

# State Capitalism and Chinese Food Security Governance

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## Abstract

Since the financial crisis of 2008–9, how a state can play a more active role in correcting market failure has become a central topic in political economy. Thus, academia is again discussing state capitalism seriously. Contemporary state capitalism assumes state intervention in markets is becoming more multifaceted. Consequently, traditional state-owned enterprises exist alongside new government-favored actors, such as privately owned national champions and sovereign wealth funds, intervening in markets. This coalition helps the state achieve its security, political, economic, social, and nationalistic goals more efficiently. Its growing power in markets also heralds the return of state capitalism. This paper uses state capitalism theories to re-interpret China's food security governance. The three preliminary findings are as follows. First, China's food security governance is typically operated under state capitalism, which has successfully managed China's food *availability*, though not without some corruption, but has weakened its food *accessibility*. Second, using state capitalism to manage China's food *safety* has been impeded, so the effects remain to be seen. Third, state capitalism has successfully improved the *stability* of the food supply and demand in China, but its agricultural business branching-out strategy has worried the international community and should be observed further.

## 1. Introduction

Early modern discussions of state capitalism (SC) date back to the mid-1970s, largely in response to the two oil crises and discussion of the active role states should play. Nevertheless, as neoliberalism rose in the 1980s, the retreat of government intervention and the rise in private enterprises have dominated the global political economy over the past 30 years. However, the financial crisis of 2008–9 caused renewed

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widespread reflection on neoliberalism, including using government intervention in highly strategic industries, such as finance, energy, infrastructure, food, and so on.<sup>1</sup> These discussions indicated that the state should play a more active role in the industries mentioned, not just by intervening to correct the market crises after the financial crisis but also by expanding the investment scale to help strategic industries grow, further ensuring national security and reviving the economy. Related discourses have thus been concluded by Bremmer (2008) as the return of SC. His finding not only gave theoretical basis to the state apparatus for participating in market operations but also further challenged the neoliberalism operational model of the past 30 years. China's intervention into the food market provides a vivid example. Facing increasingly unstable food security since the financial crisis, the Chinese government has adopted a series of intervention policies to securitize<sup>2</sup> the food markets. In this paper, SC theories are used to analyze China's food security governance mechanism.

The origins of this paper arise from China addressing the food security issue through intervention of the state; therefore, it assumes China's food security governance mechanism is the typical product of the operation of SC. The central government and the national food state-owned enterprises (SOEs), the local governments and the local food SOEs, and sovereign wealth funds (SWFs) intervene in the food market under the governance structure of the provincial governor's responsibility system (PGRS), effectively safeguarding China's food production quantity. However, some other food security dimensions, such as production quality and responsible investment are neglected during state intervention, resulting in such dilemmas as the current food safety issues, expansion of neo-colonialism, and so forth. This paper is organized as follows: The second section uses SC to interpret China's market governance model. The third section discusses China's food security governance mechanism in terms of SC, and its achievements will be discussed in the fourth section. The fifth section sums up the practice and revision of SC in China.

## 2. State capitalism, Chinese market governance, and food security

According to Bremmer (2009), SC is one type of capitalism under the developmental model. It is distinct from what neoliberalism advocates, especially concerning deregulation and competitive free-market capitalism. SC posits the state can become a strong leading economic actor in the market, obtaining political benefits by interfering with the market. Although ineffectiveness and populism are common in SC, the following three factors are fostering the rapid development of SC in developing states: entrepreneurs and public opinion demanded a state apparatus to interfere with the market during the financial crisis of 2008–9; the process of nationalizing assets,

<sup>1</sup> For more information, see Birdsall and Fukuyama (2011), Levine (2012), and Sapir (2011) for finance, Bremmer (2010) and Tverberg (2012) for energy, Lin and Doemeland (2012) for infrastructure, and Clapp and Helleiner (2012) and Headey (2013) for food.

<sup>2</sup> Both terms, *securitize* and *securitization*, will be used frequently to explain the prioritizing process of a non-traditional security issue, like food security, in the political agenda. See Buzan *et al.* (1998).

which comes with state intervention in the market, helped vested interests consolidate their authority and power; the main driving forces of free-market capitalism, the United States (US) and the European Union (EU), dramatically lost their influence after the financial crisis. Bremmer further notes four leading actors in contemporary SC: national oil corporations, SOEs, privately owned national champions, and SWFs. These give rise to SC that can challenge the mainstream position of the free-market capitalism that has existed for the past 30 years. However, because the transparency of SWFs is connected to balancing the development of the north and the south, Bremmer (2008: 62–3) stresses the necessity of a well-established SWF management mechanism. At the same time, Bremmer analyzes the future development of SC based on capitalism's stress on efficiency, assuming, even though SC helps developing countries revive their economies, especially China and Russia, Western countries do *not* need to follow the trend of adopting SC. On the contrary, theories and systems of free-market capitalism should be reinforced to reverse the current rise of SC (Bremmer, 2010: 251–2).

In fact, Bremmer's distinction of SC can be traced back to the contemporary study of capitalism that started in the early twenty-first century. Hall and Soskice (2001) are leading scholars using the approach of varieties of capitalism (VOC) to compare international forms of capitalism. In the VOC approach, five spheres – industrial relations, education and training, corporate governance, inter-firm relations, and employees – are measured among firms in the OECD countries. Two types of capitalist economies, *liberal market economies* (LME) and *coordinated market economies* (CME), have been distinguished in the VOC framework. While the LME firms, exemplified in the US, 'coordinate their activities primarily via hierarchies and competitive market arrangements', the CME firms, exemplified in Germany, 'depend more heavily on non-market relationships to coordinate their endeavors with others actors' (Hall and Soskice, 2001: 8). The VOC approach tends to interpret other emerging capitalist models as minor variants of LME or CME or other intermediary configurations, such as Japan's *developmental capitalism* (Chiavacci, 2007) and the former Soviet-type countries' *post-Communist capitalism* (Lane and Myant, 2007). A recent tentative project conducted by Schmitter and Todor (2014) further broadens the scope of the VOC research by referring to VOC in terms of types of democracy (TOD). The results show that, despite tumultuous relationships between the two data sets, a democratic political regime is not a necessary condition for the success of a capitalist economy, leaving China's and Vietnam's successful examples as *authoritarian capitalism*.

Given dissatisfaction with statistical analysis and bias prediction within the VOC in terms of long-term institutional stability of each type of capitalism, the VOC-oriented approaches introduce more dynamism into the study of capitalism. To confront the above challenges, Deeg and Jackson (2007) introduce three more levels – micro, meso, and macro – into the VOC analysis. Their study indicates the VOC literature should, at the micro-level, incorporate an understanding of the way actors reshape institutions; at the meso-level, specify the linkages among institutions; and at the macro-level, develop a viewpoint of considering the international and national politics structuring the process

of institutional change. Thus, this revised VOC approach can explain institutional change in capitalist forms rather than only stability. Moreover, Boyer and Saillard (2002) and Boyer (2005) apply the Regulation Theory (RT) to analyze the diversity of contemporary capitalism. They find VOC emphasizes economics more than politics, so it is weak in explaining institutional change. Inversely, RT focuses more on the endogenous dynamics that can account for an explanation of how and why institutional forms of capitalism change over time. Based on RT's formulation, four brands of capitalism have been laid out: *market-oriented* (the English-speaking countries), *meso-corporatist* (Japan and South Korea), *social democratic* (the Scandinavian countries), and *state-driven* (the European-continental countries). Through widening the analytic spectrum, the diversity of capitalism is not limited to the dichotomy between LME and CME but rather expanded to RT's four configurations, enabling the study of capitalism in other newly industrializing countries, particularly in Asia.

Also discontented with the VOC's firm-centered approach, Schmidt (2002) further advocates the VOC approach to bringing the state back into consideration. Her proposal is to take into account changes in polity, policy, and politics, which still continually educate institutions, to understand national political economies. She finds at least three ideal-typical models of capitalism existing from the 1970s to the early 2000s – *market capitalism* (the US), *managed capitalism* (Germany), and SC (France and Italy). Although the pressures of globalization and European integration have liberalized the three models with a more market-oriented hue, they have not converged in the US market capitalism model. However, her later publications (Schmidt, 2003, 2012) confirmed that, since the early 2000s, neo-liberalism has moved France's SC into state-enhanced capitalism. This state-enhanced capitalism has been called *state-influenced market economies* (SME) in the VOC spectrum categorization. Other newly industrializing countries in Asia, such as Taiwan and South Korea, can be grouped into the SME camp in which the state continuously intervenes in the market.

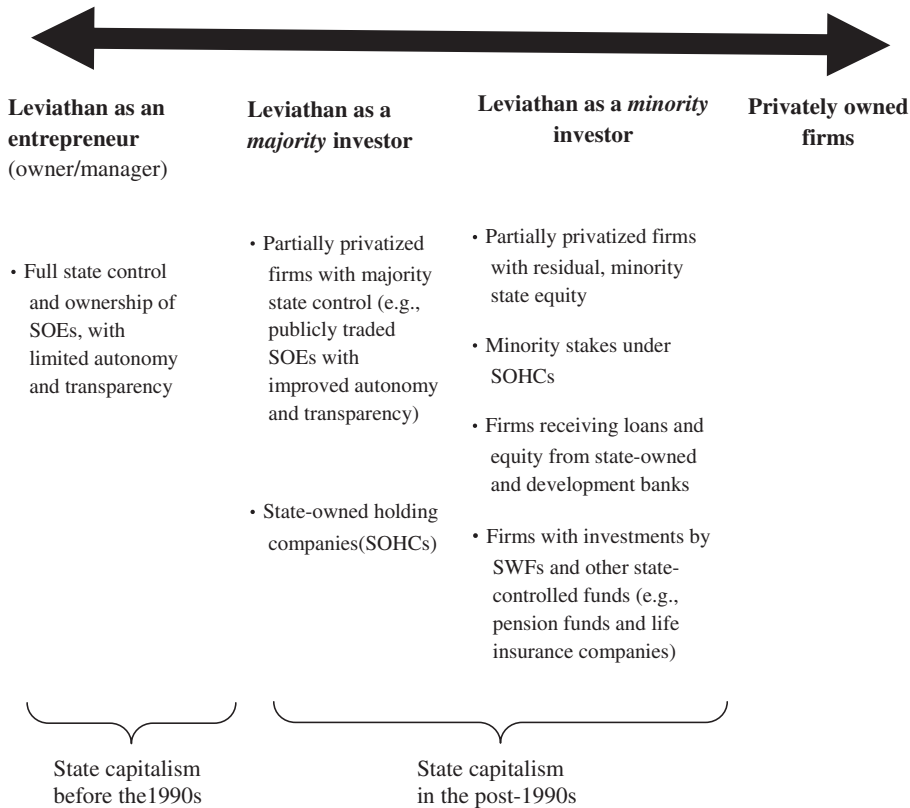
Schmidt's revision of the VOC spectrum indicates extension of the VOC approaches to include other economies emerging in the world during in the twenty-first century. Nölke and Vliegthart (2009) introduce the term *dependent market economy* (DMS) as an extension of the VOC framework. This DMS model indicated a heavy dependence on foreign capital in East Central Europe's economic performance in the 2000s. Further, Nölke and Claar (2013) introduce an alternative model, *state-permeated market economies* (SME), to explain emerging economies. The outline of South African capitalism can be considered as conforming to the SME model, exhibiting close cooperation among public authorities, national elites, and corporate companies. This SME model has been used to measure other emerging economies, particularly that of China (Vermeiren and Otero-Iglesias, 2015; Nölke, 2015), as well as those of other BRICs members (e.g., Brazil, Russia, India, and China; Nölke *et al.*, 2015). Becker (2014) also joins this discussion and argues the VOC approach should address other functional requirements for the economy as a whole, such as state structure, social culture, informal education, physical infrastructure, social security, and economic individualism. These

additional components in the VOC measurement allow to clearly distinguish the BRICs and other emerging economies from the LME and CME models. Thus, BRIC capitalist institutional changes between 1998 and 2008 can be mapped, more or less, into four dimensional fields of capitalism: *liberal*, *corporatist*, *patrimonial*, and *statist* ideal.

Through cases of Brazil's capitalist changes, Musacchio and Lazzarini (2012, 2014) further analyze SC based on the VOC-oriented approach. They assert, in terms of the spectral catalogue of shareholding ratio, SC actors include SOEs with the most left-wing state apparatus as the entrepreneur (Leviathan as an entrepreneur). This type of SOE is the typical product of socialism; therefore, it is the center of attention of early SC. Next on the spectrum is the left-wing state-owned holding company with the state as a majority investor (Leviathan as a majority investor). Next is the right-wing, supporting a blend of privately owned enterprises, with the state as the minority investor and supporter (Leviathan as a minority investor). These two are the forms of the new SC that rose in the 1990s, and they are the authors' focus. The privately owned firms of the most right-wing are not within SC's discussion scope. Figure 1 shows Musacchio and Lazzarini's classification system.

In addition, unlike Bremmer, who regards free market capitalism and SC as the two major rival types of capitalism nowadays, Musacchio and Lazzarini's research assumes that SC is only one of the operational features under the VOC. SC first appeared in the nineteenth century, during the modernization of Europe, and most recently in the early twenty-first century during the financial crisis. As a result, SC has long existed in human history, and the reasons include: industrial factors, supporting specific industries to avoid market failure; social factors, promoting social welfare to exceed the profits of the market; political factors, obtaining political benefits to pursue rent-seeking; path-dependency factors, historical heritage under nationalism to fight the invasion of colonial powers (Musacchio and Lazzarini, 2014: 57–8).

Nevertheless, Western liberal media regard SC's starting point and operative results with suspicion. In a special issue on SC, *The Economist* (2012) indicated state-directed capitalism can be traced back to the founding of The East India Company, so it is not a new capitalism concept. However, developing countries' (especially China and Russia) success in steadying market failure at the hands of SOEs during the financial crisis in 2008–9 resulted in their belief that SC is much better than free-market capitalism in directing their development. Relevant successful experiences were thus widely emulated by other developing countries. Despite SOEs being able to steady the domestic market and society through the support of the state, the following three impediments occurred because of their dependence on the state apparatus: first, putting too much emphasis on monopolizing the market without the momentum to invent new products and create new markets; second, paying too much attention to cultivating the internal interpersonal relationships while neglecting the competition and mobility of talent; third, overusing currency manipulation policies and neglecting free trade, leading the global market toward the currency war between protectionism and economic nationalism. In an article published in June 2014, *The Economist* continued to attack



**Figure 1.** The varieties of state capitalism.

Source: Musacchio and Lazzarini, 2014, p. 8.

Musacchio and Lazzarini's research,<sup>3</sup> commenting that the Brazilian government was using state-owned commercial banks' loan process to intervene in the assignment of personnel in enterprises, resulting in the quick development of crony capitalism that caused the disparity between the rich and poor.

*Bloomberg Businessweek* also joined the debate on SC in 2012. Related articles directly referred to China as the inventor of contemporary SC.<sup>4</sup> China's development to its current situation was similar to that of the German Empire under Bismark in the 1870s.<sup>5</sup> Bureaucracy and big enterprises supported by the state have been reviving China's global political economic power, which would lead to similar consequences as the economic nationalism before World War I. The US should meet the enemy

<sup>3</sup> For more information, see *The Economist* (2014).

<sup>4</sup> For more information, see Coy (2012), Kurlantzick (2012), and D'Aveni (2012a).

<sup>5</sup> For more information on the comparison between contemporary and nineteenth-century state capitalism, see Chung-Min Tsai (2014).

head-on in this cold war of capitalism, strategically supporting specific industries (such as renewable energy resources and raw materials) (D'Aveni, 2012b); otherwise, the global marketplace norm-marking and price-setting authority the US currently appreciates will gradually fall under China's grasp, and the global authority the US enjoys could fade away.

Recently, academicians have also frequently used SC to analyze China's development. Becker (2013) asserted, in BRICs, capitalism development models, especially that of China, represent a gradual move toward statism and patrimonialism. This development has been learned by other developing countries and has enriched the debate on the VOC. Yasheng Huang (2008) pointed out that China's development in the 1980s had already moved from a communist economic model toward a capitalistic development model. In addition, capitalism brought about real economic growth and not simply an economic bubble. Thus, China's growth was no longer marked by competition between communism and capitalism but between two types of capitalism. The two types of capitalism included *entrepreneurial capitalism* in the 1980s and *state-led capitalism* in the 1990s. Entrepreneurial capitalism occurred through privately owned companies that helped the economy grow and shaped the society through wealth parity, whereas state-led capitalism used SOEs to guide growth and brought about wealth disparity. Furthermore, Yasheng Huang compared the Shanghai model, in which SOEs spurred growth, with the Zhejiang and India models, in which private enterprises shaped growth. He found the entrepreneurial capitalism model was a better economic model that delivered sustainable growth. Therefore, he recommended, in the twenty-first century, China should return to the entrepreneurial capitalism model of the 1980s. Philip C. C. Huang (2012) further explained the direction of China's next reforms should be to abandon SC and to strive toward a *socialist market economy*. His argument was that SC created wealth for the nation and poverty for the people and wealth for officials and poverty for the citizens. As a result, SOEs must reform. The reform would not necessarily mean privatization, but profits should be shared with the society. Thus, he asserted a socialist market economy should become China's new future development model.

Further, Chu and So (2010) and So and Chu (2015) introduced the term *state neoliberalism* to present China's capitalist evolution, especially tensions between China's party-state system and its survival in the neoliberal globalization. Thoroughly considering China's historical policy transitions, Chu and So believed the Chinese Communist Party has been encouraged to adopt neoliberalism since the late 1990s, not only to deepen its party-state operation but also to insert China into the global capitalist orbit, moving China from market socialism into state neoliberalism. Neoliberal policies, like privatization and corporatization, commodification of human services, and deepening of liberalization, could indicate China's new state apparatus of state neoliberalism. Moreover, McNally (2012) demonstrated China was moving toward *Sino-capitalism*, which had three major features: bottom-up network capitalism, top-down state-led development, and inside-out adaptation of global influences.

McNally's later research indicated Sino-capitalism is the typical SC that reinforces the control and dominance of the state apparatus of China's political economy (McNally, 2013). A recent study by McNally (2014) applying the VOC approach to measure China's capitalist practices further found Sino-capitalism differed from the OECD's LME and CME configurations. Sino-capitalism's unique institutional structure is its duality that integrates state-led development top-down with entrepreneurial and networked capitalist activities bottom-up. Guanxi (Chinese social networking) is a key to combining these liberal and statist elements, rather than transparent codes and rules. These state–capital relations enable China to adapt to the global capitalist orders. Likewise, Lin and Milhaupt (2013) found out, from the personnel's angle, the practice of SC in China relied on both top-down bureaucratic supervision and internal parallel job rotations so that SC could operate well in China. SC also combined China's party-state system, a personnel promotion system, and the development of SOEs, facilitating the state apparatus control of most social resources and boosting the country's production (Lin and Milhaupt, 2013: 701–2). Li and Shaw (2013) incorporated the dimensionality of time into SC research and found *state capitalism with Chinese characteristics* had formed during China's development process. The evolutionary features included China's transformation from 'civilization state' to 'nation state', from semi-feudalism to state socialism and SC, and from 'politics in command' to 'economics in command', with Chinese politics adapted to state-market embeddedness. Hence, the unique political, economic, and social progress in history is shaping the content of SC with Chinese characteristics, causing unique phenomena, such as the state policy of intervening with the market, the state's corporatization and access to the market, and the state and the market integrating to control society.

Like Lin and Milhaupt's and Li and Shaw's discovery of China's SC practices based on Chinese historical lessons, Breslin (2011) further analyzed China's developmental/governance experience from a longer term and Western historical perspective. Breslin found the so-called China model has, in fact, an international political economic root based on Friedrich List's (1789–1846) revised mercantilism, which emphasizes state-led development and protectionism. From the US's unification processes, List determined the importance of protecting strategic industries and state-led promotion of innovation, infrastructure, education, and centralized financial institutions, as well as of state responsibility to provide stability and legality. This Listian theory helped to build a unified German state and propelled Germany to dominate the European continent in the nineteenth century. Japan then modified the Germany state-led model to develop its modernization projects from the 1960s, and it was used again in the developmental states in East Asia during the 1970s and 1980s. Therefore, China's state-led developmental model has parallels with previous cases of SC evolution in the US, Europe, and East Asia.

The VOC approach also guided the investigation of the Chinese capitalist developmental model. Fligstein and Zhang (2011) found current Chinese capitalism has three features, including the huge role of the Chinese government in economic



development, adoption of the developmental state theory and centralization of personnel control to reward and punish local officials, and *guanxi* between firms and governments as important to the success of business. Although, so far, at least eight ideal-typical models of capitalism, ranging from LME to CME, have been applied in China's local practices, Fligstein and Zhang believed, in the coming future, Chinese capitalism would be its own model. Peck and Zhang (2013) also investigated the VOC literatures, intending to integrate recent discussions regarding SC with Chinese characteristics. According to them, current capitalism research emphasizes only the neoliberalism development model, with private enterprises as the economic entity. Thus, discussions are limited to the American LME and the German CME. The rise of China would form a third type of capitalism, Sino-capitalism, in which the market is dominated by the state and controlled by political parties. This capitalism is blended into China's unique historical background, including from market socialism to SC, from socialist-developmental state to state neoliberalism, and from *guanxi* transnationalism to power-elite capitalism. Sino-capitalism is not to replace market rule but to provide another development model to adapt to the market. Liou (2014) also stated that academia should look at China's development based on political economy theories and the VOC so that the uniqueness of China studies could be avoided and a common academic communication platform could be established, helping to clarify the development of capitalism in China. Kellee S. Tsai's recent work (2014) provided a good example in which a political economy theory – vested interests – has been borrowed to investigate SC in China's shadow banking (unregulated financing) practices. She found the 2008 stimulus package has driven SOEs, state banks, state-affiliated entities, and local governments to extend loans to real estate developers and private businesses, resulting in an expansion of shadow banking networks. Development of this mutual liability would not only further consolidate SC's exercise in China but also raise the political costs on China's current reform projects.

Studies of SC also indicate sustained implementation of SC policies tends to embrace nationalism (Feirden, 1981: 412–13; Pfeifer, 1979: 7). This embracement, in turn, merged the concepts of SC with national security (Hagel and Grinder, 2004: 78–9). The investigative report of Szamosszegi and Kyle's US–China Economic and Security Review Commission revealed China's SC development was closely connected to national security concerns (Szamosszegi and Kyle, 2011: 33–4). As a result, the state needed to control strategic industries and support pillar industries to maintain national security, among which food storage and transportation were regarded as strategic industries. Thus, national SOEs needed to monopolize the market to maintain food distribution security. Food production and processing were regarded as a pillar industry, so local SOEs needed to control the market to maintain food production security. The investigative report indicated China was implementing the 'branching-out' strategy via foreign investment by large SOEs and SWFs, intending to obtain resources abroad and further secure the supply of important goods and materials. The rich agricultural resources of Latin America (especially Brazil and Argentina) are currently China's

main investment target (Szamoszegi and Kyle, 2011: 33–4). Haley and Haley (2013: 10) recently explained that one of the features of China's SC development was the use of the World Trade Organization's regulations that consider certain industries, such as the food industry, and non-commodities related to national security, so the request to open the domestic market to trade liberalization could be avoided. Thus, Beijing could legitimize itself to support the SOEs that were important to national security through financial loans, land tax subsidies, and trade protection. By such means, not only did the state obtain higher profits, but the national security standard was also raised. Table 1 summarizes the discussions on VOC and SC.

In summary, this article argues state intervention in markets has become more multifaceted; therefore, the final goal of the development of SC has become varied as well, including not only to acquire political benefits but also to achieve economic security, social stability, and nationalistic missions. SC with Chinese characteristics places more emphasis on expansion of economic nationalism and maintenance of national security through state interference in the marketplace so that the ultimate objective of supply of strategic materials can be secured. This analysis includes discussion not only of whether China implements SC and the degree to which it implements SC but also of governance adaption and securitization achievements of China's use of SC. At least four perspectives illuminate the analysis of governance adaption: scaling-down domestic market control, scaling-up international market investment, scaling-out social stability, and scaling-back nationalism. The securitization achievements can be measured with related security indices. The next two sections discuss China's food security governance and its securitization achievements as an example of China's adoption of SC.


### **3. State capitalism in Chinese food security governance mechanisms**

#### *3.1 Scaling-down domestic market control*

Domestically, the operation of SC in the Chinese grain market can be traced back to 1995, when the PGRS was implemented; globally, the Chinese SC's international practice for its increasing food demands was accelerating in the 2008–9 financial crisis and will be discussed later. This PGRS policy clearly divided the responsibility for grain administration between the central and the local provincial governments.<sup>6</sup> The central government took responsibility for establishing state-level grain storage systems and grain risk funds. The provincial governments took responsibility for balancing the demand and supply of grain in their own provinces, maintaining arable land and grain-cultivated land, establishing local governments' grain storage systems, and negotiating interprovincial production and marketing agreements.

<sup>6</sup> For discussions about the division of responsibility between the central and local governments, see Edin (2003).


**Table 1.** *The varieties of capitalism and state capitalism*

Advocators	State-led development				Market-led development
Firm-centered approach Hall & Soskice (2001)		Coordinated market economies (CME, Germany)		Liberal market economies (LME, the US)	
Chiavacci (2007) Lane & Myant (2007)	Developmental capitalism (Japan)		Post-Communist capitalism (Former Soviet-type countries)		
Schmitter & Todor (2014)	Authoritarian capitalism (China and Vietnam)				
Polity-centered approach Boyer & Saillard (2002); Boyer (2005)	State-driven capitalism (the European-continental countries)	Social democratic capitalism (the Scandinavian countries)	Meso-corporatist capitalism (Japan and South Korea)	Market-oriented capitalism (the English-speaking countries)	
Schmidt (2002)	SC (France and Italy)	Managed capitalism (Germany)		Market capitalism (the US)	
Schmidt (2003, 2012) Nölke & Vliegenthart (2009)	State-enhanced market economies (SME, France, Taiwan, South Korea)		Dependent market economies (DMS, East Central Europe)		
Nölke & Claar (2013)	State-permeated market economies (SME, BRICs)				

**Table 1.** *Continued*

Advocators	State-led development	Market-led development
Bremmer (2008, 2009, 2010)	SC (China and Russia)	Free-market capitalism (the US and EU)
Musacchio & Lazzarini (2012, 2014)	SC (Brazil)	
Becker (2013, 2014)	Statist capitalism (China in the 2000s)	Patrimonial capitalism (China in the 2000s)
Huang (2008)	State-led capitalism (China in the 1990s)	Corporatist capitalism Entrepreneurial capitalism (China in the 1980s)
Breslin (2011)	State-led model (the US in the 18th century; Germany in the 19th century; Japan in the 1960s; East Asia in the 1970s & 1980s; China in the 21st century)	Liberal capitalism (China in the 1990s)
Huang (2012)	SC (China today)	Social market economy (China in the future)
Chu & So (2010)		State neoliberalism (China in the 21st century)
So & Chu (2015)		Market socialism (China in the 1990s)
McNally (2012, 2013, 2014)	Sino-capitalism (China)	

**Table 1.** *Continued*

Advocators	State-led development 	Market-led development
Peck & Zhang (2013)	Sino-capitalism (China)	
Fligstein & Zhang (2011)	SC with Chinese characteristics (China)	
Lin & Milhaupt (2013)	SC with Chinese characteristics (China)	
Li & Shaw (2013)	SC with Chinese characteristics (China)	
Liou (2014)	SC with Chinese characteristics (China)	
Kellee S. Tsai (2014)	SC with Chinese characteristics (China)	
Security-centered approach		
Pfeifer (1979)	SC for national security (Russia, Germany, Japan in the 19th century)	
Feirden (1981)	SC for national security (Less developed countries)	
Hagel & Grinder (2004)	SC for national security	
Szamosszegi & Kyle (2011)	SC for national security (China)	
Haley & Haley (2013)	SC for national security (China)	

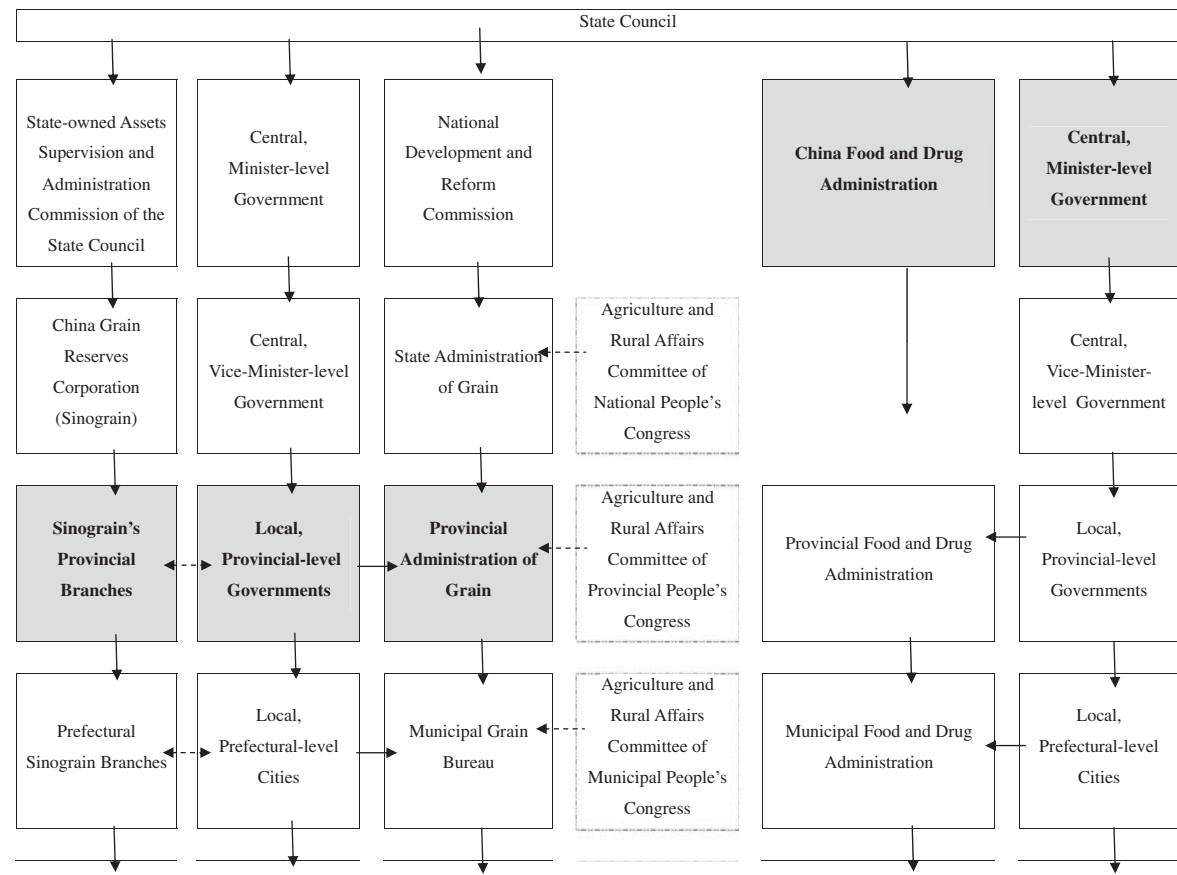
*Source:* Collated by the author.

The 1998-issued ‘About the Decision of Deepening the Grain Circulation System Reformation’ divided responsibilities more clearly between the government and SOEs, and fully nationalized such market behaviors as grain purchase, storage, and distribution. ‘State Council’s Response to the Establishment of China Grain Reserves Corporation’, issued in 2000, resulted in the founding of China’s grain storage SOE, the China Grain Reserves Corporation (Sinograin); consequently, relevant grain SOEs were classified as Sinograin’s subsidiary companies. These three regulations not only led the grain privatization movement since the 1990s to nationalization and monopolization by Sinograin but also gave provincial governments clear responsibility for administrating the grain market in their own provinces. Hence, provincial governments could work more closely with Sinograin to maintain grain administration security. The relevant administrative mechanism actors, therefore, include the State Administration of Grain, Sinograin, the Provincial Administration of Grain, and Sinograin’s provincial subsidiary branches. Even though China has continued to reform its grain market in the twenty-first century, relevant reformative policies still reside with the PGRS and Sinograin’s market nationalization.

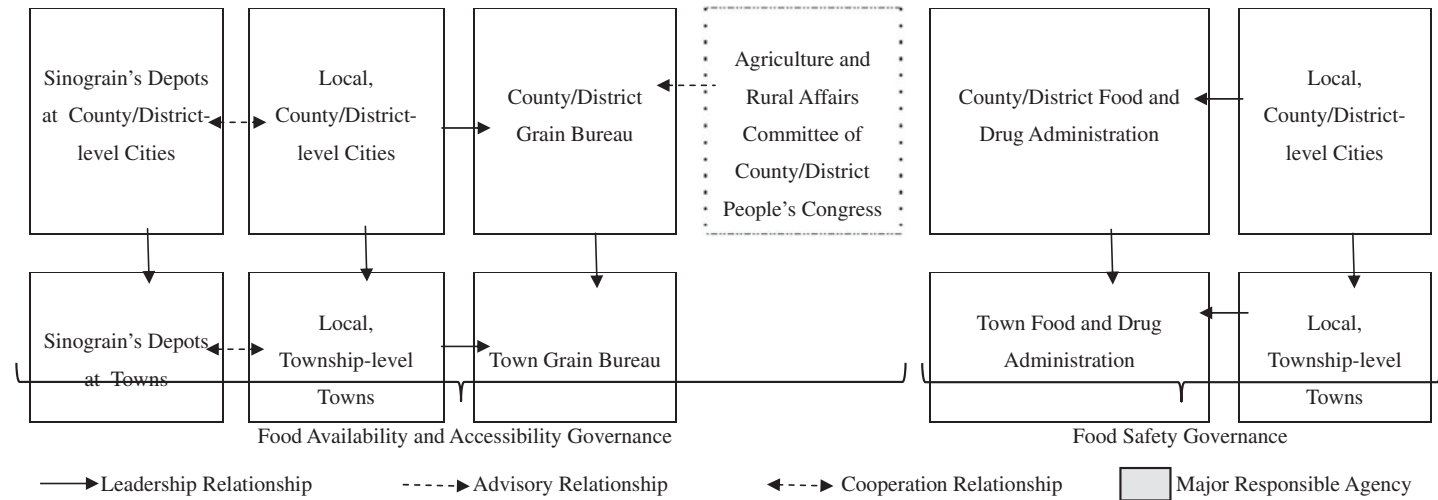
In other words, the provincial governments and the provincial branches of Sinograin largely take responsibility for the administration of China’s domestic grain market. The provincial administrations of grain are largely responsible for protecting the arable and grain-cultivated lands in their own provinces. The provincial branches of Sinograin work with the provincial governments (mainly the Provincial Administration of Grain, the Provincial Department of Agriculture, and the Provincial Department of Finance) to control the storage and warehouses of grain within the provincial jurisdictions. This cooperation also helps the provincial governments negotiate the interprovincial agreements of grain production and distribution. When implementing the agreements, relevant provincial administrations of grain and the provincial branches of Sinograin connect and interact. [Figure 2](#) illustrates China’s current food security governance institutions. Because the PGRS connects local food security status to the promotion systems of local officials and leaders of SOEs,<sup>7</sup> the implementation of food security policies can be monitored. Thus, China’s current food availability shows a 95% self-sufficiency ratio, which means that China has achieved food self-sufficiency. However, the PGRS also makes provinces the independent units of the production and distribution system in China’s grain market, hindering establishment of a nationwide grain market. Because the rivalry among provinces prevails over the cooperative relationship the central government demands,<sup>8</sup> grain prices often differ dramatically across provinces, affecting the security of food accessibility. Moreover, corruption often arises during nationalization of the grain market for two reasons.

<sup>7</sup> This develops discussions of promotion tournament of local officials, see Li and Zhou (2005).

<sup>8</sup> Related competitive relationships frequently take the form of state-vs-region relations (or Tiao-Kuai relations in inter-governmental relations), fragmented authoritarianism, and regionally decentralized authoritarian system. See Lieberthal (1998), Mertha (2009), and Xu (2011).



**Figure 2.** China's food availability, accessibility, and safety governance structure diagram.  
 Source: Collated by the author.



**Figure 2.** Continued.



On the one hand, the grain markets, particularly purchase prices and quantities, are managed by Sinograin's policy-oriented financial support; on the other hand, the provincial branches of Sinograin lack parallel monitoring systems when managing the provincial grain markets. Therefore, the market mechanism does not function well, leaving space for the market to be manipulated and to acquire more financial support from the central government and to purchase cheaper expired grain to benefit from price differences. This weakness due to corruption causes not only personnel changes in the provincial governments and Sinograin but also price fluctuations in the grain market.<sup>9</sup>

### 3.2 *Scaling up international market investment*

Beginning in the twenty-first century and accelerating in the 2008–9 crisis, China has strongly encouraged its agricultural businesses to 'branch out' in the hope of that this would lead to investing in the global market and agricultural land through international trade to secure the grain supply the Chinese people need (Lin, 2015; Hoering and Sausmikar, 2011; Friedberg, 2006). The major actors include national SOEs, SWFs, provincial SOEs, and large privately owned agricultural national champions favored by the state. National SOEs and SWFs can obtain more financial support from the central government, making investing, merging, and acquiring international agricultural enterprises their goals. However, provincial SOEs and privately owned agricultural national champions have more agricultural reclamation experience, making investing in overseas agricultural lands their investment strategy.

By investing in global agribusiness enterprises, China can gain information on global grain supplies, grain production materials, and logistic gateways to grain marketing. Moreover, because global agribusiness enterprises are largely based in developed countries, relevant investments can distance China from the notoriety of its imposition of neocolonialism in developing countries. The case of the recent overseas investment of China National Cereals, Oils and Foodstuffs Corporation (COFCO) fully illustrates these strategies. COFCO, China's national SOE and its largest cereals, oil, and foodstuffs import and export corporation, bought Australia's large sugar corporation, Tully Sugar Limited, in July 2011; purchased a 51% stake in a Dutch company, Nidera, in March 2014; and acquired a Singaporean company, Nobel Agri, in April 2014. As a result, COFCO improved access to networks in the seed market, especially soybean and corn, and grain production and marketing in the global market, especially in

<sup>9</sup> Between 2012 and 2013, corruption cases at Sinograin's Henan Province branch caused Pusheng Cao, the former chief of Henan Provincial Administration of Grain; Changxuan Li, the former manager of Sinograin's Henan Province branch; Hongjie Yang, former vice-manager; and related officials to leave office and serve prison sentences. Because Henan Province's grain output made up one fourth of all of China's output, this corruption case caused China's grain price to fluctuate significantly. In April 2015, another Sinograin act of corruption, accused of substituting old grain for freshly harvested grain to earn huge disparities in Liaoning and Jilin Provinces, also revealed SC's weakness.

South America. Among these mergers and acquisitions, the investment in Nobel Agri is especially noteworthy because China's SWF participated in its investment evaluation.

China's main SWF is China Investment Corporation (CIC), with 50 billion USD. It was founded in 2007. In September 2009, CIC took the lead in buying a 15% stake in Nobel Agri. Apart from enabling COFCO to buy more of Nobel Agri's shares in 2014, this investment also demonstrates CIC's interest in agribusiness investment. Hong Kong's *South China Morning Post* reported that CIC's investment target has expanded from traditional investments, such as technology, real estate, and infrastructure, to agricultural resources (Chen and Yu, 2014). Chinese President Xi Jinping's visit to Eastern Europe, Africa, and South America in 2014, accompanied by CIC's agribusiness investment consultant, showed the corporation's strong interest in global agribusiness investment.

However, provincial governments' bureaus of land reclamation not only run the provincial SOEs but also support or favor development of some privately owned national champions. Consequently, both provincial SOEs and privately owned national champions tend to invest in overseas farmland. So, besides exporting the provincial bureau of reclamation's agricultural technique, the responsibility for grain supply assigned by the PGRS can be further safeguarded. The most obvious case is the investment in Brazilian farmland starting from 2011 by Chongqing Grain Group (CGG), a SOE founded in 2008 by the Chongqing City Government. The investment planned to involve 500 million USD and 200,000 hectares of soybean farmland (approximately 23 times the size of Manhattan Island). Through the investment, 1.5 million tons of cooking oil could be produced annually to meet the needs of Chongqing citizens and to create economies of scale by selling it to other provinces.<sup>10</sup> In addition, the investment in Ukrainian farmland by Xinjiang Production and Construction Corps in September 2009 reached 3 billion USD, with a plan to rent in the Ukraine 3 million hectares of farmland (approximately 343 times the size of Manhattan Island) for 50 years to supply China's growing need for grain. Although the Ukrainian government clarified the investment was not yet ratified, Chinese official media have confirmed the investment's importance to China's food production security.<sup>11</sup> Other provincial SOEs and privately owned agricultural national champions include Heilongjiang Beidahuang Nongken Group, Tianjin Agriculture Reclamation Group Incorporation, Yunnan Agricultural Reclamation Group, Shanghai Pengxin Group, and Sanhe Hope Full Grain & Oil Group Company Limited, all of which have invested in South America, Russia, and South East Asia, producing grain and oil to supply China's domestic market.

<sup>10</sup> It is also interesting to note that CGG's construction in Brazil has been delayed. One of the main reasons to explain CGG's decision to postpone the investment is the downfall in 2012 of China's prominent party chief, Bo Xilai, who had been the leader of the Chongqing Government between 2007 and 2012 and supported the CGG branching-out investments (Oliveira, 2015: 11).

<sup>11</sup> For more information, see People's Daily Online (人民網) (2013).

### 3.3 *Scaling out social stability*

China's SC emphasizes SOEs' intervention in market behavior, leading to spillover effects and further stabilizing society. The Sanlu milk powder incident in summer 2008 shows that China deals with food safety incidents through nationalization and regularization of supply chains, stabilizing Chinese society's faith in food safety.

The 2008 Sanlu milk powder incident demonstrated that China's dairy product industry had been growing too fast, resulting in price competition among enterprises, which used chemicals, such as melamine, to reduce production costs and to raise the output of milk products, which slipped through food safety inspections (Xiu and Klein, 2010). After the incident, an official public survey<sup>12</sup> and the private Pew Research Center<sup>13</sup> both indicated that the food safety issue existed – along with environmental pollution, inflation of prices, government corruption, and the gap between the rich and the poor – was one of the Chinese people's main concerns in 2012. Consequently, the Chinese government intended to deal with the food safety issue through intervention and regulation. Prior to 2008, there had been intense competition in the dairy industry among Yili (SOE), Mengniu (private), Bright Food (SOE), Shengyuan (private), Yashili (private), Wondersun (SOE), Firmus (SOE), Huishan (private), and Sanlu (SOE). After 2008, the dairy industry was gradually consolidated and dominated by Yili and Mengniu (COFCO bought Mengniu shares in 2009, making it an SOE) through the strong intervention of the National Development and Reform Commission (NDRC), thus reducing competition. A new development in 2014 was Yili and Mengniu successively adopting the 'agribusiness branching out' strategy, making investments in New Zealand under the mutual agreements between China and New Zealand and New Zealand's strict food safety administration. After their milk powder factories are established, the total production will be as high as 100,000 tons, equivalent to 20% of China's milk powder import.

Second, because of the regulation enhancement, China's Food Safety Law was passed in February 2009, replacing its outdated Food Hygiene Law. The new law resulted in the establishment of the Food Safety Committee of the State Council, which worked with the China Food and Drug Administration (vice-minister level) to start the administration and reorganization of food safety from 2009. The restructure of the State Council in February 2013 further enhanced the food safety administrative mechanism. The Food Safety Committee of the State Council and China Food and Drug Administration were thus merged and upgraded into a new minister-level agent of the China Food and Drug Administration (FDA), even higher than the vice-minister level of the State Administration of Grain (see [Figure 2](#)). The state apparatus was thus given more authority and resources to regulate the business activities and safety administration of the food market. Nevertheless, because food safety regulation is a strong administrative mechanism formed by state apparatus intervention in the market

<sup>12</sup> For more information, see Jin (2012).

<sup>13</sup> For more information, see Pew Research Center (2012).

in response to the uneasiness of society, the initial stage of the administration might have immediate effects because of attention from the central government. In the long term, however, food safety regulation still lacks the incentive to motivate enterprises to work with local governments and social groups and to cooperate and enforce relative regulations voluntarily. Thus, the effects remain to be observed. In the future, how to combine food safety administration with food security governance mechanisms (like PGRS) will be a critical subject for the state apparatus to enforce food safety regulations sustainably.

### 3.4 *Scaling back nationalism*

Since ancient times, China has regarded food security as an important part of national security. Confucius said that ‘the requisites of government are that there be sufficiency of food, sufficiency of military equipment, and the confidence of the people in their ruler’, indicating sufficiency of food is the foundation of governing a country. Guan Zhong, Confucius’s student, said, ‘Etiquette is followed only when the barn is full; honor is valued only when people are well-off’, illustrating food security is the key to a civilized society. Shang Yang’s political reform of the Qin state encouraged the production of grain and a strictly controlled grain trade to prevent a state’s grain from becoming the strategic objective of other states. Food security concepts, such as emphasizing production, controlling trade, and maintaining self-sufficiency have been passed down from the time when the first emperor of the Qin Dynasty unified China. They have been an ancient Chinese policy for almost two thousand years. After the Communist Party of China (CPC) unified China in 1949, the state apparatus strictly controlled food circulation, considering national security. Additionally, because of the grain crisis in 1959–61, caused by the Great Leap Forward, the CPC realized the importance of grain self-sufficiency and reformation of the grain market (Lin, 2000; Lin and Wen, 1995). After the reform and opening in 1978, the grain market started to be reformed drastically. The principles still revolved around economic nationalism, centering on concepts like grain self-sufficiency and the idea that ‘when hands are filled with grain, then hearts are freed from fear’. The reform will be described in five stages, starting from being strictly controlled by the central government, then becoming market-oriented, then monopolized by SOEs, and finally developing into the current ‘branching-out’ tendency.

The first stage of the grain market reform was from 1978 to 1984, when the state gradually lifted its monopoly of purchasing and marketing grain, implemented before the reform and opening. After the farmers turned over grain to the government, they were allowed to buy and sell the remaining grain. Thus, small-scale grain markets were gradually formed. The second stage of the reform, from 1985 to 1993, marked the complete abolition of the state monopoly. The market moved into a system in which the state signed contracts with farmers, who sold grain to the state according to the amount and price on the contract. The excessive amount could be sold to the state according to the agreed-upon price or be freely traded in the market. This was the double-track

price system, which gave rise to thriving private grain enterprises. The third stage of reform, between 1994 and 2000, focused on the strong intervention by the state in the market.<sup>14</sup> First, the 1995-issued PGRS gave provincial governments more power to intervene in the grain market, intending to regulate market disruption after the reform and opening. Second, the state has monopolized the grain market through Sinograin since 2000, so China's grain market was again controlled by the state. However, this time, instead of direct acquisition by government departments, the state apparatus intervened by establishing an SOE. In the fourth stage of reform, between 2001 and 2008, with provincial governments' and Sinograin's branches in each province under the regulation of the PGRS, China's grain market became a system with the province as a unit. The grain price was initially stable. However, as the restrictions from the household registration system were lifted, subsequently causing frequent migration, the grain market with the province as a unit could not handle the vast interprovincial migration. The grain price thus started to fluctuate in the later period,<sup>15</sup> leading to the fifth stage of reformation, beginning in 2009 and continuing until today.

The current stage has two primary features. The first is enhancement of interprovincial interaction and improvement of operative efficiency between provincial governments and Sinograin's provincial branches. Regional grain markets are planned to make up for the rising grain prices caused by interprovincial competition (with the results remaining to be seen). The second is encouraging both national and provincial grain SOEs to branch out. As noted, while national SOEs tend to merge or acquire large-scale international agricultural business enterprises to obtain more overseas grain supply and market information, provincial SOEs are inclined to invest in foreign farmlands, growing grains overseas to solve the inadequacy of the grain supply for their provinces. This strategy of grain enterprises branching-out makes overseas farmlands Chinese offshore grain production bases. While supporting the concept that 'Chinese people's bowls should be filled with Chinese people's rice',<sup>16</sup> which the Chinese leaders promoted, China's influence is expanding across the globe, achieving food self-sufficiency and rejuvenation of the Chinese nation. However, this branching-out strategy has brought criticism concerning China's expanding 'neo-colonialism',<sup>17</sup> asserting that China is exploiting Africa's resources and labor to feed the Chinese, resulting in famine in Africa.

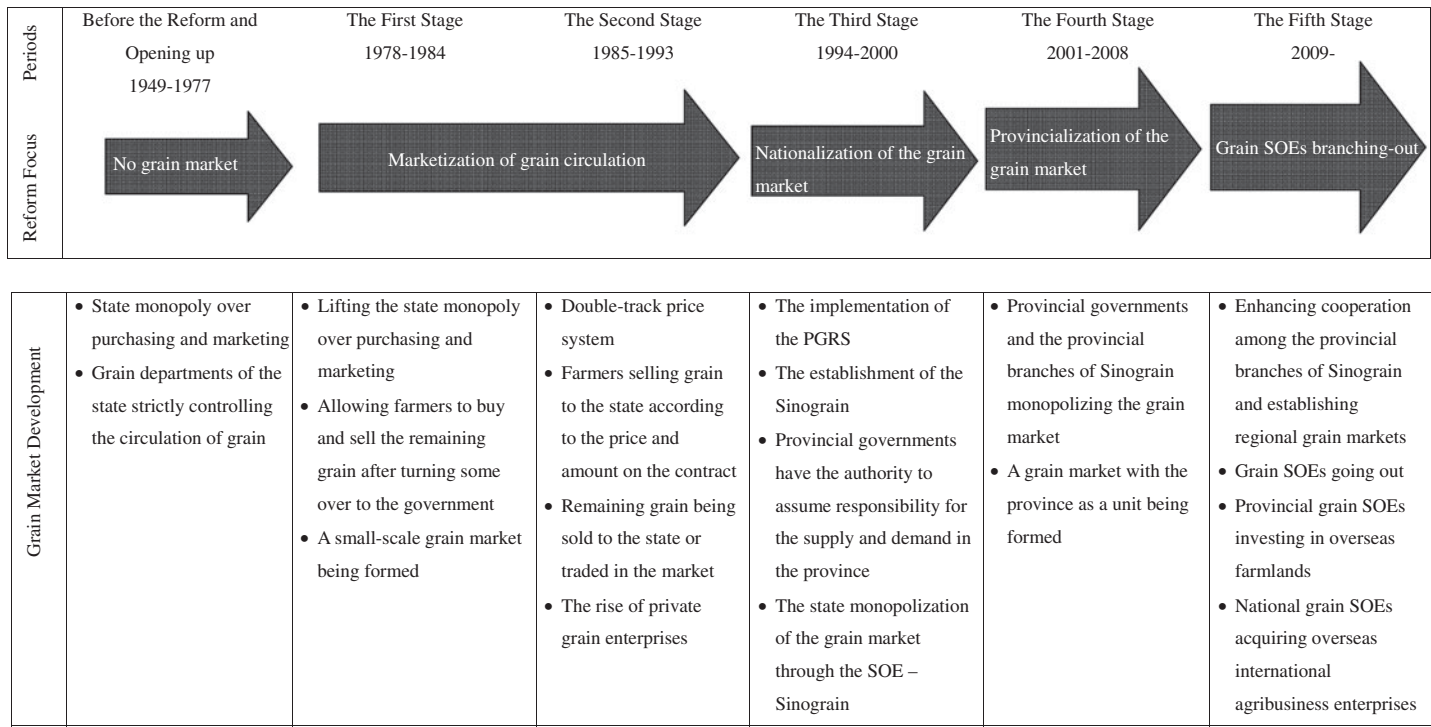
Figure 3 shows the historic development of China's grain market. It shows that the history of reform of China's grain market has been under state intervention for a long period. The state's approach has gone from direct control by the government to monopolization of SOEs, and then to branching-out to securitize the Chinese food security governance.

<sup>14</sup> Regarding this stage of market reform, see Zhou (2010).

<sup>15</sup> For more information, see Lee and Lin (2015).

<sup>16</sup> For related remarks, see People's Daily Online (人民網) (2014).

<sup>17</sup> Regarding China's neo-colonialism, see Horta (2008), Bräutigam and Tang (2009), and Yan and Sautman (2010).



**Figure 3.** Modern China's grain market reforms.  
*Source:* Collated by the author.

#### 4. China's food security governance achievements under state capitalism

The four perspectives illustrate China's food security governance mechanism under SC. In this section, its securitization achievements are evaluated in terms of global food security standards.

In 2001, the UN Food and Agriculture Organization (FAO) defined *food security* as '[a] situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life'.<sup>18</sup> Considering this definition, FAO's 2009 World Summit on Food Security indicated that at least four indices were incorporated into food security measurement: *availability*, *accessibility*, *utilization safety*, and *stability* of availability and access to food.<sup>19</sup> These four indices will be used to analyze China's food security governance achievements. Furthermore, four databases for evaluating food security include the 'Global Hunger Index' (GHI) from the International Food Policy Research Institute (IFPRI),<sup>20</sup> 'The State of Food Insecurity in the World' (SFIW) from the FAO,<sup>21</sup> the 'Food Security Risk Index' (FSRI) from Maplecroft,<sup>22</sup> and the 'Global Food Security Index' (GFSI) from DuPont and *The Economist*.<sup>23</sup> These databases will be cross-referenced to explain China's food security governance achievements under SC.

##### 4.1 Availability

Since the CCP promulgated 'The Medium- and Long-Term Framework Plan for National Food Security (2008–20)' in 2008 and 'The Plan for Increasing National Grain Production Capacity by 50 Billion Kilograms (2009–20)' in 2009, the government has regarded maintaining 1.8 billion Mu (126 million hectares) of farmlands, 1.58 billion Mu (110.6 million hectares) of farmland for grain production, and 95% grain self-sufficiency as the indices of food availability. As noted, according to the PGRS, the central government distributes relative indices to provincial governments and Sinograin's branches in each province; therefore, the availability of the food governance mechanism is comprehensive. Figure 4 shows the sizes of China's arable areas and farmlands for grain production have notably increased since 2008 and have achieved the index the government mandated in 2011. Figure 5 shows that China has maintained more than 95% grain self-sufficiency since 1999, so China's current food availability is relatively safe. As a result, *The Economist* noted in a GFSI survey report that China's annual growth rate for grain production was the steadiest in the world and its success

<sup>18</sup> For more information, see Food and Agricultural Organization of the United Nations (2001).

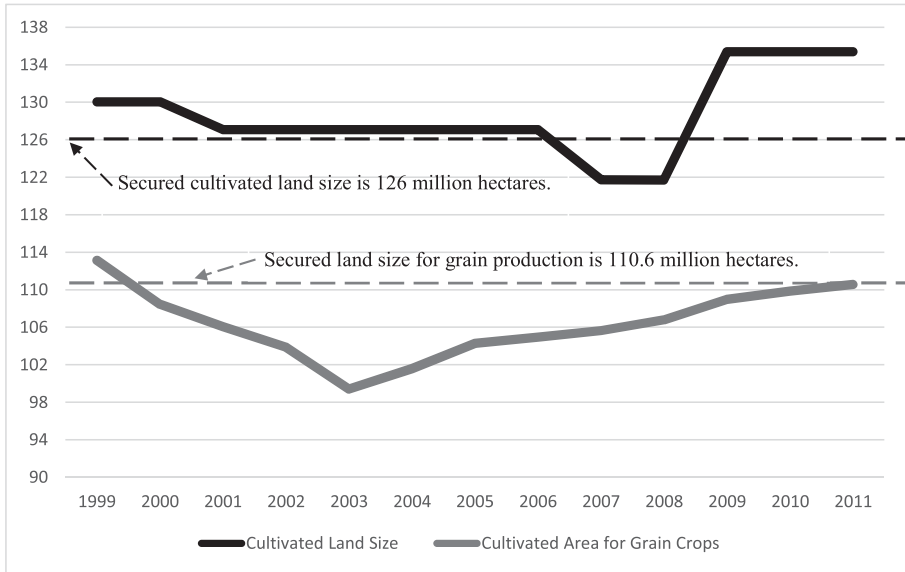
<sup>19</sup> For more information, see Food and Agricultural Organization of the United Nations (2009).

<sup>20</sup> For more information, see The International Food Policy Research Institute (2014).

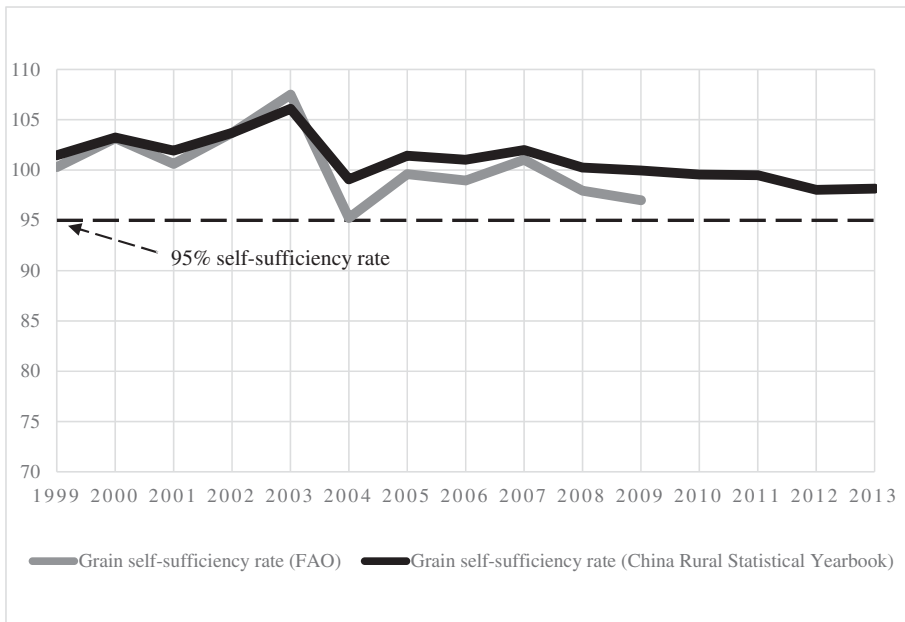
<sup>21</sup> For more information, see Food and Agricultural Organization of the United Nations (2013).

<sup>22</sup> For more information, see Maplecroft (2013).

<sup>23</sup> For more information, see Economist Intelligence Unit (2014).



**Figure 4.** Sizes of cultivated land and grain production land in China (in million hectares). Sources: Data of cultivated land between 1999 and 2008 from *China Statistical Yearbook*; between 2009 and 2011 from the Second National Land Survey of China. Date of grain production land from *China Statistical Yearbook*.



**Figure 5.** Grain sufficiency rates of China (by weight).



partly attributed to the state apparatus's intervention in the market, stabilizing factors of production and increasing farmers' willingness to produce grain.<sup>24</sup>

#### 4.2 Accessibility

The concept of food accessibility is largely based on evaluation of the stability of grain prices and is completely different from food availability in terms of China's governance achievements. Globally, because of China's nationalism, the state apparatus requires a national security strategy based on grain self-sufficiency, making the grain prices of the domestic market generally higher than those of the international market. Domestically, the PGRS often causes price differences across provinces. Currently, fast urbanization has caused huge numbers of migrant workers, severely challenging the household registration system the PGRS relies on. These two factors gave rise to the noticeable increase in China's grain prices after 2006, severely affecting food accessibility of Chinese individuals and households. Food insecurity caused by the relative consequences of the increase in grain prices was evident in the statistics of the GFSI for 2014 and the SFIW for 2013. Those surveys show, even though China's food security index number is steadily improving, the instability of grain prices is one food security indicator that has been falling recently, together with deterioration of food safety.

#### 4.3 Safety

As discussed and as shown in [Figure 2](#), since the Sanlu milk powder incident of 2008, the state apparatus has been strictly governing the quality and safety of food production by nationalizing the food supply chain and regulating the supervision and governance of food. Relative governance labels and certification mechanisms have been established gradually, and consumers have been educated to accept more expensive food, certified by the state, to avoid food safety problems (Ortega *et al.*, 2011). The SFIW of 2013 shows that China's food safety steadily improved between 1990 and 2010. Moreover, the GFSI notes that, after China's food safety improvements of 2012 and 2013, the 2014 investigation revealed, for the first time, clean water resources had decreased markedly, causing food safety to deteriorate. Such results show, although the state apparatus can quickly improve food safety through SC approaches, production enterprises care only about the supervision mechanism from the central government and neglect their environmental and social responsibilities because China lacks the certification mechanism formed by the voluntary cooperation of the market and society (Bai *et al.* 2007). Moreover, local governments were not assigned any indicators; thus, the effectiveness of this one-way top-down governance for food safety remains to be seen.

<sup>24</sup> For more information, see Economist Intelligence Unit (2012).

#### 4.4 *Stability of availability and accessibility*

The stability of availability and accessibility of food depends on such factors as the stability of a state's political economy, the comprehensiveness of its infrastructure, and investment in agribusiness research and development (R&D), which are all major investments under SC; therefore, the GHI, SFIW, and GFSI all show that China is making steady improvement in the stability of availability and accessibility. Among these, the GHI shows the percentage of China's population suffering from malnutrition dropped from 21.4% in 1990 to 11.5% in 2012 and the neonatal underweight rate and neonatal mortality have been steadily improving. Thus, the country's GHI went from 'serious' (13.0) in 1990 to 'moderate' (5.5) in 2012.<sup>25</sup> However, Maplecroft's FSRI of 2011 includes two warnings.<sup>26</sup> First, it suggests extreme climate change will affect the future stability of availability and accessibility in huge grain-producing countries like China, so China needs more comprehensive grain storage systems and production resources to face such climate change. Second, even though China has adopted the agribusiness branching-out strategy to expand its grain resources, its large-scale farmland investments in Africa have caused negative effects in African countries such as food deficiency, rise in grain prices, and more frequent floods and droughts, especially in Zambia. China must follow international regulations, making responsible agribusiness investments (Hallam, 2011). The former warning proves one of SC's shortcomings in that SC lacks the momentum to develop new ways to manage new challenges. The latter indicates that, although SC can effectively improve China's domestic food security, its goal of maintaining China's national security might lead to other countries' food insecurity. This zero-sum international development will continue to challenge the practice and development of China's SC. Table 2 reviews China's food security under SC.

### 5. Conclusion

Following the end of the Cold War, in 'The End of History?' Fukuyama (1992) stated that market capitalism and democracy would prevail over socialism and become the end of man's history. However, the development of SC after the 2008–2009 financial crisis shows that history has not ended. Governments of authoritarian regimes and their SOEs are gradually adapting to capitalism, adopting SC to continue to compete with free-market capitalism, causing a war of two types of capitalism: free-market capitalism and SC. The rise of China, in which the role of SC dominates, also shows the final goal of the development of SC is not what Bremmer (2009) indicates, with the state intervening in the market only to obtain political benefits. It also includes security, economic, social, and nationalistic factors. Thus, analyzing SC's practices and achievements is not only about the acquisition of political benefits but also about the process of securitization, international economic expansion, social stability, and the

<sup>25</sup> The GHI is divided into five hunger levels: extremely alarming (> 29.9), alarming (29.9–20.0), serious (19.9–10.0), moderate (9.9–5.0), and low (<5.0).

<sup>26</sup> For more information, see Maplecroft (2011).

**Table 2.** China's food security under state capitalism

Food security dimensions SC dimensions	Availability	Accessibility	Safety	Stability of availability and accessibility
Responsible governmental actors	Provincial governments (e.g., provincial administrations of grain)		Central government (e.g., FDA and NDRC)	Central government (e.g., NDRC)
Major market actors	Provincial Sinograin branches to manage domestic markets; Provincial agribusiness SOEs & national champions to acquire foreign resources		Food SOEs and national champions	National SOEs and SWF to merge large international agribusiness firms
Guiding policy in personnel control/promotion systems	PGRS		Absent	Nationalization and agricultural branching-out policies
Governance approach based on SC	Scaling-down market control; Scaling-up global investment		Scaling-out social stability	Scaling-back nationalism
Strengths contributed by SC	➤Protecting farmlands; ➤Maintaining grain self-sufficiency	➤Accessing overseas agricultural resources	➤Immediate effects on stabilizing food safety concerns	➤Consistent investment in agricultural infrastructure and R&D
Weaknesses resulting from SC	➤Corruption in Sinograin & governments	➤Hindering establishment of a nationwide grain market; ➤Grain prices difference between provinces; ➤Grain prices higher than those in the global market	➤Lacking market incentives to motivate enterprises to enforce regulations voluntarily	➤Global concerns about China's expanding neo-colonialism; ➤Lacking incentives to deal with climate change consequences

driving force of economic nationalism. China's nationalization of the grain market and the establishment of a comprehensive food security governance mechanism can demonstrate the crucial role that SC plays in China's development.

Through the specified research on SC, this paper has shown three features of China's food security governance. First, China's food security governance is typically the operation of SC, in which the state apparatus, SOEs, and SWF work together under the PGRS and branching-out policies, successfully governing China's food availability, despite some corruption, but weakening its food accessibility. Second, quality and safety of food are also important indicators of food security, but China's food safety governance emphasizes a more central-to-local implementation approach, lacking voluntary cooperation in market behavior. In addition, the food safety administrative structure is devoid of mechanisms like the PGRS to obtain local governments' cooperation, so governance bottlenecks occur. Such achievements as improving food safety under SC remain to be observed. Third, over the past 20 years, the nationalistic investments in infrastructure that SC emphasizes have greatly improved China's food stability in terms of availability and accessibility, but with few incentives to deal with future climate change threats. At the same time, encouraged by the agribusinesses' branching-out policy, China's grain SOEs and SWF are acquiring overseas farmlands and investing in overseas grain enterprises in the hope of further ensuring China's domestic food security. However, the branching-out policy has also aroused anxiety in the international community, which expects China to make more responsible investments.

Two important issues have been identified for future research. First, theoretically, as China's food security governance has applied SC's practices with security, political, economic, social, and nationalistic hues, SC's developmental nature has been modified accordingly. Since Japan, as indicated by Breslin (2011), introduced and developed the SC model for East Asia, the process of Japan's agricultural modernization in the 1960s and construction of its overseas grain supply chain from Latin America in the mid-1970s (McDonald, 2000; McMichael and Kim, 1994) have been recognized by China (Cheng and Zhang, 2014). Future researchers are therefore encouraged to extend the VOC and SC comparisons based on food security governance. These spatially and temporally international comparisons will contribute to a better understanding of SC's evolution. Second, practically, SC has improved much of China's food security governance mechanism, but this present analysis shows that further incentives to motivate cooperation among local administrations and market groups in the country and responsible investments across the globe are lacking, challenging the development of SC. This challenge from China's SC practices also is worthy of academia's attention in the future.

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## References

- Bai, Li, Chenglin Ma, Shunlong Gong, and Yinsheng Yang (2007), 'Food Safety Assurance Systems in China', *Food Control*, 18: 480–4.
- Becker, U. (2013), 'Measuring Change of Capitalist Varieties: Reflections on Method, Illustrations from the BRICs', *New Political Economy*, 18(4): 503–32.
- Becker, U. (2014), 'Institutional Changes in the BRICs, Eastern Europe, South Africa and Turkey, 1998–2008', in U. Becker (ed.), *The BRICs and Emerging Economies in Comparative Perspective: Political Economy, Liberalisation and Institutional Change*, New York: Routledge, pp. 27–52.
- Birdsall, N. and F. Fukuyama (2011), 'The Post-Washington Consensus: Development after the Crisis', *Foreign Affairs*, 90(2), <http://www.foreignaffairs.com/articles/67456/nancy-birdsall-and-francis-fukuyama/the-post-washington-consensus> [accessed 21 August 2015].
- Boyer, R. (2005), 'How and Why Capitalisms Differ', *Economy and Society*, 34(4): 509–57.
- Boyer, R. and Y. Saillard (eds.) (2002), *Regulation Theory: The State of the Art*, London: Routledge.
- Bräutigam, D. A. and X. Tang (2009) 'China's Engagement in African Agriculture: "Down to the Countryside"', *The China Quarterly*, 199: 686–706.
- Bremmer, I. (2008), 'The Return of State Capitalism', *Survival: Global Politics and Strategy*, 50(3): 55–64.
- Bremmer, I. (2009), 'State Capitalism Comes of Age: The End of the Free Market?', *Foreign Affairs*, 88(3), <http://www.foreignaffairs.com/articles/64948/ian-bremmer/state-capitalism-comes-of-age> [accessed 21 August 2015].
- Bremmer, I. (2010), 'The End of the Free Market: Who Wins the War between States and Corporations?', *European View*, 9(2): 249–52.
- Breslin, S. (2011), 'The "China Model" and the Global Crisis: From Friedrich List to a Chinese Mode of Governance', *International Affairs*, 87(6): 1323–43.
- Buzan, B., O. Wæver, and J. de Wilde (1998), *Security: A New Framework for Analysis*, Boulder, CO: Lynne Rienner Publishers.
- Chen, G. and J. Yu (2014), 'China State Investor Shifts Sights to Agribusiness Worldwide', *South China Morning Post*, 29 April, <http://www.scmp.com/business/china-business/article/1499747/china-state-investor-shifts-sights-agribusiness-worldwide> [accessed 1 September 2015].
- Chiavacci, D. (2007), 'The Social Basis of Developmental Capitalism in Japan: From Post-war Mobilization to Current Stress Symptoms and Future Disintegration', *Asian Business & Management*, 6(1): 35–55.
- Chu, Yin-wah and A. Y. So (2010), 'State Neoliberalism: The Chinese Road to Capitalism', in Yin-wah, Chu (ed.), *Chinese Capitalism: Historical Emergence and Political Implications*, New York: Palgrave Macmillan, pp. 46–72.
- Cheng, G. and H. Zhang (2014), 'China's Global Agricultural Strategy: An Open System to Safeguard the Country's Food Security', S. Rajaratnam School of International Studies Working Paper, <https://www.rsis.edu.sg/wp-content/uploads/2014/10/WP282.pdf> [accessed 12 May 2016].
- Clapp, J. and E. Helleiner (2012), 'Troubled Futures? The Global Food Crisis and the Politics of Agricultural Derivatives Regulation', *Review of International Political Economy*, 19(2): 181–207.
- Coy, P. (2012), 'China's State Capitalism Trap', *Bloomberg Businessweek*, 2 February, <http://www.businessweek.com/magazine/chinas-state-capitalism-trap-02022012.html> [accessed 26 September 2015].

- D'Aveni, R. A. (2012a), 'How America Can Beat China's State Capitalism', *Bloomberg Businessweek*, 2 October, <http://www.businessweek.com/articles/2012-10-02/how-america-can-beat-chinas-state-capitalism> [accessed 26 September 2015].
- D'Aveni, R. A. (2012b), *Strategic Capitalism: The New Economic Strategy for Winning the Capitalist Cold War*, New York: McGraw-Hill.
- Deeg, R. and G. Jackson (2007), 'Towards a More Dynamic Theory of Capitalist Variety', *Socio-Economic Review*, 5(1): 149–79.
- Economist Intelligence Unit (2012), 'Global Food Security Index 2012: An Assessment of Food Affordability, Availability and Quality', [http://pages.eiu.com/rs/eiu2/images/EIU\\_DUPONT\\_Food\\_Index\\_July\\_2012.pdf](http://pages.eiu.com/rs/eiu2/images/EIU_DUPONT_Food_Index_July_2012.pdf) [accessed 9 September 2015].
- Economist Intelligence Unit (2014), 'The Global Food Security Index', *The Economist*, <http://foodsecurityindex.eiu.com> [accessed 9 September 2015].
- Edin, M. (2003), 'Remaking the Communist Party-State: The Cadre Responsibility System at the Local Level in China', *China: An International Journal*, 1(1): 1–15.
- Fligstein, N. and J. Zhang (2011), 'A New Agenda for Research on the Trajectory of Chinese Capitalism', *Management and Organization Review*, 7(1): 39–62.
- Food and Agricultural Organization of the United Nations (2001), *The State of Food Insecurity in the World, 2001*, Rome: Food and Agricultural Organization of the UN, <http://www.fao.org/docrep/003/y1500e/y1500e00.htm> [accessed 9 September 2015].
- Food and Agricultural Organization of the United Nations (2009), *Declaration of the World Food Summit on Food Security*, Rome: Food and Agricultural Organization of the UN, [http://www.fao.org/fileadmin/templates/wfs/Summit/Docs/Final\\_Declaration/WSF509\\_Declaration.pdf](http://www.fao.org/fileadmin/templates/wfs/Summit/Docs/Final_Declaration/WSF509_Declaration.pdf) [accessed 9 September 2015].
- Food and Agricultural Organization of the United Nations (2013), *The State of Food Insecurity in the World*, Rome: Food and Agricultural Organization of the UN, <http://www.fao.org/docrep/018/i3434e/i3434e.pdf> [accessed 9 September 2015].
- Friedberg, A. L. (2006), "'Going Out": China's Pursuit of Natural Resources and Implications for the PRC's Grand Strategy', *NBR Analysis*, September, <http://www.ou.edu/uschina/SASD/SASD2007readings/Friedberg2006GoingOut.pdf> [accessed 1 September 2015].
- Fukuyama, F. (1992), *The End of History and the Last Man*, New York: Free Press.
- Hagel, J. and W. E. Grinder (2004), 'From Laissez-Faire to *Zwangswirtschaft*: The Dynamics of Interventionism', in Peter Kurrild-Klitgaard (ed.), *The Dynamics of Intervention: Regulation and Redistribution in the Mixed Economy*, Bingley, UK: Emerald Group, pp. 59–86.
- Haley, U. C.V. and G. T. Haley (2013), *Subsidies to Chinese Industry: State Capitalism, Business Strategy, and Trade Policy*, New York: Oxford University Press.
- Hall, P. A. and D. Soskice (2001) (eds.), *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*, New York: Oxford University Press.
- Hallam, D. (2011), 'International Investment in Developing Country Agriculture – Issues and Challenges', *Food Security*, 3(1): 91–8.
- Headey, D. D. (2013), 'The Impact of the Global Food Crisis on Self-Assessed Food Security', *World Bank Economic Review*, 27(1): 1–27.
- Hoering, U. and N. Sausmikat (2011), *Agriculture in China: Between Self-Sufficiency and Global Integration*, Essen, Germany: Asienstiftung/German Asia Foundation.
- Horta, L. (2008), 'The Zambezi Valley: China's First Agricultural Colony?', *Center for Strategic and International Studies (CSIS) Publications*, 20 May, <http://csis.org/publication/zambezi-valley-chinas-first-agricultural-colony> [accessed 1 September 2015].
- Huang, P. C. C. (2012), 'Profit-Making State Firms and China's Development Experience: "State Capitalism" or "Socialist Market Economy"?', *Modern China*, 38(6): 591–629.
- Huang, Y. (2008), *Capitalism with Chinese Characteristics: Entrepreneurship and the State*, New York: Cambridge University Press.
- Feirden, J. (1981), 'Third World Indebted Industrialization: International Finance and State Capitalism in Mexico, Brazil, Algeria, and South Korea', *International Organization*, 35(3): 407–31.
- Jin, Jiaqi (2012), '2012 liang hui yu qing bao gao (3 yue 1 ri pian) : re yi shi pin an quan' (2012 兩會輿情報告 (3月1日篇) : 熱議食品安全) [2012 National People's Congress and Chinese People's Political Consultative

- Conference Public Sentiment Report (1 March): Heated Debate on Food Safety.] *China.com.cn* (中國網), 1 March, [http://news.china.com.cn/2012lianghui/2012-03/01/content\\_24775501.htm](http://news.china.com.cn/2012lianghui/2012-03/01/content_24775501.htm) [accessed 1 September 2015].
- Kurlantzick, J. (2012), 'The Rise of Innovative State Capitalism', *Bloomberg Businessweek*, 28 June, <http://www.businessweek.com/articles/2012-06-28/the-rise-of-innovative-state-capitalism> [accessed 26 September 2015].
- Lane, D. and M. Myant (2007) (eds.), *Varieties of Capitalism in Post-Communist Countries*, New York: Palgrave Macmillan.
- Lee, Huey-lin and S. Y. Lin (2015), 'Weighting up Market Mechanism and Regulated Distribution: A China Dream to Feed Itself under Spatially Imbalanced Development', in Chih-shian Liou and A. S. Ding (eds.), *China Dreams: China's New Leadership and Future Impacts*, Singapore: World Scientific, pp. 243–84.
- Levine, R. (2012), 'The Governance of Financial Regulation: Reform Lessons from the Recent Crisis', *International Review of Finance*, 12(1): 39–56.
- Li, H. and Li-An Zhou (2005), 'Political Turnover and Economic Performance: The Incentive Role of Personnel Control in China', *Journal of Public Economics*, 89(9–10): 1743–62.
- Li, X. and T. M. Shaw (2013), 'The Political Economy of Chinese State Capitalism', *Journal of China and International Relations*, 1(1): 88–113.
- Lieberthal, K. (1998), 'Introduction: The "Fragmented Authoritarianism" Model and Its Limitations', in Kenneth Lieberthal and Michel Oksengerg (eds.), *Policy Making in China: Leaders, Structures, and Processes*, Princeton, NJ: Princeton University Press, pp. 1–30.
- Lin, J. Y. (2000), 'Collectivisation and China's Agricultural Crisis in 1959–1961', *Journal of Political Economy*, 98(6): 1228–52.
- Lin, J. Y. and D. Doemeland (2012), 'Beyond Keynesianism: Global Infrastructure Investments in Times of Crisis', *Journal of International Commerce, Economics and Policy*, 3(3): 1–29.
- Lin, J. Y. and G. J. Wen (1995), 'China's Regional Grain Self-Sufficiency Policy and Its Effect on Land Productivity', *Journal of Comparative Economics*, 21(2): 187–206.
- Lin, S. Y. (2015), 'From Self-Sufficiency to Self-Supporting: China's Food Security under Overseas Farmland Investment and International Norms', *Issues and Studies*, 51(3): 89–129.
- Lin, Li-wen and C. J. Milhaupt (2013), 'We Are the (National) Champions: Understanding the Mechanisms of State Capitalism in China', *Stanford Law Review*, 65: 697–759, <https://clsbluesky.files.wordpress.com/2013/04/milhaupt-paper.pdf> [accessed 1 September 2015].
- Liou, Chih-shian (2014), 'Guo jia zi ben zhu yi yu zhong guo zheng zhi jing ji ti zhi' (國家資本主義與中國政治經濟體制) [State Capitalism and Chinese Political Economy Structures.] Presented at the State Capitalism Seminar Series I: State Activity in the Market, Institute of International Relations, National Chengchi University, Taipei, Taiwan, 30 May.
- Maplecroft, (2011), 'New Products and Analysis', [http://maplecroft.com/about/news/food\\_security.html](http://maplecroft.com/about/news/food_security.html) [accessed 9 September 2015].
- Maplecroft, (2013), 'The Food Security Risk Index 2013', [https://maplecroft.com/about/news/food\\_security\\_risk\\_index\\_2013.html](https://maplecroft.com/about/news/food_security_risk_index_2013.html) [accessed 9 September 2015].
- McDonald, M. G. (2000), 'Food Firms and Food Flows in Japan 1945–98', *World Development*, 28(3): 487–512.
- McMichael, P. and C.-K. Kim (1994), 'Japanese and South Korean Agricultural Restructuring in Comparative and Global Perspective', in P. McMichael (ed.), *The Global Restructuring of Agro-Food Systems*, Ithaca, NY: Cornell University Press, pp. 21–52.
- McNally, C. A. (2012), 'Sino-Capitalism: China's Reemergence and the International Political Economy', *World Politics*, 64(4): 741–76.
- McNally, C. A. (2013), 'Refurbishing State Capitalism: A Policy Analysis of Efforts to Rebalance China's Political Economy', *Journal of Current Chinese Affairs*, 42(4): 45–71.
- McNally, C. A. (2014), 'The Evolution and Contemporary Manifestations of Sino-Capitalism', in Uwe Becker (ed.), *The BRICs and Emerging Economies in Comparative Perspective: Political Economy, Liberalisation and Institutional Change*, New York: Routledge, pp. 53–78.
- Mertha, A. (2009), "'Fragmented Authoritarianism 2.0": Political Pluralization in the Chinese Policy Process', *The China Quarterly*, 200: 995–1012.

- Musacchio, A. and S. G. Lazzarini (2012), 'Leviathan in Business: Varieties of State Capitalism and Their Implications for Economic Performance', *Harvard Business School Working Paper*, 12(108): 1–62, <http://www.hbs.edu/faculty/Publication%20Files/12-108.pdf> [accessed 21 August 2015].
- Musacchio, A. and S. G. Lazzarini (2014), *Reinventing State Capitalism: Leviathan in Business, Brazil and Beyond*, Cambridge, MA: Harvard University Press.
- Nölke, A. (2015), 'International Financial Regulation and Domestic Coalitions in State-Permeated Capitalism: China and Global Banking Rules', *International Politics*, 52(6): 743–59.
- Nölke, A. and A. Vliegthart (2009), 'Enlarging the Varieties of Capitalism: The Emergence of Dependent Market Economies in East Central Europe', *World Politics*, 61(4): 670–702.
- Nölke, A. and S. Claar (2013), 'Varieties of Capitalism in Emerging Economies', *Transformation: Critical Perspectives on Southern Africa*, 81/82: 33–54.
- Nölke, A., T. ten Brink, S. Claar, and C. May (2015), 'Domestic Structures, Foreign Economic Policies and Global Economic Order: Implications from the Rise of Large Emerging Economies', *European Journal of International Relations*, 21(3): 538–67.
- Oliveira, G. de, L. T. (2015), 'Chinese and Other Foreign Investments in the Brazilian Soybean Complex', *BRICS Initiative for Critical Agrarian Studies (BICAS) Working Paper No. 9* (April), [https://www.tni.org/files/download/bicas\\_working\\_paper\\_9\\_oliveira.pdf](https://www.tni.org/files/download/bicas_working_paper_9_oliveira.pdf) [accessed 10 May 2016].
- Ortega, D. L., H. Holly Wang, L. Wu, and N. J. Olynk (2011), 'Modeling Heterogeneity in Consumer Preferences for Select Food Safety Attributes in China', *Food Policy*, 36(2): 318–24.
- Peck, J. and J. Zhang (2013), 'A Variety of Capitalism . . . with Chinese Characteristics?', *Journal of Economic Geography*, 13(3): 357–96.
- People's Daily Online (人民網) (2013), 'wu ke lan jiang cheng zhong guo zui da hai wai nong chang' (烏克蘭將成中國最大海外農場) [Ukraine Will Become China's Largest Overseas Farm], 23 September, <http://politics.people.com.cn/n/2013/0923/c70731-22997138.html> [accessed 1 September 2015].
- People's Daily Online (人民網) (2014), 'zhong guo ren de fan wan yao duan zai zi shou shang – san lun shi zhong ba 'san nong' gong zuo lao lao zhua zhu jin jin zhua hao' (中國人的飯碗要端在自己手上一三論始終把三農工作牢牢抓住緊緊抓好) [Chinese People's Bowls Should Be Held in Their Own Hands – Hold on Tightly to 'Rural Areas, Agricultural Businesses, and Farmers'], 7 January, [http://paper.people.com.cn/rmrb/html/2014-01/07/nw.D110000enrmb\\_20140107\\_4-01.htm](http://paper.people.com.cn/rmrb/html/2014-01/07/nw.D110000enrmb_20140107_4-01.htm) [accessed 1 September 2015].
- Pew Research Center (2012), 'Growing Concerns in China about Inequality, Corruption: Ratings for the US Decline', *Pew Research Center: Global Attitude Project*, October, <http://www.pewglobal.org/files/2012/10/Pew-Global-Attitudes-China-Report-FINAL-October-10-2012.pdf> [accessed 1 September 2015].
- Pfeifer, K. (1979), 'Three Worlds or Three Worldviews?: State Capitalism and Development', *Middle East Reports*, 78: 3–11.
- Sapir, A. (2011), 'Europe after the Crisis: Less or More Role for Nation States in Money and Finance?', *Oxford Review of Economic Policy*, 27(4): 608–19.
- Schmidt, V. A. (2002), *The Future of European Capitalism*, Oxford: Oxford University Press.
- Schmidt, V. A. (2003), 'French Capitalism Transformed, Yet Still a Third Variety of Capitalism', *Economy and Society*, 32(4): 526–54.
- Schmidt, V. A. (2012), 'What Happened to the State-Influenced Market Economies (SMEs)? France, Italy, and Spain Confront the Crisis as the Good, the Bad, and the Ugly', in W. Grant and G. K. Wilson, (eds.), *The Consequences of the Global Financial Crisis: The Rhetoric of Reform and Regulation*, Oxford: Oxford University Press, pp. 156–86.
- Schmitter, P. C. and A. Todor (2014), 'Varieties of Capitalism and Types of Democracy', in M. Ido (ed.), *Varieties of Capitalism, Types of Democracy and Globalization*, New York: Routledge, pp. 17–52.
- So, A. Y. and Yin-wah Chu (2015), *The Global Rise of China*, New York: John Wiley & Sons.
- Szamosszegi, A. and C. Kyle (2011), *An Analysis of State-owned Enterprises and State Capitalism in China*. N.p.: CreateSpace.
- The Economist* (2012), 'Emerging-Market Multinationals: The Rise of State Capitalism', *The Economist Special Report*, 21 January, <http://www.economist.com/node/21543160> [accessed 26 September 2015].
- The Economist* (2014), 'Leviathan as Capitalist – State Capitalism Continues to Defy Expectations of its Demise', *The Economist Schumpeter Blogs*, 21 June, <http://www.economist.com/news/business/>



- 21604553-state-capitalism-continues-defy-expectations-its-demise-leviathan-capitalist [accessed 26 September 2015].
- The International Food Policy Research Institute (2014), 'Global Hunger Index', *IFPRI*, <https://www.ifpri.org/topic/global-hunger-index> [accessed 9 September 2015].
- Tsai, C.-M. (2014), 'Guo jia zi ben zhu yi :yi ge xin de 「guo jia —shi chang」guan xi ma' (國家資本主義：一個新的「國家—市場」關係嗎) [State Capitalism: A New 'State-Market' Relationship?] Presented at *the State Capitalism Seminar Series I: State Activity in the Market*, Institute of International Relations, National Chengchi University, Taipei, Taiwan, 30 May.
- Tsai, K. S. (2014), 'The Political Economy of State Capitalism and Shadow Banking in China', Presented at the Conference of Mainland China's Reform and Transition? The Opportunities and Challenges of the Xi-Li Administration, Center for China Studies, National Chengchi University, Taipei, Taiwan, 18–19 May.
- Tverberg, G. E. (2012), 'Oil Supply Limits and the Continuing Financial Crisis', *Energy*, 37(1): 27–34.
- Vermeiren, M. and M. Otero-Iglesias (2015), 'China's State-Permeated Market Economy and Its Constraints to the Internationalization of the Renminbi', *International Politics*, 52(6): 684–703.
- Xiu, C. and K. K. Klein (2010), 'Melamine in Milk Products in China: Examining the Factors That Led to Deliberate Use of the Contaminant', *Food Policy*, 35(5): 463–70.
- Xu, C. (2011), 'The Fundamental Institutions of China's Reforms and Development', *Journal of Economic Literature*, 49(4): 1076–151.
- Yan, H. and B. Sautman (2010), 'Chinese Farms in Zambia: From Socialist to 'Agro-Imperialist' Engagement?', *African and Asian Studies*, 9(3): 307–33.
- Zhou, W. (2010), 'The Role of the State in Making a National Market: The Evolution of the Grain Market in China (1978–2000)', *China Agricultural Economic Review*, 2(3): 276–97.