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1996

Online at <https://mpra.ub.uni-muenchen.de/41215/>
MPRA Paper No. 41215, posted 15 Sep 2012 20:45 UTC

Chapter Two

China's Economic Reform and Smooth Institutional Transition — A Three-Stage Economic Reform Method

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ABSTRACT

This paper addresses the methods of state-owned enterprises' ownership reform and the smooth institutional transition of the economic system in China. By using the theory of endogenous ownership arrangements developed in Tian (1995), a three stage method of China's economic reform will be provided. It will be shown that a smooth institutional transition to a market economy needs to go through three stages: (1) economic liberalization; (2) marketization; and (3) privatization. In the first stage, the entry and competition of enterprises of all kinds of ownership make the non-state owned sector of the economy develop quickly. In the second stage, competition among enterprises of all kinds of ownership, and the introduction and development of the market system lead to a reduction of state-owned enterprises. In the third stage, state-owned enterprises will face large scale bankruptcy and privatization. The first stage began with rural economic reform in China in 1979. The second stage began in 1992. The third stage has not begun and should not be expected to begin too soon. It is preferable that the third stage does not start taking place for about 5-10 years until the non-state owned economy has become a large proportion of the economy, say above 80 percent of GNP, and the social security network is almost completed.

I. Introduction

Now is a critical time for China's market-oriented economic reform. The economic reform that began in 1979 has achieved great success, resulting in very impressive changes in China's economic situation. Economic reform in the past 15 years has brought a high rate of economic growth and a dramatic rise in the standard of living in China. From 1979 to 1994, the annual rate of increase in GNP has been 9.5 percent. This figure is larger than that of any other country during the same period, and may be without precedent in Chinese history. Currently, China looks like a work-site. Construction of infrastructure and buildings is taking place all over the country. Markets are prosperous and commodities are abundant everywhere.

Great progress has also been made in reforming the economic system. To some degree, economic freedom, acknowledgment of personal interests and benefits, adoption of decentralized decision making, and the introduction of various incentive mechanisms became acceptable. Numerous forms of non-state ownership, including collective enterprises, private enterprises, township-village enterprises (TVEs), foreign capital funded enterprises, and joint ventures have prospered and, in turn, have changed the economic system drastically. The total GNP share of state-owned economies has been dropping quickly. The economy has changed from a mainly publicly owned, central command system to a mixed-ownership system with the non-publicly owned sector producing around 60 percent of the total GNP. From the data released by the state-owned statistics bureau, China Information, the state-owned proportion of industrial gross product decreased from 78.5 percent in 1979 to 52.4 percent in 1991. The decrease indicates a 2 percentage point annual drop. This trend has accelerated to 4.8 percentage points in 1992 and 4.1 percentage points in 1993. The proportion of GNP produced by state-owned enterprises has decreased to 44 percent by 1993, while the non-state owned sector has become the main driver of the Chinese economy. In 1992, the investment in the non-state owned sector was only 25 percent of total investment, but this sector accounted for 69 percent of GNP growth.

In addition, China has made remarkable progress in introducing market systems. For example, the prices of most

commodities are determined by market forces. So far, the reform has helped lay the basis for total marketization and privatization of publicly owned enterprises, which will accelerate the process of institutional transition. During the 14th National Congress of the Chinese Communist Party held in 1992, the decision was reached that China will adopt a market economy, which cleared the ideological road block for adopting that type of a system. All of these facts indicate that the transition of China's economy to a market system has so far been successful both in results and the experience obtained from the process.

However, as the reform process accelerates and deals with deeper issues, the difficulty of bringing forth change increases. Many fundamental problems arise that must be solved so that they do not block or slow down the transition process. Some of these problems existed before the onset of reform, but others arose during the transition process. These problems include, (1) the primitive nature of the current market system; (2) the inability of prices to fully reflect the economic relations involved; (3) the imperfection of macro regulating and controlling mechanisms; (4) the lack of a modern enterprise system; (5) the severity of crises facing state-owned enterprises that bring increasing burden to the country's economy; (6) the severity of government fiscal deficits; (7) the existence of many leaders who are slow and, in some cases, reluctant to learn how to operate in a market economy while resorting to old planning methods to solve economic problems; (8) the social instability caused possibly by unemployment and inflation; (9) the imperfection or lack of laws and regulations governing labor and financial markets, property rights, and social security and welfare systems; and (10) the unfair competition resulting from imperfect markets and legal systems during economic transition. Also, some people are able to take public properties under their control through their connections or through embezzlement.

Among the problems mentioned above, the most noticeable involve the losses incurred by state-owned enterprises. China's state-owned enterprises currently have a capital stock of 2 trillion RMB, excluding the value of the land and real estate they occupy. Nevertheless, their losses are extremely serious. In 1992, one third of the state-owned enterprises were suffering losses. In addition,

approximately another one-third of the state-owned enterprises barely broke even. However, according to the data released from the recent National Changing Losses for Profits Working Meeting, among the "in budget" state-owned enterprises alone, over 16,000 enterprises suffered losses in the first half of 1994, 15.5 percent more than the previous year's losses, with the total proportion of losses reaching 46.3 percent. The total loss amounted to 21.97 billion RMB, 26.8 percent more than the previous year's losses and 7 times more than the 2.678 billion in losses during 1985. In terms of industrial growth, state-owned enterprises have a share of only 6.6 percent, while non-state-owned enterprises have the remaining share of 93.4 percent. Due to the large scale losses during several consecutive years, the state-owned enterprises can hardly contribute to the government's revenue. Moreover, they have become a severe fiscal burden to the country, like a bottomless hole, that goes beyond the country's economic capacity. For example, the proportion of state-owned enterprises suffering losses was almost 50 percent in the first season of 1994, which is double that of non-state owned enterprises. Furthermore, these suffering state-owned enterprises require a government subsidy totaling 15.7 billion RMB. The employees of many of these inefficient state-owned enterprises are living below the poverty line with a very low "basic wage," and sometimes only 60 percent of that wage. After the reform in the wage system of the non-production public sector, these employees ended up with the lowest wages among all types of occupations. Specifically, their wages average about 200 RMB a month, just half of those in the non-public enterprise sector. Life is extremely hard for them.

Finding a solution to the problems of state-owned enterprises has been an important topic, drawing much public attention. Many policy makers and economists suggested large-scale bankruptcy or privatization of the state-owned enterprises suffering losses. However, first one must ask if such a solution is the key to China's economic reform, and if the conditions required for large scale bankruptcy have been satisfied. Then, a greater understanding of the possible impact of many unemployed workers to the country's social stability is necessary. Finally, the main blockades to enforcing bankruptcy must be considered and evaluated.

Since many problems need to be addressed during the transition period, they need to be prioritized and analyzed in turn. In doing so, many factors such as, the risks involved, the feasibility of change, social stability, the timing, and the capability for change need to be taken into consideration. The economic and political environment, historical traditions, the cultural background, and the social structure must be considered. Furthermore, the methods for achieving reform must be evaluated in terms of the speed of economic growth and the rise in people's living standards that they can provide. Only after taking into account the factors mentioned above, can one propose a proper method of reform.

The author believes that the most fundamental strategic issue to be considered is choosing a method of transition, which is closely related to choosing a method of ownership reform for state-owned enterprises. The methods chosen for these important issues will determine the success and difficulty of reform. Therefore, this article focuses on possible solutions to these issues by using the theory of endogenous ownership arrangements developed by Tian (1995). Although other issues may also be important, they are only tactical because they are limited to specific stages of reform. For discussions of these issues, see Hussain (1994); Jefferson, Rawski, and Zheng (1992); Jefferson and Rawski (1994); Perkins (1994); Summerfield (1994); and Tian (1994b, 1994c, 1994d) among many others.

Under the requirements of optimal ownership arrangements and the social stability in the transition period, a three-stage method for China's economic reform is needed to guarantee the economy's smooth transition to a market economy. These three stages are: (1) economic liberalization; (2) marketization; and (3) privatization. In the first stage, the creation and competition of enterprises of all kinds of ownership make the non-state owned sector of the economy develop rapidly. Such growth guarantees the lasting development of the economy, which, in turn, provides the material base for the reform in later stages. At the same time, such growth raises the people's sense of participation and wins their support. In the second stage, continuous competition among enterprises of all types of ownership as well as the introduction and development of the market system induce a reduction in the number of state-owned enterprises since their human, capital and

technology resources drain. In the third stage, state-owned enterprises will face large scale bankruptcy and privatization.

The first stage began with the rural economic reform in 1979. The second stage began on or about 1992, marked by the resolution on marketization by the 14th National Congress of the Chinese Communist Party. The third stage has not yet begun and I do not think the time is yet right to begin. It may be preferable to wait until a non-state owned economy represents a large proportion, say above 80% of GNP and the social security network has more or less been set up to carry out the third stage operations. I estimate that it needs 5-10 years for the third stage to begin. This is based on a 2-4 percentage point annual drop of the proportion of state-owned economy in the total economy. I will discuss the three stages in detail and explain that, under the current Chinese situation, the three stage gradual transition method may be the best one in the sense that it can make the economy grow rapidly and simultaneously guarantee relative social stability. To understand the rationality and feasibility of the three-stage transition, let us first introduce the theory of endogenous ownership arrangements for imperfect markets and transitional economies which is developed by Tian (1995), and discuss the prerequisite conditions for an economy to operate efficiently in the following two sections.

II. The Optimal Ownership Arrangements

Institutional transition is one of the hot research fields in the current economics literature. However, in the author's opinion it seems that there is no satisfactory theoretical framework extant in this field. Most of the studies in this field (and the related policy recommendations) are based on conventional neoclassical economic theory, traditional property rights theory (contractual theory), or insights provided by the theory of the firm, information economics, and mechanism design theory. Some of the basic assumptions underlying these theories are not satisfied by transitional economies. The main focus of study of these standard theories is modern industrialized economic institutions where mature market systems are well established, and where there exists a high degree of economic freedom and decentralization. A conventional wisdom from these theories is that clearly defined

private property rights are the prerequisite condition for economic prosperity. It is because of this conventional wisdom that many economists believe that *rapid* privatization is a necessary first step for institutional transition from a centralized command economy to a decentralized free market economy.

However, China's experience of rapid economic growth without large scale privatization over the past 17 years and the recent experience of sharply decreasing GNP after implementing rapid privatization in Eastern Europe and the former Soviet Union challenge this conventional wisdom. The experience of partial and gradual reform coupled with rapid economic growth in China puzzled many economists. For example, some wondered why China has grown so fast when the conditions thought to be necessary for growth were absent (Blanchard and Fischer, p. 4, 1993). On the other hand, the rapid privatization in Eastern Europe and the former Soviet Union has not been without serious problems. These countries have experienced continued economic turmoil and significant declines in output. Thus, the vigorous increase of the Chinese non-state sector operating under the constraints of poorly defined property rights and the lethargic economic performance in Eastern Europe and Russia after rapid, albeit problematic, privatization seem to contradict these theories. These examples raised some suspicions about conventional wisdom and the generalizability of the standard theories.

Indeed, the conclusion that private ownership is the optimal arrangement regarding property rights is based on a set of presumptions that are not satisfied when transitional economies and other irregular economies are involved. Standard theories assume that ownership arrangements are exogenously made, and that the economic environments under consideration are "regular" in the sense that they provide a high degree of economic freedom and decentralization. (For convenience, an economic environment will be called an irregular economic environment if it is not regular.) Also, these theories assume the existence of a highly mature and perfect market system. However, economic reality seldom adheres very closely to these assumptions. Even while these assumptions may be approximately met by modern industrialized economic institutions, they are extremely unsuitable to the institutions of command and transitional economies; economies

characterized primarily by state ownership; and economies with a great degree of government intervention that hinders many socially worthwhile transactions and restricts economic freedom. Thus, there is a need for a new theoretical framework that can be used to explain existing phenomena in the real world and provide alternatives to the selection of institutional arrangements when economic environments are irregular.

Tian (1995) developed a more appropriate theoretical framework which expands the conventional property rights theory to include irregular economic environments where economic freedom and decentralization may be bounded and markets may be absent, immature or imperfect. This new theory of property rights is more descriptive and closer to economic reality. It provides a rational interpretation of ownership and property rights arrangements, and relates a firm's optimal ownership arrangement to the degree of economic freedom, decentralization, and market perfection possible. The optimal ownership arrangement is endogenously chosen, and is based on an efficiency comparison of state, collective and private ownership.

The new property rights theory captures the crucial features of imperfect markets, bounded economic freedom and decentralization. In addition to including two usual physical factor inputs, capital and labor, this theory includes two other resources in production, management and government relations. In general, private entrepreneurs have superior abilities in management, while bureaucratic managers have superior abilities in government relations and procurement of government owned or controlled resources. Management and government relations are crucial for effective production when government intervention is high or when a market is absent or far from perfect. The status (degree) of market perfection, decentralization and government intervention is summarized by a number ρ , between zero and one, which is introduced to capture the relative importance of these two abilities. The closer ρ is to zero, the more centralized, constrained or imperfect is the economic environment. Assume the existence of three types of ownership arrangements for production: private ownership, which can take advantage of management ability; state ownership, which can take advantage of government-relations ability; and collective (mixed) ownership, which affords an

opportunity for specialization and the possibility of combining management and government relations abilities.

A basic question addressed in this paper involves the type of ownership arrangement that is relatively more efficient compared to the others in terms of the net income of an individual. Tian (1995) showed that private ownership would dominate state and collective ownership arrangements if the degree of economic freedom and decentralization is very high and if the market is close to perfect; that state ownership would dominate private and collective ownership arrangements if a high degree of economic irregularity exists; and that collective ownership would dominate state and private ownership arrangements if the degree of irregularity of the economic environment is somewhere around the middle.

III. Prerequisite Conditions for Prosperity

I should point out that the above results on optimal ownership arrangements should not be interpreted as arguing the advantages of state and collective ownership arrangements. Rather, they should be used to argue the importance of economic freedom and decentralization, and consequently the importance of improving economic environments. Although a state or collective ownership arrangement may dominate a private ownership arrangement when the economic environment is irregular, this does not mean that a state ownership or collective ownership arrangement within an irregular economic environment will dominate a private ownership arrangement within a regular economic environment. In fact, transactions in irregular economic environments carry high costs, and some extra resources, such as government relations, have to be used in such irregular economic environments. The desire to transform an economic system is not based fully on the two basic welfare economics theorems which form the theoretical foundation for economists' positive view of the market mechanism.¹ Thus, private ownership will be more efficient. To reach the efficient allocations of resources, nevertheless, one should adopt private ownership as the final goal. However, the procedure for reaching such a goal should not privatize state-owned firms rapidly. First, economic environments should be improved. For example, the four prerequisite conditions, such as acknowledgment of people's self-interest, freedom of

economic choice, decentralization in decision making, and usage of incentive mechanisms, should be improved for an economy to work well. The fact that the market system can solve many problems which cannot be solved in a planned economy is simply due to the satisfaction of the four prerequisites by a market system. We can even say that the four prerequisite conditions are the "four basic principles" for any economic system to work well.

The first prerequisite is acknowledging people's self-interest. In economics, while showing the optimality of the competitive market mechanism,² one of the most basic assumptions made is that people are self-interested (or rational) and will maximize their welfare under various constraints, such as budget constraints, price constraints, production technology, and law-policy. Human beings' self-interest is an inevitable reality. Acknowledging such self-interest is a responsible attitude toward solving problems of society. On the contrary, denying human self-interest and treating social economic problems on the basis of altruism, as before reform, has resulted in tragedy. Self-interest is the engine of economic development and social progress. The great success of the "production responsibility system" in the countryside of China lies in the acknowledgment of the peasant's self-interest or individual interest and benefit. Before using the production responsibility system, peasants were not motivated to work hard because they were worried that their own products would be shared by others; meanwhile, they were motivated to share the products of others. After using the production responsibility system, the peasants knew they were working for themselves; therefore, their production enthusiasm increased significantly.

The second prerequisite condition for an economic system to perform well is the freedom of economic choice. That is, allowing people freedom to choose among economic alternatives so long as they do no harm to others. Freedom of choice based on mutual benefits and cooperation through voluntary exchange, plays a fundamental role in an economic system characterized by decentralized decision making. Also, it is a basic requirement in achieving optimal resource allocation in a competitive market mechanism. In the past 15 years, Chinese reformers have accomplished much. Most importantly, they have loosened restrictive policies. For example, producers and consumers have

been given more freedom of choice. And, although the central government has given little financial aid to the coastal areas, these areas have been developing very fast due to relaxed economic policies.

The third prerequisite condition for an economic system to perform well is decentralized decision making. Production or consumption decisions should be made by individual producers or consumers, not by high ranking departments. Decentralized decision making is preferred because the economic information involved cannot be obtained completely by a bureaucracy. Decentralized decision making can save much of the cost of information processing and information transmission and thus, use economic information more efficiently. A command economic system uses mainly centralized decision making, while a market system uses primarily decentralized decision making.

The fourth prerequisite condition for an economic system to perform well is the introduction of various incentive compatible mechanisms. Since agents have private information and may find it advantageous to distort the information they reveal, they may use such information to advance their own interests. This implies that the basic principle of designing a mechanism, rule, or regulation with incomplete information would provide individuals with appropriate incentives so that individual interests are consistent with the goals of the organization. Better results are often obtained by using incentive mechanisms, such that individuals are motivated to act in the desired manner by the rewards they receive from doing so, rather than as a result of orders. One important problem facing an economic system is how to stimulate people's energy to work hard through institutional arrangements. If an economic system fails to stimulate incentives, but rather succeeds in producing sluggards and idlers, then it is bound to fail at some point in the future. The market mechanism solves successfully the incentive problem. The market system provides incentives to self-interested people to induce them to work for the society. This is called incentive compatibility.³ Whether or not incentive compatibility can be achieved is of concern to the fate of an economic system.

In addition, to incentive compatibility, the most salient feature of the market system is its efficiency in using information

(footnote See Hurwicz, 1986 and Jordan, 1982). In the market system, economic information can be transmitted efficiently through prices. We should point out, however, that before a market system is fully established, people should not expect the imperfect market system to solve informational problems perfectly. We must bear in mind that many problems such as unemployment, inflation and deficits on the macro-economic side and inefficiency of firms on the micro-economic side are inevitable in transitional periods. Nevertheless, we should begin the transition in good condition. Since developing new markets and establishing a mature market system are very time-consuming and costly (although untying government intervention, allowing economic freedom, and introducing incentive mechanisms may be relatively easy and less time-consuming), complete privatization is not the optimal choice for an irregular economic environment according to the new property rights theory. In the transitional period, collective ownership is a more efficient response given the current state of the transition. Only when the economic environment is sufficiently close to perfect, one can privatize state-owned firms.

IV. The First Stage: Economic Liberalization

The first stage of the transition process is characterized by economic liberalization. Much of the past 17 years in China was spent in this stage. The first step of reform is establishing and improving the basic prerequisite conditions for an economic mechanism to perform well. The reform during this stage has greatly changed the Chinese people's values, thinking and behavior. People have used their specialties and perennial networks to the best of their ability to make money. Although, some people make money through irrational and illegal ways. During this period, people have gradually come to realize that self-interest is an inevitable part of human behavior. After this reform, the people have gained freedom of economic choice to a great degree. In rural areas, peasants have had the right to use the land even though they have not been given ownership of it; hence, they can determine what products to produce. In the cities, people can choose to stay in a state-owned enterprise or can undertake the risk of working for a non-state owned enterprise. At the same time, decentralized decision making and various types of incentive mechanisms have

been adopted. Decision power has been granted to agents who are directly responsible for results. With incentive mechanisms, the individuals' goals (indirectly) serve the benefit of society as a whole. Agents work hard and effectively, because they work for themselves. These factors are the main reasons for the quick growth in the economy.

China's economic reform began in rural areas, starting with the improvement of the above four basic conditions. The reform has been characterized by acknowledging the self-interest of peasants, shifting production decision power to peasants and enhancing their incentives to work. With such reform, the production enthusiasm of peasants has increased and the Chinese agricultural situation has changed dramatically. Of course, some problems with the reform of the production responsibility system exist. The most serious problem is that peasants are reluctant to make long-term investments on land due to the short term of the contracts. This reluctance has resulted in predatory production, characterized by the decreasing fertility of the land. Thus, contracts with longer terms are needed. If the terms are long enough, the peasants, provided with the rights to use and transfer the land, will treat their rented land as if they owned it. This is true because the ownership and usage rights of land can be separated.

Since the reform has achieved great success in rural areas, it was introduced to other industries and geographic areas. For example, individual enterprises and private enterprises were allowed. Furthermore, foreign capital funded enterprises and joint ventures are not only allowed to "exploit" Chinese people, but also can enjoy some favorable treatment. In these enterprises, people's self-interest is better acknowledged, they have more freedom of choice and decision making is more decentralized than in state-owned enterprises. The result has been the prosperous development of non-state owned enterprises. The non-state sector has become the main engine of the Chinese economy. This new development is true not only for the rapid development of coastal areas, but for the whole country. In 1992, investments in the non-state owned sector was 25 percent of total investment, but the non-state owned sector accounted for 69 percent of GNP growth. This is an indirect, spontaneous and intangible transition process in which the non-state sector developed from being small to becoming large. At the

same time, the state-owned sector did not necessarily shrink. Potential conflicts between reform and the state-owned sector have been avoided successfully at this early stage. With the development of the non-state sector, the market system has developed, pushing the state-sector to improve its economic efficiency. The economy has changed from a mainly publicly-owned central command system to a mixed system with the non-publicly owned sector having a share of over 50 percent of GNP. The share of total GNP produced by state-owned firms has dropped from 80 percent in 1978 to 44 percent in 1993. How did this change happen? Does this mean that 30 percent of state-owned enterprises went bankrupt or were sold in the past 15 years? The answer is no. Actually, fewer bankruptcies of state-owned enterprises took place during this period. In fact, non-state owned enterprises have developed very rapidly, causing the change between the state and non-state sector ratio. Among those non-state enterprises, the township-village enterprises have played a very special role. The dramatic development of this group of enterprises has made it possible for the state's share of total GNP to drop 4 percentage points each year for the past 2 years. This trend can only become stronger. Today, about 70 percent of China's population lives in rural areas. It is estimated that, after China has become a modern industrial society, only about 20 percent of its population will be needed for agricultural production. As long as current policy of reform is not reversed and the non-state economy is allowed to develop, the non-state share and non-agricultural share of total GNP probably will be very high. The situation of the coastal areas of Guangdong Province represent this trend best. The percentage of people living in rural areas has dropped to 20 percent today from 80 percent before reform. This change is more significant if we bear in mind that these areas have absorbed more than 6 million people in the labor force from other areas.

V. The Second Stage: Marketization

The second stage of the transition process is characterized by marketization. China is now at this stage. Its beginning was marked by the 14th National Congress of the Chinese Communist Party's resolution on marketization. On one hand, the market oriented reform has achieved great success. As mentioned

previously, some of the prerequisite conditions for an economic system to perform well have almost been satisfied or have greatly improved. Those conditions include the acknowledgment of people's self-interest, allowance of freedom of economic choice, adoption of decentralized decision making, and the introduction of various incentive mechanisms. After these reforms were implemented, market share of non-state owned enterprises in the total economy increased significantly, as have people's ability to undergo market risks. People's demands for a complete marketization are growing. On the other hand, during the current stage of reform, as mentioned in the introduction, many problems still need to be addressed. Most of these problems are due to the imperfection of the current market system. Therefore, the completion of the marketization reform and the perfection of the market system must be under way. A perfect modern market system requires, not only flexible and open markets for all kinds of products and economic freedom, but also the cooperation of other systems, including a price system, a macro-economic regulation system, a modern enterprise system, a tax (income distribution) system, a social security system, a law system, an antitrust system, and labor and financial systems. A great deal of work remains to cultivate and perfect these systems. The only way to achieve such cultivation is by the incessant introduction of the market system. With the marketization process, the economy is characterized by the reduction of state-owned enterprises. This reduction is due to the relatively low efficiency and losses suffered by the state-owned enterprises.

Due to the marketization reform, the state-owned enterprises have to compete with other types of enterprises of different ownership types. Although, the efficiency of the state-owned enterprises has increased during economic reform, in general, it is still lower than that of non-state owned enterprises due to the vagueness of property rights, the existence of historical burdens, and the inflexibility of its market mechanism.

What methods should we adopt to solve the problem of state-owned enterprises? Large-scale bankruptcy and privatization are the most popular methods in modern transition economies. Is such bankruptcy or privatization the key to China's economic reform? Have the conditions required for large-scale bankruptcy or

privatization been satisfied already? My answer is no. We must wait for more time before resorting to these policies. In a competitive market, a firm can go bankrupt and leave its workers unemployed due to poor management, old technology, inferior quality, or bad luck. However, in a mature modern market system, this result would not induce social instability because of social security and unemployment relief systems. However, in China, no social security and unemployment relief systems exist for large-scale bankruptcy. Since the number of workers in the state-owned enterprises is large, the government has no way to finance the potential burden of unemployment without a developed labor market. But, we know that the current labor market is far from developed. Even without bankruptcy of state-owned enterprises, 12 million people need employment each year, including five million that are laid off from state-owned enterprises. Society cannot be stable with such massive unemployment. If a large proportion of people dropped in the economic-social ranks and faced hard times, they would certainly lose their psychological balance and accumulate anti-reform moods. Thus, China should be very careful when adopting large-scale bankruptcy. It would be better to postpone large-scale bankruptcy until the labor market and social security system are set up. State-owned enterprises can play a vital role of social security during this period, since those who cannot find their way into non-state owned enterprises can stay in state-owned enterprises. Although, high subsidies are needed from the government to support the state-owned enterprises which incur losses, this subsidy should be much less than that required to support unemployed workers adequately as long as the revenue of a state-owned enterprise can cover the wage part of the cost of production. At the same time, workers of state-owned enterprises should be guaranteed more freedom of choice and be encouraged to leave for non-state owned enterprises or to open their own small business.

Letting the number and size of state-owned enterprises decrease naturally without large-scale bankruptcy or privatization in this stage is, not only necessary for social stability, but also feasible. Since workers in state-owned enterprises have the right to choose whether or not to stay and workers in poorly run state-owned enterprises have the lowest wages in all types of occupations, increasing numbers of them are willing to take the risk

and work for non-state owned enterprise. This willingness accelerates the reduction in the number and size of the state-owned enterprises greatly. On my trips to China in the past, I found that a fairly large proportion of taxi drivers, individual businessmen (and women), and workers in non-state owned companies and privately owned firms were from state-owned enterprises. In addition, the capital drain from state-owned enterprises is severe, with a loss of a US \$100 million a day.

How long should we wait before using large-scale bankruptcy or privatization? I think we must wait for at least 5-10 years. First, the privatization is not the optimal choice at the current status of the transition period. The market system has not matured and economic freedom is still bounded in a great degree. According to the new property rights theory, the private ownership arrangement is not the best choice. Second, state-owned enterprises still produce around 40 percent of GNP. If China adopted a privatization process similar to those used in Europe, the production of the state-owned enterprises would certainly drop in the first few years, which in turn would result in a drop in total production. In that case, the people's living standards would drop also. Third, with the sharp reduction of state-owned enterprises, many workers would be unemployed, which would influence social stability if the labor market and social security system have not been set up. Fourth, due to China's social structure and cultural traditions, the Chinese people's psychological capability to undergo changes is not as great as that of Eastern European people. These are the main reasons, I argue, for which we must wait until the production of non-state owned enterprises has reduced a large proportion, say at least 80 percent of GNP; the country has enough comprehensive social-economic power; and the social security system has been set up, to adopt large-scale bankruptcy or complete privatization policies.

During the marketization process of the second stage, while the Chinese government allows state-owned enterprises to suffer losses with superfluous workers, the government should improve economic environments. Specifically, it should do the following: (1) allow labor motion to form the labor market; (2) set up and improve the social security system, which is a necessity for any modern market mechanism; (3) use auction, sell-out, stock cooperative or stock-sharing system to change the public

ownership of middle to small sized state-owned enterprises; (4) adopt a stock-sharing system in those large to middle sized state-owned enterprises with relatively higher efficiency; (5) try bankruptcy in a small scope for those middle to small sized state-owned enterprises with recurring and severe losses, and let them go bankrupt in the near future; (6) design appropriate incentive mechanisms to enhance the energy of managers and workers of state-owned enterprises. For instance, long-run contracts or leases should be used for middle to small sized state-owned enterprises, especially for the third industry state-owned enterprises. The results of incentive mechanism design theory tell us that, even for public ownership, efficient allocations may be achieved through some appropriately designed incentive mechanisms.⁴

VI. The Third Stage: Privatization

The third stage of the transition process is characterized by privatization. As we mentioned, we are not in this stage yet, and it should not begin on a large-scale until the non-state owned sector accounts for a large proportion of GNP, and the social security system has been set up. We now turn to the question of how China should privatize the state-owned enterprises when the required conditions are satisfied.

Influenced by the successful introduction of the contract system in rural reform, privatization was used for state-owned enterprises in earlier years. But the results were not very satisfactory. We know that property rights include two important aspects, namely the significance of ownership and the right to use that property.⁵ Well-defined property rights can offer the right incentives to the economic agents involved. In the rural reform, the right to use and own land were separated by the production responsibility system with the latter belonging to the public and the former being assigned to the peasants. With the right to use the land to their discretion, peasants were stimulated and the purpose of the rural reform was realized. In the early years of ownership reform, people used these contracts which separate ownership and the usage rights on enterprises in non-agricultural sectors, thinking that by doing so the workers' energies could also be stimulated without the loss of physical capital ownership by the state. The reasons that the results from the city reform and the rural reform

are so different, although the same ideas were used, are complicated. One main reason lies in the differences between land and other production factors. The supply of land is almost inelastic, land cannot depreciate, and the fertility of land decreases very slowly even without care. These characteristics guaranteed the success of separation between the ownership of land and the right to use land. For example, land in Hong Kong belongs to and must be rented from the government. Although, people do not have ownership, they have the right to use, the right to a return, and the right to transfer land (lease contract). Physical capital can depreciate and devalue very fast. Like machinery, the users of physical capital would have incentive to overuse it during the term of the contract without maintaining or fixing it if they do not have ownership. Since the contractor does not share much of the risk of capital loss, the initial capital investment tends to be too large (more than enough from an efficiency point of view). Given the failure of these early attempts, people realized the inevitability of ownership transformation for the state-owned enterprises.

There are many ways to make such a transformation, such as to sell-out, auction, divide-up, or use the stock market to transfer land ownership. Sales or auctions induce the complete clarification of property rights. Hence, according to the Coase Theorem, transfer can result in efficient resource allocation if the costs of clarifying the property rights are negligible. A problem with these two methods is that the productive capital would be held by only one or very few people which, due to its unequal distribution, could not be easily accepted at this stage of reform. The stock-sharing system sells the property rights to a relatively large population by selling shares, which would result in relatively equal distributions. However, still some problems with the existing stock-sharing systems exist. That is, too high of a proportion of shares with ill-defined property rights belong to the state, and have government control over personnel. Many state-owned enterprises with newly adopted stock systems are operated in much the same way as before. As a result, workers have not taken very much interest in such stock systems. Many workers were forced to buy shares of their own enterprises. They were concerned that while the state underwent all losses, it tried to have the workers share in the loss. Their anxiety is rational and reasonable, since the government

has the largest shareholder discretion over management and personnel. Managers still lack incentives to work efficiently for the benefit of the enterprises. It is true that a stock system alone cannot solve the efficiency problem, but as I proposed in previous papers (cf. Tian (1994b)), a simple and effective way to handle this difficulty exists. That is, the state's shares, no matter how large, should be seen as special shares and the persons legally standing for these shares should not take part in decisions on production activities. This means that the managers and the Board of Directors should be elected by the individual share holders. From my first-hand visits to the township-village enterprises (TVEs) in the Zhejiang Province in 1994, many TVEs seem to use methods very similar to these to set up the stock system, which obtained very good results. Such results, indirectly prove that this method should be suitable to the property rights structure reform for the state-owned enterprises.

VII. Conclusion

In this paper, we discussed the strategies of state-owned enterprise ownership reform and the smooth transition of the economic system in China. We gave the rationale for a three stage method of economic reform with some degree of "gradualism." I argued that in the early stages of China's reform, the most important and appropriate action taken was a significant improvement in the implementation of the prerequisite conditions for an economic mechanism to perform well, instead of marketization or privatization. This action was important because of the social structure, economic conditions, cultural background, historical tradition, and political stability in China. The reform must begin with the improvement of the required conditions, with no one or no sector suffering in the first place. Its positive effects can be seen immediately. To the contrary, Russia and other Eastern European countries adopted a different approach to the institutional transition. The method of reform used in Russia and other Eastern European countries, which is called "shock-therapy," privatized first, while China has not yet reached that stage. The Russian privatization reform resulted in a sharp drop in GNP in the short-run. For example, during the period from 1991 to October 1994, the GNP in Russia dropped 50 percent. The inflation has

been 16,000 percent since large-scale privatization began. So far, China's method can be characterized by a gradual transition process in which, as the market system improved, the economy grew incessantly. As long as we follow this method in the future, the economic system transition can be achieved smoothly.

I wish to thank Jim Kelley, Liqun Liu and Anne Mckibbin for research assistance, comments and suggestions. Financial support from Private Enterprise Research Center and Texas A&M University's Program to Enhance Scholarly and Creative Activities is gratefully acknowledged.

Endnotes

1. These two theorems deal with the relationship between competitive equilibria and Pareto efficiency of resource allocation. The so-called First Theorem of Welfare Economics states that every perfectly competitive equilibrium allocation is Pareto efficient in the sense that there is no alternative feasible resource allocation, leaving everyone at least as well off and making some members in the society better off. It pre-supposes the absence of externalities and a certain non-satiation property of individual preferences which implies that the desires of individuals are never satisfied. The Second Theorem of Welfare Economics states that any Pareto efficient allocation can be achieved as a perfectly competitive equilibrium allocation by an appropriate redistribution of assets. It also postulates the absence of externalities and non-satiation property, and makes several additional significant assumptions, including continuity and convexity of individual preferences. Rather, it is primarily due to the unacceptable low efficiency of the planned economy in practice. In most of this paper, the term efficiency is used in the sense of Pareto efficiency. But in the present context, it is convenient to introduce two other usages of this term. First, the term refers to efficiency within a firm. A firm is internally production efficient if no output can be increased given a level of inputs. Second, the term refers to efficiency in the aggregate of all firms in an economy. An economy is production efficient in the aggregate if no aggregate output can be increased given a level of aggregate inputs. Note that, under the assumption of monotonic preferences, Pareto efficiency implies internal production efficiency and aggregate efficiency, but the converse may not be true because production-efficiency does not take into account consumer preferences. Hence, the "wrong" goods might be produced in a production-efficiency manner, thus misallocating resources. Also, aggregate production efficiency implies internal production efficiency but not vice versa. Each firm might be internally production efficient without maximizing the aggregate outputs for the given aggregate input levels. This paradox would happen if firms with low productivity were producing goods that other firms with high productivity can produce.

2. See Varian 1992

3. This terminology is widely used in the mechanism design literature. Incentive compatibility is a basic requirement for an incentive mechanism. For the discussion of this concept and the design of incentive mechanisms under various types of ownership, see Hurwicz (1972), Groves and Ledyard (1979), and Tian (1989, 1990, 1991, 1994a).

4. See Hurwicz, 1979; and Tian and Li 1994, 1995).

5. For detailed discussions, see Alchian and Demsetz (1972), Demsetz (1972), and Furubotn and Pejovich (1974)].

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