Evaluation of China’s regional grain trade policy

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Key to symbols used in tables

n.a. not applicable
.. not available
- zero
. insignificant
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During both the old period of the planned economy and the new period of the establishment of a market economy, the Chinese government paid great attention to the regional balance of grain supply and demand. Currently, because of the continuous development of grain marketisation and the fundamental changes taking place in patterns of grain supply and demand, China’s regional grain trade has also undergone fundamental changes. During the period of the planned economy, regional grain trade depended on planned transfers. After the economic reform, the proportion of regional grain trade dependent on market operations has gradually increased. Since 1993, when the planned inter-provincial grain transfer system was abolished, China’s regional grain trade has depended mainly on market operations. In the past, during periods of grain shortage, in order to increase grain supply, areas unsuited to grain production were forced to produce grain anyway. This limited the quantity of regional grain flows. Since the mid 1990s, when the policy of grain production according to comparative advantage was implemented, regional grain flows have increased greatly. We should note, however, that regional grain flows and the related policies still need to be improved.

Main regional grain trade policies since 1993

Since 1993, grain-marketing reform in China has focused almost exclusively on marketisation. Regional grain trade policies have been adjusted and improved continuously, according to new and changing situations. To summarise, regional grain trade policies since 1993 have performed the following tasks.

First, the respective grain responsibilities of the central and local governments were clarified, and a provincial-level grain responsibility system was established. The new responsibility system makes provincial governments responsible for grain production and marketing, for establishing and improving province-level grain reserve systems, and for the balance of grain supply and demand in their own provinces.

Second, a grain market system was established. In the main grain production areas, the main grain sale areas and the main transportation centres, a large number of regional and national grain wholesale markets were established. A grain wholesale market network linking the main grain production areas and the main grain sale areas was also established in embryonic form.

Third, a government-controlled grain market pricing mechanism was established. The basic feature of the new pricing mechanism is that, under normal conditions, it allows grain prices to be determined by market supply and demand, and grain enterprises to
purchase and sell grains at market prices. In order to protect producer interests, however, governments set purchase protection prices for the main grain crops. On the other hand, in order to protect consumer interests and stabilise grain sale prices, governments set sale ceiling prices for main grain crops. Purchase prices for grain crops covered by contract purchase are set mainly by provincial governments according to state-specified regulations. When grain prices fluctuate excessively, governments rely mainly on grain reserve operations and grain imports and exports to adjust grain market supply and demand and thus stabilise grain market prices. In recent years, because of successive good harvests, grain supply has exceeded grain demand, and so governments have purchased much grain from farmers at protected prices. At present, the grain crops to which protected purchase prices apply include middle and late-season rice produced in the south, corn and rice produced in the northeast and in the eastern part of Inner Mongolia, and wheat produced in the Huang Huai Hai and in the northwest. There are other grain crops to which protected purchase prices have ceased to apply and whose prices are subject to market adjustment.

Fourth, the mechanism of grain trade between grain production areas and grain sale areas has changed. Market adjustment through direct contracts between grain producers and grain purchasers or through wholesale market operations has taken over from state-planning as the main mechanism determining grain flows between grain production areas and grain sale areas. Grain production and grain sale areas have been encouraged to establish stable, long-term grain purchase and sale relations, and to manage inter-provincial grain surplus and shortage.

Fifth, a multi-player grain market system has been established. By continuing reform, separating administration from business, and changing operation mechanisms, the state has enabled more and more state-owned grain purchase and sale enterprises to become independent economic entities responsible for their own business operations and profits and losses. On the one hand, state-owned grain enterprises implement government grain policies of purchasing grain crops that are on the protected price list at protected prices without limit. On the other hand, state-owned grain enterprises purchase and sell grain crops that are not on the protected price list at market prices according to the principle of purchase depending on sales. With the approval of provincial-level industry and commerce administration, grain-using and grain-operation enterprises can go to the countryside directly to purchase grain crops on the protected price list. With the approval of county or above county-level industry and commerce administration, grain-using and grain-operation enterprises can go to the countryside to purchase grains not on the protected price list. With the approval of county or above county-level industry and commerce administration, grain dealers (including private and individual grain operators) can purchase and sell grain at rural markets and grain wholesale markets. All grain enterprises and grain-using enterprises can purchase and sell grains at above county-level grain wholesale markets.
The pattern of China’s regional grain trade

Before the reform, China’s grain supply was less than its grain demand. In order to balance the gap between grain supply and grain demand, the state adopted the method of planned transfer, which caused regional grain flows to form a basic pattern of ‘transferring grain from the south to the north’, supplemented by grain imports. Since the mid 1980s, the pattern of regional grain flows has changed to ‘transferring grain from the north to the south’. With the large increase in grain output following the reforms, regional grain trade has become much brisker nationwide but especially in the north. The increased demand for grain has changed in nature from demand mainly for food grain to demand mainly for feed grain. Because the north has a comparative advantage in corn production, more and more corn produced in the north has been transported to the south. In recent years, with the implementation of the ‘West Development Strategy’, the western region has gradually readjusted agricultural structure and placed emphasis on returning land from grain production to forest and pasture land. As a result, a new pattern of ‘transferring grain from the centre to the west’ has emerged.

The basic situation of grain production and grain sale areas

In terms of grain production and grain sale areas, China’s 30 provinces can be divided into three groups. The first group consists of grain import provinces, or main grain sale provinces, where aggregate grain supply cannot meet aggregate grain demand and there is therefore the need to import grain from other regions to meet local demand. The second group consists of grain export provinces, or main grain production provinces, where aggregate grain supply exceeds aggregate grain demand and there is therefore surplus grain that can be exported to other regions. The third group consists of grain balanced provinces, where aggregate grain supply and aggregate grain demand are balanced. These provinces nonetheless continue to trade in grain with other provinces, mainly for the purpose of adjustment of crop varieties.

Grain import provinces. There are 15 grain import provinces. These can be divided further into four types. To the first type belong large cities with very low grain self-sufficiency, including Beijing, Tianjin and Shanghai. To the second type belong the southeastern coastal provinces with low comparative advantage in grain production, including Zhejiang, Fujian, Guangdong and Hainan. To the third type belong the southwestern provinces with scarce farmland resources, including Guangxi, Yunnan, Guizhou and Chongqing. The fourth type is made up of the northwestern provinces with fragile ecological environments, including Shanxi, Gansu, Qinghai and Tibet.

Grain export provinces. There are ten provinces able to provide relatively stable grain exports. They are Hebei, Jilin, Heilongjiang, Anhui, Jiangxi, Shandong, Henan, Hubei, Hunan and Sichuan. In addition, Jiangsu and Inner Mongolia are also able to export some grain. A summary of the main rice, wheat and corn export provinces follows.
• **Rice export provinces.** In terms of total quantity of rice produced, the largest ten rice production provinces are Hunan, Jiangsu, Sichuan, Hubei, Jiangxi, Guangdong, Anhui, Guangxi, Zhejiang and Heilongjiang. In 1999, these ten provinces’ combined total rice output was 155.68 million tonnes, or 78.43 per cent of the national total. Considering per capita grain holdings, the main rice export provinces are Hunan, Hubei, Jiangxi and Anhui in the middle and lower reaches of the Yangzi River. In addition, Heilongjiang in the northeast, Jiangsu in the lower reaches of the Yangzi River and Sichuan in the upper reaches of the Yangzi River also have the ability to export some rice.

• **Wheat export provinces.** In terms of total quantity of wheat produced, the largest ten wheat production provinces are Henan, Shandong, Hebei, Jiangsu, Anhui, Sichuan, Xinjiang, Shaanxi, Gansu and Hubei. In 1999, these ten provinces’ combined total wheat output was 96.17 million tonnes, or 84.45 per cent of the national total. Considering per capita grain holdings, the main wheat export provinces are Henan, Shandong and Hebei in the Huang Huai Hai areas. In addition, Jiangsu and Anhui can also export some wheat.

• **Corn export provinces.** In terms of total quantity of corn produced, the largest ten corn production provinces are Jilin, Shandong, Heilongjiang, Henan, Hebei, Liaoning, Inner Mongolia, Sichuan, Yunnan and Shaanxi. In 1999, the total corn output of these ten provinces was 100.14 million tonnes, or 78.18 per cent of the national total. Considering per capita grain holdings, the main corn export provinces are Jilin, Heilongjiang in the northeast and the eastern part of Inner Mongolia. In addition, Henan, Shandong and Hebei in the Huang Huai Hai areas can export some corn, and Liaoning in the northeast can also export a small amount.

**Grain balanced provinces.** The six grain balanced provinces are Inner Mongolia, Liaoning, Jiangsu, Shaanxi, Ningxia and Xinjiang. The situation in each of these provinces, however, is different. In Inner Mongolia, per capita grain holding reached 607 kilograms in 1999, mainly because of the large increase in corn output in recent years (60 per cent from 1994 to 1999). Inner Mongolia therefore has large amounts of corn that can be exported. In Liaoning, although some corn and a little rice is exported at the moment, in the future it is likely that aggregate grain supply and demand will balance. Jiangsu has a high ranking for both total grain output and per capita grain holding, and exports both rice and wheat. But grain supply and demand within Jiangsu have been unbalanced. In addition, Jiangsu is one of the coastal economically developed areas, so it is unlikely that it will continue to export large quantities of grain in the future. Shaanxi, Ningxia and Xinjiang are located in the northwest. Shaanxi experiences relatively large fluctuations in grain production but can achieve a basic balance in production and consumption in normal harvest years. Ningxia had a per capita grain holding of 542.6 kilograms in 1999. Although it has some surplus in aggregate grain supply, the total quantity is small. Xinjiang also has some surplus in aggregate grain supply. Geographical and transport factors, however, make it very difficult to transport grain out of Xinjiang.
Direction and quantity of regional flows of the three major grain crops

Since 1996, because total grain output in China has reached 500 million tonnes four years running, aggregate grain supply has come to exceed aggregate grain demand. There are currently 13 provinces able to export grain, including Heilongjiang, Jilin and Liaoning in the northeast and the eastern part of Inner Mongolia, Hebei, Henan, and Shandong in the Huang Huai Hai areas, Jiangsu, Anhui, Jiangxi, Hubei and Hunan in the middle and lower reaches of the Yangzi River, and Sichuan in the upper reaches of the Yangzi River. In terms of grain crops, the northeastern region mainly exports corn, the Huang Huai Hai areas mainly export wheat and corn, the areas in the middle and lower reaches of the Yangzi River mainly export rice and a small amount of wheat, and Sichuan mainly exports rice.

Fifteen provinces currently have grain deficits and need to import grain. In terms of grain crops, the three large cities of Beijing, Tianjin and Shanghai need to import all three grain crops of rice, wheat and corn; the southeastern coastal provinces mainly need to import corn and some rice; the southwestern provinces mainly need to import corn and some rice and wheat; and the northwestern provinces mainly need to import corn and wheat.

According to the findings of the ‘strategic studies on grain supply and demand in the grain deficit provinces’, the 15 grain deficit provinces imported a total of 29.8 million tonnes of grain from domestic and foreign markets in 1998. In terms of regions and provinces, the three large cities of Beijing, Tianjin and Shanghai imported a total of 7.82 million tonnes of grain, with Beijing importing 2.8 million tonnes, Tianjin 1.64 million tonnes, and Shanghai 3.38 million tonnes. The southeastern coastal provinces imported a total of 14.5 million tonnes of grain, with Zhejiang importing 2.9 million tonnes, Fujian 4.02 million tonnes, Guangdong 6.86 million tonnes and Hainan 0.73 million tonnes. The southwestern provinces imported a total of 3.73 million tonnes of grain, with Guangxi importing 1.08 million tonnes, Yunnan 0.43 million tonnes, Guizhou 1.22 million tonnes and Chongqing 1 million tonnes. The northwestern provinces imported a total of 3.75 million tonnes of grain, with Shanxi importing 3.37 million tonnes, Qinghai 0.36 million tonnes and Gansu 0.02 million tonnes.

Grain outflows of the major grain production provinces. The following analysis gives an indication of how grain outflows from grain production provinces are highly specific to each individual province.

- **Rice outflow from Hunan province.** Hunan’s rice outflow is directed mainly to Guangdong, Guangxi, Yunnan and Guizhou. Its total quantity was 1.12 million tonnes in 1997, 1.07 million tonnes in 1998 and 2.53 million tonnes in 1999. The market channels for rice outflow in Hunan are diverse. Apart from state-owned grain departments, grain enterprises, private grain enterprises and individual grain dealers are also involved in grain marketing. In 1997, of the total quantity of rice outflow, 14.5 per cent was conducted by the state-owned grain departments and 85.5 per cent was conducted by the
other multi-channel grain operators. The share in 1998 was 22.3 per cent and 77.7 per cent respectively, and in 1999 it was 38.7 per cent and 61.3 per cent respectively.

- **Wheat outflow from Henan province.** For the four years from 1997 to 2000, the total quantity of wheat outflow from Henan was 0.72 million tonnes, 0.41 million tonnes, 2.56 million tonnes and 3.61 million tonnes, or 3 per cent, 2 per cent, 11 per cent and 16 per cent of Henan’s total wheat output. From June 2000 to March 2001, the quantity of wheat outflow from Henan was 2.57 million tonnes. Guangdong and Guangxi were the largest importers of Henan wheat, accounting for 26 per cent of total wheat outflow from Henan. Wheat outflow from Henan to Inner Mongolia, Shaanxi, Gansu, Shanxi and Qinghai accounted for 20 per cent of total outflow, outflow to Sichuan, Yunnan Guizhou, Hunan and Hubei for 15 per cent, and outflow to Zhejiang, Jiangxi and Jiangsu for 10 per cent. Henan wheat outflow operations were conducted mainly by state-owned grain purchase and sale enterprises.

- **Corn outflow from Jilin province.** Between 1998 and 2000, Jilin state-owned grain enterprises purchased 13.64 million tonnes, 19.53 million tonnes and 8.65 million tonnes of grain (mainly corn), accounting for 72 per cent, 102.7 per cent and 85 per cent of commercial grain. During the same period, state-owned grain enterprises sold 4.40 million tonnes, 12.55 million tonnes (including 1.80 million tonnes exported internationally) and 14.19 million tonnes (3.55 million tonnes exported internationally). In 2000, not counting international exports, Jilin state-owned grain enterprises exported 6.01 million tonnes of grain (mainly corn) to other provinces, including Guangdong (2 million tonnes), Fujian (1.5 million tonnes), Zhejiang (1 million tonnes), Shanghai (1 million tonnes) and Guangxi (0.5 million tonnes). In addition, the other multi-channel grain operators exported around 3 million tonnes of grain (mainly rice and coarse grains) to other provinces each year. In terms of destination, Jilin’s corn was exported to 25 provinces across China, with the exception of the northwestern provinces of Gansu, Qinghai, Ningxia and Xinjiang and Tibet.

**Grain inflows of the major grain import provinces.** The major grain import provinces include Guangdong, Zhejiang and Fujian. Again the import needs and modes of importation are quite specific to each province.

- **Guangdong.** Guangdong’s total annual grain consumption comes to around 33.5 million tonnes. From 1996 to 2000, Guangdong imported (from domestic and foreign markets) a total of 58.32 million tonnes of grain, averaging 11.66 million tonnes annually. Of the imported grain, corn accounted for 38 per cent, rice for 31 per cent, wheat for 11 per cent, pulses for 3.5 per cent and others for 15 per cent. Around 60 per cent of the imported grain was transported by sea, the remaining 40 per cent by railway and road. Grain imports from other provinces are conducted mainly through long-term purchase contracts between Guangdong and the main grain production provinces, such as Hunan, Hubei, Jiangxi and Heilongjiang.
Zhejiang. Zhejiang’s total annual grain consumption comes to around 17.5 million tonnes. The difference between grain production and grain consumption is around 5.5 million tonnes each year, and Zhejiang has established relatively stable grain purchase and sale relations with grain production provinces to make up this difference. With the development of grain wholesale markets, around 50 per cent of the grain deficit is filled at grain wholesale markets within Zhejiang. In 2000, there were 35 grain wholesale markets in Zhejiang, with a combined annual grain trading volume of 2.5 million tonnes, of which more than 70 per cent was traded by private grain enterprises and individual grain dealers. The food grain wholesale markets in Hangzhou, Ningbo and Wenzhou, and the feed grain wholesale markets in Jinhua and Jiaxing have also developed to quite large scales.

Fujian. Fujian’s total annual grain consumption comes to around 14 million tonnes. In recent years, the difference between grain production and grain consumption in Fujian has been around 4.5 million tonnes. Grains needing to be imported are mainly high-quality rice, wheat, corn, soybeans and other feed grains. In recent years, of total grain imports, wheat has accounted for 18 per cent, rice for 15 per cent, corn for 50 per cent, soybeans for 8 per cent and other feed grains for 9 per cent.

The main factors constraining regional grain flows

China is a large country and its regional economic development is very uneven. The improvement of regional grain trade requires each region to play its own comparative advantage and overall resource allocation to be made more efficient. The formation of a unified national grain market network and the improvement of regional grain flows are therefore very pressing tasks.

The factors constraining regional grain flows can be divided into two classes—the ‘hard’ and the ‘soft’. Although the hard constraining factors, such as transportation and infrastructure facilities, can be problematic, the real problem—the slow development of grain marketisation—is caused by the soft containing factors. Soft factors include the following.

- **The grain market system is yet to function fully.** China has established mainly urban and rural fair markets, county-level grain wholesale markets in the grain production areas, city and town grain wholesale markets, regional grain wholesale markets, national grain wholesale markets and national grain futures markets. Among these, those linked directly to regional grain flows are grain wholesale markets and grain futures markets. But these two forms of grain market have many problems. Except for city and town grain wholesale markets, whose business is relatively good, the business of many county-level grain wholesale markets in the grain production areas, regional and national
grain wholesale markets, and national futures markets is quite slack. Thus, although a grain market system framework has been established, the system has yet to begin functioning fully.

- **Government macro-management of regional grain marketing is still imperfect.** First, the development of a legal system and the stipulation of relevant laws and regulations are lagging behind grain marketing developments. Second, government administrative intervention in regional grain flows is still common. Third, deviations from policy seem to have occurred in the implementation of certain government grain policies, such as the governors’ grain responsibility system and the grain policies implemented in 1998. Fourth, the functions of government grain management organisations have not been adapted to grain marketing developments. Fifth, local grain protectionism still exists. Each of these problems related to macro-management has constrained the development of regional grain flows.

- **State-owned grain enterprises are not yet reformed.** The state-owned grain enterprises are the main players and channels in grain marketing in China. Most of them, however, have not yet become independent economic entities responsible for their own profits and losses. Their failure to reform has been one of the main constraints on regional grain flows.

- **The private sector is constrained.** Although in recent years the private sector has been allowed to participate in grain marketing, its activities have been limited. In addition, the private sector itself has problems of its own, for example, smallness of scale, lack of necessary facilities, non-standard operations and so on.

- **Grain market management is still poor.** For grain trade operations to succeed, certain basic requirements must be met in terms of, for example, location, storage facilities, checking methods, capital and qualified staff. Many grain business operator are still unqualified. As a result, grain market management is still poor.

In terms of hard constraining factors, although railway capacity and the number of special-purpose docks have been increased, the many demands of grain transport are still not being met. In addition, undeveloped storage facilities and inadequate checking methods are also common but serious problems.

**International grain trade and the impact of accession to the WTO on regional grain flows**

**The characteristics of international grain trade since reform**

**Periodic change of net grain trade.** From 1978 to 1984, China was a net grain importer with annual average net grain imports of around 10 million tonnes. During this period, grain imports were equal to 2.5–4.6 per cent of China’s annual domestic grain output. In 1985 and 1986, because of successive bumper harvests in previous years, China became a net grain exporter, and the ratio of grain import to domestic grain output fell to below 2
per cent. From 1987 to 1991, however, China again became a net grain importer, and the ratio of grain import to domestic grain output rose to around 3–4 per cent. From 1992 to 1994, because of a large increase in domestic grain production, China was a net grain exporter, and the ratio of grain import to domestic grain output fell to around 1.6–2.7 per cent. In 1995 and 1996, because of a sharp decrease in domestic grain production, grain imports increased dramatically, and, in 1995, the ratio of grain import to domestic grain output reached 4.5 per cent. Since 1997, China has had successive good harvests, and grain imports and exports have balanced. Grain imports are now equivalent to 1.5 per cent of domestic grain output.

The changing situation of wheat as China’s main import crop. From 1978 to 1994, wheat imports accounted for more than 70 per cent of China’s total grain imports. Since 1995, however, this situation has changed. In 1995, the proportion of wheat imports fell to 55.9 per cent of total grain imports, and this declining trend has strengthened in recent years. In 1997 and 1998, China imported 1 million tonnes of wheat annually, equivalent to 30 per cent of total grain imports. In 1999, China imported just 0.45 million tonnes of wheat, or only 5.8 per cent of total grain imports.

Rice and corn as China’s main export crops. Historically, China has been a rice exporter, but the quantity of rice exports has in fact been small. Since 1998, rice exports have increased, reaching 3.75 million tonnes in 1998 and 2.7 million tonnes in 1999. Since 1985, corn has been China’s main export crop, accounting for more than 50 per cent of total grain exports. On average, China has exported 3.4 million tonnes of corn annually. In 1992 and 1993, however, corn exports reached 10 million tonnes.

Impact of WTO accession on regional grain flows
China will become a full member of the WTO in November 2001. Undoubtedly, the country’s grain import and export system and policy will be adjusted in accordance with WTO rules, and this will have a significant impact on China’s domestic regional grain flows. Following China’s entry into the WTO, its domestic grain market will be increasingly linked to the world grain market, and relations between grain imports and exports and domestic regional grain flows will be closer as well. The impact of WTO accession on domestic regional grain flows will mainly assume three forms—an impact on the grain marketing system, an impact on the quantity of regional flows and an impact on the main operating body of the grain market.

Impact on the grain marketing system. Accession to the WTO means that China’s domestic grain market will be linked to the world market. This will push China’s grain marketisation reform further. Increased degree of grain marketisation and improvement of the grain marketing system are favourable to grain flow and trade and will therefore promote domestic regional grain flows. State-owned grain enterprises’ monopoly on grain marketing will be removed, local protectionism will break down, the interests of grain production areas and grain sale areas will be linked, ‘fair, just, open and ordered’
competition in grain trade will be achieved, and the grain marketing system will undergo continuous improvement. In addition, the mechanism of government macro management of grain marketing will also be improved, and the policy environment and external environment of grain marketing will become more and more open.

**Impact on the quantity of regional grain flows.** After accession to the WTO, China will adopt a tariff-rate-quota system to manage the import of major agricultural products, such as wheat, rice, corn, cotton, soybean oil and sugar. China has guaranteed that in the first year of its WTO membership, its import quota for wheat, corn and rice will be 14.4 million tonnes, including 7.3 million tonnes for wheat, 4.5 million tonnes for corn and 2.66 million tonnes for rice. In 2004, the import quota for the three grain crops will increase to 21.8 million tonnes, including 9.64 million tonnes for wheat, 7.2 million tonnes for corn and 5.32 million tonnes for rice. The within-quota tariff rate for imports of the three grain crops will be 1 per cent. The above-quota tariff rate, however, will be 65–77 per cent. In addition, import shares undertaken by private grain enterprises are subject to specific requirements. From WTO entry in December 2001 to 2004, private-enterprise shares in the total imports of the three grain crops will be 10 per cent for wheat, 25–40 per cent for corn and 50 per cent for rice. Quotas left by state-owned enterprises will also be allocated to private enterprises.

Obviously, such large import quotas and possible above-quota imports will affect domestic regional grain flows. In terms of China’s grain imports in recent years, the highest level occurred in 1995, when China imported a total of 20.81 million tonnes of grains, including 11.59 million tonnes of wheat, 1.64 million tonnes of rice and 5.18 million tonnes of corn. Since then, China’s grain imports have decreased continuously and significantly. In 1996, a total of 12 million tonnes of grain was imported. From 1997 to 1999, 7 million tonnes were imported annually. Thus, although foreign grain imports will inevitably cause shock, the situation and risks are controllable.

First, the ratio of imported grains to total domestic grain consumption is limited. The function of China’s entry into the WTO is mainly to provide an opportunity for the market entry of foreign grain. The quantity of foreign grain that enters China’s domestic market will depend mainly on China’s domestic grain deficit, domestic grain varieties and the competitiveness of domestic grain enterprises. There are three basic situations in which China imports grains. In the first, domestic grain supply is less than domestic grain demand, and grain must be imported to meet domestic demand. In the second situation, grain prices are higher in domestic grain markets than in foreign grain markets, and so consumers and grain-using enterprises prefer to use imported grains. In the third situation, some grain crops are not produced in China, or their production in China is very small. To ensure grain security, the Chinese government will try to keep the grain self-sufficiency rate above 95 per cent. In other words, under normal circumstances, grain imports will not exceed 5 per cent of total domestic grain consumption. At present, except for rice and some coarse grains, domestic resource costs in the production of wheat, corn and other
grain crops are higher than those in the world market. Thus, following China’s accession to the WTO, grain imports into China will increase. With adjustment of the domestic grain production structure and an increase in competitiveness, however, the proportion of imported grain to total domestic grain consumption will still be limited.

Second, the pattern and quantity of regional grain flows will undergo some changes. In terms of the pattern of regional grain flows, a large increase in grain imports to the southeastern coastal provinces and the large cities of Beijing, Tianjin and Shanghai will affect the pattern of regional grain flows. These provinces might, for example, import more corn for feed from the world market than from domestic markets, thus enabling the northeastern region to increase corn exports to Japan, South Korea and Russia. Similarly, as the southeastern coastal provinces and the large cities begin to import more wheat from world markets, they will import less from the main Chinese wheat production provinces, thus allowing the main wheat production provinces to transfer more wheat to the western region. In terms of the quantity of regional grain flows, with the final adjustment of the grain production distribution structure, each region will increasingly allocate resources according to the principle of comparative advantage. Thus, the quantity of regional grain flows will also increase, together with grain imports from the world market.

**Impact on main operating body of the grain market.** China has committed itself to allowing the private sector to play a role in grain import after accession to the WTO. This will change the current situation in which state-owned foreign trade enterprises monopolise international grain trade. Diversification of grain market operation bodies will not only stimulate grain trading, enable the market mechanism to play its fundamental adjustment role, and disperse and reduce market risk, but also push further state-owned grain enterprise reform and reduce the state’s budgetary burden. The Chinese government should on the one hand speed up reform of state-owned enterprises in order to allow them to compete freely in the market, and on the other hand encourage the development of new market operation bodies in order to inject new blood into the domestic grain marketing sector.

**Conclusions**

Grain marketisation patterns in China are still in the process of formation. The market mechanism is playing an increasingly important role in grain pricing. A group of large-scale regional grain wholesale markets has been established, and the market has been playing an increasingly important role in regional grain flows. The central and local grain reserve systems and grain risk funds have been established in primary form, and they will play an important role in governments’ grain marketing macro management. In terms of the future prospects of China’s regional grain flows, the following judgements can be made.
First, the Chinese government will continue its marketisation reform of the grain marketing system. The ‘Tenth Five-Year Plan’ explicitly stated that, ‘in accordance with the new situation of grain production and marketing and the different characteristics of grain production areas and grain sale areas, the marketisation reform of the grain marketing system will be deepened and continued’. Grain markets and prices in the main grain sale provinces have either already been liberalised or will be liberalised soon. It can be predicted that grain markets and prices in the main grain production areas will also be liberalised with the deepening of marketisation reform. Relations between grain production and grain sale areas will be further strengthened, and the degree of integration between domestic and foreign grain markets will be raised. Thus, a relatively well functioning grain trading system will form, one not only linked to the world market but also in keeping with China’s national characteristics.

Second, a unified, open, competitive and ordered regional grain trade system will gradually be established. The existing regional grain wholesale markets will continue to develop and will come to form a nationwide grain wholesale market network. Market trading rules will be improved and the level of information will be increased. Futures markets will grow steadily.

Third, the scale of regional grain flows will continue to expand. With increasing urbanisation and rural labour migration towards the coastal economically developed areas, grain demand in the urban and economically developed areas will increase further. Meanwhile, with the adjustment of the regional agricultural structure, grain production will concentrate further in the main grain production areas.

Fourth, the two-tier grain reserve system managed by the central and local governments will be further improved. Through marketisation reform of the grain marketing system, the government’s capacity to adjust and control the grain market will be increased. From existing bases, the central and local governments will go further in specifying their responsibilities in adjusting and controlling grain markets. Governments should establish flexible and highly efficient grain reserve rotation and handling systems by determining reasonable grain reserve scales, adjusting grain reserve distribution and perfecting the grain risk fund system and the central government grain reserve vertical management system.

Fifth, laws and regulations in grain marketing will be further improved and enforced. Governments should adopt more legal methods in managing grain marketing, that is by stipulating and improving relevant laws and regulations and by formulating legal definitions of the behaviour of governments, grain producers, grain business operators and grain consumers.
References


