

WTO Accession and Chinese Economy:¹
Impacts on Agriculture, Financial Sector, and State-owned Enterprises

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I. Introduction

After 15 years of effort, China has finally become a formal member of World Trade Organization (hereafter WTO) on December 10, 2001. The basic spirit of the WTO is to lower tariff rates, to eliminate non-tariff barriers, and to allow market entries so that production could be allocated globally according to the principle of comparative advantage. Top Chinese leaders regard the WTO accession as the second most important change in China's economic policy regime, following Deng Xiaoping's reform and opening-door policy in the late 1970s. This change will have undoubtedly profound impacts on the future course of China's economic development. Some analysts are very positive about the accession. They believe that any drawback will be overwhelmed by the efficiency gains, injecting new growth impetus into China's reform and economic development. According to them, China will enter an entirely new development stage. However, China is still a developing country and, at the same time, is in the process of transition from a planned to a market economy. Not surprisingly, in its economy there exist many sectors, which are not competitive. It's expected that the accession to the WTO will bring a challenges to the national economy as well. Other analysts are worried that China's weak economic base would not be able to sustain the tremendous external shocks brought by the entry to the WTO. They argue that the WTO accession will do more harm than good to the Chinese economy.

My personal judgment is that, before the expiration of the grace periods in the bilateral agreements, most sectors in Chinese economy will still be protected. However, in anticipation of opening up of China's domestic markets to foreign firms after the expiration of grace period, foreign direct investments from multinational companies will increase substantially immediately after the accession. Therefore, the accession should bring an immediate boost to investments and a spurt to economic growth in Chinese economy in the immediate, short run. In the long run, a membership at the WTO will undoubtedly enable Chinese economy to have a closer integration

¹This paper draws heavily on Justin Yifu Lin, "WTO Accession and Financial Market Reform in China," the Cato Journal, Vol. 21, No. 1 (Spring/Summer 2001): 13-9; Justin Yifu Lin, "WTO Accession and China's Agriculture," China Economic Review, Vol. 11, No. 4 (2000), pp. 405-8; and Justin Yifu Lin (2001), "WTO Accession and China's SOE Reform," in Kyung Tae Lee, Justin Yifu Lin, and Si Joong Kim eds., China's Integration with the World Economy: Repercussions of China's Accession to the WTO, Seoul, Korea: Korea Institute for International Economic Policy, 2001.

with the world economy, facilitating a better access to foreign technology, capital and world market. Therefore, the accession will be beneficial to China's overall economic growth in the long run. The real challenge to Chinese economy will be in the intermediate run after the expiration of the grace period and before the completion of Chinese economy's adjustments to the long run equilibrium. The intermediate-run challenges will certainly be different from one sector to another, depending on the gains and adjustments that the sector needs to make.

Agriculture and Financial agreements are two of the most sensitive areas in China's bilateral negotiations. The state-owned enterprises (SOEs) are among the least efficient enterprises in China. To a large extent, if we have a good understanding of the WTO accession's effects on Agriculture, financial sector, and SOEs, we understand the impact of WTO accession on the Chinese economy. In this paper, I will discuss the potential impacts of the WTO accession on China's agricultural sector and financial sector, and analyze the possible impacts and necessary reforms for SOEs to meet the challenges of WTO accession.

The paper is organized as follows: In Section II, I will discuss the impact of WTO accession on Chinese agriculture. It is followed by an analysis of WTO accession on financial sector in Section III. Section IV will focus on the challenges of WTO accession to SOEs. Concluding remarks are provided in Section V.

II. WTO Accession and China's Agriculture

Agriculture is the most sensitive issue in the WTO negotiations and caused the most difficult in reaching an agreement, as it has with other WTO member countries. Conflicts and disputes on agricultural problems always result in lengthy negotiations among not only the developed countries themselves but also between developing countries and developed nations. China is a developing country with the largest population in the world. Most Chinese people still live in the countryside. Many people are worried that Chinese farmers endowed with small plots of land and backward technology cannot compete with large farmers equipped with modern technology in advanced countries, such as the United States, Canada, and Australia and that WTO accession will have substantial negative impacts on Chinese agriculture. They give as evidence that current prices of grain in Chinese markets are already close to or even exceed world market prices. For example, on March 1999, the price of corn in the domestic market was RMB 1.44/kg on average; however, the average price in the Chicago Futures Market was equivalent to RMB 0.72/kg. Therefore, some anxiety about the agricultural impact of WTO entry is understandable.

In the bilateral agreement between China and the U.S., agricultural trade occupies a premier position. Since the agricultural agreement with the U.S. is most comprehensive and has received most public attention, I will base my discussion mainly on the agreement between China and the U.S., supplemented the agreement between China and the EU only when it is necessary. The main contents of the China-U.S. agreement cover five areas as follows:²

1. Elimination of sanitary and phyto-sanitary barriers on U.S. exports of wheat, citrus and meat, for example, the bans on importing wheat from TCK-affected regions.
2. Elimination of China's subsidies to agricultural exports.
3. Liberalization of state companies' monopoly and allowing private companies to engage in agricultural trade.
4. Adoption of a tariff-rate quota (TRQ) system for grain imports.
5. Reduction of tariffs on agricultural products to well below 20% for major agricultural imports from U.S.³

The first item listed above will not have much impact on China's imports because those trade barriers affect only small amounts of agricultural products and are hard to implement. The second item will not have much impact on China's export either, because there are currently few subsidies for Chinese agricultural exports. The third item is beneficial to Chinese farmers and consumers. The state monopoly on agricultural export/import is extremely inefficient. The liberalization of agricultural trade and the consequent competition between private and state traders should be most welcomed by farmers and consumers. Controversy focuses mainly on the fourth and fifth items, namely, agreementson the importation of grain and the lowering of import tariffs.

China is a land-scarce economy. Agricultural production requires land input. However, it does not mean that the agriculture sector in China will be decimated when China enters the WTO. The relatively low price of agricultural products in U.S. is due to multiple factors. Grain, one of the major agricultural products, is land-intensive and the United States is relatively land-rich, giving it a comparative advantage in grain. In addition, the U.S. government subsidized and protected grain farmers for years through technology development, export

²U.S.-China agreement is drawn from the White House Office of Public Liason, *Summary of U.S.-China Bilateral WTO Agreement*, available on the website of U.S.-China Business Council at <http://www.uschina.org>.

³ According to the agreement with the US, China will also eliminate restrictions on soybean imports, tariff on which will be cut down to 3%. Tariffs on wine will be reduced from 65% to 20%. Tariffs on beef will be reduced from 45% to 12%, on pork will be from 20% to 12%, and on poultry will be from 20% to 10%. Tariffs on orange will be decreased from 40% to 12%, on grape will be from 40% to 13%, and on apple will be from 30% to 10%. Tariffs on apricot will be reduced from 30% to 10%, on cheese will be from 50% to 12%, and on ice cream will be from 45% to 10%. China made further concessions to EU and agreed to reduce the tariff on wine to 14%, on all spirits to 10%, butter to 10%, milk power to 10 %, mandarins to 12%, olives to 10%, pasta to 15%, rape oil to 9%, and wheat gluten to 18% (Lapres, 2000)

subsidies and price supports. Such policies deviate from the recent WTO agricultural cooperation agreement. Moreover, the WTO member countries including the U.S. are encouraging new negotiation on free trade of agricultural products, including grain. Thus, the U.S. will eventually have to give up almost all of its current protective agricultural policies, leading to a greatly diminished price advantage for U. S. grain. Agricultural production in the European Union is not much threat to Chinese agriculture since for most agricultural products other than wine, spirits, and milk products, European countries do not have comparative advantages.

Given that China has limited land but abundant population, it does not have a comparative advantage in grain production. Importing grain is equivalent to importing land, which is not harmful to Chinese economic development. In addition, a considerable portion of the price of grain in the domestic market does not reflect actual production cost, due to the inefficient monopoly operation of the state grain agency. In accordance with China's commitment to allow entry of private traders, this situation will be improved after China enters the WTO. Therefore, the market competitiveness of grain production in China will be enhanced.

Moreover, the China-U.S. agreement on grain is a tariff-rate quota (TRQ) system. Within the agreed import quota, low tariffs will be implemented; for imports exceeding quota limits, high protective tariff will be imposed. The TRQ is initially 14.4 million tons and will gradually increase to 21.8 million tons.⁴ In general, imports will not exceed the quota, because the high over-quota tariffs are prohibitive. In addition, even if the TRQ of 21.8 million tons is fully used, the resulting grain imports will only be less than 5% of China's average grain output in the 1990s. The impact on domestic prices, and therefore on farmers' income, will be very limited.⁵

Apart from the land-intensive grains, many other agricultural products, such as animal husbandry, horticulture, aqua culture, and processed agricultural products, are labor intensive. In these commodities, China has a comparative advantage over most other countries.⁶ In fact, since reform began in the late 1970s, China's agricultural trade has always been in surplus, soaring from USD 57 million in 1980 to USD 6.8 billion in 1999 (SSB 2000, p. 140). One of the important reasons for this trend is the increase in exports of labor-intensive agricultural products (Lu, 1999). The reduction of China's import tariffs will not hurt China's net exports of those labor-intensive

⁴ The TRQ for wheat will increase from 7.3 million tons at time of accession to 9.3 million tons after five years, while the share for private traders will be 10%. The TRQ for corn will increase initially from 4.5 million tons to 7.2 million tons, and the share for private traders will grow from 25% to 40%. The TRQ for rice will increase from 2.6 million tons to 5.3 million tons, and the share for private traders is up to 50%. No TRQ is set for importing barley and its tariff will be reduced to 9%.

⁵ Exception is the Farmers in the Northeast of China. Northeast is the corn and soybean belt of China. Not only the price of corn but also the price of soybean is higher than international price. There is no quota on the importation of soybean. The import of corn and soybean is likely to reduce substantially the income of farmers in Northeast. It is therefore imperative for the Chinese government to increase research investments in soybean and corn so as to increase corn and soybean productivity in the Northeast as a way to mitigate the adverse impact on farmers' income in that place.

⁶ The exceptions are those commodities that are itemized in the tariff agreements with the U.S. and the EU. However, those commodities are very small in China's production except for soybean (Johnson 2000).

products at all.. Moreover, the past growth of agricultural exports was achieved under high protective tariffs and non-tariff barriers set by the importing countries. The agricultural trade interventions by WTO countries have been reduced substantially recently, and will diminish further in the near future. After joining the WTO, China will have increased access to foreign agricultural product markets. It is expected that China's exports of labor-intensive agricultural products will increase tremendously.

III. WTO Accession's Potential Impacts on Financial Sector

Financial sector is another most sensitive issues in the bilateral negotiations. In a market economy, the primary role of banks and financial institutions is to serve as an intermediary between savers and investors and to facilitate payments between economic units. Prior to the economic reform, China had a planned economy with heavy industry as its priority of development. The financial system was an integral part of the plan economy. Regular financial market activities were banned. People's Bank of China (PBOC) was the only financial institution, serving as the central bank and at the same time providing commercial banking services (Lin, et. al., 1996). After the start of economic reform, those previously banned banks and non-bank financial institutions were gradually re-opened. However, the four big state banks, namely China Industry and Commerce Bank, China Agriculture Bank, Bank of China, and China Construction Bank, still dominate China's financial sector.

Statistics data shows that by early 2000 foreign banks and financial institutions have already set up 191 representative offices and subsidiaries in China with total assets of USD 36 billion in 23 locations, including Shanghai, Beijing, Tianjin and Shenzhen, and Hainan province. Many foreign banks have been recently allowed to upgrade their representative offices to branches and to conduct local currency business in Pudong and Shenzhen. For insurance, the Chinese government recently approved four foreign insurance companies to set up new branches or joint ventures.

After the WTO accession, China agrees to remove the geographic and business restrictions by 2005, allowing foreign banks to set up branches in all other cities in China, conduct local currency business, and provide retailing services. Foreign insurance companies will also be allowed to own up to 50 percent of the equity of the joint ventures and to operate in more cities.

It is predictable that China's financial sector will become increasingly more open to foreign financial institutions after the WTO accession. For a long period, China treated the financial sector as a special industry, not only was very cautious in liberalizing the sector to foreign competition but also imposed many restrictions on the entry and operation of local financial

institutions. After the WTO accession, foreign financial institutions will receive a national treatment. The state-owned banks and insurance companies will lose their existing protections. Therefore, the competition in China's financial market is expected to be very strong.

Financial sector and the state-owned enterprises (SOE) are the two important and unaccomplished areas of reform in China's transition from a planned economy to a market economy. For a long time, the high ratio of non-performing loans in China's banking sector has attracted many attentions.⁷ The state banks have heavy burdens of policy lending. Meanwhile, the monopolistic nature of the state banks results in low efficiency in their operations. The overall quality of China's banking industry is poor and not competitive. In fact, China did not have a clear direction of financial reform until 1994. Since then, the four state banks have attempted to move their operations towards commercial banking. China has also set up a number of other regional and nationwide banks. In addition, the government issues more licenses to domestic insurance companies. The government has also had a better understanding of the possible roles of equity market for the SOE reforms and for China's economic development.

After the WTO accession, the four big state banks' monopolistic position will cease to exist. The asset values and business volumes of these four banks are no larger than other major foreign banks. Their operations and techniques are not as advanced as the overseas banks. Therefore, foreign banks have the ability to bring a large enough shock wave to end the monopolistic nature of China's banking industry. Of course, the local banks, especially the four state banks, have developed for years a relatively complete service network. Therefore, they still have an advantageous position in this regard. How long this advantage can be maintained depends on whether local banks can learn from foreign banks, improve their services, and become competitive. This advantage, however, has its limitation. China's banking business concentrates in the developed, coastal regions and major cities. Foreign banks can easily open branches in those areas. They will first compete for the high profits, low costs, and less risky business, such as international clearance. Data show that foreign banks have already handled over 40% of China's trade settlements.

Foreign banks and other international financial institutions appear to be very attractive to domestic customers, because of their quality and efficiency of services, complete range of financial products and innovations, and sound financial foundation. Therefore, it is inevitable that certain business will shift from domestic banks to foreign banks. Those foreign enterprises in

⁷ Lardy (1998) estimated that about 50 percent of the outstanding loans of the four big state banks was non-performing loans. However, the most accepted figure among the Chinese banking officials is 25 percent, which is still higher than the levels of non-performing loan in Thailand, Korea, and Indonesia before the financial crisis in 1997.

China are even more prone to do so because of their familiarity with foreign banks' operations. In the loan business, foreign banks depend mainly on customers' credit ranking and ability of repayment. Because of the transparency and efficiency of their business operation, good state-owned and private enterprises as well foreign enterprises are inclined to borrow from foreign banks. Foreign financial institutions also have advantages in other business, including discount of promissory notes, insurance, and security investments.

The other competition in financial sector will be in the saving deposits business. State banks' financial resources come mainly from domestic households and enterprises' deposits. One frequently raised concern in the domestic discussion of the WTO accession is whether or not the deposits will be relocated in a large amount to the foreign banks. Some fears this possibility would happen because of the concentration of deposits in a small percentage of wealthy depositors. It is argued that they are likely to relocate their deposits to foreign banks because of both foreign banks' better services and sound financial positions. The state banks' problem of high ratio of non-performing loans would be exposed if the relocation occurs. This incidence could lead to bank runs and other crisis, if handled inappropriately, which could in turn accelerate the relocation of deposits and further weaken the state banks. The survival of many SOEs depends on the continuous supports of loans from the state banks. If such a scenario occurs, the four state banks will not have the means to support the SOEs. Many of those poorly performed and inefficient SOEs would go bankrupt. In my judgement, such a doomsday prediction will not occur because of the recent change of policy from an anonymous banking to a real-name banking. The reallocation of deposits from the state banks to foreign banks will reveal those wealthy depositors' identities, an undesirable situation to them. Therefore, the competition among state banks and foreign banks for deposits is likely to be on the new stream of savings instead of those savings already in the state banks.

It is undoubted that the WTO accession will bring competitive pressure to the financial sector in China. Foreign institutions can bring in advanced management skills and business practices. If China's financial institutions can master the advanced business practices, develop new financial products, improve service quality, and cut down operating costs, Chinese financial institutions should be able to compete with their foreign counterparts. They need to do the above reforms in order to survive. Therefore, the pressure from the WTO accession will be beneficial to the development of China's financial sector, enabling the sector to provide more efficient and convenient services to customers, and benefiting China's overall economic growth.

China will relax the entry restriction on financial sector after the WTO accession, which will not only allow foreign financial institutions to enter China's financial market, but also provide

opportunities for other domestic financial institutions to develop. The latter possibility is especially important for China's long-term development. After the WTO accession, the Chinese government will not have enough means to support the non-viable big SOEs. Chinese economy will have to develop more closely along the line of China's comparative advantages, at this stage of economic development, namely, more labor-intensive industries (Lin et al. 1996). Most enterprises in the labor-intensive industries are small- and medium-size. The best institution for serving their financial needs is the local, small- and medium-size banks (Lin 1999). In the past, the government suppressed the development of local, small- and medium-size banks to favor the development of the four big state banks. The financial needs of the small- and medium-size enterprises were under served. The WTO accession will provide a better opportunity for the small- and medium-size bank to develop, which in turn will facilitate the growth of small- and medium-size enterprises and enhance Chinese economy's competitiveness.

IV. WTO Accession and SOE Reform

It's evident that the enterprises are the ultimate bearers of the possible shock brought by WTO accession. The state-owned enterprises (SOEs) are among the least efficient enterprises in China. There exists a possibility that SOEs may be forced to reform and achieve a successful transformation. The question is what are the challenges and how to achieve successful reform within the grace period before the abolishment of protections required by the WTO agreements.

IV.1. The viability problem and the challenges of WTO Accession to SOEs

The tradable sectors will be the first to be affected by the WTO accession. China's endowment structure, relatively scarce in capital and natural resource and relatively abundant in labor, will not be changed in a short run. Therefore, China has comparative advantages in labor-intensive industries and in labor-intensive segments of capital-intensive and natural resource-intensive industries. Meanwhile, China has comparative disadvantages in industrial segments, which are too capital intensive or natural-resource intensive. This is a basic fact that we need to bear in mind when we try to analyze the impact of WTO accession.

Many studies have found quite a few large SOEs have such a viability problem that they cannot survive without a monopoly position in the market or the government's policy support or

subsidies. It is true that the government's protections reduce SOE's incentives to improve their efficiency. However, the reason that the government is willing to give SOEs protections is because of the SOE's innate viability problem. In order to understand the likely effect of WTO accession on SOEs and the required reforms, we need to find out why the SOEs have an innate viability problem. If this innate problem is not resolved, the government needs to give SOEs explicit or implicit protections/subsidies unless the government allows SOEs to go bankrupt or close down.

The fundamental reason that many SOEs are innately nonviable is because they are in industrial segments where are not the economy's comparative advantage (Lin and Tan 1999, and Lin 2001a).

Whether an enterprise needs governmental and other non-market supports, among other reasons, depends on the industrial segment in which the enterprise operates. An economy consists of many industries, which could be ranked in terms of their capital-intensities or labor-intensities. For instance, overall, the iron and steel industry is relatively capital intensive, while the textile industry is relatively labor intensive. What's more, each industry itself can be divided into segments with different capital intensities or labor intensities. For example, the production of IC chips is a relatively capital-intensive segment in a computer industry, while the assembly of chips and other components into a computer is a relatively labor-intensive segment. In the textile industry, the mechanical spinning and weaving is a relatively capital-intensive segment, while the making of clothes from outsourced raw materials and fashion design is a relatively labor-intensive segment. It is noteworthy that the capital-intensity of a capital-intensive industry's labor-intensive segment is often lower than that of a labor-intensive industry's capital-intensive segment. A normally managed enterprise is viable if it can survive in a competitive market without external assistants. In an open, competitive market, a normally managed enterprise will be viable only if it is operated in an industrial segment in which the economy has comparative advantage (Lin 2001a). This is because, in an open, competitive market, if an enterprise operates in an industrial segment,

which is not the economy's comparative advantage, the enterprise will have a higher production cost and will not be able to compete with foreign enterprises from countries where they have competitive advantages in this industrial segment. Under such conditions, the enterprise can survive only if the government gives it a monopoly position, preferential policies, or subsidies.

Many large SOEs were set up for the purpose of catching up and overtaking the industrial/technology structure of the developed economies (Lin and etc, 1994). When the People's Republic of China was founded in 1949, in order to realize industrialization and narrow its gap with developed economies as quickly as possible, the government adopted a heavy industry oriented development strategy. As China was a capital-scarce economy at that time, the SOEs in the capital-intensive industries were not viable in an open, competitive market. The set up of SOEs was based on the government's strategy consideration and their operations were in industrial segments where they are not viable in an open, competitive market. Therefore, the SOEs carry a "strategic burden", i.e., the burden generated from the government's development strategy (Lin, et al. 1998). To make the non-viable SOEs survival possible, the government adopted a planning system-- artificially distorted the interest rates, foreign exchange rates, the prices of raw materials, the wage rate, and so on, and replaced the market allocation mechanism with administrative measures-- in order to assist the set up and operation of the SOEs (Justin Yifu Lin, Fang Cai, and Zhou Li, 1997).

China's planning system has been reformed substantially since 1978. However, SOEs still receive preferential treatment and subsidies. In essence, it is because the SOEs are still not viable in an open, competitive market. This problem will become more apparent after China enters WTO.

IV.2 Opportunities from China's WTO Accession to SOE reform:

Along with challenges, opportunities will arise as well. As mentioned in above analysis, SOEs, especially those in capital-intensive industry, need protection because they violate China's comparative advantages and thus are not viable. Considering the WTO restrictions on

governmental protection for non-viable SOEs, the government will have nothing to do but to offload SOEs' policy burdens so as to make them viable. From another point of view, the problem of China's SOEs is basically rooted in their soft budget constraint resulting from their policy burden (Lin, etc., 1997, 1998,1999). We believe that the correct resolution for SOEs' reform in the future is to eliminate policy burdens from SOEs so that SOEs have to be solely responsible for their performance in a competitive market. As a result, the problem of soft budget constraint will automatically disappear. In order to meet the challenges from China's WTO membership, provided that specific policy protection to SOEs are not permitted any more, the government has to release SOEs from policy burdens and hence make SOEs viable in a competitive market. Therefore, provided that governmental preferential policies and subsidies are not available any more, the SOEs will also have a strong incentive to force the government to offload their policy burdens. It is analyzed in detail as follows:

1) The emerging competitive markets will provide a better guide for SOEs' development

It goes without saying that China's WTO membership will help China to create a more competitive market, in which factor markets will also become much more competitive. When the domestic market is opened up to the global market, a more flexible price system, which reflects the supply and demand of commodities and relative scarcities of factors endowments in the economy, will gradually come into being. In particular, prices of tradable raw materials and products in domestic market will soon get close to the international level. With the elimination of policy burdens and price distortions, an SOE's performance will become a "sufficient information index" of its managerial performance (Lin, etc., 1997, 1998). The SOEs will be induced to choose products and production technology according to market demands and factor scarcities. After China enters the WTO, governmental interventions with the economy will disappear gradually. Meanwhile, a competitive market and flexible pricing system will come into being, shaping a sound basis for the economy to make sustainable growth in accordance with its comparative

advantage. Needless to say, for SOEs' part, this is also the sound basis to achieve their current reforms and future developments.

2) The inflow of foreign capital and technologies will improve SOEs' viability

For non-viable capital-intensive SOEs, if their products have a large domestic market, the way to make them viable is to get access to foreign capital through joint ventures or listing in foreign capital markets. Since foreign capital has a comparatively lower cost in its home country, to use foreign capital may relieve China's constraints on adoption of capital-intensive technology or production of capital-intensive products due to the relative scarcity of capital. China's WTO membership will enhance foreign investors' confidence in China's regulatory environment and economic growth, attracting more foreign capital inflow. This is helpful for China to resolve the SOEs' viability problem⁸.

Currently, China has attracted the largest amount of foreign capital among developing countries. Foreign capital inflow in general comes with new technology. After China enters the WTO, China will follow WTO rules. Foreign enterprises will have more confidence in making direct investments in China. It is hence supposed that foreign capital will inflow more rapidly. It will provide more opportunities for SOEs to get access to foreign capital and improve their viability.

3) The development of labor-intensive industries provides more opportunities for SOEs' restructuring

The WTO accession will bring about not simply domestic competition pressures, but foreign export markets, to China. In the markets of other WTO member countries, China's products will meet no more prohibitive tariff, or non-tariff trade barriers, etc. All sorts of unfair treatment will be removed. For instance, there will be a better dispute settling mechanism for trade issues, a much lower tariff and non-trade barriers to China's exports, etc. The "multiple Fiber Agreement (MFA)",

⁸ There are two approaches to import foreign capital. First, foreign capital is directly injected into SOEs. As a result, the proportion of state owned equity shares would correspondingly decrease. The other is to make swaps between foreign capital and state owned equity shares. Consequently, the state owned shares decrease with the enterprise's total capital unchanged.

which restricts China's fiber-product exports to developed countries, will be phased out gradually. That is, industries in line with China's comparative advantage, including textile and garment industry and household electronic appliances industries, will be greatly promoted. According to Table 4, the revealed index of comparative advantage of China's labor-intensive industry is always on the rise⁹. It demonstrates that currently in the international market China's products of labor-intensive industries are very competitive¹⁰. A large amount of empirical researches and model simulations have shown that after China enters the WTO, China's textile industry will take a larger market share in the international market and provide more employment opportunities.

For those SOEs that have limited domestic markets for their products, the only way for them to become viable is to change their production lines to other products, which have large markets and at the same time are consistent with China's existing comparative advantage. Since the future of labor-intensive industries is very promising after China enters the WTO, the WTO accession provides SOEs with a bright future for shifting their production lines to the labor-intensive industries. In addition, in view that costs of restructuring is unaffordable by the government, it is also necessary to utilize foreign capital. The WTO membership will facilitate SOEs obtaining foreign capital for the purpose of restructuring.

IV.3. WTO Accession: the turning point for accelerating China's SOE reform

How large the impact of WTO accession on China's economy depends on whether China will reform its SOEs in a right direction during the grace period before China abides by the whole set of WTO rules. Therefore, the chance hereby should be sufficiently used by the government for the sake of SOEs' reform.

1) Giving up the unrealistic thinking and practice of Overtaking Strategy

The harm of traditional thinking and practice of the heavy industry-oriented strategy have

⁹ Since 1978 when China began to reform, the rising trend of the revealed comparative advantage index of China's labor-intensive industries is in a great degree a sort of remedy to the traditional strategy of economic development. However, the still rising trend doesn't mean it will last without end. With more and more capital accumulated, the index of China's labor-intensive industries will gradually fall, meanwhile that of capital-intensive industries will gradually rise up.

¹⁰ Of course we have to take into account of the effect of tariff rebate to import goods. However, the comparative advantage of China's labor-intensive industries is still undeniable even if this effect is eliminated.

been widely recognized in China. However, soon after it becomes clear that China will enter the WTO, the traditional thinking turns to revive in new forms: going after advanced technology and increasing enterprises' scale via non-market measures. The intention to develop economy is good; the practice based on the above ideas is rather bad, however.

A more advanced technology level in some specific industry doesn't necessarily suggest anything about the whole economy's technology level. To catch up with more developed economies in terms of technology level means reaching a comparable technology level on the whole, but not in one or two specific industries only. Meanwhile, since an economy's technology level as a whole is determined by its factor endowment structure, it is accordingly of first importance to upgrade its factor endowment structure. Herein the factor endowment structure refers to the relative scarcities between land (natural resources), labor, and capital. Since land is given, an economy's factor endowment structure primarily depends on the relative scarcity between labor and capital, in other words, capital per capita. Capital accrues to an economy from residuals generated by this economy. The more residuals are generated and saved, the quicker the economy's factor endowment structure will be upgraded. If an economy develops in accordance with its comparative advantage, the whole economy will gain its competitive edge as much as possible both in domestic and international markets, increasing its market share as large as possible, and achieving its economic residuals as much as possible. That is, its factor endowment structure can be upgraded as fast as possible. As a result, a developing economy is able to narrow its gap with developed economies as fast as possible with good use of its existing comparative advantage. When Japan and Asian Four-Tigers carried out their industry and technology upgrading, they followed closely the dynamic change of their comparative advantage, which was determined by the upgrading of their endowment structures. This is the key reason why they had transformed themselves into Newly Industrialized economies successfully and caught up with other developed countries after World War II. For other economies, including socialist economies, however, they

usually ended up suffering from their burdensome economic problems and failing to achieve their development objectives because of attempting to defy their comparative advantages¹¹.

To some extent it can be asserted that it is exactly from their technological gaps with developed economies that the developing economies get their commodious space to make rapid and sustainable economic growth. A case in point is, the technological gaps provide a possibility for Japan and newly industrialized economies in East Asia to have a 40~50 year period of rapid economic growth by borrowing technology from the advanced countries. There is no need for less developed economies to make enormous investments in R&D to have technological innovations. The task for less developed economies is to import appropriate technologies, which have shown their potential business value and are consistent with their comparative advantages (Lin 1999a, 2001a). In the meantime, these technologies to be imported usually have lost their competitive edge in developed economies for they don't conform to their economies' comparative advantages any longer. Provided appropriate technologies were introduced and comparative advantages are used to the fullest extent at each development stage, residuals would be maximized and accumulated. China's growth potential in the following 20~30 years would be also rooted in its technological gap with developed economies. Only when technologies in accordance with China's comparative advantages are introduced at each stage of development, maximum amounts of profit will be obtained, resulting in quick enough upgrading of China's factor endowment structure to narrow the endowment gap between China and developed economies. With the gap of factor endowment structure reduced, the gap in terms of overall technological level and industrial level can be reduced, too.

At the same time, an enterprise's large scale is not a necessary precondition for competitiveness in the market; instead, the scale should be endogenously determined by market competition. An enterprise's competitive edge depends on its cost level, not its scale. Furthermore,

¹¹ Justine Yifu, Lin, Cai Fang, Li Zhou, "Comparative advantage and development strategy: a re-interpretation to 'East Asia Miracle'", China Social Science, No5, 1999.

its cost level is in essence determined by how much the capital intensity of its technology is consistent with its factor endowment structure. A large scale may be economical, or not, depending on the characteristic of related industries, technologies, and markets. The large scale of multinational companies is usually an associated result of horizontal integration, vertical integration, and operational diversification. Horizontal integration is aimed at achieving an optimal economic scale for one product. Vertical integration is for the sake of overcoming possible transaction uncertainties between upstream and downstream enterprises. Operational diversification is used by highly capital abundant and large-scale enterprises to create a product portfolio thereby reducing the risk from only a single product. In China, most enterprises will be located at labor-intensive industrial segments for quite a long time in the future. For labor-intensive industrial segments, since the optimal scale of an enterprise tends to be relatively small, horizontal integration is not very meaningful in most cases. And, in view of the loose connection between upstream and downstream enterprises, there seems also no apparent necessity for related enterprises to make large-scale investment for the purpose of vertical integration. Finally, the comparatively easiness for enterprises to make product adjustments makes it unnecessary to have product diversification. Conclusively, it is unreasonable to radically enlarge enterprises' scale in China.

It must be based on market principles to develop advanced technologies and enlarge enterprises' scale. That is, it is the enterprises themselves that ought to be responsible for related decisions considering their operational needs and price signals in the market. Meanwhile, any governmental enthusiasm for helping the shoots grow by pulling them upward will only spoil things. The contrast between South Korea and Taiwan Province is a good case in point. Before the 1970s, both economies' comparative advantages lied in labor-intensive industries. In the 1970s and thereafter, the two economies adopted different development strategies. South Korea government decided to take preferential measures to zealously support capital-intensive large-scale

conglomerates. In the meantime, it is comparatively labor-intensive industries that were developed in Taiwan province. Since Korea's enterprises heavily disregard their comparative advantages, their competitive edges were undermined by their burdensome capital-intensities, resulting in a lower profitability and higher leverage ratio (liability relative to asset). When the Asian Financial Crisis occurred in 1997, large Korean conglomerates were heavily damaged. Conversely, in spite of their much smaller scales and relatively higher labor-intensity, enterprises in Taiwan province demonstrated a strong competitive edge and better profitability. Not surprisingly, Taiwan's enterprises weathered the crisis in a much better shape (Lin 2000).

Take China's auto industry as another example. It is definite that some enterprises will have to close down after China enters the WTO. Does this mean that these enterprises should go all out making new investments for technologies currently applied in developed countries? Or making mergers and acquisitions so as to form giant enterprise groups? Or is there some other way out? A hint may be found considering the contrast between Korea and Taiwan. Korean-made cars have managed to wedge into the US market at the cost of colossal explicit and implicit subsidies from its government. In other words, the Korea government is using its domestic taxpayers' money to subsidize the US's car consumption. For Taiwan's auto industry, however, it mainly produces auto parts and obtains considerable profits. Therefore, a large part of China's auto enterprises could turn to produce auto parts for domestic and foreign automakers and develop in this way.

2) Promote interest-rate liberalization and reform existing financial system

In spite of the remarkable development of the market system, China's capital market, especially its indirect financing institutions, have still failed to make substantial progress. Credit extension and interest rates have not been liberalized. The underlying reason, as analyzed before, is to protect SOEs. However, here is a self-enforcing vicious feedback: the lower the SOEs' competitiveness and viability, the more protections they will need; furthermore, the more protections they get, the less incentives they will have to improve their competitiveness and

viability. Since China is capital scarce, the implications of interest rate liberalization in China is self-evident: it is not simply a problem of the state-owned financial sector's self-survival, but also a problem whether or not China's economy is able to grow in accordance with its comparative advantage in the long run. So, interest rate liberalization is a must-be choice. As for SOEs' viability problem, it has to be resolved with other measures.

Specific industrial structure requires a corresponding financial system (Lin, 1999b). In developed economies, the dominated enterprises are capital-intensive and technology-advanced large-scale ones. Correspondingly, there are highly developed financial systems composed of stock market, corporate-bond market and big commercial banks. In China, however, the dominated enterprises are labor-intensive small and medium ones, which correspondingly requires a financial system mainly composed of small and medium commercial banks. In view of China's current financial system based on four big state-owned commercial banks, it is not suitable for the development of labor-intensive industries. For small and medium enterprises, on the one hand, the cost to get listed in stock market is prohibitively high; and on the other hand, big commercial banks have an inherent discrimination against small and medium enterprises. In spite of the establishment of related credit departments for small and medium enterprises at the four big state-owned banks, it remains hard for small and medium enterprises to get loans from these banks. After China enters the WTO, the government should reduce its intervention in the domestic banking industry and encourage the development of small and medium commercial banks for the sake of the development of labor-intensive small and medium enterprises, which are consistent with China's comparative advantages.

3) Restructure SOEs' industries and regional locations in accordance with comparative advantages:

The key for SOEs' to improve their viability is to restructure their production according to market signals and China's comparative advantages. For the government, the tasks in the first

place are to offload SOEs' policy burdens and to put the pricing system in order. Accordingly, preconditions will be created for SOEs to restructure their industrial and regional allocations for the purpose of improving their viability and competitive edge.

For a few enterprises essential to national defense, their high-level capital-intensity is necessary for production and it is impossible for them to become joint ventures or to list in foreign capital markets. The policy burden derived from their high-level capital-intensity needs continuously to be fiscally subsidized. Except for these few enterprises, other SOEs can be divided into three categories and be reformed separately:

(1) Changing production lines. For SOEs without a large domestic market for their products, they ought to change into industries, which have large domestic market demand and at the same time are consistent with China's comparative advantages. (2) Regional restructuring. Regionally, coastal provinces are more developed and more capital abundant than hinterland provinces. The regionally sound industrial structure in accordance with comparative advantage is, the capital-intensity of enterprises in coastal regions should be higher than that of enterprises in hinterland regions. Specifically, after China enters the WTO, coastal regions would be responsible for absorbing new applicable foreign technologies. In the meantime, because of economic development, the upgrading of factor endowment and the increase of labor cost, some enterprises of labor-intensive industries, including textile industry and other light industries, become non viable in coastal regions and need be relocated to hinterland regions for the sake of being viable again. With further economic development and capital accumulation, factor endowment structures in both coastal regions and hinterland regions will be further upgraded. In this process, coastal regions will introduce new higher-level technology-based industries while transferring industries, which have become comparative disadvantages due to upgrading of the factor endowment structure, to hinterland regions. This layered industrial distribution is the basic way for China to carry out its strategy to develop its hinterland regions' economy proposed by the Central

Committee of Chinese Communist Party. That is to say, for labor-intensive industries, which lose comparative advantages in coastal regions, they may be transferred to hinterland regions, for a regional restructuring with their sufficient labor supply and comparatively lower labor costs. (3) Using foreign capital. For industries and enterprises, which have promising domestic market demands but are not viable due to its over capital intensity, the way out is to form joint ventures with foreign enterprises or to list in foreign capital markets. Consequently, their viability could be improved.

4) An appropriate policy for guiding foreign investment's inflow

Capital is currently the scarcest factor of production in China. In the past 20 years, a large amount of foreign capital inflow has greatly expedited China's economic growth. After China enters the WTO, foreign capital inflow is anticipated to increase further. However, it should be recognized in the wake of the 1997 Asian financial crisis that proper regulation is more than necessary. The key issue is still how to regulate foreign capital's structure and inflow in accordance with the principle of comparative advantage (Lin, etc. 1999).

First of all, foreign capital's structure should be long-term FDI based. Industries that are apt to produce exceptional bubbles during economic growth include real estate and security market, which are characterized by their comparatively inelastic supply and tremendous attractions for hot money. With the magnification effect of large amount short-term hot money into these sectors, the economy tends to be excessively prosperous or depressive during corresponding economic boom or bust stages. Therefore, proper regulations should be imposed on short-term foreign capital inflows into enterprises, including SOES, in domestic real estate and security markets. Instead, long-term FDI usually introduce not only capital, but also technology, management and markets as well. Long-term FDI has significant effects on the economy, while not so easy to incur abrupt reversion of capital inflow and outflow. As a result, FDI should be the main form of foreign capital inflow.

Secondly, foreign capital should be channeled to fill the gap between the technology level of SOEs and China's factor endowment structure. Currently, some governmental departments and local governments crave for a few enterprises with extraordinary large-scale and advanced-technology. Korea's experiences have given us a good lesson in this aspect. This kind of concept and practice is very harmful and should be corrected as soon as possible. That is, on one hand, part of the foreign capital should be channeled to some SOEs, making these SOEs able to carry out their industrial and regional restructuring according to their comparative advantage. On the other hand, foreign capital should also be channeled to local industries in accordance with local comparative advantage, paving the way for a sustainable economic growth of the local economy.

V. Concluding Remarks

In this paper, I have analyzed the potential impacts of WTO accession on Chinese agriculture, financial sector, and SOE reforms. China's agricultural agreement of removal of trade barriers, elimination of export subsidies, reduction of tariffs, and import of grain seem to have given the Chinese general public the impression that China has given in too much to outside pressures on a weak sector in Chinese economy. However, the above analysis shows that the accession to the WTO will actually do more good than harm to Chinese agriculture. The agricultural agreement actually is, using a Chinese proverb, "*shu le mian zi, ying le li zi*" (losing the face but winning the substance).

Regarding the impacts of WTO accession and subsequent entry of foreign financial institutions on China's financial sector, it is no doubt that there will be a strong competitive pressure on China's inefficient financial sectors. Chinese government needs to abandon inappropriate administrative interventions that have been implemented for a long time and adopt policies that conform to the normal practices of a market economy. Financial regulations need to be strengthened and become transparent. Interest rates need to be liberalized and determined by markets. The Treasury bond market and the central bank's open market operation will become normal. The restructuring is likely to result in a rapid development of efficient financial institutions and the defeats of inefficient ones. It is predictable that both the financial institutions and non-financial enterprises in China will have a more stable, transparent, and predictable business environment after the WTO accession. This new development will create a favorable milieu for a sustainable dynamic growth in Chinese economy.

Finally, in this paper, I argue that the problem of SOEs, especially the large-scale SOEs, is

rooted in their choices of technology and industry, which deviate from China's comparative advantage and make them not viable in an open, competitive market. Therefore, the government created a whole set of price distortions and relied on administrative measures to subsidize and protect the SOEs in order to compensate for the "strategic burden" arising from SOEs' industry/technology choices. The ultimate way out for the SOEs is to restructure their technologies and industries according to China's comparative advantage so that they can be viable in a competitive market. The WTO accession will deprive the Chinese government's means to subsidize and protect SOEs. Therefore, the WTO accession will prompt the Chinese government to adopt reform measures along the lines suggested in the paper in order to make SOEs viable. In effect, the 10th Five-year Plan adopted by the Chinese government in March 2001 has embraced all the reform measures suggested in the paper (Lin and Liu 2001). It can be expected that, with the suggested reforms, many SOEs will become competitive in the globalized markets after the accession to the WTO.

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