

MARKET SOCIALISM AND
ECONOMIC DEVELOPMENT IN CHINA

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"Can socialism work? Of course it can." Joseph A. Schumpeter, Capitalism, Socialism and Democracy (Harper & Brothers, 1947), p. 167.

"I have always said that if any country in the world can make communism work, China is the country, but I do not believe it can either." Milton Friedman, "The Invisible Hand in Economics and Politics," Academia Sinica lecture, Taipei, 1981.

Can socialism work in the promotion of a fairly rapid rate of economic development in China? I think it can. Socialism did not work satisfactorily in China from 1949 to 1978, according to the consensus of the Chinese people and their political leaders who embarked upon major economic reforms in late 1978. However, it can and is likely to work in the second and third decades after the economic reforms. In Section 1 of this paper I will characterize the Chinese economic system as it has evolved up to 1988. In Section 2, I will evaluate, from a theoretical point of view, the performance of such a system. In Section 3, the historical performance of the Chinese economy in the last decade will be briefly reviewed, and the prospect of its future development will be examined under the assumption that the economic institutions will not be changed substantially in the next two decades. The analysis is confined to a purely economic point of view, leaving many important political and social issues untouched.

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1. Characterizing the Chinese Economic System

The Chinese economy is a socialist economy. By the definition of socialism, most of the means of production are controlled by the state. It is not a highly centralized socialist economy. Although in the 1950's the Chinese government tried to adopt Soviet-style central planning, with the First Five-Year Plan starting in 1953, observers question the degree to which China practiced centralized economic planning from the 1950's to the 1970's. Central economic planning penetrated mainly into the urban industrial sector for a selected number of products. The economic power of local authorities existed all through this period. Furthermore, planning was interrupted by the Great Leap Forward Movement in 1958-1962 and the Cultural Revolution of 1966-1976. The limited degree of central planning has been reduced further since the economic reforms initiated by the Third Plenary Session of the 11th Central Committee of the Communist Party in December 1978. See Chow (1985, pp. 50-69) for a discussion of the limited degree of central planning and the introduction of economic reforms. As of 1988, the Chinese economy is to a significant extent a decentralized (socialist) market economy, even though most of the means of production are controlled by the state. To characterize the Chinese economy, I will consider in turn its domestic microeconomy, its foreign trade and investment, and its macroeconomy.

1.1 Domestic Microeconomic Institutions

According to Statistical Yearbook of China (abbreviated SYC) 1987, p. 41, the five major sectors, agriculture, industry, construction, transport and commerce respectively accounted for 34.9, 45.6, 6.3, 3.6, and 9.6 percent of China's national income in 1986. While agriculture accounted for 34.9 percent of national income, 73.67 percent of total population engaged in

farming, animal husbandry, forestry and fishery (p. 86). As is well known, after economic reforms Chinese agriculture has been characterized by household farming, with each household assigned a piece of land. The household is required to sell a fixed amount of its farm output to the government procurement department at a fixed purchase price (usually below market price), but is allowed to sell the remaining output in the free market at market price. The above "responsibility system" amounts to the government collecting a fixed rent for the land assigned to the farm household. The short-run maximizing behavior of the farm household is identical to that prevailing in a market economy.

In practice, the farm household can transfer its right to the use of the land to another household, that is, the right to land use can be bought and sold. However, the right to use the land is not permanent (usually assigned for 10 to 15 years) and the farmers are not certain of a stable land assignment policy. These two factors have affected the incentives of the farmers in investing to improve the land, thus behaving differently from the farmers owning their land in a market economy. The incentive to save by Chinese farmers operating in a market farm economy in the early 1950's after the land reform is documented in Chow (1985, p. 93): "The ratio of saving to income in the agricultural sector is found to be 13.0 percent in 1952, 3.7 percent in 1957 [when most farm households had been organized into advanced cooperatives], 7.7 percent in 1965 [when the period of economic adjustment after the Great Leap allowed some free markets in the rural sector] and 6.9 percent in 1979 [as the responsibility system had just been introduced in Chinese agriculture]." In summary, except for the very small fraction of output produced by state farms, essentially market-oriented institutions in

the agricultural sector are responsible for producing about 34 percent of national income in China.

Consider next the industrial sector which accounts for 45.6 percent of national income. It is dominated by state-owned enterprises, while collective and individual enterprises also exist. In 1986, there were 499.3 thousand industrial enterprises, of which (1) 96.8 thousand or 19.4 percent were state-owned, (2) 80.1 percent were collectively owned (49 percent being township enterprises) and (3) the remaining 0.5 percent being of other forms, including joint state-collective, joint state-private, joint collective-private, joint ventures with foreigners, and enterprises run by overseas Chinese and by foreign investment (SYC 1987, p. 187). The above three types of industrial enterprises account respectively for 73.12, 25.61 (9.93 for township), and 1.27 percent of net industrial output value (SYC 1987, p. 223). Collective enterprises may belong to local governments or to individuals. Accordingly the incentives of their managers may differ. To a significant extent, they are operated for profit as enterprises of market economies. From the fact that 26.88 percent of net industrial output is produced by the second and third types of enterprises, it appears that perhaps about 20 percent of industrial output in China, or 9.12 percent of national income, is produced by enterprises operating somewhat like those of a market economy.

The construction sector, accounting for 6.3 percent of national income, employed 18,006 thousand persons in 1986, with state-owned enterprises, collective-owned enterprises in cities and towns, and rural construction teams employing respectively 6,173, 3,764 and 8,069 thousands (SYC 1987, p. 381). Net output values of the first two categories were respectively 16,008 and 6,421 million Rmb. In view of the large numbers of persons employed in

the second and third categories, it seems plausible to count about 50 percent of national income contributed by the construction sector as being produced by enterprises with management incentives somewhat similar to those prevailing in a market economy.

The transport, post and communications sector, accounting for 3.6 percent of national income, is mainly state-owned, although highway transportation by private vehicles (of the 3,620 thousand civil motor vehicles in 1986, 347 thousand or about 10 percent are private, SYC 1987, pp. 342 and 344) and waterway transportation by private boats belong to the market-oriented sector of the economy. Perhaps .3 of the 3.6 percent of national income can be so included. Of the 9.6 percent of national income originating from commerce, perhaps 6.0 percent can be so included. This estimate is based on the following facts: in retail trade, of the 18,430 thousand persons engaged in 1986, 3,056 thousand are in state-owned units, 6,522 thousand in collective-owned units, 33 thousand in jointly owned, and 8,819 in individually owned units; in catering trade, the corresponding four categories have 524, 1,148, 29, and 2,238 thousand persons respectively; in service trade, they are 626, 1,140, 43, and 1,890 thousand respectively (SYC 1987, p. 452); and in retail trade, the values of retail sales by the four categories are respectively 195.10, 180.40, 1.52, and 80.48 million yuan, while retail sales by peasant to non-agricultural residents amount to 37.50 million (p. 484).

Adding up the percentages 34.0, 9.1, 3.2, .3, and 6.0 of national income produced by market-oriented units in the five sectors, I conclude that these units produced about 52.6 percent of China's national income in 1986. Assuming that the remaining production units are state enterprises, or are collective enterprises behaving like state enterprises, I next ask to what

extent these enterprises may also behave like enterprises of a private market economy.

Before the economic reform initiated in 1978, Chinese state enterprises were designed to operate as enterprises in a centralized planned economy, following instructions on prices, output and employment from the ministry which controls them, receiving supplies of materials from a bureau of material supplies and delivering products as directed by the central authority. Reform of state enterprises was initiated in 1979 by allowing 6,600 industrial enterprises to make certain market decisions. By June 1980, these units produced in value 45 percent of the output of all state enterprises, surpassing in profits and in revenue those enterprises run under the old system of central planning. In August 1980, the Chinese People's Congress approved legislation to follow the principle of regulation through planning combined with the regulation of the market. See Chow (1985, p. 149).

A major landmark of economic reform was the Decision of the Central Committee of the Communist party of China on Reform of the Economic Structure of October 20, 1984. The Decision includes the following major components concerning the operation of the domestic economy. First, "we should extend the decision-making power of enterprises owned by the whole people . . . on the premise of following the state plans and subjecting itself to state control, the enterprise has the power to adopt flexible and diversified forms of operation; plan its production, supply and marketing; keep and budget funds it is entitled to retain; appoint, remove, employ or elect its own personnel according to relevant regulations; decide on how to recruit and use [note not explicitly "dismiss"] its work force, and on wages and rewards; set the prices of its products within the limits prescribed by the state; and so on. In short, the enterprise should be truly made a relatively independent

economic entity and . . . responsible for its own profit and loss and . . . act as a legal person with certain rights and duties." Second, concerning central planning, "the socialist state institutions must manage, inspect, guide and regulate the activities of the enterprises, as is necessary, through planning and by economic, administrative and legal means; . . . it must designate, appoint and remove the principal leading members of the enterprises or approve their appointment and election . . . for a considerably long time to come, our national economic plans on the whole can only be rough and elastic and that we can do no more than, by striking an overall balance in planning and through regulation by economic means, exercise effective control over major issues while allowing flexibility on minor ones . . . the socialist planned economy is a planned commodity economy based on public ownership, in which the law of value must be consciously followed and applied."

Third, concerning price reform, "The irrational system of pricing is closely related to the irrational system of price control. In readjusting prices, we must reform the over-centralized system of price control, gradually reducing the scope of uniform prices set by the state and appropriately enlarging the scope of floating prices within certain limits and of free prices. Thus prices will respond rather quickly to changes in labor productivity and the relation between market supply and demand. . . ." However, market price determination was somewhat restricted. "All enterprises should achieve better economic results through efforts to improve management and operation and should never try to increase their income by price increases. It is absolutely impermissible for any unit or person to boost prices at will by taking advantage of the reform, deliberately generating a tendency towards a general rise in prices, disrupt the socialist

market and harm the interests of the states and the consumers." The Decision also allowed the market sector of collective and individual enterprises to expand. Wage rates were to be differentiated enough "to apply fully the principle of rewarding the diligent and good and punishing the lazy and bad and of giving more pay for more work and less pay for less work . . ."

Under the Decision of October 1984, the responsibility system in agriculture was to be introduced in the management of state enterprises by allowing subunits of each enterprise to act independently while using the resources allotted to them by the enterprise. This provision should be distinguished from the policy of allowing the enterprise itself to have financial independence after paying a fixed rental to the state as in the case of individual farms. The distinction was made partly because the state enterprises are much larger than the individual farms and the management of these enterprises could not be permitted to use the possibly very large profits as freely as the individual farm households could. It was not until 1986 that a major attempt was made to introduce the responsibility system to the level of the state enterprises themselves rather than their subunits. By 1986, some small state-owned commercial and industrial enterprises were leased to the managers who were given almost complete control of the profits after paying rent to the government. A number of successful cases, with tremendous increases in outputs and profits, were well publicized in the news media. The "contract responsibility system" was then introduced in 1987. The main feature of this system is to let the management and workers sign a contract with the state or provincial government to lease the enterprise, paying fixed amounts of taxes in the forthcoming years (often five) of the contract and keeping the remaining profits for distribution among the management and workers in a way agreed upon by their mutual consent. By the

end of 1987, over 90 percent of state enterprises were placed under this system. Even though this system looks attractive on paper, in practice the results are not entirely satisfactory. The management and workers often complain that the fixed taxes imposed by the state or local government are too large, leaving too little profit for them; they would prefer to pay a fixed percentage from their profits, thus avoiding the risk of paying taxes when the enterprise is operating at a loss.

In summary, over 50 percent of the national income in China is produced by production units having incentives similar to those of enterprises in a private market economy. The state enterprises responsible for producing the remaining part of national income are decentralized. They are given certain autonomy and incentives, while commodity prices are partly determined by market forces, so that these enterprises too may behave to some, but smaller, extent like enterprises of a market economy. To what extent and how efficient these enterprises are is a subject of Section 2.

1.2 Foreign Trade and Investment

A very important component of China's economic reform is the open-door policy, which is a drastic change from Chairman Mao Zedong's policy of closing China's door to the outside world. China's exports increased from 5.6 percent of national income in 1978 to 13.9 percent in 1986 (SYC, 1987, pp. 38 and 519). The amount of foreign capital utilized, in the form of foreign loans or foreign investments, increased steadily from 1979 to 1986, totaling 29.23 billion U.S. dollars during these eight years, with 20.92 billion being loans and 8.31 billion being foreign investment. In the year 1986, foreign loans utilized amounted to 5.01 billion and foreign investments 2.24 billion (p. 531). Of the 2.24 billion of foreign investment utilized in

1986, however, 1.33 billion came from Hong Kong (p. 532) while .86 billion went to Guangdong province (p. 533). Foreign investment has gone mainly to coastal areas.

The significance of foreign trade and foreign investments for China's economic system is threefold. First, foreign investment augments domestic investment in the process of capital accumulation while foreign trade expands China's production possibility frontier inclusive of trade. Second, foreign investment and trade are channels through which updated technology and management practices are introduced into China in the process of learning by doing. Third, and not least, joint venture, foreign enterprises, and foreign trade provide competition to Chinese state and collective enterprises, forcing them to be more efficient, and at the same time put pressure on the Chinese price system to reflect the forces of demand and supply.

1.3 Macroeconomic Management

A slogan used by Chinese reform officials since 1985 was "invigorate the microeconomic units and control by macroeconomic means." This is another way of describing the policy stated in the Decision of October 1984 to change from compulsory planning to guidance planning: "planned economy does not necessarily mean the predominance of mandatory planning, both mandatory and guidance planning being its specific forms . . . guidance plans are fulfilled mainly by use of economic levers; mandatory plans have to be implemented, but even then the law of value must be observed." While state enterprises are given more autonomy to make economic decisions and are asked to be responsible for their own profits, regulation of the economy is to be achieved by the use of the levers of fiscal and monetary policies. However, macroeconomic policies in China include some direct control of microeconomic

units, more so than in the United States, as the quotations in Section 1.1 from the Decision of October 1984 indicate. (In the United States, direct control of microeconomic units is not entirely absent, as evidenced by the introduction of price and wage controls in 1972-1973 proposed by Federal Reserve Chairman Arthur Burns in the first administration of President Richard Nixon.)

Under the system of Soviet-style central planning, fiscal control of the macroeconomy was automatically achieved when production and investment quotas for the state enterprises were determined. Revenues and expenditures of state enterprises were parts of government revenues and expenditures. In 1980, about 43 percent of the revenues of the central government were incomes from state enterprises. See Chow (1985, p. 230). For most of the three decades up to 1979, the annual state budget was nearly balanced. In 1983, when state enterprises became financially more independent, their revenues were no longer automatically government revenues and they were required to pay taxes to the government. When state enterprises are allowed to make their own investment decisions, rather than seeking approval from the planning authorities, total investment expenditures are no longer under the direct control of the central government. A suitable macroeconomic control mechanism is yet to be designed to control total investment expenditures.

The lack of a suitable control mechanism also applies to the control of total money supply and credit in the conduct of monetary policy. In 1983, while state enterprises were given more autonomy in their investment decisions, the People's Bank had just been reorganized to become a central bank and its branch banks were given autonomy to make loans to state and collective enterprises. While an appropriate mechanism of monetary control under the central banking system--such as by effectively imposing a

fractional reserve requirement to the branch banks--was not firmly established, local banks extended credits freely to the state and collective enterprises requesting them. After the loans were made, the central bank had no alternative but to honor the loans and to provide currency to the borrowers on demand. As a result, the total quantity of currency in circulation increased from 52.98 billion Rmb at the end of 1983 to 79.21 billion at the end of 1984, or by 50 percent in one year (SYC, 1987, p. 565). In 1985, realizing the rapid increase in money supply occurring in the previous year, the central bank tried to tighten credit by issuing credit quotas to the branch banks. Depositors were sometimes not permitted to withdraw funds from their own accounts. This incident illustrates the fact that China has not established appropriate economic institutions to implement the stated objective of the Decision of October 1984 to apply the economic levers of interest and tax rates for monetary and fiscal control to the macroeconomy. In the meantime, government authorities have exercised control by using quotas as under the former system of central planning.

The same situation prevails today, in October 1988. Without appropriate control, currency in circulation in China continued to increase, being 98.78 billion Rmb in the end of 1985, 121.84 billion in the end of 1986, 145.45 billion in 1987 (SYC 1987, p. 565 and China Statistics Monthly, April 1988, p. 152). The percentage increases in these three years are respectively 24.7, 23.3 and 19.4, following the 50 percent increase in 1984. Not surprisingly, inflation has become serious by the Spring of 1988, with increase in the official index of the prices of consumer goods reaching an annual rate of 20 percent, the true inflation rate being claimed by residents to be higher. The statistical relation between money supply and inflation has been investigated in Chow (1987b). At the end of September 1988, the

Central Committee of the Chinese Communist Party met and decided to tighten control of the macroeconomy. The Central Committee declared that "the major effort required in improving the economic environment is to reduce the total social demand and curb inflation and . . . to put an end to confusion existing in economic activities, especially in the sphere of circulation." Prime Minister Li Peng stated, "Governments at every level must go all out to improve links in circulation by checking up on and reorganizing various corporations and companies, putting a firm stop to all unauthorized price hikes and, in accordance with law, banning and cracking down on such illegal activities as jacking up prices, hoarding, speculation, profiteering, and extortion by middlemen." (New York Time, October 1, 1988, pp. 1 and 4). These statements echoed the provisions for restricting price increases stipulated in the October 1984 Decision of the Central Committee on Reform of the Economic Structure quoted in Section 1.1 (third paragraph from end of section).

2. Evaluating the Chinese Economic System

In this section I will try to evaluate the Chinese economic system as characterized in Section 1. Short of very drastic and unexpected political changes, this system is unlikely to be greatly changed in the next decade. Reform of economic institutions is unlikely to be reversed. Chinese farmers are much happier with the system of individual farming than with collective farming under the Commune system and government officials are pleased with the performance of the agricultural sector. Having more vitality than state enterprises, the collective and individual enterprises are likely to account for larger shares of national income in the future. The state enterprises are unlikely to return to the former mode of Soviet-style central planning as

Chinese leaders have become firmly convinced of its many shortcomings through years of experience before the reform. The open door will not and cannot be closed. At the same time, one cannot expect a very rapid progress in institutional reform. The basic characteristics of the economic system to be achieved was already outlined in the Central Committee Decision of October 20, 1984, and there has been no indication that these basic characteristics will be significantly changed (the introduction, after 1984, of the contract responsibility system to the level of state enterprises after 1984 possibly being classified as a mild exception). To review, the basic characteristics include limited central planning combined with autonomous state enterprises, a gradual change of the price system to reflect significantly the market forces of demand and supply, and a differential wage system to reflect productivity. The techniques of central planning and macroeconomic control, the functioning of financial institutions including the banking system, the operation of state enterprises, and the working of the price system can be expected to improve only slowly for reasons of institutional inertia, bureaucratic resistance, and the slow process of training personnel at all levels to improve their performance. The two well-known dependency problems under Chinese socialism of the workers on the enterprise for job security (the iron rice bowl) and of the enterprise on the state, in spite of the attempted institution of bankruptcy laws, are difficult to solve. Therefore, it is realistic to evaluate the Chinese economic system as it exists today for the purpose of predicting the performance of the Chinese economy in the next two decades. For those readers who believe that the Chinese economic system may change significantly, my prediction of performance is conditional on the system remaining approximately constant. In any case, it is of interest to evaluate the Chinese economic system as it exists today.

My conclusion is that the present Chinese economic system, with proper management, is capable of achieving a fairly high level of performance to generate a reasonably rapid rate of economic development. This conclusion is based on the following three propositions, each to be discussed in turn.

Proposition 1. A decentralized socialist market economy, if properly designed, can perform somewhere between 60 and 100 percent as efficiently as a capitalist market economy. By 60 percent efficiency is meant producing 60 percent of the output using the same amounts of resources.

The analysis below is essentially static while economic development is a dynamic process. To apply the analysis to economic growth, consider for example the Harrod-Domar model consisting of a production function $Y_t = \theta K_t$ and a savings function $\Delta K_t = \hat{I}_t = \sigma Y_t = \sigma \theta K_t$, implying output growth by $Y_t = (1 - \sigma \theta)^{-1} Y_{t-1}$. A 60 percent statistic efficiency means changing θ to .60 in the above model. A similar analysis applies to a different model.

Whether a decentralized socialist market economy (market meaning the respect for the price system) can perform as well as a capitalist market economy in terms of economic efficiency (ignoring other possible virtues of socialism) is a controversial question in economics which has been intensely debated in the literature. In the literature written in English, the best known proponents of the proposition that market socialism can perform equally well are Lange and Taylor (1938) and Schumpeter (1947, Part III). Schumpeter (1947, pp. 172-173) refers to earlier proponents including Vilfredo Pareto and his student Enrico Barone. A recent defender of market socialism is Yunker (1988). L. von Mises (paper in von Hayek, ed., 1935) is a well-known opponent to this proposition. So are the majority of American economists including in particular Milton Friedman (1962). I put the upper limit at 100

percent in Proposition 1 because arguments supporting a higher percentage appear to me as weak as those supporting a percentage below 60, and there is no historical example to support it. Most economists believe, and history has demonstrated, that decentralized economic decisions by independent producing units maximizing profits under the institution of market prices are capable of yielding efficient economic performance. The main point of the opponents to market socialism is that under public ownership the enterprise managers, even when instructed by the central authority, have no incentive to maximize profits, or to take an optimum risk in investing. This argument has much merit to it. How serious the incentive problem is depends on how well market socialism is designed.

Consider a small enterprise, one which employs not more than three hundred employees. Its management can be given a lease by the state and required to pay a market rental. Such an enterprise can be expected to perform almost as well as in the case of private ownership under capitalism. This point has been demonstrated by the performance of some small commercial (mainly retail) and industrial enterprises leased to the managers in China under the contract responsibility system. The incentive problem for the management of a medium-size or a large state enterprise is more difficult to solve. One suggested solution is the leasing arrangement similar to that for a small enterprise, but such an arrangement might not work well because the management may not be willing or able to bear the financial risk when the large enterprise is operating at a loss. The Chinese have experimented with a "contract responsibility system" for medium-size and large state enterprises. The system does not work very well partly because, lacking a market for capital goods, the government officials do not know the appropriate amount of tax or rental to charge. Sometimes the government

officials are too greedy, trying to extract too much tax from the lease. The management and labor signing the contract complain that the fixed tax is too high and would prefer to pay a percentage of profits as tax so that they do not have to bear the risk. Also they often suspect that if profits become higher, future taxes may increase.

A second proposed solution is to diversify the ownership of state enterprises and let the stockholders, through a board of directors, control the management as in the case of a corporation in a capitalist economy. It has been suggested that bureaucrats of economic ministries will not do a good job (have wrong incentives) in controlling state enterprises, including the appointment and rewarding of their managers. As a solution, the state ministry in charge can be required to issue up to 49 percent of the stocks of each enterprise to the public and much of the remaining 51 percent mostly to other ministries and provincial government agencies. Enterprise management will be subject to the control of a board of directors elected by stockholders as in the case of a private market economy. Even takeover by a new management team (good or bad) is possible if the team can buy up sufficient stocks from the public and/or convince the stockholders representing government agencies to vote for it. Under such an arrangement, the management of a state enterprise will have incentives similar to those of corporate executives in a capitalist economy, and will behave about as efficiently. Whether managers of state enterprises need to be as highly paid as corporate executives in a capitalist system is a debatable question. University presidents in the United States are not as highly paid and do not maximize profit, and yet some are highly motivated in their work.

The above discussion suggests that a state enterprise under market socialism can be made about as efficient as a corporation in a capitalist

economy. Since this is a debatable point, and since my conclusion is that market socialism can work, I ought to underestimate its performance by asserting in Proposition 1 that it can work between 60 to 100 percent as efficiently as capitalism. To be conservative, I will use a figure of 75 percent in the following discussion.

Proposition 1 asserts that market socialism can work reasonably well, leaving the Chinese case aside. In terms of remuneration for management of state enterprises, and of partial privatization and decentralization of ownership (through the use of many public stockholders) of state enterprises, there are discrepancies between the second solution suggested above and the current thinking of many Chinese leaders. By examining the provisions of the Central Committee's Decision of October 1984 which are politically feasible and considered by the Chinese Communist Party leaders to be most desirable, I conclude, based partly on the interferences with the market mechanism provided in the Decision, that the state enterprises under the desired form of Chinese socialism as stated in the Decision are perhaps about 80 percent as efficient as under an ideal form of market socialism. The difference lies in the remuneration of management, the degree of diversification of stock ownership, and the job security provided to the workers. These characteristics of Chinese socialism may be desirable from a point of view other than pure economic efficiency.

Proposition 2. The combination of economic planning with market socialism or capitalism can make the economic system work about as well, if not better, than pure market socialism or capitalism.

Economic planning exists in every economy. The differences among countries are in the extent to which it exists. In capitalist economies,

macroeconomic planning is prevalent, while government-directed activities affecting the microeconomy are less so. In the United States, for example, national defense, federal highway network, national parks are among the public goods subject to central planning. It is difficult to decide the optimal amount of central planning and the particular areas to which it should apply. In developing economies where markets are not yet highly developed and where highly trained and experienced entrepreneurs are scarce, it may be reasonable for the government to establish and operate some state enterprises for the purpose of developing certain industries, leading and setting examples for private enterprises but not monopolizing the industry. To compete in the international market, it may be beneficial for the government to set up larger enterprises than can be financed by private funds. The above propositions are questioned by advocates of a "pure" market economy, often citing Hong Kong as an example to illustrate the benefits of the absence of government economic planning. Yet even Hong Kong practices planning for public goods such as education services, roads and harbors. Just as a large multinational and multiproduct corporation can use central planning effectively in operating its branches, so can the economic ministry of a mixed planned-market economy.

Two conditions should be observed to make central planning effective. First, government directed productive activities by state enterprises should be subject to the law of prices in the same way as the autonomous state enterprises and private enterprises. For example, in the building of railroads, a government enterprise following the direction of central planning should pay for the steel at market price so that the cost of the project can be accurately ascertained under rational central planning. The October 1984 Decision of the Central Committee shows some appreciation of

this point, as suggested by the quotation cited in Section 1.1 concerning central planning that "the law of value must be consciously followed and applied." Secondly, as much as possible, competition from independently operated state enterprises in the form of alternative bids or of producing competitive products should be encouraged in order to ensure the efficiency of government projects.

Proposition 3. Monopolistic and rent-seeking behavior on the part of state enterprise managers and government bureaucrats in China affects the distribution of income but might not seriously affect the efficient working of the market.

Large state enterprises in China often take advantage of their monopoly power and reap high profits. This is partly the result of monopolistic pricing and the lack of capital markets to evaluate the cost of capital goods. This situation can be improved by making further progress in the proposed price reform of the Decision of October 20, 1984, and by allowing for more competition by foreign corporations, potential or existing provincial and collective enterprises. Bureaucrats and enterprise managers in China take advantage of their positions to obtain bribes in various forms (money, foreign goods and travel, foreign scholarships for their children, return favors, etc.) when approving licenses, signing contracts and making other economic decisions affecting the welfare of their clients. Such practices prevail in many countries in various degrees. Hong Kong (especially in the 1960's and 1970's, but less so today) and Taiwan government officials received bribes when issuing construction permits. The Chinese case is bad, but is probably not much worse than those of some other developing countries. The situation will improve when the compensation and

income of government officials increase and as the market sector expands. Higher income reduces the desire to take bribes. When the market sector expands, fewer economic activities are subject to government control or to the authority of government bureaucrats and competition from the market sector will reduce the monopoly power of state enterprise managers. Bribery results in an unfair distribution of income if one believes that the officials taking bribes do not deserve (they do not work for) the side payments which they receive, but not if one considers the payments as "commissions" for their jobs, paid by the users of their services rather than by their employers. Insofar as useful economic activities are carried on after the required payments are made to government officials, the system may function fairly efficiently.

Socialism is characterized by state ownership of most economic resources. Under either state ownership or private ownership in the case of capitalism, resources are always controlled by people. The difference lies in the ways people obtain control of resources and are supposed to use resources. Under capitalism, a person obtains control of resources by competition in the market, by advancing one's position in a private enterprise, and less frequently in a government bureau, by personal transfers including inheritance, and by transfers from the state through welfare programs. Under socialism, a person obtains resources by competition in the market sector, by advancing in a state enterprise or in a government bureau, by joining the ruling political party, and by transfers. Under capitalism or socialism, a person controlling the resources owned by the state is supposed to use the resources entirely for the benefit of the state, however the benefit is defined, but in practice the person often takes advantage of his or her position for personal gains, such as taking bribes. If the person

thinks he is well compensated, he is less likely to take bribes. Taking bribes is ethically wrong and affects the distribution of income. In many occasions, it might not seriously affect the efficient functioning of the economy.

Consider an example of a purchasing agent of a state or private enterprise offering to pay \$100,000 to buy a certain product from another state or private enterprise and asking for \$5,000 as bribe. In effect, the purchasing enterprise pays \$100,000, \$95,000 to the seller and \$5,000 to its own agent. If the purchasing agent happens to be the owner of the first enterprise, he pays, and the second enterprise receives \$95,000 for the good sold. Nothing is wrong. Something is wrong when he does not own the enterprise because the owner of the enterprise in effect pays him \$5,000 to which he is not entitled. Also nothing is wrong if the owner or the seller willingly and openly offers the purchasing agent \$5,000 commission for the transaction, as in the case of someone buying a \$100,000 house in the United States. Bribery is considered bad because it is paid to a person who is not entitled to it or who does not deserve it.

The problem of entitlement is more serious under socialism because most resources are publicly owned and the persons controlling them are not entitled to them. The problem of enterprise executives not deserving the side payment is also more serious under socialism because, in practice, it is the ethical judgement of the advocates of socialism that enterprise managers and staff members should not be highly paid and should not receive commissions for conducting economic transactions. Bribes paid to government officials issuing licenses of various kinds have similar economic effects as increases in licence fees which are then paid to certain employees of the licensing bureaus. Leaving the ethical question of bribery aside, much of

economic efficiency is already achieved when, in contrast with central planning, state enterprises are allowed to make autonomous market transactions, if prices are set by market forces and if sufficient incentives are provided to the workers and managers. Bribery might be a secondary issue in terms of economic efficiency, although it is a very serious issue for political and moral reasons. The validity of this comment, and of Proposition 3, is illustrated by the fact that Taiwan, Hong Kong and Singapore succeeded in rapid economic development in spite of such practices.

Let me now apply these three propositions to evaluate the economic efficiency of present-day Chinese socialism which uses a combination of planning and market forces. Propositions 1 and 2 show that market socialism, combined with a certain degree of central planning, can work about 75 percent (conservatively) as efficiently as capitalism. The state sector of the Chinese system to be established under the principles stated in the October 1984 Decision on Economic Reform of the Central Committee of China's Communist Party may attain about 80 percent of this 75 percent efficiency, or 60 percent of the efficiency of ideal capitalism. As of today, in October 1988, the Chinese government has made important progress, say about 65 percent of the way, in the price reform and in the reform of state enterprises suggested by the Decision. In the next decade, momentum itself will carry the reform process forward to something like the 70 percent mark, in spite of the present policy to curb inflation which is necessary and desirable. Inflation control will not jeopardize the reform of the state enterprises or even slow down price reform, since under the present condition, it can provide a more stable economic environment for future reform to take place. If we apply the 70 percent to the 60 percent

efficiency of the desired Chinese socialism of the 1984 Decision as compared with ideal capitalism, we may obtain 42 percent for the efficiency of the state sector of the present Chinese system. This evaluation is not meaningful because the present Chinese system should not be compared with an ideal but unachievable system. Even if one assumes that the capitalist system is more efficient and that hypothetically the Chinese leaders decide to adopt its economic institutions for the present state industrial sector, it will take time for large private corporations to be established and to operate efficiently. Institutional inertia, ideological resistance on the part of Communist Party members and the lack of trained personnel would prevent large enterprises in China from becoming as efficient as modern corporations. Rather than using ideal capitalism as 100 percent to evaluate the state sector under Chinese socialism in the next two decades, it is more reasonable to use 70 percent of ideal capitalism as something achievable. Our evaluation of the Chinese state sector is more like 42 percent divided by 70 percent, or 60 percent, of the feasible ideal. For the Chinese economy as a whole, we apply 100 percent efficiency to the individual and collective sector which account for 52.6 percent of national income and 60 percent efficiency to the remainint 47.4 percent for the state enterprises, obtaining a final measure of 81 percent efficiency as compared with an ideal and feasible economic system. If the reader disagrees with some of the percentage figures used above, she or he may revise the calculations and use a figure somewhat different from 60 percent for the efficiency of the state sector. Since the state sector accounts for only 47.4 percent of total output, my conclusion concerning the Chinese economy as a whole will not be seriously affected.

3. Retrospect and Prospect

A strong supporting evidence for the conclusion that a mixed planned and market economy under Chinese socialism functions well is the historic growth of the Chinese economy during the first decade of reform from 1979 to 1988. An official index of national income in constant prices (1952 = 100) increased from 484.9 in 1979 to 884.1 in 1986, or at an average annual rate of 8.96 percent (SYC 1987, p. 39), as compared with an annual increase of about 6.0 percent from 1952 to 1979. In per capita terms, it amounts to 7.71 percent per year (p. 67 for population figures). National income contributed by the industrial sector which is dominated by state enterprises increased from 48.6 percent of the index of 484.9 in 1979 to 45.6 percent of the index of 884.1 in 1986, or at an annual rate of 7.97 percent. One has to be careful in attributing economic growth to economic reform since a part of it was probably due to the recovery after the Cultural Revolution. However, the effect of recovery is not the main story as one can observe the enthusiasm and behavior of the farmers and compare this recovery with past recoveries. For a more detailed documentation of the Chinese economic record since the reform, the reader is referred to Robert Dernberger (1987). For a discussion and assessment of the reform process, see Lardy (1987) and Perkins (1988). The agreement among these authors and other knowledgeable observers is that the first decade of China's economic reform, inspite of some shortcomings, is essentially a success story, especially in view of the condition China was in before the reform.

The fact that the Chinese economy has grown substantially in the last decade is not sufficient to justify the conclusion that it will grow at similar rates in the next two decades. Some reservations have been voiced. First, the economic momentum generated by the reform will run out of steam.

In particular, reform in agriculture increased efficiency in terms of raising output per capita as compared with farming under the Commune system, but once the level of output per capita is raised, no further increase is expected. In fact, the record of agricultural output since 1985 has been poor. This is a valid point, except that the energy of the farmers unleashed by the present system (in spite of the uncertainty about the right of long-term land use) has been applied to work in light industry, and in commercial and other more productive pursuits in the rural areas, and that the process of technological change in the form of changing occupation and production mix in China's countryside has continued and is expected to continue, thus helping to raise output per capita in rural areas.

Second, inexperienced macroeconomic management in an environment of imperfect macroeconomic institutions may destroy the economic fabric for further growth. This is a serious possibility. Like other observers, I am concerned about the current inflation, but it is my judgment that the Chinese government will succeed in preventing it from getting out of hand, even if some arbitrary controls might be applied and the progress of price reform might be slower than in the absence of inflation. Like many economists who appreciate the distinction between the flexibility of relative prices and the control of the (average) price index, I believe that it is possible for the Chinese government to control inflation while allowing prices of individual products to remain fairly free. One well-known experience is the control of inflation in Taiwan in the 1950's when aggregate demand for consumer goods and velocity of currency circulation were reduced significantly by raising the rate of interest, following advice given by Sho-chieh Tsiang to the Taiwan government. High interest rates from "real goods savings deposits" and "real unit bonds" were also used in the People's Republic of China in

1949, and they helped to curb inflation rapidly in 1950 (see Tsiang, 1980, p. 311). A similar device can be used today. There is no need to estimate the rate of inflation in order to determine the rate of interest for deposits. One can try a monthly rate of 4 percent, for example, and observe the inflow of deposits to the banking system. The rate can be adjusted monthly depending on observed results. Furthermore, the increase in money supply in the last five years at rates quoted at the end of Section 1.3, though excessive, was not large enough to cause run-away inflation, if the rapid increase is to slow down under the present policy of curbing inflation. High interest rates as recommended above, in order to be effective, have to be accompanied by stopping the rapid increase in money supply.

Third, some observers are concerned that the reform process will stop. As I have argued above, reasonable economic progress in China can occur without significant further reforms in economic institutions. The present system is good enough, although it can be better under Chinese socialism as put forward by the October 1984 Decision. Supporting this argument further is the open-door policy, which will continue to provide energy to China's economic growth in the forms of capital and technology import, and of setting examples for and providing competition to Chinese State enterprises. The contribution to economic growth of foreign investment, and of collective and private enterprises has been evident in the province of Guangdong, neighboring Hong Kong. Vogel (1989) is a detailed and interesting account of the economic success of Guangdong in the last decade. Comparing with Japan, South Korea, and Taiwan, the author asserts that Guangdong "has made a more dramatic turnaround than any of those countries, and its annual rate of industrial progress compares favorably with the periods of fastest growth in

any of the East Asian countries." (See Vogel's letter to the editor in New York Times, March 15, 1988.) Observing China's recent experience and inferring from theory, one can expect that China will continue its reasonably rapid economic growth in the next two decades. One can also expect its coastal provinces including Guangdong to develop more rapidly, serving as leaders to economic development in China as a whole. China may be slow in correcting the present deficiencies of the economic system. These deficiencies include the dependency of labor on the iron rice bowl, the dependency of state enterprises on the government for financial help, a certain amount of corruption, the lack of proficiency in economic planning and macroeconomic management, and the poor environment for foreign investment.

It is my conclusion that market socialism combined with a certain degree of central planning will succeed in modernizing China. This conclusion does not rule out the possibility that capitalism may be better than socialism under normal circumstances. Most people living in a capitalist society prefer capitalism as a form of economic organization. China has a very different historical experience from the United States. How feasible and desirable capitalism is under China's political and economic situations are difficult questions to answer. Many Chinese leaders believe that socialism is more desirable for China, although many young people in China are questioning this view. Since the end of the Second World War, under the leadership of the United States and the Soviet Union, capitalist and communist countries have been engaged in a cold war. People and intellectuals on each side have criticized the other system while arguing the superiority of their own. The Chinese economic experiment, by combining socialism with market incentives, may help resolve the conflict in economic ideas and hasten the end of the cold war.

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