil Service System of the People's Republic of China. Proceedings of Civil Service Systems in Comparative Perspective* (Bloomington, IN, 5–8 April 1997).

26. Specifically, the 2003 reforms consisted of: deepening the reform of the state-owned assets management system; bettering the macro-control system; strengthening the financial supervision and management system; continuing to push forward the reform of the circulation management system; and strengthening the construction of food security and safety production supervision and management system. "Five major points concerning State Council restructuring," People's Daily Online, Beijing, 7 March 2003.

Figure 2: Reform of Selected Administrative Departments under the State Council



mould the economy through close business–government relations and within corporatist structures.²⁷

The Ministry of Agriculture survived the rounds of administrative reforms but was affected by them. At the central level, staff numbers were cut by about 50 per cent in 1998. More importantly, cuts followed at local levels around the year 2000.²⁸ As part of the broader ministerial re-shaping, functions of the Ministry of Agriculture such

27. Jonathan Unger and Anita Chan, “China, corporatism, and the East Asian model,” *The Australian Journal of Chinese Affairs*, No. 33 (1995), pp. 29–53.

28. Agriculture is one of few hierarchies (along with education, civil affairs, finance and family planning) to be required to fill each administrative level from central to township levels. Burns, “Downsizing the Chinese state.” For an idea of staff numbers in a provincial agricultural department, the Hunan Department of Agriculture had 965 staff entering into the reform era, cut to 482 in 1984, 148 in 1995 and 73 in 2000. He Tielin, “Thoughts on the institutional reform of agricultural administration,” in Liang, *Proceedings of International Workshop on Agricultural Administration*, pp. 270–78. The Yunnan Department of Agriculture had 119 staff in the late 1990s with 19 service units and six enterprises. In the 2000 reforms, staff numbers were reduced to 82, but these were largely absorbed into ten extra service units (to total 29) while the number of enterprises remained the same (six). Pan Zhengyang, “The issue of institutional structure and functional disposition for agricultural management in agricultural sector,” in *ibid.*

as quarantine, inspection and statistics were partly transferred to respective macro-control departments. At the same time, ongoing internal restructuring aimed to strengthen the role of macro-control departments within the Ministry of Agriculture.²⁹ Li interprets these changes as a move towards providing “guidance, support, protection and macro-control” where they “do not mean that we will give up the duties of providing guidance to farmers, but that we will function on the basis of legal administration. This is only a change of patterns, with the essence remaining the same.”³⁰

The Ministry of Agriculture might not have come through the reforms unscathed, but it is highly significant that it survived them, along with several other departments related to agriculture: the State Forestry Administration, the State Grain Administration and the State Tobacco Monopoly Administration (see Figure 2).³¹ At the same time, the dismantling of other economic departments that compete with the Ministry of Agriculture – particularly the Ministry of Internal Trade and the Ministry of Light Industry – has provided an opportunity for the Ministry of Agriculture to extend its scope of activities from its traditional base in agricultural inputs and production into areas such as agricultural marketing and food processing. The restructuring suggests that rather than being regarded purely as an economic sector, agriculture is treated in similar way to sectors that combine economic activities with public service activities such as infrastructure, health and education, all of which have also maintained their ministry status. These bodies have retained their position directly under the State Council and so are able to formulate and implement sectoral policies, regulations and programmes.

Thus, government reform measures have not decreased – indeed may have increased – the relative power base of the Ministry of Agriculture. Chinese agriculture is in the position of being an economic sector still overseen by a powerful and bureaucratic structure with both the institutional capacity and the mandate to intervene in the sector, which it does pro-actively and frequently.³² As shown below, this capacity is strengthened by fuzzy boundaries

29. Li Bingkun, “Further and deeper reform on the agricultural administration system,” in *ibid.* pp. 221–28.

30. *Ibid.* Departments and bureaus under the Ministry of Agriculture are: Sectoral Policy and Law; Rural Economic System and Administration; Market and Economic Information; Development Planning; Finance; International Co-operation; Science, Technology and Education; Crop Production; Farm Mechanization; Animal Production and Health; Fisheries; Administration, Personnel and Labour; and the Party Committee. The non-sector specific areas of poverty alleviation, land reclamation, and township and village enterprises are also embedded within the hierarchy. See www.agri.gov.cn.

31. This new administrative environment has led to calls to establish an all-encompassing Agricultural Commission. Liang, *Proceedings of International Workshop on Agricultural Administration*.

32. As a reflection of this mandate, the mission statement of the Ministry of Agriculture is to: formulate mid- to long-term development strategies and programmes for agriculture and the rural economy; investigate agricultural industry policy and

within the state sector and between the semi-state and non-state sectors.

Service Units

Although service units (*shiyè danwèi* 事业单位) are known as the “big shadow of the state,” accounting for about 48 per cent of staff and a major proportion of state expenditure, they receive little attention in English literature.³³ Service units play an especially important role in agriculture, where they are most numerous after health (hospitals and clinics) and education (schools and higher learning institutions).³⁴ The institutional position of service units lies somewhere between that of an administrative unit (discussed above) and a state-owned enterprise unit (discussed below). They are involved in areas such as service delivery, research, standards, testing and inspection and have titles such as station (*zhan* 站 or *zongzhan* 总站), institute (*suo* 所), centre (*zhongxin* 中心), laboratory/school (*shi* 室 / *yuan* 院), or association (*xiehui* 协会).

China’s vast service system is the most recent part of the state sector to have undergone reform, having only really began to reform in earnest in 1999. The reform process so far has been only partial or what Ding refers to as “incremental change and strategic adjustment.”³⁵ Indeed, instead of being cut back, the Chinese service sector swelled at the end of the 1990s, partly because it absorbed staff and organizations displaced by the administrative and enterprise reforms.³⁶

Key to understanding the reform process of service units is their classification into three forms: fully state funded (*quan’e* 全额), partially state funded (*cha’e* 差额) and self-funded. Fully-funded service units are funded by the administrative units to which they are

footnote continued

adjust agricultural industry structures; research and propose guiding policies and reform measures for agriculture and the rural economy; establish and build agricultural science and technology systems; direct the reform of the rural economy system through government policies and regulations; conduct research and assist the formulation of laws and regulations about agriculture and rural economy; and conduct research on the development of rural human resources (translation from the document “Simple introduction to the Ministry of Agriculture,” provided by the Ministry of Agriculture).

33. Some of the few English-language studies to have examined the role of service units in China’s public service system in detail are in Lee and Lo, *Remaking China’s Public Management*.

34. Lo, Lo and Cheung, “Service organizations.”

35. Ding Li, “Jieduanxing bianhua yu zhanlüexing tiaozheng: guanyu nongye shiyè danwèi gaige de diaocha yu sikao” (“Thoughts on the reform and strategic adjustment of the structure of agricultural service units”), *China Rural Outlook*, No. 4 (2000), pp. 12–18.

36. Lo, Lo and Cheung, “Service organizations,” and Burns, “Downsizing the Chinese state.”

attached, and are thereby obliged to perform work as directed by these units. In recent years, responsibility for funding service units has been largely delegated to local government. Budget constraints at local levels place intense pressure on the service units to move along the continuum toward commercialization, but most have only been able to commercialize partially, and as such remain partly state funded. In this case, the (local) state pays for office space and basic wages, in return for which the unit performs a corresponding amount of government work.³⁷ Beyond this, partially-funded service units can utilize their human, technical and other resources to take on outside work or deliver commercial services, without registering as a company.³⁸ There are examples of service units that have been able to commercialize fully. In many cases, these represent the profitable corporate arms of – and are still controlled by – government administrative or service units.³⁹ In other cases, service units cut loose from local government funding struggle to survive, close operations or merge with other units.

There are many categories of service units in the agricultural sector.⁴⁰ These include agricultural education and research institutions,⁴¹ units that administer agricultural information and standards,⁴² monitoring and inspection institutions,⁴³ demonstration farms,⁴⁴

37. Several county-level agricultural extension technicians interviewed said that their official annual salary can be as low as RMB 3,000, but that their ability to earn extra income through consulting and business activities can make this service job more attractive than working in the administrative system.

38. Because of the unclear boundaries between state and commercial activities, attention is turning to improving accounting, auditing and inventory recording practices of service units. Zhou Weiping and Chen Tingbin, “Jiaqiang nongye shiye danwei: neishen gongzuo de duice” (“Strengthen agricultural service units: policy toward internal audit work”), *Jiangxi shenji yu caiwu (Jiangxi Auditing and Finance)*, No. 7 (2002), p. 53.

39. Ding, “Thoughts on the reform and strategic adjustment of the structure of agricultural service units.”

40. At the central level in Beijing, the Ministry of Agriculture has formal affiliation with five technical inspection and regulatory units, five social organizations, four education and training units, six information, publishing and propaganda units, eight science, research, technology and extension units, and 16 exchange, development and consulting units. These are, in most cases, central organizations for larger regional networks.

41. China has 58 agricultural universities and colleges, 365 agricultural secondary schools, and 2,600 agricultural television and broadcasting schools at country level. More than 30 million farmers attend technical training courses each year and the number of agricultural research units has increased to 1,200. For details on other agricultural organizations in China see Zhang Qiaoqiao (ed.), *Zhongguo nongye jiqi xiangguan xueke jigou jianjie (Directory of Chinese Agricultural and Related Organizations)* (Wallingford: CAB International, 1994).

42. Examples include the China Green Foods Centre and the Non-polluting Foods Centre within the Ministry of Agriculture China Food Quality and Safety Centre, both of which administer huge systems with offices down to province level or below.

43. For example, the National Institute of Chemical and Biological Products Inspection and the Ministry of Agriculture Feed Inspection Centre are powerful bodies that test for compliance with National Standards.

44. Under the so-called “demonstration + administrative promotion measures + input supply” model, demonstration sites have proliferated in Chinese agriculture at all levels.

and associations.⁴⁵ Agricultural extension is particularly important in China's service system, and so is discussed in some detail below.

China's nationwide agricultural extension system has its roots in the central planning era where it was run as a top-down vertical hierarchy stemming from administrative bodies at the central level (especially the Ministry of Agriculture and Ministry of Science and Technology) down to grassroots levels. Decisions were made administratively rather than being guided by user needs, and the system was used as an instrument of policy where local government agencies at all levels organized, mobilized, guided and encouraged farmers to accept new technologies.⁴⁶

In many ways this is still an accurate depiction of the contemporary Chinese agricultural extension system. However, three major reform measures have generated significant and genuine change in recent years. First, especially during the late 1990s, various laws and decrees shifted funding responsibility for extension units from central levels to local levels, and exerted pressure for them to commercialize operations.⁴⁷ Township government in particular now holds responsibility for funding "basic" extension activities of township stations.

The reforms had major effects on township agricultural extension stations (engaged in cropping, livestock, aquaculture and fishery, agricultural machinery, and rural economic management). The system grew until the late 1990s but when the full impact of decentralization

45. While there are many forms of associations in Chinese agriculture, it is useful to place them in a continuum from "top-down" to "bottom-up" forms. "Top-down" associations often have a background as government administrative units with ex-state-owned enterprises as members, and now see their role as acting as a bridge between government and business. Examples from the former Ministry of Light Industry hierarchy include the China Leather Industry Association and the China Food Industry Association. Further down the spectrum more localized and specialized associations have emerged in response to the needs of the industry and their participants. Examples are the Xinjiang Fine Wool Producers Association (attached to the Xinjiang Academy of Animal Sciences) and the Nanjing Wool Market (attached to a subsidiary of a major wool import conglomerate). There are probably more than 100,000 local specialized farmer associations in China, in which government is often closely involved, that play an important role in the extension and services delivery. For survey results on farmer associations see Shen Minggao, Scott Rozelle and Zhang Linxiu, *Farmer's Professional Associations in Rural China: State Domination or New State-Society Partnerships?* No. FE20050013 (2005).

46. Chen Xiaohua, "Development and reform of agro-tech extension system in China," in Liang, *Proceedings of International Workshop on Agricultural Administration*. See also, Jorgan Delman, "We have to adopt innovations' – farmers' perceptions of the extension-farmer interface in Renshou county," in Eduard Vermeer (ed.), *From Peasant to Entrepreneur: Growth and Change in Rural China* (Wageningen: PUDOC, 1992); and Zhai Xueling and Fan Xiurong, "Woguo dangqian nongye tuiguang tizhi cunzai biduan ji gaige silu" ("Thoughts about the reform and malpractices in China's current agricultural extension system"), *Nongye keji guanli (Agricultural Science and Technology Management)*, No. 6 (2000), pp. 17–20.

47. These include the 1985 CCP Decision on Reform of Science and Technology System (to introduce the technical responsibility system where technical extension institutions were permitted to establish business entities), the 2001 State Council "Outline for Agricultural Science and Technology Development 2001–2010" (to promote fee services), and the 2002 "CCPCC and State Council Opinion on 2002 Agriculture and Rural Work" (where public finance was allocated to activities with a strong public good component such as crop and animal diseases).

and commercialization measures came into effect between 2000 and 2002, the number of township extension stations was slashed by 19 per cent and number of technicians by 21 per cent.⁴⁸ These stations were taken off the books of the state extension system because they were commercialized, closed or amalgamated with other stations.⁴⁹ By 2001, approximately 52 per cent of township extension stations were fully state-funded, 27 per cent partially state-funded and 20 per cent self-funded.⁵⁰

A second element of reform of the agricultural extension system has been to delineate more clearly the functions of the different types of administrative units and service units. For example, it has now been established that it is the responsibility of the administrative system (especially the Ministry of Agriculture and the State Council) to make policy and laws on livestock disease control, while various service units then take responsibility for providing services that will uphold these laws. Local veterinary stations provide day-to-day veterinary services to households (on a subsidized fee basis), other local service agencies within the Animal Husbandry and Veterinary Bureau inspect livestock at the point of sale or slaughter (usually for a percentage of the value of the activity), and the state uses public funding for large-scale epidemic control programmes. Other administrative and service units have jurisdiction over feed inputs, meat outputs and trade. While this may appear convoluted, it is clearer than the previous system where multiple agencies had overlapping jurisdictions. To clarify institutional roles further, there have been calls to return both regulation and inspection functions back to government administrative units.⁵¹

The third major element of reform of the extension system has been the entry of a range of actors that are not formally part of the state hierarchy. These include the commercialized ex-state extension stations (discussed above), an estimated 400,000 extension groups at village level,⁵² farmer associations⁵³ and, as discussed below, agricultural enterprises.

Despite these reforms, the agricultural extension service still largely operates as a top-down system. The state still monopolizes parts of

48. There were 166,000 township agricultural extension stations in 1996, 187,000 in 2000 and 151,000 in 2002 (with an additional 21,700 county-level stations in 2002). There were 679,000 township agricultural technicians at township levels in 1996 (an additional 300,000 on the payroll but not working), 880,000 in 2000 and 694,000 in 2002 (with an additional 330,200 agricultural technicians at county level in 2002). Chen, "Development and reform."

49. For example, in Yunnan province 20% of specialized township stations were recently amalgamated into comprehensive Agricultural Science and Technical Service Centres. Pan, "The issue of institutional structure and functional disposition for agricultural management in agricultural sector."

50. Chen, "Development and reform."

51. Ding, "Thoughts on the reform and strategic adjustment of the structure of agricultural service units."

52. Chen, "Development and reform."

53. Shen, Rozelle and Zhang, *Farmer's Professional Associations in Rural China*.

the system such as some livestock breeding activities, veterinary products and seed varieties. The extension system is very often used as an instrument of policy, particularly in the establishment of new agricultural industries (beef, mutton or dairy), new technologies (straw ammoniation, genetically modified cotton, various crop varieties), or for special programmes (forestation, poverty alleviation). Mechanisms include the provision of state funds to cash-strapped fully- or partially-funded state extension units, and through coercion through the hierarchy of leadership and professional relations.⁵⁴ Furthermore, as discussed below, even where non-state actors such as enterprises and associations have stepped in to play a major role in agricultural extension, these bodies are often captured within local state corporatist structures.

Enterprise Units

As a central component of the broader enterprise reform programme, government departments have divested themselves of state-owned enterprises, using several means. First, large enterprises deemed strategically important to the state were transferred from specialized economic departments to various central-level commissions. The 163 central-level non-financial enterprises under the Central (Large-scale) Enterprise Work Commission in the late 1990s included at least 20 agricultural conglomerates.⁵⁵ Secondly, local-level state-owned enterprises have been cut from their line bureaus and delegated to local government, where they also come under a multi-layered network of bureaus.⁵⁶ Thirdly, state-owned enterprises have undergone corporatization through privatization, “shareholderization” and holding company structures. About 50 per cent of large agricultural enterprises were shareholder enterprises in 2000, in which government departments are usually the major shareholders.⁵⁷ Fourthly, agricultural marketing agencies and processing enterprises have been stripped of their monopoly positions and now compete on a

54. The state hierarchy is linked through a nexus of “leadership relations” (*lingdao guanxi*) and “professional relations” (*yewu guanxi*). Higher-level units are more able to discipline subordinate units if the relations are “leadership” rather than just “professional.” For a structural diagram of leadership and professional relations in the agricultural extension sector see Huo and Ling, “Thoughts about the reform and malpractices in China’s current agricultural extension system.”

55. In 1997, these central level companies controlled about 12,000 local subsidiaries. Harry Broadman, “China’s management of enterprise assets: the state as shareholder,” (Washington, DC: The World Bank, 1997). For a complete list of enterprises including agricultural enterprises that report directly to the State Council see Malcolm Lamb, *Directory of Officials and Organizations in China* (New York: Eastgate, 2002).

56. These include economic and trade commissions, planning commissions, supervisory committees, state asset management bureaus and state asset operating companies.

57. Ministry of Agriculture, *2000 China Agricultural Development Report* (Beijing: China Agriculture Press, 2000).

roughly equal footing with non-state enterprises.⁵⁸ China's enormous state farm systems are also undergoing liberalization.

Despite the structural shift ushered in by these state-owned enterprise reforms, the process has been incremental and has stalled on occasions. Specialized economic departments have lost formal control over their old enterprises, but other macro-control government departments remain in a powerful interventionist position through personnel, finance and other forms of resource allocation and through involvement in operational decisions. At local levels, government departments still hold shares and have representation in their old companies, state marketing agencies and state farms.

Ownership structures, however, are not necessarily the defining factor in the role of the state in the enterprise sector. Indeed, the state remains a powerful force in the development and operation of enterprises, regardless of ownership structures. In the 1990s era of privatization, Oi argued that the local state had been able to influence the activities of rural industry through corporatist structures, by providing support for credit, through favourable policy treatment, licensing and other approval processes, and through access to technology, markets and infrastructure.⁵⁹ Lu and Tang argued that the state has a strong capacity to influence the business decisions of firms through mechanisms linked to central planning, especially plans and preferential policies. They maintain that the state can change the micro-economic consequences of business activities to the extent that it influences enterprise decisions on what, how, where and for whom to produce.⁶⁰

The reliance of enterprises on government also holds in reverse in a symbiotic relationship. At both central and local levels, officials promote enterprise development because they can add value to and integrate industries (especially the processing of agricultural commodities), generate tax revenues (more than is the case for primary production) and for personal reasons.⁶¹ These pressures are particularly pronounced in many rural areas where agriculture represents one of few development options.

The state therefore has an interest not only in maintaining close and ongoing ties with existing enterprises, but also in building and forging new relationships with enterprises regarded as more suited to China's ambitions of modernization. In this regard, central government has taken a pro-active role in supporting and establishing enterprises. For example, the Jiang Zemin (江泽民) regime aimed to fast-track the

58. For a discussion of state marketing agencies in their early reform phase, see Sicular, "Redefining state, plan and market."

59. Jean C. Oi, *Rural China Takes Off: Institutional Foundations of Economic Reform* (Berkeley: University of California Press, 1999).

60. Lu Ding and Tang Zhimin, *State Intervention and Business in China: The Role of Preferential Policies* (Cheltenham: Edward Elgar Publishing, 1997).

61. Government and Party officials are often reluctant to divest their units of state-owned enterprises because they act as a vehicle to claim expenses such as meals, accommodation and entertainment.

development of 1,000 conglomerates or group structures (*jituan gongsi* 集团公司) to resemble Japanese, Korean and United States conglomerates.⁶² Local officials went about meeting the quotas, and in many cases the conglomerates were involved in or extended business activities into agriculture.

There are many examples of enterprise targeting in the agricultural sector. One of the most important but unreported developments in Chinese agriculture in recent years is the proliferation of “dragon head enterprises” (*longtou qiye* 龙头企业) that “lead along” (*daidong* 带动) other actors (especially households) in the agricultural vertical integration (*nongye chanyehua* 农业产业化) movement.⁶³ At the central level, the Ministry of Agriculture maintains a list of about 150 very large dragon head enterprises that are eligible for special finance, tax and other support measures.⁶⁴ In 1999 the Agricultural Bank of China gave discounts on loans of RMB 500 million for the purpose of agricultural vertical integration (that is, for dragon head enterprises).⁶⁵ In 2002 the Agricultural Development Bank developed a special lending programme for dragon head enterprises, where lending reached RMB 40 billion in 2003. Rural credit co-operatives also have a loan facility for dragon head enterprises.⁶⁶

The propensity to target agricultural enterprises at central level is replicated at local levels. Shandong province has bestowed dragon head status on 50 enterprises but, as the criteria become increasingly lenient down the administrative hierarchy, there can be 50 dragon heads per county, as was the case in some places in Henan. By the year 2000, surveys conducted by the Ministry of Agriculture counted more than 27,000 dragon head enterprises across China, which acted as the main interlocutor for an estimated 25 per cent of China’s farmers to integrate vertically with agricultural industries.⁶⁷

The state plays an integral role in China’s massive vertical integration movement. At the central level, China’s agricultural

62. Willy Wo-Lap Lam, *The Era of Jiang Zemin* (Singapore: Prentice Hall, 1999). Big business in China is examined in various works by Nolan, including Peter Nolan, *China and the Global Economy: National Champions, Industrial Policy and the Big Business Revolution*. (Houndsmill: Palgrave, 2001).

63. See Waldron, Brown and Longworth, *Rural Development in China*; and Scott A. Waldron, “Models of agro-industrialisation in China: the case of the cattle and beef industry,” *Agricultural and Natural Resource Economics Discussion Paper* (St Lucia: School of Natural and Rural Systems Management, University of Queensland, 1999).

64. China Food and Agricultural Services, “China targets agribusiness conglomerates” (2002), available at www.cnfas.com. One enterprise on the list interviewed said that favourable treatment was confined to waiving taxes on profits.

65. Ministry of Agriculture, *China Agricultural Development Report* (Beijing: China Agriculture Press, 2000).

66. Fred Gale, Bryan Lohmar and Francis Tuan, “China’s new farm subsidies no. WRS-05-01” (Electronic Outlook Report from the Economic Research Service, United States Department of Agriculture, 2005).

67. Niu Ruofeng, “Zhongguo nongye chanyehua jingying de fazhan tedian yu fangxiang” (“Development characteristics and directions in agricultural vertical integration management in China”), *Zhongguo nongye jingji* (*China Agricultural Economy*), No. 5 (2002), pp. 4–8. Other intermediary organizations for farmers to become vertically integrated include specialized markets and associations.

vertical integration movement is overseen by a purpose-built unit called the Agriculture Vertical Integration Office at central level and industry offices of various titles down to county level across China. At local levels, the predominant form of organization in agricultural vertical integration is known as the “farmers + enterprise + government” model. The role of government includes providing a raft of favourable policies, public funding and special projects. An equally important role is to organize farmers to enter into the vertically integrated projects through, for example, the formation of specialized farmer groups or associations, or by brokering contracts between farmers and enterprises. This can be done through administrative decree at the local level, or through inducements such as concessional loans or access to poverty alleviation projects.

The state also plays a role in agricultural vertical integration projects through the provision of infrastructure (for example livestock housing and feed facilities), extension services (breeding, vet and feeding services), information and marketing, and in monitoring compliance with health and quality standards. These roles are crucial for dragon head enterprises, especially when targeting higher-value markets. The close relationships between government administrative units, dragon head enterprises and service units (including extension units and associations) represent another layer in the intermeshing of state and non-state sectors in agriculture.

Reasons for the Ongoing Role of the State in Agriculture

This article argued that while agriculture has been swept along in the reforms implemented across the broader economy, the state has retained strong capacity in the sector. There are several underlying reasons for this which may provide insights into probable future changes.

Strong administrative capacity has been retained by the state as a means of maintaining control over the development of the agricultural sector. This is not just to pursue the well-known objective of influencing grain production, marketing, prices and trade balance. The full range of agricultural industries – targeted industries in particular – is seen as a vehicle to increase rural incomes, and to pursue more balanced regional development, modernization, import replacement and better environmental outcomes. These goals are unlikely to be realized under current structures dominated by small-scale farmers, speculative traders and private companies. Thus, the state has sought to retain the capacity to intervene in agricultural structures pro-actively.

The state also maintains a major role in service provision in agriculture, which is a highly service-intensive sector and where many of the services are public goods. In some cases, the state roles have been maintained to ensure that these services are delivered in line with administrative objectives and the perceived interests of society.

However, the state would like to divest itself of many less strategic aspects of service delivery but has been unable to do so because the private sector has not taken up the role on a widespread basis. On the demand side, a limited proportion of agricultural households currently act on incentives to pay for better quality private services such as extension, standards, information or co-operative activities. Until major structural constraints in the agricultural sector are overcome (such as small farm scale, the predominance of low-value markets, lack of price-grade differentials, and a lack of specialization along the lines of comparative advantage), these incentives will remain unclear to most households.

It is also difficult to delineate public and private roles in the agricultural enterprise sector. Behind the difficulties lies the failure of the state to provide functioning public market services such as grading, standards, inspection, certification, registration and market regulation. In an environment with high market transaction costs, enterprises will seek to internalize costs within vertically integrated enterprise or project structures. Government has stepped in to provide the additional incentives for enterprises to develop and for other actors to participate in the structures.

Looking to the longer term, policy makers will continue to remove barriers in China's transition from an agrarian to an industrial society in areas such as urban and worker migration and the on-leasing of agricultural land. This may help to create a more affluent market for agricultural products in China, and also an agricultural sector with fewer, larger scale participants and more consolidated and specialized structures. As the agricultural sector decreases in size relative to the industrial sector, the state will also have both greater demand and greater capacity to target rural adjustment and agricultural modernization, as has been the case in other North-East Asian countries, the United States and Europe.⁶⁸

68. Kim Anderson and Yujiro Hayami, *The Political Economy of Agricultural Protection: East Asia in International Perspective* (Boston, London and Sydney: Allen and Unwin, 1986).