

## Chapter 6

# China's Economic and Political Trends



*Photo credit: Eric Basques*

This magnificent bronze lion is one of a pair that guards the entrance of the Gate of Supreme Harmony in The Forbidden City in Beijing.

# CONTENTS

	<i>Page</i>
Potential Long-Term Economic Growth . . . . .	147
Future Political Evolution . . . . .	151
The Impact of Technology Transfer . . . . .	153
Impact on the Economy . . . . .	153
Impact on the Political System . . . . .	154
Impact on Social Change . . . . .	155
Market Socialism . . . . .	157
Implications for the United States and the World Economy . . . . .	159
Implications of a Failed Modernization Program . . . . .	161

## Table

<i>Table No.</i>	<i>Page</i>
14. Comparison of Real Gross Domestic Product Growth Projections, 1981-2000 . . . . .	149

# China's Economic and Political Trends

The recent dramatic changes in China's economy, polity, and foreign policy, have been discussed in chapters 2 and 3. Despite frequent assertions by China's leaders that current policies will continue, many observers have raised the question of the stability of China's new course and China's prospects for achieving its modernization goals.<sup>1</sup> Will the trends of the

<sup>1</sup>See for instance, Daniel Southerland, "Party Leader Says

last 6 to 8 years continue, or is China likely to go on a markedly different course? These questions cannot be answered without considering the prospects for economic performance.

China To Extend Economic Reform," *The Washington Post*, Sept. 24, 1986, p. 1.

## POTENTIAL LONG-TERM ECONOMIC GROWTH

In considering the overall prospects for the Chinese economy, it is useful to distinguish between the prospects for growth, for reform, and for structural change. Growth is the quantitative expansion of total physical output. Reform refers to the reorientation and revitalization of economic organizations and behavior. Structural change deals with a substantial movement of the work force out of agriculture and an increase in the size of the service sector. In contrast to past efforts to promote economic growth through increases in direct capital investment, present Chinese leaders are trying reform and structural change as well as expanded use of domestic and foreign technology.

Most analysts of the Chinese economy agree that the prospects for economic growth are promising, particularly in view of the changes that have been introduced since 1978. At the same time, there is also a clear recognition that China's growth trajectory could be seriously altered by a number of factors, some of which have to do with environmental factors while others are related to the pace and extent of political and economic reform. Of course, a modest degree of economic growth is possible without further economic reform. Yet, as shown in chapter 3, the majority of problems that confront China's economic policymakers are systemic in nature. To achieve a sustained pattern of growth, a number of modernizing reforms are definitely required. It will become progres-

sively more difficult for the Chinese economy to grow solely on the basis of "extensive" means —i. e., increased capital investment. Thus, in assessing the prospects for economic growth, the potential success of the current reforms in economic and technology affairs must also be addressed.

In effect, there are two schools of thought regarding China's economic potential and the role of reform. One school focuses on the progress resulting from the changes to date in the organization and ideology that underlie the economy.<sup>2</sup> Indeed, there is no doubt that reforms have gone quite far, especially in agriculture, toward reducing the inefficiencies associated with the former Soviet-style economic approach. Many of these reforms are now irreversible and have become fully incorporated into the prevailing economic structure. Based on the apparent success of these reforms and on the improvements in economic performance apparently derived from these reforms, it can be argued that similar growth rates will be sustainable for the rest of the century,

The other school takes a much less sanguine view of the long-term efficacy of recent economic changes, arguing that despite the immediate changes that have been introduced,

<sup>2</sup>For example, see Dwight Perkins, *CHINA Asia Next Economic Giant* (Seattle, WA: University of Washington Press, 1976).



Photo credit: McDonnell Douglas Corp.

The interior of an MD-82 twin-jet transport being built under a coproduction agreement between McDonnell Douglas Corp. and the Shanghai Aviation Industrial Corp. The first of the 25 planes should fly in 1987.

“the Chinese economy still retains the basic institutional organization, functional operations, and problems, or results, of a Soviet-type economy. While acknowledging the improved performance of the economy, proponents of this perspective suggest that most of the economic gains since 1978 have been achieved through nonreplicable or one-time changes in agriculture. In this view, the foot-dragging, ob-

structionism, and resistance apparently hindering the implementation of the industrial reforms, suggests that further reforms are not inevitable and the prospects for rapid, sustained economic growth remain uncertain.

The difficulties with industrial reforms come when the reform coalition in the Chinese leadership has become more vulnerable to criticism from the more conservative members of the elite, owing to perceptions that the central government was steadily losing control over the economy. While there remains almost unani-

— Robert F. Dernberger, “Economic Policy and Performance,” *China Economy Looks to the Year 2000* (Washington, DC: Joint Economic Committee, May 1986).

mous agreement on the need for reform among all of China's leaders, continued differences over such issues as the pace, the targets, and the scope remain important. Events during 1985-86, including the rapid depletion of foreign exchange, continued high rates of investment, excessively rapid growth, and reduced grain production, have led to greater caution in the implementation of the reform program. This caution is likely to remain characteristic of Chinese economic policy during the Seventh Five-Year Plan and could be exacerbated as a result of the post-Deng succession process. Thus, even though they are essential, the more difficult reforms in the area of prices, labor, and capital markets will proceed at a more gradual pace than perhaps initially intended.

Yet, even taking into account the consequences of a more gradual approach to reform for economic growth rates for the rest of the century, most observers agree that the quantitative dimensions of economic performance are likely to be respectable. The range of projections (discussed in app. 1 of vol. II of this report) is shown in table 14. Two factors affect the projections (in addition to problems with the reliability of Chinese data). First, the perceptions reflect the differences in modeling techniques and the nature and currency of the data used by the respective researchers. Models inherently contain biases, especially because they deal with interrelationships among the economic variables and the role assigned to various key sectors. For example, the models differ in their assessment of the projected contribution of agriculture, with the Lau model suggesting a much more modest role than does either the World Bank or Rock Creek.

Second, the projections reflect the explicit and implicit assumptions of the respective re-

searchers about the workings of the Chinese economy and their interpretation of the likely contribution the reforms will make to present and future economic performance. The base projections in the Lau model are firmly rooted in China's Maoist era experience, for example, whereas the World Bank depends on causal relationships mainly extrapolated from the experience of other developing countries. Similarly, the projections contained in the Rock Creek models give more weight and importance to China's recent experiences under the Dengist reforms.<sup>4</sup> These differences account for the more optimistic projections of Rock Creek, which goes further than either Lau or the World Bank in incorporating China's output and productivity growth up to the mid-1980s into its model. Thus, implicitly, if not explicitly, it assumes fewer problems with the reform effort in the future.

As presented in table 14, the three models project average growth rates ranging from 6.6 to 8.7 percent through the end of the century. China's goal of quadrupling the value of the GVIAO (Gross Value of Industrial and Agricultural Output)<sup>5</sup> would be met in all these scenarios. More conservative estimates might see an average annual growth of 4.5 percent in the future, which would still almost quadruple GVIAO because growth since 1981 has been above the target rate.

Such high growth rates for extended periods of time would be very unlikely in an industri-

<sup>4</sup>Rock Creek Research, Inc., *The Role of Technology Transfer for China Economic Future*, app. 1, vol. I I of this report.

<sup>5</sup>GVIAO grows faster than gross domestic product (GDP) because it includes double-counting of intermediate inputs that increase with time as a country develops. Thus, by focusing on quadrupling the GVIAO, the Chinese will not have to quadruple GDP.

Table 14.—Comparison of Real Gross Domestic Product Growth Projections, 1981-2000

				Agriculture	Industry	Other	Total
World Bank	Quadruple <sup>a</sup>			4.9	7.1	7.6	6.6
World Bank	Balance			4.4	6.0	9.2	6.6
L. Lau	High Scenario			3.4	7.9	6.7	6.7
Rock Creek	Research	Low		5.7	7.7	9.3	7.8
Rock Creek	Research	High		5.7	9.3	9.8	8.7

SOURCE: Rock Creek Research Inc. *The Role of Technology Transfer for China's Economic Future* app 1, VOL II of this report

alized country, but Japan in the 1960s and South Korea and Taiwan in the 1970s achieved such growth levels. In contrast to the majority of less developed countries (LDCS), China has a strong resource base; a literate, moderately disciplined work force; and a high savings rate. There is a significant capital stock in place, though much of it is dated. There is also a significant science and technology infrastructure. Finally, there is a national commitment to growth and modernization at the highest levels, which is more characteristic of the newly industrialized countries (NICS) than of most developing countries, or China of a decade ago.

The “qualitative” dimensions of economic growth in China must also be considered in addressing the prospects for improved economic performance. This would include issues such as the composition of growth and the role of technological change. In other words, it is important to consider where China’s growth might come from and how it will be achieved. Chinese economic performance during the last 5 to 7 years has been buoyed by the achievements of the agricultural sector. There are some signs that agricultural growth rates may not be able to match those of the recent past, however, owing to external diseconomies (loss of farmland to housing construction, neglect of infrastructure—i. e., irrigation systems—neglect of agricultural extension services, and a slowing of the technical modernization of agriculture) that result in diminishing returns. At the same time, some of these trends could be reversed, according to the Rock Creek projection, through the switching of cropland out of low-value-yielding grains into vegetables and fruits with an enormously greater yuan output per hectare.

Technological change as a result of technology imports will also be an important factor affecting growth, though in all but the Rock Creek high-growth scenario projections noted above, they seemingly are not assigned a critical role. In the Rock Creek low-growth scenario, for example, even with only modest improvements in technology, the Chinese economy still promises to grow at a rate faster than the official Chinese projections, attaining the quad-

rupling goal by 1995, not 2000. As suggested, in this model, a good portion of this growth will come from agriculture. Both the World Bank and Rock Creek agree that trade will also be an important component of growth. In the case of the latter’s projections, industries such as consumer electronics will play a significant role, fueled in large part by greater technical sophistication and improved product quality.

It is only within the Rock Creek high-growth scenario that foreign technology imports are incorporated as a key determinant of economic performance. This projection is based on the assumption that China acquires and absorbs a range of technologies that markedly raise productivity and output quality throughout the economy, especially in the machinery and consumer manufacturing sectors. The major beneficiary of successful technology assimilation will be the industrial sector, which could improve its performance capabilities beyond the Lau, World Bank, or Rock Creek low-growth projections. The implications of such a high-growth pattern would be particularly important in the trade area. According to the Rock Creek analysis, if China were to make optimal use of foreign technology imports, it could dominate the apparel export market, replace South Korea as the source for most basic consumer and some sophisticated electronics products, and even begin to export automobiles to Third World countries.

Without delving further into the underlying dynamics of the various estimates discussed in this section, it appears that the outcomes at either extreme, very low growth and very high growth, are unlikely. For either to occur would require a confluence of numerous factors to either strongly inhibit or greatly facilitate economic performance. The high growth rates since 1980, which have surprised many analysts, could continue, but a plethora of factors could negatively affect economic performance and the success of technology transfers. Barring any drastic change in current Chinese borrowing practices, China’s foreign exchange shortage is likely to be a major constraint on large-scale importation of technology and equipment. Combined with existing bottle-

necks to effective assimilation of technology, these factors could become significant obstacles to growth in the 1990s if appreciable progress is not made in alleviating them during the Seventh Five-Year Plan.

Other issues also raise questions about China's economic future. Reform of the urban economy has proven to be difficult, and incomplete reforms could be damaging. The reform program has also contributed to the rise of socially undesirable behaviors that could discredit the reforms and therefore slow them down. Along with the political factors that will be discussed in the next section, these include urban protests, corruption, and increased inequality. The Chinese will also have to be concerned with labor indiscipline and will have to find ways to alter the sociology of the work unit (*clan wei*). As described in chapter 3, the proprietary claims on technology and personnel made by the work unit are among the most debilitating obstacles to technology diffusion. Tensions between the central authorities and local governments, especially in the area of finance, will also have to be changed,

Some of these factors will affect China's growth trajectory, more than others, though here again, even in combination they do not necessarily portend significantly low economic performance. What is likely until the turn of the century is a China still beset by numerous

economic fragilities, but one able to sustain a pattern of growth range of 6 to 7 percent. This growth rate will not be distributed evenly throughout the economy: a few sectors across this broad-based economy will reflect the fruits of modernization while the remainder of the economy lags significantly behind. Textiles, consumer electronics, machinery, and agriculture will continue to be important in this regard. The major economic question facing China for the rest of this century, therefore, will be the extent to which these few leading sectors can pull the rest of the economy forward versus the degree to which the backwardness of the other sectors will slow down the overall rate of growth for the entire economic system.

It is clear that some of the most important constraints on future economic performance will be economic and technological. However, political stability and reform are also crucial factors influencing the prospects for modernization. The course of domestic politics is also important in considering China's foreign policy, its open door to foreign investment and technology, and its role in international security affairs (which are discussed in the next chapter). Finally, questions about the future of Chinese politics are all the more important in light of China's recent history of social turmoil and political cleavages.

## FUTURE POLITICAL EVOLUTION

Despite uncertainties about the depth of conservative opposition to the pace of reforms, it appears that the general direction of China's current course in economic policy is unlikely to change drastically. Although the current leaders have major internal differences, they share a common commitment to reform and modernization.<sup>6</sup> The range of foreign opinion is considerably broader on China's ability to

manage what all observers would agree are enduring political problems. Until recently, the reform coalition was effective in managing divisive issues. At present, however, there are obviously serious divisions within the leadership over policy, especially the pace and extent of reform. Underlying these divisions are questions about the limits of reform in a system dominated by a Leninist party, and the future role of ideology in a society that has been so driven by ideology (with many unfortunate consequences) in the past. The lower ranks of officials and managers, some of whom have actively resisted reform, will also play a crucial role.

<sup>6</sup>See Thomas Fingar, "Politics, Policy, and China's Future Course," app. 7, vol. II of this report; and Charles F. Steffens, "Leadership Changes in China and Their Implications for the United States," U.S. Library of Congress, Congressional Research Service. CRS 86-131 F (June 24, 1986).

Clearly, China's current course and its recent accomplishments owe much to the presence and leadership of Deng Xiaoping. Many questions have been asked, therefore, about the prospects for politics under his successors. Deng and his supporters have clearly tried to plan for political leadership in the post-Deng era, and have brought into second and third echelon leadership positions younger, better educated individuals who seemingly share Deng's reform values.<sup>7</sup> It will not be clear for many months, or even years, whether these efforts to ensure continuity will be successful.

Even if the reformers prevail over the more doctrinaire elements of the leadership, there will be competition for power and influence. Cleavages are certain to develop based on personal aspirations, factional relations, and policy positions. Regional divisions based on uneven growth are also likely to be a factor in intra-elite politics. How these conflicts will be managed is an important question for the future. There are various signs that the Chinese are trying to make political life less personalistic and more subject to publicly understood laws and rules, and to make elite conflicts less of an all-or-nothing experience. Nevertheless, in light of past experience, there are good reasons to question the extent to which the new political rules of the game have been institutionalized. The effectiveness of political reform, still nascent compared with economic reform, will bear close watching.

The future of Chinese politics bears a close though complex relationship to the course of the economic reform program. On one hand, the future of reforms will require continued political commitment and political stability. Failure of reform will reflect badly on the Dengist leadership and could be a source of political instability.

However if the reforms succeed, China will also face new political challenges. A successful reform program will reinforce the continuation of the open door policy and be a stimulus to modernization; however, modernization



*Photo credit Leo A Orleans*

View of Shenzhen, a special economic zone. In the background is Hong Kong. Eight years ago this was a fishing village surrounded by rice paddies.

will bring with it many new problems. These include the management of demographic and environmental changes brought by modernization, the need to accommodate politically the social and economic pluralism entailed by a successful reform program, the need to respond to rising expectations from the population, and the challenges of managing the commercial and security problems resulting from interactions with the external environment via the open door.

One of the more intriguing questions about China's political future is the likelihood of democratizing and liberalizing trends. The post-Mao period has clearly seen some evidence of change in the political climate, and the leadership itself refers to the need for democratization, although it is by no means clear what that term means to those who use it.

The liberalization that has occurred has been within the established Marxist-Leninist framework. From the viewpoint of the Western liberal tradition, this liberalization would appear to be minimal. Yet relative to the period preceding it (1958-77), the tone of political life has clearly changed for the average Chinese. There is more freedom of speech, and the Party shows new tolerance for appeals from the population for the rectification of official abuses (though this tolerance has limits, as shown by

<sup>7</sup>Steffens, *op. cit.*

the crackdown on the student demonstration in January 1987). The election of leaders in work units is encouraged, and competitive elections for local people's congresses have been tried. The National People's Congress has emerged as a more active representative body within which Government policies are debated and legislative proposals from the executive are modified. Finally, the press has become a more lively forum for the airing of different opinions, although it has by no means become free of political supervision.'

At the center of the uncertainties about Chinese political change is the question of the future role of the Chinese Communist Party. In the past, the Party has run the affairs of the state—both macro- and micro-management of the economy, culture, and ideology—and was the sole route to material gain and upward social mobility. The environment created by the

\*Based on remarks by Professor Andrew Nathan, Columbia University at the SAIS China Forum of the Johns Hopkins School of Advanced International Studies, Washington, DC, Sept. 17, 1986.

reforms is inconsistent with these roles. An objective of economic reforms is the reduction of political influence in economic management. Administrative reforms have attempted to establish a clearer separation between Party and state. The ideological bases for policy are shrinking, and ideology has become a less salient factor in Chinese society and public life. Material benefits are increasingly available to those with money, and the ability to earn money has increased. The prestige and privilege once attached to Party membership no longer seems attractive to large segments of the population.

It is difficult to conceive of the Party allowing itself to whither away. Major questions face the Party: Will it be able to do what no other Communist party has done, and define for itself a new social role that will be compatible with modernization? Or, will it become an ever more conservative force, a drag on modernization, in the interests of maintaining its organizational integrity and control over the society in the face of changes that render it obsolete?

## THE IMPACT OF TECHNOLOGY TRANSFER

### Impact on the Economy

Without technology from abroad, China will have a slow and costly road to modernization. However, technology is only one function involved in reaching a more efficient economy. Shifting from an extensive to an intensive growth pattern will also require managerial changes and an improved environment for managerial decisionmaking. The economic reforms are clearly intended to alter the economic environment; if successful, they would be an important step in moving toward an effective, intensive growth strategy.

The experiences of Japan and the Asian NICS readily demonstrate the importance of foreign technology transfer to economic growth, especially in certain sectors of the economy; for example, consumer electronics and textile

industries. Technology transfer from abroad can also be a force supporting the kind of institutional change sought by the reform program. As illustrated in the Foxboro case described in chapter 4, and as noted in the World Bank's analysis of the Chinese economy, effective technology transfer often involves the transfer of the modern management and general business skills that China needs.<sup>8</sup> Since the Chinese have a stake in importing technology, technology transfer can be (but is not necessarily) a force for overcoming resistance to reform. Successes in reform, in turn, can have positive growth effects, and there is some, albeit still limited, evidence that China is beginning to realize increments of growth through

<sup>8</sup>The World Bank, *China: Long-Term Issues and Options* (Washington, DC: 1985).

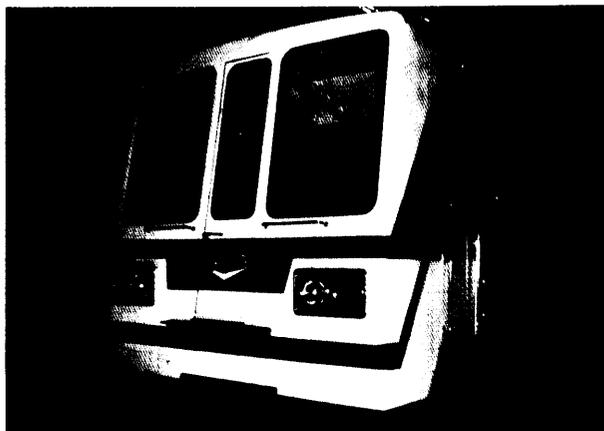


Photo credit Eric Basques

This modern subway train is being manufactured at the Changchun Passenger Coach Factory. It will be put in service on the Beijing Subway.

“disembodied technical change” (increased output not linked to increased equipment) resulting from reform and new technology.<sup>1</sup>”

Over the longer term, as the experiences of other East Asian countries illustrate, technology transfer can have a profound effect on the growth and modernization of an economy, including qualitative changes. One of the more important consequences of technology transfer indeed is likely to be in the improvement of product quality, a change that is closely linked to the question of Chinese export expansion, discussed below. The benefits from technology transfer are more likely to become evident in the 1990s (sooner in some cases), assuming that some of the basic institutional problems of the economy are solved. Growth over the short term is likely to depend on factors other than technology transfer; for example, through high levels of investment<sup>11</sup> and, as reforms succeed, by greater rationality in economic decisionmaking.

Not all effects of technology transfer are positive. Adding an active technology transfer

program to an economy that is institutionally ill-prepared to receive and use the technology can lead to reduced growth and economic confusion, as the experiences of countries such as Poland illustrate. The importance of having a receptive institutional environment and the ability to assimilate technology and incorporate it into production is illustrated by the Asian NICS. The existence of these attributes in the latter countries, but perhaps not in China at the moment, should induce caution in comparing China's current course with that followed by the Asian NICS.

China has clearly had technology transfer experiences recently that have not gone smoothly. The transfer of Spey engine technology in the 1970s, for instance, has not led to its effective utilization in Chinese production. The Baoshan steel complex, though now partially completed and operating with Japanese technology, has also run into a host of problems that have required extraordinary efforts to manage and have been a source of ill feeling between China and Japan. Serious problems are also evident in such showpiece projects as the Volkswagen Shanghai Santana venture and the AMC-Beijing Jeep operation discussed in chapter 4. In these and other cases, technology transfer has not gone smoothly, and the efforts have not produced the expected economic effects.

#### Impact on the Political System

The impact of technology transfer on China's political future is an intriguing question. Western observers often like to think that the coming of modern technology will promote liberalization, the implicit assumption here being that the division of labor and specialization that are associated with much modern technology carry an imperative for pluralizing political arrangements as well. This maybe too simple an approach to an assessment of the Chinese political future.

These implications cannot be considered without discussing people—the foreign supplier of technology and the Chinese managers and officials who procure it. China's quest for technology has made the foreigner a partici-

<sup>10</sup>Rock Creek Research, *The Role of Technology Transfer*, app. 1 in vol. II of this report.

<sup>11</sup>Robert F. Dernberger, “China's Development Strategy Investment Financing Needs and Sources, paper presented to the Fifteenth Sino-American Conference on Mainland China, Taipei, June 1986.

pant in Chinese policymaking and thus a factor in Chinese politics. The opinions and analyses of the foreigner often carry weight in Chinese policy deliberations, and access to the foreigner can be a useful political resource for the Chinese decisionmaker. " More generally, the West and Western technology have great prestige in China, and are seen as a source of guidance for the modernization program.

But there is ambivalence about the West, about the foreigner, and about foreign technology, as well. The West is seen as the source of corrupting ideas and values, and close relations with foreigners can be a liability as well as an asset.

The impact of technology transfer is also not uniform; the distribution of the benefits from it are uneven. The most notable differential is based on geography, with the coastal regions being more clearly the beneficiaries of the open door policy and the access it has brought to the goods of the foreigner. This privileged position of the coastal region is a consciously chosen part of the Chinese development strategy, which sees these regions serving as a bridge between the advanced technology in the international environment and the more technologically backward interior sections of the country. While there now seems to be a general acceptance of this policy, it has not come without objections from the interior.

As with the impact on the economy discussed above, the impact on the political system could be positive or negative. China's long history of xenophobia, the force of nationalism, the potential for corruption resulting from interactions with the foreigner, and the differential distribution of benefits of technology transfer all make for potent threats to domestic political stability and to continuity in foreign policy.

<sup>10</sup>See Michel Oksenberg and Kenneth Lieberthal, *Bureaucratic Politics and Chinese Energy Development* (Washington, DC: U.S. Department of Commerce, 1986).

<sup>11</sup>This includes access to overseas education. See Committee for Scholarly Communications with the People's Republic of China, *A Relationship Restored* (Washington, DC: National Academy Press, 1986).

On the other hand, in China's recent history of interactions with foreigners, and search for foreign technology and investment, there is evidence of positive political change. This includes greater attention to achievement criteria in the recruitment of leaders, efforts to institutionalize a legal system, more rational approaches to policymaking, pragmatism replacing ideology, moderation in the management of political conflict within the elite, and a degree of liberalization, albeit within the terms of Marxism-Leninism.

### Impact on Social Change

In contemplating the future impact of technology transfer on Chinese politics, a central issue is the extent to which technology transfer will contribute to social change, which will in turn effect the Chinese political system. One approach to this question is to see the Dengist leadership generally in control of issues of liberalization and the impact of technology transfer. In this view, the liberalizations that have occurred can be seen as part of the political and policy agenda of Deng and his followers. Forms of liberalization can be seen as means to combat the conditions, such as entrenched bureaucratism, that are viewed as threats to the successful implementation of the reform program. To simplify this argument, the Dengists are committed to modernization, including the importation of foreign technology. They realize that economic reform is needed to utilize foreign technology effectively and thus are willing to initiate political changes to overcome resistance to reform. Technology transfer thus has an impact through the planning of the leadership.

A second approach is to see technology transfer as a force for social change that is somewhat beyond the control of the elite. Technology transfer in the context of reform is seen as a pluralizing force. As Chinese society becomes more complex because of technological changes, it has greater difficulty achieving centralized, comprehensive political controls. Access to foreign technology and investment by an increasing number of organizations can be

seen as empowering in the sense that it reduces dependence on the Chinese state for necessary resources.

Furthermore, certain requisites of successful technology transfer are more compatible with a pluralistic, decentralized social order than with a centralized, monolithic system. If China wishes to have the benefits of the technology, it will have to accommodate these requisites. For example, Chinese approaches to property rights, including intellectual property rights, have been altered by the need for clarity in proprietary claims technology. It is unlikely that China would have created a patent system, for instance, if not for the concern that without one, Western technology would be less available. The concern for patent protection, however, reinforces other trends in the Chinese reform environment that are in the direction of assigning property rights to individuals and groups outside of the sphere of the state. This in turn is part of a trend toward the creation of an economic system that is considerably more independent of the political system. A more autonomous economic system is thought in this latter interpretation to be a check on state power and thus a force for a more liberal order.

These two perspectives—one stressing managed political change from the top and the other seeing political change resulting from social and economic change from below—need not be regarded as mutually exclusive. There is evidence for both interpretations. Perhaps the more significant observation, therefore, is that technology transfer is part of a complex process—involving active elite participation *and* diffuse social change beyond the elite's control—which is forcing political change in directions that could be interpreted as liberalizing.

It is impossible to say whether these trends will continue or whether on balance they are a force for future political stability. There clearly are other forces in Chinese political life that work against liberalization, but more importantly, there is the question of whether liberalization serves Chinese modernization in-

terests or not. While the Western observer might consider the answer to this question to be obvious—modernization cannot proceed without liberalization—a careful reading of Chinese politics would indicate that under certain conditions, some forms of liberalization might have negative consequences.

For, despite an image of monolithic, centralized power, China is in many ways a polity in which authority is fragmented. As noted in chapter 3, there are uncertainties in the authoritative roles of ministries vis-a-vis central planners and the top elite, and of those of local governments vis-a-vis the central government. Other areas of uncertain authority relations also point to problems of fragmented authority.

Modernization-induced change, including the impacts of technology transfer, in principle could create problems for the political system in two ways. First, as a force eroding concentrations of power (the liberalizing influences discussed above), technology transfer could lead to the further fragmentation of authority. There is already evidence, for instance, that the combination of the open door environment and domestic reforms have produced delays (approaching immobility) in decision making on certain large projects where foreign technology would be central, such as Three Gorges, the hydroelectric project. ”

At the same time, technology transfer, and economic modernization more generally, will create a host of new social problems—new environmental insults, occupational dislocations and employment problems, new infrastructure and social services requirements—that will require effective political responses. A case could be made that more, rather than less, concentration of power and authority might be required, and that without it, technology transfer could increase China's problems of governability and political stability.

There clearly are dynamics of Chinese politics that are beyond the ken of the foreign observer, and that makes predictions and fore-

<sup>1</sup> See Oksenberg and Lieberthal, *op. cit.*

casts subject to considerable doubt. The political changes in China since the late 1970s have been important, have pointed toward the likelihood of continued stability, and have been liberalizing to a degree. The increased interactions with the outside world, including increased technology transfer, have been compatible with those changes—the open door has both helped and been helped by the domestic political changes. The trend line therefore is encouraging. By implication, to support technology transfer is to support the trend.

However, Chinese politics have shown unexpected changes of direction in the past, and may again. In addition, the political role of technology transfer is complex. Modernization can be a disruptive as well as a positive experience. Ultimately, the question becomes whether or not China will be blessed by skillful and dedicated political leaders who can guide the country around the pitfalls of technological change while reaping the benefits of that change.

### Market Socialism

The current direction of Chinese institutional experimentation involves greater use of decentralized market mechanisms to stimulate efficiency and innovation as well as more attention to central planning controls. The basic principles of socialist ownership are to be maintained, as are socialist fairness in distribution and socialist welfare and social security principles (although the mechanisms for providing the latter may change). The sanguine view of China's future assumes that these often contradictory elements in China's institutional quest can, in principle, be reconciled into a Chinese form of "market socialism."

The less sanguine view, drawn in part from analyses of East European experiments with market socialism, is that the prospects for an institutional order that is "half plan, half market" are not promising. On certain key issues—prices, workplace motivation, property rights, social security—the approaches of market-

coordinated and planner-coordinated systems are simply too divergent.<sup>16</sup> Socialist planners are incapable of tolerating the wide fluctuation in prices, for instance, that will characterize an effectively functioning market system. To achieve the motivational benefits of a market system is to tolerate the use of material incentives leading to significant income inequalities, which again will be incompatible with the socialist orientation. The principles of economic efficiency underlying the market system contradict the "social contract" or "socialist ethical code" of the socialist system, which stresses such values as the protection of the weak (rather than the value of competition), the interests of the collective (rather than the individual), and full employment (rather than efficiency)."

In this view, the "half plan, half market" hybrid is seen as ultimately less desirable than either the market system or the planner controlled system. In addition to contributing to economic disequilibrium, the hybrid also contributes to a disequilibrium in public morality. Individuals faced with the uncertainty of whether they are expected to conform to the norms of the marketplace or to the norms of socialist morality become morally confused and adopt a "live for the day" mentality.<sup>18</sup> The rise of corruption, which China has experienced since the initiation of reforms, maybe a result of this moral disequilibrium.

The two views on the prospects for market socialism in China—the sanguine and the skeptical—may both fail to allow for the possibility, and indeed the likelihood, of more incremental, less premeditated, changes in Chinese institutions in response to Chinese conditions. Such changes may defy easy description and are less neat theoretically, but they are more typical of the actual workings of social systems.

<sup>16</sup>This argument has been made by Jan S. Pry byla. See, for instance, "Mainland China and Hungary: To Market, To Market . . ." unpublished paper presented to the Fifteenth Sino-American Conference on Mainland China, Taipei, June 8-14, 1986.

<sup>17</sup>Ibid.

<sup>18</sup>Ibid.

"Cf., The World Bank, op. cit., p. xxxiii.



Photo credit A/an T Crane

With the new economic liberalization have come new marketing techniques including western style billboards.

Technology transfer will be an important factor shaping these conditions in which Chinese economic and political institutions evolve. However, it should not be assumed that the "imperatives of technology" will be determinative of institutions. The weight of evidence from Chinese experience and the experiences of other countries suggests otherwise.<sup>19</sup> Instead, the imperatives of technology should be seen as *inclining* institutional choices in certain directions, not all of which will be the same.

Technology transfer affects the evolution of Chinese institutions in two ways: what the Chinese will have to do if technology transfer *is to be effective*, and the consequences for institutions if technology transfer *is effective*. In

<sup>19</sup>See Richard P. Suttmeier, "Science, Technology and China's Political Future: A Framework for Analysis," paper presented to the Conference on China's New Technological Revolution, Harvard University, May 1986.

both cases, the impacts are likely to appear contradictory.

To be effective, technology transfer would seem to require the further marketization of the economy, including more fully developed labor and capital markets, a price system that provides macroeconomic decisionmakers with accurate economic information, and a further clarification of property rights. The persistence of an irrational economic environment (including irrational prices and irrational limitations on the efficient movement of capital and labor) appears to affect adversely China's ability to select technology wisely and assimilate it fully.

At the same time, there are certain negative externalities associated with market transactions in technology that seemingly require strong administrative responses from the central authorities. These include the problems, discussed in chapter 3, of the duplication of

technology imports and of importing technology that may already be available in China. Central controls over the expenditure of foreign exchange for technology are also appropriate in light of the collective disadvantages that result from an uncoordinated use of this scarce resource.

Other types of problems associated with negative externalities can also be noted. These would include the setting of technical standards for imported technology and the establishment of health and safety standards. In short, an effective technology transfer program will require not only more decentralized marketization, but also more vigorous policy interventions from a stronger central government, seemingly a contradiction.

Similarly, successful technology transfer is likely to be both a force for greater decentralization of Chinese society and a force for more effective centralization. Decentralizing trends will result because successful technology transfer will make enterprises and other economic units more autonomous vis-a-vis central authorities and less dependent on them. Successful technology transfer will entail networks of relationships between economic units and foreign suppliers of technology, which will be very difficult for central authorities to control. Often, the technologies transferred will be empowering of lower level organizations, and they will often require new forms of specialization that should be a force for greater economic and social pluralism.

At the same time, successful technology transfer will strengthen the capabilities of central authorities. Especially in areas such as transportation, telecommunications, and data processing, foreign technology should help the state penetrate and control society more effectively. The society it will want to control, however, will itself be more empowered and thus be in a better position to resist the penetration of the center. Whether these developments are constructive and progressive, or debilitating, depends on many nontechnological factors that are not likely to be determined in the first instance by technology transfer.

On balance, technology transfer should be a constructive force in China's future. It is likely to make possible rapid improvements in the quality of China's export goods, to become an increasingly important factor in Chinese economic growth, and to be an important factor in overcoming major constraints on growth and development caused by underdeveloped infrastructure and energy supplies.

The impacts on the evolution of Chinese political and economic institutions are likely also to be salutary, although there is much more uncertainty connected to this prediction. As seen in chapter 3, China needs both more decentralization *and* more effective centralization, and technology transfer is likely to be a force for both. The great uncertainty is whether the nature of the current system, with its many economic and political irrationalities, will have more of an impact on technology transfer than vice versa.

## IMPLICATIONS FOR THE UNITED STATES AND THE WORLD ECONOMY

It has been U.S. policy since the 1970s that a friendly modernizing China is in the U.S. interest. Quite apart from any foreign involvement, China is undergoing major changes designed to realize finally a century-long quest for wealth and power. The United States and other countries are now involved in these changes in China, and technology transfer is

one of the prominent modes of involvement. The implications of this involvement must be understood in order to judge whether it serves U.S. interests.

One area where the implications of China's future course require rethinking is China's international economic role. China's foreign trade

has expanded dramatically in recent years, albeit from a small base, and China clearly has premised its current modernization drive on active participation in the world economy. China's interest in membership in the General Agreement on Tariffs and Trade is indicative of its growing interest in and commitment to international economic institutions.

China's export economy suffers from both technical and systemic inefficiencies. The economic system reforms, currency revaluation, and other incentives for Chinese producers to export rather than sell to the domestic market will help alleviate systemic inefficiencies. Technology transfer will help with the technical inefficiencies. Indeed, the main short-term consequence for economic performance of technology transfer will be to improve the performance of the export sector, mainly through qualitative improvements.

China's foreign trade potential is much greater than its actual trade today. The rate of growth of China's foreign trade has been greater than the overall rate of economic growth, and this is likely to continue for the next 15 years. China's exports have been rising at an average annual rate of 14 percent since 1978, and the value of exports now represents 7 percent of the gross national product. It is quite possible that by 2000, this latter figure could be doubled.

If current trends continue, Chinese exports will represent about 4.4 percent of world exports by 2000. This percentage is comparable to the current shares of such countries as Italy and Canada. China's considerable ability in recent years to capture market shares has been due largely to its low prices, which are due in turn to its low production costs. The growth of Chinese exports, and China's penetration of foreign markets, has occurred during a deflationary period in international trade. This fact also suggests that the potential for growth of trade has not yet been fully demonstrated.

As China's exports have increasingly diversified, questions have arisen about whose products China's will replace in which markets.

During the next 15 years, Chinese products are most likely to be competing with those of the NICS (including Singapore, Malaysia, Brazil, India, Mexico, Thailand, Argentina, Hong Kong, Taiwan, and Korea) in third country markets. Direct competition with either the LDCS or developed countries such as the U.S. is less likely. One exception to this is that U.S. agricultural exports to Asian markets may suffer from Chinese export expansion.

China's imports are heavily weighted toward industrial supplies and producer goods rather than consumer goods and should offer attractive trade prospects for the United States. In light of the above, and although Chinese exports will compete with some U.S. products of older industries in U.S. markets,<sup>20</sup> it should be in the U.S. interest to see the expansion of Chinese exports. However, the U.S. share of the Chinese market has fallen, due in part to more aggressive marketing and more efficient export control practices in other countries.

Other problems also make the actual prospects for Chinese exports less rosy than the potential suggests. China's interest in a more active participation in world trade does not come at the best of times. Many of the markets in the advanced industrialized countries are already vulnerable to pressures from imports, and protectionist sentiments in places run high. In addition, the cost advantages Chinese products enjoy because of cheap labor may not be enduring. New technological advances in the advanced countries in industries that were vulnerable to inexpensive imports based on low wage rates could upset established patterns of comparative advantage in the near future.

China's rapid decline of foreign exchange holdings has led to increasing interest in commercial credits. The Seventh Five-Year Plan expects \$40 billion to \$50 billion in financing of all kinds from abroad. As with foreign exchange, there has been some loss of central control over international indebtedness because

<sup>20</sup>A politically significant example is textiles.

of the increasing financial role of organizations such as the China International Trust & Investment Corp. (CITIC). According to estimates made by the Bank of Japan, China's foreign debt by the end of the Seventh Five-Year Plan in 1990 could reach \$49 billion.<sup>22</sup>

There is no consensus about the longevity and severity of these problems. They have made the Chinese more insistent that in its trading relations, ways must be found to increase China's exports. They are also likely to lead China to seek more barter opportunities, which could lead to more trade with the Soviet bloc. Such trade would reduce the pressure on the use of hard currency reserves, would be more insulated from the perturbations of the international capitalist economy (e.g., the fall in oil prices), and would be more congenial to the operation of the centrally controlled, planned sector of the economy.<sup>22</sup>

China's problems of adjusting to the international economy are also likely to limit the

growth of U.S.-China trade and economic cooperation in the short run, particularly when the problems of foreign investment are also considered. Efforts to improve the investment climate are not likely to have rapid results. The appeal of joint ventures has faded for the moment, which is likely to slow technology transfer and change the mode of technology transfer preferred by U.S. companies to *licensing* agreements.

China continues to give evidence of wanting to participate in the world economy and to reap the benefits of foreign investment and technology transfer. To do so, China must export. It is likely that a number of bilateral and multilateral trade issues will result from Chinese export expansion. These include the persistence in Chinese efforts to realize bilateral trade balances, a likely increase in Chinese use of export subsidies and other forms of protectionism in China, the lack of transparency in Chinese trade decisions, and the changeableness and unpredictability of those decisions. The rise of protectionism on the U.S. side, already evident in the growth of antidumping cases brought against Chinese imports, further complicates the prospects for U.S.-China trade and for U.S. participation through technology transfer in Chinese modernization programs.

<sup>22</sup>Mainichi Daily News, Sept. 6, 1986, p. 6.

<sup>23</sup>Juan-li Wu, "Economic Reform and Foreign Economic Relations: Systemic Conflicts in a Theoretical Framework," paper presented at the Fifteenth Sino-American Conference on Mainland China, Taipei, June 1986.

## IMPLICATIONS OF A FAILED MODERNIZATION PROGRAM

All developing countries are faced with very tight constraints imposed by population pressures, environmental limitations, and pressures from the international economy. The tightness of these constraints often puts enormous pressures on social institutions, making governance and the maintenance of domestic stability difficult.

China is no exception to this observation. Indeed, many of its constraints are particularly severe. China's leaders continue to be in a contest against demography and environmental degradation, and they must race to keep from falling further behind the economic and technological progress of other countries.

This chapter has suggested that the international community as a whole will benefit from China's modernization, though problems will emerge in certain areas. However, successful modernization is not guaranteed. The direct implications for the world economy if China's modernization fails to meet expectations are fairly easy to predict: China will be less of a market and less of a producer. The domestic implications are considerably more complicated because the stakes are very high, both for China's leaders and for the Chinese population.

There is a distinction between a "failed modernization program" and a "failure to modern-

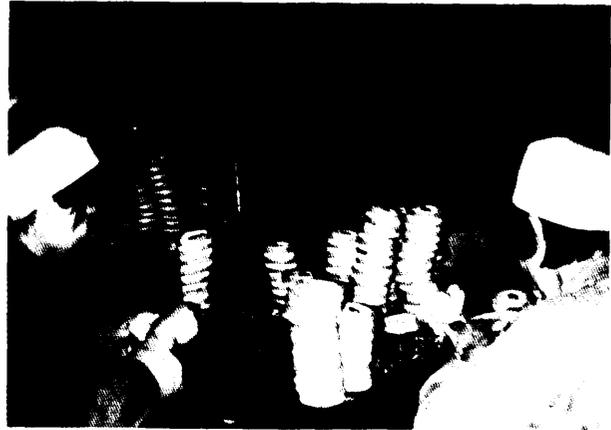
ize." China is already "modernizing" in the sense that China has been experiencing a series of societal changes. Examples are industrialization and the substitution of inanimate for animate energy, urbanization, increased literacy and life expectancy, the development of a science and technology base, establishment of and penetration of society by mass media. China's modernization program, The Four Modernizations, is a conscious effort to give Chinese societal change new quantitative and qualitative dimensions that will enhance national wealth and power and individual well-being.

The partial modernization experienced by China (albeit, unevenly distributed across China) has created expectations in the population that more will follow and that living standards and quality of life should improve. The increasing exposure experienced by many Chinese to the lifestyles of Hong Kong, Taiwan, Japan, and the West fuel these expectations further. One of the requirements of a successful modernization program is to be able to respond to these expectations. Fulfilling that requirement is a challenge to the political system.

At the same time, the modernization that China has experienced has brought with it a series of new challenges to the capabilities of the state. China's problems of energy supply, urban transportation, sewerage, telecommunications, and housing are all more serious precisely because modernizing change has begun. These problems are likely to remain unsolved and to worsen if the modernization program is not successful.

The problems associated with population growth and employment during the next 15 years (and beyond) will be particularly difficult. Between 1981 and 2000, the Chinese working-age population will increase by about 250 million, with a probable increase in the labor force of 180 million. To provide employment for these new entrants into the labor force would require an average annual increase of new jobs of 10 million.<sup>23</sup>

<sup>23</sup>The World Bank, *China: Long-Term Issues and Options* (Washington, DC: 1985), p. 185.



G

Also affecting the employment picture will be the significant shift out of agriculture and other forms of rural employment to urban jobs. Whereas 36 percent of the work force now lives and works in cities and towns, this figure is expected to rise to 54 percent by 2000. The need for rural workers will decline.<sup>24</sup> China, in short, will be much more of an urban society by 2000 than it has been.

The smaller cities and towns will feel the most demands from the new job-seekers. Their capacity to respond to these demands remains unknown, but the scale of the problem will be large. As one analyst has put it:

Coping with the waves of peasants who flock to urban areas looking for work will pose extraordinary challenges to the social and economic infrastructure of China's small cities and towns. Not only will jobs for these people be required; they will need housing, access to medical care, transportation, schools, stores and a host of other services taken for granted.<sup>25</sup>

China's ability to cope with the social disruptions of modernizing change will be enhanced by a growing economy and improve-

<sup>24</sup>Jeffrey R. Taylor, *Employment Outlook for China to the Year 2000*, CIR Staff Paper No. 16 (Washington, DC: Center for International Research, U.S. Bureau of the Census, March 1986), p. 2.

<sup>25</sup>*Ibid.*, p. 17.

ments in China's political and administrative institutions. The state will clearly need additional resources—for investments in human capital, social services, infrastructure, and the like—to smooth the transition to modernity. A growing economy will make the task of extracting these resources easier, as will political and administrative institutions capable of fair and efficient extractions and the implementation policies that will cushion the effects of rapid social change.

A China not able to meet these requirements is likely to be a China overflowing with individual and collective frustrations. For the individual, long-suppressed aspirations for a better quality of life, were in the post-Mao period, would be frustrated again. For the society as a whole, a failure to fulfill the promises of the Dengist leadership for developing the nation's human and natural potential and thereby instilling national pride, would be a disappointment of massive proportions. A society with such frustrations would be a society susceptible to the appeals of political extremism and to the dangers of political instability.

Domestic political extremism and political instability in China can have international implications. A politically unstable China, or one

under the sway of an extremist leader, is more likely than present-day China to be a disruptive force for the regions around its periphery—especially on the Korean peninsula and in Southeast Asia. Such a China is also likely to be more difficult to deal with on the Taiwan problem and on the future of Hong Kong. A more extremist China is likely to support Third World insurgences and to be a more disruptive force in international fora, such as the United Nations. In short, a China subject to the influences of political extremism as a result of a failed modernization program is likely to be a considerably less constructive member of the international community than the present China.

A modernizing China must live with constant risks of instability. Without technology transfer, however, China's modernization program will be much more difficult to implement, and a failed modernization program threatens to leave China with troubling national frustrations, to undercut the legitimacy of the reformist coalition, and to expose China to the appeals of more radical political doctrines. Such a China would have less of a stake in a stable international order than does a China pursuing its current course.