WORKING PAPER 42

Effects of Trade Liberalization on Agriculture in China: Institutional and Structural Aspects

Jikun Huang and Chunlai Chen

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The CGPRT Centre

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Abbreviations

AMS	Aggregate Measurement of Support
APEC	Asian and Pacific Economic Cooperation
CAPSiM	China Agricultural Policy Simulation Model
CCAP	Center for Chinese Agricultural Policy
CGE	Computable General Equilibrium
CHINATEX	China National Textiles Import and Export Corporation
COFCO	China National Grain, Oil and Food Import and Export Corporation
ETDZ	Economic and Technological Development Zone
EU	European Union
FDI	Foreign Direct Investment
FFEs	Foreign Funded Enterprises
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
HS	Harmonized Commodity Description and Coding System
MFN	Most Favored Nation
MNEs	Multinational Enterprises
MOFTEC	Ministry of Foreign Trade and Economic Cooperation
NPRs	Nominal Protection Rates
NRP	Nominal Rate of Protection
NTMs	Non-Tariff Measures
OTR	Open Trade Regime
RMB	Chinese Currency
SAGR	State Administration of Grain Reserves
SDPC	State Development and Planning Commission
SETC	State Economic and Trade Commission
SEZ	Special Economic Zone
SITC	Standard International Trade Classification
SOE	State-Owned Enterprises
SSB	State Statistical Bureau
WTO	World Trade Organization

Foreword

Responding to the growing concern for the effects of trade liberalization on regional agriculture, the CGPRT Centre started a three-year research project "Effects of Trade Liberalization on Agriculture in Selected Asian Countries with Special Focus on CGPRT Crops (TradeLib)" in March 1997, in collaboration with partners from ten countries: China, India, Indonesia, Japan, Malaysia, Pakistan, the Philippines, the Republic of Korea, Thailand and Vietnam. In all these countries, important issues regarding trade liberalization were investigated with an identical research framework by national experts.

The investigation covers major crops which might receive either favorable or unfavorable effects of trade liberalization both in export and import. I believe that readers of the reports can obtain broad and practical knowledge on institutional aspects of the effects of trade liberalization; moreover, the information will be useful for researchers and policy planners in other countries in the region. A volume which includes more commodity and location-oriented study on the same subject will follow. I would like to note that, since this project was conceived and started before the current currency and economic crisis began in the middle of 1997, the analysis handles basically the period before the crisis with available current information.

I am pleased to publish **Effects of Trade Liberalization on Agriculture in China: Institutional and Structural Aspects** as one of the fruits of the project. I certainly hope this report will be fully utilized for the improvement of agricultural trade and the encouragement of regional agriculture.

I thank Dr Jikun Huang and Dr. Chunlai Chen of China for their intensive research and the Center for Chinese Agricultural Policy for allowing them to work with us and for providing continuous support. Dr Boonjit Titapiwatanakun ably coordinated the various complex steps in the study. I would also like to express appreciation to the Government of Japan for funding the project.

Haruo Inagaki
Director
CGPRT Centre

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This study is a country study for China under the overall project entitled Effects of Trade Liberalization on Agriculture in Selected Asian Countries (TradeLib). This report is first part of the China study focusing on the institutional and structural aspects related to trade liberalization.

The report benefited from fruitful discussions with many Chinese government officials, the staff of the CGPRT Centre, and the national experts from the 10 Asian countries participating in this project.

The completion of this report would not have been possible without the assistance from many officials, who helped in providing data required for this study, from the Ministry of Foreign Trade and Economic Cooperation, Ministry of Finance, Ministry of Agriculture, and General Customs Administration.

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Beijing, China
April 1999
Huang

Dr. Jikun

Professor and Director
Center for Chinese Agricultural Policy
Chinese Academy of Agricultural Sciences

and

Dr. Chunlai Chen
Visiting Research Fellow
Center for Chinese Agricultural Policy
Chinese Academy of Agricultural Sciences

Executive Summary

Since the economic reforms initiated in the late 1978, China's economy has grown rapidly. The annual growth rate of China's GDP was more than 9% in the 1978-98 period. China's foreign trade has been expanding even more rapidly than its overall economic growth. With the rapid growth of the external sector, foreign trade has been playing an increasing role in the national economy since reforms started in the late 1970s. The annual growth rate of the total value of China's foreign trade was nearly 15% in 1978-98. China's trade to GDP ratio increased from 13% in 1980 to 36% in 1997.

With the success of the Uruguay Round negotiation on General Agreement on Tariffs and Trade (GATT) in December 1993, the movement toward trade liberalization has been positive throughout the world. It has been 13 years since China applied to resume its original membership of GATT and then the World Trade Organization (WTO) in 1986. Despite China's great efforts to make concessions and commitments in the area of market accession in terms of reduction of tariff and non-tariff barriers, reform of the trade system and regulations and trade-related investment policies as of mid-1999 is still lacking. While there is increasing evidence showing that both China and its trade partners or the rest of the world all stand to benefit economically if China joins the WTO, what is preventing its accession? What efforts has China made in liberalizing its economy and trade sector and what does China need to do in its final accession to the WTO? On the other hand, however, widespread concern about the effects of trade liberalization on China's economy, especially on China's agricultural production, has been growing in China. How to improve China's food self-sufficiency, the central goal of China's agricultural policies, and increase farmers' income with the process of agricultural trade liberalization have been priority concerns of the Chinese government.

To better understand the questions raised above, the efforts made by China in the trade sector, and the impacts of trade reform on China's economy, we have examined the reform process of foreign trade in different stages based on the extent of trade liberalization and measures adopted and the changes in trade patterns over the last two decades.

China's foreign trade regime can be broadly divided into two periods: the highly centralized foreign trade regime under the planned economy before 1978 and the increasingly liberalized foreign trade regime since economic reforms started in 1979. The foreign trade regime in China before 1978 was characterized as a state monopoly, administrative management, central planning, and budget financing.

Reform and trade liberalization in China's external sector, because of its strategic role in the economy, has proceeded gradually. Gradual trade liberalization consistent with reforms in other sectors of China's economy has its logic. In the initial stage, the reform was tried for some "non-strategic products" and in specialized or designated regions. The institutional structure was partially altered, and more efforts were put in the incentive and management system instead of fundamental changes in decision-making and trade control. As experience was gained from increasing reforms and the objectives of trade could be achieved through alternative settings of institutions and policies, trade liberalization has proceeded smoothly since the late 1980s.

The evidence in this report indicates that during the past 20 years the highly centralized and monopolized foreign trade operation system has been gradually reformed and decentralized through granting trade rights to more trade corporations and production firms. The trade planning system has been gradually moved from a strictly mandatory plan to a combination of mandatory and guidance plans with flexible adjustments based on the market situation. The planning system was first replaced by a quota and licensing system, and then moved to a tariff-

quota system. While state trading and decision-making processes are still concerns of many negotiators in China's access to WTO, foreign trade corporations and companies have been gradually reformed and largely commercialized by reducing government direct administrative intervention and by introducing trade instruments to manage foreign trade. The commercialization of the state trade corporations was initially promoted by introducing the trade contract responsibility system, and then by transforming trade companies into handling agents and letting trade companies trade their commodities based increasingly on market forces and implementing various other trade-related policies on monetary, foreign exchange, financial and trade controls.

The trade regime has also been gradually moving from an import substitution system to a more export-oriented system since the reforms were initiated. The major policies to improve the efficiency and responsiveness of state trading and promoting export included introducing the export tax rebate policy, implementing the trade contract responsibility system, reducing the number of commodities requiring import and export licenses, reducing tariffs, and shifting the management of foreign exchange, etc.

Moving toward a more market-oriented trade system is evidenced from various aspects of China's trade policies and trade patterns. For example, the centralized trade management and operation system was first replaced by a foreign trade contract responsibility system, which was in turn replaced by a taxing system; the foreign exchange retention system was abolished and replaced by foreign exchange bank settlement system; a single managed floating foreign exchange system was introduced in 1994; government export subsidies were phased out; and the financial system related to foreign trade was adjusted to meet the reformed trade system.

With experience gained from SEZs in ETDZ, the uneven regional open strategy was revised. The regional open policies have been expanded from the SEZs in the coastal cities to the entire coastal areas, and then implementation of the open policies was gradually extended throughout China. Regional preferential policies have been gradually phased out.

Foreign exchange control, though still highly interventional, has been relaxed significantly since the late 1980s by introducing a foreign exchange retention system and establishing a foreign exchange swap center in the early reform period, and the two-tier exchange rate was consolidated in December 1993. The RMB became convertible on current accounts at the end of 1996.

While tariffs now are still high compared to existing WTO member countries and some non-tariff measures are commonly applied to "strategic products" such as agricultural and food products, foreign trade control in China has also been significantly liberalized since the early 1990s. China's average tariffs were reduced from 47.2% in 1991 to 17% in 1998. China's tariffs on agricultural trade have also been largely reduced since the early 1990s. The simple average agricultural import tariff decreased from 42.2% in 1992 to 23.6% in 1998.

During the 1980s China extensively used quotas and licensing to control its foreign trade. However, since the early 1990s China has progressively and drastically reduced the number of items subject to export and import quotas and licensing administration. The products subject to quota, licensing and other import control measures accounted for only 5% of the total import tariff lines in 1998.

In summary, through nearly 20 years of reform, China's foreign trade regime has gradually changed from a highly centralized, planned and import substitution regime to a more decentralized, market-oriented and export promotion regime. While significant progress has been made since the economic reform in liberalizing the trade regime, China's foreign trade regime still has major inefficiencies. China's international trade in agricultural products is still largely a monopoly.

The impacts of trade reform on the patterns of China's international trade were examined. The reforms resulted in rapid growth and significant structural changes in international trade. The importance of agricultural trade in China's total trade has declined

considerably since 1980, particularly since the early 1990s. Within various agricultural commodities, this study also reveals that the gradual liberalization of China's agricultural trade has the expected impact on trade patterns. Over time, the pattern of agricultural trade has been gradually moving more closely towards reflecting China's resource endowments and exploiting China's comparative advantage in the world agricultural markets.

However, this study also reveals that room for further liberalization exists in terms of tariff reduction, limiting non-tariff measures to control agricultural imports, commercialization of state trading, and the efficiency of the foreign trade management. Indeed, China has decided to take further steps in trade liberalization in the coming years. This is evidenced in a recent joint China-US statement signed by China Premier Zhu Rongji and US President William Jefferson Clinton on the Status of Negotiation on China's Accession to the World Trade Organization in April 1999. Besides this effort on liberalizing China's trade sector, some other policy implications will be followed.

With further trade liberalization and the adjusting of China's trade regime consistent with the WTO, it is expected that China will face great challenges in maintaining its current food self-sufficiency, a central agricultural policy that has been a top priority in setting China's agricultural policies since the founding of the People's Republic of China in 1949.

Research efforts should be make to assess the impact of trade liberalization on China's agriculture and to improve the awareness of policy makers on these impacts. Grain, mainly wheat and maize, imports are expected to rise significantly with trade liberalization. If China wants to maintain the grain self-sufficiency policy and reap the comparative advantage gains from trade liberalization, China has to make a fundamental policy shift in its investment policy, domestic agricultural marketing policy and foreign exchange policy. Investment in agricultural research and extension, irrigation, and other productivity-enhancing activities should be increased. China should allow a greater role for the market to determine trade patterns in order to reap comparative advantage gains. In the past, domestic price and marketing prices have consistently represented a tax on farmers. The most heavily taxed commodities are the exportable agricultural commodities. If the impact of overvaluation of the domestic currency is considered, the agricultural sector is even taxed more than that shown by the NPRs.

The impacts of trade liberalization on the welfare distribution, on the poor and rural labor employment and income, and social stability would be the other important policy issue for the Chinese government to consider in the coming years. With trade liberalization, most agricultural product prices, especially grain, edible oil and cotton prices, would certainly decline. Thus the farmers of these crops and subsistence farmers in poor areas would suffer income losses. New policies are required to minimize any adverse impact of trade liberalization on the income and welfare redistribution among the farmers and regions.

Although China has made great progress in the construction and improvement of transportation systems and trade-related physical infrastructure, China's existing transportation network and physical infrastructure still lag behind the growing needs of the rapidly expanding economy and international trade. The trade-related physical infrastructure and marketing information systems (both domestic and international) need to be improved. The policies related to food processing industry development, agricultural product quality, standards and grading are the other concerns of future policies in improving China's agricultural trade balance under a more open trade regime.

1. Introduction

Since the economic reforms initiated in late 1978, China's economy has been growing very rapidly. The annual growth rate of China's GDP was 8.5% in 1979-84, 9.7% in 1985-95 and 9.2% in 1996-97. With the fast economic growth, China's foreign trade has been expanding more rapidly than its overall economic growth. The annual growth rate of the total value of China's foreign trade was 14.3% in 1979-84, 15.2% in 1985-95 and 7.6% in 1996-97. As a result, China's trade to GDP ratio increased from 12.7% in 1980 to 36.0% in 1997.

As in many developing countries, agriculture is one of the most important economic sectors in China. On average, the agricultural sector directly contributed 25% of national GDP and 60% of national employment during the past two decades. The annual growth rate of agricultural GDP was 7.1%, 4.0%, and 4.3% in 1979-84, 1985-95 and 1996-97, respectively. The annual growth rate of China's agricultural trade was 6.0% in 1979-97. However, because of the much faster growth rate in other economic sectors, especially in the labor intensive manufacturing sector, the shares of both agricultural GDP and agricultural trade in China's national GDP and trade have declined continuously during the past 18 years. The share of agricultural GDP in China's total GDP declined from 30% in 1980 to 19% in 1997, while the share of agricultural trade in China's total trade declined from 24.4% in 1980 to 7.7% in 1997.

With the success of the Uruguay Round negotiation on General Agreement on Tariffs and Trade (GATT) in December 1993, the movement towards trade liberalization has been positive throughout the world. China applied to join GATT and then the World Trade Organization (WTO) in 1986. Although China has not been accepted as a member of the WTO, China has committed to comprehensively implement the Uruguay Round agreements upon its accession into the WTO. However, widespread concern about the effects of trade liberalization on China's economy, especially on China's agricultural production, has been growing. How to improve food self-sufficiency and increase farmers' income during the process of agricultural trade liberalization has been a priority concern of the Chinese government.

1.1 Objectives of the study

Under the organization of the United Nations ESCAP CGPRT Center, the project "Effects of Trade Liberalization on Agriculture in Selected Asian Countries with Special Focus on CGPRT Crops (TradeLib)" aims at:

- Describing the international trade of agricultural products in the region under liberalized market conditions;
- Characterizing the situation and prospect of agriculture in selected Asian countries with special attention to the effects of trade liberalization;
- Specifying policy options for improving farmers' income in the process of trade liberalization; and
- Providing concerned policy makers and researchers with discussion and suggestions on the above findings.

The present study is the first part, the institutional and structural study, of the project from China and mainly focuses on the following five specific objectives:

- To present an overview of the history of China's foreign trade regime;
- To examine China's trade-related policies and the measures implemented in the process of trade liberalization in China;

- To present the development of physical infrastructures affecting international trade in China;
- To analyze the trend and patterns of China's agricultural trade and the overall effects of trade liberalization on China's agriculture; and
- To provide some policy recommendations for the smooth implementation of agricultural trade liberalization in China.

1.2 Structure of the study

The study is structured as follows. Chapter 1 specifies the importance and introduces the objectives of the study. Chapter 2 presents an overview of the history of China's foreign trade regime and examines China's trade-related policies. Chapter 3 presents the development of China's physical infrastructures relating to international trade. Chapter 4 analyzes the trend and patterns of China's agricultural trade and the overall effects of trade liberalization on China's agriculture. In this chapter a special effort is made to identify and analyze the patterns of China's agricultural trade. Finally, conclusions and policy implications from the study are summarized in the last chapter.

2. China's Foreign Trade Regime and Trade-Related Policies

2.1 Foreign trade institutions and administration

Currently, there are at least seven institutions involved in formulating or administering China's trade policies. These include the Ministry of Foreign Trade and Economic Cooperation, the State Development and Planning Commission, the State Economic and Trade Commission, Customs Tariff Commission, Customs General Administration, State Administration of Foreign Exchange (under the People's Bank of China), and various foreign trade corporations. These agencies administer a set of complex and frequently overlapping controls over foreign trade. Figure 2.1 presents the institutional structure for foreign trade in China.

Among all the foreign trade institutions, the State Development and Planning Commission (SDPC) and the Ministry of Foreign Trade and Economic Cooperation (MOFTEC) are the two major institutions in foreign trade policy formation and implementation. While the decisions regarding foreign trade are finally made by the national top leaders in the State Council, the SDPC and MOFTEC play the most important role in preparing and proposing all trade-related policies. Once the trade policy and plan are made, the implementation is mainly carried out by these two institutions at national as well as local levels (i.e., Development and Planning Commission, DPC, and the Bureau of Foreign Trade and Economic Cooperation at the provincial level). They administrate the trading rights, quota and licenses, and control the export and import.

The State Economic and Trade Commission (SETC) is mainly in charge of domestic trade and procurement of commodities for export. The SETC and other ministries work with SDPC and MOFTEC to prepare a joint proposal for the State Council to recommend the volumes of export and import.

The Customs Tariff Commission and Customs General Administration administrate the import tariff, export tax and various tax-related policies such as the tax rebate and exemption. The foreign exchange market and foreign trade finance are under the control of the People's Bank of China, the central bank, through its arms the State Administration of Foreign Exchange and the Import and Export Bank of China.

To give a better understanding of trade administration and implementation, Figure 2.2 shows the planning process of China's grain importing and exporting mechanism. At end of the calendar year, at the request of the State Planning Commission, provincial planning bureaus make requests for imported grain (and domestic transfers from outside of their jurisdiction). These requests are based on information in reports from their respective grain bureaus, buffer stock operations, and other grain producing, using, and trading entities regarding demand for the coming year (Figure 2.2, steps 1 and 2). The State Administration of Grain Reserves (SAGR), the SDP and MOFTEC use this information with other inputs to draw up a joint proposal for the State Council, recommending the amount of grain to be imported or exported during the upcoming year (steps 3 and 4). This proposal is based on recent harvest figures, the size of the state grain reserve, and the potential seeded area for the upcoming year (Carter et al. 1999). The final decision regarding import and export volume is reached by the nation's top leaders in the State Council in March of each year, and the decision is typically not radically readjusted after this (step 5).

Figure 2.1 Institutional structure for foreign trade in China.

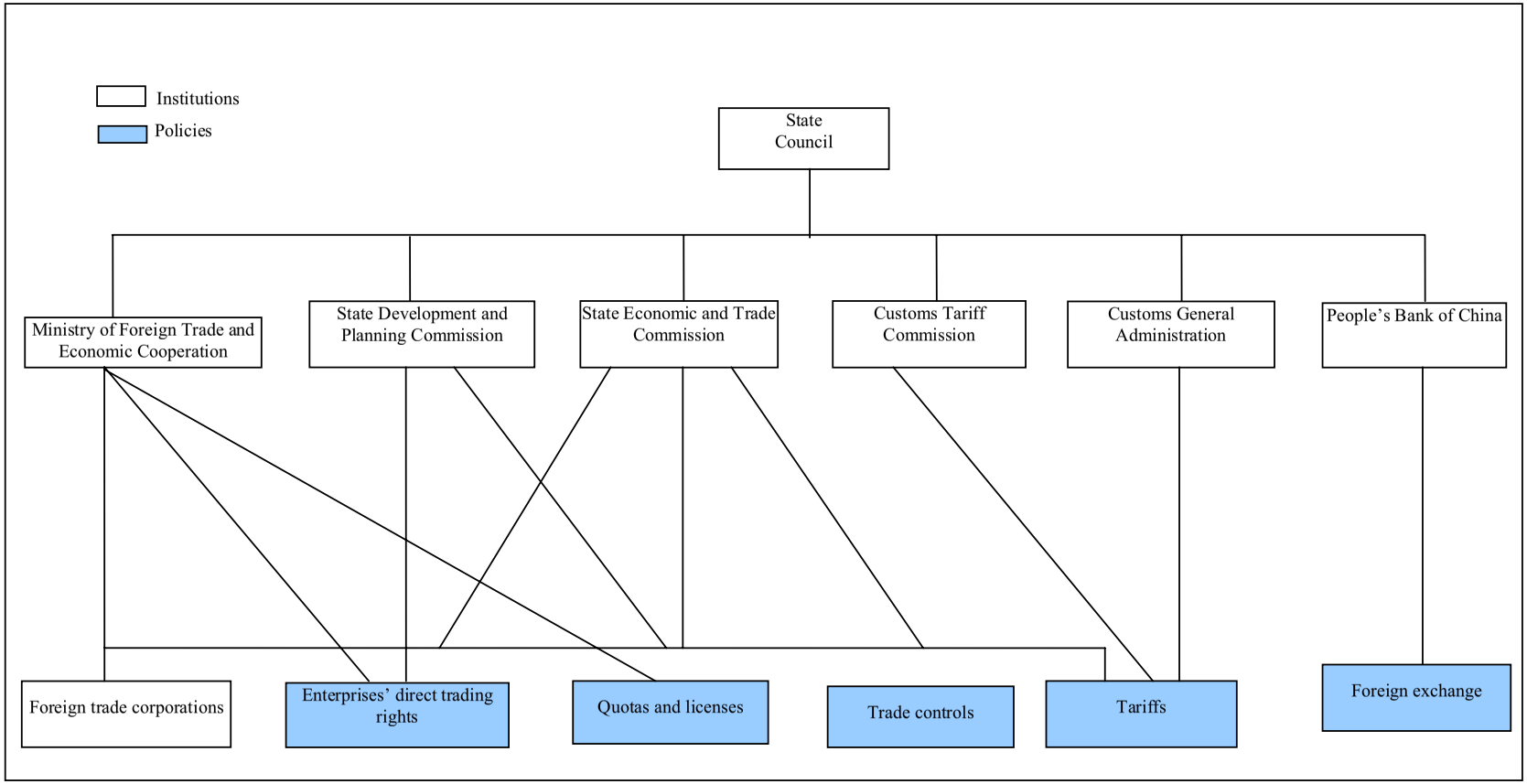
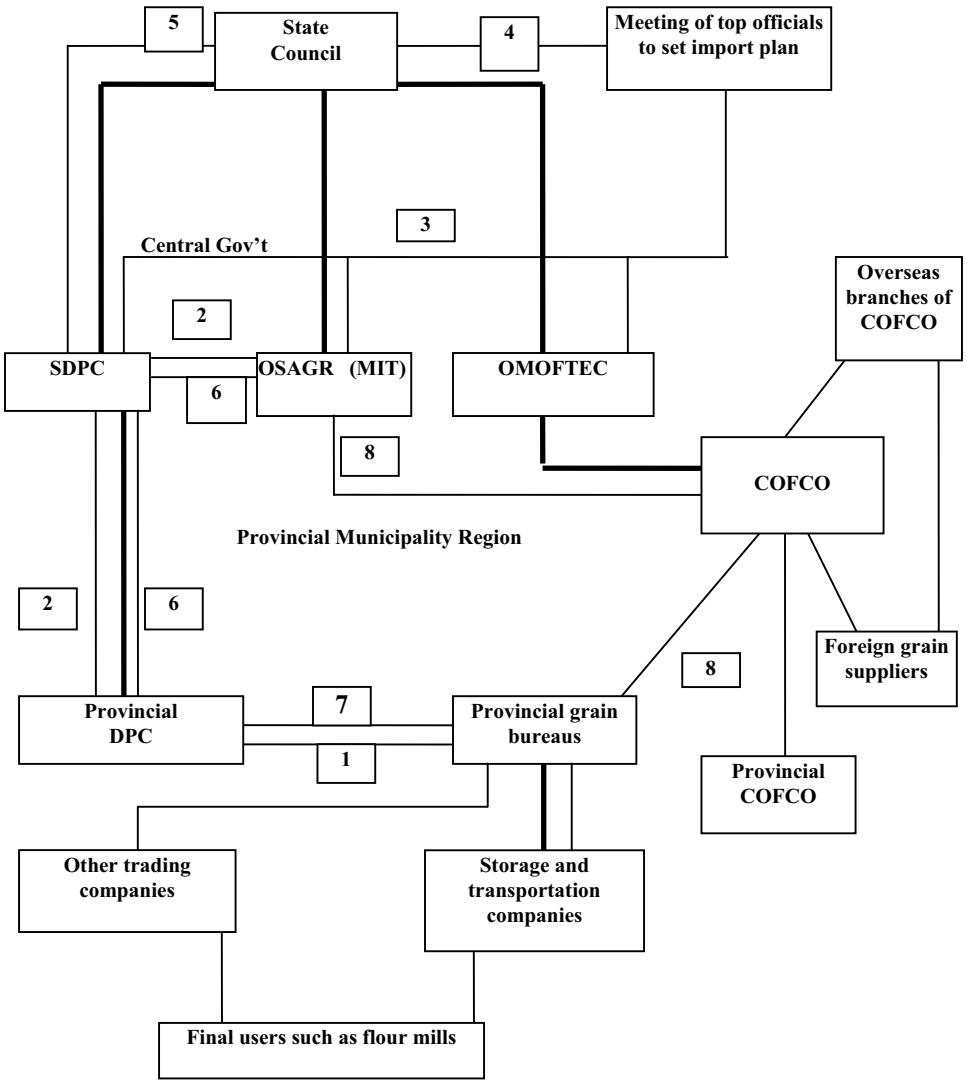


Figure 2.2 China's grain trade: the planning process.



Source: Carter et al. 1998.

After the State Council sets the plan and delivers it to the SDPC (step 6), the quotas and associated import licenses are then distributed between SAGR itself and the various provinces, who in turn place their orders with COFCO (steps 7 and 8). The quota allocated to SAGR is called the zhongyang's (or center's) portion of the planned annual import, and that allocated to the provinces is called the difang's (or locality's) part. When the provinces and SAGR have import licenses in hand, the process of placing orders for physical materials, arranging for transportation, and moving grain from international markets into domestic storage facilities and market places begins.

The COFCO will buy on the world market, arrange for transport, and deliver the grain to various locations along China's coast and inland waterways, depending on the province's contractual terms and SAGR's requests (Carter et al. 1999).

2.2 China's planned foreign trade regime before 1978

China's foreign trade regime can be broadly divided into two periods, the highly centralized foreign trade regime under the planned economy before 1978, and the gradually and increasingly liberalized foreign trade regime since the economic reform started in late 1978.

After the founding of the People's Republic of China in 1949, China soon established the socialist planned economy. To accelerate the growth of the national economy and achieve rapid development of national industrialization, like many other developing countries, China adopted an "import substitution" industrialization strategy. To meet the demands of the socialist planned economic system and to implement the "import substitution" industrialization strategy, China established a highly centralized and planned foreign trade regime. Under this foreign trade regime, export was to serve import and foreign trade was to serve national industrialization (Lardy 1992, 1995). This planned foreign trade regime was implemented strictly under the rules and regulations on trade organization and operation, trade management and control, trade planning, and trade financing.

Under the planned foreign trade regime, for a foreign trade corporation to conduct foreign trade operations it must have foreign trading rights. The foreign trade rights were granted by the Ministry of Foreign Trade to only a few the state-owned enterprises (SOE) or corporations under the planned trade regime. For the nation as a whole, only 12 national specialized general foreign trade corporations and their port sub-corporations had the trading rights. These 12 national specialized general foreign trade corporations and their port sub-corporations monopolized all foreign trade business in China before 1978. For example, foreign trade of agricultural products was monopolized by China National Grain, Oil and Food Import and Export Corporation (COFCO), China National Native and Animal Products Import and Export Corporation, and China National Textiles Import and Export Corporation.

In the 1950s, China used protective import tariffs, import and export licensing, unified management of foreign exchange and other trade policies to manage and control foreign trade. However, during the 1960s and the 1970s foreign trade management and control were mainly based on government administrative means.

The foreign trade planning system was the core of China's foreign trade regime before 1978. The state foreign trade plan was mandatory and covered all the aspects of foreign trade, including foreign trade procurement, transfer and allocation, export, import, foreign exchange earnings and payments and so on. Foreign trade corporations were not responsible for making profits and losses from trade. The Ministry of Finance was responsible for all profits and losses and also provided all working capital to foreign trade corporations.

In summary, the foreign trade regime in China before 1978 can be characterized as state monopoly, administrative management, central planning, and budget financing.

2.3 Gradual reform of the foreign trade regime since 1979

China started its economic reform and open door policy in late 1978. Since 1979, China has gradually reformed and liberalized its foreign trade. It has been 13 years since China applied to resume its original membership of General Agreement on Tariffs and Trade (GATT) in 1986. Despite China's great efforts to make concessions and commitments in the area of market accession in terms of reduction of tariff and non-tariff barriers, reform of the trade system and regulations and trade-related investment policies, as of mid-1999 is still lacking. To have a better understanding of the efforts made by China in the trade sector, we examined the reform process of foreign trade in the past two decades in different stages based on the extent of trade liberalization and the measures adopted.

2.3.1 The early reform period (1979-1987)

The early reform period of the foreign trade regime covers nine years from 1979 to 1987. During this period, the Chinese government implemented the following major reform measures.

- The highly centralized and monopolized foreign trade operation system was gradually reformed and decentralized by establishing more new trade ports and granting more corporations and production firms direct foreign trading rights. From 1979 to 1987, more than 2,200 foreign trade corporations were established, increasing 11 times over the number of foreign trade corporations in 1979.
- In 1985 the single mandatory planning foreign trade system was replaced by a new system that combined mandatory plan, guidance plan and market adjustments. This new foreign trade system covers most majority products except a few bulk products, which are important to the national economy and the people's livelihood, including most agricultural products (mainly grains), and the imports of whole sets of equipment and technology.
- The foreign trade management system was reformed by gradually reducing government direct administrative intervention and by introducing trade instruments to manage foreign trade. In 1980 China established the quota system and restored the licensing system to manage import and export of commodities including agricultural products.
- In 1982 experiments on linking foreign trade corporations with production firms were carried out in order to improve the quality of export products and increase competitiveness in the international market.
- The export tax rebate policy was introduced in order to encourage exports in 1983. The export tax rebate was extended both in the number of export commodities and in the type of taxes later in 1985 and 1986 (see the section on trade related policies for details of the commodities and the types of taxes subject to tax rebate policy).
- The trade contract responsibility system was first tried on the national specialized general foreign trade corporations under the Ministry of Foreign Economic Relations and Trade in 1987. The contract specified the total export value, the cost of earning foreign exchange, export profits and losses, and export subsidies (see the next sub-section for details of the contract system).

2.3.2 The trade contract responsibility system (1988-1990)

China's foreign trade regime made certain progress in many aspects in the early reform period. However, some fundamental problems in China's foreign trade regime still remained unsolved, including the budget financing system. This system has prevailed for more than three

decades and has been the main cause for the inefficiency and poor performance of state-owned foreign trade corporations.

Drawing on experience of the foreign trade contract responsibility system tried on the national specialized general foreign trade corporations in 1987, the foreign trade contract responsibility system was implemented nation-wise in 1988-90. During this period reform of foreign trade regimes was mainly focused on the overall implementation of the foreign trade contract responsibility system. The contract system consisted of three major components: foreign exchange earnings of exports, the shares of foreign exchange earned between the central government and trade agencies, and overall economic efficiency. Quantitative measurements of each component were planned based on the actual performance at the end of 1987 and then were fixed for three years from 1988 to 1990. To facilitate the implementation of the foreign trade contract responsibility system, the Chinese government introduced a number of complementary measures.

- *Relaxing foreign exchange controls*. In 1979 China introduced a foreign exchange retention system to provide incentives to various enterprises and local governments to increase foreign exchange earnings through expanding exports. Under this foreign exchange retention system, enterprises and local governments can retain a certain proportion of foreign exchange earned through their expanded exports. However, the use of the retained foreign exchange was strictly controlled by the central government before 1987. In 1988 the central government relaxed the controls on using the foreign exchange quota and allowed local governments and enterprises to control and use their own retained foreign exchange in accordance with state regulations.
- *Establishing a foreign exchange swap center*. In 1988 China established foreign exchange swap centers in the key cities of each province and Special Economic Zone (SEZ). Enterprises, including foreign-funded enterprises, could purchase and sell foreign exchange at the foreign exchange swap center at the managed floating exchange rate.
- *Introducing full export tax rebate*. Following the implementation of export tax rebate policies in 1983 and then in 1985-86, China introduced a full export tax rebate policy in 1988. Taxes such as value-added tax and other product-specific taxes were fully rebated for export products. Since 1994 after the introduction of a new taxation system in China, the rate of export tax rebate has been reduced for some export products.
- *Partially decentralizing decision-making powers*. To ensure implementation of the foreign trade contract responsibility system, the central government gradually granted more decision-making powers to local governments and enterprises from 1988 to 1990. These include the approval powers for granting foreign trading rights to foreign trade enterprises; the approval powers to the coastal economic areas in approving foreign direct investment; the allocation powers on quotas and licenses; and the approval powers on imported materials for processing.

2.3.3 Toward a more market-oriented trade reform period after 1991

The foreign trade reform, which followed implementation of the trade contract responsibility system, has been trying to introduce a more market-oriented trade regime in the economy since 1991. Government export subsidies were phased out, foreign exchange policies on the rate of retention, conversion rate, and exchanged market were adjusted and further reformed, a single managed floating foreign exchange system was introduced, and the financial system related to foreign trade was adjusted to meet the reformed trade system. Some milestones of more market-oriented reform since 1991 are summarized here.

2.3.4 The period of 1991-93

- Government fiscal export subsidies to state owned foreign trade enterprises were completely phased out in 1991.
- The quantitative measurements of the 1988-90 foreign trade contract responsibility system for foreign trade corporations were based on the actual performance of the end of 1987. However, with the rapid development of China's national economy and foreign trade, the quantitative measurements of contracts should also be adjusted. Therefore, from 1991 to 1993 a new round of foreign trade contracts was implemented. All provincial governments, national specialized general foreign trade corporations and other foreign trade enterprises were required to make contracts with the central government and the relevant government ministries concerning the amounts of exports, foreign exchange earnings and foreign exchange turned in to the central government and the relevant government ministries. The quantitative measurements for the three contracted indicators were based on the actual performance of the previous year or specific agreements.
- The bases for determining foreign exchange retention rates were changed from locations to categories of commodities in 1991.
- To facilitate the reform process and to improve the macro-adjustment system of foreign trade, from 1991 to 1993 the Chinese government adjusted the foreign exchange rate several times, reducing the difference between the official exchange rate and the swap market exchange rate. In 1992 the volume of foreign exchange traded in the swap market exceeded US$23 billion, more than half of the export earnings of that year.
- In 1991 China for the first time voluntarily reduced the import tariff rates for 265 commodities. In 1992 and 1993 China further reduced import tariff rates for 3,371 and 2,898 commodities, reducing average tariff rates by 7.3% and 8.8%, respectively.
- In 1991 the "agent system" was introduced to foreign trade corporations for handling foreign trade business. In this system, foreign trade corporations and enterprises do business as an agent of import and export for production firms and other institutions based on commission fees. This has pushed the foreign trade corporations one step further in the direction of commercialization.

2.3.5 The period after 1994

- China unified the official exchange rate and the swap market exchange rate and adopted a single managed floating exchange rate based on market supply and demand in 1994.
- The foreign exchange retention system was abolished and replaced by a foreign exchange bank settlement system in 1994.
- With the introduction of a new taxation system, the Chinese government adjusted the export tax rebate policy in accordance with changes in the taxation system (see more details in export tax rebate policies in the next section) in 1994. At the same time, the government also implemented a series of policies favorable for export development. These include establishing import and export banks, creating export commodity development funds and risk funds.
- The foreign trade contract responsibility system implemented by the state-owned foreign trade enterprises was abolished and replaced by a tax system in 1994. At the same time, a shareholding system was tried on the state-owned foreign trade enterprises.
- Import tariff rates were further reduced since 1994. The import tariff exemption and reduction for some commodities, such as productive equipment and technology

imported by foreign-funded enterprises as part of their direct investments, and raw materials as inputs for the purpose of export processing production, were further extended especially for foreign-funded enterprises since 1997.

- The government has accelerated the process of granting foreign trading rights to production enterprises, commercial material enterprises and scientific and research institutions since 1994.
- The RMB became convertible on current accounts at the end of 1996.

In summary, while China needs to further liberalize its trade sector, China's foreign trade regime has gradually changed from a highly centralized and planned regime to a more open and liberalized regime during the past 20-year reform period. The impacts of these reforms on foreign trade performance will be investigated in a later part of this study.

2.4 Trade-related policies

Since 1979 China has gradually liberalized its foreign trade regime and adopted a series of open policies in foreign trade. The major trade policies include the following aspects: regional open door policies, foreign direct investment policies, fiscal policies, monetary policies, foreign exchange policies, and foreign trade control (tariff and non-tariff measures) policies.

2.4.1 Regional open policies

Following adoption of the open door policy in late 1978, China established four Special Economic Zones (SEZs) in Guangdong and Fujian Provinces in 1980. The creation of the four SEZs not only symbolized the beginning of China's economic reform, but also constituted an integral part of the overall open door policy. Drawing on experience of the export-processing zones established in Taiwan, South Korea, and other developing countries, the SEZs in China have the multiple functions of free trade zones and export-processing zones. The main objective of the SEZ policy was to attract foreign direct investment (FDI) by offering favorable terms and a good business climate in order to establish an outward-oriented economy. As an initial experiment in the market-oriented economic reform, the SEZs were granted unique freedom to manage and operate their economies on a market basis and were allowed to offer concessionary tax policies to foreign investors. With the establishment and implementation of a series of laws, regulations, and special open policies, especially those promoting foreign trade and attracting FDI, the SEZs were granted the highest priority and freedom for economic development (Chen 1997a).

The economic success of the SEZs greatly increased the confidence of the Chinese government. However, due to the small size and the specific location of the four SEZs, the desired diffusion effect was geographically limited. In February 1984 when Deng Xiaoping visited Shenzhen, Zhuhai and Xiamen SEZs, he pointed out: "for us to establish SEZs and adopt open door policies, we must have a clear guiding ideology that is not to constrain but to release". He also indicated: "in addition to the existing SEZs, we can consider opening several more areas and port cities, such as Dalian and Qingdao. These areas will not be named SEZs but can apply some of the special policies implemented in SEZs". Following Deng's speech, in May 1984 the Chinese government announced the opening up and extension of the concept of SEZs to another fourteen coastal cities (Dalian, Qinhuangdao, Tianjin, Yantai, Qingdao, Lianyungang, Nantong, Shanghai, Ningbo, Wenzhou, Guangzhou, Zhanjiang, and Beihai) and Hainan Island. The coastal open cities were granted similar special economic policies, but less generous than those offered to the SEZs. The coastal open cities, however, were encouraged to establish "Economic and Technological Development Zones" (ETDZs) that could enjoy the whole set of special economic policies as generous as those offered to the SEZs.

In May 1985, three "development triangles", the Yangzi River Delta Region (around Shanghai), the Pearl River Delta Region (around Guangzhou), and the Minnan Delta Region (around Xiamen), were designated as coastal economic open areas and granted most of the special economic policies implemented in the fourteen coastal open cities. Following the trend, expansion continued to include Liaodong and Shandong peninsulas as coastal economic open areas in 1988.

In order to develop an outward-oriented economy, another large step towards expanding the open policies, termed the "coastal development strategy", was taken by the Chinese government to extend the open policy to the entire coastal area in early 1988. The "coastal development strategy" focused on two main issues. First, it would develop labor-intensive industries in the coastal area, and second, these labor-intensive processing industries must base their products for export on imported raw materials. This strategy effectively brought all eleven coastal provinces and municipalities (Liaoning, Beijing, Tianjin, Hebei, Shandong, Jiangsu, Zhejiang, Shanghai, Fujian, Guangdong, and Guangxi) together to acquire foreign capital, technology, raw materials and international market opportunities. It enabled China to take advantage of its abundant cheap labor endowment and to increase significantly the ability of its manufacturing sectors to compete in the international market.

With the implementation of the "coastal development strategy", many special open zones were established in the coastal provinces and municipalities. In particular, Hainan Island became a province and China's fifth, and the largest, SEZ in April1988, and later the concepts of SEZ and ETDZ were extended to the Shanghai Pudong New Economic and Technological Development Area in June 1990.

The implementation of this uneven regional open strategy, from the SEZs to coastal cities and then to the entire coastal area, enabled the coastal region to gain more benefits than other regions. These include the acquisition of capital, technology, modern management skills, and the opportunity to access the international market. The gains from trade liberalization and regional open policies in the inland areas are mainly through labor migration and increasing industrial raw material demand in the coastal regions. However, the outflow of skilled workers, technical personnel, and capital from the inland areas to the coastal region has been increasing. Consequently, the gap in economic development and income levels between the coastal region and the inland areas has enlarged since the late 1980s (Chen 1997a).

To deal with these problems, in the 1990s the Chinese government gradually extended the implementation of the open policies throughout China. This major policy move was especially enhanced by Deng Xiaoping's call for deeper, faster and wider economic reform and liberalization during his tour to the southern coastal economically-opened areas and SEZs in the spring 1992. To facilitate the implementation of this policy, a series of measures has been taken not only to improve the existing unfair competition between the coastal and inland regions, but also to create a more liberalized economic environment to promote market-oriented economic development and to attract foreign investors.

First, the application of preferential policies to FDI gradually shifted from regional priority to accommodating national and local industrial development policies. For example, as long as they are in line with state or local industrial policy and involve high or new technology, any FDI project is entitled to the same preferential treatment as applied in the ETDZs, regardless of its location.

Second, fifty-two cities, including all the inland provincial capitals and the major cities along the Yangzi River, became open to foreign investors. The preferential policies granted to the fourteen coastal cities are also applied in these cities.

Third, more than fifteen border cities and counties in the southwest, northwest, north and northeast of China were declared open border cities. Some were authorized to offer coastal FDI preferential policies, while others were mandated to reopen or expand their existing border trade ties with neighboring countries or to set up economic development zones.

Fourth, some service industries, such as aviation, telecommunication, banking and retail trade, were opened to FDI participation in a limited and experimental fashion. For example, some designated coastal cities are allowed to host FDI banking, finance, and retail entities. Shanghai, as a major commercial center, is also permitted to host a FDI insurance company.

Finally, to develop further foreign trade and processing industries in the coastal areas, more bonded zones are to be established (Liu et al. 1993; United Nations 1994; Wei 1994). As a result, with the implementation of these new policies, during the first nine months of 1992, almost 2,000 economic development zones were set up, and many of them were located in inland areas (Shirk 1994).

Admittedly, the Chinese approach of gradually extending regional openness has proved relatively successful in two main aspects. First, the selective establishment of SEZs, beginning with a small number and gradually adding more, effectively gained nationwide support for the market-oriented economic reform drive. Second, the fast economic growth and development in SEZs and the coastal provinces not only provided the Chinese government with valuable experience in market-oriented economic reform, but also produced strong demonstration effects to the inland areas.

However, some direct or indirect negative results due to the implementation of the uneven regional open strategy cannot be ignored. The uneven regional open strategy directly resulted in uneven regional economic development, which contributed partly to the increasing inequalities between the coastal and the inland regions.

2.4.2 Foreign direct investment policies

For historical and ideological reasons, FDI in China was highly restricted prior to 1978. Since the passing of the Equity Joint Venture Law in late 1979, China has gradually liberalized its FDI regime, and an institutional framework has been developed to regulate and facilitate such investments. The liberalization of the FDI regime and the improved investment environment greatly increased the confidence of foreign investors in China. Consequently, FDI flows into China increased rapidly after 1979, and particularly during the early 1990s. Over the course of the two decades, FDI became well-established in China's economy, and the activities of multinational enterprises (MNEs) came to assume increasing importance in capital formation, labor training, technology transfer, international trade, and in accelerating the transition of China from a planned economy to a market economy. FDI has increasingly stimulated and integrated the Chinese economy into the world economy.

FDI flows into China

As shown in Table 2.1, the flow of FDI to China from 1979 to 1997 can be broadly divided into two phases: 1979-91 and 1992-97. At the initial stage of the first phase, following the establishment of the four Special Economic Zones (SEZs) in Guangdong and Fujian provinces, FDI flows into China were highly concentrated in the four SEZs. However, since the Chinese government was very cautious about introducing FDI into its domestic economy, and foreign investors were also cautious about making investments in China at the initial stage of China's opening up to the outside world, during this period FDI flows into China were very limited. In 1984 Hainan Island and fourteen coastal cities across ten provinces were opened to FDI. Following this trend, more and more regions and areas were opened up, and at the same time, a series of laws and regulations was stipulated and implemented to encourage FDI inflows (Chen 1997a). The inflow of FDI to China in 1984 doubled the amount over the previous year. The momentum of FDI flow into China continued from 1984 to 1988 with an annual growth rate of 38%. However, in 1989, mainly due to the Tiananmen events, the growth rate of FDI flow into China fell sharply from 38% in 1988 to only 6% in 1989. The flow of FDI into China recovered in 1991 and rose to over 1% of GDP for the first time since 1979.

Table 2.1 Actual FDI inflows into China, 1979-1997.

Year	Total FDI Inflows (US$ billion)	FDI Inflows as percentage of GDP (%)
1979	0.109	0.04
1980	0.195	0.07
1981	0.375	0.13
1982	0.440	0.16
1983	0.636	0.22
1984	1.258	0.41
1985	1.661	0.55
1986	1.875	0.65
1987	2.314	0.73
1988	3.194	0.81
1989	3.392	0.77
1990	3.487	0.90
1991	4.366	1.05
1992	11.007	2.25
1993	27.515	4.29
1994	33.767	5.89
1995	37.521	5.13
1996	41.726	4.84
1997	45.257	5.02

Source: State Statistical Bureau, China Statistical Yearbook, various issues.

The second phase was initiated by Deng Xiaoping's tour to China's southern coastal economically-opened areas and SEZs in the spring of 1992. Deng's visit set the scene for China's move away from the uneven regional priority toward nationwide implementation of open policies for FDI. Following Deng's call for deeper, faster and wider economic reform, the Chinese government further liberalized its FDI regime and implemented a series of new policies to encourage FDI inflows into China. The results were astounding. The flow of FDI to China surged from US$11 billion in 1992 to more than US$45 billion in 1997. At the same time, the ratio of FDI inflows to GDP rose to around 5-6%. China has become the second largest FDI recipient in the world (following the United States) and the single largest host country among the developing countries since 1993 (United Nations 1995; Chen 1997c).

While total FDI flow into China is massive, the magnitude compares to several other countries when measured relatively. During 1991-95, inflows averaged 16% of capital formation, somewhat less than Malaysia and Argentina, but much higher than most other developing countries (World Bank 1999).

Policies on the organizational forms of FDI

According to China's laws and regulations, foreign investors can choose four organizational forms, namely contractual-joint ventures, equity-joint ventures, wholly foreign-owned enterprises and joint exploration to invest in China.

The Equity Joint Venture Law issued in 1979 was China's first law permitting the establishment and operation of foreign economic entities in its territory. Because of ideological reasons as well as the primary interest in introducing and acquiring advanced technologies through FDI, China only allowed the establishment of joint ventures in the initial stage of attracting FDI. Unlike the joint ventures, wholly foreign-owned enterprises were only permitted within the SEZs. It was not until 1986, after the passing of the Wholly Foreign-Owned Enterprise Law, that wholly foreign-owned enterprises were allowed to establish in China nationwide.

The legal permission of wholly foreign-owned enterprises was needed by both the foreign investors and the Chinese side. From the perspective of foreign investors, as some studies (Powell 1987; Stein 1987; Behrman 1988) revealed, there are many reasons for foreign investors to prefer wholly owned ventures over joint ventures. However, two are the most

important. One is to maintain maximum operating independence from Chinese participation and, therefore, to have a high degree of control over financing, marketing, pricing, the production schedule, quality control, purchase of materials, technology employed, and even external relations of various subsidiaries. Another important reason is to access fully all corporate resources and technology from the parent company and more effectively to protect their technologies. This point is especially important when the foreign enterprises are in technology-intensive industries (Chen 1997d). As Pomfret (1994) and Kamath (1994) point out, the role of private property rights is a critical determinant of the entry mode of foreign companies. Due to the nature of their firm's specific assets, they will seek to prevent their dissipation in foreign markets by choosing the form of entry that will deliver the most protection. That form is usually the wholly foreign-owned type of entry.

From the Chinese perspective, there are also two important reasons to allow the establishment of wholly foreign-owned enterprises. The first reason is to increase China's competitiveness in the world FDI market by providing foreign investors with more entry alternatives to invest in China. This is particularly important in considering the growing initiatives of other developing countries, especially the East and Southeast Asian countries, to attract FDI. The second reason is to accelerate the introduction of new and high technology products through local production by wholly foreign-owned enterprises. This is consistent with China's industrial and technological development strategy, since it can both enhance China's technological development and reduce foreign exchange expenditure through import substitution (Chen 1997a). On the other hand, China also specifies some strategic important industries or areas that are not allowed the establishment of wholly foreign-owned enterprises and where the Chinese partners must have a majority share (Appendix Tables 2.1 and 2.2).

Industrial policies concerning FDI

China has comprehensive industrial polices to guide FDI into the targeted industries in accordance with China's economic and industrial development strategy. In June 1995, the Chinese government issued the "Provisional Regulations on Guiding Foreign Investment" and the "Industrial Catalogue on the Guidance of Foreign Investment". The regulations classify FDI into "encouraged", "permitted", "restricted" (restricted A and restricted B) and "prohibited" categories (Table 2.2). According to the regulations, China encourages both a greater geographic dispersion of FDI within China and more FDI into targeted economic sectors and industries, such as agriculture, resource exploitation, infrastructure, export-oriented and high technology industries.

In December 1997 the amended "Industrial Catalogue on the Guidance of Foreign Investment" was issued. Compared to the 1995 version, the 1997 revision added more industries as Encouraged or Restricted Category B, gave more emphasis on encouraging investment to the central and western parts of China, and encouraged foreign investors to set up export-oriented enterprises (MOFTEC 1998). Foreign investments in the industries listed as Encouraged and Restricted B categories are entitled a set of fiscal incentives. Foreign investments in Encouraged and Restricted B categories can enjoy tariff-free and value-added tax exemption treatment for imported equipment and technology. In addition, foreign investments in Encouraged categories are offered a set of income tax incentives.

The industries of agriculture, forestry, animal husbandry, fishery and related industries, which are classified as Encouraged and Restricted B for FDI, are listed in Table 2.3. It is interesting to note that FDI in grain production is not encouraged, and FDI in the development and production of grain, cotton and oil seeds is restricted and is not allowed to hold a majority share. This policy is not only unfavorable to agricultural technology transfer but is also contradictory to China's general FDI policies of encouraging high technology FDI inflow.

Table 2.2 China's industrial guidance on foreign direct investment.

Encouraged:
(1) new agricultural technologies, comprehensive development of agriculture, and the building of energy sources, communications and important materials industries;
(2) new or advanced technologies which can improve the quality of products, conserve energy and raw materials, raise technological and economic efficiency of enterprises, or can manufacture products to alleviate the shortage of such products in the domestic markets;
(3) projects that meet the needs of the international market, raise the grade and quality of products, open up new markets, or expand and increase exports;
(4) investments related to comprehensive use of renewable resources and new technologies and equipment for environmental protection;
(5) investments that can give full play to the advantages of labor and natural resources in the central and western regions.

Permitted:
(1) Foreign direct investments that are not under the categories of encouraged, restricted and prohibited are permitted.

Restricted:
(1) projects which have been developed domestically, projects the technology of which has been imported and projects the production capacity of which can meet domestic demand;
(2) trades in which the state is still experimenting with utilizing foreign investment in sectors where a state monopoly still exists;
(3) projects involving prospecting and exploitation of rare and valuable mineral resources;
(4) trades that must be put under the overall plan of the state;
(5) other projects restricted by state laws and administrative regulations.

Prohibited
(1) projects that endanger state security or harm social and public interest;
(2) projects that pollute and damage environment, destroy natural resources or harm people's health;
(3) projects that use up large tracts of farmland, that are not beneficial to the protection and development of land resources, or that endanger the security and the effective use of military facilities;
(4) projects that manufacture products by applying China's special industrial arts or technology;
(5) other projects that are prohibited by state laws and administrative regulations.

Source: Foreign Investment Administration of the Ministry of Foreign Trade and Economic Cooperation (1998).

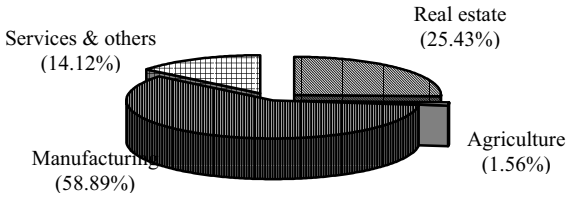
FDI in China's agricultural sector

The agricultural sector was one of the earliest sectors open to FDI. However, what is the position of agricultural FDI in the total FDI flow into China? Table 2.4 and Appendix Table 2.3 present the flows of FDI into China's economic sectors from 1983 to 1997 based on the contracted values. Several interesting points from these tables are worth mention here.

First, in terms of the accumulated contracted FDI from 1983 to 1997, as illustrated by Figure 2.3, among the economic sectors, the manufacturing sector was the largest recipient accounting for 59%, followed by the real estate sector receiving about 25% of the total. In contrast, among all the economic sectors, the agricultural sector received the smallest amount of FDI, accounting for less than 2% of the total contracted FDI flow into China's economy for the period from 1983 to 1997.

Second, while the agricultural share in total FDI has been small during the 20 years reform in China (Table 2.4), the growth has been substantial (Appendix Table 2.3). During the 1980s the average annual inflow of contracted FDI into the agricultural sector was less than US$200 million except in 1988. However, during the 1990s and particularly after 1992 the average annual inflow of contracted FDI into the agricultural sector increased dramatically and was well above US$1,000 million. As a result, compared to the 1980s there has been a five-fold increase in annual contracted FDI inflow into China's agricultural sector in the 1990s.

Figure 2.3 Sectoral distribution of accumulated FDI inflows in China (1983-97).



Source: State Statistical Bureau, China Statistical Yearbook, various issues; and China Foreign Economic Statistical Yearbook, various issues.

Table 2.3 China's industrial catalogue for FDI in agriculture, forestry, animal husbandry, fishery and related industries.

Encouraged:

1. Cultivation and development of waste land, waste mountain, flood land (except those with military facilities), as well as improvement of low-yielding fields.
2. Development of fine and high-yielding new varieties and technologies of sugar crops, fruit trees, vegetables, flowers and plants and forage grass.
3. Serial production of soil-less cultivation of vegetables, flowers and plants.
4. Planting of forest trees and introduction of fine strains of foreign trees.
5. Breeding of good strains of domestic animals, poultry and aquatic fingerlings (excluding the precious and fine strains unique to China).
6. Cultivation of famous aquatic products.
7. New varieties of effective and safe agriculture chemicals and pesticides (80% death rate, safe to humans, animals and crops).
8. High-density fertilizers (potash and phosphate fertilizers).
9. Development of new technologies for the production of agricultural film, and development of new products (fibre film, photolysis film, multifunctional film and raw materials).
10. Antimicrobial stock medicine for animal use (including antibiotics and chemical compounds).
11. New products and forms of antiscolic, pesticides, antiglobulin for animal use.
12. Feed additives and the development of feed protein resources.
13. New technologies and equipment for the storage, preservation, drying and processing of grains, vegetables, fruits, meat products and aquatic products.
14. Forestry chemicals and new technologies and products for the comprehensive utilization of "sub-quality, small and firewood" lumber and bamboo wood in the forest areas.
15. Construction and management of key water projects for comprehensive utilization of hydraulic resources (with Chinese side having the majority stake holding or leading position).
16. Water-saving irrigation technologies and equipment production.
17. Agricultural machinery and tool technologies and production.
18. Biological environment treatment and construction projects.

Restricted (B):

1. Development and production of grain, cotton and oil seeds (with Chinese side having the majority stake holding or a dominant position).
2. Processing and export of precious varieties of logs (wholly foreign-owned enterprises not allowed).
3. Inshore and continental-river fishing (wholly foreign-owned enterprises not allowed).
4. Cultivation of Chinese medicinal crops (wholly foreign-owned enterprises not allowed).

Source: Foreign Investment Administration of the Ministry of Foreign Trade and Economic Cooperation (1998).

Third, in terms of the shares of agricultural contracted FDI in the total contracted FDI flow into China, the story was opposite to that of the annual contracted FDI inflow. As shown in Table 2.4, in the 1980s the share of contracted FDI in the agricultural sector was around 3-4% of the total contracted FDI inflow. However, in the 1990s despite the large increase of contracted FDI inflow into the agricultural sector in absolute terms, the share of agricultural contracted FDI dropped significantly to well below 2%, particularly during the period from 1992 to 1994 when its share was only around 1.1%. The primary reason for this is directly related to a number of policy changes that were made in 1993 and 1994, which not only

deregulated the retail sector in China but also allowed real estate acquisitions. A large amount of FDI went to the real estate, commerce and services sectors. In other words, the decline of FDI share in the agricultural sector indicates that the growth rate of FDI inflow into the agricultural sector has been lower than that of the national average in the 1990s.

How much FDI has China's agricultural sector actually utilized? Because of data limitations there is no precise answer to this question. Chen (1998) estimates that based on the contracted values the share of agricultural FDI was 1.56% of the total contracted FDI inflow into China from 1983 to 1997. Therefore, by using 1.5% as the share of agricultural FDI, a conservative estimation would be that the agricultural sector attracted about US$2,000 million actual FDI at the year end of 1995 and about US$3,300 million actual FDI at the year end of 1997. China attracted US$133,112 million actual FDI from 1979 to 1995 and US$220,095 million actual FDI from 1979 to 1997. Therefore, the actual FDI figures of agricultural sector are derived as: accumulated actual agricultural FDI at the year end of 1995 (133112*0.015) = US$2,000 million; and accumulated actual agricultural FDI at the year end of 1997 (220095*0.015) = US$3,300 million.

Table 2.4 Sectoral distribution (%) of contracted FDI inflows into China, 1980-97.

Year	Agriculture	Manufacturing	Construction	Transport & Telecom.	Commerce & Services	Real Estate	Health, Edu. & Sciences	Others
1983	0.93	66.89	2.96	3.13	2.05	4.95	19.10	0.00
1984	2.74	21.97	2.71	2.92	3.83	33.46	32.37	0.00
1985	1.99	37.65	2.09	1.67	8.31	35.85	0.99	11.45
1986	3.13	37.07	1.58	1.00	3.01	48.56	1.72	3.92
1987	3.98	52.34	1.27	0.38	0.68	34.06	0.61	6.69
1988	4.08	77.61	1.92	1.47	1.04	8.56	0.92	4.40
1989	2.10	84.47	1.06	0.83	1.07	8.32	0.74	1.40
1990	1.98	85.07	2.59	0.52	1.53	6.48	1.07	0.76
1991	1.82	80.95	1.08	0.80	1.41	12.11	1.12	0.71
1992	1.26	56.53	3.13	2.63	2.46	30.78	0.94	2.27
1993	1.09	46.12	3.46	1.36	4.11	39.09	1.36	3.40
1994	1.18	53.31	2.88	2.44	4.72	28.72	3.45	3.30
1995	1.90	67.54	2.10	1.86	3.75	19.54	1.60	1.71
1996	1.55	68.90	2.73	2.18	3.20	17.54	0.96	2.94
1997	2.09	61.64	6.12	5.14	8.84	12.20	0.69	3.29
Total	**1.56**	**58.89**	**3.07**	**2.23**	**4.14**	**25.43**	**1.77**	**2.90**

Source: State Statistical Bureau, China Statistical Yearbook, various issues; and China Foreign Economic Statistical Yearbook, various issues.

What is the industrial distribution of agricultural FDI within the agricultural sector? The data of FDI for industrial breakdown within the agricultural sector are only available from 1994 to 1996 on contracted values. As Table 2.5 shows, from 1994 to 1996 the total amount of contracted FDI inflow into the agricultural sector was US$3,659 million, which accounted for 45% of the total contracted FDI inflow into the agricultural sector from 1983 to 1997.

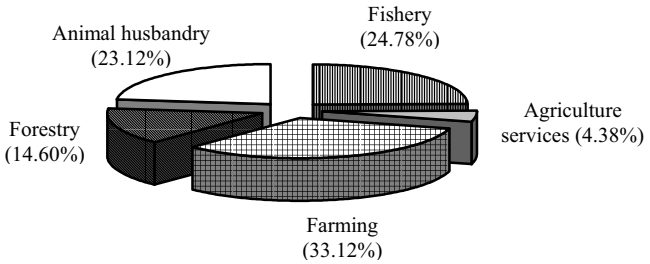
Table 2.5 Industrial distribution of FDI within the agricultural sector (based on contracts, 1994-96).

Industry	FDI Inflows (1994-96) (US$ million)	Share (1994-96) (%)
Farming	1,211.90	33.12
Forestry	534.19	14.60
Animal Husbandry	845.78	23.12
Fishery	906.54	24.78
Agricultural Services	160.22	4.38
Total	**3,658.63**	**100**

Source: Ministry of Foreign Trade and Economic Cooperation (unpublished material).

Within the agricultural sector, the farming industry received the largest share of FDI inflow, accounting for one third of the total (Figure 2.4). Among the farming industry, FDI was mainly in vegetable growing and flower and plant cultivation, while FDI in grain and cotton production was very small (Ministry of Agriculture 1997). Animal husbandry and fishery industries attracted roughly equal shares, each accounting for about 24% of the total. The forestry industry received a relatively small share of FDI inflow, accounting for 14.6% of the total, and the agricultural service industry attracted the smallest share with less than 5% of the total FDI inflow into the agricultural sector. Therefore, the industrial investment pattern of FDI in China's agricultural sector is concentrated in land-saving and labor-intensive agricultural industries, such as vegetable growing, flower and plant cultivation, animal and poultry raising and fishery/farming industries.

Figure 2.4 Industrial distribution of agricultural FDI in China (1994-96).



Source: State Statistical Bureau, China Statistical Yearbook, various issues; and China Foreign Economic Statistical Yearbook, various issues.

Given its obvious interest in technology transfer, China's initial foreign investment policy allowed only joint ventures. This policy was consistent with its generally suspicious interest in foreign companies and with its attempt to encourage commercial partnerships. While wholly foreign-owned enterprises were only allowed to establish within the four SEZs and ETDZs before 1986, China has allowed the establishment of wholly foreign-owned enterprises nationwide and foreign companies have responded to this increase in flexibility (Chen 1997a).

Table 2.6 presents the organizational forms of agricultural FFEs in terms of foreign registered capital by the end of 1991 and 1993. Data for foreign registered capital of agricultural FFEs after 1993 are not available. Table 2.6 shows that equity-joint ventures are the main type of foreign investment in the agricultural sector, and there is a trend away from contractual-joint ventures toward wholly foreign-owned enterprises.

The above findings are confirmed by the information provided in Table 2.7. Equity-joint ventures accounted for 41%, wholly foreign-owned enterprises accounted for 34% and contractual-joint ventures accounted for only 25% of the total accumulated contracted FDI inflow into the agricultural sector from 1994 to 1996.

Table 2.6 Composition of agricultural FFEs by organizational form.

	End 1991		End 1993	
Form of FDI	Foreign Registered Capital (US$ million)	Share (%)	Foreign Registered Capital (US$ million)	Share (%)
Contractual-Joint Ventures	275.02	39.51	868.74	35.28
Equity-Joint Ventures	273.90	39.37	993.79	40.36
Wholly Foreign-owned enterprises	147.00	21.12	599.77	24.36
Total	**695.92**	**100**	**2,462.30**	**100**

Source: State Statistical Bureau, China Statistical Yearbook, various issues.

Table 2.7 Composition of FDI inflows into the agricultural sector by organizational form (based on contracts, 1994-96).

Form of FDI	FDI Inflows (1994-96) (US$ million)	Share (1994-96) (%)
Contractual-Joint Ventures	925.17	25.29
Equity-Joint Ventures	1,499.18	40.98
Wholly Foreign-owned Enterprises	1,234.28	33.73
Total	**3,658.63**	**100**

Source: Ministry of Foreign Trade and Economic Cooperation (unpublished material).

There are some theoretical explanations for the choices between entering into joint ventures with local partners and setting up wholly foreign-owned enterprises. The biggest advantage of entering into joint ventures for the multinational enterprise is the reduced costs of doing business abroad. This is especially important for multinational enterprises when they enter a new and unfamiliar foreign market. However, entering into joint ventures also incurs various transaction costs, especially when the multinational enterprise possesses more advanced and high technology intangible assets as its ownership advantage. The choice of multinational enterprises between entering into joint ventures and setting up wholly foreign-owned enterprises depends on the valuation and judgement of each of the individual multinational enterprises on the benefits and costs between the two modes of entry (Chen 1997d).

Blomstrom and Zejan (1991) in their studies on joint ventures found that multinational firms are less likely to seek a foreign partner when their firms' intangible assets are important. According to Morck and Yeung (1991), a firm's intangible assets are roughly the firm's market value less the value of tangible assets such as plant and equipment. These assets can generally be characterized as "knowledge capital" ranging from proprietary product or process know-how to reputations and trademarks (Markusen 1995). Since these knowledge-based intangible assets involve very high transaction costs due to market failure and are most likely to produce spill-over effects and externalities due to their nature as public goods, the multinational enterprises are most likely to set up wholly foreign-owned enterprises rather than entering into joint ventures, whenever they value the costs of protecting their new and high technology and proprietary products higher than the benefits gained from entering into joint ventures. The greater the high-technology component of the intangible assets, the more important it is for the multinational enterprises to protect such assets, and the more likely it is for the multinational enterprises to set up wholly foreign-owned enterprises rather than to enter into joint ventures with local partners.

According to the above reasoning, the increasing presence of wholly foreign-owned enterprises indicates the increasing technology transfer embodied in foreign investment in China's agricultural sector. This development cannot be separated from the various policies implemented by China to improve its legal framework governing FDI, particularly in the areas of property rights protection, as well as the increasing interest in China from the United States and Europe. As China continues to seek technology-intensive activity, foreign firms will be reluctant to enter China without legal protection of their private property rights. Hence, releasing restrictions on the entry of wholly foreign-owned enterprises in some technology-intensive agricultural industries, such as the development and production of grain, cotton and oil seeds, and improving the protection of intellectual property rights are very important for China to attract further FDI inflow, especially FDI with high technology, into its agricultural sector (Chen 1998).

2.4.3 Trade-related fiscal policies

Export subsidies

Under the planned foreign trade regime, foreign trade corporations were not responsible for their profits and losses incurred from foreign trade. The Ministry of Finance not only took all profits and covered all losses but also provided all working capital for foreign trade corporations. Because of the distorted domestic pricing system, export subsidies were a common phenomenon under the planned foreign trade regime.

Since 1979, the government has taken several steps and introduced a series of reform measures to reduce and finally to eliminate all export subsidies. In 1987, the Chinese government first introduced the contract responsibility system to the national specialized general trade corporations under the Ministry of Foreign Economic Relations and Trade. One of the main aspects of the contract responsibility system was to fix the total amount of export subsidy at the 1987 level, which was about 4% of the value of total export in 1987. Then, in 1988 the government applied the foreign trade contract responsibility system to all foreign trade corporations and fixed the amount of export subsidy at the 1987 level for three years from 1988 to 1990 for all foreign trade corporations. Finally, in 1991 the government eliminated all export subsidies to all foreign trade corporations. Therefore, since 1991 there have been no export subsidies in foreign trade, all foreign trade corporations have been commercialized and they conduct their foreign trade business based on commission fees in conformity with the common practice of international rules.

Tariff free and value-added tax exemption

Since the early 1980s, to encourage an export-oriented economy, the government has granted import tariff free to export-oriented production enterprises for their imported raw materials, intermediate inputs and parts for export production.

Also to accelerate the transfer of high technology and advanced equipment, the government offered import tariff free and value-added tax exemption for the imports of high technology and advanced equipment to some industries classified as priority industries in national economic development. According to “The Catalogue of Industries, Products and Technologies Currently Encouraged in Priority Development by the State”, there are a total of 69 industries, products and technologies subject to the import tariff free and value-added tax exemption treatment (State Planning Commission 1997). The imported high technology and advanced equipment should be that which China can not produce or for which domestic production can not meet domestic demand.

Export tax rebate

Export tax rebate is a commonly-used practice in international trade in the world. To promote exports and to increase the competitiveness of China’s export commodities in the international market, China started to use export tax rebates in 1983. In this year China introduced export tax rebates for the product tax levied at the final production stage to 17 export commodities on an experimental basis. In 1985 the coverage of export commodities entitled to export tax rebate was extended to all commodities except crude oil, refined oil and the zero tax commodities. In 1986 the product tax levied at the intermediate production stage was added to the export tax rebate, and further in 1988 a certain proportion of business tax and the special consumption tax were added into the export tax rebate. Thus since 1988 this type of export tax rebate has included the product tax, value-added tax, business tax and special consumption tax.

In the beginning of 1994 China adopted a new taxation system, which includes value-added tax, consumption tax, business tax and individual income tax, and applies to both domestic enterprises and FDI firms. For example, the value-added tax rate on domestically produced goods and imports is 17% (the value-added tax is 13% on some selected goods,

including grain, edible vegetable oil, running water, hot air and water, cold air, coal gas, liquid petro-gas, natural gas, household coal products, books, newspapers, magazines, feeds, chemical fertilizers, pesticides, agricultural machinery, and agricultural films). Under this new taxation system, the type of taxes subject to export tax rebate are the value-added tax and consumption tax.

The principle for the rate of export tax rebate is that exports should be zero-rated and eligible for a full rebate on the value-added tax (13% for some selected commodities mentioned above and 17% for all other commodities) and consumption tax paid. This export tax rebate policy applies to all export commodities except crude oil, refined oil, export commodities for foreign assistance, commodities prohibited for export by the state, and sugar. However, in the actual implementation of the new export tax rebate, the claims for rebates on value-added tax paid on inputs imported for export production substantially exceeded expectations; thus in 1995 the rebate on inputs purchased for export production was reduced to 14% and latter to 9%. Thus the value-added tax on inputs purchased for export production imposes an effective net tax on exports. Improvement in the administration of the law that would raise the collection rate and allow a return to zero rating for exports would substantially improve trade performance (World Bank 1997).

Tax incentive policies to FDI firms

Since the initial offer of tax incentives in the early 1980s to FDI firms in the SEZs and open coastal cities, China has extensively but selectively used tax incentives as "economic levers" to guide FDI into its designated regions, economic sectors and manufacturing industries. In 1994 China adopted a new taxation system, which applies to both domestic enterprises and FDI firms. For example, the business income tax rate is 33% and value-added tax rate is 17% for both domestic and FDI firms. At the same time, China decided to introduce national treatment for FDI firms in order to establish a level playing field for both domestic and FDI firms. With the gradual implementation of national treatment, FDI firms and domestic enterprises will be given equal treatment, and the preferential policies including tax incentives given to FDI firms will be gradually reduced and abolished. However, as shown in Appendix Tables 2.4-2.6, at present FDI firms still enjoy substantial tax incentives.

Appendix Tables 2.4-2.6 show that China's tax incentive policy for FDI firms has three key features. First, the tax incentives offered in the SEZs and ETDZs located in the open cities are much more favorable than in other open regions. Second, the tax incentives are more favorable toward FDI firms engaged in infrastructure construction and agricultural development. Third, the tax incentives are more favorable for technologically-advanced and export-oriented FDI firms.

2.4.4 Trade-related monetary policies

China's monetary policy refers to the measures which the People's Bank of China, the central bank, takes in controlling the money and credit supply to bring about the desired changes in the economy. Since the economic reform China has been gradually moving away from a planned economy towards a market economy. As a result, China has been increasingly using monetary policy as one of the main means in its macro-economic adjustment and control. The main objective of China's monetary policy is to achieve rapid economic growth, price stability, new job opportunities, and a balance of payments in the country. The soft landing of China's economy, from more than 20% inflation in 1994 to around 5% inflation in 1997 while keeping the economic growth rate at nearly 10%, has been a great success of the Chinese government in using monetary policy to adjust and control the economy. In 1998 to counter the Asian financial crisis, China adopted an expansionary monetary policy and achieved an economic growth rate of 7.8%.

To promote foreign trade, in 1994 China established the Import and Export Bank to provide the import and export credits which the commercial banks have difficulty underwriting. The Import and Export Bank is a state policy bank; its main objective is to carry out state foreign trade development strategy and to implement specific foreign trade preferential credit policies. It can adjust the scale of credits, the level of interest rates, and the extent and level of the discount rate to improve the commodity structure of import and export, to coordinate foreign economic and technological cooperation, and to improve the external business environment of foreign trade enterprises.

The main business scope of the Import and Export Bank includes:

- Sub-lending the loans from international monetary organizations and foreign governments to domestic enterprises and managing the debts;
- Providing medium and long term discounted interest, low interest and comprehensive loans to domestic production enterprises, especially to those enterprises producing machinery, electronics and whole set equipment;
- Providing export credits including the seller's credits to domestic export enterprises and the buyer's credits to foreign importers;
- Providing import credits;
- Providing capital credit and risk credit guarantees to domestic export enterprises, production enterprises and foreign economic cooperation enterprises in order to facilitate enterprises' external borrowing and fund-raising.

2.4.5 Foreign exchange policies

Before economic reform, to serve the "import substitution" industrialization strategy, China adopted a state monopolized unified foreign exchange income and expenditure management system. Under this system, the government strictly controlled the earning and allocation of all foreign exchange and adopted an official exchange rate system. Since the economic reform China has gradually changed its foreign exchange management system and foreign exchange rate system and established a foreign exchange swap market.

Foreign exchange management policies

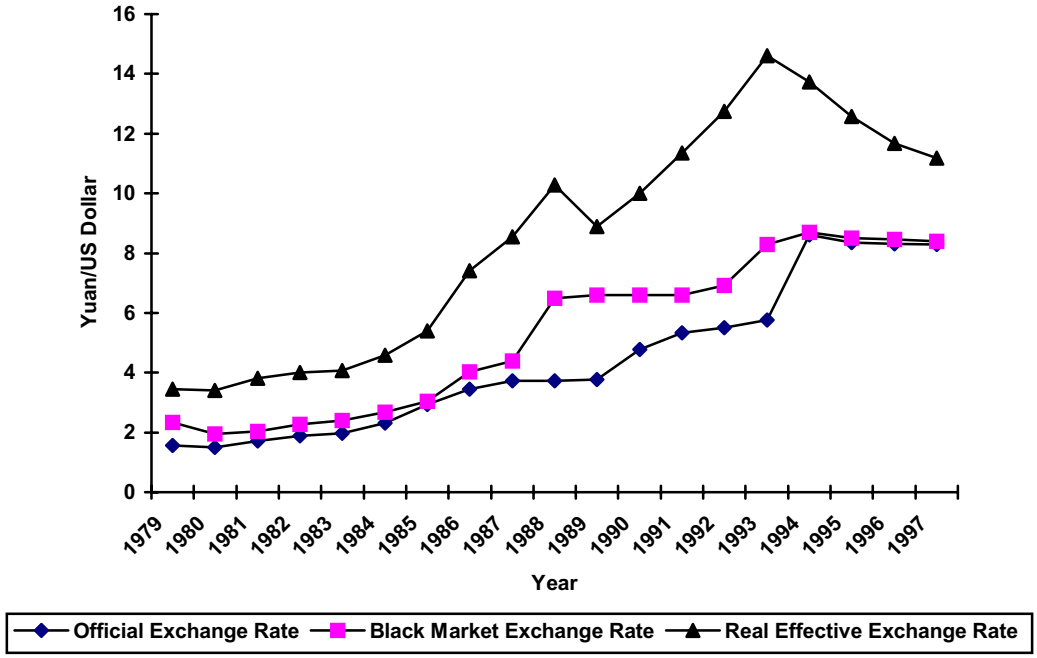
In 1979 with the implementation of economic reform, China introduced a foreign exchange retention system to provide incentives to various enterprises and local governments to increase foreign exchange earnings through expanding exports. Under this foreign exchange retention system, enterprises and local governments can retain a certain proportion of foreign exchange earned through their expanded exports. In 1988 the central government relaxed the control on using the foreign exchange quota and allowed local governments and enterprises to control and use their own retained foreign exchange in accordance with state regulations. In 1991 the foreign exchange retention system was changed from the differential proportion system based on location to the unified proportion system based on categories of commodities. In 1994 with the unification of the foreign exchange rate and the introduction of the foreign exchange sale-and-purchase system through banks, the foreign exchange retention system was finally abolished. In December 1996 the RMB became convertible on current accounts.

Foreign exchange rate policies

Appendix Table 2.7 and Figure 2.5 present the RMB exchange rates in terms of the official exchange rate, the black market exchange rate and the real effective exchange rate for the period of 1979-97. These data reveal three main points regarding the foreign exchange policy. First, the official exchange rate of the RMB has been overvalued throughout the period. Second, the real exchange rate of the RMB depreciated significantly during the period of 1979

to 1994. Third, the RMB has appreciated gradually both in terms of the official exchange rate and the real exchange rate since 1994.

Figure 2.5 RMB exchange rates (1979-97).



From 1949 to 1980 China adopted a single official foreign exchange rate system with an overvalued domestic currency (RMB). Since China adopted the "import substitution" industrialization strategy during this period, an overvalued domestic currency is a necessary complementary method to implement the "import substitution" strategy. After the implementation of economic reforms and the open door policy, China has gradually shifted its industrial development strategy from "import substitution" to "export promotion". With the reform of the domestic price system and the rapid growth of foreign trade, the costs of export commodities have increased dramatically and, as a result, the export losses resulting from the overvalued RMB exchange rate have become an unbearable burden to the state budget.

From 1981 to 1987 China still kept a single official exchange rate system but introduced the internal settlement price for foreign trade. The internal settlement price was higher than the official exchange rate but lower than the real exchange rate. Also during this period China gradually devalued the RMB exchange rate. The official exchange rate of the RMB devalued gradually from 1.71 yuan per US dollar in 1981 to 3.72 yuan per US dollar in 1987, a total devaluation of 117.54% in seven years or an average devaluation of 16.79% per year. From 1988 to 1993 with the establishment of foreign exchange swap centers, China adopted a double foreign exchange rate system. One is the official foreign exchange rate and the other is the swap center floating foreign exchange rate based on market supply and demand. During this period the official exchange rate of the RMB continued to devalue from 3.72 yuan per US dollar in 1988 to 5.76 yuan per US dollar in 1993. For these six years the RMB devalued 54.84%, an average devaluation of 9.14% per year.

China unified the official exchange rate and the swap market exchange rate and adopted the single managed floating exchange rate based on market supply and demand in 1994. As a result, the RMB exchange rate devalued from the official exchange rate of 5.76 yuan per US dollar in 1993 to the managed floating market exchange rate of 8.62 yuan per US dollar in 1994, a one step sharp devaluation of 49.65%. Since 1994 China has been using the managed floating exchange rate system and the value of the RMB has appreciated slightly in recent years.

To infer how exchange rate policy may have affected agricultural incentives over time, Huang and David (1995) and Huang (1999) examined the trends in the real exchange rate. They argued that a nominal exchange rate devaluation would only be effective in raising the price of tradables relative to non-tradable goods if inflation does not erode the increase in the exchange rate. A real depreciation of the domestic currency will raise the local currency prices of tradable relative to non-tradable goods and contribute to the price competitiveness of domestic exports. Since agricultural products are generally tradable, agricultural incentives may be expected to increase with real depreciation of the domestic currency and decrease with real appreciation. Their study revealed that China's exchange rate policy during the reform period has clearly been successful in effecting substantial depreciation (increase) in real exchange rate. Whereas real exchange rates remained constant, and even appreciated over three decades prior to the reform period, real exchange rates rapidly depreciated during the reform period except for a couple of years after 1985. From 1978 to 1992, the real exchange rate depreciated by more than 400%. Evidently, nominal exchange rate depreciation was not eroded by inflation despite significant expansion in the money supply.

The success of the exchange rate adjustments stemmed mainly from the productivity effects of economic reforms and technological innovation in agriculture, foreign trade, and industry that contributed to the relatively low inflation (Huang and Rozelle 1996; Huang et al. 1996; Fan and Pardey 1997). China was second only to Indonesia in pursuing aggressive adjustments in the real exchange rate in the region over the past two decades (real exchange rate has appreciated by about 30% from 1992 to 1997). This very favorable trend in the real exchange rate sharply increased export competitiveness and thus significantly contributed to the phenomenal export growth record and consequently the spectacular economic growth of the country in the 1980s and the early 1990s.

Foreign exchange swap market

In 1988 China established a group of foreign exchange swap centers in the key cities of each province and Special Economic Zones (SEZs). Enterprises, including foreign-funded enterprises, could purchase and sell foreign exchange at the foreign exchange swap center at the managed floating exchange rate. In April 1994 the China Foreign Exchange Swap Center was officially established in Shanghai. According to the regulations, all foreign exchange trading among the financial institutions located within the territory of China should be conducted by the center. The establishment of the center symbolized the official formation of the foreign exchange market among banks in China.

2.4.6 Foreign trade control policies (tariffs and non-tariff measures)

Prior to economic reform, foreign trade control in China was mainly administrative. Since 1979 China has gradually reduced government administrative intervention and used various trade instruments to manage and control trade.

Tariffs

During the 1980s, China extensively used high tariffs to manage and control trade. By the early 1990s China's average tariffs (47.2% in 1991) were among the highest in the world (World Bank 1997). In 1991 China for the first time unilaterally reduced the import tariff rates for 265 items. Since then, China has gradually reduced its import tariff rates. In April 1996

China reduced its import tariff rates for more than 4,900 items, lowering the simple average tariff rate from 35.9% to 23%. In October 1997 China further reduced the import tariff rates for more than 4,800 items and brought down the simple average tariff rate from 23% to 17%.

In 1998 China's tariffs include 6,941 headings and sub-headings with a simple average tariff rate of 17%. Currently, relevant departments are studying specific products and implementation steps for tariff reduction. Apart from that, China has actively participated in consultations on tariff-related actions for early voluntary sectoral liberalization.

According to China's 1997 Individual Action Plan submitted to APEC, in the short term China committed to reduce its average tariff rate to 15% by 2000 (Table 2.8). In the medium and long term from 2001 to 2020, China will reduce its average tariff rate for industrial products to 10% by 2005. China will eliminate tariffs of 185 information technology products by 2005 except a few of them by 2007. China will take actions actively and steadily toward tariff reduction in sectors identified for early voluntary sectoral liberalization in accordance with relevant agreements or arrangements concluded by APEC members, and China will further lower the overall tariff level. Tariff policy and reduction for agricultural products will be discussed in more detail in Chapter 4.

Table 2.8 China's 1998 and 2000 simple average applied tariff rate (%).

Item	1998 Simple Average Applied Tariff Rate	2000 Simple Average Applied Tariff Rate
Agricultural products (excluding fish products)	23.6	32
Fish and fish products	20.0	29
Petroleum oils	7.9	5
Wood, pulp, paper and furniture	14.5	17
Textiles and clothing	27.2	22
Leather, rubber, footwear and travel goods	17.0	20
Metals	10.1	9
Chemical and photographic supplies	11.9	10
Transport equipment	26.8	25
Non-electric machinery	14.2	11
Electric machinery	16.8	13
Mineral products, precious stones and metals	11.5	11
Other manufactured goods	16.8	13
All goods	17.0	15

Source: MOFTEC (1998), 1998 China's Individual Action Plan on Implementing APEC Trade and Investment Liberalization and Facilitation (unpublished).

Non-tariff measures

The non-tariff measures used in China to control trade mainly include state trading, quotas, licensing and price tendering.

China uses state trading for some commodities. These commodities are classified as important to national economy and people's livelihood; they involve a large quantity in trade and are sensitive in the international market. In terms of imports, there are 14 commodities subject to state trading, including grains, sugar, crude and refined oils, chemical fertilizers, rubber, pesticides, agricultural film and materials, steel, cotton, chemical fibres, wool, wood, and tobacco. The national and provincial specialized general trade corporations have exclusive trading rights to import these commodities. For example, China National Grain, Oil and Food Import and Export Corporation (COFCO) and COFCO in each province are in charge of the imports of grain and sugar; China Chemical Industry Import and Export General Corporation is in charge of the imports of chemical fertilizers, crude and refined oils, and so on.

In terms of exports, there are 16 commodities subject to state trading. These commodities mainly include rice, soybean, maize, tea, coal, crude and refined oils, cotton, cotton-related textile materials, and silk. The national specialized general trade corporations and

some of their port sub-corporations and some provincial specialized trade corporations have the trading rights for the export of these commodities.

China established its trade quota system in 1980. There are several categories of quotas. In terms of export, the quotas are classified as planned quotas, active quotas and passive quotas. The commodities subject to planned quotas are classified as the large quantity resource export commodities that are important to the national economy and people's livelihood, and the large quantity traditional export commodities that have an important position in China's exports. The commodities under planned quotas mainly include rice, soybean, maize, tea, coal, crude and refined oils, cotton and cotton-related textile materials, silk, wood, steel, and so on. The commodities subject to active quotas are classified as the export commodities for which China has a leading position in the international market and the foreign countries ask China to actively restrain the quantity of exports. These commodities include mainly agricultural products such as coarse grains, live animals, poultry, meats, aquatic products, fruits, vegetables and so on, and half of these commodities are exported to Hong Kong and Morocco. The commodities subject to passive quotas are the commodities for which the foreign country has a quantitative restriction and asks China to voluntarily restrain the quantity of exports based on trade agreements through trade negotiations between governments. These commodities include mainly textiles and steels to USA, textiles to Canada, Sweden, Finland, Austria and Norway, and textiles and footwear to EU.

In terms of import, the quotas are classified as machinery and electronic product import quotas and general product import quotas. The purpose of the quotas is to prevent excess imports of these products, because it is feared that excess imports could bring serious injury to the development of relevant domestic industries or damage to China's balance of payments. In 1998 there were quotas on 143 items of machinery and electronic products, for example, automobiles and refrigerators, and there were quotas on 97 items of general commodities, including mainly crude and refined oils, wool, wood, rubber, pesticides, sugar, chemical fertilizers, tobacco, grain, cotton, vegetable oils, and spirits (Table 2.9).

China restored its import and export licensing system in 1980. The commodities subject to export licenses are mainly the following categories. They are large quantity resource export commodities that are important to national economic planning and people's livelihood. They are large quantity traditional export commodities and have an important position in China's exports. They are the important commodities for which China has a leading (major) share in the international market or a market (commodity or country). They are the commodities for which foreign countries have import quotas for China or foreign countries ask China to voluntarily restrain the quantity of exports. They have large export quantity and easily lead to disorders in trading operations. They are the important, high grade and special export commodities, and they are the commodities subject to some special requirements. In 1998 there were 115 commodities subject to export licenses (MOFTEC 1998).

In terms of import licenses, the commodities subject to import licenses are mainly agricultural products and chemical products (including chemical fibres). In 1998 there were 44 commodities subject to import licenses (Table 2.9).

Table 2.9 China's main non-tariff measures on imports in 1998 (number of items).

Item	Import Quotas	Import Licensing	Import Tender Requirements
Agricultural products (excluding fish products)	26	29	
Fish and fish products			
Petroleum oils	7		
Wood, pulp, paper and furniture			
Textiles and clothing	30		
Leather, rubber, footwear and travel goods	7		
Metals			
Chemical and photographic supplies	27	15	

Transport equipment	72		8
Non-electric machinery	38		67
Electric machinery	33		13
Mineral products, precious stones and metals			
Other manufactured goods			
All goods	240	44	88

Source: MOFTEC (1998), 1998 China's Individual Action Plan on Implementing APEC Trade and Investment Liberalization and Facilitation (unpublished).

China has introduced price tendering to control the export and import of some commodities since 1994. Export tendering is mainly for the export commodities which are large in export value, traded by many traders, sensitive in the international market, subject to increasing price at purchase and falling price in sale resulting in anti-dumping suits from foreign countries. Import tendering is exclusively used for the imports of some special designated machinery and electronic products. These products are defined as those for which China has developed or introduced the production technology, the production of these products is at the starting stage, and the state needs to accelerate the development of these machinery and electronic products. The State Machinery and Electronic Product Import and Export Office issues the import permission certificate based on the result of import tendering.

During the 1980s China extensively used quotas and licensing to control its foreign trade. However, since the early 1990s China has progressively and drastically reduced the number of items subject to export and import quotas and licensing administration. As Table 2.9 shows, in 1998 there were 372 items subject to quota, licensing and other import control measures, accounting for only 5% of the total import tariff lines.

According to the 1998 China's Individual Action Plan submitted to the APEC, in the short term from 1998 to 2000, China will identify and review all non-tariff measures (NTMs), China will further reduce or relax NTMs in a progressive manner, and China will ensure the transparency of NTMs. In the medium term from 2001 to 2010, China will further reduce NTMs and eliminate all NTMs inconsistent with the WTO agreements by 2010, 10 years ahead of the APEC schedule.

In summary, during the past nearly 20 years, China's foreign trade regime has gradually changed from a highly centralized and planned regime to a more open and liberalized regime. Significant progress has been made since the economic reforms in liberalizing the trade regime, but further reforms are needed to move China toward a more open and liberalized economy.

3. Trade-Related Physical Infrastructure

A well-developed transport network is a basic requirement for the economic development of China. It is expected that agricultural trade liberalization would lead to increasing commercialization of the agricultural economy in China. This would include growing agricultural-based processing industries, production of new emerging products, changing from traditional to commercial farming, increasing the volume of exportable surpluses and so on. To take full advantage of these emerging opportunities from agricultural trade liberalization, a well-developed physical infrastructure is a pre-requisite. However, the development of transport systems has been lagging behind the rapidly expanding national economy and has long been a bottleneck to the development of China's national economy. In the presence of the existing physical infrastructure, China may not be able to fully benefit from agricultural trade liberalization. To compete in the international market, China would require a well-developed infrastructure for efficient transportation of goods, handling, packaging and processing, technology and information, and disseminating network.

This chapter examines development over time in the transport and communication systems in China. The major components of the transport system include roads, railway, air transport, and port and shipping services.

3.1 Road network

The road system has been the most important factor in transportation in China. Road transportation carried 78% of China's total freight traffic in 1997 (SSB 1998). On average, road transportation carried around 75% of China's total freight traffic from 1980 to 1997.

Table 3.1 and Appendix Table 3.1 present the length and freight traffic of roads in China from 1980 to 1997. The road network in terms of length has made remarkable progress during the period. The total length of all types of roads in China was 1,226.4 thousand kilometers in 1997, increasing nearly 50% over that in 1980. More than 80% of the total length of roads is paved road and the rest is unpaved road. Progress in the case of paved roads has been very remarkable. The length of this type of road increased from 661.6 thousand kilometers in 1980 to 997.5 thousand kilometers in 1997, increasing 50%. In addition to construction of new roads, emphasis was also made on the upgrading of existing roads, construction and improvement of many bridges, and national highways. Despite the increase in the length of roads, the road network is still very limited for the growing needs of the country. In terms of road density, there were only 12.78 km of all types of roads per 100 square km of the total area of China in 1997. Also many villages in the remote and poor areas have not been connected with main roads.

Table 3.1 Length and freight traffic of highways in China, 1980-97.

Year	Length of Highways (10,000 kilometers)					Freight Traffic of Highways (million tons)	Share in National Total Freight Traffic (%)
	Total	Paved Highways	Share of Paved Highways (%)	Unpaved Highways	Share of Unpaved Highways (%)		
1980	88.33	66.16	74.90	22.17	25.10	3,820	71.27
1985	94.24	75.03	79.62	19.21	20.38	5,381	73.50
1990	102.83	88.35	85.92	14.48	14.08	7,240	75.82
1995	115.70	104.34	90.18	11.36	9.82	9,404	77.11
1997	122.64	99.75	81.34	22.89	18.66	9,765	77.52

Source: State Statistical Bureau, China Statistical Yearbook, various issues.

3.2 Railway network

Table 3.2 presents the length and freight traffic of railways in China. China's total length of railways in operation was 57.6 thousand kilometers, of which electrified railways was 12 thousand kilometers in 1997. From 1980 to 1997, the total length of railways increased 7.7 thousand kilometers while the length of electrified railways increased 10.3 thousand kilometers (Appendix Table 3.2). The railway system is the second most important means of transportation in China. Railway transportation carried 13.47% of China's total freight traffic in 1997. However, the share of railway transportation in China's total freight traffic has shown a declining trend since 1980.

Table 3.3 and Appendix Table 3.3 present the number of locomotives and freight cars in China. In 1997 China's railway system possessed 15,747 locomotives, of which 15,335 were owned by national railway and 412 were owned by local railways. In terms of the national railway, of the total number of locomotives, 2,931 were steam locomotives, 9,583 were diesel locomotives and 2,821 were electric locomotives in 1997. The number of steam locomotives decreased greatly while the number of diesel and electric locomotives increased significantly from 1980 to 1997. The total number of freight cars owned by China's railway system was 437,686 in 1997 with a total loading capacity of 25.6 million tons, increasing nearly 100% from 1980 to 1997.

Table 3.2 Length and freight traffic of railways in China, 1980-97.

Year	Length of Railways in Operation		Freight Traffic of Railways	Share in National
	Total (10,000 kilometers)	Electrified (10,000 kilometers)	(million tons)	Total Freight Traffic (%)
1980	4.99	0.17	1,113	20.76
1985	5.21	0.42	1,307	17.85
1990	5.34	0.69	1,507	15.78
1995	5.46	0.97	1,659	13.60
1997	5.76	1.20	1,697	13.47

Source: State Statistical Bureau, China Statistical Yearbook, various issues.

Table 3.3 Number of locomotives and freight cars in China, 1980-97.

Year	Number of Locomotives (unit)							Number of Railway Freight Cars (unit)	Total Loading Capacity of Freight Cars (10,000 tons)
	Owned by National Railway				Owned by Local Railway				
	Total	Steam	Diesel	Electric	Total	Steam	Diesel		
1980	10,278	7,801	2,190	287	405	279	126	266,376	1,337
1985	11,772	7,674	3,511	587	368	239	129	300,886	1,613
1990	13,592	6,279	5,680	1,633	378	253	125	364,966	2,055
1995	15,146	4,347	8,282	2,517	398	260	129	432,731	2,503
1997	15,335	2,931	9,583	2,821	412	282	130	437,686	2,560

Source: State Statistical Bureau, China Statistical Yearbook, various issues.

3.3 Air transport

Since 1980 China's airway services have been growing very rapidly. Table 3.4 presents the length and freight traffic of airway services in China. From 1980 to 1997, the total length of airway services increased from 195.3 thousand kilometers to 1,425 thousand kilometers, increasing more than 7 times, of which the length of international airway services increased from 81.2 thousand kilometers to 504.4 thousand kilometers, increasing more than 6 times. In terms of freight traffic, airway services account for a very small share of China's total freight traffic. In 1997 airway services transported 1.247 million tons of freight traffic, accounting for only 0.01% of the total freight in China. However, the share of airway services in China's total

freight traffic has been growing rapidly, increasing more than 5 times from 1980 to 1997 (Appendix Table 3.4).

Table 3.4 Length and freight traffic of airway service in China, 1980-97.

Year	Length of Airway Service		Freight Traffic of Airway Services (million tons)	Share in National Total Freight Traffic (%)
	Total Length (10,000 kilometers)	International (10,000 kilometers)		
1980	19.53	8.12	0.089	0.0017
1985	27.72	10.60	0.195	0.0027
1990	50.68	16.64	0.370	0.0039
1995	112.90	34.82	1.011	0.0083
1997	142.50	50.44	1.247	0.0099

Source: State Statistical Bureau, China Statistical Yearbook, various issues.

Table 3.5 presents the number of civil aviation routes and airports in China. Up to December 1997, China's airway services covered 967 civil aviation routes, including 109 international routes, 7 regional routes and 851 domestic routes. The total number of civil aviation routes of China's airway services increased more than 3 times from 1985 to 1997. In addition, the number of airports also increased significantly, especially the number of airports serving Boeing 737 or larger aircraft. From 1985 to 1997, the total number of airports increased from 82 to 141, of which the number of airports serving Boeing 737 or larger aircraft increased from 30 to 106 (Appendix Table 3.5).

Table 3.5 Number of civil aviation routes and airports in China, 1985-97.

Year	Number of Civil Aviation Routes				Number of Civil Airports	
	Total Number of Civil Aviation Routes	International Routes	Regional Routes	Domestic Routes	Total Number of Civil Airports	Airports Serving Boeing 737 or Larger Aircraft
1985	268	27	8	233	82	30
1990	437	44	8	385	94	47
1995	797	85	18	694	139	81
1997	967	109	7	851	141	106

Source: State Statistical Bureau, China Statistical Yearbook, various issues.

Table 3.6 and Appendix Table 3.6 present the number and types of civil aircraft in China. From 1985 to 1997, the total number of civil aircraft of China increased from 404 to 770, increasing 90.59%. Among the civil aircraft, Boeing 737 is the main craft, followed by Yun 7, Boeing 757, MD-82, Tupolov, Boeing 747 and Boeing 767. China has gradually modernized its civil aircraft fleet.

3.4 Ports and shipping services

China's rich inland waterway resources and long coastal lines are ideal for development of waterway and shipping services, which are important for domestic and international transportation and trade. Table 3.7 and Appendix Table 3.7 present the length and freight traffic of navigable inland waterways and the number of berths in major coastal ports of China. The total length of navigable inland waterways was 109.8 thousand kilometers. The total freight traffic conducted by navigable inland waterways was 1,134 million tons in 1997, increasing nearly 3 times from that in 1980. On average, the navigable inland waterways accounted for around 9% of China's total freight traffic from 1980 to 1997. The number of berths in major coastal ports increased significantly from 1985 to 1997. Up to December 1997, the total number of berths in China's major coastal ports was 1,606, of which the number of the 10,000 ton class berths was 449.

Table 3.6 Number and type of civil aircraft in China, 1985-97.

Type of Civil Aircraft	1985	1990	1995	1997
Total Number of Aircraft	404	421	720	770
Boeing 747	6	11	16	18
Boeing 737	15	21	115	141
Boeing 707	10	9	1	1
Boeing 767	2	6	17	17
MD-82	5	25	39	39
Airbus A310	2	2	3	3
Tupolov 154	2	20	33	32
Boeing 757		9	44	46
Ilyushin 62	3			
Ilyushin 18	9			
B-146		10	14	14
Trident	22	7		
Antonov 12	2	2	1	1
Antonov 24	28	23	5	2
Yun 7	13	45	67	58
Short 360	7	7	2	

Source: State Statistical Bureau, China Statistical Yearbook, various issues.

Table 3.8 presents the number of transport vessels and dead weight tonnage in China. The number of transport motor vessels increased from 64,300 in 1980 to 352,500 in 1988 and then declined to 215,800 in 1997 (Appendix Table 3.8). However, the dead weight tonnage increased continuously from 12.79 million tons in 1980 to 25.90 million tons in 1988 and to 38.75 million tons in 1997, increasing 3 times. This means that since 1988 the average dead weight tonnage per motor vessel has increased dramatically.

Finally, Table 3.9 presents the volume of freight handled in major coastal ports of China. From 1980 to 1997, the total volume of freight handled in China's major coastal ports increased dramatically from 217.31 million tons in 1980 to 908.22 million tons in 1997, increasing more than 4 times. Among the major coastal ports, Shanghai port is the largest, followed by Ningbo, Qinghuangdao, Guangzhou, Dalian, Qingdao and Tianjin. China has taken great efforts in the construction of ports in order to facilitate the development of an outward-looking economy since the 1980s (Appendix Table 3.9).

3.5 Communication network

The capacity of telephone exchanges (measured in total number of installed telephones) increased by about 46 times during 1970-97, from only 2.2 million sets in 1970 to 101.11 million sets by 1997 (Table 3.10 and Appendix Table 3.10). Most of the increase occurred after 1980. Moreover, by 1997 all long distance telephone circuits shifted to automatic exchanges. On the other hand, the telephone service has been replacing the telegram service, and the latter has experienced a declining trend since the early 1990s.

Table 3.7 Length and freight traffic of navigable inland waterways and number of berths in major coastal ports of China, 1980-97.

Year	Length of Navigable Inland Waterways ('000 kilometers)	Freight Traffic of Waterways (million tons)	Share in National Total Freight Traffic (%)	Number of Berths in Major Coastal Ports (unit)	of which: 10,000 Ton Class Berths (unit)
1980	108.5	427	7.97	n.a.	n.a.
1985	109.1	633	8.65	503	178
1990	109.2	801	8.39	1,157	275
1995	110.6	1,132	9.28	1,519	394
1997	109.8	1,134	9.00	1,606	449

Source: State Statistical Bureau, China Statistical Yearbook, various issues.

Table 3.8 Number of transport vessels and dead weight tonnage in China, 1980-97.

Year	Number of Transport Vessels ('000 unit)			Dead Weight Tonnage (million tons)		
	Motor Vessels	Barges	Sailing Boats	Motor Vessels	Barges	Sailing Boats
1980	64.3	119.5	113.0	12.79	5.95	1.20
1985	260.3	132.7	82.0	20.90	8.67	0.76
1990	325.9	82.5	17.6	29.10	9.07	0.18
1995	299.7	58.0	7.3	40.94	9.45	0.04
1997	215.8	50.0	6.1	38.75	9.06	0.03

Source: State Statistical Bureau, China Statistical Yearbook, various issues.

Table 3.9 Volume ('000 tons) of freight handled in major coastal ports of China, 1980-97.

Major Coastal Ports	1980	1985	1990	1995	1997
Total	217,310	311,540	483,210	801,660	908,220
Dalian	32,630	43,810	49,520	64,170	70,440
Yingkou	240	980	2,370	11,560	16,050
Qinghuangdao	26,410	44,190	69,450	83,820	78,620
Tianjin	11,920	18,560	20,630	57,870	67,890
Yantai	5,060	6,890	6,680	13,610	15,600
Qingdao	17,080	26,110	30,340	51,030	69,160
Rizhao	n.a.	n.a.	9,250	14,520	16,500
Lianyungang	739	9,290	11,370	17,160	16,520
Shanghai	84,830	112,910	139,590	165,670	163,970
Ningbo	3,260	10,400	25,540	68,530	82,200
Shantou	1,760	2,010	2,790	7,160	8,840
Guangzhou	12,100	17,720	41,630	72,990	75,180
Zhanjiang	10,750	12,310	15,570	18,850	20,500
Haikou	720	1,700	2,880	4,680	4,860
Basuo	2,780	3,880	4,310	2,750	3,360
Sanya	380	780	370	420	300
Other Medium Ports	n.a.	n.a.	50,920	146,870	198,230

Source: State Statistical Bureau, China Statistical Yearbook, various issues.

Table 3.10 Telecommunication service facilities in China, 1970-97.

Year	Number of Telephones (million sets)	Long Distance Tel. Circuits ('000 lines)	among: Automatic Circuits	Telegram Circuits ('000 lines)	Number of Long Distance Tel. Calls (million)
1970	2.20	11.7	0	6.5	85.7
1975	3.06	16.0	0	7.8	151.5
1980	4.19	22.0	0.6	9.1	214.0
1985	6.26	37.6	3.6	9.9	382.5
1990	12.33	112.4	64.2	11.7	1,162.9
1995	57.62	735.5	717.6	12.3	10,139.7
1997	101.11	1,146.1	1,146.1	12.6	15,540.3

Source: State Statistical Bureau, China Statistical Yearbook, various issues.