U.S.-China Economic Relations
U.S.-China Economic Relations
Present and Future

EDITED BY
Richard H. Holton and Wang Xi
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The papers in this volume were prepared for the conference on “United States-China Economic Relations: Present and Future,” which was held at Fudan University in Shanghai, March 28–April 1, 1988. Following the events in and near Tiananmen Square on June 3–4, 1989, and the subsequent developments, we reflected on the possibility that the papers were essentially out of date and that there would be little to be gained from their publication. However, it was decided that the contrary view had much to recommend it, namely, that the papers could provide a useful picture of how economic relations between the two countries stood before Tiananmen Square. Revising the papers seemed not only burdensome for the authors but unwise, because the revisions would not have the benefit of further conference discussions among all the participants.

Professor Robert Scalapino had presented a paper at the conference on “The Political Context of U.S.-PRC Relations.” Since the political environment was changed so substantially by the events flowing from the turmoil of early June, 1989, Professor Scalapino considered that paper especially outdated and suggested that it be omitted from this volume. The remainder of the papers, focusing on economic topics, we hope are instructive in portraying the status of economic relations as of late 1987 and early 1988, when the papers were prepared, discussed, and revised by the authors.

Richard H. Holton
August 1989
China and the United States have now had a decade of experience since China's new economic reforms were introduced late in 1978. Economic relations between the two countries have been evolving steadily, but not without some tensions and complaints. The papers in this volume, presented at a conference at Fudan University in March 1988, review and assess the experience in this new era, with the hope that improved understanding can lead to felicitous relations between the two countries in the coming years.

In 1979, China's international trade was minimal, reflecting the longstanding policy of managing the economy with self-sufficiency as a major objective. Meanwhile, the United States was the biggest international trader. So in a sense we are looking at the David and Goliath of international trade and asking how they are getting on.

The answer seems to be that they are getting along tolerably well. The problems that have drawn attention stem largely from the pattern of change that the two countries are facing both internally and in relation to the world scene. China is moving toward an economy characterized by economic planning supplemented with free markets. Market forces are now to play a major role in guiding the allocation of resources. At the same time, modernization of the economy calls for fast improvements in the state of technology applied in the country's factories and infrastructure services, and this need dictates that much modern technology be acquired from the more industrialized countries of the world. Thus the demand for foreign exchange is great. Meanwhile, the country's industrialization program has not proceeded to the point where new industries have matured sufficiently to compete easily in world markets. Thus China must earn its foreign exchange largely from the exports traditionally favored by less-developed countries, namely textiles and textile products and other labor-intensive products.

The United States over the last decade has been experiencing its own version of a foreign exchange problem. Huge trade deficits developed,
reaching $160 billion in 1987. Manufacturers increased their sourcing of components, raw materials, and semiprocessed goods from abroad. Foreign manufacturers of everything from machine tools to consumer electronics increased their share of the U.S. market. In part this was because the value of the dollar on the world market rose to such heights, peaking in 1985. But even after 1985 the imbalance in foreign trade continued longer than most economists had anticipated. It is feared that the United States is losing its competitive status perhaps not just because of the value of the dollar, but because of such factors as a slow growth in productivity per worker and a shrinking commitment to research and development programs. In any case, Americans have grown increasingly concerned about their country’s ability to compete in world markets. As jobs “moved offshore” and competition from imports intensified, they became especially sensitive to the question of “fairness” in international trade.

Two consequences affecting U.S. attitudes about economic relations with China that have sprung from these developments are of interest here. First, the voices speaking out for more protectionist measures appeared to be more numerous and noisy. And second, the United States became increasingly aware that technology is a resource that must be safeguarded from appropriation by others without appropriate payment.

The interplay of these developments has led to some continuing strain in China-U.S. economic relations. The Chinese, on the one hand, consider the American quota restrictions on the imports of textiles and textile products to be a gross violation of the principles of free trade. The Americans, on the other hand, still see China as essentially a planned economic system, one in which prices are set largely by fiat rather than by free market forces; thus, they would argue, the Chinese should not expect others to adopt free market policies if they are not prepared to do so themselves. The Chinese, of course, see the huge difference in income per capita between the two countries and ask why the United States should not feel compelled to assist Chinese economic development by opening up the U.S. market completely to their textile products or at least by providing a larger quota than at present.

The great majority of American economists would probably agree that the total welfare of the American people would be advanced if the United States were to have a policy of free trade in textiles. But the textile quota policy is not formed by American economists. It is a result of the political process in the United States Congress. Thus far the political influence of the representatives of the states with an interest in textile manufacturing have carried the day, so the textile quotas remain in place. They are the result of political power, not of economic logic focusing on the long-term economic welfare of the American public. We can expect the Chinese pressure
for relaxed quotas to continue, and we can expect the American resistance
to relaxed quotas to continue as well.

The second source of contention of interest has been the American
stance on the transfer of technology to China. Here we witness the
consequence of markedly contrasting views of the nature of technical
knowledge. The Chinese long considered technical information to be a
public good, freely available to all, with no restrictions. Thus technical
information moved readily from one unit to another as technical advances
that had been developed in one unit were shared with others. In the United
States, on the other hand, technical information is considered to be the
property of the party developing that information, if it meets certain tests
and is therefore patentable. So the American talks of "intellectual property"
as a valuable resource. New technology developed by a private firm's
research and development staff has been developed at a cost, mostly the
cost of the personnel in the R&D activity. Furthermore, typically much of
the R&D effort in most firms is wasted, in the sense that many projects have
to be abandoned because they are not leading to the results initially
expected. Since in the long run the "winners" must pay for the "losers," the
cost of developing a winner must include the cost of the losers.

Given that the American firm wants to continue with its R&D efforts
and to maximize the wealth of its shareholders, it will guard its intellectual
property, using it to maximize the firm's total value. Consequently, it will
not readily share it with other parties, either at home or abroad. While
Chinese firms often see themselves as not receiving the latest technology
from their American joint venture partners, for example, the American firm
sees itself as protecting a valuable resource; consequently, the Chinese
units can expect to find a continuing reluctance, on the American side, to
share technology. This is especially true if the American side fears that
sharing technology means that the Chinese partner, once the knowledge is
internalized, will abandon the partnership and become a new competitor.

Some transfer of technology is inhibited because of public rather than
private policy. The government of the United States does not want advanced
technology that might have military applications to get into the
hands of governments that are, or might become, "unfriendly." Controlling
exports, however, is fraught with definitional and conceptual difficulties.
Many American firms that might otherwise export technologically ad-
vanced equipment to China are frustrated by their own government's
restrictions and consider them to be unwise and unnecessary. This set of
problems can be particularly troublesome in the case of products subject
to both civilian and military use. Thus electronic air traffic control
equipment might be restricted because of its potential military applica-
tions. Although the list of restricted items is now considerably shorter than
it was several years ago, until U.S. suspicions of other countries' intentions are greatly reduced, there will continue to be a list of goods that the United States will not sell to China. We can anticipate that this problem, unfortunately, will be a continuing irritant in China-U.S. relations.

Insofar as direct investment by Americans in China is concerned, the outlook is promising. The Chinese have exhibited disappointment that the flow of direct investment by Americans into joint ventures in China has not been greater, and Americans in the first years following the introduction of economic reform certainly anticipated considerable investment activity. But although direct investment has been slower than expected, experience is being gained by both sides, and one can expect the flow to increase as both the Americans and the Chinese learn how to make the process work more effectively. One suspects that the Chinese, given their limited experience in other countries before 1979, did not realize that to a considerable extent China is competing with other countries of south and southeast Asia in the race to attract the foreign investor. So the investment environment must be attractive on a relative as well as an absolute basis. With improvements in that investment environment, American firms will surely step up their operations in China. Furthermore, the Americans are learning more every year about how best to establish operations in China. As some of the mystery of doing business in China dissipates, we can expect to see more vigorous direct investment by American interests.

The papers in this volume, prepared for the Conference on United States—China Relations: Present and Future, which was held at Fudan University, Shanghai, PRC, March 28—April 1, 1988, discuss these and other topics at length and are designed to improve our understanding of the points of view encountered on both sides. We are grateful to the Fund for Reform and Opening of China, Inc., the Ford Foundation, the Earhart Foundation, and the Rockefeller Brothers Fund for financial support for the Fudan University conference. And we especially thank the organizing committee of the conference: Professor Robert A. Scalapino, director of the Institute of East Asian Studies at the University of California, Berkeley; Professor Dwight Perkins, director of the Harvard Institute of International Development; Harry Kendall, conference coordinator, Institute of East Asian Studies, University of California, Berkeley; Xie Xide, president of Fudan University; and Professors Wang Xi and Lu Yimin, both of the Center for American Studies, Fudan University.
Part One
The Political Context of U.S.-PRC Relations
1. A Multidimensional Approach to Sino-U.S. Relations

ZI ZHONGYUN

In February 1987, China and the United States observed the fifteenth anniversary of the Shanghai Communiqué, and 1988 marked the tenth anniversary of the establishment of diplomatic relations between the two countries. In retrospect, no one can deny that in the past twenty years the progress of Sino-U.S. relations has been fairly rapid in the political, economic, and cultural areas, bearing results beneficial to both sides. To a certain degree military relations have also been established. More importantly, the general trend of the relationship reflects two main features, the first of which is that the development tends to be multidimensional. At the beginning, geopolitical and strategic considerations caused both sides to change their attitudes toward each other. Today, however, Sino-U.S. relations are based on a variety of considerations far beyond the previous ones, although strategic security still remains an important concern. Second, the relationship is increasingly stable and not likely to be affected by temporary incidents. This second feature can also be considered the corollary of the first.

Strategy and Security

Concern over the threat from the Soviet Union was the major factor in the breakthrough of Sino-U.S. relations. On the part of the United States, its policy toward China, either regarding it as an enemy or as a friend, had always been affected over the years by its relations with the Soviet Union. In the late 1940s, the Soviet Union was a factor that both prompted and constrained U.S. involvement in China's civil war. Following the founding of the PRC, one important reason for the United States to contain and isolate China was that China then belonged to the socialist camp headed by the Soviet Union. In the 1960s, when Sino-Soviet frictions became an open dispute, U.S. policymakers started to review the policy toward China; but the major concern of the Kennedy administration at that time was to readjust U.S. relations with the Soviet Union, and both superpowers had a
common interest in preventing China from becoming a nuclear power. In the 1970s, realizing that it would be suicidal for the United States to align itself with the Soviet Union against China, the Nixon administration resolved to start the contacts with China in order to strengthen the U.S. position in the confrontation with the Soviet Union. The Soviet offensive posture in the world was another factor that pushed the Carter administration toward the decision to establish diplomatic relations with China. Again, it was the consideration of U.S. security and strategic interests that convinced President Reagan of the necessity of putting good relations with China over his personal ideological bias and taking further steps in the positive direction. For instance, in 1981 when the Poland situation caused concern that the Soviet Union might send troops to Poland as it did to Czechoslovakia in 1968, there were suggestions inside the U.S. government that selling arms to China in response to such an eventuality might be a desirable option.\(^1\) When Sino-Soviet tension began to ease in 1982, the United States was very concerned. Some politicians who had opposed the improvement of Sino-U.S. relations took this opportunity to launch an attack on the U.S. government policy toward China. Their argument was that “Communist China” could be valuable to the United States only as a counterbalance against Russia and that now this function proved to be unreliable.

Since its founding, the People's Republic of China has found itself in the midst of an international environment characterized by U.S.-Soviet confrontation. While there was more than one cause of China's “leaning-to-one-side” policy in favor of the Soviet Union, the U.S. policy toward China at that time definitely played an important role in pushing it. In the 1960s, when Sino-Soviet relations deteriorated, the United States and the Soviet Union moved toward détente. Naturally, China was much upset by the U.S.-Soviet negotiations on disarmament and on a nuclear test ban, as well as by the secret correspondence and the “hotlines” between Khrushchev and Kennedy. Severely criticizing the idea of “U.S.-Soviet collusion to dominate the world,” China became concerned that the United States and the Soviet Union would “gang up” against China. In the 1970s, Mao Zedong decided to welcome Nixon to China. “Let's handle the polar bear together” became a much-quoted catchphrase. However, for a period of time thereafter, Chinese leaders still worried that the United States was merely playing the “China card” to deal with the Soviets and might let down China if it wished to ease tensions with the Soviet Union.

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The beginning of the 1980s witnessed some changes in the international situation. After President Reagan took office, his administration adopted a harsh attitude toward the Soviet Union, greatly increased the military budget, and started arms expansion as well. Meanwhile, the Soviet Union bogged itself down in Afghanistan, repeating to some extent the U.S. experiences in Vietnam. Domestically, the Soviet Union has been haunted by economic difficulties and the increasingly evident defects of the existing system, which has led to Gorbachev's determination to start a large-scale reform. Therefore, at least for the present, the Soviet Union will have to show some restraint in expanding internationally. Given this situation, and at the same time carrying on its reforms, China has re-adjusted its foreign policy and placed more stress on independence and taking the initiative. If in 1982 the United States had misgivings over the loosening up of Sino-Soviet relations, it later showed its understanding of the situation and even looked at it with reserved approval. Furthermore, U.S.-Soviet relations have gone through some changes as well. From the Reykjavik Conference in 1984 to Gorbachev's visit to the United States in 1987, the two countries have improved relations enough to hold the first summit meeting in sixteen years and to sign the Intermediate Nuclear Forces (INF) Treaty. In this sense, the U.S.-Soviet relationship has developed faster than the Sino-Soviet relationship.

Today, facing the new situation, China does not harbor the misgivings it had in the 1960s about a possible détente between the United States and the Soviet Union. Rather, it welcomes the INF Treaty and possible further disarmament. The United States in its turn is less sensitive to the evolution of Sino-Soviet relations. Now American officials tend to place more stress on the bilateral relationship between the United States and China per se, and the subordination of U.S. policy toward China to its relationship with the Soviet Union seems to be undergoing some changes. This demonstrates a healthy development and genuine normalization of the relationship between the two countries. Both have come to acknowledge that, being two large nations facing each other across the Pacific, they have a broad basis for establishing good relations. The once powerful influence the two superpowers exercised on the course of world affairs is declining, and it is no longer possible for the United States and the Soviet Union to divide spheres of influence between themselves and dominate the fate of the world. Nor is a Sino-Soviet alliance likely to be reestablished.

This is not to say that strategic factors are negligible now in Sino-Soviet relations. On the contrary, as long as the basic pattern of confrontation between the two superpowers remains unchanged, which is quite likely in the foreseeable future, Sino-U.S. relations will be important for the strategic interests of both sides. Neither China nor the United States will remain
indifferent to developments in the other's relation with the Soviet Union. The United States would not wish to see China moving closer to the Soviet Union than to the United States; on the other hand, China is still concerned about the possibility that the United States would subordinate its relations with China to those with the Soviet Union.

The Soviet Union is not the only factor in the consideration of international strategy. For instance, because China is still a developing country, it differs with the United States in regard to the Third World countries.

Equality and Mutual Respect

There is an extremely important paragraph in the Sino-U.S. Shanghai Communiqué:

There are essential differences between China and the United States in their social systems and foreign policies. However, the two sides agreed that countries, regardless of their social systems, should conduct their relations on the principles of respect for the sovereignty and territorial integrity of all states, nonaggression against other countries, noninterference in the internal affairs of other states, equality and mutual benefit, and peaceful coexistence. International disputes should be settled on this basis, without resorting to the use or threat of force. The United States and the People's Republic of China are prepared to apply these principles to their mutual relations.

It is these principles that laid the foundation for the healthy development of Sino-U.S. relations. The essence of these principles is the stress on equality and mutual respect. It should be acknowledged that China attaches far more importance to this aspect than the United States does. This is because, first, historically China rarely enjoyed equal status in its relationships with world powers in modern times and suffered deep national humiliation. For several generations, Chinese people fought and shed their blood precisely for national liberation, so that China could stand as an equal member in the world community. Second, after World War II, the United States interfered in China's civil strife in opposition to the Chinese revolution. It also carried out a policy of violating China's territorial integrity, and the Taiwan issue that resulted still remains a problem in Sino-U.S. relations. Third, at present a great disparity in national strength exists between the two countries, and full equality in economic and cultural exchanges is hard to realize.

Because of these reasons, China particularly values the present relations based on the five principles in the Sino-U.S. Shanghai Communiqué, and does its best to see that they are upheld. From the Chinese point of
view, most of the problems between the two countries have arisen from the failure of the United States strictly to abide by these principles.

In this context, the Taiwan issue remains a major problem. In the past year, new developments have occurred in Taiwan leading to remarkable progress in communications between China and Taiwan. While officially maintaining its "off-hand" attitude, the U.S. government implicitly welcomed this development. But as long as the Taiwan Relations Act exists and the United States sells arms to Taiwan, China will not consider the Taiwan problem settled. Moreover, there is a group of people in the United States who advocate Taiwan's secession from China. They cause trouble occasionally by supporting either the "Taiwan Independence" movement or the idea of "two Chinas" in the international arena. This is still a hidden rock in Sino-U.S. relations.

With the Taiwan problem still unsolved, a "Tibet issue" loomed in the Sino-U.S. relations in 1987. True, this was started by the U.S. Congress, not the executive branch, and the two held different attitudes. But since the U.S. Congress is part of the American government in a broad sense and does have an influence over the making of U.S. foreign policy, its conduct cannot but have an adverse impact on the feelings of the Chinese people toward the United States and thereby on Sino-U.S. relations. The Chinese people were greatly enraged that the U.S. Senate provided a forum for the Dalai Lama to advocate the independence of Tibet and passed the Tibet Resolution. They were stunned to find that some very influential Americans in the United States were so ignorant of the basic facts about China and that allegations so far from the truth were widely spread and taken as the basis for adopting resolutions by what should be a serious and responsible legislative body. Americans cannot be expected to possess full knowledge of the complicated history, politics, and society of an area so far away from the United States; what, then, made this group of Americans think they had the right to form a judgement and launch accusations? What is even more incomprehensible to the Chinese people is that those who claim to be the guardian of human rights never raised a finger when the Tibetan people were under the darkest and cruelest system of serfdom, but instead made such a fuss when the human rights situation in Tibet (even if measured by American standards) is the best and most promising in its history. To the Chinese people, the attitude of these Americans is sheer hypocrisy and is not based on a true concern for the welfare of the Tibetan people. This, again, leads to the old issue of respecting territorial integrity. All the previous American administrations never regarded Tibet as an independent country. The present administration also declared that Tibet is a part of China. The open support of separatist activities by the U.S. Congress has
actually played a role in pouring oil on the fire of the unrest in Tibet. This is what the Chinese people and their government find intolerable.

It is not the theme of this article to go into the details of the Tibet situation. I cite this example only because it is an unpleasant event that should not have happened given the present stage of development of Sino-U.S. relations. This has caused indignation and reactions among Chinese in very broad circles that are unfavorable to the United States. One cannot expect ordinary Chinese to follow the subtle distinctions between the legislative and executive branches and to comprehend the intricate Congressional procedures that enabled the proposals of a few to be passed by a vote of 98:0. The United States does not like to be connected with the word hegemonism. Yet for the Chinese people, the fact that the U.S. Congress claims the right to openly advocate the split of China's territory provides a typical example of hegemonism. For quite some time, the Chinese have ceased calling the United States imperialist. Yet the Tibet case has evoked the memories of imperialist arrogance among many Chinese.

The year 1987 marked the 200th anniversary of the U.S. Constitution. Chinese academic circles attached great importance to this occasion. Numerous seminars were held and Chinese scholars in general positively evaluated the U.S. Constitution and the founding principles of the United States of America from the perspectives of political science and the development of human societies. However, the ignorance, prejudice, and arrogance shown by the U.S. Congress in its recent behavior regarding Tibet has greatly demeaned its image as a serious legislative body in the minds of Chinese intellectuals. As for those Chinese scholars who are especially concerned with the study of Sino-U.S. relations, this serves as an alarm to remind them that there is still a long way to go before some Americans can overcome their prejudice against China and their superpower mentality and learn to treat other countries equally and respect the principles that constitute the basis for Sino-U.S. relations.

China's Modernization

If strategy and security were the main concerns of the Chinese in Sino-U.S. relations during the Mao Zedong era, then the main concern in the Deng Xiaoping era and beyond will be China's modernization. For the United States, however, the major concern in its relations with China continues to be strategic. However, the two concerns converge, because one of the U.S. strategic goals in the Western Pacific, at least since the middle of the Second World War, has been to ensure a unified, stable, and relatively prosperous China friendly to the United States. Unfortunately, while the old Chinese government was friendly to the United States, it was
unable to unify the country. And New China, although unified and stable, was hostile to the United States for a period of time. Only in the present situation can the United States see its above-mentioned policy goal toward China achieved. At the same time, those Americans with insight have realized that China's modernization, being an irresistible historical trend, will come sooner or later irrespective of the amount of American aid, while a more positive role played by the United States will in turn be conducive to its own long-term interest. China's current reforms, giving more play to the market mechanism in the economy and democratization in political life, as well as opening up more to the outside world, are welcomed by the United States. Furthermore, since China is so underdeveloped, the United States need not worry about the former being a big competitor; whereas with a population of 1 billion, this country is a promising market for the United States. Consequently, the United States supports China's modernization, which has led to more economic, scientific, technical, and cultural exchanges between the two countries.

The more normal the political relations between the two countries, the more important economic issues will become. I want to mention here several noneconomic factors that affect the development of economic relations. On China's part, the major problems are evidently those existing in the course of reforms, namely bureaucracy, the absence of sound policies and a legal system to guarantee the legitimate rights of foreign business, unqualified government officials in charge of trade with foreign countries, corruption and extortion with regard to foreigners, and so on. Moreover, since the reforms are experimental in many respects, some policies and measures inevitably will be subject to occasional change, thus causing inconvenience to foreign enterprises. The United States, on its part, has not completely given up its restriction on technology transfer to China, although it has relaxed these controls somewhat. Moreover, it continues to use technology transfer and trade to exercise political pressure. In most cases, this practice is directed to China's domestic affairs, such as birth control, the so-called human rights issue, and China's policy toward part of its own territory. This is also related to the question of equality and mutual respect and constitutes one of the reasons for the Chinese belief that the United States has not given up its hegemonistic attitude. At present, U.S. trade protectionism is a major obstacle in the trade relations between the two countries. Besides, Americans (and Westerners in general) tend to overreact to certain political trends within China, which often affect their confidence in developing economic relations with China. But increasingly people have come to understand that China is engaged in profound reform; the path of reform cannot always be smooth, but the general orientation will remain unchanged.
Cultural exchanges between China and the United States have reached an all-time high. According to the statistics provided by the U.S. Committee on Scholarly Communications with the People's Republic of China, in the decade following the 1979 normalization of Sino-U.S. diplomatic relations, there will be more PRC students and scholars who will have studied in the United States than there were between 1860 and 1950.\(^{2}\) Although the Chinese students and scholars in the United States are only a small percentage of all Asian students in that country, the growth rate of the Chinese students exceeds that of the total foreign student population.\(^{3}\) According to the incomplete statistics from the State Commission of Education of China, there are at present approximately 30,000 Chinese students and scholars in the United States. Following its opening up to the outside world, China has been exposed to a wide range of American publications and American arts.

Although there are far fewer American students in China than Chinese students in the United States, there are more than in any previous period in history. Now, many American "China Hands" above the age of forty envy their younger colleagues the opportunities of studying and staying in China. Yet, they themselves have the opportunity to come frequently to China to do significant research. Cultural contacts between the two peoples on such an unprecedented scale are bound to have a far-reaching impact.

Considering its immediate needs, China is presently preoccupied with learning American advanced science and technology. Therefore, most of the Chinese students currently in the United States are in the natural sciences. No matter what their field of study, their contacts with the nation as a whole reach far beyond that field. What is even more important is that the cultural aspects of student exchange as well as cultural exchange trips themselves allow the Chinese people to open their minds and to better understand American society through their personal perceptions. In turn, they can reevaluate Chinese culture in the light of a culture and society absolutely different from their own.

On the part of the United States, cultural exchange has always been an important tool in its foreign policy. Americans are interested in cultural exchange from various perspectives: American intellectuals in the humanities have always been attracted by the culture and history of China as an ancient civilization, and the fact that such a country is now undergoing a process of modernization is all the more appealing to American scholars as

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\(^{3}\)Ibid., p.25.
a subject for extensive study. American scientists who wish to promote the
development of science and technology worldwide find China to be a
Third World country backward in science and technology but eager to
modernize. However, China can offer American scientists opportunities in
such areas as agronomy and medicine. Some American universities have
come to realize that the admission of excellent Chinese students and
scholars will help raise their academic status. In the short span of a few
years, the excellent performance of Chinese students and scholars has
convinced their professors that it would mean a great loss to American
education if this source of talent were cut off. Finally, American business-
men wish to have a better understanding of Chinese culture and society in
order to facilitate doing business with Chinese.

In sum, there has been great progress in the mutual understanding
between the two peoples and the mutual study among the intellectuals of
the two countries through these years of cultural exchange.

Unfortunately, cultural exchange involves some problems. China has
had bitter experiences with foreign powers in the past. Because of the
subversive implications in the U.S. policy of culture and information
toward socialist countries during the "Cold War," for some time the PRC
was highly vigilant against the "infiltration of the imperialist culture." This
led to an indiscriminate rejection of Western culture. The current policy of
"opening to the outside world" differs substantially from the previous
attitude. Yet, sudden contact in such a wide range between two totally
different cultures will inevitably create clashes and friction. Some young
Chinese blindly worship everything American, whereas others are con-
cerned with the loss of Chinese national identity and harbor various
degrees of misgivings toward the influence of Western culture. In a word,
the question of "discarding the dross and absorbing the essence" has not
been fully solved. This, of course, is China's own problem. In a way, these
problems are inevitable in a nation that takes pride in a magnificent culture
five thousand years old, presently suffering from a low level of education
and finding itself suddenly exposed to the outside world following a period
of isolation.

The problem with the United States lies again in its superpower
mentality even in the cultural field, which is manifested in the natural
inclination of some Americans to measure Chinese life against American
values and to impose American concepts upon Chinese society. This easily
arouses resentment among the Chinese, who have a strong sense of
nationalism. Besides, sending students abroad has led to brain drain, which
retards reconstruction of the country. Accordingly, China must take

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corrective steps to cope with the situation, which in turn may cause misunderstanding and misgivings among some Americans about China's policy of opening to the outside world.

Finally, the economic gap between the two countries has resulted in an imbalance in the cultural exchange. Because of China's limited financial means, many of her students abroad are sponsored in one way or another by the recipient country. However, China's capacity for American students and scholars is much smaller, the Chinese archive system is different from that in the United States, and the environment for conducting field studies is limited—more because of facilities than policy. This constitutes one of the major complaints about China among American scholars.

Ideology

Ideological differences played a fairly important role in the once antagonistic relationship between China and the United States. The basic ideologies upon which the two countries are founded are diametrically opposed. In his letter of transmittal in the “China White Paper” Dean Acheson wished for the reassertion of “Chinese democratic individualism,” implying an encouragement to any opposition force within China to overthrow the existing regime. And during the 1950s and the 1960s, China used to advocate a united front against U.S. imperialism. In 1960, three articles under the general title “Long Live Leninism,” directed against Khrushchev, were published by the Communist Party of China; in 1965, another article, “Long Live the Victory of Revolutionary Wars,” in the name of Lin Biao put forward an analogy to world revolution in the strategy of surrounding the cities by the countryside. These articles were widely interpreted by the outside world as evidence of China's opposition to peaceful coexistence and its intention to instigate armed revolutions in the rest of the world.

In the 1970s, both sides downgraded the ideological tone in their statements about each other. The two pioneers who initiated the normalization of relations between the two countries were none other than President Nixon, who started his political career as a staunch anticommunist, and Chairman Mao Zedong, who was a resolute fighter against imperialism. This proves that national interest prevails over ideology in the making of foreign policies by both sides. Likewise, belying the personal inclination previously displayed, after taking office President Reagan adopted a policy of continuing to improve Sino-U.S. relations. Another point worth noting is that China's reforms are headed toward freeing the country from the old Soviet model and the restraints of dogmatism in ideology. As a result, an unprecedented vigor appeared in both the
academic and cultural fields. Compared with other socialist countries, the Chinese government has taken a more liberal view of Chinese citizens going abroad either to visit relatives or to immigrate. All this has received favorable reaction from Americans. The downgrading of ideology in China’s foreign policy is reflected not only in practice but in theoretical formulae. For instance, Chinese official statements no longer assert that war is inevitable so long as imperialism exists, but instead state that a new world war can be avoided, and there is indeed hope for a lasting world peace. In 1986, Chinese leaders made it clear that they had changed the idea about “the inevitability of war.” Accordingly, the ratio of military expenditure in the overall national budget has been steadily decreasing since 1979, that is, from 17.5 percent in 1979 to 10.5 percent in 1985. Obviously, China has given up such theses as “either war gives rise to revolution, or revolution stops war.”

Ever since the founding of the People’s Republic of China, the Five Principles of Peaceful Coexistence have constituted the guideline for China’s relations with foreign countries. But their meaning has taken on a new dimension in new reforms. Since 1984, Chinese leaders have time and again pointed out that relations between nations transcend ideology and social system, that “facts have shown and will continue to show that if the Five Principles of Peaceful Coexistence are adhered to, countries with different social systems can live in harmony and maintain amicable cooperation, but if not, even countries with similar social systems may come into sharp confrontation or even conflict”\(^5\) and that “learning from experiences since the end of World War II, we will not let the state of our relationship with other countries be predetermined by whether our social systems and ideologies are similar or not.”\(^6\) This represents a further step in recognizing the distinction between ideological differences and foreign relations.

With regard to the United States, ideology has weighed heavily in its foreign relations, though differing in degree at different times. Today, of course, ideology plays a much smaller role than in the heyday of the “Cold War.” As mentioned above, the change of American policy toward China is also the manifestation of national interests prevailing over ideological concerns. However, unlike China, the United States has made no significant changes in the basic ideas guiding its relations with foreign countries. The United States has not given up its goal of pressing American systems, political ideas, and values on the whole world. This is demonstrated both


\(^6\)Speech by Zhao Ziyang at the British Royal Institute of International Affairs (June 1985).
by the speeches of American leaders and the practices of U.S. diplomacy. In Sino-U.S. relations, these ideological factors tend to lead to American interference in China’s internal affairs. Problems raised by Americans over the Taiwan, Tibet, and birth control issues are all evidence of this. Even though these positions might not represent official U.S. government policies, they reflect the political pressure that influences those policies. Americans tend to judge the gains and losses of China's reforms against American values. One American scholar, Michael Hunt, in his recently published *Ideology and U.S. Foreign Policy*, analyzes several major factors in the ideological origins of U.S. foreign policies. Among those listed in the book, in my opinion, the U.S. “national greatness” (which, for the Chinese, is equivalent to a sense of superiority of the superpower) and the anticommunism after World War II continue to be the factors that cause unpleasantness in Sino-U.S. relations.7

**Conclusion**

Over the last decade, Sino-U.S. relations have tended to be stabilized. The basis for the relationship has grown from the original strategic concern by both sides into a multidimensional one. This serves as an important foundation for the genuine normalization and prolonged development of Sino-U.S. relations. However, because of the differences in their history, culture, social system, national strength, and positions in the world, the two countries take different approaches to the relationship between them and emphasize different aspects. At some points, their interests converge, while at others, conflicts and frictions may arise. China is more concerned with the role the United States plays in the course of its modernization, whereas the United States is more interested in China's strategic position in the Western Pacific region and the role it may play with respect to U.S. security interests there. Starting with this consideration, the United States deems it in its own interest to help China's modernization. Here lies the most important point of convergence. Both China and the United States recognize that the Five Principles of Peaceful Coexistence constitute the guideline for Sino-U.S. relations; but the two countries differ in their sensitivity to these principles. From the Chinese perspective, the United States is a superpower that, because of domestic political forces, occasionally deviates from these principles in either words or deeds. It will take time for some American politicians to learn to regard other countries genuinely as equals and show them due respect. Both sides

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believe that economic factors will play an increasingly important role in Sino-U.S. relations. Given the complementarity of the two economies, the prospect for the development of economic relations is promising. But there are also constraints in this respect. In addition to the subjective factors already mentioned, the great gap in the stage of development and economic strength between the countries is an undeniable objective fact. The problems in U.S.-China economic relations arise at least partly from the asymmetry of the two economies. These problems will gradually be resolved in the course of China’s reforms. What the United States can do is to facilitate this progress. In a word, in the present framework of U.S.-Sino relations, the development of economic relations will probably be governed more by economic laws than by political developments.
Part Two
Chinese Economic Reform:
Implications for U.S.-PRC Cooperation
2. China's Economic Reforms and U.S.-China Economic Relations

DWIGHT H. PERKINS

Will China's economic reforms go far enough to change fundamentally China's relations with the world around it? Or are the reforms only minor variations on the theme of socialist system reform that will leave the essential features of a Soviet-type system mostly intact? The answers to these questions will have a profound influence on the evolution of both economic and political relations between China and the United States.

How China's reforms can affect relations with the outside world has many dimensions. To begin with, reform has contributed to China's accelerated growth over the past eleven years. Accelerated growth has increased China's demand for imports, which in turn has put pressure on the government to raise exports. High growth rates have also led to a structural transformation of the Chinese economy that has changed China's comparative advantage and altered the structure of the country's imports and exports.

But reform has had more than just a quantitative impact on the level and structure of China's trade. Changes in China's economic system have altered the way in which China conducts business with the outside world in a number of qualitative ways as well, and potential future reforms, if realized, could have an even more profound effect. For example, existing reforms have opened the doors to foreign direct investment in China. But it will take far more profound changes than have occurred before foreign investors can operate comfortably in the Chinese environment.

Many of the issues that affect the willingness and ability of foreign investors to participate in Chinese development also will have a major influence on the nation's ability to integrate Hong Kong into the mainland economy. Similarly, these changes will largely determine whether a meaningful start can be made on building systematic economic ties with Taiwan. Economic reform by itself, of course, will not be sufficient to make possible close ties between China and Taiwan or even Hong Kong, at least on a voluntary basis. Political reform will be even more critical. But major
political reform in China is probably a long way off, so that progress in building closer ties in the near future depends critically on what happens in the economic sphere.

**Background to Economic Systems Reform**

Before one can analyze the impact of reform on China's relations with the outside world, one must have a clear picture of what reform means in the Chinese context and what it could mean in the future.

In many ways efforts to change China's economic system fit readily into the pattern of similar attempts to reform the socialist economic systems of Eastern Europe and the more recent efforts in that direction by Gorbachev in the Soviet Union. Certainly the initial motivation was similar.

China in the 1950s, like Eastern Europe, had taken over the Soviet-type economic system with few significant modifications. China not only copied the Soviet emphasis on machinery and steel and the desire to minimize the role of foreign trade, but also adopted the highly centralized bureaucratic command system for control of the economy. In the urban industrial sphere under this system, enterprises were little more than low-level departments of the central government bureaucracy. Output targets and the inputs needed to meet those targets were determined in Beijing after consultation with the enterprises. Enforcement of these targets was in the hands of the centrally controlled materials-allocation system and the People's Bank. Materials were allocated to firms only if such allocation was called for in the plan. Similarly, banks allowed firms to borrow money or even to spend money they had on deposit only if the funds were being used in ways consistent with the plan. Enterprises that wanted more material or financial input than was called for in the plan could not turn to the market for additional supplies. No markets for key material or financial inputs existed.

This system had one major advantage. Government planners had the capacity to reallocate national resources on a large scale. It is unlikely that China, like the Soviet Union before it, could have built a large machinery and steel sector from scratch so quickly through any other kind of economic system. The major disadvantage of this system is that no country has been able to make it operate efficiently. Incentives to conserve resources were missing, and the resulting profligate use of those resources was wasteful in the extreme. In China it took even higher rates of savings and capital formation to maintain a steady if modest growth rate of around 4.5 percent a year. Even this level of development depended on such breakthroughs as the discovery of the Daqing Oil Field because it took
more than twice the energy input to produce a dollar of GNP in China as it did in India—and India was hardly a paragon of efficiency.\footnote{World Bank, \textit{China: Socialist Economic Development} (Washington, D.C.: World Bank, 1981), p. 96.}

Autarchic trade policies and the centralized bureaucratic command system tend to go together. Planning becomes extremely difficult if a large part of the output is destined for foreign markets over which planners have no control. The flexibility required for producing for the international market, particularly for manufactures, is well beyond the capacity of a centralized bureaucracy. It is no accident that, despite the enormous size of its manufacturing sector, the Soviet Union depends on petroleum exports for most of its hard currency earnings.\footnote{In 1985, 57 percent of the USSR's hard currency earnings were from petroleum and natural gas exports; see Joan F. McIntyre, "The USSR's Hard Currency Trade and Payments Position,"} Nor was it an accident that the nations of Eastern Europe were the first to experiment with reforms in this system. The absurdity of autarchic industrialization centered on the development of machinery and steel for countries as small as those of Eastern Europe was readily apparent to many Eastern European economists.

China, unlike Eastern Europe, is a large continental nation with a history of exploitation by the forces of Western Imperialism. Like the Soviet Union, China saw itself partially surrounded by hostile powers, notably the United States. An autarchic trade policy combined with an emphasis on industries that could contribute to the defense of the nation did not seem absurd. To create such a system in a hurry led easily to a desire to copy most other elements of the Soviet system.

One aspect of the Chinese economy, however, did not fit well with the requirements of a centralized bureaucratic command system. In China, unlike the USSR, a significant fraction of industrial output was produced in tens of thousands of small- and medium-scale units with weak or nonexistent accounting and statistical reporting systems. Technologies and costs between firms within a single industry varied widely. There was no practical way that central planners could gather enough timely and accurate information on these small enterprises to control them from Beijing. The solution to this problem in the 1960s and early 1970s was to decentralize planning and control over enterprise inputs and outputs to the provinces and even to China's two thousand-plus counties. However, all other features of the bureaucratic command system were retained. Planning and control at the provincial and county levels were through bureaucratic, not market, channels. Just as foreign trade caused problems for
planners at the national level, interprovincial trade caused problems for planners at that level. The solution was to push for as much provincial autarchy as possible. Even at the county level these forces were at work. County-level enterprises typically were given a monopoly over the local county market. Enterprises in other counties could not compete with them for that market, nor could they sell their products outside that same market. If a county firm saturated its local market, it stopped production and, if possible, retooled to produce something else.

By the late 1970s the inefficiencies of this system, centralized or decentralized, were increasingly apparent to those responsible for management of the Chinese economy. The death of Mao Zedong and the political demise of the Shanghai radicals removed a major political obstacle to consideration of far-reaching changes in the economic system.

The situation around China had also changed. In part this was a matter of perceptions that had changed; in part it was a real change. China in the 1970s still perceived hostile military forces on its border, but now the hostility came from the north in the shape of the Soviet Union. In contrast, toward the Western world, China faced neither military hostility nor an accompanying embargo on trade. Furthermore, by the 1970s and particularly by the 1980s, the Soviet Union no longer appeared to be the economic success story it had been in the 1950s. Instead, China's East Asian neighbors, including two areas that were formally (in China's eyes) part of China, were being held up as the new economic success stories for all to emulate. These latter success stories were built on the rapid expansion of exports and at least partial reliance on market forces, albeit with a considerable component of bureaucratic commands.

In these new circumstances, China in the late 1970s began to introduce even more sweeping reforms in its economic system. The first reform was to take steps to expand foreign trade. The initial effort to open up the economy to more foreign imports and to allow enterprises some autonomy in deciding what should be imported soon ran up against the reality of China's enormous import hunger. Central control over foreign exchange had to be reinstituted quickly, but the government also pushed the development of exports with considerable success. In the four years from 1978 through 1981, Chinese exports in real terms grew at 19 percent annually. One reform taken in this same initial phase did not stick. In


1979–81, most of China's industrial growth occurred in the consumer goods sector, and the producer goods sector—notably machinery and steel—grew hardly at all. By the mid-1980s, however, the producer goods industry was once again growing more rapidly than the consumer goods sector.

The reforms with the greatest implications for China's relations with the outside world and for China internally as well were those designed to expand the role of market forces in the economy. These changes first began in agriculture where they met with instant success, but it was not until past the midpoint of the 1980s that market-oriented reforms began to have a major impact on Chinese industry.

To comprehend how market-oriented reforms affect China's external relations, it is necessary to understand what a well-functioning market system requires and the extent to which Chinese systems' designers have been able to meet those requirements. With that background understanding, one can then turn to the question of how these changes have already influenced or could in the future influence China's relations with the United States and the other Western industrial powers and the ability of China to integrate its economy with that of Hong Kong and possibly even Taiwan.

Making Markets Work

There are five elements that must be in place in a well-functioning market system, and the Chinese have made some progress with all five. These elements are discussed below.

1. To begin with, inputs and outputs must be available for purchase and sale on markets rather than being allocated by administrative means through the bureaucracy. Some consumer goods in China were always sold through the market, and by the mid-1980s most consumer goods were allocated in this way. Rationing still existed and in rare cases—as for pork in 1987—was even reinstituted, but generally played a minor role. By 1987 purchases of farm products were also supposed to be made entirely through market channels. In practice, informal quotas set by the bureaucracy still played some role in what farmers planted, but the role was clearly a declining one.

The situation in industry was more complex. Certain key inputs such as foreign exchange were hardly available through the market. Others such as steel or coal were partly available through the market and partly through

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the old bureaucratic allocation mechanism. In addition, large- and small-scale enterprises obtained their inputs and sold their output differently. Small-scale firms worked mainly through the market. Large enterprises sold only a portion of their output, that over and above their plan quotas, on the market. A sizable but declining share of their inputs was received through the government's material allocation bureaus. More important than the precise share of goods allocated to large enterprises by bureaucratic or market means was whether marginal decisions were made with respect to the market or the bureaucracy. If enterprises had to resort to the market to meet their needs for most key inputs, then allocation of inputs was primarily determined by conditions on the market. To what extent this was the case in practice in the 1986–88 period is not really known with confidence.

2. Making goods available on the market will create more efficient allocation only if prices reflect true scarcities in the economy. In China, however, consumer prices were often frozen for more than two decades. It was inconceivable that such prices generally reflected the opportunity costs of the late 1970s or the 1980s. The problem for the Chinese government was how to make the necessary price changes.

For consumer goods prices and agricultural producer prices, the task was not difficult except for a few key products, notably grain, where any price change was certain to have political repercussions. For lesser products, prices were already set by market forces or could be freed to find their appropriate level. Pent-up demand did mean there was a threat of inflation on the consumer market about which more will be said below.

A bigger initial problem was how to set producer prices for industry. For most enterprises receiving a higher price for their output, other enterprises had to pay that same higher price for their inputs. Every time the state set out to change one of these prices, as a result, the bureaucracy found itself in a confrontation between potential winners and losers. Not surprisingly, relatively few prices were altered in this way.

The main solution to this industrial pricing dilemma turned out to be relatively simple. Goods allocated through the materials-allocation system of the government bureaucracy continued to be transferred at the state set prices. For the above quota goods allocated through the market, prices

\[\text{Precise data on the share of inputs and outputs sold through the market as compared to being distributed by the material allocation system of the state are not readily available. Scattered surveys, however, give a picture of the overall trends. One such survey is reported in the General Survey Group of the Chinese Institute for Economic Systems Reform, } \textit{Gaige: women mianlin de tiaozhan yu xuanze} (Beijing: China Economics Press, 1986), \textit{p. 45.}\]
were allowed to float in accordance with conditions on the market.\(^6\) Therefore, to the extent that the marginal decisions of enterprises were being made with respect to goods made available on the market, the prices governing those decisions were market prices. These market prices might even have reflected true relative scarcities in the Chinese economy if not for one missing element.

3. Prices reflect relative scarcities if decision-makers on the market behave in accordance with the rules of a competitive market. The issue of competition will be discussed under (4) below. The question here is what does behaving in accordance with the rules of the market mean and were Chinese decision-makers behaving in an appropriate way?

The key rule is that enterprise decision-makers must maximize profits by cutting their costs or increasing sales. They should not be raising profits by extracting higher guaranteed prices or more subsidized loans from the bureaucracy. For consumers the comparable rules are to maximize welfare given a particular level of income or budget.

For consumers and for individual farm households these rules apply naturally whether in China or elsewhere. Chinese consumers did not have to be told to purchase food and clothing in a way that would increase their welfare. Farm households also are natural income maximizers, although the same cannot be said of cadres in charge of collective farms. By the end of 1983, however, collective farms were no longer in existence in China except for isolated cases.

The problem is with industrial enterprises. In the bureaucratic command system of the Soviet type, enterprise managers typically attempt to maximize the gross value of output rather than profits. The early literature on socialist market systems assumed that this situation could be corrected simply by ordering enterprise managers to maximize profits while an impersonal bureaucracy set prices. No student of socialist systems today thinks that this issue can be dealt with so easily.

The basic problem is that enterprise decision-making in socialist systems is governed by a number of close ties between the enterprise and higher officials within the government bureaucracy. Even if enterprise managers are attempting to maximize profits, they are not likely to manipulate the bureaucracy in order to extract favors of one sort or another. Chinese enterprises in the mid-1980s were maximizing something that approximated profits, but the key to achieving higher profits

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often had more to do with receiving subsidized inputs or a negotiated lower tax rate than it did with cutting enterprise costs.

Failure to break this connection between the bureaucracy and the enterprise means that the objective function of the bureaucracy or of individual bureaucrats is a major element in the objective function of the enterprise. How does one break this connection? One part of any solution is to eliminate the sources of subsidies available to the firm. In the worst case, but in reality a common case in socialist systems, an enterprise has easy access to costless funds to cover any losses it might incur. This is the "soft budget constraint" par excellence, and what a well-functioning market requires is a "hard budget constraint." For a hard budget constraint to exist, there must be penalties for failure whether through bankruptcy or by firing managers for not making adequate profits. Tax rates must be fixed and not subject to negotiation, and prices must be set by impersonal market sources. Only some of these conditions existed in China in the mid-1980s. By any standard for large enterprises, the budget constraint was still soft.

Hardening the budget constraint is only part of the story. As long as enterprise managers are appointed and promoted by the bureaucracy, they will gear their decisions to the wishes of that bureaucracy. But if the bureaucracy does not appoint the managers, who does? In a socialist system there are no private shareholders who elect a board of directors to perform this function. In China there have been a few experiments with various forms of shareholding by one enterprise in the shares of another, but so far these are only isolated experiments. Managers in most enterprises are still appointed by government officials and still behave in part as if they were themselves mid-level government officials, which in effect they are.

Once again there is less of a problem in this regard with small enterprises than with large ones. Small enterprises do receive subsidies if they get in trouble, but to a much smaller degree than is the case with large enterprises. Frequently, small enterprises are reorganized or allowed to go out of business even if the word "bankruptcy" is not used. Small enterprises frequently are collectives, and in theory at least, collectives appoint their own managers. An increasing though still small share of industrial output in China is produced by private firms. Even with private and collective

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7 The "soft budget constraint" and other key aspects of the behavior of enterprises in a bureaucratic command economy are discussed in Janos Kornai, The Economics of Shortage (Amsterdam: North-Holland Press, 1980).

firms, local bureaucracies exercise much control, but the nature of the bureaucratic-manager relationship is different from that in large enterprises.

4. If the purpose of converting to a market system is to increase the efficiency of that system, there is little prospect of that goal being realized if the state enforces monopoly controls over those markets and stifles competition. In China prior to this reform period, as indicated above, little direct competition existed between enterprises even at the small-scale and county level. These state-enforced monopolies were among the first things to disappear when the reform effort began. The initial impact of this change was most apparent in commerce. Small retail outlets sprang up all over the urban areas competing directly with larger state outlets by providing better service and remaining open longer. In many cases the larger state firms were pressured to follow suit.

Competition, however, is meaningful only if there is a buyer's market. In the seller's markets that prevail in much of Chinese industry, there is no meaningful competition because enterprises have no trouble selling all they can produce. Therefore, eliminating sellers' markets becomes critical for achieving effective competitive pressures, but sellers' markets will exist as long as there are soft budget constraints for enterprises. The soft budget is the main source of excess demand in socialist systems.

5. The soft budget constraint, however, is not the only source of excess demand. Effective macroeconomic management is also necessary if markets are to function properly. Some inflation, of course, is consistent with well-functioning markets. The problem is when inflation becomes excessive. What is excessive is first and foremost a political question. In some countries, such as in much of Latin America, double-digit and even triple-digit inflation is the norm. In China, anything above 2 or 3 percent a year is a political problem. The reason, of course, is historical, having to do with the hyperinflation that brought the Communist Party to power in China and the subsequent thirty years during which prices increased hardly at all.

If inflation reaches politically intolerable levels, the state frequently steps in and attempts to freeze prices. Frozen prices lead to shortages and queuing. The desire to eliminate the inconvenience of long lines and

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10Between 1952 and 1978, the official retail price index increased by 2 percent a year or less in all but four years (1953, 1954, and the two crisis years—1960–61). In ten of those years, the index actually declined slightly. The average increase was 0.7 percent per year over the entire period (State Statistical Bureau, Statistical Yearbook of China, 1986, pp. 535–36.)
waiting time leads to the reimposition of rationing, and one is back to a bureaucratic rather than a market system of allocation. As China has moved away from bureaucratic controls toward a market system, China's economists have found themselves in unfamiliar territory when it comes to macroeconomic management. The result has been inflation that sometimes reached double-digit levels and led to the reimposition of some forms of direct bureaucratic controls.

Therefore, as of 1987 the Chinese economic system overall was very different from that which existed prior to the beginning of reform in the late 1970s. Enterprises were concerned with profits. Markets existed for most goods even though bureaucratic allocation existed alongside the market. Prices on these markets were sometimes fixed by the state but often were allowed to fluctuate with supply and demand.

On the consumer market and in agriculture it was realistic to speak of a system where market forces predominated. Even with small-scale industry, market forces may have played the major role. None of these systems were pure market systems on the model of Hong Kong. Bureaucratic interference by the state was frequent and often shaped the outcome, but in these sectors China's system would not be unfamiliar to people who have lived with the mixed bureaucratic-market systems found in so many developing countries, notably in some of China's neighbors such as the Republic of Korea.

The exception was large-scale industry. Market forces also played a role there, but enterprise behavior still appears to have been driven by bureaucratic concerns. Budgets were still soft, and managers were still beholden to higher-ups in the bureaucratic chain of command.

The Future of Economic Systems Reform

What is the future of this mixed system in China? Is China stuck at some halfway house between a fully functioning market system and one ruled by bureaucratic commands? Or are there reasons to anticipate movement toward a purer form of a market system or back to central planning and administrative allocations of most key inputs? And if there are forces pushing the system in one direction or another, what is the nature of these forces? Are they driven primarily by Chinese politics? Or does the economy have an internal dynamic of its own, separate from politics?

Most discussions of these questions begin and end with speculation

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11The most thorough study of rural small-scale industry in China to date is that done by a joint Chinese Academy of Social Sciences-World Bank research team. These papers were presented at the International Conference for the Collaborative Research Project on Chinese Collective Industry, Beijing, November 4–7, 1987.
about the nature of the future leadership of the Chinese Communist Party. And the nature of this leadership does matter. The Chinese Communist Party is a Leninist party, and in such a system the preferences of the leadership have a major influence on what happens. One only has to compare the policies of the 1980s with those of the Cultural Revolution period (1966–76) to see the truth of that statement.

But there is more to the relationship between politics and economic reform than the nature of the leadership. Most Eastern European economists are pessimistic about the prospects for fundamental reform in their economic systems, and the reasons have little to do with the personalities on their various politburos. A more fundamental problem is that in these systems political power is in the same hands as bureaucratic power. Bureaucratic power is used to reinforce the control of the party and the party acts to ensure bureaucratic power. Bureaucrats typically hold tightly to power even when they are not the primary repository of political power. There are exceptions, of course, but exercising control over some aspect of the economy is what bureaucrats are trained to do and the reason why their job exists. Such control can also be a source of legal and illegal additions to their income.

If political power is separate from bureaucratic power, as is true in some countries, both those with democratic systems and those with authoritarian political systems, then political power can be used to curb bureaucratic influence. What was the situation in China in the mid-1980s? Certainly China's political system had many features in common with those of Eastern Europe. But there are also differences—if subtle ones. One obvious difference is that bureaucratic power in China is not backed up by the power of the Russian army, which—prior to Gorbachev at least—was fearful of a weakening of the command system in Eastern Europe because of the implications change would have for the Soviet Union's own system. Eastern Europe also did not experience the ten years of China's Cultural Revolution that did so much to weaken the hold of the Chinese Communist Party on the system. When the role of the Chinese party was rebuilt, it proved relatively easy to replace most of the older cadres with a younger, better-trained group with less of a vested interest in the system as it was. Nevertheless, when all of these qualifications are taken into account, a large overlap still exists in China between political and bureaucratic power. The main support for curbing bureaucratic excesses is at the top and from the ordinary citizens, including party people, who suffered from the excesses of the earlier period. Perhaps these excesses of the past were sufficient to inoculate most of the political system against future excessive bureaucratic power, but this outside observer, at least, is skeptical.

If politics were all there were to the story, this discussion would
conclude with a fairly pessimistic assessment of the future of Chinese economic reforms. But economic forces are also at work. Nothing that has occurred anywhere in the socialist world (or elsewhere for that matter) suggests that government bureaucrats are sensitive to the rapidly changing tastes of the market or that they have devised incentive systems capable of ensuring high-quality products in enterprises they control. But sensitivity to changing tastes and maintenance of quality are essential if China is to continue to expand its export of manufactures. And increased exports are critical if China is going to expand the import of technology and other inputs essential for rapid growth.

China's size and the nature of industrial organization work against the bureaucratic system. With over 400 thousand small-scale industrial enterprises and with the share of these enterprises in gross industrial output at over half of total gross output value, it will be a long time before China is a nation where industrial power is concentrated in large enterprises readily controllable from the center. The only way of coordinating so many small enterprises efficiently is through the market.

Essentially the same kind of considerations prevail in agriculture, particularly after the demise of the communes and collective production teams. Who is going to be foolish enough to try to control the production decisions of over 100 million farm families primarily by means of bureaucratic commands? The service sector including much of commerce presents similar problems. Prior to 1979 the only way China's service sector was controlled was through outright suppression.

Intellectual forces are also at work. The year 1987 is not the year 1950. Several of China's East Asian neighbors have provided irrefutable proof that a mixed market and bureaucratic system can achieve unprecedentedly high growth rates. The Soviet Union's system has had increasing difficulty dealing efficiently with the complexities of a modern industrial society. China's own leadership has had ample experience coping with the limitations of the bureaucratic command system. Crude notions about the irrationality of markets and the inherent superiority of planning are less widely held. Markets, of course, are not seen as the answer to all problems nor is there any deep faith in the inherent rationality of such markets. Perhaps the only true believers in the rationality of markets are holders of the Ph.D. in economics, and there are only a handful of these people in

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12 In 1985 China had 455,300 small-scale enterprises, 5,600 medium-scale enterprises, and 2,300 large-scale enterprises. The criterion for determining size is based on enterprise production capacity or value of fixed assets, depending on the nature of the industry. In 1985 these small enterprises produced 53.8 percent of the gross value output of all industry. State Statistical Bureau, Statistical Yearbook of China, 1986, pp. 190, 227, 744-45.
China. Still, people learn from formal education and from experience and that is as true of China as anywhere else. And there is ample evidence that one of the things people have learned is that change in the system is desirable and moving in the direction of greater use of market forces is one direction of change worth trying.

**Internal Market Reform and Foreign Investment**

What is the relevance of these changes for the evolution of U.S.-China economic relations? The broad significance of the increasing role of market forces in China can best be seen by looking at some of the problems currently facing foreigners investing in the Chinese economy. Foreign investment in China is not a large or an essential part of China's development program, but the experience with foreign investment can be used to make a broader point.

American and other foreign investors have been lured to China by the age-old promise of China's huge domestic market. A desire to access China's petroleum reserves and a large supply of cheap labor has also played a role, but it is the prospect of a billion customers that provides the primary motivation. The fact that this prospect has little chance of bearing fruit within the next decade or longer does not stop many investors from bringing in their money.

Once in China, however, these investors are immediately up against the reality of the Chinese economic system. In other developing countries these investors worry about being able to repatriate their profits, avoiding nationalization of their assets, and being subject to excessive taxation. They worry about these issues in China as well, but the primary difficulties of doing business in China lie elsewhere.

Enterprises set up with foreign direct investment are as much a part of the bureaucratic command system as are China's state enterprises. They not only must apply to the Bank of China for any foreign exchange other than that which they bring in with them, they must also turn to the state allocation system for their electric power, other material inputs, and even their labor force. Foreign direct investors in effect become lower-level.

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13Direct investment in China in the 1979–83 period averaged just under US$1,000 million per year in terms of funds actually used, rising to $2,240 million in 1986. Commitments peaked in 1985 at $6,330 million and then fell in 1986 to $3,330 million. State Statistical Bureau, Zhongguo tongji zhaiyao, 1987 (Beijing: China Statistical Publishers, 1987), p. 93. These are sizable figures when compared to foreign investment in other developing countries, but the amount is still only 5–7 percent of China's export earnings and less than 2 percent of gross domestic investment.
units in the Chinese bureaucracy just like China's own enterprise managers. But foreigners are not in a good position to be effective low-level Chinese bureaucrats. Even if they speak Chinese, they do not have the personal ties and knowledge of the inner workings of the system so essential to bureaucratic effectiveness. Foreign-owned enterprises thus become highly dependent on their Chinese joint-venture partners to play this role. Whatever the formal ownership share of the foreign investor, they are in many respects junior partners in management of the firm.

The Chinese have taken steps to alleviate this problem for foreign investors. By creating Special Economic Zones in Guangdong and Fujian provinces, in effect they have allowed foreigners to bring in inputs from abroad, and in other ways the Chinese have made efforts to reduce bureaucratic involvement in enterprise operations. But the effective introduction of a market system within the industrial sector throughout China would have a far greater impact. Instead of petitioning the state every time they required something, foreign enterprises could meet their needs through purchases on the market.

The reality in 1987–88 was that Chinese industry including foreign joint ventures was still hemmed in on all sides by bureaucratic restrictions. Foreigners were not without weapons in the battles that ensued over the allocation of key inputs. American Motors managed to "persuade" the controllers of the economic system to use scarce foreign exchange to pay for the jeep kits being imported for assembly in China, but that experience illustrates the nature of the problem. The Chinese gave in on the issue mainly because the bad publicity surrounding American Motors' decision to stop importing kits and assembling jeeps would have had negative repercussions on foreign investment in China generally. Clearly the foreign investor's environment would be friendlier if most inputs could be obtained freely by anyone willing to pay the going price.

Small-scale investors, like small-scale enterprises in China in general, could operate in part outside the bureaucratic command system. Many of their input requirements could be met through the market or by bureaucratic decisions at a local rather than a provincial or national level. But large-scale American corporations were not in a position to take ready advantage of these opportunities. The main beneficiaries of the reforms that stimulated small-scale industrial development were investors from Hong Kong, and most of this investment went into neighboring Guangdong.14 Hong Kong investors spoke the language, had numerous personal

14In 1985, 49 percent of all utilized foreign direct investment in China came from Hong Kong, and 49 percent of all direct foreign investment whose provincial destination could be
and family ties with the local people, and operated on a small scale and with considerable flexibility.

Therefore, economic reform held out the promise of greatly simplifying the life of the foreign investor, but the actual benefits in the mid-1980s were modest. Whether in the future foreign investors will be able to operate in China in ways similar to how they work in other developing countries will depend on how much further progress is made in introducing market forces into Chinese industry. There is no serious prospect, however, that foreign investors in China will be able to operate in ways similar to, for example, Japanese investors in the United States. That degree of market liberalization is not remotely in the cards for China.

Integrating Hong Kong's Economy

One of the central issues for China over the next two decades will be how to build closer ties between the economy of Hong Kong and the economy of the Chinese mainland as a whole. How those ties are created and maintained also will have an important impact on American relations with China. American investors are heavily involved in the Hong Kong economy, and U.S. trade with Hong Kong passed US$12 billion in 1984, or 22 percent of the colony's total foreign trade.¹⁵ The United States' total trade with the People's Republic of China in that same year, by comparison, was US$7.4 billion.¹⁶

The current formula for incorporating Hong Kong into China is "one country, two systems." Given the radical differences between the two systems, such a formula is clearly necessary if major damage to the Hong Kong economy is to be avoided. Hong Kong is closer to the ideal of the pure laissez faire market economy than any place in the world, and the introduction of Soviet-style bureaucratic commands into this system would do incalculable harm.

The "one country, two systems" formula in effect will turn Hong Kong into China's largest "Special Economic Zone." The Shenzhen Special Economic Zone on Hong Kong's border was probably created in part to provide China with the experience it would need later in managing Hong Kong's much larger economy. But is Hong Kong likely to remain an isolated special zone indefinitely into the future, and is that a desirable outcome determined went to Guangdong Province. State Statistical Bureau, Statistical Yearbook of China, 1986, pp. 500–1.


from the point of view of either Hong Kong or the rest of China? Or, will the reforms taking place in the rest of China play a major role in changing Hong Kong’s economic relations with the Chinese mainland?

Some indication of what the future may hold if reforms continue is already apparent in Hong Kong’s neighboring Guangdong Province. Unverified figures are quoted suggesting that around two million Guangdong workers are currently employed by Hong Kong investors in a multitude of mostly small-scale enterprises. Foreign exchange appears to be more readily available in Guangdong in part because of the province’s booming foreign trade, in part because the central government lacks the means to control the myriad of formal and informal ways that foreign currency flows between the province and Hong Kong. Communication links of all kinds are being expanded and strengthened between Guangzhou and Hong Kong. A new superhighway is being built, and Guangdong television sets regularly tune in Hong Kong programs.

Some of these changes are superficial. Others are having a profound impact on the economy and society of Guangdong. It is China that is restoring political sovereignty over Hong Kong, but the economic and social influences are mainly flowing in the reverse direction. China’s domestic economic reforms clearly have facilitated this reverse flow, and this flow of Hong Kong money and skills has helped further that reform process.

Guangdong’s industrial economy is much more dominated by small-scale enterprises than is the case in the rest of China, and that in turn implies that market forces are likely to play a larger role in Guangdong than elsewhere. In Guangdong in 1984, for example, large enterprises accounted for only 14 percent of the gross value of industrial output and small enterprises accounted for 70 percent. The comparable figures for China as a whole in 1985 are 27 percent and 54 percent. Research on one district in Guangdong by a joint Chinese Academy of Social Sciences–World Bank team lends support to the view that small-scale enterprises in Guangdong operate more in accordance with market principles than is true elsewhere in the nation.

From Hong Kong’s point of view, there is little doubt that these trends are beneficial. The more Guangdong evolves in the direction of Hong

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19This impression was gained from reading several of the papers presented at the International Conference for the Collaborative Research Project on Chinese Collective Industry, Beijing, November 4–7, 1987.
Kong, the less likely is it that the Chinese government will feel impelled to impose the levers of bureaucratic control over Hong Kong's economy. On the positive side, Hong Kong businesses will be more and more able to draw on a hinterland of over 60 million people as a source of labor and raw materials, as a market for Hong Kong products, and as an inexpensive way of meeting the consumption needs of Hong Kong's people.

Were there comparable benefits for the Chinese economy? A definitive answer to this question is not possible, but a few statistics are suggestive, if inconclusive. Between 1980 and 1984, Guangdong industry grew much more rapidly than did industry in China as a whole (13 percent a year versus 9 percent a year). In the 1965–73 period, in contrast, Guangdong industry grew less rapidly than in all of China (9.5 versus 11 percent). Other explanations are possible, but a reasonable hypothesis is that growing ties to Hong Kong were an important reason for the accelerated industrial growth in Guangdong in the early 1980s.

Somewhat surprisingly, Guangdong's foreign trade does not appear to have grown as rapidly as in the rest of the country. Whereas nationwide between 1978 and 1984, exports in current dollar terms grew at 18 percent a year, in Guangdong the rate appears to have been only 9.6 percent per year. This result is particularly surprising given that Hong Kong's imports from China as a whole over this same period were rising at a rate of 21 percent a year in current U.S. dollars. Certainly more analysis is required before a clear picture of the evolving nature of Hong Kong—Guangdong economic relations is possible.

Even if further analysis reaches the conclusion that closer economic ties with Hong Kong have had major benefits for Guangdong—and such a conclusion seems likely—it does not follow that China will view these developments as an unmixed blessing. Profound social changes are accompanying these changes in economic structure, which no doubt have caused and will continue to cause unease among some members of China's leadership. Whether this unease will lead eventually to efforts to exert more bureaucratic control over these social and economic forces both in Guangdong and Hong Kong, only time will tell. As of the mid-1980s,
however, it is clear that economic reforms within China have paved the way for increasingly close ties between the mainland’s economy and that of Hong Kong. If these trends continue, integration of Hong Kong’s economy into the Chinese national economy will become feasible without changes in Hong Kong that will destroy the territory’s economic vitality. If domestic economic reforms in China are reversed and there is a return to a Soviet-style economic system, then the choices for Hong Kong are to remain an enclave on China’s periphery, for all practical purposes a foreign country in economic terms, or gradually to convert the Hong Kong system into one much like that in the rest of China, as was done in Shanghai in the 1950s. Making Hong Kong an integral part of a bureaucratic command system, however, will be much more difficult than it was for Shanghai if for no other reason than that Hong Kong’s economy in 1988 was much larger and more complex than that of Shanghai in 1949.

Economic Relations with Taiwan Province

The critical decisions that will govern the future development of relations between Hong Kong and the rest of China will be made, for the most part, in Beijing. The people of Hong Kong and those from other countries investing in Hong Kong or trading with the territory can bring pressure on the Chinese government to make or resist changes, but the government in Beijing clearly has or soon will have the power to impose whatever system it prefers. The same is clearly not true with respect to Taiwan Province.

The continuation of reform on the Chinese mainland opens up the possibility for Taiwan of the development of economic ties much like what is occurring between Hong Kong and Guangdong. In a modest way such ties are already beginning, despite formal disapproval from the Taiwan side. If China’s economy becomes increasingly open with a steadily rising role for market forces, it is difficult to see how Taiwan businesses could be effectively prevented from establishing closer and closer ties with the mainland. Wages on Taiwan have risen rapidly, leading many exporting enterprises to look for alternative cheaper labor bases from which to continue exports of shoes, garments, and other labor-intensive products. What better place to move than to a location where the language and culture are the same.

However, if China were to revert to a bureaucratic command system, trade between Taiwan and the mainland could still grow, but direct investment and any real integration of the two economies would be much less attractive to Taiwan’s business community. In order to work effectively on the mainland these businessmen would have to learn to behave
like Chinese state enterprise managers, they would have trouble converting their profits into foreign exchange, and much else. Under such circumstances these businessmen would resist efforts to strengthen ties in other spheres, notably politics, in part because political autonomy would be the only way of ensuring economic autonomy and the economic system that has brought so much prosperity to the island.

Ultimately, the future of relations between Taiwan Province and the rest of China will be determined by forces that go well beyond economics. But in the 1980s economic forces were much more open to significant change than were those in the political realm.

U.S.-China Trade and Investment

The relationship between China's economic reforms and the economic interests of the United States has many dimensions. Part of the story has to do with evolving direct U.S.-China trade and investment. But of comparable importance will be how China's economic ties with Hong Kong and Taiwan develop and how those ties in turn affect the United States.

U.S. trade with these three areas increased rapidly from the mid-1970s to the mid-1980s. In nominal dollar terms, American exports to China, Hong Kong, and Taiwan grew by 15 percent a year and imports from that region grew by 22 percent annually. Together the region accounted for just under 6 percent of U.S. exports and nearly 8 percent of U.S. imports. The share of U.S. trade in the exports in the exports of these three regions was much higher (see Table 1).

It is highly unlikely that exports from this region to the United States will continue to grow as rapidly in the future as they have in the past. The devaluation of the U.S. dollar more than creeping American protectionism should slow the growth of U.S. imports. For the same reason, however, U.S. exports should begin to grow more rapidly, including exports to East Asia. How might China's domestic reforms influence these trends?

China's trade differs from that of Hong Kong and Taiwan in one important way. In China there is an enormous pent-up demand for foreign imports. Only tight controls on foreign exchange have kept imports from growing more rapidly. As it was, China ran large trade deficits in 1985 and 1986 before cutting the deficit in 1987 by keeping a tight rein on imports and pushing exports. In contrast, Hong Kong maintains more or less of a balance between its exports and imports without any controls, and Taiwan in the 1980s began running enormous trade surpluses. Two important reasons for China's import hunger are the nature of the economic system and the relationship between investment and imports. The influence of the economic system is straightforward. Import hunger is a fundamental
Table 1
United States Trade with China, Hong Kong, and Taiwan Province
(US$millions)

<table>
<thead>
<tr>
<th>Destination of U.S. Exports (c.i.f.)</th>
<th>1974</th>
<th>1978</th>
<th>1980</th>
<th>1984</th>
</tr>
</thead>
<tbody>
<tr>
<td>China (excluding Hong Kong and Taiwan)</td>
<td>372.9</td>
<td>721.1</td>
<td>3,830.2</td>
<td>4,037.4</td>
</tr>
<tr>
<td>(% share)</td>
<td>4.9</td>
<td>6.6</td>
<td>19.6</td>
<td>14.7</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>916.6</td>
<td>1,604.1</td>
<td>2,652.4</td>
<td>3,117.6</td>
</tr>
<tr>
<td>(% share)</td>
<td>13.5</td>
<td>11.9</td>
<td>11.8</td>
<td>10.9</td>
</tr>
<tr>
<td>Taiwan Province</td>
<td>1,679.9</td>
<td>2,376.1</td>
<td>4,673.5</td>
<td>5,041.6</td>
</tr>
<tr>
<td>(% share)</td>
<td>24.1</td>
<td>21.5</td>
<td>23.7</td>
<td>23.0</td>
</tr>
</tbody>
</table>

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<tr>
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</thead>
<tbody>
<tr>
<td>China</td>
<td>102.9</td>
<td>270.7</td>
<td>981.1</td>
<td>2,432.6</td>
</tr>
<tr>
<td>(% share)</td>
<td>1.5</td>
<td>2.8</td>
<td>5.4</td>
<td>9.3</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>1,574.5</td>
<td>3,488.8</td>
<td>5,156.8</td>
<td>9,396.6</td>
</tr>
<tr>
<td>(% share)</td>
<td>26.4</td>
<td>33</td>
<td>26.1</td>
<td>33.2</td>
</tr>
<tr>
<td>Taiwan Province</td>
<td>2,036.6</td>
<td>5,010.4</td>
<td>6,760.3</td>
<td>14,867.7</td>
</tr>
<tr>
<td>(% share)</td>
<td>36.1</td>
<td>39.5</td>
<td>34.1</td>
<td>48.8</td>
</tr>
</tbody>
</table>

Note: Shares are the share of U.S. exports or imports in the total trade of China, Hong Kong, and Taiwan.


characteristic of all bureaucratic command systems with soft budget constraints. Enterprises have few incentives to save on inputs, including imported inputs, and any lifting of direct controls over their ability to purchase such inputs leads to an immediate response.

If reforms in China succeeded in creating a form of market socialism where hard budgets prevailed, import hunger caused by the nature of the
economic system would disappear. Conceivably China could manage to maintain a balance-of-payments equilibrium through management of its exchange rate rather than through the use of direct controls over imports, something that was not possible in the 1980s. For China to eliminate this source of import hunger, however, reforms will have to progress much further than they have by the latter half of the 1980s.

Even if reforms did eliminate system-caused import hunger, China's high investment and growth rates would probably lead to periodic balance-of-payments problems caused by surges in imports. Import growth of this kind was a periodic source of economic slowdowns in Japan in the 1950s and 1960s and Korea in the 1960s and 1970s. Even when consumer goods imports are tightly controlled, 10 percent or higher annual investment growth rates in a developing economy with a low per capita income will lead to a surge in demand for imported investment goods. Particular goods critical to the investment program either cannot be produced domestically, cannot be produced at an acceptable cost, or simply fall short of demand in domestic supply.

What this analysis suggests, therefore, is that there is little prospect of China's following Taiwan and running up large export surpluses either in 1988 or anytime in the next decade. For China the problem is how to expand exports rapidly enough to pay for the imports required by a high target growth rate. If China's imports grow rapidly, the United States should get a significant share of the increased purchases by China, assuming that the United States manages its own trade policies appropriately.

If economic reforms in China encourage a more active role on the mainland for Hong Kong and Taiwan business, that involvement should facilitate a faster rate of growth of Chinese exports. Marketing, particularly marketing abroad, is a weak link in China's economic system, and Hong Kong and Taiwan have many people with export marketing skills. It is likely that China's creditable export performance over the past decade owes much to ties with Hong Kong, although such an assertion is difficult to prove.

As one looks at the future of China's trading relations with the outside world in general and the United States in particular, two different patterns of development are possible. One pattern assumes that China will succeed in pushing reforms to the point of establishing a socialist market system. Ties to Hong Kong both before and after reversion in 1997 will become increasingly close, and Taiwan businesses will be more and more involved in trade and investment in China. Hong Kong under such circumstances will continue to prosper in the 1990s, not as an isolated enclave, but as part of a dynamic, rapidly growing China. China's exports together with those of Hong Kong will expand rapidly, and imports will keep pace.
At the other extreme, China could give up on most efforts to create a market system in industry. Hong Kong would retain its enclave status, but Hong Kong business would look to the rest of the world, not China, for investment opportunities. As 1997 approached and passed, Chinese planners might begin talking about establishing greater control over Hong Kong's economy—further discouraging investment in Hong Kong and lowering its growth prospects. Economic ties with Taiwan would remain at a minimal level. China's exports would grow slowly as would imports. GNP (gross national product) growth rates in China would also be well below levels achieved in the years between 1978 and 1987.

No doubt the reality will fall somewhere between these two extremes. Internal bureaucratic politics and the dislike of certain social trends will keep China from achieving full market socialism and removing all of the barriers to contact between Hong Kong and the rest of the economy. Offsetting these constraints, however, is the success of the reform policies during their first decade. China has been set on a rapid growth path that promises to make the nation prosperous and powerful at a pace only somewhat slower than that of its East Asian neighbors. Increasing contact with Taiwan is taking place, and it is hard to imagine such contact in the closed, controlled atmosphere of pre-reform China. Some of the most basic political and economic goals of the Chinese state are being well served by the reform program. Negative perceptions of some aspects of reform could slow the program, but they aren't likely to derail it altogether.

If this analysis is reasonably close to what in fact will take place, then U.S.-China economic relations should continue to grow. China's trade will be much like that of the other newly industrialized countries (NICs) in the 1960s or early 1970s. One of the NICs (Hong Kong) will become part of China formally. The United States will have periodic difficulties with various restrictions on Chinese imports and with rapidly growing Chinese exports in the U.S. market. But if the United States can manage its own economic affairs to eliminate the trade deficit, there is no reason to be pessimistic about the two countries' ability to enjoy a growing and mutually beneficial trade relationship.
Chen Baosen comments:

Professor Perkins's paper is a profound analysis and objective estimation of the possibility of success for China's economic reforms and the prospect of Sino-U.S. economic relations. I will focus my discussion on but one aspect of the paper.

In his conclusion Professor Perkins estimates, "Some of the most basic political and economic goals of the Chinese state are being well served by the reform program. Negative perceptions of some aspects of reform therefore could slow the program, but they aren't likely to derail it altogether." Within this basic estimation Professor Perkins believes that "U.S.-China economic relations should continue to grow. China's trade will be much like that of the other NICs in the 1960s or early 1970s... But if the United States can manage its own economic affairs to eliminate the trade deficit, there is no reason to be pessimistic about the two countries' ability to enjoy a growing and mutually beneficial trade relationship."

My estimation of the prospect of China's economic reforms and Sino-U.S. economic relations is a little more optimistic. First, China has found a way to make economic reforms work, by experimenting with a model first and then gradually implementing it on a broader scale.

As the old economic model has not been able to compete with market economy, today there are few people in China who still insist on realizing the modernization program by following the old model. However, the Chinese do not think a pure market economy is perfect. They hope to find a way that inherits the advantages of a market economy (entrepreneurial spirit, competition, efficiency, creativity) and excludes its disadvantages (great disparity of wealth, money worship, cyclical economic depression). It is possible that through the experiments in the Special Economic Zones and the open cities and open areas, a model with the most advantages and fewest disadvantages will be established and gradually perfected. At present the economic reforms in Shenzhen Special Economic Zone and Guangdong province have achieved initial success, which is convincing more and more people of the possibility of establishing the model of a planned market economy. When one sees that all the social aspects in the Special Economic Zones and the open cities have been improved, including economic prosperity, social stability, living standards, and spiritual civilization, one will naturally support the economic reforms.

Therefore, China's reforms will go hand in hand with the open policy. The opening to the outside world will follow a rough sequence—first, the Special Economic Zones, then the open cities, then the open areas, and
finally the inland areas. That does not mean that inland reform will all be postponed. Instead, reform measures that work under the existing conditions will be introduced there early on. One of the measures, for example, is to apply the responsibility contract system in the management of industrial enterprises there. At the time when the price system has not been fully adjusted, the responsibility contract is relatively effective, though it is only a makeshift, and has disadvantages too.

The second reason for my optimism is that China has come to realize that, in addition to self-reliance, international cooperative efforts are needed to achieve modernization. In implementing the modernization program China has to absorb foreign capital and technology and participate in international competition. Therefore, foreign investment in the form of equity joint ventures, cooperative ventures, and wholly foreign-owned enterprises will become common in the Special Economic Zones and the open areas. Foreign investment also plays an important role in the reform of Chinese enterprises (as witness many Sino-U.S. joint ventures). American investors who have opened joint ventures in China are sensitive to various problems concerning China's investment environment. They complain because they want a good management environment so as to earn profits under conditions of fair competition. But more importantly, although they may not be aware of the fact, their complaints and actions help push forward China's economic reforms, just as the booster helps push the rocket into the right orbit.

I am not saying that reforming China's economic system will be easy. If the Chinese Communist Party does not succeed in fighting corruption; if the Chinese are satisfied with short-term results in economic construction, emphasizing speed while disregarding efficiency; if they do not try to improve the quality of products, reduce production costs, and increase their competitiveness in the international market; or if China cannot control excessive construction, over-heated economic development, and inflation, the reforms will encounter political as well as economic troubles and their progress will be slowed. Considering that in the past year some aspects of the above problems were improved and that the deepening of the reforms is also creating favorable conditions for solving the problems, we have reason to believe that these problems will be solved before they become major obstacles to the reforms.
Richard H. Holton comments:

I wish to expand a bit on three points raised in Professor Perkins's excellent overview of China's economic reforms and U.S.-China economic relations. The first concerns the outlook for interregional trade and its possible impact. Professor Perkins notes that regional autarchy characterized Chinese economic planning at least until 1979. He points out that even at the county level the enterprises were given a monopoly in the country market, and since the policy was the same elsewhere, those enterprises could not sell outside their local market. Regional protectionism was the rule.

If the move toward market socialism continues, we would expect this regional protectionism to disappear. Regional comparative advantage should then come to the surface. If this happens, it will surely lead to some significant adjustment problems. Some counties and provinces will do better than others, so rates of economic growth will differ from one region to another. This might well lead to greater inequality of income across provinces. Will this lead to political stress?

These differential rates of growth could also aggravate the problem of migration into the more prosperous cities and provinces. Thus the growth in interregional trade could generate more adjustment problems, as a consequence of what Perkins calls "making markets work."

To a considerable degree the authorities are already coping with growing income disparity and with migration toward the cities. I am only saying here that these pressures are likely not just to grow but to become significantly greater over time if the country continues to encourage more interregional trade as a part of the move toward market socialism.

The second supplemental point I would offer also concerns "making markets work," in this case the labor market for well-educated and well-trained managers, engineers, and scientists. These are key people in the economic development process. If they cannot be attracted into the positions that need them most, China's economic progress will surely be dampened. At the present time a worker cannot move from one unit to another unless the authorities in both units agree to the transfer. Because this talent is especially scarce, it is the talent most needed in those sectors that should be growing rapidly. While the mobility of high-level talent is apparently improving, anecdotal evidence suggests that there are still major difficulties in implementing anything approximating a true market in this most critical portion of the labor force. Until the supply of well-educated, well-trained managers, scientists, and engineers is expanded greatly, this problem can continue to be a major one for China.

The third point follows from Professor Perkins's point that increased exports are critical and that sensitivity to changing tastes and quality
control is needed if the country's performance in international markets is to improve. I would note the importance, too, of Chinese authorities paying more attention to world prices as indicators of China's relative competitive ability. It is impressive to learn how frequently foreign partners in joint ventures in China complain that they cannot produce in China at costs low enough to permit profitable exports. Given the low wages in China, one would expect more Chinese products to be easily competitive on world markets. Low productivity per worker is only part of the answer. Various government policies, such as requiring that international joint ventures pay Chinese managers salaries comparable with their foreign counterparts, reduce international competitiveness. Chinese authorities when designing their economic and management policies would be well advised to look at world market prices as they assess the efficiency of their industries. The sooner this is done, the sooner the structure of Chinese industry will be such that China can compete satisfactorily in world markets and earn the foreign exchange needed for continuing modernization.
After its founding in 1949, China gradually developed into a highly centralized economy of mandatory planning. Under this system, sectors of state and cooperative ownership predominated over China's economy, eliminating the capitalist private sector. Meanwhile, the existence of individual ownership was also so harshly restricted that its function in the economy became marginal. Both state and cooperative enterprises were run according to the state mandatory planning targets. The state planning was compulsory. The fixed assets and working capital were basically allocated by the state. While the enterprises had to deliver nearly all their profits to the state, their loss, if any, was also subsidized by government departments.

Under the system, means of production and consumer goods were priced mainly by the state, and the administrative transfer and distribution of means of production were executed at planned prices. Although consumer goods markets did exist, the prices in these markets were not determined by supply and demand. As a result, most prices were unchanged over a long period of time, and rationing would always be instituted if a shortage of basic necessities developed. Clearly, price was then only a tool to formulate plans and make accounts. Prices did not regulate production and circulation. The market mechanism had no bearing on the country's economic activities at that time; they were then totally organized by means of the state plan, which was in turn executed by governments of various levels through administrative measures. This combination of mandatory planning and administrative measures has been called a "command economy" by some Western economists.

Profound historical and social factors explain the evolution of this economic system. The old China was a semifeudal and semicolonial society in which the commodity economy was underdeveloped. The military communism of the revolutionary war years, the Soviet economic
model, and the extreme leftist thinking inside the Communist Party of China all contributed to the formation of a centrally planned economic system that restricted commodity production and rejected the market mechanism. This system did lead to industrialization (especially the development of heavy industry) in a very short time, enabling the New China to survive the embargo imposed by hostile countries and a number of border wars. However, people increasingly realized that the system was too rigid and was hindering further development of the social production forces and dampening the initiative and creativity of the people.

Under the old system, enterprises were nothing but mere appendages of government departments. They were not empowered with any authority to make decisions in production, sales, or price. Their major task was to fulfill the targets set by the state plan with the output value target being the first priority. Markets and end-users were unimportant to them because they were mainly responsible to their higher administrative departments. They faced no competitive pressure nor did they attempt to maximize profits. All these factors have deprived enterprises of their vitality, and economic efficiency has worsened. Therefore, we must restructure the economy if we are to achieve the socialist modernization.

At the end of 1978, the Eleventh Central Committee of the Communist Party of China, holding its third plenary session, decided to invigorate the domestic economy and open the country's door to the outside world, thus marking the beginning of China's economic reform. The reform began in the rural areas, eliminating such organizations as people's communes as well as such working systems as collective farming and unified distribution. In place of these organizations and systems, a responsibility system with the household as the basic working unit came into being. The state has also raised the prices it pays to farmers for their output contracted to the state and has allowed farmers to sell their surplus in the free market. Following this change, farmers' production has increased greatly.

In October 1984, the third plenary session of the Twelfth Central Committee of the Chinese Communist Party passed the "Decision on Reform of the Economic Structure," shifting the focus of the reform to the urban areas and further deepening it. After several years of study and debate, the Party had finally come to the conclusion in its "Decision" that China should move vigorously to develop a planned commodity economy on the basis of public ownership. Since the chief and direct responsibility for industrial production and commodity circulation falls on urban enterprises, invigorating them becomes the key to restructuring the national economy. In his report to the Thirteenth National Congress of the Chinese Communist Party in October 1987, Comrade Zhao Ziyang pointed out that China is now at its primary stage of socialism. Adherence to reform and the
open-door policy is a major task of the Party during the years of this primary stage. The report also says, "On the whole, under the new economic mechanism (which the reform seeks to institute), 'the state regulates the market and the market guides enterprises.'"

**Recent Advances in Economic Reform**

By 1986, the total value of industrial output under the mandatory plan had been reduced to 20 percent; the categories of materials allocated under governmental overall planning had decreased to 20 from 256 in 1980; and the number of commodities in circulation controlled by the Ministry of Commerce had been cut to 23 from 188 in 1979. Regarding pricing, the government still fixes some prices, but some are free to float within a prescribed range while others are set totally by free-market forces of supply and demand. By 1987, 65 percent of farm and side-line products had been marketed under the floating price and free market price systems; for consumer goods this percentage was 55 percent and for capital goods, 40 percent.¹

Under the policy of decentralizing administrative power and allowing enterprises to retain more profits, enterprises were given more power in the areas of production, marketing, pricing, investment, and wages. In the past, for example, nearly all profits went to the government. Now this has been replaced by tax payment. The net profit (after-tax) belongs to the enterprises and can either be reinvested or used to improve workers' welfare. In 1979, the profits retained by enterprises were only 7.9 percent of the realized profits. By 1986, however, this had risen to 42.2 percent, a five-fold increase.² State revenue as a percentage of national income fell from 37.2 percent in 1978 to 26.7 percent in 1986.³ Of the total funds used in production and circulation, 76.6 percent came from the state budget in 1978, but only 31.6 percent by 1986. Bank credits increased from 23.4 to 68.4 percent.⁴ The government has obviously reduced its control greatly, and enterprises are beginning (although only initially) to evolve from appendages of government departments into independent economic entities.

Reform has made an inspiring start. The gross national product (GNP)

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¹All the figures contained in this paragraph are quoted from *Financial and Trade Economics* (monthly) by the Research Institute of Finance and Trade Economics under the Chinese Academy of Social Science (September 1987):2.
³Ibid., 21.
increased from 348 billion yuan in 1978 to 938 billion in 1986, an increase of 102 percent in terms of comparable prices; state revenue rose from 112.1 billion yuan to 222 billion, up 98 percent; and the average per capita consumption rose from 175 to 450 yuan, an increase of 86.9 percent after adjusting for price increases.5

China's two basic policies are "invigorating our national economy and opening the door to the outside world." Under the old system, the different ministries of the central government had minimal contact with each other; the same could be said of the different provinces and municipalities. To invigorate the national economy, the barriers between these units had to be abolished. Also the open-door policy became a necessity because the development of the commodity economy would inevitably clash with the old policy of international isolation. Only through rapid economic growth can foreign economic relations and trade expand. The following are the prime measures of reform for implementing the open-door economic policy.

Reforming the Managerial System of Foreign Trade

China's management of foreign trade was modeled on the Soviet system of the Stalinist era. Under this system, the Ministry of Foreign Trade governed all import and export business. National corporations reporting to the Ministry of Foreign Trade and organized on the basis of business lines were authorized to sign import and export contracts. As a result, foreign trade for many years has been the most centralized economic sector. Implementation of the open-door policy has led to some ministries of the central government and some local governments being given autonomous power to undertake import and export transactions. Also, foreign trade corporations and industrial enterprises can now undertake import and export business jointly, and foreign trade corporations may act as agents for industrial enterprises to export their products. Domestic end-users who have import licenses may also entrust any foreign trade corporation to import on their behalf. However, the industrial enterprises are responsible for the profit or loss in these transactions; the foreign trade corporations are agents and receive only a commission. According to the latest statistics, there are about 1,160 foreign trade corporations of all kinds, excluding those in Guangdong, Fujian, and Hainan Island provinces and those in the four Special Economic Zones (SEZs).6 Of the total foreign

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5All the figures contained in this paragraph are quoted from Advance Along the Road of Socialism with Chinese Characteristics, by Zhao Ziyang, speech delivered to the Thirteenth National Congress of the Communist Party of China, October 25, 1987.
trade corporations, 750 or so are engaged in the import and export business, and about 400 are specialized respectively in contracting projects abroad, consulting, investment, storage and transportation, chartering, commodity inspection, notarial service, and so forth. All this indicates that diversified methods for interacting with the international market have developed.

Opening More Regions

In 1979, Guangdong and Fujian provinces were authorized by the State Council to adopt special policies and flexible measures in their external economic activities in order to be more open to the outside. In May 1980, three SEZs were established in Shenzhen, Zhuhai, and Shantou, Guangdong province, and another one in Xiamen, Fujian province. Again in May 1984, the following fourteen coastal cities were opened up to the outside and established as Economic Development Regions (EDRs): Dalian, Qinhaungdao, Tianjin, Yantai, Qingdao, Lianyungang, Nantong, Shanghai, Ningbo, Wenzhou, Fuzhou, Guangzhou, Zhanjiang, and Beihai. Then in 1985 it was decided to gradually open the areas of the Yangtze Delta, the Pearl River Delta, and the Triangular Region of South Fujian. These regions and cities were also granted the power to develop economic relations and trade with foreign countries and to give preferential treatment to incoming foreign investors and businessmen. The establishment of EDRs is to attract foreign investment. The major difference between an SEZ and an EDR is that the former has independent administrative institutions and enjoys more freedom to take flexible measures; an EDR, however, is subject to the leadership of the local government.

Attracting Foreign Investment

As part of the open-door policy, China also has begun to welcome foreign capital. Foreign entities have loaned money to the central government and to ministries and local governments with the approval of the central government. The state-borrowed funds are mainly used in the less-developed sectors, such as the energy industry and the construction of railroads, harbors, and other basic facilities. In addition to the foreign loans, direct foreign investment has come into China in equity joint ventures, contractual joint ventures, cooperative developments (mainly offshore oil exploration), and wholly owned foreign enterprises. A number of national and regional laws and regulations have been implemented to facilitate this foreign investment in China.

Economic growth and the open-door policy have accelerated the expansion of China's economic relations with foreign countries, especially the United States. Sino-American trade over the seven years from 1978 to
1985 was nine times as great as in the previous seven years, while China's total trade was only 3.7 times as great. Now the United States is China's third largest trading partner, behind Japan and Hong Kong/Macao. The United States ranks second in foreign direct investment in China, behind Hong Kong/Macao but ahead of Japan.

In regard to technology transfer, no accurate official statistics are available so far. But taking the machinery-building industry as an example, during the Sixth Five-Year Plan period (from 1981 to 1985), China signed 679 contracts for technology transfer with a total value of US$528 million. Most of these transfers were from the United States and West Germany. Although Japanese machinery and equipment export volume to China was twice that of the United States, the Japanese technology transfer to China in machinery-building was about US$90 million, which was far behind the United States. If the U.S. government had not placed unfair restrictions on technology transfer, American enterprises could have occupied a much bigger share in China.

China's economic reform is a key element in its strategy for economic development. The reform aims to achieve stable economic growth. So we should fully consider how to create favorable conditions for economic reform. Economic reform needs a relaxed economic environment, because it cannot be achieved if capital, foreign exchange, and consumer goods are in short supply. In his report on the Seventh Five-Year Plan delivered on March 25, 1986, Premier Zhao Ziyang stressed the necessity of fixing an appropriate rate for economic growth. Again in his government work report presented on March 25, 1987, Premier Zhao addressed the necessity of controlling the excessive capital construction and avoiding a blind chase for a high economic growth rate. Once again in his report at the Thirteenth Party Congress held in October 1987, he stressed the importance of maintaining steady economic growth. By reforming the structure of production, we will not only improve macroeconomic results, but also create a relaxed environment for economic reform.

Presently, the biggest problem in the structure of production is the backwardness of such industries as energy, transportation, telecommunication, and basic materials such as steel products, nonferrous metals, and chemical raw materials. Some official documents clearly stipulate that the essential strategy for economic development is to rapidly develop these backward industries. The United States happens to have obvious superiority in the above-mentioned industries, which opens up vast vistas for Sino-American economic cooperation, as manifested in the developments of the past few years.

According to UN standard international trade classifications (SITC), machinery and transportation equipment currently constitute about 50
percent of American exports to China. In 1985, China's imports of machinery and transportation equipment increased by 237 percent over 1980, but China's imports from the United States increased by 546 percent. Obviously, the United States is becoming a more important supplier for China and is expected to remain so. At present, about one-third of the U.S. direct investment in China is in China's offshore oil industry. Data from the Ministry of Foreign Economic Relations and Trade (MOFERT), show that by the end of 1986, of the Sino-American joint ventures, machinery and electronic industries accounted for 28.57 percent, light industry 24.54 percent, transportation 5.58 percent, telecommunication 2.83 percent, service 3.73 percent, and hotels 26.26 percent. The above figures show that the U.S. export commodity composition and direct investment pattern could well meet the needs of China's economic reform and its strategy for economic development.

During the Seventh Five-Year Plan period, though the increase of Sino-American trade will not be as high as that in the 1979–85 period, Sino-American trade will increase faster than China's overall foreign trade. The U.S. share of China's overall foreign trade will continue to increase. The share was 10.5 percent in 1985; and it is estimated that it will reach about 12–13 percent in 1990, or even as high as 14–15 percent, totalling $10–12 billion. According to MOFERT statistics, a total of 408 contracts of American direct investment in China were signed in 1979–87, with a total value of US$3,040 million. It accounted for 13.05 percent of the total amount of foreign direct investment during the same period. Compared to the U.S. total amount of external trade and investment, the above figures are modest. However, as China's economic reform deepens, after 1990 Sino-American economic cooperation will have a more solid foundation, which will bring about a more rapid development on a larger scale. In addition, Sino-American economic cooperation will effectively promote economic prosperity and political stability in the Asia-Pacific region.

**The Slow Process of Reform**

China's economic reform is a process in which the old existing structure is withering and the new structure is growing. China is a large country, and the pace of economic development varies greatly from place to place. Existing conditions constrain reform. Therefore replacement of the old structure by the new one will be slow. Chinese leaders have said that "it now seems that it will take a longer time to build the framework of the new structure than we estimated" and "we should fully understand the difficulty and complexity of the reform."^7^ The coexistence of the old and

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^7^Zhao, *Advance Along the Road of Socialism.*
new structures for years to come remains a reality in the Chinese economy whether people like it or not. We now focus on two issues in this environment, namely, trade and investment.

**The New Demand for Investment**

In earlier years and now, aggregate social demand often surpasses aggregate social supply. Excessive expansion of investment results from the motive of the state's desire for a high growth rate leading to larger state budgets for investment. Governmental sectors and enterprises undertaking investment projects use the fund gratuitously. Until recently, bankruptcy and insolvency were unknown, so governmental departments and enterprises were not held responsible for the efficiency of the enterprise or the effectiveness of the investment. Now if enterprises are not managed properly, the state is bound to extend a helping hand. The result is not difficult to understand: governmental departments and enterprises vie with each other for a larger share in financial allocation, and a wave of new demand for investment is thus created.

Under the old structure, personal income of residents both in urban and rural areas could not be used for productive investment or for fixed assets for consumption purposes, such as housing. Consequently, personal savings would mainly be spent on consumer goods. In addition, because differences in income and consumption among the Chinese were limited and because salary increases were typically instituted on a nationwide scale simultaneously, the synchronization in the increase of purchasing power and the concentration of spending for consumption would often result in pressures on the market. These increases in investment demand and consumption demand are the main cause of the excessive expansion of the aggregate social demand, raising the potential danger of inflation.

Economic reform will undoubtedly lead to decentralized investment decisions. State budgeted investments are declining as a percentage of all investments, while investments by local governments and enterprises such as retained earnings, bank loans, and so on are on the increase. The former are still expanding, whereas the latter cannot easily be controlled by the state. Since the new structure has not been fully instituted and market prices are not permitted to operate, and since the self-restraining mechanism limiting corporate investment has not taken shape, investment demand is still rising and may continue to do so. Investment in fixed assets increased from 120 billion RMB yuan in 1982 to 247.5 billion RMB yuan in 1985, an increase of over 100 percent.8

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Consumption demand is also growing fast. When enterprises are given more power and responsibility, they often use considerable after-tax profits for employees' bonuses and fringe benefits, a characteristic typical of short-term corporate behavior.

In the past, the state purchased all agricultural products at the official price and could easily control the monetary income of the farmers. Now only a few staple agricultural products are purchased by the state on contracts, while the rest are totally at farmers' disposal. Furthermore, the diversification of the rural economy enables farmers to earn their income in various ways, and the ability of the state to directly control the monetary income of farmers is substantially reduced. This is aggregated by the fact that the macroregulatory means are not yet perfected. Consequently, controlling consumption demand by both rural and urban residents is difficult.

From this analysis, it is apparent that the tense relationship between aggregate social demand and aggregate social supply will continue. This requires an increase in both imports of commodities and inflow of capital, which, in turn, calls for an expansion of exports in order to offset imports. Therefore, China will be concerned with the trade balance between China and the United States and any signs of protectionism practiced by the United States. Thus it will be important to manage correctly the cooperation between China and the United States.

As China's economic reform involves a transition from a closed economy to an open one, the significance of export is apparent. To a great extent, the ability to export determines the degree to which we can open to the outside world and pursue domestic economic development. To increase exports, China is reshaping its foreign trade policies to encourage exports. For example, the value-added tax is refunded to enterprises for their exported products. Chinese scholars are also discussing intensively the devaluation of the Chinese renminbi in terms of foreign currencies. For a long time, price-cost relationships and relative prices among commodities in China have been distorted. In addition, domestic prices have long been insulated from the international market. Therefore, the exchange rate is important to consider in restructuring the domestic price system. However, this cannot solve the problem of trade imbalance in China, as more than half of China's exports are primary goods, which face inelastic demand on the international market. So even if prices for these primary goods are reduced in terms of foreign currency, the volume purchased will not be raised substantially. Increasing exports of China's

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9 Zhao, *Advance Along the Road of Socialism*. 
manufactured products is hindered not by their prices but by problems of quality, design, and the like. Protectionist barriers imposed by foreign countries are also a factor.

Even the devaluation of the Chinese renminbi will not be of much help in restraining large imports of the capital goods and technology needed for modernization. In short, no "Marshall-Lerner's condition" exists in China now, so devaluation of the Chinese renminbi will not help significantly the balance of China's foreign trade. Under such circumstances, more attention will be focused on the composition of export goods rather than on aggregate volume.

An effective way for China to go from a closed economy to an open one lies in the optimization of the composition of export goods by adjusting the domestic industrial structure and establishing nationwide networks for the production of export goods. In fact, the United States is currently undergoing a readjustment of its industry, because the scientific and technological revolution has resulted in a rapid development of those industrial sectors characterized by intense research and development, intensive knowledge-technology, and intensive information-software. These high-tech industries are replacing the "sunset" industries, especially the labor-intensive ones. Chinese leaders have already announced the establishment of internationally oriented economic zones in China’s coastal areas, where activities such as processing, assembling, packaging, and subcontracting with resources, capital, and technology introduced from abroad can be carried out. This would make full use of the rich resources of experienced labor, the advanced processing and manufacturing capabilities, and the favorable transportation facilities found there. This plan is of great significance for economic reform in China. Since the industrial structures of China and the United States are complementary in many respects (unlike the United States and Japan, which are competitive), economic cooperation between China and the United States certainly has a bright future. China intends to cooperate with Western Europe, Eastern Europe, and Japan, but the United States may be in a particularly advantageous position in this respect.

The Problem of Foreign Exchange

The imbalance of foreign exchange still remains the major problem facing foreign investors. The ultimate motive of American investors is often no more than to tap the Chinese market, that is, to sell their products locally and repatriate their profits. However, the Chinese want to utilize and absorb U.S. capital, technology, and managerial experience so they can export and earn foreign exchange. This problem can be avoided either by foreign investors establishing export-oriented enterprises or by the state
providing support and assistance for enterprise with foreign investment. For example, the twenty-two articles of the “Provisions of the State Council for the Encouragement of Foreign Investment” promulgated in October 1986 provide that preferential treatment shall be rendered to two categories of enterprises in China established with foreign capital. The first category is the export-oriented enterprises, that is, enterprises whose products are mainly for export. They have a surplus of foreign exchange. The second category refers to the technology enterprises, that is, productive enterprises that provide advanced technologies, engage in the development of new products, or contribute to the upgrading and replacement of out-of-date products in order to increase foreign exchange through export or by substituting for imports. Preferential treatment means that such services as the supply of water, electricity, telecommunication, and transportation shall be offered to the above-mentioned enterprises with first priority and that they shall be charged the same as Chinese enterprises. In addition, these enterprises are eligible for lower land-use fees.

What should be particularly mentioned here is that these enterprises have been permitted to sell their foreign exchange for renminbi at higher than official exchange rates and to sell their products quoted in foreign currency in China. In fact, the implementation of the aforementioned measure had already started in many places such as Guangdong, Fujian, Shanghai, and Tianjin in 1987. It can be believed that along with the deepening of the reform, foreign exchange control will inevitably be loosened. A case in point is that beginning in 1988, foreign trade corporations in provinces and municipalities have been permitted to adopt the responsibility system, under which they will be able to retain more foreign exchange and have more say in disposing it. Therefore, it can be predicted that in the future a foreign exchange market will appear under the supervision and control of the state, which will be a great convenience for foreign investors. In a word, American investors will surely be successful if they fully understand these two strategic plans, that is, the adjustment of industrial structures and the development of export-oriented enterprises in coastal areas.

In conclusion, it should be pointed out that China's economic reform is a great social experiment, which will exert an impact not only on the development of China but on the rest of the world as well. China is the largest developing country in the world, while the United States is the most advanced country, with great economic strength. As opportunities for mutual economic cooperation are substantial, it will be a great contribution to the world economy if such potential is fully tapped.
Part Three
U.S. Economic Policies:
Implications for U.S.-PRC Cooperation
4. An Overview of U.S. Economic Prospects and Some Implications for China

C. FRED BERGSTEN and MARCUS NOLAND

During the 1980s the United States has experienced a historically unprecedented deterioration of its trade and government budget balance to become the world's largest debtor. The necessity of reducing these "twin deficits" will be the central feature of U.S. economic policy well into the 1990s. This will entail reductions in the government budget deficit and increases in net exports on the order of 5 to 6 percent of the gross national product (GNP).

In this chapter we will examine the likely scenarios for medium-run macroeconomic adjustment in the United States. We will then identify particular sectors in which much of the necessary increases in net exports will most likely occur. Finally, we will sketch out some implications of this process for trade between China and the United States.

Medium-Run Prospects for the U.S. Economy

It is widely held that the combination of expansionary fiscal policy and tight monetary policy will typically lead to a rise in interest rates, inducing capital inflows, an exchange-rate appreciation, and a loss of competitiveness. The relative composition of domestic output will shift from the tradables sector to the nontradables sector, and the trade balance will deteriorate.

This simple Mundell-Fleming view of the world does a respectable job of describing the U.S. macroeconomic experience during 1981–84. Because of large tax cuts and expenditure increases, the federal government budget deficit ballooned to over $200 billion in the early 1980s. In the absence of large compensatory reductions in private and local government expenditures, real interest rates rose, the currency appreciated, and the excess of domestic demand over domestic production was satisfied by
the importation of goods from abroad. The growth of the U.S. trade deficit mirrored the deterioration of the federal government budget position.

The deterioration in the trade account was exacerbated by faster growth in the United States than in the other industrialized countries. As a result of this "growth gap," the U.S. demand for imports grew at a more rapid rate than foreigners' demand for U.S. exports. This effect was reinforced by the Third World debt crisis, which slowed growth in the demand for imports in many developing countries, especially in Latin America, a major U.S. export market. The differential growth rates at home and abroad contributed to widening the trade deficit and increasing the need for capital inflows.

The impact of this growing reliance on foreign borrowing could be seen further in the current account. Although the United States had accumulated merchandise trade deficits since 1975, surpluses on service transactions and net investment income had kept the broader measure of external balance, the current account, in approximate balance. However, as the buildup of foreign financial claims and their associated dividend and interest income steadily reduced this surplus, the current account also went into deficit in 1982.

The putative success of the Reagan administration "supply-side economics" was caused in part by the extraordinary willingness of foreigners to invest in American financial assets at relatively low real rates of return. In Japan, capital controls had kept a huge pool of savings bottled up within the domestic economy. With the initiation in December 1980 of a major program of capital market liberalization, savings began flowing abroad, seeking higher rates of return and portfolio diversification. Net financial investment abroad grew from $8.4 billion in 1980 to $117.6 billion in 1986, with the preponderance of this investment going to the United States.¹

Similarly, the period of the U.S. fiscal expansion coincided with the nadir of the debt crisis of the less developed countries (LDCs). Because of skepticism about their governments' willingness or ability to fulfill outstanding financial claims, residents of some LDCs attempted to shift part of their portfolios out of domestic currency-denominated assets, leading to the phenomenon of "capital flight" and the inflow of billions of dollars into the United States.² Thus the coincidence of capital market liberalization in Japan and capital flight from the LDCs allowed the United States to borrow

money from foreigners at more attractive rates of return than might otherwise have been the case. The warning signals of fiscal overexpansion resulted—large increases in interest rates were muted, and the government was under less pressure to alter the macroeconomic policy mix. Indeed, we now know the "miracle" of "supply-side" economics: the foreigners supplied much of the goods and most of the money.

Thus over the period 1984—87 domestic demand grew at a strong 4 percent a year. Unfortunately, real output only grew by around 3 percent a year, and the shortfall was made up by imports. Moreover, the growth was spread unevenly through the economy, with most of the gains concentrated in the relatively sheltered service sector. Employment grew at a 2.6 percent annual rate, but employment actually fell in the manufacturing sector, which was hit hard by the exchange-rate appreciation. At the end of the day, the Reagan fiscal expansion had bought strong growth, but at the cost of rapidly mounting trade and budget deficits.

The increase in the U.S. foreign debt was so enormous that in four years the United States, which had the largest net foreign investments in 1983, became the world's largest debtor, with a net external debt of over $400 billion in 1987—more than the next three largest debtors (Canada, Brazil, and Mexico) combined (see Figure 1). Even under an optimistic scenario, this figure will probably rise to $750 billion before leveling off, and the actual number is likely to be closer to $1 trillion.\(^3\) Because of this rapid buildup in the stock of foreign debt, net investment income flows are likely to remain negative well beyond the 1990s. Consequently, the adjustment of the trade balance necessary to restore the U.S. current account to a sustainable equilibrium will be even larger to compensate for the deficit on net investment income.

This rapid growth in the stock of debt is key to understanding the events from 1985 on and into the future. With the buildup of debt, foreign investors became increasingly concerned about the real effective value of their dollar-denominated assets and the share of dollar assets in their portfolios. It became increasingly obvious to market participants that a substantial currency devaluation would be necessary to generate the increase in net exports needed to finance the payments on the external debt and return the current account to a more sustainable position. However, with the decline in the dollar, the rate of return in the lender's currency on dollar-denominated assets would fall in the absence of compensatory widening differentials in nominal rates of return. Thus,

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\(^3\)The four scenarios developed in Morgan Guaranty Trust Company, World Financial Markets (November-December 1987):11, foreign debt at the end of 1995 ranging between $900 billion and $2.5 trillion.
Figure 1. Net International Investment Position, 1975–86
without a rise in U.S. interest rates, there would be continual downward pressure on the dollar.

In the absence of widening interest rate differentials, the steady depreciation in the dollar since early 1985 reduced the relative rate of return on dollar-denominated assets. Japanese insurance companies alone recorded losses of over $13 billion on U.S. government securities in 1987. (Actual losses were reportedly even larger.) Not surprisingly, private investors reacted by diversifying portfolios away from dollar-denominated assets. The net inflow of private financial investment in the United States fell dramatically in 1987, forcing foreign central banks to intervene heavily to prevent a collapse of the dollar. Altogether, they reportedly bought about $140 billion of dollar-denominated assets, thereby financing a large share of the U.S. current account deficit. The absence of private investors willing to purchase dollar-denominated assets has left the United States dependent on the willingness of foreign central banks to support the dollar at its current level without interest rate increases in the United States. Their willingness and capacity to continue doing this is by no means clear.

As an illustration, during the last period of sharp declines in the dollar in 1977–78, the U.S. external financing requirement was about double the magnitude of the current account deficit because of a sizable net outflow of private funds. Any such occurrence on a similar scale today would mean the United States would have to borrow $300 billion in a year from foreign central banks, clearly an impossible task.

Thus the overriding objective of U.S. international economic policy well into the 1990s will be the reduction of the huge federal government budget and trade deficits. The magnitude of this adjustment will be considerable. A recent statement by thirty-three prominent international economists (including two Nobel Prize winners) from thirteen countries called for the United States to reduce its current account deficit by $100–150 billion. In light of the widening deficit on net investment income, reaching this target would entail an improvement in the trade balance on the order of $200 billion. Moreover, because exchange-rate depreciation increases the dollar value of a given volume of imports, the required adjustment in terms of volume would be even greater, perhaps $250 billion, or around 5 to 6 percent of the GNP.

This adjustment could be accomplished in three ways. The first would

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5 This analysis is contained in Resolving the Global Economic Crisis: After Wall Street, Special Report no. 6, Washington, D.C., 1987, released by the Institute for International Economics and eight research centers in other countries.
be through an autonomous decrease in consumption. While there is some evidence that the U.S. savings rate may increase (perhaps because of a desire by consumers to restore target wealth levels eroded in the October 19, 1987, stock market crash), as a matter of policy it would be unwise to rely on an autonomous decline in consumption.

A second possibility would be to cut private investment. This would accompany an increase of U.S. interest rates as part of a program to induce foreign lending and support the dollar. Such an approach is extremely shortsighted however, as more investment would be needed to sustain growth, especially export growth. Already, some of the most competitive U.S. export industries (forest products and chemicals, to name two) are running at near or full capacity. More investment, not less, is needed in these sectors.

The third, and in our view, most desirable solution is a steady and substantial reduction in the federal deficit on the order of $150-200 billion. As the structural budget and current account deficits are now about equal ($150-160 billion each), the goal should be to cut both deficits by $30-40 billion annually over the next four to five years. If they were reduced in tandem, the increase in net exports would offset the drag caused by fiscal contraction, and the United States could move toward a position of macroeconomic balance without a recession.

Over the course of the current economic expansion, as noted above, real domestic demand in the United States has grown by about 4 percent per year, while real output (the GNP) has grown by about 3 percent. The difference represents the steady growth (until 1987) in the trade deficit. The only way to reduce the trade deficit is to reverse this relationship. The growth in domestic expenditures will have to be slower than the growth in domestic output, to make room for a substantial shift to net exports.

As it now stands, the Reagan administration, using optimistic assumptions about economic growth and the level of interest rates, has forecast that the budget deficit will fall to $130 billion in FY 1989 and continue to decline thereafter. (The Gramm-Rudman target for 1989 is $139 billion; hence the Reagan administration projection would meet the target. The administration's forecasted deficits remain above the Gramm-Rudman targets for subsequent years, however.) In contrast, the Congressional Budget Office (CBO), using assumptions closer to the mainstream consensus, has projected that the deficit will actually widen in FY 1989 to $179 billion.

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6 These cuts should be calculated and implemented in terms of structural, not actual, budget deficits. In terms of capital inflows needed to finance the current account, a weaker economy could imply a reduced need for foreign savings, even though the actual budget deficit might fall more slowly than otherwise, or even increase.
billion, well above the Gramm-Rudman trigger. In fact, the CBO projects that the federal government budget deficit will not fall below $150 billion before 1993.

A number of researchers have analyzed the effects of a U.S. federal budget deficit reduction on the current account. Helkie and Hooper report simulation results for a U.S. fiscal contraction for the Federal Reserve Board's multicountry model (MCM) and for a weighted average of nine other large macromodels. According to the MCM, holding real domestic and foreign income growth and exchange rates constant, a sustained federal deficit reduction equal to 1 percent of the baseline GNP yields an improvement in the U.S. current account deficit of $41 billion relative to the baseline projection at a five-year horizon. For the forecast-error-weighted average of the nine macromodels, this figure is $20 billion, with individual model estimates ranging from $5 billion to $47 billion. In comparison, results from a vector autoregressive (VAR) model indicate that a Gramm-Rudman—type fiscal contraction would lead to a $19 billion improvement over the baseline projection, well within the range of estimates generated by the large macromodels.

As an alternative, several well-known economists (most notably Martin Feldstein and Rudiger Dornbusch) have called for substantial further declines in the dollar, on the order of 20 to 40 percent. While additional exchange-rate depreciation may be part of the adjustment program, it would be unwise to rely solely on further depreciation to balance the external accounts. As the “Group of 33” economists noted, “Currency depreciation that is not accompanied by strong action to slow down domestic demand simply paves the way to further currency depreciation. A further sharp fall in the dollar—by increasing inflation in America and the threat of recession elsewhere, and further undermining confidence in the world's key currency—could lead to financial crisis and a serious world recession.”

These analyses suggest that unless Gramm-Rudman or some other deficit reduction plan is vigorously pursued, the U.S. federal government budget will remain large. In the absence of autonomous declines in expenditure, this necessitates continued financial inflows from abroad and

8Ibid., Table 2–16.
10Resolving the Global Crisis, p. 13.
Figure 2. U.S. Merchandise Trade Volumes, 1967–87
puts tremendous pressure on monetary policy. Monetary authorities will need to run a tight fiscal policy to keep interest rates high and the exchange rate stable. The risk is that they will tighten too much and cause a recession. However, if monetary policy is kept too loose in an attempt to avoid a recession, the likely outcomes are inflation and an exchange-rate overshoot.\footnote{The full implications of this scenario are cogently laid out in Stephen Marris, \textit{Deficits and the Dollar}, Policy Analyses in International Economics 14 (revised) (Washington, D.C.: Institute for International Economics, 1987).}

Thus, sustained action to reduce the federal budget deficit is essential. This would permit a gradual easing of monetary policy and a shift toward macroeconomic balance while maintaining full employment. Unfortunately, recent efforts at deficit reduction, including the November 1987 "budget summit," have not been credible. These cuts have reduced the deficit from what it otherwise would have been; they do not cut the deficit from what it was the previous year. It is likely that serious action on the budget will be left to the incoming administration and Congress in 1989.

**The Impact on Trade**

The external sector counterpart to the reduction of excess domestic demand would be an expansion of net exports. To some extent this has already begun to occur. Exports in constant dollar terms rose 12 percent in 1987, as much as the four previous years combined (see Figure 2). Import volume grew at 5 percent in 1987. However, the prices of goods making up around 25 percent of U.S. imports (mostly natural resource commodities) are denominated in dollars; looking at the narrower category of manufactures in which exchange rate changes would increase the relative price of imports, the volume rose only 3 percent in 1987. The trade balance in nominal terms fell slightly in the fourth quarter of 1987.

Nevertheless, without a recession, import volumes will probably not fall dramatically. Thus, as Figure 2 starkly shows, with import volumes over 60 percent higher than exports in 1987, a tremendous increase in exports will be required to close the trade gap.

It is sometimes questioned whether the United States possesses the underlying "competitiveness" to accomplish this task. Concerns about losses of international "competitiveness" are probably exaggerated, however. During the period 1984–87, labor productivity in manufacturing grew at over 4 percent a year, indicating the fundamentally sound state of the traded goods sector. Further indication of U.S. competitive strength is that in the period before the dollar appreciation priced U.S. firms out of world markets, the United States achieved impressive gains in world trade.
Between 1978 and 1980 American exports grew twice as fast as world trade, and the United States recouped its market share in every industrial sector and in every geographical market. The current account improved substantially (excluding the direct effects of the second oil shock) and was in surplus in 1980–81 despite a sharp rise in oil exports. Thus, given a more reasonable exchange rate, U.S. firms should be able to compete. Nevertheless, the question arises: where will these increases in exports come from?

One way of answering this question is to identify in which sectors the United States exhibits comparative advantage. To this end, Balassa and Noland calculated indices of revealed comparative advantage (RCAs) for nineteen industries, spanning the non-oil traded goods sector. The export RCA is defined as the ratio of the U.S. export share in a particular commodity category to its share in total merchandise exports:

\[
XRCA_i = \frac{X_{iUS}}{X_{iW}} \bigg/ \frac{X_{US}}{X_W}
\]

where the subscript i indicates industry category, and the superscripts US and W indicate U.S. and world exports, respectively. An RCA of greater than 1.0 indicates that the country has a "revealed" comparative advantage in that category, as its export share exceeds its overall average. These RCAs, calculated for the years 1967 and 1983, are shown in Figure 3.

The areas of U.S. comparative disadvantage are greatest in labor-intensive light industries such as leather goods, textile and apparel, and furniture. Comparative advantage eroded in primary metals. Industries of U.S. comparative advantage broadly fall into two groups: the natural resource-based agricultural and mineral sector where the U.S. was strong and grew stronger over the period, and the human capital-intensive manufacturing sectors such as machinery and transportation equipment. However, future growth in exports is likely to be greater in the latter category, if for no other reason than the higher income elasticity of demand for manufactures.

To examine the determinants of the U.S. pattern of specialization within manufactures more closely, Balassa and Noland estimated an econometric

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12The export figures for the world were devised by summing the relevant export category for the world's thirty-eight largest manufactures exporting countries.


model in which an index of industry net exports was regressed on industry factor intensity variables. Factors included in the model were unskilled labor; physical capital, alternatively defined in stock and flow terms; human capital (returns to labor in excess of the unskilled wage); and research and development (R&D). Each was expressed as a share of value added. The model was estimated for 167 manufacturing industries for 1967, 1971, 1975, 1979, and 1983. The results are presented in Table 1. (Variable definitions and the details of estimation are described in the Appendix.)

As shown in Table 1, the United States had a comparative advantage in human capital-intensive and physical capital-intensive manufactured goods in 1967, while it had a strong disadvantage in unskilled labor-intensive products. The situation changed little in subsequent years. Adding the R&D variable does not alter these conclusions, and for the most part the factor intensity variables remain statistically significant. The R&D variable is highly significant and shows the continued U.S. comparative advantage in products intensive in R&D.

In light of the strong correlation between U.S. specialization and human capital and R&D intensity, it is of interest to take a closer look at high-technology products. For purposes of analysis, these have been defined as products where the ratio of research and development expenditures to the value of output exceeded 3.5 percent in the mid-1970s. Altogether there are nineteen such product categories; their export RCAs are displayed in Figure 4.

As can be seen in Figure 4, the United States maintained a revealed comparative advantage in all these products throughout the sample period—with the exception of calculating machines, where a major change apparently took place in the classification of the data. Otherwise the RCAs are high, with four of these products (aircraft, aircraft engines, office machinery, and steam engines and turbines) occupying the first four positions of the RCA ranking for the 167 industry sample in 1983.15 Overall, the average ranking of the high-technology products (excluding the case of calculating machines mentioned above) rose steadily from 57 in 1967, to 49 in 1971, to 42 in 1975, to 33 in 1979, and to 27 in 1983. The increases in the RCAs depicted in Figure 4 and the steady rise in the average RCA ranking of the high-technology products over the sample period indicate the increasing specialization of U.S. trade in the high-technology product area.

In addition, the United States has a strong comparative advantage in

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15Office machinery includes photocopying machines; steam engines and turbines includes the engines and turbines used in large electricity-generating power plants.
### Figure 3. Revealed Comparative Advantage for U.S. Exports, 1967–83

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Figure 4. Revealed Comparative Advantage for U.S. High Technology Exports, 1967–83

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Table 1
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<td></td>
<td></td>
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<td></td>
<td>(-0.663)</td>
<td>(-3.729)</td>
<td>(2.564)</td>
<td>(2.233)</td>
<td>(2.318)</td>
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Note: T statistic in parentheses; the superscript a indicates a coefficient estimate significantly different from zero at the 1 percent level in a two-tail test; b indicates significance at the 5 percent level; c at the 10 percent level.
many areas of services trade, such as financial services, information services, and consulting, which are human capital-intensive in production. Consequently, the service area is likely to remain an important contributor to net exports, especially if significant trade liberalization in this area is negotiated under the Uruguay Round. (Though it should be pointed out that the U.S. services balance may deteriorate sharply because of the large negative swing in net investment income, as noted above.)

In summary, a reduction in the U.S. current account deficit will require an increase of net exports on the order of $250 billion in volume terms. A substantial share of this will undoubtedly come through an increase in the volume of exports. Three sectors—agriculture, high-technology manufactures, and services—have been identified as likely areas for this growth to occur. What remains is to sketch out the implications of this scenario for China.

**Implications for China**

Given the great differences in the pattern of factor endowments between the United States and China, one would expect the pattern of trade between the two countries to be dominated by interindustry trade. China would export labor-intensive manufactures to the United States in exchange for high-technology goods and services. The United States, with its large and affluent consumer market, is potentially a huge market for Chinese exports, and in fact, the United States runs a bilateral trade deficit with China. However, overall U.S. import volume growth is slowing and may even become negative as part of the macroeconomic adjustment. Thus the prospects for increased China-U.S. trade must be analyzed in the context of the large increase in U.S. net exports that is likely to occur over the medium run.

In this light, increased Chinese exports to the United States face two...
major potential obstacles: recession and protection. A recession in the United States would seriously reduce its demand for Chinese exports. As discussed earlier, a continuing threat of recession will exist in the United States as long as the federal budget deficit remains unsustainably high. Failure to reduce the deficit could lead to a recession by forcing the authorities to tighten monetary policy and raise interest rates in an effort to defend the dollar. However, cutting the budget too precipitously could also trigger a recession. A third possibility is for the structural budget deficit to come down slowly, enabling monetary authorities to avoid a currency crisis. Economic growth would slow, and both the actual budget deficit and the trade deficit would remain high. Investment would fall, and the economy would enter a period of slow growth and moderate cyclical activity. The recent macroeconomic data showing that growth in the fourth quarter of 1987 was almost entirely due to an increase in inventories point to this possibility.

Moreover, in the absence of concerted efforts to reduce the trade and budget deficits through macroeconomic policy, there is a serious possibility that the Congress would attempt to use protectionist trade policy to lower the trade deficit. Barriers against Chinese exports would be increased. As it now stands, most Chinese exports to the United States consist of textiles and apparel, which are covered under the Multi-Fiber Agreement (MFA). While China may be able to negotiate increases in the bilateral quotas in the future, the MFA remains fundamentally a means of restricting trade, not promoting it.

Second, certain provisions of the trade bill currently under consideration in the Congress could have a considerable negative impact on trade with the United States. Under the rubric of unfair trade practices, one provision would extend antisubsidy codes to nonmarket economies. Because subsidies are impossible to measure in nonmarket economies, the bill would define as a subsidized price anything lower than the American price, or the average price of imports of the same goods into the United States. This provision would effectively eliminate the Chinese cost advantage in sectors of comparative advantage.\(^{17}\) Again, while it is not certain (and is even unlikely) that such legislation will be enacted this year, it provides an indication of potential protectionist threats to Chinese exports.

Conversely, the Chinese economic modernization and the normalization of trade relations within the GATT (General Agreement on Tariffs and Trade) framework present U.S. exporters with a large potential market. In

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\(^{17}\)Another approach to protecting U.S. industries from import surges would be to simply use a discriminatory standard for nonmarket economies in market disruption provisions.
this regard, the depreciation of the U.S. dollar means that U.S. exporters should be increasingly competitive with third-country suppliers in China, especially in capital equipment, high technology, and associated services as noted earlier.

Finally, there may be some important third-country effects associated with the U.S. adjustment. First, U.S. pressure on the East Asian newly industrializing countries (NICs) to revalue their currencies should increase Chinese price competitiveness vis-à-vis these countries.

Second, as part of the global adjustment process, Japan and the Asian NICs are likely to experience reductions in their external surpluses. As a consequence, they are expected to expand domestic demand to offset the drag from the external sector. These shifts may be accompanied by increases in imports, providing new opportunities for China. One would expect that Chinese exports to Japan will grow more rapidly over the medium run than Chinese exports to the United States.

Conclusion

The most profound and enduring legacy of the Reagan period is its conversion of the United States from the world's largest creditor to the world's largest debtor. The associated macroeconomic imbalances have contributed to the possibilities of recession and renewed protection. Either outcome would have a serious negative impact on trade between China and the United States.

Reversing this situation will require a sustained reduction in the U.S. government budget deficit of $150–160 billion as part of a program to restore macroeconomic balance. The external counterpart of the budget reduction will be a reduction of the trade deficit of $150–200 billion, or 5 to 6 percent of GNP in terms of volume.

Such a transformation probably will entail significant increases in U.S. export market shares, especially in the area of sophisticated manufactures. Consequently, the United States may become an increasingly important supplier of capital goods imports to the Chinese market, consistent with China's plans for economic modernization.

Prospects for Chinese exports to the United States hinge on the avoidance of a recession and protection in the United States. However, the Chinese position may be strengthened by currency appreciation by the NICs, which would increase Chinese price competitiveness in the U.S. and other third countries' markets.

Finally, as part of the global adjustment process, other countries in Asia, most notably Japan, are likely to pursue policies of domestic demand expansion. This could mean enhanced export opportunities for China,
with exports to these markets growing more rapidly than those to the United States.

Appendix

The net export index has been defined as net exports divided by the sum of exports and imports for a particular industry, as follows:

\[ \text{NX}_i = \frac{X_i - M_i}{X_i + M_i} \]

where \( M \) refers to imports. Because this index is defined over the range \([-1, 1]\), ordinary least squares (OLS) estimation will not be appropriate, as it could lead to fitted values of the dependent variable outside its defined range. In fact, because the residuals are truncated at the values \(-1\) and 1, they are heteroscedastic.

One way of addressing this problem is to redefine the dependent variable so that it takes values between \(-\infty\) to \(\infty\). A customary way of doing so is to use a logistic transformation of the variable:

\[ \text{NXADJ}_i = \ln\left(\frac{\text{NX}_i + 1}{\text{NX}_i - 1}\right) \]

The regressions have been estimated using both the unadjusted (NX) and adjusted (NXADJ) measures as dependent variables. The results were virtually identical. The estimates reported in Table 1 have been obtained using the theoretically preferable adjusted index. The data used to construct these variables originated from the GATT trade tapes.

In constructing the explanatory variables, factor intensity has been defined as that factor's share of value added. The share specification has been adopted because it yields an unambiguous ranking of industries by factor intensity in the multifactor model and has a straightforward interpretation in terms of the multifactor Heckscher-Ohlin model.

The unskilled labor share has been defined as follows:

\[ \text{LABOR}_{ij} = \frac{(W_{ij} \cdot L_{ij})}{VA_{ij}} \]

where \( W_{ij} \) is the industry unskilled wage, \( L_i \) is full-time employment in the industry, and \( VA_i \) is value added. The unskilled wage is defined on an industry-by-industry basis because differences in market structure, union power, and so on, will cause the remuneration of unskilled workers to vary
across industries. In turn, the human capital share is defined as wage payments in excess of those attributed as returns to unskilled labor:

\[ HCAP_i = (W_i - W_{ij}) \cdot I_i / VA_i \]

In some previous studies, two measures of human capital intensity were used. One was the wage differential measure described above, and the other was the share of technical and administrative workers. In this study, the wage differential approach has been adopted for a variety of reasons. First, this measure is economically more appealing based on market information rather than on an arbitrary classification of occupations. Second, the wage differential approach coincides with the share of value-added specification, while the skill index does not.

Physical capital intensity has been defined in both stock and flow terms. The flow measure is the nonwage share of value added, while the stock measure is defined as the ratio of the physical capital stock to value added. While under certain conditions (perfectly competitive markets, no uncertainty) the two measures will yield identical industry rankings, in practice they do not. The flow measure contains a risk premium that varies across industries. In turn, the valuation of capital stocks at historical rather than replacement cost makes this measure susceptible to distortion, especially during periods of prolonged inflation. Because neither approach is clearly superior a priori, both have been used.

Research and development intensity has been defined as the share of research and development expenditures in output value. This definition is not exactly comparable to the share of value-added definition used for the other factor intensity variables, but data are only available in this form.

One objection to the specification of the explanatory variables is that the components of value added may fluctuate over the business cycle and lead to shifts in the factor intensity rankings. However, this problem arises only if the cyclical effects have differential impact across industries. If factor shares fluctuate equiproportionately across industries, the parameter estimates will be unaffected. At any rate, averages across several periods have been used to eliminate the business cycle effects.

The regressions have been specified with the research and development variable both included and excluded. The latter is more consistent with the factor-based Heckscher-Ohlin theory and avoids double counting, as R&D expenditures are already included in the remuneration of physical and human capital. This may explain the collinearity between the R&D variables and the physical and human capital variables, which reduces the statistical significance of the latter variables in several of the regressions. This is particularly true for the correlation between the human capital
variable and the R&D variable, which largely represents investment in human capital in the form of scientists and engineers.

The regressions have been estimated using White's heteroscedastic-consistent covariance matrix estimator, which yields a consistent estimate of the covariance matrix (permitting proper inferences to be drawn) even in the presence of heteroscedastic disturbances.\(^\text{18}\)


The research and development data have been taken from the Federal Trade Commission, *Statistical Report: Annual Line of Business 1974 and 1975*, both in September 1981; and *1976*, in May 1982. These data are preferable to the widely used National Science Foundation data on two counts. They are far more disaggregated (approximately four-digit SIC versus two-digit SIC for the NSF data), and in contrast to the NSF figures, which are calculated using raw data classified by firm, the FTC figures are constructed using raw data classified by plant—hence yield a more accurate indication of research and development expenditures in different product classes for multiproduct firms.

The data for value added, wages, and employment have been averaged for the period 1973–75. The data on research and development expenditures have been averaged over the midsample period, 1974–76, which were the only years available.

**COMMENTS**

Commenting on the Bergsten-Noland paper, Ye Gang first notes that "the enduring legacy of the Reagan administration—the conversion of the United States from the world's largest creditor country to the largest debtor—is the result of maintaining a faster growth, under the influence of 'supply-side economics,' at the cost of running huge budget and trade

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deficits." The "growth gap" idea is the key to understanding the dilemma the United States faces. A substantial reduction in the federal budget deficit or another 20 to 40 percent drop in the value of the dollar might bring the current account into balance, but at the risk of a recession in the United States and elsewhere.

But Ye Gang notes that a recession in the United States or further moves toward protectionism would harm China's export performance. As China pursues its open policy, it cannot isolate itself in a world of interdependence, so it is concerned about the possibility of recession and protectionism in the United States.

Professor Ye hopes that his foreign colleagues can understand that if a recession and protectionism were to develop in the United States, China could have trouble with its balance of payments and could even encounter a debt crisis, which would be harmful for the rest of the world as well as for China.
Sino-U.S. trade relations began in 1972, with President Nixon’s “ice breaking” first visit to China. As a result of joint efforts, the annual growth rate of Sino-U.S. trade during the past fifteen years averaged 20 percent, the highest growth in China's foreign trade with any country. Bilateral trade value in 1986 reached US$7.3 billion, making the United States China’s third largest trade partner, behind Japan and Hong Kong. China is now the sixteenth largest trading partner of the United States. In 1986, trade with the United States accounted for more than a fifth of China’s exports and about 10 percent of China’s imports.

But increases in bilateral trade have been far too small, relative to the potential trade volume. The U.S. protectionist policy is the main obstacle inhibiting the future development of bilateral trade. In light of many years of huge trade deficits, the U.S. government has enforced a great number of protectionist rules, and new, more restrictive trade legislation is currently being considered in the U.S. Congress.

Among China’s export products, textiles are the most important. Over the past years, textiles have constituted about 50 percent of Chinese exports to the United States. The strictly protectionist policy toward textile imports followed by the U.S. government for decades has not only harmed both the Chinese and U.S. economies and the economic cooperation of the two countries, but has threatened their political relations as well. The long-run mutual interests of the two countries require that U.S. policymakers scrap protectionism and resolve the dispute between China and the United States over textiles.

U.S. Protectionist Policy Toward Textile Imports

In the case of textiles and apparel, the United States has the most protectionist policy in the industrialized world. In the late 1950s the United States sought “departure” from the General Agreement on Tariffs
and Trade (GATT) principles promoting free trade. It maintained that "abrupt, massive" increases in textile imports did not allow sufficient time for American manufacturers to adjust to new market conditions, and thus caused so-called market disruption in the United States. The United States was successful in winning support for special restrictive trade rules for textiles. The Short-Term Arrangement Regarding International Trade in Cotton Textiles, and the Long-Term Arrangement were concluded in 1961 and 1962, respectively. Contrary to the GATT most-favored-nation rules, these arrangements, signed by nearly fifty countries, allowed import controls that discriminated against particular countries. These controls were intended to be applied only when imports caused an actual threat of market disruption. And it was hoped that appropriate restrictions would follow an agreement between importers and the exporting countries affected.

Under these agreements, quota limitations—also illegal under the GATT—could be imposed on textiles. But the limits were not to be lower than the actual percentage share of the market held by the exporting countries. Moreover, at least a 5 percent annual growth in the level of imports to the country suffering the trade restrictions was permitted.

The Multilateral Fiber Arrangement (MFA) is currently the main international agreement governing textile and apparel trade. The growing use of synthetic fibers, such as polyesters and acrylic, together with the global economic problems of the early 1970s, prompted the first MFA in 1973, renewed in 1978, 1981, and 1986. MFA quotas are established by bilateral agreements negotiated every three to five years with major suppliers. These agreements set annual limits for specific textile and apparel products. Each agreement typically provides for annual growth in these limits. The United States may allow the supplying country to carry forward into the next year a portion of the unused quota from the previous year and to "borrow" a part of next year's quota for the current year. Countries may also switch a certain share of one product category's quota amount to another category. In 1984, two-thirds of U.S. textile and apparel imports were covered by some type of quantitative restriction.¹

Ironically, the first multilateral textile trade agreement was called the Short-Term Arrangement; this "temporary" protection has now lasted twenty-seven years. And the original agreement, intended to allow orderly adjustment in the cotton trade, has since grown into a protectionist monster covering over a hundred fiber products. Rather than promoting liberalization and market adjustment, the MFA has become a permanent

instrument of trade restriction, encouraging U.S. textile producers to seek more and more protection.

Despite the tighter trade restrictions and GATT exemptions allowed under the MFA, the United States has violated the agreement on a number of occasions. For example, in August 1984, the United States unilaterally changed its rules for determining the country of origin of textile imports. According to the White House, this action was necessary to prevent the circumvention of import quotas and restrictions. The new rules seek to do this by redefining what constitutes "country of origin" for textile products bound for the United States. However, the origin is difficult to ascertain, especially in the Pacific area, because textile products are often produced in stages by processors in different countries. The old interpretation takes this complex production process into account; the new interpretation does not. As a result, contrary to the established international practice, the new regulations have further restricted the imports of foreign textiles to the United States. The Textile Surveillance Body (TSB), set up by the MFA to monitor treaty compliance, found the United States in violation of the agreement. The United States has done nothing to correct the violation.

Despite its original purpose, the MFA has not led to trade liberalization; it has instead strengthened the forces of trade protectionism in the United States.

In addition to the MFA quotas, the U.S. textile and apparel industries are protected by tariffs levied on all imports from all suppliers except Israel, whether the supplier is subject to quota restrictions or not. The discussion of U.S. protectionist policy in textile imports often ignores these substantial tariffs. The average tariff for most imported goods is about 5 percent. By contrast, the average textile and apparel tariff reaches about 20 percent. Overall, the United States currently has a protectionist textile and apparel system with over 1,300 tariffs and quotas.\(^2\)

The Chinese textile exports to the United States had suffered discriminatory treatment in the form of high tariffs until the Sino-U.S. trade agreement took effect in February 1980. Subsequently, all Chinese textile and apparel products exported to the United States were subject to the restriction under the textile agreement between China and the United States, signed in January 1981. According to the agreement, whenever the U.S. charges of alleged threat of "market disruption" are made, it may consult with China about proposed new controls. In 1982, Chinese textile and apparel products subject to quota control increased from the eight categories originally specified in the agreement to fifteen categories.

Moreover, the United States tried to rush China to conclude a more restrictive agreement even before the expiration of the old agreement. When both parties failed to conclude a new agreement, the United States unilaterally imposed additional restrictions against Chinese textiles on January 13, 1983. The categories covered by the restrictions amounted to thirty-two, and quota levels were required to decrease by 16 to 45 percent.

After hard bargaining, the second Sino-U.S. textile agreement, much tighter than the previous one, was concluded on July 30, 1983. Hence 70 percent of textiles and 80 percent of apparel exported by China were covered by quota. Although China was unsatisfied with the agreement, it hoped that no new barriers would be erected by the United States in the future. However, within six months after the agreement took effect, the United States asked to consult with China seven times for new restrictions. Consequently, 85 percent of Chinese textile exports to the United States were subject to controls.

Other protectionist moves taken by the United States, for example, the antidumping duties and the regulations on country of origin, have also threatened and harmed Sino-U.S. trade. A far more restrictive legislation, known as the Textile and Apparel Trade Enforcement Act, or Jenkins Bill, was passed by the Congress in 1985. The bill, which would require a further decrease in the import levels of currently restricted textile and apparel products from twelve major foreign suppliers, has prompted China and other countries and areas to protest. In vetoing the legislation, President Reagan labeled it pure protectionism.

Although the U.S. House of Representatives failed to override President Reagan's veto of the Jenkins Bill on August 6, 1986, the United States did succeed in including tough new provisions in the renewed MFA. The new agreement, which took effect on August 1, 1986, following strong U.S. pressure, extends coverage beyond cotton, wool, and synthetic fibers to all natural fibers including ramie, linen, and silk. In addition, it allows the importing countries to impose quotas for two years rather than a single year as before. Thus the agreement is generally more protectionist than the old MFA and represents a retreat from the gradual liberalization of textile trade. In the summer of 1986, the U.S. Customs Service also rescinded the duty-free rule for textile import shipments under US$250, thus further affecting Chinese exports to the United States.

In 1987, the U.S. Congress once again was considering a new law to restrain imports. The House and Senate approved new textile and apparel legislation that would dramatically restrict textile trade. These bills would freeze 1987 imports under each category of textiles, apparel, and footwear products from all sources at current levels. Total future imports of about 185 categories of textiles and apparel would be limited to a 1 percent
annual increase, starting at the 1986 level. Imports of nonrubber footwear covered by those bills would be held at 1986 levels forever. Not surprisingly, the proposed bills are facing strong opposition from all exporting countries. As many U.S. government officials and representatives of business have pointed out, passage of the textile bills of 1987 would violate the MFA and article 19 of GATT and abrogate most if not all bilateral agreements.

The third Sino-U.S. agreement on textile trade was signed in late December 1987. According to the statement of the U.S. trade negotiator, the new four-year agreement will further sharply curtail the growth rate of China's textile and apparel exports to the United States, reducing it to 3 percent from the previous 19 percent. The categories subject to quotas amounted to over 100. Many of them have never been restricted before.

The Lame Excuse

The United States adopts a protectionist policy on the grounds that the growing imports of textiles have caused market disruption in the United States, and have led to the decline of the U.S. textile industry and the loss of jobs. However, this argument is refuted by the facts.

First, there has not been a so-called market disruption in the United States. The American textile and apparel industry has been in sound economic shape. As the largest textile producer in the world, the U.S. textile industry enjoys a number of advantages, compared with its counterparts in other industrialized countries: cheap and abundant raw materials, a high level of specialization, increasing capital formation, and higher productivity.

As Table 1 shows, U.S. textile and apparel production has experienced stable growth during most of the years since 1972. During 1972–84, the growth of shipments in the textile industry averaged 5.3 percent annually. The value of apparel shipments more than doubled in 1986 compared with 1972, almost without any downturn for sixteen years. Textile production declined in 1975 and 1982, when the United States underwent the two most severe recessions since World War II. This demonstrated that, like other U.S. industries, the ups and downs of textile and apparel production are influenced by the business cycle rather than by the volume of imports.

Over the past two years (1986–87), the U.S. textile and apparel industry has been working at maximum output, and production is at near-record levels. From 1985 to 1986 total textile production rose by 4 percent, and U.S. mill consumption of cotton, wool, and other fabrics used to make apparel topped previous records. Moreover, industry profits have soared. Total industry profits rose 46 percent in 1986. Capacity utilization in textile mills was above 90 percent in 1987, compared with about 81
percent for U.S. manufacturing as a whole. Many plants now work twenty-
four hours a day, seven days a week and continue to add capacity. Ironically,
some plants have serious problems finding enough manpower to run
operations at full capacity. It is reported that unemployment in North and
South Carolina, two of the leading textile-producing states, is below the
national average.

Therefore, there is no need to increase protection for the U.S. textile
industry. It is clear that the U.S. textile industry does not face destruction
by imports. In light of the boom in the U.S. textile industry, rather than
seeking to limit the growth of textile imports to just 1 percent per year, the
United States should be considering a reduction of textile controls.

Secondly, there is no logical link between textile imports and unem-
ployment in the U.S. textile industry. U.S. government officials and some
congressmen blame the increase in imports for job losses and thus justify
more protectionist barriers to textile and apparel imports. For example,
they argue that doubling textile and apparel imports between 1980 and
1984 was responsible for the loss of some 300,000 American textile
industry jobs during that period. However, this argument is groundless
as well.

Table 2 shows the job losses experienced by the industry between
1980 and 1982 at the time of the sharp downturn in domestic demand
during the 1980–82 recession. Even at that time the unemployment rate in
the industry (9.6 percent) was below the national average (10.8 percent).
There is no reason to attribute job losses to imports. Actually, the greatest
increase in imports occurred after 1982, when the U.S. economy recovered.
Table 2
Relation of Import Growth to Unemployment

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<th>Period</th>
<th>Import Growth Annual Rate</th>
<th>Percentage Change in Employment</th>
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<td>1980–82</td>
<td>10.2</td>
<td>−20.7</td>
</tr>
<tr>
<td>1982–84</td>
<td>30.9</td>
<td>+32.1</td>
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Source: U.S. Department of Commerce and Department of Labor.

and the demand for textiles and apparel was great. The annual growth rate of imports during 1982–84 reached 30.9 percent, while the employment increased instead of dropped. According to the U.S. Department of Commerce, the foreign textile imports to the United States grew by 17 percent in 1986, while the employment of the industry posted a gain of 1 percent, with an hourly wage increase of 3 percent. So there is no interrelation between textile imports and job losses in the U.S. textile industry.

The failure of the U.S. textile industry to rehire all the 300,000 workers laid off during the recession can be explained by improved productivity, not increased imports. Diverse technological changes are taking place in the textile and apparel industry. Changes include the installation of faster, more efficient machines, advanced auxiliary equipment for machine cleaning or materials handling, and computers for data processing and finishing. Production methods have improved significantly over the last decade with the introduction of advanced technology, such as robotics and computer-aided design and manufacturing. Mills have made large capital expenditures on modern machinery to enhance productivity and competitiveness. The textile and apparel industry increased capital outlays more than 28 percent in 1984 or US$1.78 billion and maintained that percent increase during 1985–86. The result was the elimination of obsolete facilities and operations and a reduction in the number of companies; the industry employs fewer workers but produces a greater volume of higher-quality products that are competitive in the marketplace. Between 1982 and 1984, the output of broadcloth from U.S. mills actually increased by 11.7 percent, for instance, while employment in that sector dropped by 2.8 percent. According to some estimates, by the end of the current decade, mills may require one-third fewer workers than they did in the 1970s. Thus the


evidence points strongly to increased efficiency as the major cause of lower total industry employment.

Another factor leading to job losses in the industry is the trend toward overseas production. Although improved technology has increased productivity in the U.S. apparel industry, it has not closed the price gap sufficiently between domestic and foreign producers. A high proportion of apparel is now produced in low-wage countries either by American-owned plants or American-selected contractors. U.S. firms also are using overseas processing under item 807 of the U.S. tariff code to increase competitiveness. This stipulation permits domestically cut material to be shipped for sewing to countries with lower labor costs and then reimported. Duty is paid only on the value-added portion of the commodity, and that value is modest because of the low-cost foreign labor used in the sewing operation. Many companies, therefore, shifted production abroad and cut back the output of domestic plants, contributing to shrinking domestic textile job rolls.

Thirdly, the decline of the textile industry should not be attributed to the growth of foreign imports. It is a historical trend in all developed countries.

The history of world trade indicates that textiles are closely associated with the stage of a country's economic development. Newly industrializing countries and regions historically have turned to textile production to spur economic growth because this requires lower-skilled labor, less capital investment, and less sophisticated equipment than other industries. Inevitably, as a country or region is industrialized, a stepped-up demand for labor leads to higher wages, making its textile industry vulnerable to competition from new emerging nations. This has been the pattern since the beginning of the Industrial Revolution in British textile production in the late eighteenth century. The industry spread to other parts of Europe as the British moved on to produce such higher-valued goods as steel and locomotives. The U.S. industrial revolution also began with textile plants in New England. As heavy industry grew in the Northeast, textile production shifted to the Southern states, especially to the Carolinas. The decline of the U.S. textile industry took place as early as the pre-World War II years. In the U.S. national income without capital consumption adjustment by industry, textile mill products accounted for 7.7 percent of manufacturing in 1930 and only 2.4 percent in 1984. Within the same period, apparel and other textile products dropped from 7.7 percent to 3.0 percent. The share of textile and apparel workers in total manufacturing employment also dipped conspicuously.

Since the end of World War II, worldwide production of textiles and clothing invariably has been shifting to the newly developing countries and regions, from the United States and Europe, and recently even from
Japan. As far as the United States is concerned, it has been undergoing a great change in industrial structures in the past twenty years. While the U.S. economy shifts toward high technology and service industries, many old-line, labor-intensive industries are declining. Artificially imposed restrictions on textile imports and protection for the declining industry will only delay the adjustment of the economic structure and retard economic growth in the United States.

Since the textile job losses are due to structural change and the modernization of the textile industry in the United States, as noted above, unemployment in that industry is not at all permanent. Most displaced textile workers have always been offered jobs in other plants. Moreover, unlike auto or steel workers, low-wage textile workers seldom lose much income when they shift to another job. According to the investigations made by the Federal Reserve Bank in Atlanta, although North Carolina, the industry's largest employer in the country, lost 16,500 textile jobs and 4,500 apparel jobs from June 1984 to June 1985, the number of unemployed workers actually fell by nearly 21,000 over that period. In South Carolina, where the unemployment rate also ranks below the national average, 10,400 textile jobs and 3,600 apparel jobs were lost statewide over the year, while the total number of unemployed workers dipped by nearly 7,000. The burgeoning employment increases in the services and construction sectors in the two states more than offset the negative figures registered by textile and apparel firms.5

Nothing could be more ridiculous than to assert that the U.S. market was "disrupted" by the textile imports from China. During the U.S.-China negotiation on the second textile agreement in 1982, the U.S. government officials and media alleged that the "fast growth" of China's textile exports to the United States was the largest contributor to the decline of U.S. textile production, plant closings, and job losses. In fact, China started to renew textile trade with the United States only recently, almost from zero, contributing a tiny share in total U.S. textile imports. According to U.S. statistics, China supplied only 6 percent of America's textile and apparel imports in 1981, while China's imports of cotton and synthetic fibers from the United States accounted for US$940 million, twice the value of the U.S. textile imports from China. Now China exports only about one billion dollars of textiles per year to the United States, and most of them are "gray goods" (basic cloth and fibers), which are turned into finished apparel in the United States and benefit the U.S. manufacturers. In short, the facts make it clear that Chinese textile exports have been a healthy factor in Sino-U.S. trade.

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5Economic Review, Federal Reserve Bank of Atlanta, November 1985, p. 36.
Adverse Effects of U.S. Protectionism on the United States and China

The historical record of protectionism is clear. It protects jobs in one part of American industry at the cost of jobs elsewhere, while forcing all Americans to pay higher prices for goods. It also harms China's economy and thus endangers further development of Sino-U.S. economic relations.

As U.S. sources have proved, protectionist measures designed to help the textile industry have not kept employment in it from shrinking drastically. In the decade after the United States signed the multilateral restraint agreement in 1962, employment in the textile and apparel industry rose 9 percent. But the aggregate figures hid massive job losses in the Northeast, as textile firms reduced labor costs by moving south and west. Between 1960 and 1970, textile employment in New England declined 34 percent, while increasing 19 percent in the South. Then between 1973 and 1984, as the industry increasingly automated, total employment fell 28 percent to 722,000—20 percent below its 1961 level. Even if some textile and apparel jobs were saved, many, and probably more, jobs were lost in retailing, agriculture, and other export-related industries.

Trade protection hits the U.S. consumer's pocketbook because any form of import protection, be it tariffs or quotas, has two immediate effects: the volume of imports falls and the price of imports rises. Consumers respond by switching some or all of their purchases to the domestic product. This increase in demand for the domestic product, coupled with reduced competition from imports, permits domestic producers to raise their prices. The protection of the U.S. textile industry for twenty-seven years has forced U.S. consumers to pay tens of billions of dollars for higher-priced textile products. A number of studies made by American scholars tried to quantify these costs. Some estimates of the total cost at wholesale prices of tariffs and quotas on textile and apparel imports run as high as US$27 billion a year in 1984 dollars. Gary Hufbauer and Howard Rosen of the Institute for International Economics in Washington, D.C., also calculated that American consumers are subsidizing jobs in the textile industry at a cost of US$42,000 per job (the average wage in the United States is $12,000). The cost to the consumers at retail could be as

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high as $54 billion a year. Although they use a variety of methodologies, these studies all arrive at the same conclusion: the costs of textile and apparel protection far exceed the supposed benefits.

Thus any additional import restrictions on textiles and apparel would do nothing to help the U.S. textile industry. All they would do is allow manufacturers to exploit an undersupplied domestic market by hiking prices, which hurts the interest of American consumers. The study by William Cline of the Institute for International Economics estimates that the elimination of existing tariffs and quotas would cut domestically produced apparel prices by 1.9 percent and prices for imports by 34.6 percent. Conversely, the passage of the proposed new trade restrictions could double the current consumer costs of protection.

Protectionism will also delay the process of modernization of the American textile industry. It merely forestalls necessary adjustments to market changes and hinders the restructuring of the U.S. economy from the declining old-line industries into such internationally competitive sectors as high-technology industries. As a result, the resources are wasted on the production of goods in the United States that could be more efficiently produced abroad, while capital and labor are diverted from more efficient sectors of the U.S. economy. The artificially imposed protection for a declining industry would only hurt the entire U.S. economy.

Under the bilateral agreement, the gradual growth of China's textile exports to the United States should be considered a favorable factor for the development of bilateral trade rather than a reason for unilateral restrictions imposed by the United States. China's expanded exports to the United States would mean increased imports from the United States by China. Because of currency restrictions, any imports into China hinge on China's export capacity. Relying on foreign exchange earnings generated from Chinese exports to the United States, China is able to import high-technology products from the United States. Any U.S. restrictions on Chinese textiles thus will lower the ability of China to purchase more American goods.

The U.S. protectionist policy has caused severe harm to China's economy. As a result of implementing the new rules of "country of origin" for textile products, around 100,000 jobs were lost in the southern provinces of China, and textile exports decreased by US$300 million in 1984.

An escalation of U.S. control of textile imports would prompt its trade partners to retaliate against U.S. exports, especially against agricultural products. For example, when the U.S. declared unilateral restrictions on Chinese textiles in late 1982, the Chinese government responded by suspending approval of new contracts on cotton, synthetic fibers, wheat, and soybean imports from the United States in 1983. China was the largest
buyer of U.S. wheat then, importing an average of 7 million tons per year from the United States. The volume of the agricultural trade far exceeded that of the textile trade. If China turned to other suppliers of agricultural products, it could seriously harm American farmers. On the day when the Chinese government declared its cutoff decision, the prices of grain and soybeans plummeted at the Chicago Board of Trade. Unfortunately, U.S. Commerce Secretary Baldridge stated that, despite China's cutoff of U.S. farm purchases, the United States should insist on its restrictive policy toward Chinese textiles. Mainly because of the stubborn U.S. attitude and the consequent Chinese retaliation, 1983 was the worst year since normalization in terms of Sino-U.S. trade with the total volume declining.

The expansion of Sino-U.S. economic and trade relations serves the interests of the two countries. Besides agricultural products, China imports from the United States a great number of industrial materials, such as pulp, logs, chemicals, fabric, and so on, as well as various types of equipment. This contributes to the increase of American exports and employment and to the decrease of the U.S. trade deficit. The United States had better take the long view in understanding and handling this issue. It would be unwise of U.S. policymakers to protect the immediate interests of a particular industry at the cost of weakening or giving up its foothold in the massive Chinese market.

This is a critical moment for Sino-U.S. trade. The U.S. government faces pressures from Congress to tighten textile trade. This state of affairs warrants China's concern about the pending new textile legislation. If the bill is passed, the bilateral textile agreements will be abrogated and overall trade between China and the United States will decline. Moreover, the price of severe protectionist policy today could be a world recession and possibly another depression. The resulting damage would swamp any gains to the protected industry. The U.S. Congress should avoid such self-destructive economic policies. Roger W. Sullivan, president of the National Council for U.S.-China Trade, recently noted, “The just-closed Thirteenth Congress of CCP demonstrated that the policies of the Chinese leadership toward reform and opening have been consistent. The U.S. policymakers should formulate a new China trade policy.”

COMMENTS

Nai-Ruenn Chen comments:

Protectionism became one of the issues heatedly discussed at the conference, thanks largely to Professor Zhang's stimulating paper. The discussion, however, focused primarily on U.S. policy toward textile imports and on the application of U.S. trade law to imports from China. No reference was made to the data showing rapid growth and an increasing diversification of China's exports to the United States in recent years. These data clearly do not lend support to Professor Zhang's contention about the inhibitive effect of the U.S. textile policy on Sino-American trade. Neither was there any mention of China's protectionist policies, which severely restrict U.S. exports to China. The following observations expand on and balance Professor Zhang's assessments.

Since the resumption of trade between the two countries in 1972, China's exports to the United States have grown every year with the exception of 1983. During 1981–87, these exports increased from $2.1 billion to $6.9 billion, with an average annual growth rate of 22 percent. They totaled $4.1 billion in the first six months of 1988, an increase of another 19 percent over the same period in 1987. These figures clearly demonstrate that the U.S. market is relatively open and that Chinese export marketing efforts have been increasingly successful.

In the textile field, where bilateral quota agreements have existed since 1980, Chinese exports have shown higher than average growth rates. U.S. purchases of Chinese textiles and apparel increased from $734 million in 1981 to $2,764 million in 1987, with an average growth rate of more than 27 percent per year. This rate is higher than that of any other major foreign supplier. In terms of volume, China has become the largest exporter of textiles and apparel to the United States. These figures reflect China's ability to expand textile exports to the United States despite quota agreements.

While the share of textiles and apparel in Chinese exports to the United States has declined recently (from 46 percent in 1986 to 40 percent in 1987), this decline reflects China's improving ability to compete in other market sectors. Chinese exports have become more diverse, with a gradual decrease in the concentration of exports in the clothing sector and rapid growth in exports of light industrial manufactures and small appliances. China's exports of toys and sporting goods to the United States, for example, increased from $152 million, or 7 percent of total exports, in

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1All trade data are from various U.S. Department of Commerce sources.
1981 to $1,192 million, or 17 percent of the total, in 1987. The value of telecommunications equipment exports was only $3.5 million in 1981, but rocketed to $250 million in 1987. The value of electrical machinery imports soared from $2.9 million to $157 million during the same period.

While China's exports to the United States have expanded rapidly in recent years, U.S. sales to China have experienced very little growth. U.S. exports to China totaled $3.6 billion in 1981, and declined to $2.9 billion in 1982 and $2.2 billion in 1983. Export volume recovered to $3 billion in 1984, reached a peak of $3.85 billion in 1985, and then declined to $3.1 billion in 1986. The volume rose to $3.5 billion in 1987, and totaled $2.3 billion in the first six months of 1988. The sluggish growth in U.S. exports to China has been due largely to Chinese government efforts to control trade and limit foreign exchange expenditures. China maintains a complex system of administrative and market controls that has greatly restricted trade. Many of China's trade regulations and government directives are not available to foreign business people. Stringent and unpredictable controls on foreign exchange resources have greatly hindered foreign commercial activities in China. Access to the Chinese service market is especially restrictive. The restrictions placed on U.S. service firms stand in sharp contrast to the treatment granted Chinese enterprises undertaking service activities in the United States; Chinese enterprises in service industries in the United States are treated in the same manner as U.S. companies.

Every nation practices varying degrees of protectionism. In recent years, however, the United States has made major efforts through bilateral and multilateral negotiations to promote an open and fair trading system. The American market is among the most open in the world. Since 1979, China has achieved significant results in economic reform and in greater integration with the world economic system. But access to the Chinese market remains highly restricted. To assess the impact of protectionism on U.S.-China trade, one needs to look at the issues surrounding restricted entry to both markets.
Part Four
U.S. and PRC Global Trade Patterns
6. U.S. and PRC Global Trade Patterns

NICHOLAS R. LARDY

In the mid-1980s both the People's Republic of China and the United States find themselves in substantial balance-of-trade disequilibria. As shown in Table 1 the United States, beginning in 1982, and China, beginning in 1985, began to incur substantial deficits in their current accounts. In both cases the deterioration in the trade account began several years prior to the emergence of the current account deficit. But in the case of the United States, until the trade deficit grew quite large, earnings from previously accumulated United States investments abroad kept the current account from showing a deficit. In the Chinese case there were large earnings from services as well as remittances that initially masked the trade deficit.

Because the United States comprises such a large share of total world trade and because its deficit is unprecedented in absolute size, it has been the object of intense scrutiny and analysis. In contrast, China's substantially smaller deficit has had a modest effect on the world trade and financial system and has virtually escaped notice.

Yet in 1985 China's trade deficit, relative to its export earnings, equaled that of the United States. China's trade deficit that year of US$14.9 billion was almost 60 percent of China's merchandise exports. Similarly the U.S. merchandise deficit of 124.4 billion dollars was almost 60 percent of U.S. merchandise exports. These ratios were the highest in the world among major trading countries.

1Data on China's trade deficit and export earnings cited here are those gathered by the Customs Service and reported by the Chinese State Statistical Bureau, Chinese Statistical Abstract 1987 (in Chinese) (Peking: State Statistical Publishing House, 1987), p. 89. In contrast, the data cited in Table 1 are the first balance-of-payments data ever released by the People's Republic of China. They are based on data from the Customs Service, but have been readjusted in accordance with standard international practices. The current account includes the balance on trade in goods as well as net income from services and net unrequited transfers. Figures throughout refer to U.S. dollars.

**Table 1**

United States and Chinese Current Account Positions 1982–86

(US$billions)

<table>
<thead>
<tr>
<th>Year</th>
<th>United States</th>
<th>China</th>
</tr>
</thead>
<tbody>
<tr>
<td>1982</td>
<td>-9.131</td>
<td>5.674</td>
</tr>
<tr>
<td>1983</td>
<td>-46.604</td>
<td>4.240</td>
</tr>
<tr>
<td>1984</td>
<td>-106.466</td>
<td>2.030</td>
</tr>
<tr>
<td>1985</td>
<td>-116.393</td>
<td>-11.417</td>
</tr>
<tr>
<td>1986</td>
<td>-141.352</td>
<td>-7.034</td>
</tr>
</tbody>
</table>


At one level both the United States and China exhibit a similar excess demand for imports relative to export earnings. But this similarity is superficial, and the policy problems faced by the two governments are quite different. Moreover, while the U.S. deficit has captured the attention of the world financial markets and world financial press, it is far more sustainable than the Chinese current account deficit. In short, for reasons outlined below China is under far more short-term pressure to reduce its deficit than is the United States. Finally, the policies that will lead to a reduction in the current account deficit in the United States are, for reasons explained below, fundamentally different from those in China.

**China’s Entry into the World Economy**

In the Maoist era China pursued policies of quasiautarky and financial self-reliance. Particularly during the 1960s total trade turnover languished below the peak level reached in 1959. Not until after the opening to the United States and the establishment of diplomatic relations with Japan, both in 1972, did trade turnover in real terms surpass the previous peak level of 1959. On the financial side, in the first half of the 1960s China ran a balance-of-trade surplus with the Soviet Union to be able to repay the loans and credits the Soviets extended in the 1950s. By 1965 these loans were entirely repaid, and for the next decade China carefully eschewed foreign borrowing.

Although there was some growth of foreign trade prior to Mao’s death in 1976, it was modest. China’s foreign trade turnover in 1976, according to China’s Ministry of Foreign Trade, was 13.4 billion dollars. On that basis China ranked only thirty-fourth among the trading countries of the world. Moreover, despite almost three decades of rapid economic growth after
Table 2
China's Foreign Trade Turnover

<table>
<thead>
<tr>
<th>Year</th>
<th>US$ billions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1976</td>
<td>13.44</td>
</tr>
<tr>
<td>1977</td>
<td>14.80</td>
</tr>
<tr>
<td>1978</td>
<td>20.64</td>
</tr>
<tr>
<td>1979</td>
<td>29.33</td>
</tr>
<tr>
<td>1980</td>
<td>37.82</td>
</tr>
<tr>
<td>1981</td>
<td>44.02</td>
</tr>
<tr>
<td>1982</td>
<td>41.64</td>
</tr>
<tr>
<td>1983</td>
<td>43.62</td>
</tr>
<tr>
<td>1984</td>
<td>53.54</td>
</tr>
<tr>
<td>1985</td>
<td>69.61</td>
</tr>
<tr>
<td>1986</td>
<td>73.80</td>
</tr>
<tr>
<td>1987</td>
<td>82.70</td>
</tr>
</tbody>
</table>

Note: Data for 1976–80 are those released through the Ministry of Foreign Economic Relations and Trade; for 1981–87, through the Chinese Customs Administration.


1949, particularly the rapid expansion of the manufacturing sector, China's share of total world trade was only 0.7 percent—about half of China's 1.5 percent share in the closing decade of the Qing Dynasty when China was overwhelmingly agrarian and modern industry scarcely existed.\(^3\) Similarly, in 1976 external debt, except for modest short-term trade credits, was minuscule.

It would be difficult to imagine a more profound transformation than that which occurred in China's external trade and financial relations over the next decade. As shown in Table 2 total trade turnover (imports and exports combined) grew by leaps and bounds to reach almost 80 billion dollars by 1987. By 1985 China's rank in the world trading system reached fifteenth, and China's share of world trade had risen to 2.2 percent.\(^4\)

Financial self-reliance also was abandoned in this decade as China


\(^4\)China's percent share of world trade has been calculated on the basis of the data on Chinese trade in Table 2 and world trade data from World Bank, *World Development Report 1987* (New York: Oxford University Press, 1987), pp. 220–21. Because China had a huge trade deficit, its share of world exports was substantially lower than 2.2 percent.
began to borrow heavily abroad and to seek direct foreign investment. Beginning in 1982 China, through such entities as the China International Trust and Investment Company (CITIC), the Bank of China, and several provincial investment companies, began to borrow in Japan, Hong Kong, Germany, and elsewhere. In addition to the sale of bonds and floating rate notes on world financial markets following China’s entry into the World Bank and the International Monetary Fund (IMF) in 1980, China began to borrow from these agencies, particularly the soft-loan window of the Bank: the International Development Association (IDA). By the mid-1980s China had become the largest borrower from the Bank and the IDA. Finally a substantial flow of funds was made available through the official development assistance programs of Japan and several Western European countries.

The resulting growth of external public debt is reflected in Table 3. Total medium- and long-term external public debt more than tripled from 3.7 to 12.3 billion U.S. dollars between year-end 1982 and year-end 1986. Unfortunately, these data are not complete and may substantially understate China's external public debt. The IMF toward the end of 1986, for example, projected China's external public debt at more than twice the level reflected in the official data shown in Table 3. As will be discussed further, considerable uncertainty still exists regarding the size of China's total external obligations with some estimates placing total debt at year-end 1987 at about 33 billion U.S. dollars, much of it short-term.

\(^5\)International Monetary Fund, November 1986.

**Table 3**

<table>
<thead>
<tr>
<th>Year</th>
<th>US$Billions, Year-End</th>
</tr>
</thead>
<tbody>
<tr>
<td>1982</td>
<td>3.703</td>
</tr>
<tr>
<td>1983</td>
<td>3.384</td>
</tr>
<tr>
<td>1984</td>
<td>4.324</td>
</tr>
<tr>
<td>1985</td>
<td>7.020</td>
</tr>
<tr>
<td>1986</td>
<td>12.286</td>
</tr>
</tbody>
</table>

Note: Includes the external medium- and long-term debt of China, including its political subdivisions and state-owned enterprises. Figures include only debt with a maturity exceeding one year.

From Import Substitution Toward Export Promotion

China's substantial trade expansion in the past decade is remarkable. It signifies a substantial initial success in transforming domestic economic development strategy away from the import substitution strategy. The former takes as its basic long-term objective the creation of the capability to produce domestically most if not all of the manufactured goods initially acquired on international markets. That objective is achieved through high import tariffs, which protect domestic industries against foreign competition; through an overvalued exchange rate, which is thought necessary to reduce the domestic cost of acquiring capital goods and necessary intermediate inputs from the international market, but which inevitably also undermines the incentives for domestic firms to sell on the international market; and through import licensing and foreign exchange controls, frequently including multiple exchange rates, which attempt to mitigate the effects of the overvaluation of the domestic currency in the foreign exchange market.

The best contemporary exemplars of this approach to development are countries in Latin America where tariff protection of domestic industries, which began under the guise of supporting infant manufacturing industries that would ultimately become competitive in international markets, has led to increased inefficiency in production and a long-term inability to compete internationally except with enormous subsidies. The contrary pattern of export promotion is more characteristic of the rapidly modernizing countries of East Asia, notably Taiwan after about 1960, South Korea, and of course, Hong Kong.

In many respects China's economic policies in recent years have moved away from import substitution toward export promotion. These include reforms of the foreign trade bureaucracy and a substantial devaluation of the Chinese currency, the yuan.

The Foreign Trade System

In the early 1950s the Chinese borrowed the Soviet-style foreign trade system. The key feature, of course, was that foreign trade became a monopoly of the state carried out by foreign trade corporations organized under the direction of the Ministry of Foreign Trade. The corporations

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were organized along product lines parallel to the industrial production ministries. They also were organized vertically with head offices in Peking and branches in most of the provincial capitals. The key economic feature of the system was the complete insulation of domestic firms from the international market. Domestic firms could not sell directly on the international market, nor were they subject to competition from foreign firms. The system of foreign trade corporations also worked in reverse to frustrate the access of foreign firms to the domestic Chinese market. Rather than being able to sell their products directly to factories that would utilize the goods, the “end-users,” foreigners were forced to work through the foreign trade corporations. By 1979 China's foreign trade was almost entirely under the direct control of ten national import and export corporations under the Ministry of Foreign Trade.

Beginning in the early 1980s this centralized, vertically controlled system began to erode as individual provinces, major municipalities, and industrial ministries were able to set up their own trading entities, undermining the monopoly power of the Ministry of Foreign Trade for many product lines. By the mid-1980s literally hundreds of these new corporations were regularly entering into export and import transactions, and the number of trading corporations was expected to expand to about one thousand.

Simultaneously, the number of export and import commodities under the exclusive control of the Ministry's trade corporations shrank considerably. By the mid-1980s they reportedly had the exclusive control of only seven import commodities: steel, fertilizer, rubber, timber, tobacco, polyester fiber, and grain; and they controlled sixteen export commodities, including rice, soybeans, peanuts, frozen pork, cotton, cotton yarn, cotton grey goods, drawn work, tea, tobacco, crude oil, refined petroleum products, and coal. All other commodities could be bought or sold by the roughly 600 trading corporations organized by the various industrial ministries, provinces, and major municipalities.

In addition, there were sweeping changes in the control of foreign exchange. Under the traditional system the foreign exchange proceeds from exports were retained entirely within the foreign trade corporation system. Earnings from international sales were used to finance imports via a system of implicit foreign exchange rationing. Domestic producers of export goods did not gain any foreign exchange nor any explicit right to use foreign exchange to purchase imports. Access to imported goods was controlled bureaucratically, and users did not have to pay for imports with foreign exchange. This insulation between the domestic and foreign markets has led some foreign observers to characterize the foreign trade
corporations as establishing an airlock between domestic and foreign markets.

When the reforms were introduced, firms selling goods in the international market were allowed to retain a fixed share of their export earnings in foreign exchange, thus establishing an explicit potential command over foreign goods. Under the present system only three-quarters of the foreign exchange earnings are controlled by the foreign trade corporations. The remaining quarter is divided between the enterprise and the local government. Thus for the first time firms have a direct incentive to sell on the international market.

**Exchange Rate Policy**

Like other centrally planned economies, China adopted an administratively set foreign exchange rate. The Bank of China assumed complete control of the country's foreign exchange transactions. The actual exchange rate was not very important, since after China's entry into the Korean War in 1950, the United States and other Western industrialized countries imposed an embargo on trade with China, and thus the great bulk of China's trade was carried out on a bilateral barter basis with other centrally planned economies.

By the 1960s, after the break with Moscow, trade with market-oriented economies increased significantly; but because all trade was under the monopoly control of the foreign trade corporations of the Ministry of Foreign Trade, the exchange rate was not a major determinant of trade decisions. Domestic producers of export goods sold them to the appropriate foreign trade corporation at the same price as goods sold in the domestic market, so these firms were not affected by either the level of or changes in the exchange rate. Similarly, imported goods prices in the domestic market were not affected by the exchange rate because the foreign trade corporations followed a practice of setting the price of imports at the same level as comparable domestically produced goods. Thus changes in the exchange rate could not affect the prices of exports and imports and thus would have no direct effect on their volume. Imports were determined by shortfalls between planned needs and planned domestic output, and exports were regarded primarily as a means to finance the planned level of imports.

After foreign trade decisionmaking began to be decentralized in the late 1970s, the exchange rate between the Chinese yuan and foreign currencies began to play a significant role in foreign trade decisions. Since that time the Bank of China has systematically devalued the yuan vis-à-vis the U.S. dollar. By mid-1986 the value of the yuan was less than half the level
of 1979. Most of the drop occurred in 1985 and 1986, a period when the value of the dollar against many other currencies was also falling substantially. Thus the yuan has fallen even more against the Japanese yen, the deutsch mark, and currencies of other major industrial countries.

When the reform of China's foreign trade system began in the late 1970s, the exchange rate was 1.55 yuan to the dollar. In 1979 and 1980, as the exchange rate remained almost constant, China's imports began to run significantly ahead of exports, and a number of steps were taken in an attempt to alleviate the trade deficit. Among the most significant changes was the introduction in 1981 of an internal settlement rate, a new exchange rate offered by the Bank of China to Chinese trading organizations, which in effect substantially devalued the Chinese domestic currency. Immediately prior to the introduction of the internal rate, firms that sold products on the international market received only 1.5 units of domestic currency for each dollar's worth of international sales. With the new internal rate they were credited with 2.8 yuan or 87 percent more units of domestic currency than previously. The internal settlement system was thus designed to provide substantially greater incentives for Chinese firms to export. But the official rate, which fell in value much more slowly, also was maintained so that foreign tourists traveling in China or Chinese citizens cashing in remittances received from their relatives abroad did not receive the benefit of the domestic currency devaluation. Similarly, the internal settlement rate made imported goods more expensive in China because beginning in 1981 importers had to pay the Bank of China 2.8 units of domestic currency for each dollar's worth of imports. Obviously, in theory, the net effect of the internal settlement rate should have been to increase the volume of exports relative to the volume of imports.

In practice it appears that the demand for imported goods was price inelastic. If potential importers had the authority to act on their own or they could obtain approval to bring products into China, in many cases they were prepared to pay seemingly unlimited amounts of domestic currency to buy a dollar's worth of imports. In part that reflected the easy access to domestic credit—the so-called soft budget constraint. Many firms could borrow almost unlimited amounts of domestic currency from the People's Bank and use the proceeds to purchase dollars from the Bank of China. Because most firms were able to pass along the costs of borrowing or were in no way penalized if higher interest payments cut into their profits, the demand for foreign exchange was not effectively curtailed by the higher internal settlement rate. Thus, traditional bureaucratic mechanisms were used to control the trade deficit, and in 1982 and 1983 a trade surplus was reestablished.

But in 1984 and 1985, when trade controls were relaxed somewhat, an
even larger deficit emerged. This time, unlike in 1979 and 1981, as the
deficit emerged in 1984 and expanded in 1985 the value of the domestic
currency was steadily devalued. In early 1985 the rate stood at 2.8 yuan to
the dollar.

In the first months of 1986 the deficit continued at an unabated pace. A
further sharp devaluation took place in early July when the Bank of China
lowered the value of the domestic currency by about 15.8 percent. By
mid-1986 the exchange rate stood at 3.70, and the value of the yuan in
terms of the U.S. dollar was then about 40 percent of what it had been in
1980. Despite this drastic devaluation, such administrative means as a
prohibition on the further import of automobiles and certain types of
consumer durables are still critical to efforts to reduce the trade deficit.

In addition to devaluing substantially the value of the domestic cur-
currency, the Chinese have reduced the number of commodities subject to
export taxes. For most goods that are sold at established international
prices in competitive markets, exporters are unable to pass along the cost
of the export tariff to international buyers; those buyers would be able to
purchase the goods more cheaply from other sources if they were faced
with the international price plus the export tariff. In fully competitive
markets the producer would have to lower the price of its goods by the full
amount of the export tax. Thus the export tariff cuts into the earnings of
the exporter and reduces the incentive to try to sell on the world market.
In the spring of 1986 the Chinese reduced the number of commodities
subject to export tariffs in an attempt to stimulate world market sales. The
process continued in 1987 with the elimination of the export tariff on coal.

Comparative Advantage Trade Versus
Continued Self-Reliance

While China has reorganized its foreign trade apparatus, undertaken
substantial changes in its exchange rate system, and curtailed export taxes
on some goods in order to promote the growth of exports, the transition
from import substitution to export promotion is still partial. The partial
nature of the transition is reflected in the persistent articulation of a long-
term strategy of self-sufficiency, the absence of a commitment to making
the yuan convertible, and the failure to realign the domestic price struc-
ture to be more congruent with international prices.

Although China's highest political leaders frequently reiterate their
support of what has come to be called the "open door policy," they have
not necessarily fully understood the necessity of transforming their atti-
tude toward international trade. That attitude is perhaps reflected in
Premier Zhao Ziyang's report to China's National People's Congress, in the
spring of 1986, on the Seventh Five-Year Plan (1986–90). On international economic issues he began by recounting the successes achieved under the open door policy and spoke of the need to become more competitive in international markets. But strikingly he also called for China to “make every effort to produce at home whatever we can” and “to expand production of import substitutes and to increase the proportion of goods produced at home,” words that could have been spoken by Mao Zedong in the period of most extreme autarky and self-reliance. Perhaps the emphasis on import substitution and self-reliance does not reflect the true thinking of China’s reformist leadership, but is simply a concession to those elements within the Chinese leadership who oppose China’s opening policy. But whether these formulations represent a dominant or minority view, they are troubling because they leave no room for the pursuit of a long-term trade strategy based on China’s underlying comparative advantage.

Similarly, there is a seeming reluctance on the part of the Bank of China to make a commitment to eventual convertibility of the yuan, which is almost certainly a prerequisite to China’s long-term integration into the world economy. In certain respects there is an implicit recognition that convertibility is desirable in the long-term. When the internal settlement rate was introduced in 1981, the Chinese went to great pains to deny that the new system effectively had introduced a multiple exchange-rate system, generally regarded as a step away from convertibility and inconsistent with the charter of the General Agreement on Tariffs and Trade. But when asked, Chinese officials in the Ministry of Foreign Economic Relations and Trade deny that the post-1980 devaluations of the domestic currency represent an attempt to move toward a freely convertible yuan.

Finally, price reform has barely begun to alter the discrepancies between domestic and international prices. Unprocessed agricultural commodities, raw materials, and minerals are substantially underpriced on the domestic market, leading to large financial profits (but not necessarily economic profits) when these goods are exported. But because manufactured goods are frequently overpriced on the domestic market, their export sometimes entails large financial losses. Comparable problems exist on the import side. The net result is that decentralized trade based on profit-maximizing enterprise behavior may not be economically rational.7

The partial shift toward a strategy of export promotion may be borne

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out in the pattern of China's exports. At least for the first half of the 1980s, China was not very successful in expanding its exports of manufactured goods. As can be seen in Table 4, between 1980 and 1985 China's exports of manufactured goods increased only by about 15 percent. This is far below the average annual growth of manufactured goods exports of 8 percent achieved by developing countries over the same period. Because China's total exports were growing more rapidly, the share of manufactures in China's exports fell from more than 53 percent to under 50 percent. In other developing countries the share of manufactured goods in total exports doubled. As China's long-term comparative advantage almost certainly lies in labor-intensive manufactures, the pattern of the first half of the 1980s does not appear to reflect the result of a fully successful transition to decentralized export growth.

This interpretation is borne out by examination of the sources of export growth during this period. Much of the growth of China's exports came from the sale of raw materials and other homogenous products. The best examples are petroleum and gold. China's exports of petroleum were on a plateau of 13–15 million metric tons annually in 1979–83. But in 1984 and 1985, as petroleum production increased, China stepped up its exports dramatically. More than 80 percent of China's increased production was sold on the international market. In 1985 China sold 30 million metric tons of crude oil and 6 million tons of refined products and earned...

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over US$6 billion. The increase in crude and refined product sales on the international market in 1984 and 1985 accounts for a large share of China's export growth in those years.

In 1986 China boosted its export earnings through the sale of non-monetary gold on the London metal market. These data are not reported directly by the Chinese Customs Administration, but Western estimates suggest sales of about a billion dollars.

In short, in 1984 and 1985 as imports soared and there was intense pressure to sell more goods on the international market, the initial response was primarily to sell metals and raw material. Because these products are sold directly through China's centrally run foreign trade corporations, the growth of these exports does not really reflect the results of the policy shift toward export promotion discussed above. Rather it seems more typical of a state-directed trading system of a centrally planned economy.

However, in 1986 and particularly in 1987 there was a large surge of manufactured goods exports. As shown in Table 4, manufactured goods exports rose by 11.5 billion dollars—more than 80 percent in two years, a quantum leap over the expansion of the previous four years. Although a detailed analysis of this growth lies beyond the scope of this chapter, a few preliminary comments and judgments can be made. First, the bulk of the increase is in textiles and apparel. Textile and garment exports reached $8 billion in 1987, up about 30 percent or $2 billion in one year alone. While this may be consistent with a pattern of comparative advantage, it doesn't appear to be the result of decentralized trading. Exports of textiles and garments are still mainly handled by the China National Textile Import and Export Corporation (CNTIEC).

Second, this pace of export growth is not sustainable because of increased protectionism in the EEC and the United States. For example, the new bilateral textile agreement between China and the United States restricts China's exports to 3 percent annual growth during 1988–92, a small portion of the 19 percent growth rate of recent years. China's projection of textile exports of $10 billion by 1990—only a 25 percent increase over the next two years—appears to reflect a downward adjustment of the past growth.

The fate of Shanghai in exporting may be indicative of the difficulties China faces in developing a more export-oriented economy. By most accounts industry in Shanghai is the most productive in China. Despite decades of neglect by central government planners and an extremely small level of investment, Shanghai's industry has grown surprisingly rapidly, in large part because the municipality has been far more successful than most
### Table 5
Shanghai Exports, 1979–1987

<table>
<thead>
<tr>
<th>Year</th>
<th>US$Billions</th>
<th>Percentage of National Exports</th>
</tr>
</thead>
<tbody>
<tr>
<td>1979</td>
<td>3.675</td>
<td>26.9</td>
</tr>
<tr>
<td>1980</td>
<td>4.266</td>
<td>23.3</td>
</tr>
<tr>
<td>1981</td>
<td>3.807</td>
<td>17.3</td>
</tr>
<tr>
<td>1982</td>
<td>3.605</td>
<td>16.1</td>
</tr>
<tr>
<td>1983</td>
<td>3.648</td>
<td>16.4</td>
</tr>
<tr>
<td>1984</td>
<td>3.590</td>
<td>14.7</td>
</tr>
<tr>
<td>1985</td>
<td>3.301</td>
<td>12.7</td>
</tr>
<tr>
<td>1986</td>
<td>3.582</td>
<td>12.9</td>
</tr>
</tbody>
</table>

Note: Trade data are those compiled by the Ministry of Foreign Economic Relations and Trade.


other regions in technological innovation. The firms in the municipality are also famous for the high quality of their goods, sensitivity to demands of consumers, and so forth—all characteristics that should lead to success on the international as well as domestic market.

Yet in recent years as reform has evolved in the foreign trade sector, Shanghai has not been able to capitalize on its position, and its relative importance as a producer of goods for export has eroded. As shown in Table 5, exports through the port of Shanghai actually stagnated in value terms between 1979 and 1986. Because of the rapid growth of China's total exports, Shanghai's share of national exports has plunged by half—from more than one-quarter of national exports in 1979 to about 13 percent in 1986. That trend would appear to call into question China's currently

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10 Data on the goods produced in Shanghai that are exported are less plentiful than those on exports through the port. But the limited data that do exist bear out the failure of Shanghai-produced goods to maintain their role in recent years. In 1983 Shanghai-produced exports were US$2.85 billion. By 1987 that figure had increased only to US$3 billion, an increase of only 5 percent. *1984 Chinese Economic Yearbook* (in Chinese) (Hong Kong: Economic Management Publishing House, 1984), p. VI–82. In the same period China's total exports grew by more than 75 percent.
much-touted policy of relying on coastal regions to generate export growth. At least through 1986 Shanghai was unable to participate in China's rapidly growing trade.

In part Shanghai's difficulties in developing as a more dynamic exporter may stem from the disparity between domestic and world market prices. Shanghai industry produces a higher share of light manufactured consumer goods that, as explained above, are relatively overpriced. Thus in 1985, one bureau in Shanghai actually lost 28 million yuan on export sales of $40 million. In other words, when the dollar earnings were converted to domestic currency at the exchange rate of 2.90 yuan per dollar, the yuan earnings fell 28 million yuan short of the cost of the goods in the domestic market. Because of falling local financial revenues, it has become increasingly difficult for the Shanghai government to subsidize these losses on exports. Thus, what should be a dynamic exporting city languishes.

The Outlook for Chinese Trade

China's foreign trade faces several short-term problems. First, the large deficits of 1984 and 1985 have been curtailed largely through massive recentralization of control of foreign trade. The central government has pushed exports and rigidly controlled the growth and even curtailed the absolute level of imports, largely through administrative intervention. A basis for proceeding with decentralized trading does not seem to exist. Prices have not been reformed, and the depreciation of the yuan does not appear to have significantly curtailed the demand for foreign exchange. That in turn is related to the unprecedented growth of bank lending and thus the money supply in recent years. In short, domestic monetary and price reform must precede needed further foreign trade reforms.

Equally critical, China faces two major problems in its external debt. The first is currency risk, the possibility of a rise in the cost of repayment of the debt as a result of exchange rate changes. Most of the medium- and long-term bonds sold abroad in 1982–87 were denominated in yen. Because China receives payment for most of its exports in dollars while its debt is denominated in yen, the rapid appreciation of the yen since early 1985 has increased China's debt burden. Calculated in dollars at year-end 1986 exchange rates, the increase is almost 30 percent.

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The second problem is that an imbalanced maturity structure of its debt may subject China to acute short-term debt problems. According to some foreign estimates, China has more than $15 billion in short-term (maturity of a year or less) debt. Unless negotiations are opened soon to roll over most of this debt, a serious foreign exchange shortage may exist in 1988–89. Even if the short-term debt is rolled over, China is exposed to interest rate risk—the possibility that the interest rate on the new loans exceeds that on the earlier loans.

These debt problems stem from the previous period of decentralization when many localized enterprises appear to have contracted short-term debt without the approval or even knowledge of the State Administration for Exchange Control. According to one report, more than 1,700 Chinese entities (enterprises, institutions, and financial organizations) had borrowed abroad by 1987. In response to the apparent lack of information, the State Administration for Exchange Control initiated its first registration of China's external debt in 1987 in order to acquire full and recent information about the magnitude of China's external indebtedness.

Outlook for the U.S. Trade Deficit

If the analysis above is correct, one might anticipate even more drastic administrative intervention to alleviate a foreign exchange crisis in 1988 or 1989. By contrast the large U.S. trade deficit, which at 171 billion U.S. dollars set a fifth consecutive record in 1987, will require action of a different sort. In large part this difference is due to the integration of the United States into the world capital market—a process that has only begun for the case of China.

The U.S. trade deficit in recent years stems both from the faster growth of the U.S. economy in relation to our major trading partners and the large U.S. government budgetary deficit. As the latter grew in the early to mid-1980s, the United States became increasingly dependent on foreign capital to finance the deficit. But the purchase of dollar-denominated U.S. government bonds requires dollars; thus to finance the U.S. domestic deficit, foreigners first had to sell their domestic currencies to purchase U.S. dollars. By early 1985 these purchases had pushed the value of the dollar up by about 40 percent compared with half a decade earlier.

Although the value of the dollar began to fall after February 1985, the

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13Private western commercial bank estimate.
U.S. trade deficit continues to rise. This is the result of several factors. First, the U.S. economy continued to grow relatively rapidly compared with the rest of the world, inevitably drawing in more imported goods. Second, a delay between a change in the exchange rate and an improvement in the trade balance is inevitable. Not only do quantities of imports and exports adjust with a lag but the conventional trade figures are reported in current dollars. So, for example, even after the quantity of imports begins to fall, the value of imports will continue to rise because it will take more dollars to purchase each unit of imports. Finally, although the value of the dollar fell significantly vis-à-vis the yen and several European currencies, the fall in the value of the dollar against the currencies of Taiwan, Hong Kong, and South Korea—all major exporters to the U.S. market—initially was far less. While some estimates based on a limited sample of industrialized states showed the value of the dollar falling by 40 percent or more, other calculations designed to reflect more closely the actual pattern of U.S. trade, particularly the growing importance of trade with Asia outside of Japan, showed the value of the dollar declining by 10 percent or less. For all these reasons, the U.S. trade deficit rose in 1986 and again in 1987.

But one major new development in 1987 is of fundamental importance to predicting the future course of the U.S. trade deficit. In 1987 private financial markets were no longer willing to finance the U.S. current account deficit. Almost all of the deficit was financed by official intervention in foreign exchange markets by central banks. West Germany, Japan, and Taiwan, for example, added tens of billions of dollars to their official foreign exchange holdings. In effect they were lending the foreign exchange that private participants in the market were no longer willing to supply. The main motive of these central banks, of course, was to stem the further appreciation of their currencies vis-à-vis the dollar.

However, if private foreign investors continue to be unwilling to finance the U.S. deficit, this strategy will not work in the longer term. Given the massive volume of private foreign exchange transactions, the intervention of central banks, even on a large scale, cannot have more than a temporary effect on exchange rates. Without coordinated central bank policy on interest rates, it will be difficult if not impossible to prevent a substantial further depreciation of the U.S. dollar if private participants in the market remain unwilling to increase their holdings of U.S. dollar-denominated assets. This judgment is based on the view that the United States Federal Reserve, in an election year, will be unwilling to raise U.S. interest rates in order to prevent a further depreciation of the dollar. Indeed, the reverse is more likely. The Federal Reserve is likely to loosen monetary policy, thus lowering interest rates, at the first sign of a recession in the U.S. economy. In short, faced with a trade-off between its apparent
obligation to stabilize the value of the dollar in foreign exchange markets and the desire to sustain the level of domestic output and employment, policy will almost certainly favor the latter at the expense of the former. In short, while foreign governments may prefer that the U.S. current account deficit be solved by a combination of the now lower dollar and a U.S. recession, the U.S. is not likely to embark voluntarily on such a course.

The preferred course of action for the U.S. is to reduce its budgetary deficit gradually in order to reduce domestic demand, so that resources are freed to meet the increased foreign demand that is arising because of the depreciation of the dollar. Because U.S. industry is already operating at levels close to capacity, in the short run prices would tend to rise if domestic demand was not reduced through a combination of less government spending and less consumer demand. Such a price rise, of course, would tend to undermine the effect of dollar depreciation. The apparent continued strength of consumer spending, even in the wake of October's financial panic, suggests the increased importance of reducing the government budgetary deficit in order to ensure that the depreciation of the dollar is effective in reducing the deficit on the current account.

In short, unlike the Chinese case, curing the U.S. current account deficit does not require substantially increased direct U.S. government intervention in international trade. Because U.S. capital markets are highly integrated with world capital markets, even a declining U.S. deficit must be financed by increases in foreign holdings of dollar-denominated financial assets. This course will not be open to the Chinese for some time because of the incipient nature of China's domestic capital markets and the inconvertibility of the domestic currency. For the U.S., if private foreign investors are willing to increase their holdings of U.S. dollar-denominated assets as the trade deficit falls, perhaps no further depreciation of the dollar is required. But the likelihood of this occurring will be substantially increased if the U.S. government budgetary deficit is gradually reduced, reducing domestic demand and thus facilitating the expenditure-switching effect of dollar depreciation. If private foreign investors are not willing to increase their holdings of dollar-denominated assets as the U.S. trade deficit declines, then further depreciation of the dollar seems almost inevitable. Foreign central bank intervention on the scale of 1987 is not sustainable in the absence of U.S. interest-rate policy that is geared solely to sustaining the value of the dollar in international financial markets. This is an extremely unlikely course, particularly in an election year when sustaining the level of output and employment in the domestic economy is almost certain to take precedence in Federal Reserve policy formulation.
In his observations on Professor Nicholas Lardy's paper, Professor Wang Yaotian comments that he agrees with much in the paper, but he takes issue with Professor Lardy's point that multilateral balance in China's foreign trade is sufficient. Professor Wang thinks that China cannot have a satisfactory balance-of-payments performance unless it has balanced trade with its major trading partner, the United States. He states that "in the long run, the steady and rapid development of Sino-U.S. trade cannot be maintained with the continuous large deficit on the Chinese side." Professor Wang also argues that China's recent debt management experience indicates that no international debt crisis is likely for China.
7. China's Open-Door Policy and Trade Problems with the United States

WU JIXIAN and TANG SHAOYUN

After the Third Plenary Session of the Eleventh Central Committee of the Communist Party of China in December 1978, the first step in the reform of China's economic system was taken by making an important breakthrough in the villages. The reform was the adoption of a responsibility system in production by individual families. This system conformed well with the level of production in villages at the present stage. The reform thus greatly stirred up the peasants' productive zeal, which led shortly to considerable changes in the stagnant economy in the villages. According to the data supplied by the World Bank, in the period of 1980–84, the total value of China's agricultural production rose at a rate of 10 percent a year, which was much higher than the rate of increase in the previous years in China and also exceeded the average annual rate of increase of 3.9 percent in the developing countries as a whole.\(^\text{1}\) The success of the reform in the villages provides us with valuable experience, proves the necessity and importance of the reform, and strengthens our faith and determination in carrying it out.

In October 1984, the Third Plenary Session of the Twelfth Central Committee of the Communist Party of China made a strategic decision to shift the main object of the reform from villages to cities. The central theme of the reform is to strengthen the vitality of state enterprises, especially that of large and medium-sized enterprises. Although we are faced with great difficulties in the course of reconstructing the system and the road of progress is by no means smooth and even, the achievements we have made are rich and huge.

During the economic reforms of the last ten years, our national economy showed unprecedented large-scale developments. Main indicators of the development of our national economy rose rapidly, as shown in Table 1. As the table shows in the period 1953–85, the total value of our

Table 1
Main Indicators of China's National Economy

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total social product</td>
<td>101.5</td>
<td>269.5</td>
<td>684.6</td>
<td>853.1</td>
<td>1314.7</td>
<td>1630.9</td>
<td>8.4</td>
</tr>
<tr>
<td>Value of industrial and agricultural production</td>
<td>81.0</td>
<td>223.5</td>
<td>563.4</td>
<td>707.7</td>
<td>1083.2</td>
<td>1333.6</td>
<td>8.6</td>
</tr>
<tr>
<td>Value of agricultural production</td>
<td>46.1</td>
<td>83.3</td>
<td>156.7</td>
<td>218.0</td>
<td>379.0</td>
<td>458.0</td>
<td>4.7</td>
</tr>
<tr>
<td>Value of industrial production</td>
<td>34.9</td>
<td>140.2</td>
<td>406.7</td>
<td>489.7</td>
<td>704.2</td>
<td>875.6</td>
<td>11.0</td>
</tr>
<tr>
<td>National income</td>
<td>58.9</td>
<td>138.7</td>
<td>301.0</td>
<td>368.8</td>
<td>563.0</td>
<td>682.2</td>
<td>6.6</td>
</tr>
<tr>
<td>National income per capita (yuan)</td>
<td>88*</td>
<td>194</td>
<td>315</td>
<td>376</td>
<td>547</td>
<td>656</td>
<td></td>
</tr>
<tr>
<td>Total value of imports and exports (US$billions)</td>
<td>1.94</td>
<td>4.25</td>
<td>20.64</td>
<td>37.82</td>
<td>53.55</td>
<td>69.61</td>
<td>11.5</td>
</tr>
</tbody>
</table>

*The values of indicators are calculated in current prices, the rates of growth in constant prices.
*b1951.


Agricultural and industrial production increased by 8.4 percent per year, and in 1981–85 rose to 11 percent per year. During the same period, the growth rate of our national income increased from 6.6 to 9.7 percent per year and the national income per capita increased from 88 yuan in 1951 to 315 yuan in 1978 and 656 yuan in 1985. Compared with other countries, China's rate of economic development is outstanding, as shown in Table 2.

The Twelfth National Congress of the Communist Party of China put forward the strategic target of China's economic construction as follows: in the period from 1981 to 2000, the value of annual production of our industry and agriculture should increase fourfold, from 710 billion yuan to
Table 2
International Comparison of the Rates of Development of National Economy
(average annual rate of increase, %)

<table>
<thead>
<tr>
<th>Country</th>
<th>Value of Domestic Product</th>
<th>Gross National Product per Capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>7.8</td>
<td>6.6</td>
</tr>
<tr>
<td>India</td>
<td>3.9</td>
<td>4.1</td>
</tr>
<tr>
<td>Brazil</td>
<td>9.8</td>
<td>4.4</td>
</tr>
<tr>
<td>South Korea</td>
<td>10.0</td>
<td>7.2</td>
</tr>
<tr>
<td>Japan</td>
<td>9.8</td>
<td>4.3</td>
</tr>
<tr>
<td>West Germany</td>
<td>4.6</td>
<td>2.0</td>
</tr>
<tr>
<td>United States</td>
<td>3.2</td>
<td>2.3</td>
</tr>
</tbody>
</table>

Developing countries
Market-economy industrialized countries

*a Estimates.
*b Forecasts.


2800 billion yuan, and national income per capita should increase from US$300 to US$800 (according to the value of the U.S. dollar in 1980). These targets can be realized, if we exert ourselves vigorously.

To carry out our open policy and enlarge our international exchange and cooperation in economic and technological fields are important aspects of our economic reform. "The Decisions of the Central Committee of the Communist Party of China on the Reform of the Economic System" points out: "We treat the open policy as the long-term basic national policy, as a strategic measure to speed up our socialist modernization construction." After World War II, because of the immense enhancement of the level of science and technology and productive forces, especially great improvements in transportation and communications, national economies have become closely connected, mutually supplemented and influenced, through the exchange of goods, flow of funds, and exchange of manpower and technology, and the internalization of production has been quickened. Under these conditions, any country's economic growth and economic modernization (especially with a view to attaining an advanced level in the world) cannot proceed in isolation or turn away from the international division of labor and international intercourse and cooperation. Consequently, to enliven economic activities internally and throw the door open
externally are the keys to the realization of a fourfold increase in the total value of our industrial and agricultural production as well as of our modernization program.

Since the Third Plenary Session of the Eleventh Central Committee of the Communist Party of China, the activities in accordance with the open policy have developed rapidly and achieved rich results in the economic fields as follows:

1. Development of foreign trade. In the period 1979–85, the total value of China's commodity imports increased 19 percent annually. In 1986, the total value of imports and exports amounted to US$73.83 billion.

2. Absorption of foreign funds, including loans and direct investment. During 1979–85, the foreign funds China used amounted to US$21.78 billion, including US$15.727 billion in foreign loans and US$6.06 billion in direct investment by foreign companies in China. In 1985, of the total foreign funds actually put to use in China, American capital amounted to US$381.64 million, of which loans amounted to US$24.45 million and direct investment and other items amounted to US$357.19 million. In 1986, the total amount of foreign capital actually put to use in China amounted to US$6.99 billion, representing an increase of 56.6 percent over 1985.

3. Establishment of four Special Economic Zones, including Shenzhen and three other zones, several economically and technologically developing areas, as well as fourteen open cities along the seacoast.

4. Broadening the scale of economic and technological exchange and cooperation with other countries. In 1979–83, nearly 600 items of advanced foreign technology were introduced, and in 1984, another 1,000 items were introduced.

5. Acceptance of or participation in contracts of overseas engineering projects or cooperation in supplying services. In 1979, seven such contracts were signed. In 1984, 740 contracts were signed for undertaking engineering projects and cooperation in supplying services with a total amount of US$1,737 million.

6. Development of international tourism. Along with carrying out the open policy and foreign trade, tourism has also developed rapidly. In 1986, China accepted 22.82 million tourists from 170 countries and areas, an increase of 28 percent over last year, and the total foreign exchange earnings from tourism amounted to US$1.53 billion, an increase of 28.9 percent over last year.

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2 Including the number of individuals making repeated visits.

China's Developing Foreign Trade

Foreign trade is an important component of a country's economic activities and serves as a basis for its economic relations with other countries. Since the establishment of the People's Republic of China, a number of factors—including the "leftist" influence and the narrow and one-sided interpretation of the concepts of "independence," "autonomy," and "self-reliance"; the economic blockade and embargo of China by the main capitalist countries in the early fifties; and the Soviet Union's one-sided abrogation of the economic contracts that it signed with China in the early 1960s—resulted in the large-scale reduction of China's economic and trade relations with foreign countries, especially with the Soviet Union and some Eastern European countries. Nevertheless, China's import-export trade as a whole has grown rapidly. In the years 1953–85, it grew at an average of 11.5 percent per year. In 1979–85, it rose at an average of 19 percent per year (see Table 3), reflecting the adoption of our open policy in the early 1980s, while world commodity trade developed slowly in the same period as a result of the economic recession in the main capitalist countries.

As a result of the rapid increase in the import-export trade of China in recent years, her position in international trade has risen noticeably. The total value of her exports rose from US$553 million in 1950 to US$22,197 billion in 1983, and her share in the total value of world exports rose from 0.91 percent in 1950 to 1.23 percent in 1983 (See Table 4).

In the past several decades, China's foreign trade developed rapidly, and the rate of expansion of her foreign trade was faster than the increase of her total social product. Of course, compared to smaller countries and districts or export-oriented economies such as South Korea, Singapore, the United Kingdom, West Germany, and Japan, the percentage of China's foreign trade in her economy is relatively low—even lower than the United States, Brazil, and others. This means that China still lags somewhat behind these countries in the level of economic development and the degree of opening to the external world. Nevertheless, with the continual pursuit of reforms and the open policy and with the rise of a productive workforce, by the year 2000 China will not only realize the target of raising its total foreign trade fourfold, that is, from about US$40 billion in 1981 to $160 billion in 2000, but also will keep the rate of increase of the total value of its foreign trade higher than the rate of expansion of its total social product. Thus, its foreign trade as a percentage of the national economy will rise appreciably.
Table 3
Growth of the Total Value of China's Import-Export Trade

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Value of Imports-Exports</th>
<th>Total Value of Imports</th>
<th>Total Value of Exports</th>
</tr>
</thead>
<tbody>
<tr>
<td>1951</td>
<td>72.7</td>
<td>105.5</td>
<td>37.1</td>
</tr>
<tr>
<td>1955</td>
<td>29.3</td>
<td>34.7</td>
<td>23.2</td>
</tr>
<tr>
<td>1960</td>
<td>-13.1</td>
<td>-7.9</td>
<td>17.9</td>
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<tr>
<td>1965</td>
<td>22.6</td>
<td>30.7</td>
<td>16.3</td>
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<tr>
<td>1970</td>
<td>13.8</td>
<td>27.5</td>
<td>2.5</td>
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<tr>
<td>1975</td>
<td>1.2</td>
<td>-1.7</td>
<td>4.5</td>
</tr>
<tr>
<td>1978</td>
<td>39.4</td>
<td>51.0</td>
<td>28.4</td>
</tr>
<tr>
<td>1980</td>
<td>28.9</td>
<td>24.7</td>
<td>33.8</td>
</tr>
<tr>
<td>1981</td>
<td>6.8</td>
<td>-0.3</td>
<td>14.3</td>
</tr>
<tr>
<td>1982</td>
<td>-2.7</td>
<td>-10.3</td>
<td>4.4</td>
</tr>
<tr>
<td>1983</td>
<td>3.6</td>
<td>6.0</td>
<td>1.7</td>
</tr>
<tr>
<td>1984</td>
<td>31.8</td>
<td>47.9</td>
<td>17.8</td>
</tr>
<tr>
<td>1985</td>
<td>30.0</td>
<td>54.1</td>
<td>4.7</td>
</tr>
</tbody>
</table>

Average Annual Rate of Growth

<table>
<thead>
<tr>
<th>Period</th>
<th>Total Value of Imports (%)</th>
<th>Total Value of Exports (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1953–85</td>
<td>11.5</td>
<td>11.6</td>
</tr>
<tr>
<td>1979–85</td>
<td>19.0</td>
<td>21.4</td>
</tr>
<tr>
<td>1981–85</td>
<td>13.0</td>
<td>15.9</td>
</tr>
</tbody>
</table>


Table 4
Percentage and Rank of China's Exports in the Total Export Trade of the World

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Value of China's Exports (US$Billion)</th>
<th>China's Percentage in Total World's Exports</th>
<th>China's Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950</td>
<td>0.552</td>
<td>0.91</td>
<td>28</td>
</tr>
<tr>
<td>1960</td>
<td>1.856</td>
<td>1.44</td>
<td>17</td>
</tr>
<tr>
<td>1965</td>
<td>2.228</td>
<td>1.99</td>
<td>18</td>
</tr>
<tr>
<td>1970</td>
<td>2.260</td>
<td>0.72</td>
<td>30</td>
</tr>
<tr>
<td>1976</td>
<td>6.855</td>
<td>0.69</td>
<td>34</td>
</tr>
<tr>
<td>1980</td>
<td>18.272</td>
<td>0.92</td>
<td>28</td>
</tr>
<tr>
<td>1981</td>
<td>20.893</td>
<td>1.06</td>
<td>21</td>
</tr>
<tr>
<td>1982</td>
<td>21.819</td>
<td>1.18</td>
<td>18</td>
</tr>
<tr>
<td>1983</td>
<td>22.147</td>
<td>1.23</td>
<td>16</td>
</tr>
</tbody>
</table>

Since the founding of the People's Republic of China more than thirty years ago, the commodity structure of our exports has undergone considerable change largely because of the development of production and the rise in the level of science and technology. In 1953, primary products accounted for 79.1 percent of the total value of our exports; this dropped to 45.6 percent by 1984. In the same period, the share of industrial manufactures in the total value of our exports rose from 20.6 percent to 54.4 percent. This shows that through long-range efforts, the composition of our exports has changed from one dominated by primary products to one in which primary products and industrial manufactures each take roughly half of the total amount. However, primary product exports are still composed mainly of petroleum, coal, food, and raw materials. The industrial manufactures are mainly textile products and other labor-intensive products of light industries (constituting 31.8 percent of the total exports in 1983). Products of heavy industries and chemical products constitute a smaller percentage (22 percent in 1983). This situation is strikingly different from that of the industrialized countries. In order to alter substantially the disadvantageous position of developing countries such as China in the present international division of labor and international trade, these countries must develop the exportation of technologically intensive products of the heavy and chemical industries.

In the course of opening to the outside world and developing foreign trade, China constantly met with trade deficits. The deficit amounted to US$14.9 billion in 1985 and US$12.0 billion in 1986. (This is mainly because of trade with the industrialized countries.) Thus, in order to alter the present unfavorable situation, speed up the development of our foreign trade, and fulfill the splendid target of realizing the fourfold increase in the total value of our import-export trade by the end of this century, we should continue to organize and enlarge the export of mineral products, textiles, products of light industries, fine arts, agricultural products, and less technologically intensified machinery and equipment. In addition, we should carry out two kinds of change in our export trade step-by-step. One is a shift from relying on primary products to finished products, and the other is a shift from roughly processed goods to highly refined products. Because manufactured products already constitute almost one-half of our total exports, we should place our emphasis more on realizing the second shift. It is hoped that in the course of developing economic and trade relations and promoting technological interchanges with China, the industrialized countries will cooperate with us to carry out these changes successfully.

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4 Almanac of China's Foreign Economic Relations and Trade, 1984, WI-9; Almanac of China's Economy, 1985, III-44.
Sino-American Trade Prospects

The signing of the Shanghai Communique of 1972 brought about the restoration of trade relations between China and the United States, which had been broken for twenty years. On January 1, 1979, diplomatic relations were formally established between China and the United States. In July of the same year, the Agreement on Trade Relations Between China and the United States was signed, under which the most-favored-nation treatment was mutually granted. This brought economic and trade relations between these two nations into a new era, and bilateral trade has increased rapidly since then. According to Chinese statistics, in 1985 the total value of commodity trade between China and the United States reached US$7.44 billion, a little more than twenty-eight times that of 1973 and more than three times that of 1979. These rates of increase were higher than the rates of increase in China's total imports and exports during the same periods. In 1973, trade between China and the United States constituted only 2.4 percent of China's total value of import and export trade, and in 1981, the percentage rose to 14.6 percent. In recent years, the percentage has fluctuated around 10 percent.

However, at present the total value of Sino-U.S. trade is rather small, given the size of these two large countries, and is not compatible with the needs arising from their development. Sino-U.S. trade has constituted a very small share of total U.S. foreign trade, amounting to only 1.16 percent in 1981, and rising slightly to 1.29 percent in 1985. More rapid development of this trade will require joint effort and cooperative action on both sides to solve specific problems.

First, stabilizing bilateral political relations between China and the United States is the basic guarantee for continuous and rapid development of trade between these two countries.

Second, with respect to the recent trade balance between China and the United States, China has continuously incurred a trade deficit. In 1979–85, China's trade deficits totaled US$14.499 billion. This poses a serious threat to the further development of bilateral trade between the two countries. "To feed imports with exports" is a basic principle in the development of our foreign trade. In the long run, the stable and rapid development of Sino-U.S. trade cannot be maintained on the basis of China's continuous large excess of imports. American business capital

should be encouraged to cooperate extensively with Chinese capital to promote China's production, establish joint ventures, and link these investment activities with technological transfers, in order to raise the technological level of production in China's exports in particular.

Lastly, the American policy of protectionism is one of the largest impediments to the smooth development of the trade between China and the United States. In recent years, American foreign trade successively showed large deficits: trade deficits and budgetary deficits are the main economic problems currently faced by the U.S. government. Consequently, trade protectionism has gained wide support in the United States in recent years. Chinese textiles and other products have been subject to increasing restrictions on the American market. In addition, because of the comparatively low costs of Chinese products, the U.S. government often resorted to the antidumping legislation to raise the import duties on Chinese products, which led to a decrease in Chinese exports to the U.S. market.

If it is possible to solve the above problems adequately, the potential for the development of trade between China and the United States will be great. The history of the last few years shows that China's open policy is a right and proper policy. Our reform and open policy, together with the prosperity and development of our economy, have laid a solid foundation for us to continue to develop and enlarge our economic relations with other countries. In the course of their own economic development and exchange, China and the United States have each shown their relative advantages and needs. It is our sincere hope as well as our firm belief that on the basis of equality and mutual help, the economic cooperation and exchange between the two countries will be strengthened and developed in order to make long-run contributions to the everlasting prosperity and development of the international economy as a whole.

COMMENTS

In his comments on the paper by Professor Wu and Mr. Tang, Professor Wang Yaotian notes that although total trade between China and the United States has increased substantially since 1979, it still accounts for only 1.29 percent of the total value of U.S. foreign trade. He notes that China needs to import large quantities of equipment involving high
technology and that export restrictions of the Coordinating Committee for Multilateral Export Controls (COCOM), "dominated by the United States," limit the imports of such products. He also notes that China does not receive most-favored-nation treatment from the United States because of a policy that originated in response to the problem of the emigration of Jews from the USSR; this policy thus affects China quite unfairly. He urges that the United States modify this policy, at least insofar as China is concerned.

Denis Simon comments:

In the June 29, 1987, issue of People's Daily, there appeared an article regarding American competitiveness. The article struck my attention because it made a number of points about the loss of U.S. competitiveness and about U.S. trade problems that I think apply to both China and the United States. Specifically, the article stated, "While protectionism has safeguarded the profits of enterprises and employment for the time being, this practice has lessened the opportunity for American industry to enhance its competitive ability and is also unfavorable to transferring technology and capital to industries of better competitive ability. Therefore, the industrial structure has become stagnant, and flexibility and adaptability are poor." The article goes on to cite three things that the United States must do to restore its competitiveness: (1) boost labor productivity, (2) lower production costs, and (3) improve the design and quality of its products.

I mention this article because it appears to me that the papers presented up to this point in our conference seem, in part, to miss the point. The trade problems faced by China and the United States are primarily internal in origin rather than external. Moreover, I would argue that the solutions to the problems are also to be found primarily on the internal side rather than entirely on the external side. The persistent failure of the cheaper dollar to improve significantly the U.S. trade balance, which I might add has been a surprise to most economists, raises fundamental questions about the appropriate solution for our competitiveness difficulties.

The reality is that most of the problems are structural in nature; that is, they derive from the structural characteristics of our respective economies. On the U.S. side, while it is true that factory productivity is rising, manufacturing costs are dropping, and administrative costs have declined, many of the gains may be an illusion. Many of the productivity gains, for example, were achieved by closing plants and winning union concessions.
In addition, many of the gains in comparative cost that U.S. firms have made, against Japan, for example, can be traced to the rise of the yen and could be wiped out if the dollar rebounds. Just as the gains during the last few years of China's modernization can be said to have been the "easy" ones, so can the same be said of much of the U.S. industrial sector. Based on some current projections, Canada, France, Norway, Belgium, and West Germany will eventually surpass the United States in employee productivity. In effect, the cheaper dollar in the United States or the cheaper yuan in China will have the same effect—they will make both countries relatively poorer, perhaps without making their products truly competitive on a long-term basis. A cheaper dollar may curtail important changes underway, making industry complacent.

The bottom line is that both countries, China and the United States, need drastic internal changes. This point is relevant for Professor Perkins's paper on reform as well as those by Professor Lardy and by Professor Wu and Mr. Tang. Reform is important because it promises to bring a new marketing outlook, a better trained and more productive work-force, and improvements in product quality and reliability as well as product design. As many of us have argued in the past, and I think the discussion of trade will bear out, it is not the quantity of growth that matters, but the quality and composition of growth that are critical.

With all due deference to the economists at the conference, I think the answers to the trade problems of both countries are to be found not, for the most part, in the economics literature, but in the literature on manufacturing management, strategic management, business policy, R&D management, and organizational behavior. We are now entering a world where terms such as the "globalization" of markets are commonplace. Foreign companies, in this case mainly from Japan, have been able to respond successfully to the new requirements of this changing international economy. Foreign firms have been successful at holding down their prices through good management as much as through exchange-rate manipulation. I would argue that it is here that we should begin to place our focus. This is not to suggest that we can ignore the external environment or larger macroeconomic factors. I am only offering a corrective to what I believe has been a too one-sided discussion.

One last point—and this mainly applies to the Lardy paper. While it is true that the trade deficit is a significant problem, I think we should go further in trying to understand some of its more complex features. While some may suggest that the total U.S. share of world exports has declined, I would argue that this observation may be somewhat misleading. If you include in the data the non-U.S.-derived exports of U.S.-based multinational firms, the trade data look somewhat more balanced. If I am correct,
about 25–30 percent of the total imbalance in U.S. trade is due to the
exports of U.S. firms who manufacture overseas either in the form of
components or finished products. In Taiwan, for example, I believe RCA
was the second largest exporter—mainly to the United States. IBM Japan is
the largest exporter of computers from Japan. Videotapes sold under
names such as GE, Kodak, Memorex, etc. are all produced in Korea for U.S.
companies. Asians, on the other hand, are producing more in the United
States. Soon, Japan will no longer export cars to the United States; they will
all be made in Japanese-owned factories in the United States. Companies
such as Tatung from Taiwan and Samsung from South Korea also have
plants in the United States. The key point, however, is that we are
contributing to our own problems. Until we make the necessary invest-
ments in management training, capital equipment, and technological
modernization and R&D, the off-shore investment option is not an answer
to the long-term competitiveness problem. Rather, it is a short-term
response that only promises to bring more costs than benefits in the long
run. Moreover, for those that think the answer lies in the expansion of high
technology or service industries, I think we also need to think twice about
this proposed solution. Manufacturing matters—as a recent book sug-
gests. Without an efficient and productive manufacturing base, service
industries will not prosper. This is indeed a sobering thought, with
implications for China as well as the United States.
Part Five
Issues in U.S.-PRC Trade
8. Issues in U.S.-PRC Trade:  
An American Perspective  

NAI-RUENN CHEN  

U.S. trade with the People's Republic of China resumed in 1972 after a twenty-year hiatus. In 1978–79, at the same time that U.S.-PRC diplomatic relations were established, bilateral trade began to expand rapidly. Two-way trade increased from US$1.2 billion in 1978 to US$10.4 billion in 1987. The United States is China's third largest trading partner, behind Hong Kong and Japan. China ranks twelfth among U.S. suppliers and is the eighteenth largest market for U.S. goods.

Recent Trends in  
U.S.-PRC Trade and Investment  

Since 1972, U.S. exports to China have experienced ups and downs caused largely by the fluctuations in American agricultural sales to China. The share of agricultural products, not including forest products, in total U.S. exports to China declined from more than 50 percent in 1978–82 to 12 percent in 1987. U.S. imports from China have grown every year except one and have been dominated by textile and petroleum products. U.S. imports of Chinese goods as a percentage of total trade with China increased from 27.5 percent in 1979 to 66 percent in 1987. As a result, the United States had a deficit of $3.4 billion in 1987, compared to a surplus of $1.07 billion in 1979.1

In response to China's open economic policies, U.S. firms began to invest in China in 1979. Since then, U.S. firms have signed over 300 investment contracts with China, totaling US$3.1 billion in capital commitments. The United States is China's second largest foreign investment partner, behind Hong Kong. China is also interested in pursuing investments in the United States; however, the limited supply of foreign exchange

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1The figures on U.S.-China trade cited in this section are those of the U.S. Department of Commerce.
has prevented the Chinese from undertaking large investment projects abroad. The joint ventures so far established in the United States generally have been small-scale and primarily in electronics manufacturing, machine tools, timber, fishing, food processing, and restaurants.

U.S. trade with and investment in China are still modest. In 1987, U.S.-China trade constituted only 1.6 percent of U.S. total trade, compared to 2.1 and 5.4 percent, respectively, for U.S. trade with Hong Kong and Taiwan. The present U.S. investment in China accounts for only 1 percent of U.S. investment in Asia, while the comparable figures are about 13 and 3 percent, respectively, for Hong Kong and Taiwan. However, China's gross national product is about three and a half times those of Hong Kong and Taiwan combined. These figures together suggest that substantial room exists for expansion in U.S.-China trade and investment relations.

**Divergent Objectives and Trade Issues**

China's modernization program promises to enhance U.S.-China commerce. The United States offers many high-technology products, capital goods, and technical and managerial services that are advanced, competitive, and needed in China. The United States also provides a potentially large market for Chinese goods. Also, the Chinese modernization program will require large amounts of foreign capital, which American investors might provide.

U.S.-China commercial relations have been restrained by a wide range of trade issues. The two countries have different institutions, values, and expectations. Their economic and trade policy objectives sometimes conflict. As a result, their perceptions of the bilateral trade relationship frequently are different.

The United States maintains a basically free trading system. To protect national security, however, the Export Administration Act authorizes the president to impose controls on the export of strategic and high-technology products and technical data. U.S. laws also provide safeguards against unfair trade practices and market disruption from increasing imports. These American laws run counter to some of the key objectives of China's economic modernization and foreign trade policies. For China, the importation of high-technology products is a top national priority. However, many of these products are under U.S. and multilateral export controls. To pay for imports, China needs to generate adequate export

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2The U.S. Export Administration Act also authorizes the president to impose controls on goods and technical data of U.S. origin to further U.S. foreign policy objectives and safeguard key commodities that are in short supply.
earnings. But a number of important Chinese export commodities, especially textiles, are import-sensitive in the United States.

The conflict between U.S. and Chinese economic and trade policy objectives has been considerably sharpened by recent changes in both economies and in the global marketplace. The large trade deficit that the United States suffers has created tremendous pressure on Congress and the Reagan administration to protect U.S. producers, especially textile manufacturers. The United States also seeks to reduce trade barriers and promote U.S. competitiveness abroad.

In 1984 China's foreign trade reforms resulted in a sudden reversal of its positive trade balance and a rapid decline in its foreign exchange reserves.\(^3\) The problem was aggravated by reduced export earnings because of the decline in world oil prices. The Chinese government reacted by reducing imports, especially those of low-priority items and by promoting exports, especially light manufactures.

China appears to be adopting a development strategy in the coastal areas that was prevalent in Japan, Taiwan, South Korea, and other East Asian economies in the past.\(^4\) This strategy depends heavily on overseas sales for growth. If recent U.S. experiences with the newly industrializing economies are any guide, U.S.-PRC trade frictions could grow as China moves toward implementing the export-led coastal development strategy.

The United States and China also differ in their expectations of investment. American firms invest in China to gain access to that market or to achieve lower production costs. China, however, turns to foreign capital primarily to supplement domestic financial sources for economic modernization and to obtain greater access to advanced technology, management skills, and international distribution channels. Profitability, while important to Chinese enterprises participating in the joint ventures, may not be an overriding consideration of Chinese policymakers.\(^5\)

Divergent economic objectives have led to trade frictions between the two countries, especially since the normalization of diplomatic relations. In the following sections, we will discuss the main issues that have been prominent in the U.S.-China trade relationship and that are likely to become significant in the years ahead. These issues are related to U.S. exports, U.S. imports, the balance of trade, and U.S. investment in China.

\(^3\)"The Tug-of-War Solution," *China Trade Report* 25 (June 1987):1,3.


U.S. Exports to China

Bilateral issues pertinent to U.S. exports to China have arisen mostly in two broad areas: the transfer of U.S. technology to China and the access of U.S. products and services to the Chinese domestic market. The technology transfer issues center on the U.S. export-control policy toward China and on the protection of U.S. intellectual property rights in China. The market access issues stem largely from the Chinese system of administrative and market control, which has severely limited the entry of U.S. firms into China's market.

U.S. Export-Control Policy Toward China

U.S. export-control policy toward China was once the most contentious trade issue, threatening overall bilateral relations. Since 1983 the U.S. government has gradually and significantly liberalized its export-control policy toward China and has greatly simplified export-control procedures. Now China can acquire more easily the high-technology products it wants from the United States. Therefore, U.S. export-control policy is no longer a major irritant in bilateral relations. The Chinese, however, continue to express concern about export licensing delays. They also believe that review of Chinese export applications by the Coordinating Committee for Multilateral Export Controls (COCOM) is not consistent with the U.S. stated policy of treating China as a friendly, nonallied country.

To see how far U.S. export-control policy toward China has evolved, one need only look at the different “country groups” to which China has been assigned. For export-control purposes, foreign countries (except Canada) are grouped by letter to indicate the general levels of restrictiveness. For a brief period after 1949, China was placed in country group Y, to which all Warsaw Pact countries also belonged. During the Korean War,

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6In U.S. Embassy of the PRC, “A List of Major Trade Issues of Concern,” attachment to Chargé D’Affaires Tang Shubei’s letter of July 15, 1987, to key administration and Congressional leaders, it states that “the speed of relaxation falls behind that of the increase in technological sophistication and the need to improve overall bilateral relations.”

7Headquartered in Paris, COCOM was set up in 1949 by the United States, Japan, and most NATO countries to coordinate export-control policies toward communist countries in the interest of mutual security. Because China is included on the list of communist destinations, Chinese license applications that exceed specified minimal levels are subject to multilateral review in COCOM after unilateral U.S. government review.

8For detailed discussions of changes in U.S. export-control policy toward China, see Madelyn C. Ross, “Export Controls: Where China Fits In,” China Business Review 11(3) (May-June
China was moved into group Z, a total embargo category, where it remained for about twenty years. Shortly after the lifting of the embargo on trade with China in 1971, the United States transferred China back to Y status, allowing for sales of nonstrategic goods similar to those allowable for Warsaw Pact countries. As relations between the United States and China developed following normalization, it became increasingly inappropriate for the United States to lump China and the Soviet Union together in the same country group. On April 25, 1980, China was placed in a separate group of its own, group P, which was created to maintain the same level of restrictiveness as group Y, but to allow some differentiation in favor of China. Although exports to China continued to be subject to the same formal validated license requirements as those to Warsaw Pact countries, China was eligible for the first time to buy “dual-use” products, that is, those with potential military as well as civilian applications.

In June 1981, the Reagan administration announced that for high-technology exports to China there would be “a presumption of approval for products with technical levels twice those previously approved.” But this so-called two-times policy was not clearly defined and did not uniformly accomplish the stated objective of allowing products of significantly higher technical levels to be exported to China. The Chinese continued to complain about the limits of their P status. The controversy over U.S. export controls heightened in 1982 and in the spring of 1983, and it became a crucial issue in the bilateral relationship.

Prompted by U.S. interest in improving relations with China and mounting pressure from American exporters, in May 1983 the administration transferred China to country group V. This category covers “free world” countries outside of North and South America, ranging from NATO allies to India and Yugoslavia, and the change represented a major political breakthrough in U.S. export-control policy toward China. To speed up the processing of license applications, the U.S. government took additional steps in November 1983 by creating a system of green, yellow, and red “technology zones” to be used in the evaluation of U.S. export license applications for China. Items that met “green zone” technical specifications would be approved expeditiously. Green zones were created for


9ITA news release no. 81–118.

10Items in the green zone, the least technologically advanced of the three zones, would have a presumption of approval. Items in the yellow, or intermediate, zone would be reviewed more closely on a case-by-case basis, while red-zone items, which had direct military applications, would have a strong presumption of denial.
seven high-technology product categories, which covered 75 percent of all export license applications for China at that time.\(^\text{11}\)

When the U.S. export controls were gradually liberalized, the U.S. government began to consult with its COCOM allies about easing controls on high-technology exports to China. In December 1985, COCOM announced that an additional twenty categories would become eligible for green-zone review. This brought to twenty-seven the types of technologies that would receive expedited treatment. In 1986, another three categories were added to the list, for a total of thirty categories receiving liberalized treatment by the United States.

This brief account reveals a fundamental change in the U.S. technology-transfer policy toward China—from two decades of total embargo to gradual and significant enhancement in the technical levels of products allowed for export. The United States intends to work with its COCOM allies to further liberalize high-technology exports to China.

**Protection of U.S. Intellectual Property Rights**

As the United States has progressively eased its export-control restrictions and streamlined procedures, it becomes increasingly important for the Chinese to provide adequate protection for intellectual property, that is, trademarked goods, patented inventions, and copyrighted works as well as trade secrets. Intellectual property represents a huge investment by U.S. firms in research and development and is the key to these firms' competitiveness at home and abroad. Without adequate protection of intellectual property, American businesses will not be willing to bring their technology into China.

When diplomatic relations were established between the United States and China in 1979, the Chinese were in the process of reevaluating their laws and policies on industrial and intellectual property.\(^\text{12}\) The U.S.-China Agreement on Trade Relations signed in that year requires that both parties seek to ensure the protection of patents, trademarks, and copyrights for legal and natural citizens of the other. Since 1979, China has made considerable progress in establishing a regimen for the protection of intellectual property.

\(^{\text{11}}\)These seven product categories were computers, computerized instruments, microcircuits, electronic instruments, recording equipment, semiconductor production, and oscilloscopes.

intellectual property. An improved law on trademarks was adopted on August 23, 1982. On March 12, 1984, China enacted a patent law that became effective on April 1, 1985, affording protection of patent rights for the first time. Several more laws enacted since 1985 also contain provisions for protection. In addition, China has joined several international conventions and organizations for the protection of intellectual property.

While China has done much to develop a system for protecting intellectual property, deficiencies remain in several areas. Of particular concern to U.S. companies is the lack of adequate and effective protection for chemical formulas and copyrighted works, including computer software. The Chinese patent law does not provide protection for pharmaceuticals and substances produced by means of chemical processes, such as agricultural chemicals.

The Chinese have drafted a copyright law. Until the law is enacted and put into effect, U.S. publications have no copyright protection in China. Recently, a number of American authors and publishers have reported unauthorized Chinese translations of scientific, technical, and medical publications.

The United States is also concerned about extensive unauthorized copying of computer programs. Like other products, such as books, sound recordings, and motion pictures, a computer program is subject to widespread and unauthorized duplication. At present, Chinese laws do not provide specific protection for computer software. Therefore, the U.S. government has urged China to expedite the enactment of a copyright law that would explicitly provide protection for computer software.

Access of U.S. Products and Services to the Chinese Market

The entry of U.S. firms into the Chinese market is hindered by a complex system of administrative and market controls that China has put in place to keep both exports and imports in line with trade policy and balance-of-payment objectives. Included under the system of administrative controls is the use of embargoes to restrict the import of certain goods that are deemed to be detrimental to Chinese political, economic, cultural,
and moral interests. China also has banned imports for strictly economic reasons. For example, the importation of production lines for televisions, tape recorders, washing machines, and air conditioners is not allowed during the Seventh Five-Year Plan (1986–90). These production lines were imported in excessive quantities in earlier years. Another form of administrative control is the implementation of import plans. The State Planning Commission, working through the Ministry of Foreign Economic Relations and Trade (MOFERT), ensures that imports of a number of essential commodities are strictly controlled. All other commodities are regulated by the indicative targets where some leeway may be allowed.

One increasingly important element of the control system is an import-licensing regime. In January 1984 when the new system began, twenty-six items required a license. By June 1987, the list had grown to forty-five items, affecting about one-third of China's imports. In addition to the forty-plus items on the control list, licenses are required for all trading companies who wish to import noncontrolled items that are outside the scope of their normal operations.

China also controls imports by restricting access to foreign exchange. To obtain foreign exchange, Chinese organizations must comply with a variety of internal regulations and plan guidelines. These regulations and guidelines are generally not available to non-Chinese.

China's market-control system relies principally on the use of "economic levers," such as tariffs, taxation, prices, and exchange rates, to regulate imports. China adheres to the traditional use of tariffs as a means

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20. China exercises centralized control over its foreign exchange. Two elements of the exchange-control system act to restrict foreign-exchange access. One is the foreign-exchange retention scheme. Under this scheme, localities and enterprises may retain part of the proceeds from export in a foreign-exchange quota account with the Bank of China. All other foreign-exchange earnings from exports must be repatriated and surrendered to the Bank of China and may not be used directly to offset import payments. Before using their foreign-exchange holdings, enterprises other than the state foreign trade corporations must seek the approval of the State Administration of Exchange Control. The Bank of China provides foreign exchange for imports on the basis of import licenses and approval by the
of raising revenue as well as a tool for protecting domestic industries. Chinese tariffs are relatively high, especially for many industrial items of interest to U.S. exporters. Since June 1985, China has also applied an “import regulatory tax” to selected imports. At present, the tax is applied to fourteen commodities, including passenger vehicles, motorcycles, color television sets, mini-electronic computers, and electronic calculators. In addition to tariffs and the import regulatory tax, imported goods are subject to the consolidated industrial and commercial tax.

At present, three principal methods are used to determine the domestic price of imported goods: the agent price, the markup price, and the state-determined price. All of these pricing methods allow China to raise and lower prices in order to protect its domestic market. In addition, industrial ministries have a right to request increases in import prices if they threaten domestic industries.

In recent years, China has progressively devalued the renminbi against major Western currencies. The RMB-to-U.S.-dollar exchange rate was approximately 1.7 yuan per U.S. dollar in 1981, which gradually declined to 2.9 yuan per U.S. dollar in 1985. In July 1986, China devalued the RMB SAEC. China also uses foreign-exchange allocations to control imports. Prior to the current foreign-exchange crunch that began in mid-1985, foreign-exchange spending was allocated by the central government to ministries or provincial governments for distribution to appropriate industries. Since then, foreign exchange allocated by the central government has become more restricted.

21The Chinese tariff rates fall into two columns: minimum and general. The minimum applies to imports originating from countries, including the United States, with which China has concluded trade agreements containing most-favored-nation clauses. The general tariff applies to imports originating in countries with which China does not have such trade agreements. Import duties are generally levied on the c.i.f. value of goods. Under the minimum tariff, dutiable imports are subject to one of seventeen rates ranging from 3 percent to 150 percent.

22The import regulatory tax is a surtax over and above applicable tariffs that ranges generally from 40 percent to 80 percent. It is used in lieu of the tariff rate as an additional but temporary measure for protecting domestic production of a limited number of products.

23Under the agent price system, a product is imported at the international price plus a commission charged by the foreign trade corporation (FTC) that is handling the transaction. The end-user of an import bears the risk of a change in the international price, which is fully passed on by the FTC. Under the markup price system, the FTC contracts to purchase the import for the end-user on the basis of a markup over the international price prevailing at the date of contract, and the FTC bears the risk of subsequent price changes. Under the state-determined price system, the state sets the domestic prices of a number of import commodities having an important bearing on the national economy—such as steel, fertilizers, and grains—and the state assumes responsibility for all the profits and losses therefrom.

sharply to 3.7 yuan to the dollar. The principal objective of these devaluations was to stimulate exports and curb imports.

These various administrative and market controls have severely restricted the access of foreign goods to the Chinese market. Access to the Chinese services market is even more restrictive. The experience of U.S. shippers illustrates the seriousness of the problem. While Chinese shipping organizations are free to establish subsidiaries or representative offices in the United States, U.S. freight forwarders’ operations have been limited to setting up joint ventures with their Chinese counterparts and U.S. vessel operators limited to establishing representative offices.

Chinese restrictions on other U.S. services include insurance, banking, accounting, and legal services. U.S. insurance companies have been barred from conducting business in the Chinese domestic market, although they have been allowed to reinsure Chinese direct insurance on foreign risks. U.S. banks have not been permitted to conduct branch banking activities in China. The activities of U.S. lawyers and accountants are limited to servicing foreign firms doing business in China. The U.S. tourism industry also has only limited access to China's market. These restrictions stand in marked contrast to the “national” treatment granted Chinese enterprises undertaking service activities in the United States.

U.S. Imports from China

Two issues, the textile trade and the application of U.S. import-control laws to products from China, have dominated bilateral discussions. It should be noted, however, that China has also expressed serious concern about provisions in U.S. law requiring an annual review of China's most-favored-nation status and about its exclusion from U.S. Generalized System of Preferences benefits.

Textile Trade

Rapidly rising U.S. imports of Chinese textiles and apparel have become contentious issues in Sino-American trade. In 1979, when diplomatic relations were normalized, U.S. imports of Chinese textiles and apparel totaled 231.2 million square yard equivalent (SYEs), or 5 percent of total textile imports. By 1987, Chinese imports had grown to 1.73 billion SYEs, accounting for 12.4 percent of the U.S. market. In terms of volume, China now has become the largest supplier of textiles and apparel to the United States.

China relies primarily on export earnings, especially those from textiles and apparel, to finance imports. Textile and apparel exports are
officially projected to grow 80 percent during the current five-year plan (1986–90). The U.S. market is a target for much of this growth.

In recent years, U.S. textile imports have grown much more rapidly than the overall domestic market. Pressure from the domestic textile industry to limit textile and apparel imports by legislative means has increasingly focused on Chinese exports.

In 1986, the Textile and Apparel Trade Enforcement Act was approved by Congress. This act would have resulted in a rollback of textile imports from all the major Asian suppliers. Believing that the act was protectionist and violated commitments under the Multilateral Fiber Arrangement (MFA) and bilateral textile agreements, President Reagan vetoed the bill, and that veto was sustained by Congress. This effort has been revived and refined in the Textile and Apparel Trade Act of 1987.

The Reagan administration opposes protectionist legislation and seeks to moderate import growth through multilateral and bilateral textile accords. But the U.S. textile industry will certainly continue to pursue its goal of strictly limiting the growth of textile imports.

The United States has negotiated three bilateral agreements with China. The first agreement, reached in 1980, was applicable to textiles and textile products of cotton, wool, and manmade fibers and provided for specific limitations on eight categories of apparel. The agreement’s consultation provisions provided a mechanism for establishing limits on nonquota categories when the increase in imports from China was found to be disrupting or threatening to disrupt the U.S. market. During the life of the agreement, which expired on December 31, 1982, the consultation mechanism was invoked to restrict imports from China in nineteen additional categories of apparel and one fabric category. This brought to twenty-eight the total number of textile import categories limited under negotiated or formula limits.

The 1980 agreement expired at the end of 1982. Despite four rounds of negotiations, the United States and China had not succeeded in concluding a new agreement. In the absence of agreed limits, the U.S. government imposed unilateral controls on thirty-two textile and apparel categories, beginning in January 1983. In response, China announced that it would stop signing new contracts for delivery of U.S. grain, cotton, and synthetic fibers.

On August 19, 1983, after the seventh round of negotiations, the United

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26These categories included cotton gloves; cotton shirts and blouses for women, girls, and infants; woven cotton shirts for men and boys; cotton trousers; and man-made-fiber sweaters.
States and China signed a new five-year agreement that included specific limits in thirty-three product categories and provided for an annual average growth rate of 3.8 percent on U.S. imports of these products alone. The agreement also provided for a consultation mechanism for setting new limits. China announced at the same time that it would lift its restrictions on imports of U.S. agricultural and fiber products.

The textile problem, however, did not slip into obscurity with the signing of the new agreement. U.S. textile industry representatives filed suit in September 1983 for protection under the countervailing duty provisions of the U.S. Foreign Trade Act. They charged that Chinese financial and economic policies, including their dual exchange rate, conferred an export subsidy on Chinese textiles sold to the United States. The suit was withdrawn in December, and shortly thereafter the White House announced a new textile policy defining specific criteria for judging when foreign textile imports are disrupting the U.S. market.

The second bilateral agreement expired in December 1987, and the new four-year agreement was signed in February 1988. The 1988 agreement will limit the aggregate growth of China's textile and apparel exports to the United States to about 3.3 percent per year.

Application of U.S. Trade Laws to China

Although restraints on Chinese textiles are the main source of Chinese displeasure with U.S. restrictions on imports of Chinese goods, China is also concerned with other provisions of U.S. trade law. The Chinese are especially sensitive to legislative proposals relating to antidumping, market disruption, and countervailing duty cases.

Antidumping. Among the U.S. trade remedies being applied to China, the antidumping law has had the greatest impact on Chinese exports to the United States. Since 1980, fifteen antidumping cases have been filed against Chinese exports to the United States. In eleven cases, Chinese goods were found to have been "dumped," or sold at less than fair market value. The dumping margins on these cases ranged from 6.35 to 66.65 percent.

The Chinese, and to some extent U.S. industry, have complained that

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28 The dumping margin is the amount of a customs duty that is equal to the difference between the fair market value and the price at which the product is sold in the United States.
the U.S. antidumping law as applied to China is not fair and predictable. Under the U.S. law, foreign goods are considered "dumped" if they are sold in the United States at less than fair market value and if such sales consequently cause or threaten material injury to a competing U.S. industry. Antidumping investigations are carried out by the Department of Commerce's International Trade Administration (ITA) and by the U.S. International Trade Commission (ITC). The ITA determines the existence of sales at less than fair market value, and the ITC determines whether a U.S. industry is being or may be materially injured. This determination requires a comparison between the foreign market value of imports (the price at which they are sold in the country of origin) and their sales price in the United States, adjusted for differences in the quality and type of goods and their circumstances of sale. However, if the economy of the exporting country is "state-controlled," home-market prices may not be regarded as furnishing an acceptable basis for determining the foreign fair market value. In this case, the law provides that foreign market value can be determined by reference to a market-oriented third country whose level of economic development is deemed similar to the country under investigation. In China cases, the Department of Commerce has used cost data from "surrogates" in Paraguay, Thailand, Indonesia, India, Sri Lanka, Malaysia, the Philippines, Pakistan, and a few other countries to determine fair value. China's dissatisfaction with the surrogate-country approach may be seen in a recent statement by Han Xu, Chinese Ambassador to the United States:

Since the U.S. determination of dumping margins is not based on the real cost of the Chinese product, and as a surrogate is selected only after a petition has been filed, it is impossible for China to predict what the arbitrary "fair value" will be. Faced with the constant threat of antidumping petitions, China's exporters are forced artificially to inflate prices. This, in turn, unfairly restricts China's access to the U.S. market. Moreover, in certain antidumping cases against Chinese products, the Commerce Department unfairly chose suppliers who were at stages of economic development by no means comparable to ours, resulting in the determination of inflated dumping margins.

The Reagan administration in 1987 proposed amendments to the antidumping law as it applies to nonmarket economies (NMEs). Instead of

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31Han Xu, op. cit.
relying on a fair value based on costs in a surrogate, the preferred benchmark for NME imports would have been the lowest average import price into the United States from a market economy country. The Senate version of the bill contains a proposal (the Heinz Amendment) to allow the use of the "average import price" from the highest volume market economy exporter to the United States as the antidumping benchmark. China objects to both the administration's and the Senate's proposals. There is a third proposal that was put forth by the U.S.-based Committee for Fair Trade with China. This proposal would create a new category of countries in transition from a nonmarket to a market economy called "planned market economies." It would require that the fair value benchmark be calculated on the basis of production costs in the home market whenever those costs were found to be market-determined. In the case where no market-determined price could be found or calculated, representative world prices would be used. This proposal was rejected by the House Ways and Means Committee Subcommittee on Trade.

In July 1987, the Senate approved a trade bill amendment, sponsored by Senator Chic Hecht, requesting the Department of Commerce to study the new market orientation in China. One of the main purposes of the study would be to determine the possible need for changes in U.S. antidumping laws as they apply to foreign countries such as China, which are in transition to a more market-oriented economy.

**Market Disruption.** The first U.S. complaint against PRC imports was filed in 1977 under Section 406 of the Trade Act of 1974. This statute provides a mechanism to prevent or remedy the disruption of the U.S. market by imports from communist countries. Under Section 406 requirements, three conditions must be satisfied before the ITC can address the issue of

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32The Ninety-Ninth Congress considered a proposal to use the average price of imports into the United States as the fair value benchmark. China strongly objected to the proposal on the ground that "it would severely erode China's competitive advantages in labor and raw materials" (Han Xu, "U.S. Laws,"). The Reagan administration testified in support of amending the law to use the lowest import price as the benchmark.

33This standard takes the trade-weighted average price at which comparable merchandise produced by the largest volume market economy supplier is sold in the United States.

34U.S. Embassy of the PRC, "A List of Major Trade Issues of Concern."

35Under this proposal, in order to be classified as a "planned market economy," a country would have to be implementing economic reforms that would eventually enable the foreign country to operate on market principles. Other factors to be considered before a nation could qualify for PME category treatment would be the extent to which the nation (1) afforded market access to U.S. goods and services; (2) provided patent and copyright protection; and (3) was moving toward fulfilling GATT principles. See the Committee for Fair Trade with China, "Summary of the Testimony of Edward W. Furia Before the Subcommittee on Trade, Committee on Ways and Means, U.S. House of Representatives," February 26, 1987.
relief. First, imports of the product in question must be increasing rapidly, either in actual terms or relative to domestic production. Second, the domestic industry must have suffered, or be threatened with, material injury. And third, imports must be a significant cause of the material injury or threat of injury. If the ITC determines in favor of the petitioner, the president must make the final determination of what relief, if any, should be granted. The president's discretion under the law is very broad. His final decision may rest entirely on economic or political factors outside the scope of the investigation.

This statute (Section 406) has been applied to China on five occasions. In four of these cases, either the ITC found no conclusive evidence that the imports in question were causing market disruption, or the president declined to take any remedial action against China. In the most recent such case on imports of tungsten from China, the ITC voted unanimously that Chinese exports were disrupting the U.S. market. The president decided to provide relief to the domestic industry in the form of an orderly marketing arrangement, which was negotiated in August 1987. Thus Section 406 has so far not been a significant barrier to Chinese exports. To the Chinese, however, the statute is discriminatory in that it applies only to imports from communist countries. The Chinese are also concerned about a proposal to amend Section 406 that would relax the current injury and causation standards.

Countervailing Duties. The U.S. law provides that whenever a foreign government subsidizes the production or exportation of an article, the United States may counteract the competitive advantage that the import has in the U.S. market because of the subsidy by levying a countervailing duty (CVD) equal to the amount of the subsidy.

In September 1983, U.S. textile industry's dissatisfaction with the 1983 U.S.-PRC textile agreement prompted the filing of a CVD case on Chinese textile and apparel imports, charging that the Chinese benefited unfairly from subsidies conferred by dual exchange rates and other government

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36 In two cases, one involving certain types of cotton gloves (filed in December 1977) and the other ceramic kitchenware and tableware (filed in May 1982), the ITC determined that the imports in question caused no market disruption. In a third Section 406 investigation, involving clothespins from China and filed in May 1978, the ITC recommended that the president impose quotas. However, the president declined to grant relief because in the meantime the ITC had begun an escape clause investigation of imports of clothespins from all sources. In the fourth case, filed in June 1982 and involving canned mushrooms from China, the ITC's determination was evenly divided, and President Carter declined to take any remedial action against China.

37 Han Xu, "U.S. Laws."

38 U.S. Embassy of the PRC, "A List of Major Trade Issues of Concern."
programs. This was the first attempt ever made to apply the CVD law to a nonmarket economy (NME) country. The case was withdrawn shortly before the White House announcement on December 16, 1983, of additional textile import guidelines designed to moderate the growth of imports. However, in 1984 in a CVD case filed against another nonmarket economy country, the Commerce Department found that pervasive government intervention made it impossible to identify and value subsidies in the nonmarket economy context. Therefore, the department concluded that the countervailing duty law does not apply to imports from nonmarket economy countries because a subsidy within the meaning of the Tariff Act of 1930 cannot be found.

Thus far the CVD law has not been a major hindrance to Chinese exports. The danger that the CVD law poses to Chinese exporters lies not in its current application, but in the future possibilities that the law may be amended to become applicable to a nonmarket economy country, or that China's status as a nonmarket economy country, exempted from the application of this statute, may be changed.

**The Investment Climate in China**

A favorable investment climate in China is an important factor in the improvement of Sino-American commercial relations. However, the business environment in China has been criticized in recent years by foreign investors who remain concerned about the lack of access to the domestic market; foreign exchange control; inconvertibility of renminbi; the high cost of many inputs, especially land, labor, housing, and office space; and uncertainties about administrative and legal procedures and regulations. There has also been discontent among foreign investors about labor and wage practices; uncertainties in the supply of raw materials and utility services; an inadequate communications and transportation infrastructure; and inefficient government bureaucracies. The single greatest disincentive to investment in China is the Chinese policy of requiring each foreign-invested venture to maintain its own foreign-exchange balance. This policy, coupled with the inconvertibility of renminbi, makes the repatriation of profits in foreign ventures extremely difficult.

The concern of foreign investors was considerably heightened in late 1985 and early 1986 when China tightened its control over foreign-exchange outlays. This led to a slowdown in foreign investment approvals in 1986. Dissatisfaction with the Chinese investment climate became widespread, and caught the attention of the leadership in China.

In an effort to improve the investment environment in China, the Chinese government issued new “Provisions for the Encouragement of
Foreign Investment,” on October 11, 1986. The Provisions’ twenty-two articles provide preferential treatment for foreign investment enterprises in general and high-technology and export enterprises in particular.

The regulations published thus far have offered far less than many investors had hoped for and have touched on only a few of the problems encountered by foreign investors. Nonetheless, they are a step in the right direction and demonstrate China’s willingness to tackle concerns frequently raised by the foreign business community.

The October 1986 Provisions make clear that China continues to favor foreign investment projects that will introduce advanced technology or expand Chinese export capabilities. Projects that are certified to be in one of these two categories are given preferential treatment with respect to the supply of inputs, loans, and other facilities. This leaves foreign-invested ventures that seek to produce mainly for the domestic Chinese market or that provide China only with ordinary levels of technology in a less advantageous position than those in the two favored categories.

Since June 1983, the United States and China have met in formal negotiations six times to negotiate a bilateral investment agreement. Significant differences remain on a number of issues relating to arbitration, national treatment, standards for expropriation and compensation, and the impact of changes in domestic law on the agreement. The United States is not interested in an agreement that lacks basic substance. In the U.S. view, a meaningful and effective investment agreement requires a number of basic protections that would enhance the confidence level of American investors in China.

**Trade Imbalance**

China practices a policy of trying to balance trade bilaterally and takes the position that only through expanded exports can it finance increased imports. This position has been promoted more forcefully in recent years because of China’s mounting trade deficit.

Related to the policy of import-export balancing is the issue of how import and export figures are derived. Official Chinese trade statistics, both those compiled by MOFERT and the General Administration of Customs, differ widely from U.S. trade statistics. For 1987, U.S. statistics show a total of $10.4 billion in two-way trade, compared with the Chinese Customs estimate of $7.8 billion. U.S. data disclose a U.S. trade deficit of $3.4 billion with China in 1987, while Chinese Customs statistics indicate a Chinese deficit of $1.8 billion in trading with the United States.

Discrepancies in trading partner data are not uncommon, but the gap between Chinese and U.S. statistics has widened each year since 1981.
Experts on trade statistics from the U.S. and Chinese governments met in the fall of 1986 to discuss the discrepancy. Both sides agreed that differences in the treatment of transshipments and the valuation of imports on a CIF (cost, insurance, freight) basis were the principal reasons for the discrepancy. Until China and the United States make their methods of recording transshipments correspond, reconciliation of statistical differences will not be possible. Transshipments through third parties, especially Hong Kong, represent the unique—and most important—factor in U.S.-China trade data discrepancies.

Management of Trade Issues

Since the establishment of diplomatic relations in 1979, the United States and China have made much progress in developing a framework for normal economic and commercial relations. An overall trade agreement was concluded, providing reciprocal nondiscriminatory treatment of each country's products. This was followed by agreements in a number of areas, including science and technology, textiles, grain trade, aviation, nuclear power, maritime relations, taxation, and industrial cooperation. In addition, three ministerial-level joint commissions provide fora for discussing economic, commercial, and technological issues. These commissions are the Joint Commission on Science and Technology, the Joint Economic Committee (JEC), and the Joint Commission on Commerce and Trade (JCCT).

The Joint Commission on Science and Technology is co-chaired by the science advisor to the president on the U.S. side and the minister-in-charge of the State Science and Technology Commission on the Chinese side. The Commission has twenty-seven agreements on scientific exchange, including the highly successful Dalian Management Program, which introduces Chinese managers and executives to modern management techniques.

The JEC is co-chaired by the U.S. Secretary of the Treasury and the Chinese Minister of Finance. It focuses on macroeconomic issues.

The JCCT is co-chaired by the U.S. Secretary of Commerce and China's Minister of Foreign Economic Relations and Trade. The JCCT provides a forum for high-level consideration of bilateral trade issues and serves as a vehicle for promoting commercial relations.

Since 1979, there have been numerous exchanges of visits by high-level

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government officials. Frequently, trade issues also were discussed during these visits.

In addition to bilateral consultations, commission meetings, and agreements, trade issues can be handled with the aid of multilateral arrangements. Since 1979 China has made significant progress in integrating its economy with the world trading system. It has joined the World Bank, the International Monetary Fund, and the Asian Development Bank. It has adhered to the principal multilateral conventions such as the Paris Convention on the protection of industrial property rights and the 1958 New York Convention on the recognition and enforcement of foreign arbitral awards. China was admitted to the Multilateral Fiber Arrangement in 1983.

China is participating as an observer in the Uruguay Round. It is in the process of negotiating full membership in the General Agreement on Tariffs and Trade (GATT), a major vehicle regulating world trade. China's desire to join the GATT demonstrates the country's readiness to abide by certain principles and rules that are pivotal to international trade.

The establishment and expansion of bilateral and multilateral trading systems will be instrumental in the effective management of trade issues. These systems may provide a sound framework within which trade problems can be handled in order to promote social and economic benefits and avoid undue stresses and dislocations in both countries. Proper management of trade issues will permit trade and investment levels between China and the United States to move closer to their full potential. Only then will the two countries be in a position to foster a strong, lasting trade relationship.

WANG XI and CHEN YAWEN*

Since the historical dialogue between the People's Republic of China (PRC) and the United States in 1972, Sino-U.S. trade, growing out of nothing, has rapidly developed. In 1987 the total volume of Sino-U.S. trade reached US$7.8 billion. The United States has become one of China's major trading partners. With Sino-U.S. trade growing steadily, one is optimistic about its future development. However, from the start, certain unfavorable elements in Sino-U.S. trade relations have proved to be obstacles to the continuous expansion of trade between the two countries.

This chapter consists of three parts. The first briefly reviews two-way trade before and after the thawing of Sino-U.S. relations. The second part analyzes the existing issues, focusing on the Chinese perspective. The third part discusses means of solving the major problems and examines the outlook for Sino-U.S. trade relations.

The Development of Sino-U.S. Trade and Its Current Situation

After the PRC was established, trade between China and the United States continued for several years. The U.S. imports from mainland China were US$106 million in 1949 and $146 million in 1950, surpassing U.S. imports from West Germany, France, or Japan in those years. The outbreak of the Korean War in 1950 led to a sharp decline in two-way trade. By 1954 Sino-U.S. trade relations had been suspended completely.

In 1972 leaders of both countries held the historic dialogue, bilateral relations were resumed, and in 1979 Sino-U.S. diplomatic relations were reestablished, opening a new era in their trade relations.

*We are indebted to Ms. Liu Xialian, a doctoral candidate at Fudan University, who collected materials for this paper.


Sino-U.S. trade rose from US$2.452 billion in 1979 to $7.8 billion in 1987, an average annual increase of 15.5 percent. In 1987 China's total exports stood at US$39.921 billion, $3 billion of which (7.5 percent of the total) went to the United States. (If the exports transshipped in Hong Kong are included, the United States was the second largest market for Chinese exports in 1987.) In the same year China's total imports amounted to US$43.856 billion, $4.8 billion of which came from the United States. Based on the total volume of imports and exports, the United States is China's third largest trade partner, behind Hong Kong and Japan. Sino-U.S. trade represents slightly more than 1 percent of total U.S. foreign trade, making China the sixteenth-largest trading partner of the United States.

In 1979–87, the commodity structure of Sino-U.S. trade changed. In the early 1980s, U.S. grain exports accounted for more than one-third of its total exports to China. During the Sixth Five-Year Plan (FYP) period (1981–85), Chinese purchases of U.S. grain were gradually cut back, and imports of manufactured goods (mainly machinery and technology) increased. This shift in the commodity structure of this trade is still going on and has been reflected in the current Seventh FYP (1986–90). At the same time the structure of China's exports to the United States also changed. Traditional products have been replaced by those such as oil and textiles, the latter ranking first among China's exports to the United States. Other manufactured goods such as toys, sports equipment, machinery, and electrical power equipment have also started to be exported to the United States.


^International Business*, January 23, 1987, p. 1. On June 23, 1988, U.S. Ambassador to China Winston Lord said at the Sino-U.S. Joint Session on Industry, Trade, and Economic Development that China's exports to the United States in 1987 amounted to 16 percent of the total volume of China's exports. (Lord's figure is not the same as the 7.5 percent provided in this essay.) His figure about China's exports to the United States (US$6.29 billion) is from U.S. Customs, while the figure of Chinese Customs is US$3 billion. Obviously, the statistics of U.S. Customs include China's exports to the United States transshipped in Hong Kong. In 1987 the transshipment to the United States through Hong Kong was US$3.553 billion. After deducting the costs of transport and insurance (usually about 8 percent), this figure is exactly equal to the margin between the Chinese and U.S. statistics (US$3.293 billion). Therefore, the cause for the discrepancy between 16 percent and 7.5 percent is the figure of China's exports to the United States transshipped in Hong Kong.


^In 1983–85, U.S. grain exports to China dropped from 20 percent to 2.5 percent of total U.S. exports to China; see ibid.

^For example, the U.S. exports of machinery and transport equipment to China rose from 27 percent of total U.S. exports to China in 1983 to 50.8 percent in 1985. See ibid., p. 18.
States. But compared to U.S. exports to China, the structure of China's exports, most of which are still labor-intensive products, has not changed much. China's exports are not diversified. As a result, rapidly rising Chinese textile exports to the United States have become one of the sensitive issues affecting Sino-U.S. trade relations.

With the development of bilateral trade, two-way investment also started. Up to September 1987, direct U.S. investment in China had totaled US$3.1 billion, accounting for 14 percent of all foreign investment in China and ranking the United States as the second biggest investor in the country after Hong Kong–Macao. U.S. investors have been involved in such areas as tourism, the textile industry, light industry, coal mining, offshore oil prospecting, and the aircraft industry. In the same period China invested only US$80 million in the United States, primarily in restaurants, electronic manufacturing, machinery, timber, fishing, and food processing. Neither the U.S. investment in China nor the Chinese investment in the United States can be considered large.

The transfer of U.S. technology to China has grown rapidly since the end of 1983 when the United States liberalized its export-control policy toward China concerning the export of dual-use technology and products. Before 1983 the transfer of U.S. technology to China was strictly controlled. After the establishment of the PRC in 1949, the U.S. Export Control Act placed China in country group Y. During the Korean War, China was moved to Group Z, the total embargo category, and remained there for about twenty years. After the embargo was lifted in 1971, China was moved back to Group Y, which allowed only the technology of nonstrategic applications to be transferred to China. With the normalization of Sino-U.S. relations, the United States created a separate group, Group P, for China in April 1980. Although the move from Group Y to Group P gave China some advantages, restrictions on technology transfer to China had not been substantively relaxed. The restrictions for P status were on the same level as Y status; that is, technology transfer to China was subject to validated license. The negative effect on Sino-U.S. trade caused by the U.S. control policy was most obvious in 1982–83: for the first time since the 1979 Trade Agreement was signed, the total volume of Sino-U.S. trade declined in 1982. Restrictions on technology transfer became a major obstacle to

10From the speech by an official of the Department of Foreign Economic Cooperation of the Ministry of Foreign Economic Relations and Trade. It was made at the Second National Conference on Overseas Firms' Performance and Study on July 9, 1987. (The text of the speech has not yet been published.)
the development of bilateral trade. The United States then moved China to Group V, which includes most countries with market economies, thus liberalizing export controls over dual-use technology. In 1984 the total volume of trade started to rise again, from $4.492 billion in 1983 to $6.47 billion, and reached more than $7 billion in the subsequent years of 1985–87. Increases in high-tech products were especially large. For example, U.S. exports of automatic data-processing machines to China increased from $36 million in 1983 to $72 million in 1984.

China and the United States have also achieved some substantive progress on nuclear sales and arms transfers. The China-U.S. Nuclear Cooperation Agreement removed the legal barrier that prevented the United States from supplying technology and equipment for China's nuclear power program, thus opening a major market for U.S. suppliers to the nuclear power industry.

China and the United States have also had limited trade in arms. Since the United States liberalized its export control on dual-use technology to China, the sale of military-related technology to China has increased from $930 million in 1983 to $2 billion in 1985.

Sino-U.S. trade, investment, and technology transfer have been developing rapidly in recent years, but it is no secret that neither side is satisfied with the current level of trade and investment.

Analysis of the Current Issues and Obstacles in Sino-U.S. Trade

Two Trade "Deficits" and the Opposite Views Concerned

Both China and the United States claim a big deficit in two-way trade. The different perceptions have given rise to different views about the measures each side should take to balance the trade.

The different perceptions of trade flow arise from differences in trade

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16Ibid., p. 19.
statistics. These are basically caused by differences in the definitions and accounting of CIF and FOB shipping and in determining the value of goods from China destined for the United States but transshipped in Japan or Hong Kong. Both countries claim to suffer a deficit of approximately $2–3 billion. The United States argues that rapidly rising Chinese textile exports to the United States and the dumping of Chinese goods in the U.S. market are the major causes of the U.S. deficit. Therefore, it urges that China restrict its textile exports to the United States and open its market to U.S. goods. China argues that it needs to increase exports to the United States in order to make up for China's continuous trade deficit. The United States gives discriminatory treatment to China; it still excludes China from the U.S. Generalized System of Preferences (GSP), gives the most-favored-nation (MFN) treatment only conditionally, and institutes antidumping investigations of imports from China. This has restricted the expansion of China's exports to the United States, making it difficult for China to eliminate its deficit. Therefore, China in turn requires the United States to abolish its trade protectionism and further open its market to Chinese goods. The different views of both sides concerning the nature of the trade deficit are centered on the issues in the textile trade.

Disputes over Sino-U.S. Textile Trade

Textiles account for the largest percentage of China's total exports to the United States. Of China's total textile exports in 1987, US$6.8 billion, almost half went to the United States. Obviously, textile exports are crucial to China's economy. But the United States, insisting that China's textile exports are injuring the U.S. textile industry and disrupting the U.S. market, has imposed restrictions. Because Professor Zhang Jialin has discussed this matter in detail in his paper on protectionism in textiles earlier in this volume, only summary points will be offered here. One doubts the reasonableness of the U.S. policy on the textile trade issue for four reasons:

1. Of the total U.S. trade deficit of $159 billion in January–November 1987, only $3.33 billion (2 percent) was with China. This small figure could not seriously affect the total U.S.

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20Ibid., p. 2.
trade deficit. It is grossly unfair to shift the pressure for balancing U.S. trade toward China.

2. Chinese textiles occupy less than 10 percent of total U.S. textile imports in terms of square yardage, or 7 percent in dollar value.\(^2\) Any reduction in China's textile exports to the United States could not substantively improve the U.S. trade deficit.

3. Textiles are the major source of China's foreign exchange. Japan and the EEC have understood China's difficulties and have relaxed their restrictions on textile imports from China. The United States, however, in 1982–87, increased the quota categories from China from 14 to 87 so that now 85 percent of China's textile exports are under quotas.\(^2\) Consequently, Sino-U.S. trade has been unfavorably affected because China has been forced to cut down imports from the United States because of its shortage of foreign exchange.\(^2\)

4. China is diversifying its export product mix.\(^2\) The United States should recognize this and grant China time to adjust its trade structure. Meanwhile, China is adjusting its industrial structure, which will help rationalize the structure of China's imports and exports.

In late 1987 China and the United States signed a new textile agreement that will expire in 1991. It covers all the major items China exports to the United States, including synthetic fibers and apparel not covered under the previous two agreements. Under this agreement, the annual growth rate of China's textile and apparel exports to the United States will decline from about 19 percent to 3 percent.\(^2\) The agreement has temporarily relaxed tensions in Sino-U.S. textile trade matters, but the pressure for protectionism in the United States will probably grow as long as the overall U.S. trade

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\(^2\)For example, in 1983 the United States imposed unilateral quotas on Chinese textiles. In response, China cut back grain purchases from the United States.


\(^2\)U.S. Consulate General, EB-1324, p. 1.
deficit is not reduced. This trend is reflected in the protectionist legislation recently passed in the U.S. Congress.

**U.S. Trade Laws and Policies Affecting Sino-U.S. Trade**

Current U.S. trade laws and policies, and trade policy discussions in the Congress, exhibit some major features that can be detrimental to the development of Sino-U.S. trade.

Under Section 402 of the U.S. Trade Act of 1974, the U.S. Congress unilaterally reviews emigration policies and practices of planned-economy countries, including China, before deciding to continue their MFN status. Although the section was originally directed against the Soviet Union, its vague terms have affected Sino-U.S. trade. The annual review of China's MFN status has created unstable business conditions and unnecessary obstacles. From the legal point of view, the bilateral MFN treatment for both China and the United States is an international commitment. U.S. review neither accords with the equity principle of international law nor improves Sino-U.S. trade.

The House of Representatives recently proposed an antidumping amendment to the U.S. Trade Act of 1974 that would allow U.S. enterprises to petition—before the material injury is determined—for relief and remedial action against a nonmarket economy country (including China), regardless of whether its exports to the United States are fair or not. The amendment dogmatically stipulates that any increase in China's exports to the United States be subject to Section 406, disregarding the fact that China is a latecomer to the U.S. market. The amendment is inappropriate in three respects. First, China is being steadily transformed into a market-oriented system. It is presumptuous to attach a rigid label to a changing economic system. Second, from 1980–86, although Chinese exports to the United States accounted for less than 1 percent of all U.S. imports, China was confronted with fifteen antidumping investigations, 5 percent of all the cases filed. The disproportionately high number of cases against China is largely because of the unfairness of the U.S. antidumping law as applied to China. Apart from the loss of market share resulting from these cases, China has incurred legal fees that, in some instances,

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27Ibid.

exceeded the total value of the sales of the merchandise involved. Therefore, China's benefit from export trade has suffered greatly. Third, the amendment and the application of the U.S. antidumping law to China is contrary to the basic principles of law: consistency, stability, predictability, and fairness. The U.S. determination of dumping margins is not based on the real cost of the Chinese product, but on the cost data from a selected surrogate. It is impossible for China to predict what the arbitrary "fair value" will be. Meanwhile, to avoid antidumping petitions, China is forced to inflate prices artificially. This, in turn, unfairly restricts China's access to the U.S. market. Moreover, in certain antidumping cases against Chinese products, the Department of Commerce unfairly chose surrogates whose stages of economic development are by no means comparable to that of China, thus leading to the determination of artificially inflated dumping margins.

Other protectionist legislation being debated in the United States would also have a negative effect on Sino-U.S. trade. For example, a proposal by the Ninety-Ninth Congress as applied to nonmarket economies suggests that instead of relying on a fair value based on costs in a surrogate, the average import price be used as the fair value benchmark. This proposal also ignores the fact that China is not a nonmarket economy. Professor Nicholas Lardy of the University of Washington pointed out at the U.S. Senate China Trade Caucus on U.S. trade and investment policy for China that today about half of all China's products are being sold at market or quasimarket prices rather than being distributed at prices fixed by the state. It is expected that within two to three years 70 percent or more of all products will be sold at market or quasimarket prices. Professor Lardy said, "This transformation has now proceeded so far that one can legitimately pose the question of whether or not China should continue to be designated as a nonmarket economy under U.S. trade laws." He suggested that "United States trade law and policy should be reexamined to assure that it is congruent with this new reality."

U.S. discriminative protectionism is obvious in textile trade. The United States has determined about 1,500 quota categories and signed forty-one bilateral agreements to implement the quotas. The U.S. textile
producers, as U.S. Trade Representative Clayton K. Yeutter said, could be
totally relieved from the threat of excessive imports and have gained
considerable profits.\textsuperscript{34} Despite all this, however, the U.S. Congress still
desires a new textile bill. The bill, if passed, will be a direct violation of the
Multilateral Fiber Arrangement, the General Agreement on Tariffs and
Trade (GATT) (Article 19), and most U.S. bilateral agreements. The United
States will pay a high price and lose the respect of more than ninety GATT
signatories.\textsuperscript{35}

China enjoys GSP privileges from all the other developed countries,
but not from the United States. The United States excludes China because
China has not acquired full membership in the GATT. This argument can
hardly hold water. China was one of the original GATT signatories. Its
membership will be "restored" when conditions are appropriate. Furthermore, GSP is a kind of nonreciprocal trade privilege granted by developed
countries to developing countries, regardless of whether the latter are
GATT signatories. Otherwise one cannot explain why China enjoys GSP
privileges from other developed countries.

\textit{The Investment Climate in China and Related Issues}

Many foreign investors have complained about the unfavorable invest-
ment environment and high costs in China. The unfavorable investment
environment includes the imperfect "hard" environment (such as the
inadequate industrial infrastructure) and the unsound "soft" environ-
ment (such as overwhelming government bureaucracies and uncertainties
about legal procedures). Investment costs are raised by several factors:
low productivity leads to high labor costs; the unavailability of qualified
raw materials in the domestic market raises costs because of imported
inputs (especially after the renminbi was devalued); and bureaucratic red
tape causes the loss of business opportunities. A further disincentive is the
Chinese policy of requiring foreign investment enterprises to earn their
own foreign-exchange requirements.

These problems are indeed real. They are caused by the conservative
attitudes stemming from the longstanding "closed door" policy and from
various degrees of the Left-deviationist thinking. The well-known bu-
reaucracy is also one of the big evils. China is in transition from a rigidly
planned economy to a planned market economy and its macrocontrol
mechanism for the market economy has not been well established. Moreover, between the central government and local governments, the coastal
port cities and the inland areas, the eastern region and the western region,
\footnote{U.S. Consulate General, EB-1361.}
\footnote{Ibid.}
Indeed among all localities and economic sectors, one finds differences in degrees of openness, in the rate of economic development, and in the understanding and implementing of economic policies. As economic reform proceeds, local areas and various economic sectors, having gained more autonomy, have formed interest groups. These groups typically try to persuade the government to favor their own areas or sectors. This leads to weak macrocontrol, uncertainty, contradictions, and confusion, causing discontent among foreign investors.

The Chinese government has taken steps to resolve these problems. The new "Provisions for the Encouragement of Foreign Investment" provides more preferential terms for foreign investors, including the reduction of or exemption from the Enterprise Income Tax and the Consolidated Industrial and Commercial Tax. The Chinese government has addressed the foreign investors' foreign-exchange problem with such policies as "production for import" and the establishment of the foreign-exchange market, in addition to encouraging foreign investment enterprises to export and to reinvest their profits. "Production for import" encourages foreigners to invest in industrial sectors that produce goods formerly imported. China's foreign trade companies will then use import quotas to purchase the products manufactured by these sectors (the payment is by foreign exchange), instead of importing from foreign markets. Finally, the government now permits a kind of internal market for foreign exchange. Foreign enterprises and selected Chinese enterprises in need of foreign exchange can purchase it from those who have more than they need, at a floating exchange rate. In Shanghai, the foreign exchange market started to operate on September 27, 1988, and it soon became very brisk. Exchange rates quoted in this market are usually higher than that quoted by the government. For example, the exchange rate of U.S. dollars floats about 100 percent higher than the official rate.

Foreign investors still complain that the foreign-exchange market is too small and too strictly controlled and that other measures designed to ease the foreign-exchange problem are not quite to the point. These views might be right, but relaxing foreign-exchange controls in China will take

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time because the modernization program needs large amounts of imports. Strict controls are necessary because of the extreme shortage of foreign exchange. It should be pointed out, however, that the foreign-exchange controls are only temporary. When China's economy improves, its foreign-exchange reserves increase; and when the market mechanism is fully developed, the shortage of foreign exchange will be relieved, and controls over foreign exchange will be relaxed. The experiences of many newly industrialized countries prove this point.

According to an American consulting company's survey of American executives who have started joint ventures with Chinese enterprises, 22 percent of the American executives said the recoupment of investment had greatly exceeded their expectations; 28 percent said that it had exceeded their expectations; 44 percent said that it had fulfilled the target; and 6 percent said that it had failed to reach the target. Although the survey might not be conclusive, one can reasonably predict that, under the general guideline of "entering the international economic arena boldly," the investment environment will be increasingly improved.

**Issues of Trade Credits**

Sino-U.S. trade volume is much lower than it should be. This trade could be increased if the United States were to provide China with adequate export credit. The United States obviously has not done enough in this respect, compared with Japan who, through its Overseas Economic Cooperation Fund, has committed US$3.5 billion to aid various construction projects in China. A large portion of the loan proceeds has been used to purchase Japanese products and equipment. The Japanese Export-Import Bank has also provided China with several billion dollars in trade financing. The EEC countries have extended significant amounts of official development assistance and export credits that have led to rapid growth of Sino-EEC trade. By comparison, the U.S. Export-Import Bank up to now has supplied only a small amount of funding, and the United States has never provided any official development assistance. This is one of the reasons that Sino-U.S. trade has not developed as fast as Sino-Japan trade or Sino-EEC trade.

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38The survey was conducted by A.T. Kearney Consulting Company. For the results of the survey, see *International Business Monthly*, December 1987, p. 5; *Jie Fang Ribao* (Liberation Daily), July 28, 1988.


40Ibid.

41Ibid.
Political Factors in Sino-U.S. Trade Relations

Political factors involved in Sino-U.S. trade relations are often sensitive, especially in the case of such issues as U.S.-Taiwan relations, human rights, and birth control policy. The Taiwan issue is affecting almost all the important trade issues between China and the United States, such as China's participation in the Asian Development Bank, U.S. technology transfer to China, and Sino-U.S. arms sales. Some people will always raise the Taiwan issue whenever the U.S. Congress reviews trade or business issues concerning China. Other issues such as human rights, birth control policy, and the Tibet issue are China's internal affairs, but U.S. interference has resulted in diplomatic friction, which in turn has affected the development of bilateral trade. The Five Principles for international relations provide the best basis for shaping Sino-U.S. political relations. Improved Sino-U.S. relations would have significant impact well beyond the economic arena. The deterioration of relations would benefit neither country.

Development of Sino-U.S. Trade Relations and the Future

Despite the current problems in Sino-U.S. trade relations, solutions can be found. Important conditions favor the further development of Sino-U.S. trade.

1. The rate of economic growth in the Pacific-Asian region is the highest in the world. The focus of the economic policies of China and the United States overlap, in that the center of gravity of U.S. trade has gradually shifted from the Atlantic coast to the Pacific coast. Since 1985 the total trade volume between the United States and the Pacific-Asian region has surpassed that between the United States and Europe. Most of the U.S. trade deficit is from trade with the Pacific-Asian countries. Given the expectation that the economic development of that region will be the fastest in the world through the rest of this century, the United States now has a heightened interest there and less so in Western Europe and Latin America. In 1987 U.S. trade with the Pacific-Asian region reached US$240.8 billion, or 36 percent of U.S. foreign trade.42

42When interviewed by Chinese correspondents in 1984, President Reagan said that the United States is typically one of the Pacific Basin countries, and China is no doubt the biggest and most important country in the Basin. See World Economic Herald, November 17, 1986, p. 1; U.S. Consulate General, EB-1359.
Similarly, China's most important trading partners are also in the Pacific-Asian region. China's exports to the region account for 55 percent of its total exports, and the imports from that region account for 70 percent of its total imports.\textsuperscript{43}

2. The markets of China and the United States are the most attractive in the world. In 1987 the total volume of U.S. trade reached US$550 billion, 21 percent of its gross national product (GNP).\textsuperscript{44} The purchasing power per capita in the United States is among the highest in the world. China has the largest population in the world, although its per capita purchasing power is low.\textsuperscript{45} The market in China is growing rapidly because of the modernization program. Farsighted trade policies of both countries will be a blessing to their people.

3. Most commodities in Sino-U.S. trade are reciprocal to the needs of both sides. Therefore, the expansion of Sino-U.S. trade has its comparative benefits. For example, China still needs to import agricultural products because the labor productivity is low in China and agriculture is not evenly developed. As for natural resource products such as fertilizer, paper pulp, and timber, China needs to import a certain amount to balance demand and supply as the former greatly exceeds the latter. The United States can be a supplier of these goods. Moreover, China's modernization program needs technology and equipment from the United States. Similarly, with the development of its economy and trade, China will be able to supply more and more goods and labor services that the United States needs.

The favorable development of Sino-U.S. trade relations depends on some other factors as well. We address these now.

\textit{Economic Growth of Both China and the United States}

The United States is the vanguard of the world economy and a slowdown there could cause international trade to shrink. According to

\textsuperscript{43}Assistant Minister of Foreign Economic Relations and Trade Shen Jueren's speech at the opening ceremony of the Research and Training Center for the International Trade in China and the Pacific-Asian Region; see \textit{International Business}, December 19, 1987, p. 1.


\textsuperscript{45}According to a research report presented by the State Council's Institute of Economic Restructuring, China's per capita annual consumption in 1986 was 450 yuan RMB, or US$120 (the exchange rate was US$1 = RMB3.71). See "A Comparison of Consumption Levels Between the Chinese and the Peoples of Other Countries," \textit{World Economic Herald}, September 17, 1987, p. 14.
the U.S. Department of Commerce, the U.S. economy has grown for fifty-seven consecutive months, creating more than 13 million jobs. The unemployment rate in the United States is 5.9 percent, the lowest in eight years. Economic growth, a major reason for the dramatic increase of U.S. imports, can contribute to the stabilization and growth of Sino-U.S. trade.

China's rapid economic development since economic reform was introduced has affected its foreign trade as well. In the Sixth Five-Year Plan (1981–85), China's annual GNP growth was 10 percent. In the Seventh Five-Year Plan, the growth will be 7.5 percent, lower because of the larger base and the need to prevent the economy from overheating. Foreign trade can be expected to grow at a corresponding rate. In this foreign trade the United States is an important buyer as well as a supplier of high-technology products, capital goods, and industrial raw materials for the enormous Chinese market.

The Speed of Deepening China's Economic Restructuring

At the Third Plenary Session of the Eleventh Central Committee, China launched a strategic plan for economic development, involving three steps. The first was to double the GNP of 1980 and solve the problem of food and clothing for the Chinese people. This task has been largely fulfilled. The second step is to double the GNP again by the end of this century, thus enabling our people to lead a fairly comfortable life. The third step is to reach the per capita GNP level of moderately developed countries by the middle of the next century. This will mean that modernization has been basically accomplished and that the Chinese people have begun to enjoy a relatively affluent life. The most important task at present is to complete successfully the second step. Executing the plan for economic development basically depends on accelerating and deepening the process of restructuring the economy and opening more to the outside world. China is instituting reforms in planning, investment, allocation of materials, monetary affairs, finance, and foreign trade.

The primary method of reforming the management of foreign trade is to introduce the contracting responsibility system into all the foreign trade

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corporations. The contract involves a quota for foreign exchange to be earned, as well as a profit-and-loss quota. In the past the management of the foreign trade corporations was rigid and had no vitality. These enterprises had no incentive to compete internationally. The new reforms are changing that, but some problems have emerged because other supporting reforms have not been instituted fully. These problems are as follows:

1. Competition among the coastal port cities has driven up the prices of raw materials needed for manufacturing export goods, because of the dual pricing system.
2. The existing taxation system has lowered the profits of export-oriented enterprises and made foreign trade companies suffer heavy losses.
3. In the special economic zones where preferential policies apply, some enterprises have been engaged in illegal dealings, and smuggling is common.
4. Flexible market mechanisms have not been worked out and macrocontrols remain weak.

Because China's export capacity largely determines the volume of her foreign trade, the reform of foreign trade management must be accelerated and adapted to the environment of the world economy. Further reform will give foreign trade enterprises full authority over management and full responsibility for profit and loss. This will ensure better coordination between industry and foreign trade and eventually lead to a system whereby foreign trade corporations can act as agents for other enterprises in the export of their commodities.

We believe that, with the formation of a flexible market mechanism and success in reforming the management of foreign trade, China will become one of the most attractive markets for U.S. investors and businesses.

China's economic reform has increasingly deepened. Recently, some important legislation has attracted wide attention. The Chinese government has permitted privately owned economic entities to exist and develop within the limits prescribed by law. And now land ownership can be separated from the right of land use, permitting paid transfer of the right to use state land. This involved the amendment of the Constitution. The National People's Congress has passed the amendment, and the State Council has promulgated the regulations implementing the law. This law will instill more vitality into China's economy. Its far-reaching significance cannot be overestimated.

\[^{49}\text{See the People's Daily, June 29, 1988; by the end of 1987 the number of private enterprises employing more than eight employees had reached 225,000, with the total number of 3.6 million employees;}\text{Jie Fang Ribao, July 23, 1988.}\]
The Opening of the Markets of Both Countries

The leaders of the two countries are well aware that Sino-U.S. trade depends on a more open economic environment. U.S. Secretary of State George Shultz said, "For China, for the United States, and for other nations as well, this new Information Age will require, above all else, that we continue to open our doors to one another. When such doors are open—when people, goods, and ideas can flow freely between us—both Chinese and Americans can learn from each other. Through such openness, societies are better able to stimulate and take advantage of the inherent dynamism and creativity of their peoples." General Secretary Zhao Ziyang's report to the Thirteenth Party Congress also emphasizes that adhering to the reform and the open policy is China's basic policy and that the socialist market system must be a competitive and open system. In the Seventh Five-Year Plan, the objective of the open policy, while concentrating on improving export capacity in order to earn more foreign exchange, is to further expand foreign trade, make use of more foreign funds, increase technology imports, and promote other economic and technological cooperations. The targets are as follows:

1. By 1990 the total trade volume is planned to reach US$83 billion. This is an average annual increase of 7 percent, the annual export increase being 8.1 percent and the import increase being 6.1 percent. The proportion of exports represented by manufactured goods will gradually increase. Among imports, priority will be given to software, high technology items, and key equipment.

2. Foreign funds will be used primarily for energy, transportation, communications, and raw materials, especially for the expansion and modernization of the power industry, the oil industry and ports, and the technical reconstruction of the engineering and electronic industries. Foreign funds will also be used to improve the country's export capacity and the production of import substitutes, thus generating more foreign funds.

3. Selective and systematic imports of technology and knowledge will continue to increase. The imports of technology will concentrate on the technical reconstruction of existing enterprises. Priority will be given to the imports of the technology and

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51 "7th FYP," p. 3.
equipment that can contribute to improving export capacity or developing import substitutes.

The Stabilization of Sino-U.S. Political Relations

Trade sanctions can be used to achieve political ends, and political factors are often involved in Sino-U.S. economic relations. Despite the different political systems and differences over values, human rights, the Tibet issue, and the Taiwan issue, the two countries can build up an international political environment in favor of the smooth development of Sino-U.S. trade if both sides can respect and understand each other's positions and peacefully eliminate the differences through friendly consultation. The development of Sino-U.S. economic relations will in turn become one of the important factors for closer political relations between the two countries.

The Balance of Foreign Exchange in China and the U.S. Trade Deficit

China’s imports and exports are limited by its shortage of foreign exchange. The imports have to be controlled because of the foreign-exchange problem. As for the exports, in order to earn foreign exchange, China can only develop low-value industries and cannot help but neglect high-value industries. Thus China’s exports are not diversified, but instead are concentrated in a few commodities. China should, on the basis of the demands of the world market and its own strong points, “make vigorous efforts to develop export-oriented industries and products that are competitive and can bring quick and high economic returns. We should also work hard to improve the quality of export commodities, rationalize their mix, and open up new markets in different parts of the world with a view to achieving a relatively rapid and sustained growth of export trade. In addition, we should do more to expand tourism, to increase export of labor services and technology and to increase the amount of foreign exchange earned from sources other than trade.”52 China wants greatly to expand its trade with the United States and other countries. But the current protectionist tendency in the United States has put China in an unfavorable position. China sincerely hopes that those Americans with a vision can adopt a correct attitude toward the issue of Sino-U.S. trade balance and play a positive, rather than a negative, role in expanding the trade between the two countries.

As the U.S. trade deficit remains high, protectionism in the United States is beginning to gain ground. The underlying causes of the high deficit are

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52Zhao Ziyang’s report, p. 2.
the budget deficit of the U.S. government and the declining competitiveness of U.S. industries. The high U.S. budget deficit made the U.S. economy unstable, led to the increase of federal debts and high interest rates, and attracted foreign funds into the United States. It also drove up the value of the U.S. dollar, thus making U.S. commodities less competitive, which in turn led to a high trade deficit. While the trade deficit has caused the rising pressure of domestic protectionism, it has also made the U.S. dollar unstable. As a result, the dollar has been devalued and stock prices have gone down. If foreign funds flow out of the United States, the growth of the U.S. economy will slow down, and U.S. trade will decline. Then the whole world economy could be affected and experience some kind of recession. Thus the high U.S. trade deficit, if not reduced, might also affect the expansion of Sino-U.S. trade.

Although all these factors are constantly changing and precise predictions are difficult, we are optimistic about the future of Sino-U.S. trade. However, in order to promote further development of trade, the two countries must take some steps.

More Information About Each Other's Markets. Sino-U.S. trade was completely suspended for a long period. The social and political systems of the two countries are different, as are the backgrounds of culture and general mentality. As a result, China and the United States have many different ways of doing foreign trade. For example, many Chinese exports to the United States are transshipped through Hong Kong; some American businessmen who have come to China do not know the right organization to do business with. Some Chinese commodities do not conform to U.S. technical standards, while some American commodities are too advanced for the conditions of China. If the enterprises of both countries want to sell their products in each other's markets, they should know the business customs and market conditions in the other country. As for China, the urgent task on hand is to train foreign trade personnel.

More Competitiveness of the Commodities of the Two Countries. Both China and the United States need to make their commodities more competitive. Many of the Chinese commodities are not as competitive in the U.S. market as those from South Korea and Taiwan. Some U.S. products (especially cars and household electrical appliances) cannot compete with Japanese products in the Chinese market. Both sides should improve the quality of their products and make the prices reasonable in order to fit the conditions of the other country. It should be realized that protectionist
actions are unwise. This argument is supported by the fact that the U.S. textile industry, after being protected for more than twenty years, still must rely on government protection. However, the U.S. restrictions on textile imports from China force China to increase the variety of its textile products and to raise the processing level. Both countries should greatly improve the quality of their products so they are more competitive in the world market.

**Bilateral or Multilateral Preferential Treatments.** China has applied for restoration of its GATT membership. It has already joined the International Monetary Fund, the World Bank, the Asian Development Bank, and the Paris Convention. In all these organizations the United States plays an important role. China's participation will no doubt help build a closer link with the United States and the international economic community. China expects the United States to extend bilateral or multilateral aids to China for its modernization program.

**Economic Cooperation in Various Forms.** China and the United States have now gained experience in various forms of economic cooperation, including processing trade, compensation trade, reciprocal investment, and technology transfer. Both sides can make better use of these methods for expanding trade and increasing investment. For the past few years, the U.S. investment in China has increased considerably. In the Shanghai area the number of U.S. investments (including contractual ventures, equity joint ventures, and solely U.S.-funded enterprises) rose from fifteen in 1985 to forty-three in 1987, an increase of almost 200 percent. Among these, equity joint ventures increased from nine to thirty-three, an increase of more than 250 percent, and the number still keeps going up. As for the whole country, foreign investments approved in the first six months of 1988 reached US$2021 million, 1.86 times the amount in the same period in 1987. What is especially noticeable is the dramatic increase of enterprises wholly owned by foreigners. The number of these enterprises and the foreign funds agreed increased six times and twenty-three times (to US$262 million) respectively compared with the figures in the first six months of last year. At the same time the number of U.S. investors in China increased 2.3 times.  

**More Governmental and Nongovernmental Trade Contacts.** China and the United States have set up three ministerial-level joint commissions.  

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55They are the Joint Commission on Science and Technology, the Joint Economic Committee, and the Joint Commission on Commerce and Trade.
China's International Trade Promotion Commission and the U.S. Trade and Development Agency have also made great contributions to the promotion of Sino-U.S. trade. These organizations and institutions should be better used to promote contacts and mutual understanding between the enterprises of the two countries.

Recently, the U.S. Commission on Integrated Long-Term Strategy presented a report to President Ronald Reagan. It predicts that by the year 2010 China's GNP will have risen to second place in world economic output, just behind the United States and surpassing Japan. Although there are disputes over the methods used for the estimate in the report, this prediction represents one kind of observation of the trends in the world economy. If it proves to be true, Sino-U.S. economic relations will have had a greater breakthrough. Although obstacles in the development of Sino-U.S. trade remain, we are optimistic about the prospects.

COMMENTS

Zhang Jialin comments:

I have three comments on issues raised in the two papers by Wang Xi and Chen Yawen and by Nai-Ruenn Chen. First, Professor Chen stated that trade friction between the United States and China may grow further if China pursues an export-led growth model, because unlike the 1960s and 1970s, now the United States has large budget and trade deficits. I would not be so pessimistic. The coastal areas of China are now adopting an externally-oriented economic strategy, which means not only increased exports of finished products, but increased imports of raw materials as well. For exports, China mainly focuses on labor-intensive products, which the United States has not produced for a long time. In this trade, therefore, China competes primarily with other Asian exporting countries, not with the United States. So there is no reason for the United States to restrict these Chinese exports. Concerning the budget and trade deficits, I agree with Professor Wang's point, that the U.S. trade deficit with China in 1987 amounted to only two percent of the total U.S. trade deficit. Hence it

is unfair to attribute the huge U.S. trade imbalance to China and thus to restrict imports from China.

Second, as I mentioned in my paper, in light of the boom in the U.S. textile industry, the United States could be considering a reduction of, rather than an increase in, controls on imports of textiles from China. With capacity utilization in textile mills now above 90 percent, continuing protection for that industry will certainly lead to a recession. People should not forget that on the eve of the last recession (1981–82) the capacity utilization of manufacturing in the United States was 89 percent. It is likely that further increases in U.S. domestic textile production and restriction of textile imports would harm the U.S. economy itself.

I fully agree with Professor Chen's remarks that China should diversify its export products. At the same time, I hope the U.S. side could understand that it takes time for China to reform its industry and trade structure. Within the transition period, further restrictions of Chinese exports will only delay China's structural adjustment.

Third, in addition to textile quotas, the antidumping code is a serious obstacle to Sino-U.S. trade. Both papers elaborate on this issue. Here I want to illustrate the problem with the experiences of Shanghai. Many of Shanghai's exports to the United States have been subjected to antidumping penalties. The U.S. determination of dumping margins is not based on the real cost of the Chinese product, but on the production costs in countries that are at stages of economic development by no means comparable to China's. Enamel pots made in Shanghai and exported to the United States provide an example. The U.S. Department of Commerce has used the average import price of "surrogates" in the Netherlands, France, West Germany, Sweden, Canada, and Japan, rather than Paraguay, Thailand, Indonesia, India, Sri Lanka, and Malaysia, as stated in Professor Chen's paper, to determine fair value, thus substantially inflating the dumping margin. Consequently, Shanghai was forced to suspend enamel pot exports to the United States in 1986 and 1987.

As Professor Chen correctly points out in his paper, many U.S. firms have complained that the U.S. antidumping law as applied to China is not fair and predictable. Some U.S. government officials and congressmen have advanced recommendations that would make the antidumping law more compatible with the current state of China's changing economy. Unfortunately, these recommendations have not been accepted by Congress. Chinese officials have estimated that if the United States continues to determine the cost of Chinese products by relying on surrogate prices, 80 percent of China's export products to the United States could be subject to dumping penalties. This would severely harm Sino-U.S. trade.
Part Six
Foreign Investment, Joint Ventures, and Technology Transfer
We are now in a period in which new technology is developing rapidly. Scientific and technological progress, including modern management, determines the level of productive forces and their growth rate. In an open and competitive international environment, our productive forces just cannot develop rapidly without scientific and technological progress. In that case, our country will lag further and further behind the developed countries, and it will not be able to stand on its own feet among the nations of the world. (Speech by Premier Li Peng at National Science and Technology Conference, Beijing, March 10, 1988)

China's efforts to become a more active participant in both regional and global technology and economic markets promise to have important implications for the evolving international system in the coming decades. Beijing's "open door" to trade, foreign investment, managerial expertise, and imported technology constitutes the primary vehicle through which China will make its presence felt. From the perspective of both buying and selling, the present open-door policy is designed to act as a catalyst for the country's overall modernization program. Through increased exposure to advanced country management methods, production techniques, and technical know-how as well as the dynamics of foreign markets, the PRC's leadership hopes that Chinese enterprises will become more productive and efficient, thereby enabling them to offer a more competitive assortment of products in key overseas markets and to serve a growing domestic demand as well.

The acquisition of foreign technology, in particular, is viewed as the key element in China's strategy for entering world markets. Technology transfer has become something of a compulsion among top Chinese leaders, who see tremendous opportunities for China to leap ahead through the application of foreign equipment and technical knowledge. This is not to
suggest that China has abandoned its goal of greater technological self-reliance. On the contrary, foreign technology will be used to enhance indigenous efforts, thereby reducing the time, cost, and risk involved in modernizing existing enterprises, developing new products, and improving the quality of current products. In spite of the somewhat uneven approach to the importation of foreign equipment and know-how since 1978, major efforts remain underway to secure access to a variety of key product and process technologies. And while the leadership in Beijing may be concerned about excessive expenditures of foreign exchange as well as problems of technological dependency, it has not retreated from its overall commitment to the acquisition of foreign technology.

Heretofore, most of the advanced industrialized nations have been supportive of China's expanded participation in the world economy and technology markets. From the perspective of foreign firms, the lure of the enigmatic "China market" has been a major driving factor behind this support. While some companies may want to purchase Chinese raw materials or utilize China as an export platform, most companies are ultimately drawn by the PRC's potential as a market for capital equipment and technology or as a market for consumer goods, assorted commodities, and services. In many cases, given the PRC's almost insatiable demand for technology, some foreign firms have been willing to "leverage" selected aspects of their product and process know-how for greater access to the Chinese domestic market.

The central argument of this chapter is that a substantial amount of learning has taken place in China with respect to the importation of foreign technology. The Chinese pattern of behavior since 1978 supports the contention of several international relations scholars, who have asserted that through the process of learning and the sharing of common norms, countries will come to see greater benefits in collaboration rather than confrontation. Yet, despite Chinese progress in this area, many uncertainties remain with regard to China's increased participation in the global economy—arising, in most cases, from the uneven performance in the use of foreign technology. Moreover, within a dynamic world economy, major changes taking place in the nature of manufacturing technology and production organization have raised many questions about where the key sources of competitive advantage may be found for China as well as for other emerging nations. For example, China's greatest resource, its relatively untapped reservoir of "inexpensive" labor, may become increasingly irrelevant as a major asset in certain key industrial sectors—for example,

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the automotive industry—in terms of establishing the country's competitive position.

**China's Modernization and the Changing Face of the International Economy**

The 1960s and 1970s were a period of rapid growth and change in terms of a range of international economic and technology interactions. The face of the global economy was transformed with the emergence of Western Europe and Japan as a counterbalance to America's previous technologically dominant position. In addition, Grunwald and Flamm in *The Global Factory* have noted that during this period for the first time the operations of American multinational corporations (MNCs) seem to have switched, on a fairly large scale, to overseas production of manufactured exports for the U.S. domestic market, with Asia and Latin America being the two largest areas of concentration. In most cases, U.S. firms sought out production sites characterized by cheap labor as a means of competing against the rising Japanese presence in such industries as consumer electronics and textiles. The U.S. approach stood in sharp contrast to the actions taken by Japan, which viewed overseas production primarily (though not exclusively) as a means of addressing local market opportunities as well as third country markets. Moreover, as O'Neill suggests in *The Technology Edge*, Japanese firms were also busy investing in expensive, large-scale automated production equipment at home—which provided Japan with higher levels of productivity, reliability and quality as requisite economies of scale were attained.

Similarly, the 1980s have also been a time of significant change, especially in the area of technology. Whereas it was once possible for places such as Taiwan and South Korea to enter into the international market through participation in low-level assembly operations and to offer relatively low wages, this is no longer the case. Technological advances in transportation and communication, which were largely responsible for the movement of U.S. industry overseas, are now enabling some of those same industries (in whole or in part) to move back onshore. As the recent report by MIT entitled *The Future of The Automobile* points out, "[T]he advantages of low wages in the less-developed countries do not offset the quality and coordination handicaps, the country risk, and the use of many

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more hours of labor for most production steps." A similar argument can be made for segments of the microelectronics industry, where automation and other related changes in manufacturing—all spurred on by the demands of greater technological complexity and precision—are making it possible once again to fully integrate design, production, and testing in one location.5

One could argue that what we are really talking about is the emergence of so-called high-technology industries in the industrialized nations and that the growing emphasis on these "advanced" industries will allow some of the so-called traditional industries with their mature technologies to move steadily to the developing world. While this may be an accurate perception in some respects, current technological changes are making selected segments of so-called traditional industries once again viable in the advanced nations. Moreover, as Robert Reich shows in The Next American Frontier, these traditional industries serve as the gateways to new ones.6 Driven by technological breakthroughs, U.S. industry has begun to take traditional sectors such as steel, chemicals, textiles, and automobiles and restructure them toward higher-valued, more sophisticated businesses like specialty steel and chemicals, precision automobiles, and so on. Part of the economies of scale that GE hopes to capture is in such basic industries as wood, plastics, and glass. The introduction into U.S. industry of flexible system production—a system that merges the once separate functions of research and development, engineering, purchasing, manufacturing, and distribution—will underlie the ability of American companies to compete on a global basis at present and into the future.

In effect, the globalization of critical industries such as automobiles and electronics has changed the nature of the attraction as far as overseas production and source locations are concerned. The prerequisites for participation in these global industries have undergone a major shift in terms of management, technology, production, and personnel. As far as

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5Even in those cases where labor-intensive tasks remain, technological change and advance have allowed those tasks to be specifically excerpted from the overall production scheme, thereby diminishing to some appreciable extent the scope and level of technology transfer. See Robert Ballance and Stuart Sinclair, Collapse and Survival: Industry Strategies in a Changing World (London: Allen Unwin, 1983).

6Robert B. Reich, The Next American Frontier (New York: Times Books, 1983). Reich argues that "it is far easier to move into flexible system production by upgrading manufacturing skills and know-how and elaborating networks of suppliers, distributors, and customers already in existence than by leaping into a totally uncharted sea of products and processes unrelated to an industrial base of the past" (p.130).
technology transfer is concerned, a country needs to have technology, that is, a basic technological infrastructure, in order to attract more technology. At the same time, as Vernon notes in a recent article in the *Harvard Business Review*, there continues to be active consideration of ways to bring "lost" industries back to the United States.\(^7\) And while it would not be possible or desirable to bring all U.S. industry back, these pressures are continuing to build, and we have already begun to see a response in terms of domestic technology development.

Today, overseas production and sourcing are no longer seen as a short-term response to a simple wage-rate phenomenon. Corporations with worldwide sales are no longer able to operate as multidomestic firms. Rather, they must be global in scope and orientation, choosing technologies, designing products, selecting manufacturing locations, and establishing marketing arrangements on a worldwide basis. Within this context, the decision to locate a production facility abroad or to transfer technology to a foreign recipient must be based on a strategic set of considerations. While factors such as goodwill and politics are important in this regard, most firms are looking for locations where high value added can be obtained, where global economies of scale can be efficiently and effectively attained, and where the local infrastructure will help facilitate global integration and linkages, that is, adequate port facilities, air links, and communication capacity. And most important, the transaction costs of engaging in a manufacturing or technology transfer relationship must not be excessive—both in terms of time and money.

The managerial requisites for participating in such a complex network of economic and technological relationships have also changed. As Abernathy et al., noted in their book *Industrial Renaissance*, "[T]he skillful implementation of technology matters as much as does the quality of technical design."\(^8\) It is possible, for example, that the requirements of economies of scale necessitate the establishment of a fairly sophisticated production segment in an overseas location. It is at this stage, however, where progress on the learning curve in the past will begin to yield future benefits for places such as Brazil, Singapore, Taiwan, and South Korea—all of whom have achieved substantial levels of technological progress and have become key players in the global networks of many large multinational firms. Thus, while Reich and others may be correct in suggesting that sophisticated machinery may be moved to overseas locations, a clear


preference hierarchy exists in terms of the characteristics of possible and viable partners. The use of more complex and precision equipment, for example, means that the service and maintenance requirements will increase as will various aspects related to the “software” side of the production process—all of which exist in sufficient quantities only in a few locations outside of Japan and the Western industrialized countries. In other words, while standardization may facilitate continued overseas activities by foreign firms, the imperatives of closer coordination and precision may call for a set of managerial skills and capabilities generally absent or in short supply in most developing countries.

These shifts in the nature of production and the sources of competitive advantage have important implications for China because they could serve to inhibit Chinese objectives in a number of significant areas, particularly with respect to the acquisition of foreign technology—whether it be through equity-based investments or arms-length licensing agreements. Along with the increased capital requirements associated with building modern facilities, they constitute important barriers to entry in the international market for countries such as China.

Technology Transfer and China's Modernization Strategy

China's strategy for modernizing its domestic technological capabilities is a multifaceted one, reflecting a combination of top-down, market-oriented, and horizontal policy initiatives. In essence, the current drive is characterized by the strong emphasis being given to organizational reform and structural change—though it must be acknowledged that the Chinese have not entirely backed away from the “big push” approach to technological advance. Nonetheless, the degree to which the leadership is prepared to initiate fundamental change in the science and technology area is significant. This is best reflected in the March 1985 Central Committee Decision on “Reform of the Science and Technology Management System.” The document is significant because it spells out a broad array of modifications with regard to the funding of scientific and technological activities as well as the treatment of technical know-how and the procedures for managing scientific and technical personnel.9 It also serves to complement a number of other initiatives introduced over the past few years, for example, the “high-technology development program,” the “spark plan,” and the “torch plan”—all of which are under the aegis of the State Science and Technology Commission.

From the perspective of technology transfer, the reforms hold particular significance. Three of these initiatives stand out. Most important is the growing emphasis on the technical transformation of enterprises. Total investment in technological transformation and equipment renewal for state enterprises during the Seventh Five-Year Plan will be 276 billion yuan (RMB). While in 1986 and 1987 there was a partial slowdown in technology imports for the purpose of transforming existing enterprises because of foreign-exchange factors, the total projected amount for the Seventh Five-Year Plan. This decision to give attention to the renovation and reorganization of existing plants and facilities reflects the recognition that the "software" side of industry, that is, plant layout, scheduling procedures, inventory control, and so on, may be just as vital to increasing productivity as is the acquisition of large quantities of foreign equipment. Thus China has deemphasized its previous focus on whole plant purchases as the major form of so-called technology import—in the belief that this acquisition vehicle did not provide adequate levels of technology transfer—and is now stressing the acquisition of "know-how" and basic design data in its relations with foreign companies.

The technical transformation of enterprises program is particularly interesting because a substantial portion of the funds to support the effort is now being allocated in the form of loans (daiquan) instead of grants (baoquan). In addition, the central government is no longer the primary source of funds; since 1981 the locus of funding has shifted to the local governments at the provincial and municipal level as well as banks. (See Table 1.) These two shifts have served to place a greater degree of overall responsibility and vested interest regarding the success of various projects directly in the hands of those responsible for project implementation.

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12See "Excerpts of the Seventh Five-Year Plan Released," Xinhua, April 14, 1986, translated in Foreign Broadcast Information Service, Daily Report-PRC (FBIS-PRC), April 8, 1986, pp. K29–30. Monies provided for this program in the Sixth Five-Year Plan were increased 66.6% over funds contained in the Fifth Five-Year Plan, which is further testimony to the importance attached to this effort.

13As a means to acquire foreign technology, China is now stressing three forms of cooperation in addition to direct foreign investment: (1) technology-trade tie-up (jimao jiehe); (2) production-trade tie-up (gongmao jiebe); and (3) one purchase and three cooperations (yimai sanbeizuo).
Table 1
Investment in Technical Transformation and Upgrading (in 100m RMB)

<table>
<thead>
<tr>
<th>Year</th>
<th>Foreign Direct Investment</th>
<th>State</th>
<th>Local</th>
<th>Banks</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981</td>
<td>1.4</td>
<td>34.8</td>
<td>142.4</td>
<td>46.0</td>
<td>224.6</td>
</tr>
<tr>
<td>1982</td>
<td>2.7</td>
<td>32.9</td>
<td>190.1</td>
<td>64.0</td>
<td>289.7</td>
</tr>
<tr>
<td>1983</td>
<td>2.7</td>
<td>40.8</td>
<td>232.4</td>
<td>81.9</td>
<td>357.8</td>
</tr>
<tr>
<td>1984</td>
<td>2.8</td>
<td>58.1</td>
<td>277.20</td>
<td>103.9</td>
<td>442.0</td>
</tr>
<tr>
<td>1985</td>
<td>15.0</td>
<td>21.8</td>
<td>370.1</td>
<td>199.2</td>
<td>606.1</td>
</tr>
<tr>
<td>Total</td>
<td>24.6</td>
<td>188.4</td>
<td>1,212.2</td>
<td>495.0</td>
<td>1,920.2</td>
</tr>
</tbody>
</table>

Source: Statistical Yearbook of China, 1987 (Beijing: State Statistical Bureau)

Because the loans must be repaid by the borrowing entity, greater pressures on factory managers now exist regarding the choice of such things as appropriate technology and project feasibility.

It goes without saying that so-called technology imports in the past did help contribute to the development of such critical industries as chemical fertilizers and steel. Yet the fact remains that while the Chinese were able to obtain greater quantities of the products they desired, little direct transfer of design capacity took place. In many cases, even the simple task of retrofitting a basic energy-saving device on a synthetic ammonia plant must be done by the original supplier. A recent article in Intertrade (April 1987) commenting on China's import experiences with chemical fertilizer projects noted that some foreign firms "are skeptical about Chinese design capability and progress of the project(s), which would inevitably affect the quality of the final product." The same article went on to suggest that "some foreigners still do not trust the ability of the Chinese and insist that key parts must be imported and the patented technology for manufacturing the equipment must be purchased."

The second key element has been the linkage of the economic reforms with efforts to stimulate technological progress. The ongoing movement toward greater decentralization of decisionmaking, although fraught with a number of problems and uncertainties, promises to improve the process of technology selection and may even increase demands for foreign technology. In the past, many factory managers decided to eschew the

16 One of the major uncertainties is that under the decision to decentralize control over the operation of factories from within the MEI and the former MMBI, the authority for approving
potential benefits of new technology (in many cases, both product and process technology) because of the additional burdens that integrating a new piece of equipment or procedure might create. With increased autonomy and responsibility for profits and losses, as well as reduced bureaucratic red tape, Chinese leaders hope that production units will become more attentive to their technological opportunities as well as their technological choices and options—especially since the costs, waste, and inefficiency increasingly will have to be borne directly by the unit itself.

The third area that is significant is the effort to build closer links between the civilian and military sectors in order to facilitate the transfer of knowledge and capability from the latter to the former. Heretofore, China's defense sector has generally been the recipient of greater financial resources, larger numbers of more qualified technical personnel, and more sophisticated equipment, instrumentation, and so on. Industries such as electronics and nuclear affairs, for example, were primarily "military-oriented" and contributed little to the civilian economy—and in fact, were probably a drain on limited personnel and technical resources. Moreover, China's industrial structure was strongly biased in terms of investment and related resource allocation by the decision to create so-called third-line industries in the mid-1960s.

Since the early 1980s, this situation has begun to change, primarily in the belief that the technological and managerial leadership of the defense science and technology and industrial base can help spearhead more rapid advances in the civilian sector—and perhaps even stimulate productivity and efficiency gains in the defense sector as well. Consumer electronics technology imports is still retained by the ministry. Thus, while the factory manager may have the prerogative to seek out new and more efficient modes of production, he does not have the necessary power to formally sign an agreement.
Table 2
China's Import of Technology (1986)

<table>
<thead>
<tr>
<th>Provinces</th>
<th>No. of Contracts</th>
<th>Value (US$ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hebei</td>
<td>5</td>
<td>3.22</td>
</tr>
<tr>
<td>Shanxi</td>
<td>20</td>
<td>20.04</td>
</tr>
<tr>
<td>Inner Mongolia</td>
<td>10</td>
<td>5.32</td>
</tr>
<tr>
<td>Liaoning</td>
<td>441</td>
<td>277.24</td>
</tr>
<tr>
<td>Jilin</td>
<td>139</td>
<td>108.90</td>
</tr>
<tr>
<td>Heilongjiang</td>
<td>8</td>
<td>5.10</td>
</tr>
<tr>
<td>Jiangsu</td>
<td>13</td>
<td>11.08</td>
</tr>
<tr>
<td>Zhejiang</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Anhui</td>
<td>101</td>
<td>51.95</td>
</tr>
<tr>
<td>Fujian</td>
<td>156</td>
<td>59.52</td>
</tr>
<tr>
<td>Jiangxi</td>
<td>17</td>
<td>8.47</td>
</tr>
<tr>
<td>Shandong</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Henan</td>
<td>na</td>
<td>3.91</td>
</tr>
<tr>
<td>Hubei</td>
<td>85</td>
<td>76.38</td>
</tr>
<tr>
<td>Hunan</td>
<td>41</td>
<td>35.34</td>
</tr>
<tr>
<td>Guangdong</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Guangxi</td>
<td>142</td>
<td>19.62</td>
</tr>
<tr>
<td>Sichuan</td>
<td>32</td>
<td>22.11</td>
</tr>
<tr>
<td>Guizhou</td>
<td>7</td>
<td>4.78</td>
</tr>
<tr>
<td>Yunnan</td>
<td>8</td>
<td>9.49</td>
</tr>
<tr>
<td>Shaanxi</td>
<td>55</td>
<td>22.57</td>
</tr>
<tr>
<td>Gansu</td>
<td>17</td>
<td>25.25</td>
</tr>
<tr>
<td>Qinghai</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Ningxia</td>
<td>13</td>
<td>7.91</td>
</tr>
<tr>
<td>Xinjiang</td>
<td>19</td>
<td>20.55</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Municipalities</th>
<th>No. of Contracts</th>
<th>Value (US$ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beijing</td>
<td>99</td>
<td>200.00</td>
</tr>
<tr>
<td>Tianjin</td>
<td>122</td>
<td>92.63</td>
</tr>
<tr>
<td>Shanghai</td>
<td>92</td>
<td>93.00</td>
</tr>
<tr>
<td>Chongqing</td>
<td>32</td>
<td>14.24</td>
</tr>
<tr>
<td>Wuhan</td>
<td>47</td>
<td>33.10</td>
</tr>
<tr>
<td>Shenyang</td>
<td>189</td>
<td>35.42</td>
</tr>
<tr>
<td>Dalian</td>
<td>101</td>
<td>73.66</td>
</tr>
<tr>
<td>Harbin</td>
<td>32</td>
<td>23.24</td>
</tr>
<tr>
<td>Guangzhou</td>
<td>74</td>
<td>69.36</td>
</tr>
<tr>
<td>Xian</td>
<td>42</td>
<td>13.46</td>
</tr>
<tr>
<td>Qingdao</td>
<td>79</td>
<td>27.21</td>
</tr>
<tr>
<td>Shantou SEZ</td>
<td>120</td>
<td>88.45</td>
</tr>
<tr>
<td>Xiamen SEZ</td>
<td>23</td>
<td>12.72</td>
</tr>
</tbody>
</table>

1These figures are only for production and technical cooperation with Yugoslavia and Romania. Figures for technology import in general were unavailable.

Source: Almanac of China's Economy, 1986 (Hong Kong, 1987).
has now become a critical part of the electronics industry; nuclear scientists are now devoting their attention, in part, to development of a civilian nuclear energy program. Various mechanisms have been established, such as the working relationship between Tianjin municipality and the National Defense Science, Technology and Industry Commission, to facilitate greater civilian-military interaction. In essence, China's leadership appears committed to moving away from the highly compartmentalized system it borrowed from the Soviet Union; its new model appears to be more akin to the so-called military-industrial complex most frequently associated with the United States.\textsuperscript{21}

These changes in both organization and emphasis—the stress on technical transformation, the linkage between science and technology reform and economic reform, and the effort to build closer links between the civilian and military sector—cannot be viewed in isolation from China's own set of specific technological priorities. The recent "White Paper on Science and Technology" issued by the State Science and Technology Commission identifies a number of key areas in which China hopes to make rapid and sustained progress.\textsuperscript{22} In some cases, market-driven forces will be largely responsible for promoting technological advance, for example light industry; in other cases, such as microelectronics, strong central guidance will be maintained. Current priority fields, which were discussed in an October 1986 issue of \textit{Liaowang}, include transportation and communication, especially telecommunications; agriculture and food processing; energy including coal, hydropower, and various power transmission technologies; electronics, especially integrated circuits, computers, and software (e.g., computer-assisted design/manufacturing/engineering [CAD/CAM/CAE]); and manufacturing technologies—across the board.\textsuperscript{23} These choices reflect both the desire to enter into new technology-based industries as well as modernize the so-called traditional industries and the country's economic infrastructure, with the dual goal of reducing foreign imports and expanding exports.

\title{China's Technology Transfer Strategy}

Propelled by a desire to gain expanded access to foreign technology, the Chinese have set in motion a series of acquisition programs to support


their overall modernization. According to the statistics provided by the State Planning Commission, during the Sixth Five-Year Plan (1981–85), China signed more than 1,300 technology import contracts with foreign firms, worth a total value of US$9.7 billion. Of these, 127 projects were considered “backbone” projects, meaning that they were directed at developed or expanding high-priority sectors, for example, the Baoshan Iron and Steel Complex, the Beijing Dongfang Chemical Plant, and the Jiangxi Copper Plant.

As in the past, the basic framework of the program for the Seventh Five-Year Plan has been laid out in a list of 3,000 key items designated by the former State Economic Commission (now incorporated into the State Planning Commission) for purchase during the 1986–88 time period. As noted, these items place in the forefront the importation of technologies to support the technical transformation of enterprises—with the State Planning Commission (SPC) being the lead organization in this effort. Most of the focus is on the importation of know-how, with emphasis on technologies in the electronics and machinery area. While technology imports are not confined to this list of 3,000 items, the list does appear to contain the priority items.

The decision to place the locus of authority in the hands of the SPC apparently occurred after a number of serious concerns arose within the Chinese bureaucracy, especially between the former State Economic Commission (SEC) and the State Science and Technology Commission (SSTC), regarding which organization should have the leading role and what the goals of technology import should be. A debate emerged during 1986–87 over whether sufficient attention has been given to the “indigenization” of foreign technology and equipment, with the SSTC taking a somewhat critical view of the SEC for “overemphasizing” equipment acquisition and neglecting assimilation and the SEC suggesting that the SSTC had done a poor job directing the research and development (R&D) sector toward capturing the full benefits of technology imports. The essence of the problem was stated in succinct fashion by Wu Fengzhou, director of the Technology Import and Export Department at the Ministry of Foreign Economic Relations and Trade (MOFERT):

24 Still, in 1986, out of a total of 744 technology-import contracts valued at US$4.45 billion, 44% of the total number of contracts and 82% of the total expenditures went for hardware as opposed to software. Ironically, since reaching a peak in 1983–84, the percentage of funds spent on technology software has been steadily decreasing from 49.6% to 18.6% in 1986.

Emphasis [has] been unduly given to developing production capability, which has resulted in neglect of importing technology regarding the production process, design or manufacture, and production management. This has also caused an excessively large share of imported equipment and even led to the abnormal situation where enterprises can maintain production only by importing raw material, components, and spare parts from abroad.26

In August 1987, at a major conference on technology import work held at Dalian, an effort was made to resolve this dispute, with the result that the SEC appears to have assumed the lead position regarding a significant proportion of the foreign technology acquisition-related activities.27 However, the recent decision to incorporate the SEC into the State Planning Commission raises a number of questions regarding where the locus of oversight will be for the technical transformation program.

Information related to China's technology imports during 1986 provides much insight into the characteristics of the current acquisition program.28 In 1986, China signed 744 contracts worth US$4.45 billion, a 10 percent increase in the number of contracts and a 50 percent increase in the value of contracts over 1985.29 Almost 40 percent (290) of these projects were approved by local authorities (as opposed to MOFERT), reflecting what appears to be the general tendency toward greater decentralization of decisionmaking.30 Energy-related projects accounted for the largest percentage (US$2.9 billion), which is consistent with the continued concern with infrastructure development. More than 60 percent of the projects were financed with foreign loans. Western Europe continued to be the major source of technology transfers in terms of overall value, accounting for 47.9 percent; France was the largest supplier (US$1.5 billion), Japan was second (US$790 million), and the United States third (US$660 million).

Perhaps as interesting was the rapid increase in technology-import agreements with the Soviet Union and Eastern bloc nations. In 1986, contracts worth a total of US$810 million (18.2 percent of overall value of technology imports) were signed with these countries; the largest percentage were with the USSR (US$510 million) and East Germany (US$160

million). In most cases, these deals were conducted on the basis of countertrade agreements arranged at both the national and local level. Enterprises wishing to import foreign know-how and equipment but lacking in foreign exchange may look to these types of arrangements, especially if their respective ministry or industrial bureau has a countertrade credit for acquisition of needed equipment. A good example would be the Shanghai Beer Factory, which after importing a beer-bottling line from Western Europe acquired a similar line from Bulgaria through a countertrade arrangement from the Ministry of Light Industry. The beer factory made the decision to import the line from Bulgaria when it could not get the needed foreign-exchange allocation through normal channels.

Overall, the salience of the so-called 3,000 projects list can be seen in recent Chinese assessments of the impact of those technologies imported under this program during the last three years of the Sixth Five-Year Plan. According to one assessment, in the cities of Beijing, Shanghai, and Tianjin, for each yuan spent to import technology, there has been between 2.5 and 12.8 yuan generated in output value and 0.5 and 0.8 yuan in taxes given to the government—allowing the investments to be paid back in two to three years. According to a second evaluation, which was made in late 1986, "[T]he 3,000 projects have enabled some Chinese industries and products to leap-frog technically, significantly narrowing the gap with the advanced nations. Ten percent of the products of the machinery industry today reach international standards of the late 1970s and early 1980s. In electronics, the manufacturing of color TV sets, videocassette recorders, tape recorders, and copiers has grown and matured. More than 30 percent of [our] electronic products are now on par with the best of the world in the late 1970s and early 1980s, up from 15 percent in 1982." While perhaps somewhat overoptimistic in its tone, the assessment reveals the critical value that such a program could have if properly supported and managed, especially since, as the source suggests, "These projects require limited outlays, have a short construction period, pay off quickly, and yield good economic results."

Since 1979, we have seen the emergence of a large number of Chinese organizations doing business overseas as well as the proliferation of local foreign trade entities within the country at large. Each of the production ministries as well as many of the provincial and municipal governments has its own import-export arm, parts of which are responsible for foreign

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51 Yang Qingquan, op. cit.
53 Ibid.
technology acquisition. A good example is the Shenzhen Scientific Equipment Export Service Corporation, whose main function is to provide relevant Chinese organizations with information and data on the latest developments in international science and technology. Chinese organizations have also begun to proliferate in Hong Kong, each one seeking to take advantage to Hong Kong's special access to the West. No fewer than fifteen provinces and several of the key municipal governments have formally registered firms in the soon-to-be-former British colony.34

These types of formal organizations only begin to scratch the surface. One must also consider China's efforts to attract foreign firms to establish equity-based investments in the country. Since 1979, over 6,150 contracts have been approved for foreign investment; 2,300 have involved equity joint ventures, 3,700 are contractual joint ventures, 120 include joint exploration, and 120 are 100 percent wholly foreign-owned projects. The total foreign investment committed surpassed US$4.6 billion by the end of 1985, although only US$4.6 billion has been used. So far, Hong Kong firms account for about 80 percent of all investments, with the United States second and Japan third. Chinese leaders see foreign investment as a means to more easily bring about the transfer of key production and managerial know-how to Chinese industry—though both Chinese and foreign observers acknowledge that many questions remain about the effectiveness of many existing joint ventures for acquiring technology. China has put an entire legal infrastructure in place to encourage investment by companies from abroad. In addition, four Special Economic Zones were created in South China for purposes of not merely constructing export platforms or generating employment, but more importantly, providing a vehicle for technology transfer.

A series of regulations regarding technology transfer has also been introduced.35 For example, a patent law was announced in April 1985, in large part to alleviate foreign concerns about violations against the integrity of their technology and know-how. At the same time, regulations also have been introduced that, while designed to maximize Chinese access to core technologies, aim to limit the amount of control foreign firms can retain over the application of technology once it has been transferred to a Chinese counterpart. Announced in May 1985 by the State Council (May 24, 1985), the rules restrict the use of so-called restrictive business practices by foreign firms in China, such as limiting the geographic export of products manufactured with imported technology. On

August 26, 1985, the State Council also promulgated another set of measures designed to institutionalize the procedures by which technology-import projects are reviewed in order to better ensure that proposals are adequately evaluated before final approval is granted. This latter pronouncement, which was revised in December 1987, can be viewed as part of the overall reassertion of control of the technology-import review process under which a "certificate of approval" must be obtained from the Ministry of Foreign Economic Relations and Trade before a contract can be implemented.  

Acquisition mechanisms have also been created at the enterprise level with the establishment of so-called technology introduction or import departments. In many cases, these departments were created on an ad hoc basis to handle the process of technology import. Subsequently, they have been formally institutionalized and are now a permanent part of the Chinese enterprise. Their primary value is that they constitute a critical mass of individuals responsible for all facets of an import-related project. Enterprises are now responsible for preparing in-depth feasibility studies not only to justify the need for the purchase, but also to indicate their capabilities and resources for effectively implementing the new technology.

Critical Issues in China's Technology Acquisition System

It is clear that China has begun to benefit substantially from the growing presence of foreign technology in the local economy (see the following section). In the electrical appliance area, for example, product quality and designs have been greatly improved. A good example is the Yingkou Washing Machine Factory in Liaoning Province, which after extensive cooperation with a Japanese firm—including the completion of two large-scale technical upgradings and the setting up of twenty-two computerized production lines—now produces seven models of washing machines. In addition, according to one study of imported technology and equipment that have been put into operation in Beijing, Shanghai, and Tianjin, each yuan in investment in imported technology has increased output value by 2.5 to 2.8 yuan.

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Nonetheless, in spite of the large-scale mobilization of organizational and personnel resources aimed at the acquisition of foreign technology, the Chinese have encountered a number of serious problems regarding this important effort. Many of these problems were spelled out in a revealing series of three articles published in the overseas edition of *Liaowang* in May 1986. Written by Cao Jiarui, a former MOFERT official responsible for overseeing China's technology-import program, the articles point to a plethora of difficulties, many of which have limited the impact of foreign technology transfers to the PRC or at least led to a significant waste of scarce financial and technical resources.

Among the problems cited by Cao, four stand out. First, there is the problem of insufficient coordination among the various organizations responsible for different facets of China's technology-import program. China's bureaucracy continues to be plagued by competition and parochialism, which make themselves felt not only at the national level, but also in the relations between the central government and the provinces and key municipalities. At times, for example, relations between Shanghai and Beijing have tended to be more competitive than cooperative, leading to inefficiency, delays, and congestion in administration. A second and related problem deals with the consequences of decentralization vis-à-vis the decision-making process for technology imports. While the central government has granted various localities certain levels of financial decision-making autonomy regarding technology imports (a US$5.0 million threshold has been set similar in thrust to the foreign investment levels of autonomy), this autonomy still can be and has been circumscribed in a number of ways by Beijing. Thus, on some occasions, local authorities have gone too far afield from Beijing's dictates in rendering decisions on projects, while at other times, they have lacked the authority to move ahead on important and highly desirable projects. Foreign corporate executives often find it difficult, if not impossible, to locate the final source of authority to approve a project, let alone sort out the intricacies of bureaucratic competition and rivalry.

A third problem cited by Cao has to do with the excessive duplication of technology and equipment imports. One area where the problem has been extensive has been the import of color television production lines. Estimates suggest that China has imported more than a hundred color TV lines, giving China a production capacity far exceeding the projected demand. Given current difficulties with quality control and product

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design, most of the excess production cannot be exported. The severity of the duplication problem is exacerbated by the jurisdictional sensitivities of units that belong to different administrative hierarchies. Few organizations are willing to share items such as imported computers, many of which tend to be seriously underutilized.

According to one source, "[1]t is hard to tell the quantity, types, and nature of technology China has imported since 1979." The severity of the situation also appears to be a result of poor organizational coordination. This same source suggests that "the management system for technology import lacks overall control and planned guidance. . . . There are nearly one hundred departments that have the right of examination and approval. . . . And after local autonomy was expanded, the various supervisory departments lost control of various trades." Even though technology imports have drastically increased since 1978, a technology-import information management system has not been created, thus precluding the exchange of information and data among potential buyers.

The fourth problem highlighted by Cao deals with the issue of poor assimilation capabilities. Much attention has been focused on the acquisition of technology, including the problems of export controls and the Coordinating Committee for Multilateral Export Controls (COCOM), which seemingly prevented China from purchasing the technologies it desired and needed. With the significant relaxation of restrictions on technology exports to China that took place in December 1985, an appreciable number of China's problems in that context have disappeared. What is clear, however, is that with much of the attention focused on acquisition problems, in many cases Chinese officials and enterprise managers did not pay adequate attention to the problems of technology absorption.

In some instances, Chinese purchasers, fearful of buying obsolete technologies, have sought state-of-the-art items, only to find that they lack the expertise, maintenance and service capabilities, and supporting infrastructure to utilize fully the imported technology or equipment. In other cases, purchasers of technology have been apprehensive that their foreign-exchange holdings might be gobbled up, and thus they have sought to spend their foreign currency as soon as possible. Under such pressures, they have frequently failed to conduct adequate feasibility studies or to evaluate technological alternatives carefully. Moreover, as Cao notes, "China's current technological imports reflect the will of the high-level government departments or officials rather than the market reality or

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latent needs.” Thus, heretofore, there has been little incentive or direct pressure to be successful or effective at assimilating foreign technology.

The two new pieces of legislation regarding technology transfer mentioned above were apparently formulated for the purpose of standardizing existing technology-import procedures, tightening up control over the import process, and ensuring more careful evaluation of specific acquisition proposals. They are part of an overall Chinese effort to add more discipline to the acquisition process and thereby improve the prospects for effective and efficient application of imported technology. The major provisions of the technology-import contract regulations include the following: (a) prohibitions on the use of so-called restrictive business practices by foreign firms wishing to sell technology to China; (b) requirements concerning the levels and appropriateness of the imported technology, for example, it must meet one of eight criteria as far as its contribution to economic modernization is concerned; (c) the need for guarantees by the foreign supplier that the technology is not defective and will allow the recipient to meet its stated objectives; (d) provisions limiting the term of the contract to ten years; and (e) stipulations that MOFERT or its stated representative must review and approve the contract. While the regulations still leave many questions unanswered—for example, what obligations does the foreign firm incur by virtue of its acceptance of the “guarantee” clause—they still go a long way, especially from the Chinese perspective, toward resolving some of the inconsistencies in PRC technology-import practices across the board.

Similarly, the procedures for “examination and approval of technology-import contracts” represent an attempt to clarify the decision-making criteria and review process for potential Chinese recipients as well as foreign-technology suppliers. Under these regulations, technology-import contracts must meet a host of supplementary criteria (in addition to those spelled out in the May 1985 provisions) in order to be approved by PRC government officials. For example, there is a quality guarantee not only for the technology itself, but also for the products manufactured with the technology. This raises a number of critical questions for foreign-technology suppliers, since strict limits have been placed on their control over the various inputs and the source of those inputs to be used in the

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44The new regulations specifically limit the inclusion of nine such clauses, including any restrictions on the freedom of the buyers/licensees to buy raw materials or components from sources other than the technology supplier; restrictions on the recipient’s freedom to further
production process. The procedures also stress the use of the concept of “reasonableness” in assessing various provisions of the technology-import contract, for example, price and payment methods should be “reasonable.” While this may provide room for negotiation and flexible interpretation, it also leaves much to the discretionary judgment of the Chinese bureaucracy—a situation that could leave many firms uncomfortable.

The reasons for this discomfort are plentiful. What has surfaced over the last several years is that far from being a command economy operating in a coherent, well-coordinated fashion, China is a country where bargaining, negotiation, and internal competition tend to have a greater influence on decisionmaking than dictates from the central government in Beijing. Chinese managers interested in acquiring foreign technology must often proceed through a maze of bureaucratic obstacles and negotiations in order to obtain the needed foreign exchange, raw materials, and infrastructure support to implement a project. As a result, the decision-making process regarding technology import must not be viewed in terms of the purposeful actor model that suggests the image of a system fully mobilized to get the best deal from the foreign supplier and to take the most efficient route to effective assimilation.

Rather, the technology-import process in China tends to be characterized by great uncertainties and lack of clarity regarding the criteria for project selection and choice of recipient. Moreover, the process can be radically uneven in terms of cross-provincial treatment and frequently leaves the proposed Chinese counterpart to the foreign supplier just as frustrated and confounded as the foreign firm itself as the process of project approval proceeds through the multiple steps of review in the bureaucracy. Unfortunately, even though decentralization has proceeded to a great extent in terms of general economic decision-making, in reality most of the autonomy of local managers with regard to technology-import decisions remains circumscribed by higher officials who, through their control over foreign exchange, maintain continued authority over the factory’s “external” economic and technology relations. This is not to suggest there are not “successes” or that the process is always so cumbersome; things do work and are improving. Rather, the key point is that the problems of mixed signals and lack of predictability can be just as pervasive to those within the system as to those outside of it looking in.
Technology Transfer and China's Impact on the World Economy

On the positive side, the gradual integration of the Chinese economy with the world's major market economies—stimulated and supported in large part by the transfer and more effective use of foreign technology—could serve to make China increasingly interdependent with important segments of the global economy. Given China's factor endowments, the Chinese economy could eventually become an important site for the production of some key labor-intensive components or products, a supplier of key natural resources and minerals, or even a source of R & D support for foreign corporations. The evolution of Sino-Japanese, Sino-Western European, and Sino-American economic and technology relations could take on long-term significance in this context. For example, China could conceivably become, if it has not already, the next battleground for the playing out of U.S.-Japan competition—with the PRC being the key element as partner or market in this competition.

From the Chinese perspective, the availability of foreign technology has become the quid pro quo for entrance into the PRC domestic market. More specifically, Chinese officials are on record as indicating that those foreign firms that are more forthcoming on technology transfer will be granted greater access to the local market. This policy lies at the heart of the new foreign investment regulations announced in October 1986. And, in the future—to an extent that is even more the case than is so at present—technology transfer will become the "cement" holding China's relations with the West together. From the Western perspective, the steadily growing links between China and rest of the world remain, in large part, designed to make present and future Chinese leaders more aware of the real and potential benefits to be derived from behaving in a responsible and pragmatic fashion in the years ahead.

In the commercial area, in particular, while the promise of the China market has remained largely unfulfilled and major sales have been slow to develop and difficult to finalize, the Chinese penchant for wanting to link up with the West continues to be strong. Given this fact, and assuming

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that further progress is made in overcoming present absorption limitations, in all likelihood China will steadily increase its demands for manufacturing know-how and managerial expertise from the West. Opportunities for the licensing of technology, co-production agreements, joint ventures, and assorted training programs may grow beyond present levels as China attempts to improve in a drastic fashion the quality and marketability of its products. In the process of linking up with the West, as China expands its reliance on Western standards, measurements, designs, spare parts, and managerial procedures, it will become extremely difficult and costly for the Chinese to extricate themselves from the network of relationships they have developed with the industrialized world—though it must be acknowledged that no real guarantees exist to prevent China from bearing such economic costs in order to promote what they perceive to be more imperative political considerations.

At the same time, and perhaps more important, Chinese progress in particular facets of its modernization program could prove both politically and economically unsettling to selected industrial constituencies in the West and regional economy of East Asia. According to the development strategy articulated by Beijing in the recently announced Seventh Five-Year Plan, the Chinese hope to finance a large proportion of their technology and equipment acquisitions through rapid and sustained expansion of exports. In spite of recent controls on overall imports of goods and equipment, China's leaders recognize that export growth and not import cuts are the key to more rapid and sustained modernization. While petroleum may become a major source of these export earnings in the long term, the recent decline in the world price of oil as well as a number of other factors have led the Chinese to focus more on consumer goods, light industrial products, and selected capital goods as the core of their export drive. As China's industrial base improves and its products become more desirable in foreign markets, the Chinese economy could gradually, albeit steadily, prove to be an important source of economic competition to the various sectors in the Association of Southeast Asian Nations (ASEAN) and the newly industrialized countries (NICs) as well as selected parts of the U.S., Western European, and Japanese economies.

In areas such as textiles, machine tools, and light industrial products, for example, the Chinese have already begun to make substantial progress. During the Sixth Five-Year Plan (1980–85), the textiles industry was a principal source of foreign exchange, earning US$17.2 billion in foreign exchange; the volume of textiles exports increased 64 percent—averaging an increase of over 10 percent easy year. In 1986, textiles replaced oil

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as the largest export, reaching US$6.5 billion—equal to about one-quarter of total export earnings.\(^{50}\) In Shanghai, China's leading area of textile exports, the 462 factories in that city's textiles industry have been a main target for the municipality's technology-import and technical transformation programs. Through the contribution of foreign technology (since the 1970s the Ministry of Textiles Industry has imported advanced technology valued at more than US$2.0 billion), China has been able to significantly upgrade the quality of its textile products and move into higher value-added segments of the industry.\(^{51}\) For example, in 1984 China imported high-speed spinning equipment for polyester yarns with an annual capacity of 20,000 tons from Barmer, Maschinen Fabrik AG of West Germany.\(^{52}\)

New organizational amalgams have already appeared in order to better coordinate the technological modernization and promotion of exports in the textiles industry. A series of industrial associations has been formed to establish a union among spinning and weaving, printing and dyeing, tailoring, and exporting groups. Similarly, new efforts are being made to link research with production, such as in the case of the Changzhou Chemical Research Institute, which linked up with a number of local enterprises to create new and improved products and processes.\(^{53}\) According to one commentator in the January 1985 issue of \textit{Guoji Maoyi}, raising the quality and style of Chinese textiles is imperative because (1) about 75 percent of the markets served by PRC clothing exports are in the Western developed nations; (2) the prevailing consumption patterns in the United States require greater attention to quality, new designs, and more fashionable products; (3) the technological capacity to meet these requirements is now in place in China and needs to be utilized; and (4) higher-quality products tend to yield greater returns and more foreign-exchange earnings.\(^{54}\)

China's recent technological progress in industries such as textiles should not be taken to portend an inevitable clash between China's modernization program and the economic prosperity of the West or East Asia. Structurally, particularly with respect to the situation in East Asia, while a combination of growing protectionism and competition may

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\(^{52}\)Personal communication from Detlef Rehn.


\(^{54}\)\textit{Guoji Maoyi}, January 1985, p. XX.
impose limits on easily achievable market shares in Western countries, the current efforts by the Asian NICs to move away from their labor-intensive, light-industrial orientation could provide some relief for China. Relatedly, some interesting complementarities could develop among these countries, such as the evolving relationship between South Korea and the PRC. Nonetheless, should these countries encounter problems in their programs to move into more skill-intensive, technologically sophisticated product lines, the presence of Chinese products could bring about an intense economic rivalry with strong political overtones.

From a political perspective, China has reiterated its intention to maintain its independence in the realm of foreign policy, avoiding any movement that would bring it too close to either superpower or make it excessively dependent on any one nation. One hallmark of China’s open door since 1978 has been its willingness and desire to engage simultaneously in political, economic, and technological relations with many nations, including those of the Eastern bloc, the Third World, and the West. Beijing continues to see itself as a leader and protector of the Third World—a role that could conceivably bring it into growing conflict with the United States and other Western nations on a host of global economic and technological issues.

Beijing’s efforts to ease tensions with the Soviet Union, reflected in the recent signing of an economic and technical cooperation agreement with the USSR, also raise some potentially sensitive issues. Along with Western concerns about the possible diversion of U.S., Japanese, or Western European technology to the USSR (and possibly North Korea), questions may emerge about how viable the strategy of “interdependence” really is under circumstances of renewed Sino-Soviet cooperation. It is clear that there are at least three major stumbling blocks (Kampuchea/Vietnam, the Sino-Soviet border, and Afghanistan) to overcome as well as a number of other problems to confront before technological relations can even begin to approach the level of the 1950s. Yet Chinese concerns about foreign-exchange spending, a slowdown in the economic reforms, or their dissatisfaction with the self-perceived paucity of technology transfers from the West could lead them to turn increasingly to the Communist bloc if they

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cannot get what they want from Western countries on the terms they like. This is not to suggest that the USSR is prepared to give the PRC everything it wants. For example, the Soviets are reportedly unwilling to provide China with the technology for a number of facilities.

In a sense, China's growing participation in the world economy, engendered through its technology-transfer relationships, will force the leadership to confront a fundamental dilemma. Chinese leaders will be faced with the increasingly difficult task of trying to balance the tradeoffs between maintaining their "independence" of action, reaping the benefits that come from closer economic and technological integration with the advanced industrialized nations, and trying to make credible their claims to represent the developing world in their dealings with the superpowers and within various international organizations. What promises to compound the difficulty in achieving an acceptable balance is that the decentralization of decisionmaking in the country has fostered the more visible articulation of local interests. This has been a particular problem in the case of China's telecommunications equipment and technology imports, with each of the local posts and telecommunications bureaus asserting its prerogatives to deal with foreign firms in the face of the efforts of the Ministry of Posts and Telecommunications (MPT) to create a nationally integrated network with common standards and compatible equipment. As such, no longer can Beijing speak as the monolithic authority in China (if it ever did); local interests and capabilities must be taken into account.

The penchant for wanting to import technology has also run up against concerns from within a number of economic circles in China in regard to protection of domestic industries. Even though reducing foreign-exchange spending has been a main motivating factor in the clampdown on imports, the excessive influx of foreign products ranging from automobiles to integrated circuits and microcomputers has caused apprehension about the ability of various domestic sectors to grow in the face of competition from foreign products. Out of this apprehension have come the roots of a typical import substitution policy.

59During the joint commission meeting, both sides agreed to cooperate in the refurbishing of seventeen industrial plants in China originally built by the USSR along with the construction of seven new plants.
60Interviews in Beijing and Harbin, July—August 1987.
The Chinese have also gone to excessive extremes with respect to their policy regarding television production. Anxious to meet growing domestic demand for televisions, but also seriously committed to establishing a presence in the world television market, the Chinese imported over 100 production lines for the manufacture of black-and-white and color televisions, as they have curtailed the import of TVs from abroad. Under the long-term trade agreement with Japan, for example, fourteen of the twenty-four complete plants imported were television production plants. Estimates suggest that once all of the plants come on-line, annually China will have over a 90-million-set capacity. Significant improvements have already taken place in the basic quality of Chinese-manufactured TVs; the mean time before failure (MTBF) has steadily increased to 15,000 hours. However, even in those cases involving joint ventures such as the Fujian-Hitachi partnership in Fujian, the cost structure and the overall quality of the sets still preclude export in many cases, let alone allow the Chinese to sell the sets at a competitive price.

In many respects, what the Chinese are facing is a twofold problem. On the one hand, they are coming up against the constraints within their own system. Previously mentioned assimilation problems combined with a host of factors associated with low labor productivity, poor quality control, and ineffective management make it difficult to produce a package of competitive exports at this time—except in product areas that are the object of intense competition and protectionism. On the other hand, the various efforts by the Chinese to attract foreign know-how and expertise that could help overcome many of these problems have been slow to materialize because of continuing questions about China's investment climate, its commitment to protect proprietary information, and a series of related issues. In reality, there are many other attractive investment alternatives to China where the local skill levels, managerial capabilities, and the investment environment are all less problematic.

China's concerns about gaining unencumbered access to foreign technology are focused mainly on the United States and Japan—though in recent months there does appear to be a growing emphasis on Western Europe. In the case of the former, since 1982 the United States has been criticized by Chinese leaders for its maintenance of export controls on the

64"Fujian and Hitachi Work to Save Joint Venture," South China Morning Post, Business Section, August 26, 1986, pp. 1–2.
66West Germany has become China's premier supplier of technology. See "In Good Faith," Intertrade, July 1987, pp. 16–17.
sale of advanced technology to the PRC. China's leadership has viewed the problems as "government-derived," with the implicit assumption that if and when a substantial relaxation in export controls were to occur, American firms would be ready, willing, and able to arrive in China with technology and know-how in their arms for the taking. Yet, as evidenced in an editorial in the April 20, 1987, edition of *Beijing Review*, even though there has been a steady relaxation in controls on the sale of advanced technology to the PRC, the Chinese continue to criticize U.S. policy. The real problem is that many American firms remain unconvinced about the widely heralded China market—and thus do not want to offer their technology. Moreover, among other firms there has emerged a sense of "techno-nationalism"; future concerns remain about "creating another Japan," thus in some instances further inhibiting the pace and extent to which technology transfers will be forthcoming.

China's problems with Japan appear to be even more serious, especially in view of the fact that Sino-Japanese trade, which totaled US $13.86 billion in 1986 was almost three times as large as Sino-U.S. trade (US $5.99 billion). The PRC's trade deficit with Japan, which reached about US $5.13 billion, was more than three times the size of its deficit with the United States (US $1.06 billion). China has criticized the Japanese for being unwilling to transfer any advanced technology; it claims that Japan is only interested in selling products to the Chinese market. Similarly, until this year, Japan's level of direct investment in China was one of the lowest—a surprising state of affairs given the vast network of trade and aid relations established between the two nations. It has only been after the imposition of various trade barriers by the Chinese and the appreciation of the yen that Japanese firms have begun to seriously consider making appreciable equity investments in China. Japan, having achieved its own development through effective use of foreign technology and worried about the rise of South Korea and Taiwan on its doorstep, is also cautious about making a mistake and providing the Chinese with capabilities that could be a source of regret at some time in the future.

**Prospects and Conclusions**

In the long run, the major political forces in the world will all direct their attention to the next century. They will be involved in a new round of trial of strength against the background of "coexistence of two major systems

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and competition between various economic modes" and around the two basic issues of world peace and development. They will mainly concentrate on developing their respective comprehensive strength. In this competition, economic development and technological progress will play a vitally important role. Those who can score points in these fields will be able to play a greater role in the international arena next century.\(^{70}\)

In many respects, China's desire to establish its presence in the world economy through the use of imported technologies is occurring at an unfavorable time. First, as both the recent example of the ill-fated Fujitsu-Fairchild agreement and the Toshiba technology diversion case indicate, national security concerns along with concerns about unauthorized sales of technology have created a mentality of control in the United States and some other countries that has spilled over into China's own quest to gain greater access to advanced know-how and equipment. While gradually changing, this is still a problem for China. The recent Sino-American confrontation over China's alleged sale of Silkworm missiles is also relevant in this context, the main result being that the United States will not be forthcoming on technology transfers when it believes that its national security interests are not being served by Chinese behavior.\(^{71}\)

Second, increasing global competition has made some firms shy about releasing their technology to potential competitors. Nor at the present time do these firms see China as playing an important role in this dynamic competitive situation. If a firm is looking for a high value-added production site and a steady and secure value stream, it will not find it easily in China. As suggested earlier, the impact of design and cost-reduction efforts by U.S. manufacturing firms, in particular, has been that while labor costs are important, they are no longer the major cost factor; material and component procurement have become more critical. Therefore, the decision to locate offshore is being viewed from a radically different perspective than in the past.

Third, rising protectionism in the West has raised questions about the viability of a strategy designed to rely on exports as a major source of growth, especially when the targeted markets are already crowded with exporters such as Japan, South Korea, Taiwan, and Hong Kong. Neither the United States nor the EEC is prepared to absorb large quantities of American goods. And fourth, as noted, because of the introduction of technological changes such as greater automation into such industries as automobiles and electronics, the need to seek out low-cost labor manufacturing sites by the MNCs has begun to decline. Moreover, the financial and


technological barriers for new entrants into such industries as microelectronics are steadily increasing as the pace of technical change further accelerates and the cost of building new, modern facilities rapidly climbs.

Yet, while these factors have combined with the PRC's internal constraints to help slow down Beijing's access to technology and equipment as well as diminish some of the significance of China's own progress, they have not stopped it. Along with the progress made in the textiles industry, the Chinese have been responding to current changes in global technologies by investing in and expanding research into such fields as microelectronics, biotechnology, new materials, and robotics. Much of the information Chinese organizations gather about developments in these fields comes from an extensive network of information-collection organizations that are part of certain large enterprises, corporations, and ministries. China's Ministry of Machine-Building and Electronics Industry, for example, has an active information-collection effort underway that swallows up data about electronics from Taiwan, South Korea, Hong Kong, and Singapore, as well as the industrialized world.

From the perspective of foreign firms, there clearly remains an enigmatic quality to the Chinese economy as they attempt to determine when and how the PRC will make its presence felt in the international economy. Multinational firms contemplating business relationships with the PRC for reasons other than direct sales in the local market are mainly trying to plug into the most technologically dynamic sectors of the PRC economy. Obviously, in the short term, China is most likely to make its presence felt in the lower end of the technological spectrum as far as the international division of labor is concerned. Through a combination of technological push and market-led innovation and renovation, however, a number of Chinese enterprises will increasingly possess the tools to offer a competitive group of products for export. The greater attention being paid to standards by the central government and its efforts to impose strict requirements for meeting these standards is part of the "push" side of the equation. In addition, the recent decision by the central government to provide direct and indirect subsidies as well as assistance to those factories that are successful in meeting export requirements will further enhance the prospects for China to establish a presence in select market niches.

On the "pull" side, one of most exciting developments is the emergence of a number of small and medium-size, high-technology companies (min ban gongsi) that are collectively owned, such as the Stone Group Corporation (Sitong Gongsi), founded in May 1984 by ten engineers who resigned from their institutes in the Chinese Academy of Sciences and several other organizations. After starting with an investment of

72“Scholars Succeed with China's IBM,” China Daily, February 17, 1987, p. 3.
20,000 yuan (US$5,400), the company now has an estimated sales volume of 200–300 million yuan (US$54–80 million) with over 500 employees. Its major achievement is a series of high-speed, Chinese language word processors (MS 2400 series) that are compatible with IBM personal computers. Stone engineers developed the software and Mitsui of Japan provided the hardware for the unit.\textsuperscript{73} The company has adopted a very aggressive market posture; it maintains more than a hundred outlets throughout China and has an extensive advertising program. Along with emphasizing customer satisfaction and service, the Stone Corporation has also stressed worker satisfaction as well. In order to maintain high productivity, employees are paid two to three times average salaries.

What makes the Stone Corporation so interesting, however, is that it operates basically as an independent entity, outside the normal bureaucratic channels. Ironically, the more successful Stone has become, the more rumors have circulated that it would be taken over by the government. So far, this has not come to pass. Stone's strength is in technological innovation—an area upon which government has had a stifling effect in the past. It takes its profits from component sales and pumps the money into R&D. The company's success has prompted one Japanese firm (Mitsui) to enter into a joint venture with it to produce multilanguage word processors, 70 percent of which will be sold in China through Stone marketing channels and 30 percent of which will be sold abroad by Mitsui.\textsuperscript{74} This is the first time a Chinese company has contributed technology as its equity in a joint venture.

Stone's rapid growth and market power may be more than just an aberration. When looked at in conjunction with the formation of the larger computer conglomerates, it may illustrate an important point about the Chinese system, namely that the locus of technological dynamism has shifted away from the traditional centers of activity. Stone's management practices reflect a great respect for persons with strong technical credentials; unlike the situation in many other enterprises, technical people are prized, not subject to ostracism. Similarly, Stone's marketing practices also reflect a sensitivity to end-user needs and requirements, which also seems to represent a marked departure from previous practice. Like high-technology companies in the West, Stone exhibits a degree of flexibility and responsiveness that has been absent in China's planned economy. Of course, Stone has its weaknesses. Acknowledging this, however, the Stone experience may help point China's reformist leadership in the right


direction, that is, away from excessive government interference on the economic and technological affairs of its R & D units and enterprises.

Of course, numerous problems will continue to plague the Chinese system. While China may continue to attract foreign investors, the reality is that the contributions of foreign investment will remain unimpressive unless significant changes occur in the incentive structures for foreign firms to source components and develop subcontractors. As such, the value of this mechanism as a vehicle for technology transfer will be somewhat limited. The biggest gains will be in terms of the experience that Chinese workers obtain from being employed in a work environment where quality control, discipline, productivity concerns, and the like are strongly emphasized. This will leave the Chinese frustrated, especially as they feel they have gone a long way toward adapting to the needs of the foreign business community. Similarly, the SEZs will continue to experience difficulties too, mainly because expectations have been set too high and they are not structured to serve the functions of facilitating technology transfer. The experience of export-processing zones in Taiwan and South Korea reveals that it takes time for the diffusion of technology within and from the zones to occur. Without much greater opportunities for free labor mobility, especially with respect to engineers and technical personnel, the most viable mechanism for the movement of technology and know-how out of these projects and into the larger economy may be absent. And foreign-exchange controls are likely to place some real limits on China's ability to buy large quantities of technology, though if predictions about a greater Chinese willingness to borrow in international finance markets do come true, this situation might change somewhat.

Foreign technology will continue to provide the linkage through which China interacts with the world economy. As key buyers in the international market for technology, the Chinese promise to become more selective as their level of sophistication and their ability to do comparative shopping improve. Working with such organizations as the World Bank and the United Nations Development Program, they have learned about the critical value of such tools as feasibility studies and market surveys. This all suggests that substantial learning has taken place and that gaining continued and perhaps expanded access to foreign technology on more beneficial terms is likely to remain a high-priority item on the agenda of Chinese leaders.

Accordingly, the question about the probable impact of all of this technology flowing into China also will remain a prominent one. Therefore, whether China will overcome its present liabilities and limitations through reform and restructuring becomes more than just an academic question. In the final analysis, it will be the interface with the international
market along with the interaction between foreign buyers and Chinese firms that will provide the greatest source of technology transfer. Yung Whee Rhee et al., in a study entitled Korea’s Competitive Edge, suggest that this sustained contact with foreign firms in the international marketplace served to improve the understanding of foreign market structures and characteristics among Korean firms. This went a long way toward strengthening the ability of these firms to survive and prosper in these markets. And while nothing can substitute for a good overall economic and technology strategy, for instance as in Japan, to support an export drive, the reality is that the more the Chinese learn about the intricacies of foreign markets (as well as markets within their own country) and plug into a dynamic “learning curve,” the better they will be able to compete.

On a more provocative level, two additional interesting possibilities stand out. First, China could become an attractive partner as a source of R&D and technology to foreign firms, thereby helping the PRC to bypass its research-production problems. This has already begun to happen in the computer software industry, where Chinese technicians have gone from merely inputting information onto computer tapes to actually developing new software packages with several Japanese firms. The second possibility is even more provocative. Through the upgrading of Chinese skills that comes about as a result of ongoing technology transfers, foreign firms can create the basis for a partnership with China to enter into heretofore difficult and complex third-country markets. For example, automobiles and airplanes being produced in China in cooperation with American companies could perhaps be sold more easily in a socialist country or in Third World markets if they were made in the PRC rather than in the United States, especially if American firms could guarantee the quality of the products. In this regard, China could serve as an “intermediate production zone,” whereby “alliances” with U.S. companies could be created for mutual benefit. American industry would gain expanded market access, and the Chinese would gain valuable experience and time in selling to markets in which they could gradually get up to speed vis-à-vis the economies of scale and quality levels needed to eventually address Western markets. The short-term benefits to be gained from this experience could assist China in becoming better prepared to compete while reducing the immediate pressures to crack the U.S. and Western Europe markets. Payment could be in countertrade or partial foreign exchange. While there would be many problems to iron out, the full range of possibilities seems unlimited and is well worth considering.

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In 1984, at a seminar on China's offshore oil prospects at an American university, the speaker—a government economist—held that the prospects for China's offshore oil exploration efforts were still uncertain. Success in these efforts can greatly strengthen the Sino-American economic relationship. Four years have elapsed since then. Although there have been no major oil discoveries yet, Sino-American economic and trade ties have strengthened remarkably. This development is inseparable from China's open-door policy, the preferential treatment offered to foreign capital, and the cooperation extended by the American government and American companies. Cooperation between China and the United States is by no means limited to oil exploration.

The Establishment of Special Economic Zones

The Chinese government's coastal areas policy has led to the establishment of four Special Economic Zones in Shenzhen, Zhuhai, and Shantou in Guangdong Province and in Xiamen in Fujian Province. In 1984, fourteen coastal cities (Dalian, Qinhuangdao, Tianjin, Yantai, Qingdao, Lianyungang, Nantong, Shanghai, Ningbo, Wenzhou, Fuzhou, Guangzhou, Zhanjiang, and Beihai) and Hainan Island were opened, where economic and technological development areas have been constructed. In 1985, the Yangtze River Delta, the Pearl River Delta, and the Minnan triangle were opened to the outside world. In 1988, the Chinese government again announced that an across-the-board experiment with the open-door policy and economic reform will be conducted in the Pearl River Delta and

*All data cited are from the Ministry of Foreign Relations and Trade sources, published and unpublished.
the Minnan triangle. Meanwhile, the government has decided that Hainan Island will become a province and China's largest Special Economic Zone. These important decisions have made China's coastal areas ideal places for cooperation with foreign investors, offering American entrepreneurs the best opportunities for direct investment in China. These efforts have been appreciated by some American friends, but they are not understood by many more. Studies of these efforts will be helpful for the promotion of Sino-American economic and technical cooperation.

The Chinese government has set up the Special Economic Zones and open cities by using the experience of other countries. They are the components of a strategic policy that was created in view of China's reality and the new international situation.

China's coastal areas, with a population of nearly 200 million people, have solid industrial-agricultural bases; comparatively developed commodity economies; higher scientific, cultural, and educational levels; convenient transportation, quick access to information, and broad, traditional connections with the outside world. But these advantages have not yet been brought into full play. This is the result of both the blockade of coastal areas by foreign countries and the Chinese government's evaluation of probabilities of war and peace. After 1979, the Chinese government worked out the policies of economic reform and of opening to the outside world based on domestic and international developments. Consequently, the Special Economic Zones and coastal open cities have come to the forefront of China's modernization.

The plan is that each will play the following three roles:

1. A show window of new foreign capital investment. China's modernization needs foreign capital and sophisticated technology. But on the whole, the investment environment of the inland areas is not on a par with that of the coastal areas; that of the small cities lags behind the big cities, and that of the northern coastal cities is not as good as the southern coastal cities. In southern China, Guangdong and Fujian provinces—homes of the overseas Chinese—are endowed with favorable conditions for absorbing foreign capital. The Chinese government fully realized that to improve the investment environment for foreign capital in China as a whole within a short period was beyond our national strength. However, it is possible to do this in the four Special Economic Zones, fourteen coastal cities, and three deltas. A related effort is to build thirteen economic and technological development areas in twelve open cities and to construct pioneering areas with good infrastructures in areas of several square kilometers. With their geographics and traditional advantages and government preferential policies, the Special Economic Zones and open cities will be at the forefront of introducing foreign capital and high technology. Meanwhile,
they will become show windows of China’s open policy and the bridge to inland areas for experience in absorbing foreign capital.

2. *A pioneer of economic reform.* The purpose of China’s economic reform is to transform the rigid planned product economy to a less rigidly planned commodity economy, so that the market will play a bigger role. But China’s reform is a kind of exploration with no ready-made pattern to follow. Therefore, it is essential to be cautious in taking every step. But bigger steps can be taken in the Special Economic Zones and open coastal cities. Their successes can be spread quickly to the entire country, while setbacks can be avoided.

China’s economic reform and the policy of opening to the outside world will be pushed along a sequence of Special Economic Zones: from open coastal cities to open coastal economic areas to inland areas. This is to meet the need for reform and to attract foreign funds and introduce new technology. Therefore, the Special Economic Zones are not only the forerunners in opening to the outside world, but they are also the laboratories for China’s economic reform.

3. *An area that leads the way to higher incomes.* As show windows of the open-door policy and pioneers of economic reform, the economic growth rate of Special Economic Zones and open coastal cities and areas will surpass that of the hinterland. On our visit to Baoan County under the jurisdiction of the Shenzhen Special Economic Zone, we saw a picture of economic takeoff in Buji town. With a population of 14,700, it prospered after orders for processing imported materials streamed in from Hong Kong. Being short of hands, it has hired 47,000 laborers from outside. The per capita net income jumped up from 139.7 RMB yuan in 1979 to 3,004 RMB yuan in 1987, the annual average growth rate being 46.7 percent. Another town named Shajing has a population of 24,000. Most of the residents are engaged in processing industries and in cultivation and stock breeding in cooperation with foreign partners. In 1979, its per capita net income was 146 RMB yuan, while in 1987 that figure increased to 1,244 RMB yuan, the average annual growth rate being 30.7 percent. In the golden Pearl River Delta these are not isolated examples. In the light of this development, the Guangdong provincial government is set to achieve the target of quadrupling the per capita gross national product (GNP) by 1995, five years ahead of schedule.

Special Economic Zones and open cities can boost the development of inland areas. For instance, under heavy processing orders, Baoan County (population 230,000) has hired 220,000 laborers from twenty-one provinces. These outsiders, who are mostly contract workers, will return to their home areas after several years, bringing new technology and money. If each one of them saves 3,000 yuan a year, the total will amount to 660
million yuan. According to the Baoan post office, the total remittance from the county in one month amounted to 120 million yuan. The prosperity of the Special Economic Zones and open areas is promoting the prosperity of the inland areas. In addition, the joint management by the enterprises in the Special Economic Zones and their counterparts in the inland areas is playing an important role in the economic development of the inland.

Special Economic Zones and open coastal cities have provided excellent opportunities for direct investment to all friendly countries, including the United States. We believe that it will be good for the United States to seize these opportunities. Beginning in the 1970s, the growth of American economic activities in the western part of the country and the rapid expansion of the Asian-Pacific region have reinforced the economic ties between the United States and the countries in the Pacific rim. The importance of this region has long been recognized by American political leaders. In 1975, President Gerald Ford made a speech about “Pacific Oceanism,” declaring that the United States was a Pacific country and expressing the need to establish an Asian Economic Cooperation Organization. In 1984, President Ronald Reagan said that the United States was a genuine Pacific Rim country and that he believed the Pacific Rim represented the future of the world. In recent years, the growth rate of direct U.S. investment in Asia has far outstripped its investment in Canada and Latin America. American investors are shifting their priority to Asia.

But the Asian-Pacific region is full of fierce competition. The U.S. position in Asia is under challenge from Japan and South Korea. Therefore, the United States has to select an investment area to strengthen its competitiveness. China's Special Economic Zones and open coastal cities are ideal places for American investment for several reasons:

First, the political situation in China is stable and its relevant policies are being carried out with consistency. The opening up of Special Economic Zones and open cities and areas is not an expedient measure but a strategic step in a national policy adopted by the Chinese government for the realization of the Four Modernizations. Some foreign friends worry that China's open policy can be changed with a change of leadership. However, during the eight years since the proclamation of the open policy, the open areas have been continuously expanding, and the preferential treatment is becoming more generous. This proves that the Chinese government is serious. Moreover, our practice shows that this policy is successful, and the people give it their full support. No reverse of this policy would ever happen in China. Foreign investment in China will be safe and profitable.

Second, China has abundant cheap labor resources for investors. For example, the monthly pay of Hong Kong and Singapore workers is 3.75 to 5
times that in Guangzhou, the pay in Taiwan is 2.9 to 3.8 times, and in South Korea it is 2 to 2.6 times. A Japanese businessman said in Guangdong that the cost for processing a particular product is 6 RMB yuan in Japan, 3 yuan in Taiwan, 2.5 yuan in South Korea, 2.5 yuan in Thailand, and 1.5 yuan in mainland China. As South Korea and Taiwan are both appreciating their currencies, the cheap labor cost in mainland China is all the more alluring. At the present time, because of high labor costs, U.S. products lack competitiveness in many conventional industries. Completely automated factories without workers still take time to realize. Therefore, to shift the manufacturing of traditional products to developing countries, especially to China, will be conducive to the transformation of the industrial structure in the United States. Taking advantage of China's cheap labor, investment in China will certainly boost the market competitiveness of American firms both in the world and in Asia.

Moreover, ventures in China have easy access to rich resources. China's Special Economic Zones and open cities and areas stretch across more than 10,000 kilometers, from 40 degrees to 18 degrees north latitude, over the temperate, subtropical, and tropical zones. This territory abounds in natural resources that cater to the needs of foreign-owned enterprises, joint ventures, and co-operative enterprises. In agriculture, both cultivation and stock breeding have great potential. In mining, the titanium in Hainan Island and rare earth metals in the inland areas are needed for high-tech development. The prospect of energy industries is also promising. There is plenty of room to develop metallurgy and processing industries by relying on the vast hinterland.

Third, China's one billion population is a big market. Following the economic growth in the coastal areas, the market is being transformed from a potential one to one with real purchasing power. Direct foreign investment in coastal areas will be helpful in creating a market with real purchasing power, one that can buy imported commodities. The post-war U.S. experience shows that the prerequisite to greater exports of American commodities and capital is the development of the economy of friendly countries. After the Second World War, it would have been impossible for West Germany and Japan to quickly rebuild their industry and agriculture without American economic assistance. However, without the rehabilitation of West Germany and Japan the years of big U.S. exports to these nations would never have taken place. The export of American capital and technology benefited Japan and West Germany, as well as the United States itself. However, the domestic markets of these two countries are small, and while their economies expand, they have to scramble to compete for markets with the United States. Here lies the root of the present economic imbalance in the Western countries and the large American trade deficit.
But China is in a vastly different situation. It has a big domestic demand. Therefore, China on the whole will not become an export-oriented country to threaten the American market. At present, the Chinese government demands that the coastal cities each develop an export-oriented economy, with two objectives in mind. First, the government wants to balance foreign exchange receipts and expenditures, and second, to send Chinese products into the international market for examination, in order to improve quality, raise economic efficiency, lower costs and upgrade production and technology in inland areas. Only in this way can China's export products catch up with the standards of world markets and thus expedite the realization of her Four Modernizations. The export of capital and technology to China from the United States will certainly benefit both countries.

Direct U.S. Investment in China

The promulgation of China's open policy received a quick response from American business. In the early years, offshore oil was most attractive to American investors. In the wake of the broadening of open areas and the improvement of various policies, American investment in other fields increased and flowed into wider areas. Although mainland China opened its door later than other developing countries in Asia, the momentum of investment in China from many countries including the United States is by no means weak. The following is a brief analysis of American direct investment in China:

1. American investment in China, when compared with other developing areas in East and Southeast Asia, has reached a high level at a relatively fast growth rate. By the end of 1986, the stock of American direct investment in Asian-Pacific developing areas was as follows: Indonesia ranked first with US$4.31 billion, Hong Kong second with $3.58 billion, Singapore third with $2.29 billion, Malaysia fourth with $1.07 billion, Thailand fifth with $1.05 billion, Taiwan sixth with $0.86 billion and South Korea seventh with $0.7 billion. By the end of 1986, American direct investment in mainland China totaled $1.25 billion. This amount was less than in Singapore, but higher than in Malaysia. In view of China's advantages in its vast territory, abundant manpower, and natural resources, there is still much room for American investment.

A striking fact of American investment in China is that its growth rate in recent years is faster than that in other Asian countries (see Table 1). The high growth rate of American direct investment in mainland China is in part a characteristic of the initial investment stage. The prospect for further significant growth is promising if the Chinese government pursues the correct policies.
### Table 1
Total Amount and Growth Rate of American Direct Investment in Asian-Pacific Countries and Regions (US$ billion)

<table>
<thead>
<tr>
<th>Countries and Regions</th>
<th>Total Investment, 1984</th>
<th>Total Investment, 1985</th>
<th>Growth Rate (%)</th>
<th>Total Investment, 1986</th>
<th>Growth Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia</td>
<td>4.093</td>
<td>4.087</td>
<td>-0.15</td>
<td>4.305</td>
<td>+5.3</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>3.253</td>
<td>3.124</td>
<td>-4.00</td>
<td>3.580</td>
<td>+14.5</td>
</tr>
<tr>
<td>Singapore</td>
<td>1.932</td>
<td>1.897</td>
<td>-1.8</td>
<td>2.291</td>
<td>+20.8</td>
</tr>
<tr>
<td>Malaysia</td>
<td>1.101</td>
<td>1.217</td>
<td>+10.5</td>
<td>1.074</td>
<td>-11.8</td>
</tr>
<tr>
<td>Thailand</td>
<td>1.081</td>
<td>1.022</td>
<td>-5.5</td>
<td>1.048</td>
<td>+2.5</td>
</tr>
<tr>
<td>Taiwan</td>
<td>0.736</td>
<td>0.757</td>
<td>+2.8</td>
<td>0.860</td>
<td>+13.6</td>
</tr>
<tr>
<td>South Korea</td>
<td>0.716</td>
<td>0.757</td>
<td>+5.7</td>
<td>0.792</td>
<td>+4.6</td>
</tr>
<tr>
<td>PRC</td>
<td>0.565</td>
<td>0.922</td>
<td>+63.1</td>
<td>1.248</td>
<td>+35.4</td>
</tr>
</tbody>
</table>


By the end of May 1987, China had approved 8,332 foreign-funded enterprises, including offshore oil exploration. By the end of 1986, the contract value of foreign investments (excluding offshore oil exploration) was as follows: the Hong Kong and Macao region ranked first with approximately US$4.59 billion, the United States was second with roughly $1.25 billion, and Japan was third with around $1.15 billion. As compatriots, Hong Kong and Macao entrepreneurs would like to make a contribution to the Four Modernizations of their motherland. However, in terms of economic strength, the United States has an incomparable advantage over Hong Kong and Macao. U.S. investment potential in China can outstrip many other countries and regions.

2. The U.S. direct investment started with the big cities and can be extended to the whole of China. Its investment in Special Economic Zones and open cities has just begun. The first city is Beijing, China's capital. In April 1980, the Chinese government approved the establishment of the first Sino-American joint venture, the Great Wall Hotel. By the end of 1986, the United States had financed 234 ventures (excluding co-exploration of oil and items of compensation trade). These ventures are located in fifty-seven cities and fourteen counties in coastal and inland areas.

Because of historical reasons and the investment environment, American direct investment started largely with Beijing, Wuhan, Shanghai, and Tianjin. Today, American investments in big cities still account for a large proportion of the whole. By the end of 1986, Shanghai had signed thirty-four contracts of American invested enterprises worth $600.3 million,
Beijing thirty-four contracts worth $245.9 million, and Tianjin twenty-two contracts worth $53.4 million. However, the largest single item is the Antaibao open-cut coal mine in Suoxian County, Shanxi Province. Its investment amounts to $340 million and of course is not situated in a big city.

In 1984, the Chinese government announced the opening of the fourteen coastal cities and three open districts. This was followed by American investment in these cities. However, starting in 1984, the growth rate of investment increased markedly not only in small and medium-sized coastal cities, but also in cities in the hinterland. By the end of 1986, there were 130 U.S.-financed enterprises, totaling $762.3 million, in coastal areas, and 104 U.S.-financed enterprises, totaling $779.6 million, in inland areas. The difference in number is small. It shows that American investors are interested in the various regions of China with their different advantages.

In addition to private firms, the U.S. government has actively responded to the new open areas. For example, the American government has appropriated $500,000 to American consulting companies through the International Development Administration for the study of marketing strategy and land utilization in the Tianjin Economic and Technological Development District. The bid winner, American United Planning Company, has made important proposals after investigation. Such planning is definitely beneficial to promoting economic and technological cooperation between the two countries. It shows that the United States is optimistic about the expansion of direct investment in China's open areas.

At present, American firms' direct involvement in China takes the following five forms: joint ventures, co-operative enterprises, solely U.S.-owned enterprises, co-development projects, and compensation trade. Co-development projects are largely found in offshore oil exploration.

The China-U.S. compensation trade is on a limited scale, and its role is insignificant. Joint ventures, cooperative enterprises, and U.S.-owned enterprises have great potential. From 1980 to 1986, 206 joint ventures were established, with a total agreed U.S. investment of $572 million, averaging $2.8 million per enterprise. There were twenty-two cooperative enterprises, involving $962 million or $43.8 million per enterprise. Wholly owned U.S. enterprises came to six. The investment amounted to $6.27 million, averaging $1.05 million per enterprise. The joint ventures are the most in number, but their size is small. The cooperative enterprises are fewer in number, but they have a greater amount of investment per enterprise, and they are typically big. Wholly owned U.S. enterprises are fewer in number and smaller in scale.

3. American investment in China was concentrated in the oil industry
Table 2
Distribution of American Direct Investment
in Various Industries, 1980—86

<table>
<thead>
<tr>
<th>Industry</th>
<th>Number of Projects</th>
<th>Amount of Investment According to Contract</th>
</tr>
</thead>
<tbody>
<tr>
<td>Services (including hotels)</td>
<td>45</td>
<td>$636,510,000</td>
</tr>
<tr>
<td></td>
<td>(24)</td>
<td>616,950,000</td>
</tr>
<tr>
<td>Energy (excluding offshore oil exploration)</td>
<td>15</td>
<td>375,660,000</td>
</tr>
<tr>
<td>Coal</td>
<td>(1)</td>
<td>344,010,000</td>
</tr>
<tr>
<td>Oil exploration service</td>
<td>(13)</td>
<td>28,640,000</td>
</tr>
<tr>
<td>Electronics, communications, and bioengineering</td>
<td>42</td>
<td>54,000,000</td>
</tr>
<tr>
<td>Chemicals</td>
<td>5</td>
<td>7,940,000</td>
</tr>
<tr>
<td>Stock breeding and fisheries</td>
<td>9</td>
<td>17,270,000</td>
</tr>
<tr>
<td>Mechanical and electrical products</td>
<td>21</td>
<td>6,079,000</td>
</tr>
<tr>
<td>Construction and construction materials</td>
<td>14</td>
<td>24,450,000</td>
</tr>
<tr>
<td>Textiles, food, and light industries</td>
<td>74</td>
<td>182,920,000</td>
</tr>
<tr>
<td>Miscellaneous items</td>
<td>9</td>
<td>182,890,000</td>
</tr>
<tr>
<td>Total</td>
<td>234</td>
<td>1,487,719,000</td>
</tr>
</tbody>
</table>

and services at the beginning and has gradually expanded to other fields. Offshore oil drilling is a co-development item. This chapter will not explore it in detail. However, we would like to analyze the distribution of American investment in various kinds of enterprises (see Table 2).

Figures show that in terms of industry, American investment in services ranks first; energy second (excluding offshore oil exploration; textiles, food, and light industries third; mechanical and electrical products fourth; and electronics, communications, and bioengineering fifth (some of these items are high-tech).

In services the biggest proportion goes to hotels, with twenty-four contracts having been signed, totaling nearly $620 million. Among them,
fourteen are joint ventures, with a total investment of $207 million, and ten are co-operative enterprises with $409 million. The average is $25.7 million, the largest being $100 million.

American entrepreneurs focus their investment on hotel projects. That shows their belief in China's abundant travel resources, which are attractive to foreign tourists. These projects involve high returns and relatively low risks. Moreover, travel service earns foreign exchange directly, which makes it easier to balance foreign exchange receipts and expenditures. A large amount of U.S. investment in tourism is conducive to the development of China's travel service. However, because tourism is a big attraction for the development of all foreign investors, enough hotels have been built in a number of big cities. It is expected that foreign investment in hotel projects will soon decline.

American companies are deeply interested in energy development, especially oil exploration. The reason is known to all. But after the sharp decline of oil prices in 1985, interest in this field decreased. China's offshore oil drilling has not yielded any major discoveries, so future investments in this area are not likely to be large.

American investment in seventy-four projects in textiles, food, and other light industries totals more than $180 million. Most of these are small or medium-sized enterprises.

American investment in electronics, communications, and bioengineering totals forty-two items with an investment of $54 million, averaging $1.29 million each. The scale is small in these cases as well.

In October 1986, the Chinese government promulgated the stipulations for encouraging foreign investment (the "Twenty-Two Articles"), announcing that preferential treatment is to be given to export-oriented enterprises and enterprises involving high technology. This policy will help absorb foreign capital into the above two types of enterprises.

Since export-oriented enterprises and technically advanced enterprises are not necessarily large in scale, and items that need large investments such as energy projects and hotels have reached a low ebb, the growth rate of American investment in China in terms of money might be slowing in the near term.

American investment in China is expected to gain momentum over the longer term.

4. Foreign investments in China have earned good economic returns. A Chinese government investigation has concluded that foreign investments are typically earning good returns. In May 1987, a high official from the State Economic Commission reported that by the end of 1986, 3,120 foreign enterprises had been in operation and most of them had achieved good results. Most of the manufacturing enterprises in cities like Tianjin,
Prospective U.S. Investments

Shanghai, Dalian, and Shenzhen have been profitable and have balanced their foreign exchange receipts and expenditures. Many have earned a surplus of foreign currency. Some have achieved a profit margin of 25 percent of sales, and the rate of return on investment has reached 32.4 percent. The structure of investment has also improved; the number of high-tech enterprises and export-oriented enterprises that are encouraged by the state has increased markedly. Another study of 70 foreign-owned manufacturing enterprises concluded that 94 percent of the foreign investors had reached or surpassed their returns target, and two-thirds of them had achieved a balance or surplus of foreign exchange. A United Nations official recently pointed out that viewed from any angle, China, in opening to the outside world and attracting foreign capital, was the most successful of all the developing countries, that her pace was fast, and that there were no other major countries that could have achieved such success in such a short period.\(^1\)

The above evaluation also applies to Sino-American joint ventures and co-operative enterprises. Recently, I made some investigations in Tianjin, Shanghai, Guangzhou, Shenzhen, and Zhuhai, and gained the same impression in those cities.

For example, the Guangzhou M.C. Packaging Ltd. enterprise in the Guangzhou economic and technological development area is a model of the joint venture that has been established in a short period and has earned quick returns. Its contract was signed in March 1985, with 35 percent foreign capital from Hong Kong and the United States, totaling $26.8 million. Construction of the project started in September 1985. The enterprise went into operation in May 1986 and was completely built by November 1986. Completion of the main structures took only eight months. The year 1987 was the test-run period. In May it produced in excess of the designed capacity and turned out products worth 0.18 billion RMB yuan, 0.15 billion yuan of which were exported to earn US$30 million. As a result there was a surplus of foreign exchange. The pop-top cans produced in this factory are exported to Hong Kong, Macao, Taiwan, and Middle Eastern and Far Eastern countries. Their quality and materials consumption have reached advanced standards. The factory has been "qualified" by the Coca-Cola Company, certifying that all Coca-Cola factories over the world are permitted to use the products of the factory. Foreign investors are impressed with the speed of the factory's construction and with the company's economic performance. It was expected to lose money in the first two to three years; it actually made a profit of yuan

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\(^1\)See Zhu Rongji's speech at the National Conference of Foreign Investment and Management of Enterprises, in *Jinji Gonghzuo Tongxun* (Correspondence of Economic Work) 16 (1987).
RMB 18,370 in the first year. The president of the Ball Company, one of the foreign partners, said that the performance of the Chinese side was exemplary. The success of Guangzhou M.C. Packaging Ltd. has strengthened our confidence in Sino-American joint-venture undertakings.

We also visited a float glass factory in the Shekou industrial zone. Jointly run by Chinese, U.S., and Thai partners, its total investment amounts to US$100 million. Construction began in 1985 and required two years for completion. The first test run was successful. Half of its products will be exported, and half will be sold in the domestic market. In this way, its foreign-exchange receipts and expenditures can be balanced. Although no profit was made in the trial production period of one year, it is sure to make money later. The American manager is confident about the future of this factory. When asked about the advantages of investing in the Shekou industrial zone, he said that the zone is run efficiently, there are few bureaucratic problems, labor costs are low, and it is near Hong Kong and Macao. It is easy to import equipment and materials. This American manager, from PPG of Pittsburgh, is pleased with the cooperation offered by the Chinese side.

The Sino-American joint venture Shanghai Foxboro Corp. LMT is a model for introducing advanced technology profitably. The company manufactures process control equipment. The contract was signed in April 1982, and business started in April 1983. In the following year, it operated in the black. In 1986, profits increased by 60 percent and in 1987 by 40 percent. Sales reached 40,000,000 RMB yuan in 1987. Technology transfer has narrowed the quality gap between its chief products and those meeting advanced world standards to a matter of two to four years. The factory also helps its Chinese partners learn Western management skills. The American side is satisfied with the performance of the corporation and acknowledges that the venture is successful.

More successful examples can be found in other places. Thus there is much evidence that American direct investment in China can benefit both countries.

Removing Obstacles

The momentum of American direct investment in China has been encouraging. But many people in American business circles do not realize that China's Special Economic Zones and open cities are most attractive for investment. Many large American companies still take a wait-and-see approach. Some of them did invest but only in the manner of a soaring kite reaching out to probe the climate. How can we remove the obstacles to more American direct investment? Solving this problem is essentially a Chinese responsibility since China is the host country.
China's investment environment is underdeveloped, and the faulty market mechanism is not adaptable to international markets. Because of the former, the supply of water, electricity, and gas as well as transportation and communications is inadequate in many cities. The rigidity of the economic structure gives rise to bureaucracy, lack of responsibility, inefficiency, and slackness of the legal system. All these factors are detrimental to attracting foreign investment. The Chinese government is fully aware that it must remove these obstacles, and effective measures have been taken. China welcomes investors from all friendly nations and regions. Naturally we hope American entrepreneurs will emerge as strong competitors in China's Special Economic Zones, open cities, and some other places. Until now the Chinese officials involved in foreign investment whom I have contacted have been well impressed by American friends. They report that most American entrepreneurs tend to have strategic insight and take the interest of the whole into account. They did not fuss about trifles and solved problems in a reasonable way. They had a rigorous work style and advanced management skills.

In the interest of both sides, American direct investment shall step into a new stage. Therefore, we must sum up our positive and negative experience, remove obstacles on the Chinese side, and boost American competitiveness in order to push forward Sino-American cooperation. I believe the following points are the key to solving the remaining problems.

1. If enterprises are to be managed by international standards, we must reduce government intervention and improve the market mechanism.

To attract more American capital, we must create an environment that permits American entrepreneurs to manage the enterprises in accordance with international practices. Thus government intervention should be reduced, the market mechanism perfected, and labor markets, money markets, and commodity markets developed and improved. In recent years, the Special Economic Zones and open cities have made progress in simplifying procedures for the approval of foreign investments. Many cities have established service centers for foreign investors, providing customs house services, commodity inspection, tax collection, and banking services, as well as legal services, transportation, and materials supply, all under one roof. The construction of infrastructures has also been expedited. Factories can be built and put into production in six months. But the routine operation of foreign-funded enterprises is still beset with government intervention and faulty markets. Some of the joint ventures complain that although they have autonomy in purchasing, producing, and marketing as well as in personnel and financial affairs and in disposing of property, they do not have a good market environment in which to exercise this autonomy. The Chinese manager of a successful Sino-
American joint venture complained that although he was entrusted with personnel administration, he could not do his job well, because anyone he fired could hardly find a new job. This is a social problem. On the other hand, the men he wanted to promote were often refused by his superiors, and the men he did not want were put into his factory. All these troubles are caused by an imperfect labor market and excessive government intervention.

Another problem is the money market. A manager of a Sino-American joint venture complained of insufficient access to short-term loans.

Overdraft accounts and mortgage loans do not exist here. Even if you want to borrow money by mortgaging assets, there is no appraisal agency available. Foreign banks can offer overdraft accounts, but enterprises with foreign equity can only open accounts in the Bank of China. The joint ventures are bound hand and foot. As noted earlier, some China-made raw materials are poor in quality but high in price. However, importing raw materials is constrained by foreign-exchange controls. This is an illustration of the imperfection of commodity markets.

Of course, perfection of the market mechanism in China cannot be realized in a short period. But it can and ought to be realized soon in the Special Economic Zones and open cities. In pioneering areas like the Shenzhen and Shekou industrial zones there are fewer difficulties in this respect. But the situation is different in the economic and technological development areas in the northern provinces. Managers there complain that since they must rely on cities dominated by the old economic system for their development, they are in the grip of a crisis in which the winner, either the old system or the new one, has not been decided yet. In some of these areas, a joint venture has to organize a small group of people to tackle the old system. They must know the way to deal with bureaucracy and have access to all the right people and agencies, otherwise normal production and operation will be interrupted. This is a problem that should be addressed earnestly.

2. Improving the quality of Chinese personnel, especially people in leading positions, is one of the keys to the success of a joint venture.

To allow foreign businessmen to run a joint venture is a good idea for introducing advanced management experience. But the quality of leading managers on the Chinese side is also important for the success of a joint venture. Good performance in joint ventures can be achieved in the long run only if the Chinese cadres become familiar with production and the other relevant aspects of the management process. The subsidiaries of successful American multinational corporations usually employ native managers who know the local conditions. This practice of American multinational corporations is also appropriate for China.
Ideally, economic cooperation between China and the United States should be extended from training Chinese managers in production and operations to training them in marketing abroad in competition with world market. At present, a number of enterprises are jointly owned but not jointly managed. Executives on the Chinese side take care of production only, while foreign managers are in charge of purchasing and marketing. Under these circumstances, Chinese executives are unable to learn the whole process from sourcing to marketing. However, a joint venture will not succeed if the Chinese executives are unfamiliar with the entire process.

3. Balancing foreign-exchange receipts and expenditures should be a target for foreign-funded enterprises.

China is a developing country. Its foreign-exchange shortage will be a long-term difficulty. The introduction of foreign capital and foreign loans has helped develop the economy and has added to foreign-exchange reserves. But if used inappropriately, they can also produce negative effects. Many countries in Eastern Europe and Latin America have used too many foreign loans, and are unable to earn enough foreign exchange to service these loans. The result was a debt crisis.

China has had a similar experience up to a point. Foreign exchange was invested in new production lines in an unplanned way. Because of the lack of international market channels and marketing know-how, the products of these production lines could only be sold in domestic markets. Furthermore, the needed imported components and accessories will be in short supply once the foreign exchange is drained, and production will be suspended.

Some foreign investors do not understand why China stresses export-oriented enterprises. They ask for expansion of the domestic market for products manufactured by joint ventures. They must realize that China's purchasing power in the world market is very limited, and it faces a continuing shortage of foreign exchange.

The Chinese government has adopted a series of measures to solve its foreign-exchange problem. They include establishment of foreign-exchange redistribution centers through which enterprises can help supply each other's foreign exchange needs. Another way is to permit units with foreign exchange to use that foreign exchange to buy import substitute products produced by foreign-funded enterprises. Also foreign exchange is conserved when China-made auto parts are bartered for foreign auto parts China cannot produce. In addition, China is pressing to raise the proportion of China-made parts and materials in locally produced goods. This is not meant to protect the backward. It places a demand on Chinese producers to catch up with the world's advanced standards in a
definite time period in order to achieve a foothold in the world market.

4. The importing of advanced technology is one of the targets of China's open policy, and further cooperation between China and the United States is needed in this respect.

The export of technology often accompanies direct foreign investment. It assists the economic development of the recipient country. This has been proved by post-war practices. Western Europe, Japan, and other newly industrialized countries have expedited their modernization through technology transfer from the United States. To achieve the aim of the Four Modernizations, China will have to develop its own technology, but at the same time, it will import technology from developed countries to shorten the realization of the modernization program. All friendly countries are willing to cooperate. The United States can also make its contribution.

One problem is a matter of digestion. Because new technology is developing so fast, a new technology often comes out before the previous one is digested. For a country with a weak technological base such as China, indigestion might occur. Moreover, the mastering of new technology often requires more than one factory. Sometimes the cooperation of raw material industries and components factories is needed. Thus the effective importation of technology involves the technological capabilities of China's basic industries and requires an overall arrangement by the state in working out industrial, pricing, and distribution policies.

The other problem lies in the technology transfer policy of the United States. Although the restriction on technology transfer to China has been relaxed and a more cooperative attitude has been shown on the U.S. side recently, China is still the only country in the "V" group that is under the examination of the Coordinating Committee on Multilateral Export Controls (COCOM) and U.S. national security review. China does not really enjoy the treatment given to "V" group countries. This is unfair. The attitude of the U.S. side reflects a problem of mutual trust. It puts the United States in a disadvantageous position in the technology-export competition in the world. We hope that more efforts will be made on the U.S. side to improve this situation.

The above-mentioned obstacles in connection with direct U.S. investment in China can be removed step-by-step because the increase of direct U.S. investment is in accord with the basic interests of both countries. The economic reform and open policy are unshakable national guidelines, and the Chinese government is committed to consistently improving the investment environment. At the beginning of 1988, General Secretary Zhao Ziyang said, "The coastal areas and relevant provinces and cities must conduct a general survey immediately to determine the problems in the
4,000 foreign-invested enterprises that have already been put into operation. Do not indulge in idle talk. The relevant policies must be implemented in all enterprises. We must let foreign investors know with our deeds that in 1988 China's investment environment will be improved markedly.\(^2\) This announcement shows the determination of the Chinese leadership. During my recent visit to some coastal cities, I saw that the local authorities were taking serious actions to implement the Twenty-Two Articles. Take Fujian Province as an example. In 1986, of the 227 joint ventures, 202 were in the red. The total loss amounted to 90 million RMB yuan, while the total profit was only 20 million RMB yuan. The net loss was more than 60 million RMB yuan. In 1987, one enterprise after another adopted measures to solve their problems. As a result, Xiamen City earned a profit of 60 million RMB yuan in 1987. The net profit of the province came to 1000 million RMB yuan. This situation is very encouraging. We believe that the U.S. government and business community will respond positively to the determined efforts of the Chinese government to provide a welcome environment in China for American direct investment.

\(^2\)See Zhao Ziyang's speech when he received the participants of the Symposium on Foreign Investment, *People's Daily*, January 15, 1988.
Advancing the state of science and technology in China is now firmly recognized as one of the four modernizations being pursued by the leadership of the new China. Although a policy of relying only on indigenous improvements in science and technology might have been adopted, for almost a full decade the policy has been to accelerate the process by supplementing internal scientific and technological advances with imported knowledge and capabilities, since China appeared to be lagging so far behind the industrialized nations of the world.

Modern technology might be imported by foreign firms licensing Chinese enterprises to produce certain products or use certain processes, thus avoiding any equity involvement of foreign firms. At the opposite end of the spectrum, the Chinese might have permitted and encouraged foreign firms to set up wholly owned subsidiaries in China, thus with the technology being applied in China but by foreign-owned establishments. The equity joint venture, in which typically the enterprise is owned partly by the state and partly by a foreign corporation, is a third vehicle, one with a number of advantages when compared with the other two approaches.

In this chapter first I will discuss the relative attractiveness of the equity joint venture as a vehicle for the transfer of technology. Then I will argue that the joint venture should best be viewed as a means of importing considerably more than technology and that technology probably receives undue emphasis in China's use of international joint ventures. I will then comment on the types of problems that Americans, and presumably other foreigners as well, find most common as they attempt to establish and then operate joint ventures in China. Closing observations examine the prospects for the international joint venture becoming a less troublesome vehicle for foreign investment in China.
Licensing, Wholly Owned Subsidiaries, and Joint Ventures

Although we will focus primarily on licensing, wholly owned subsidiaries, and joint ventures as means of importing technology, we should recognize at the outset that two simpler means of importing technology are available and commonly used. One of these is for the Chinese enterprise to buy foreign equipment that is more advanced, in one dimension or another, than anything available on the Chinese market. This can be an acceptable means of importing technology if the problem of training workers to use the new equipment is properly handled. In too many instances, however, the equipment is either unused or underutilized because operators have not been trained to use it properly. Foreign visitors to Chinese plants have remarked on this in interviews, and reports of the problem have been published as well.1

This experience supports a hypothesis that has been suggested by several businessmen and scholars with whom I have discussed this subject. The hypothesis is that the Chinese tend to overemphasize the physical equipment associated with technology and to underemphasize the intangible, knowledge-intensive aspects of the transfer of technology. One American selling computers in China observed that the Chinese with whom he dealt typically did not want to pay for a service contract or for anything other than the “bare bones” equipment. The idea that a service itself might be worth something seems difficult for some Chinese to accept. But the infatuation with tangible evidence of advanced technology can turn into an embarrassment if a Chinese manager must confess to foreign visitors that no one in his unit knows how to operate the equipment. The reluctance of the Chinese to hire consultants may reflect the same inclination. Consulting services can sometimes be sold if they are carefully camouflaged in a contract involving tangible equipment as well, but even this is said to be difficult. Although Americans often laugh at themselves for overreliance on consultants, the judicious use of consulting talent can be productive. In any case, a fuller appreciation of the importance of knowing enough about a piece of equipment not only to be able to operate it but to maintain it and, for that matter, to devise means of improving it appears to be greatly needed in many Chinese enterprises.

One version of countertrade has been used in China that avoids this problem. In the case of product buy-back arrangements, the foreign

company selling the manufacturing equipment to the Chinese enterprise has a vested interest in ensuring that the equipment is properly used, since the foreign company is receiving payment in full or in part in the form of the equipment's output. Thus one Shanghai shirt factory bought modern sewing machines and related garment manufacturing equipment from a Japanese firm. The Japanese company agreed to be paid not in cash but by product, namely shirts. Because the Japanese firm wanted to make sure the shirts would fetch a satisfactory price, the firm carefully trained the Chinese workers on the new equipment.

Licensing, wholly owned subsidiaries of foreign corporations, and international joint ventures all have advantages and disadvantages as vehicles for the transfer of technology. Viewed from the Chinese perspective, licensing a product or a production process from a foreign firm means that the information embodied in the license is transferred, while the Chinese licensee retains full control. There may be limits on the Chinese licensee's freedom to do certain things; that is, the licensing agreement may stipulate that goods produced under the license will not be exported, for example, or it may stipulate the price at which the product will be sold. But on the whole, the licensee has control over the product produced under the license.

The licensor typically receives a "front end" payment, a royalty expressed as a percentage of new sales of the product in question, or a fixed amount per unit produced and sold, or some combination of these. Profits after payment of the royalties stay with the licensee, so the licensee enjoys 100 percent of the benefits deriving from reductions in operating expenses.

The licensing arrangement can also have the advantage of permitting the licensee to learn enough about the technology involved so that the licensee can eventually "walk away" from and begin competing with the original licensor. The Japanese were successful in using the licensing device to import technology in the post–World War II years. Over time they were able to build up their technological base, so in many instances they could compete on their own in international markets, no longer depending on foreign licensors.

Whether or not licensing is a satisfactory means of transferring technology depends on several factors. Licensing can offer an efficient transfer mechanism if (1) the process or product being licensed is relatively simple, (2) the licensee's physical plant is readily adaptable to the new process or product, (3) the technical capabilities of the management and

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operating staff are advanced sufficiently to learn the new technology, and (4) the licensor cooperates fully in providing both written and personal instruction to the licensee’s staff. If these conditions are met, that is, if a good “fit” exists between the technology being transferred and the capabilities of the licensee, then licensing can be satisfactory as a vehicle for the transfer of technology.

However, one can easily imagine that in the case of China the prospective licensee may realize that one or more of these conditions for successful licensing is absent. Especially if the licensee perceives that the gap between the foreign technology and the capabilities of his people and equipment is great, then the manager is likely to conclude that his unit will not be able to implement successfully the body of information, such as written instructions, drawings, and so on, that comes with a “bare bones” license. If equipment modification or totally new equipment is needed, and if the licensee’s staff requires any significant amount of face-to-face instruction, then a deeper involvement by the licensor is called for. Under these circumstances the licensee is likely to press for a joint venture arrangement. The reasoning is that the foreign partner is more likely to ensure that the new technology is fully operative in the Chinese enterprise if the foreigner has a significant equity stake in the enterprise.

For the licensor, the licensing technique can be attractive for several reasons. If the licensee is able to accommodate the licensed technology readily, then the licensor in effect is using the licensee’s management, capital equipment, market knowledge, and knowledge of the working environment to exploit whatever markets are served by the licensee. The licensor is thus able to sell into a market without an investment of managerial time and money. The royalty income can be considered virtually a return on the technology alone.

But the licensing vehicle does have disadvantages from the standpoint of the licensor. He may have difficulty verifying that the licensee is producing the product, or using the licensed process, as the licensor would like. For example, if a licensed consumer good is being produced, the licensor has a vested interest in the quality control standards that are applied. Carefully designed controls stipulated in the licensing agreement can ease this problem, but it can be difficult.

The licensing arrangement can have at least two other important disadvantages from the standpoint of the licensor. One disadvantage is that the market for information is often grossly imperfect because the buyer of information cannot evaluate the information satisfactorily until he has the

information in hand to evaluate. But once he has the information, he will not be willing to pay a price for it. Knowing this, the seller of the information, in this case the licensor, is unwilling to divulge everything the buyer of the information, the prospective licensee, needs and wants to know. So the buyer will bid less than the seller thinks the information is worth. Beyond this, even if the buyer knows the information, he might often question whether he can implement the information as effectively and as profitably as the licensor might, given that the licensor has had experience with the product or process in other markets, while he has not.

In the context of the present discussion, the licensing vehicle has yet another disadvantage in the eyes of the licensor. The foreign company typically would like to learn more about China as a market and as a place to produce. If the foreign company merely licenses a Chinese unit to produce the product or use the process, the foreigner learns little about the Chinese scene. Here, too, circumstances will push the foreigner toward something other than the licensing approach to the transfer of technology.

Finally, licensing runs the risk, for the foreigner, of leading to the loss of the technology. Once the Chinese licensee becomes familiar with the process and the product, the unit might choose to drop the licensor and start producing on its own. It might employ methods that are sufficiently different from those involved in the license so that no violation of the licensing agreement occurs, or it might assume that the former licensor will be deterred from pursuing legal action simply because of the great complexities and expense of seeking legal redress across international boundaries and systems.

Let us consider the option at the other end of the ownership spectrum, namely the wholly owned subsidiary of the foreign corporation. Permitting wholly owned subsidiaries of multinational corporations to operate in China might have certain advantages from the Chinese point of view. First, the multinational corporation (MNC) making a 100 percent investment presumably would thereby be entering with a firmer sense of commitment than it would with a joint venture or a licensing arrangement. Second, the wholly owned subsidiary probably means more Chinese access to foreign management and foreign capital. If the enterprise in question might involve developing exports, the MNC's knowledge of foreign markets would be useful. In addition, the total inflow of capital and managerial knowledge might be greater if wholly owned subsidiaries were permitted, because so many MNCs have a strong preference for this type of subsidiary. Finally, the negotiating time could be less in setting up a wholly owned

subsidiary than a joint venture because presumably decision-making authority would rest with the subsidiary and not have to be divided between two joint-venture partners.

One can readily imagine the Chinese objections to wholly owned subsidiaries of MNCs. Clearly, they are cases of private property in a socialized state priding itself on public ownership of at least the major means of production. And state control might easily be compromised if the ownership of the enterprise is in foreign hands. There might also be the question of how much would be left behind, in terms of physical assets as well as skills and knowledge, if the MNC were to decide to leave China. The fact that the MNC probably would want to repatriate all or most of its profits, thus adversely affecting foreign exchange reserves, might also be a consideration.

For the MNC, the advantages and disadvantages of operating through wholly owned subsidiaries are well known. With a wholly owned subsidiary the MNC has firmer control over quality standards and can be less concerned about losing technological know-how to local competitors. Life is simplified by not having to share decision making with a local partner. This type of vehicle also provides a good opportunity to learn about the market and the operating conditions in the country. However, the wholly owned subsidiary requires more resources, both human and financial, than a joint venture or a simple licensing agreement. And in some settings the wholly owned subsidiary’s greater visibility as a manifestation of a foreign presence can lead to troublesome political vulnerability for the MNC.

Against this background we can readily see the advantages and disadvantages of the joint venture from the viewpoint of both the Chinese and the foreign-based MNC. For the Chinese, the joint venture is preferred over straight licensing because it is more likely to warrant a serious commitment by the foreigner, with more cooperation in the transfer of technology, capital, managerial skills, market knowledge, and the like. But there are the disadvantages of shared decision making, possible disagreements over profit repatriation, flows of new technology, and other aspects of management. For the foreigner, the joint venture is a means of developing goodwill on the part of the Chinese authorities; and one can draw on the talents and physical assets of the Chinese partner. There can still be the concern about losing the technology that is involved, and of course the shared decision making is at least as great a concern for the foreigner as it is for the Chinese.

**Joint Ventures and the**
**Development of Management Skills**

Straight licensing arrangements between foreign and Chinese firms are common, as are joint ventures. Quantifying their importance is probably impossible, but fortunately not critical for our purposes. Suffice to say that
the joint-venture vehicle is a common one, especially in those cases where the foreign firm wants to learn about the nature of the China market.

The joint venture can indeed provide a means for importing modern technology. But I wish to underscore that the Chinese would be well advised to look on the foreign joint venture as a means of importing not just technology but a whole set of management skills and techniques. And the management methods might often improve the competitive status of the Chinese unit more than the technology involved.

To put the matter of technology transfer via the joint venture in proper perspective, let us first assume that one objective of Chinese development policy is to improve the performance of Chinese enterprises so that they can compete internationally. This means that the ideal enterprise would be able to sell on the domestic market successfully in competition with freely imported (i.e., no tariff or nontariff barriers) foreign substitutes. The ideal enterprise also would be able to export successfully into world markets, in competition, again, with products produced elsewhere. In order for this to happen, Chinese enterprises must be able to exploit whatever comparative advantage they can develop.

A firm can be a successful competitor on either domestic or foreign markets, or both, because of some sustainable competitive advantage. This competitive advantage might be in any of several forms, such as superior marketing capability, superior financial management, superior production management, or superior personnel management. The competitive advantage might stem from low-cost sources of raw materials, labor, components, or energy. These do not constitute an exhaustive list of the possible sources of competitive advantage. The point is that the use of modern technology in the production process is but one part of the entire picture.

With this view of the possible sources of competitive advantage in mind, one can see that the Chinese enterprise might be able to compete internationally even with mediocre technical capabilities, if there are offsetting competitive advantages that the enterprise enjoys. Indeed, one commonly finds that some Chinese enterprises are currently competing successfully in international markets even when they are using what elsewhere might be considered out-of-date technology. The garment industry might be a case in point.

Given that bases other than modern technology can provide an enterprise with a competitive advantage in international markets, it would seem advisable for the Chinese authorities to look on the international joint venture not only as a means of developing modern technology but also as a means of developing other competitive advantages. Thus the totality of

modern management methods, not just technological superiority, should be kept in mind as the joint venture effort is pursued.

One problem with applying this approach to joint ventures is that the tendency to focus on the tangible evidence of modern management—namely, the production equipment, rather than the less tangible management methods such as inventory control or quality control—must be overcome. This can prove difficult. It is much less demanding intellectually to install a new piece of equipment than to establish and operate a successful inventory control system.

This tendency to focus on the equipment might even be detrimental to the total modernization of management. If management uses the absence of modern equipment as an excuse for poor operating results, other opportunities for improving management might be foregone. One mid-level manager from a large Chinese enterprise when asked by his colleagues why the enterprise was not performing more satisfactorily, said that the problems raised would all be solved "as soon as we get our computer." One suspects that many management improvements in the enterprise may have been implemented independently of the contemplated computer system, but the absence of the computer system was simply a crutch being used to explain poor performance in other aspects of the organization.

Finally, if we are correct that competitive advantage rests on much more than the technology employed, then we must recognize that even if an enterprise does have up-to-date technology in place in the production process, poor management of the other variables might leave the enterprise with such poor overall performance that it cannot compete with foreign products either in the domestic or in the foreign markets.

In sum, it is the totality of the management process, not just the technological component, that should be brought into China through the joint venture. Poor management can swamp the advantages of a particular technology, since the technology is but one of many sources of competitive advantage. If we recognize that the ability of an enterprise to compete both domestically and internationally turns on several dimensions of management competence in addition to technological capability, we can move on to distinguish, in a crude way, three levels of effectiveness of the transfer of technology.

The first level of effectiveness is found in the case of the new modern equipment being installed, with operators trained not only to utilize the equipment during normal production but to maintain and possibly repair the equipment as well. This level of effectiveness of the transfer of technology demands that the personnel know enough about the way the equipment or process operates so that the equipment can be maintained satisfactorily over time.
The second level of effectiveness is encountered when not only the first level is achieved, but the personnel learn enough about the necessary scientific and mechanical principles so that they can develop technological advances leading to improved equipment, not just its maintenance. Clearly this calls for broader education if a seedbed for technological growth is to be established.

A third level of effectiveness can perhaps be identified, including not only the transfer of the technology itself but also sufficient supplemental managerial competence so that the full benefits of the technology can be harvested. Thus the technological capability is supplemented with modern marketing, cost control, financial management, and related managerial capabilities. One can say that the potentialities of the technology are not fully realized unless the totality of the managerial task is performed well.

Conflicts in Establishing and Operating Sino-American Joint Ventures

American firms that have stepped into the Chinese scene to establish and operate joint ventures have encountered a number of obstacles. Our interviews with American managers of Sino-American joint ventures have yielded many problems, some of which are more readily resolved than others. I present them here in summary form, with no attempt at rank ordering.

In this discussion I will focus not just on the superficial manifestations of the problems, but on the underlying causes of the difficulties as well. Presumably an understanding of the latter is essential if we are to improve the probability of successful joint ventures being established.

First I will discuss some of the problems that arise during the negotiations leading to the joint-venture agreement. We can then examine some of the difficulties that arise once the joint venture is operating. Throughout this paper, I am assuming that the joint venture is of the simplest sort, with one Chinese enterprise as one partner and one American company as the other, each with a large interest. We need not concern ourselves with which party has the majority interest or whether the equity is evenly divided between the two.

The first problem worth noting is a fundamental difference in objectives of the two parties. Often the American company wants to gain a foothold in China to develop the domestic market, whereas the Chinese partner wants to maximize exports in order to earn foreign exchange. In recent years many industries worldwide have had excess capacity, so

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typically foreign firms are not eager to establish yet another export platform. Consequently, the American partner wants to export a small percentage of production, while the Chinese partner wants to maximize this percentage. Thus negotiations just on this one question can be contentious.6

In some instances, American firms have avoided this problem because they were explicitly invited to produce products needed in the local market. This appears to have been the case with at least one of the pharmaceutical companies. But even if the export target question may have been minimized when the joint venture was first formed, the current concern about the nation's foreign exchange situation has caused the Chinese to press such companies to develop exports at least sufficient to offset the foreign exchange cost of their imported raw materials.

An underlying difficulty that has accounted for problems in negotiating Sino-American joint ventures stems from the enormous differences in the backgrounds of the two parties. Briefly put, because of these different backgrounds, the two sides have quite different views of the world. Perhaps equally important, each side knows little about what the other side's view of the world is. One can imagine two parties negotiating when they both have different views of the world but each side knows what the other's view of the world is; but if the two views are different and each side is ignorant of the principal features of the other's view of the world, the problem is compounded.

One consequence of this difficulty is found in the Chinese view of the risk the American side is taking in coming into China. My own speculation about this matter runs as follows. The Chinese team comes from a background of managing in a planned economy. In that economic and social system, bankruptcy was unknown and success, or at least survival, was assured. Although the ground rules have now changed a bit and bankruptcy is possible, it is still rare, and the Chinese team's presumptions about the prospects of failure are surely biased toward expectations that profits in the joint venture are assured, especially given the vaunted competence of the prospective American partner. The American team, on the other hand, well knows that foreign operations can be fraught with risk, especially when one is stepping into a setting as unknown as that encountered by the American manager in China.7

One unfortunate consequence of this may be that the Chinese push so hard in the negotiations that the foreigner finds that all the benefits of the venture go to the Chinese, with little if anything left for the foreigner, at

7Lucian Pye, Chinese Commercial Negotiating Style (Santa Monica, Calif.: Rand Corp., 1982).
least given the magnitude of the risks. Consequently the joint-venture effort is not consummated, or if it is, the foreigner is reluctant to go forward enthusiastically.

The Chinese view of this might be tempered by at least two considerations. First, the Chinese are still keenly aware of their having been exploited by foreigners, from the days of the Opium Wars through the treaty port days. Therefore deep suspicions are understandable. In addition, they know that they have been isolated from the rest of the world for so many years after liberation in 1949 that they are relatively unschooled in the ways of the modern world, so the need for caution is great.

Second, the Chinese negotiators may feel under pressure to strike a deal that is unquestionably more beneficial for the Chinese than for the Americans because of their concern about the authorities to whom they report. Given that the rewards for the individual who helps establish a profitable venture are minimal, while punishment for one who makes a mistake is substantial, the concern about downside risk is greater than the interest in the upside potential.

Understandably, one might entertain a related hypothesis about the Chinese tendency, often reported by Americans involved in joint-venture negotiations, to press hard for concessions of all sorts. It may be that what we might call a "merchant mentality" is dominating in these negotiations, as distinct from a "partnership mentality." To put the matter sharply, consider the merchant in a Middle Eastern bazaar. My caricature of this individual pictures him looking on each prospective customer as a walking pocketbook, one that will come by the merchant's stand only once, ever, and the merchant's objective is to dip into that pocketbook as deeply as possible. Contrast this with the case in which the individual realizes that there is to be a continuing relationship with the opposite party, and that one might expect a series of situations marked by much "give and take." In this latter case, the negotiator might be inclined to recognize that when the initial deal is struck, one should not push so hard as to exhaust any feeling of goodwill on the part of the other party.

One suspects that too often in the case of the Chinese joint-venture negotiations with foreigners, the Chinese employ the merchant approach rather than the partner approach. If the foreigner agrees to the deal but sees himself as having been "driven to the wall," he is saying, in effect, that there is little to be gained in setting up the joint venture. If that is the case, then the foreigner is not inclined to be helpful later on in the relationship when the joint venture is underway and some assistance not anticipated in the agreement is needed. In the parlance of negotiating, it might be wise for both sides to "leave some money on the table," that is, not push to get everything out of the deal for oneself. If both sides leave the negotiating
table feeling good about the deal, then both are more likely to put in the extra effort later on to ensure that the enterprise succeeds. If one side has employed what I am here calling the merchant mentality, pushing hard for every advantage, the other party is not likely to work assiduously for the good of the new venture.

One of the underlying cultural differences that, once recognized, can add to our understanding of the negotiating scene concerns what the economists term "opportunity costs." The opportunity cost of any particular activity is whatever is given up because the next most attractive activity was not undertaken. Thus the opportunity cost of a game of Ping-Pong is whatever enjoyment the individual has forsaken because he or she was not reading a book or engaging in some other activity. In the context of our present discussion, for the American firm the opportunity cost of setting up a joint venture in China is whatever income stream is forsaken because the time and money spent in setting up the joint venture were not used in another way, for example, in setting up a wholly owned subsidiary in another country. The American management team or their superiors are often asking, "Is this the best way to use our talent and money?" If it is not, they are saying that they are not covering their opportunity cost.

Although I have not explored this question in depth with Chinese managers, I suspect that commonly they have an inadequate appreciation of the Americans' concern about opportunity costs. The Chinese negotiators need to recognize that the prospective American partner not only wants to establish a profitable enterprise; he wants that enterprise to return at least as large an income stream as could be earned if the same resources were used elsewhere.

That the concept of opportunity cost is insufficiently recognized among Chinese managers is, I think, the explanation of a curious reaction encountered by the American faculty teaching in the management development program of the National Center for Industrial Science and Technology Management Development in Dalian. When we proffered the observation so common among Americans, namely, "Time is money," the Chinese managers were greatly amused; they had never heard the expression or anything similar to it. To say "time is money" is to say that if one weren't spending one's time doing X, one could make some money at Y, or at least do something with an alternative reward. Perhaps in the Chinese enterprise the alternative to X is only to do nothing, in which case "time is money" makes no sense.

The "time is money" saying is born of a system in which labor is relatively scarce. It is not true in a system in which labor is redundant, as may well be the case in China. This difference helps explain why Americans typically become so impatient with the long negotiating process.
when attempting to set up joint ventures in China and why the Chinese are puzzled about the Americans always being in such a rush.

Another conflict that clouds the negotiating scene when Sino-American joint ventures are under discussion arises because of the contrast between the American enterprise and its Chinese counterpart when these are viewed as decision-making units. The American manager dealing with his Chinese counterpart needs to recognize that the Chinese enterprise is not a decision-making unit. It is probably more accurate to conceive of the Chinese enterprise as a semiautonomous unit of the government, linked to the government through a labyrinth of agencies with varying degrees of authority over the enterprise. The enterprise is thus but a part of the bureaucracy, and decision making is diffused through many different offices, which are outside the enterprise itself.

That the Chinese enterprise is not a self-contained decision-making unit is manifested in a variety of ways. The American negotiating team commonly is impressed by the large number of Chinese on the other side of the table. The large number is explained by the fact that all the interested agencies who share in the decision making want to be represented. One often hears of the Chinese negotiators saying about one proposal or another, “I wonder what the authorities will think,” indicating clearly that “the authorities” have a major role in the decision-making process. In some cases negotiations have ceased while the Chinese traveled to Beijing to brief their superiors and to receive guidance. Finally, the lack of decision-making authority in the management of the enterprise is reflected in the comment, common among Chinese managers, that the manager has “too many mothers-in-law.”

This is not to say that this problem is entirely absent when we turn the question around. The Chinese managers report that they are sometimes puzzled about whether the Americans they are dealing with have full authority to commit their companies. Commonly the American team must gain approval from their superiors, of course, in the same manner as the Chinese. However, there can be little question that as a rule more people and interests are involved in the decision making on the Chinese side than on the American side. So typically the Americans find the decision-making process on the Chinese side excruciatingly slow and complex.

A major problem area in Sino-American joint-venture negotiations concerns the management of the labor force. The American manager is accustomed to viewing labor as a variable cost, that is, he can vary the labor input roughly with variations in the demand for his product. Within limits, he can lengthen or shorten the work week for his workers, and he can lay off workers temporarily or dismiss them completely. He can dismiss
workers who are not performing satisfactorily, again within certain limits. The American manager is well advised to recognize that in China the enterprise is, by contrast, a key unit in a giant social welfare system, and that the worker's unit has an implied responsibility for the welfare of the worker. Under these circumstances, labor is in effect an overhead cost that must be covered regardless of fluctuations in demand.

A common method of handling the labor-force problem in Sino-American joint ventures involves the joint venture contracting with the Chinese partner for the labor force, that is, the workers continue to be recognized as employees of the Chinese joint-venture partner, although they in fact work for the joint venture. The joint venture pays a total sum to the Chinese partner in exchange for the labor; the joint-venture enterprise does not pay the employees directly. Thus the total labor package must be negotiated between the two partners.

What bothers the American managers on this point is that they must pay such a premium over the going wage. The Chinese have often insisted that the Chinese counterparts of any expatriate American managers be on the payroll at a charge rate that approximates the salary an American would receive for that position in the U.S. The labor charges paid by the joint venture, however, do not go directly to the workers or Chinese managers; those labor charges go to the Chinese partner, who then pays only the normal wages and salaries to the workers. The Chinese partner pockets the difference. In effect, this becomes income to the state.

In at least a few instances the American team has arranged to put the workers in the joint venture directly on the payroll of the joint-venture enterprise; they are not seconded from the Chinese partner's operation. When this occurs, it is much easier for the joint-venture management to institute an effective system of individual rewards for good work. Limits on hiring and firing may still exist—these conditions are more liberal in the Special Economic Zones—but at least more flexibility is enjoyed than if the workers are still employees of the joint-venture partner.

Another hurdle commonly encountered in negotiating Sino-American joint ventures concerns the valuation of the technology that is transferred and the valuation of the land or building, or both, contributed by the Chinese partner. The valuation of the technology is even more ambiguous in the present context than it might be in the United States or Western Europe, since the uncertainties surrounding expectations about a future profit stream are typically greater in China than in other settings. As noted earlier, American managers have commonly observed that the Chinese appear to have difficulty recognizing that an intangible item such as technology can have a value. An alternative view is that it does have a value, but
all knowledge, including technical knowledge, is a public good and therefore a free good. In any case, putting a value on the technology contributed by the American partner is often a stumbling block in negotiations.

Paralleling this is the problem of evaluating the real estate contributed by the Chinese partner. Because there is virtually no real estate market in China, it is futile to look for sale prices on comparable property. In some instances the Chinese have looked at values of property in New York and Tokyo and attempted to apply these to outlying properties in China. One solution to the dilemma of valuing the technology and the real estate is to decide that the value of the technology is just equal to the value of the real estate.

Once the joint-venture agreement has been successfully negotiated and operations are actually getting under way, additional problems have often been encountered. Again we can briefly describe some of these, without suggesting any rank ordering.

One of the more common problems concerns the Chinese attitude toward what the American considers a legal contractual agreement. Although some American managers have found that their Chinese counterparts abide by the joint-venture agreement in full detail, many others say that they find the Chinese wish to modify the agreement whenever some part of the commitment proves to be inconvenient. One respondent was particularly irked by his suppliers' casual attitudes about supply contracts.

The Americans need to recognize that the legal trappings of American business have been, until recently, virtually unknown in post-liberation China. Business has been conducted on the basis of trust, which is built up over a long period of time. Personal relationships, solidified over time, have led to this trust, which in turn has substituted for the legal contract. At the same time the system has been loose enough so that, for example, late or partial delivery is accommodated, if not expected. As in most less-developed countries, managers have become accustomed to operating in a "make do" environment, that is, the manager has become used to adjusting to a less than flawless performance by all the parties with whom he deals, whether these are workers, suppliers, customers, or government agencies. The American manager who steps into this scene and expects a disciplined performance from everyone with whom he comes in contact is certain to be disappointed.

One American manager noted that the Chinese preference for a flexible interpretation of contracts can work to the advantage of the foreign partner; given the uncertainty in the environment, the foreign partner himself will find that circumstances from time to time will make it difficult for him to meet the terms of an agreement, and he himself will want to seek relief from its language.
Under these circumstances the American should be prepared to be flexible, even with an agreement in hand. He should keep in mind the reported incident of the American arguing with his Chinese counterpart in a joint venture, with the Chinese partner finally exclaiming, "If you keep bringing up that agreement, we'll never get anything done!"

Infrastructure problems are a source of constant frustration for most American managers in Sino-American joint ventures. The frailties of the telephone system are especially maddening for anyone spoiled by the quality of telephone service in the United States. One respondent noted that he had to have far more people in the purchasing action than he had originally planned because "they are always on the train." Because the telephone service is so difficult and unreliable, the Chinese preference for doing business face to face is reinforced, and so purchasing agents must spend much time traveling to make their contacts with prospective suppliers.

Transportation uncertainties can be equally troublesome. In one instance the railroad's refusal to accept a shipment of less than a certain tonnage was the cause of increased operating costs.

The unreliability of supply leads to the joint venture adopting a policy of higher average inventory levels than would be suitable in markets where transportation and communication systems are more advanced. The uncertainties of the Chinese scene are such that the "just in time" inventory-management system made famous by the Japanese would be risky indeed. The Chinese are accustomed to operating with large inventory levels even between individual work stations in the plant. It has been suggested that while the Japanese use their "just in time" inventory-management system, the Chinese employ a "just in case" system.® While this approach to an inventory policy might be justified partly by delivery uncertainties, in the recent past it has been the result, at least in part, of the low cost of capital recognized by the individual enterprise. Absent the concept of interest, consistent with the tenets of Marxist economics, there is no need to economize on capital and hence no reason to minimize investments in inventory. This causes the Chinese manager to be relaxed about inventory levels. The American manager, training Chinese replacements for his temporary American team, must modify this logic. Now that even wholly Chinese enterprises increasingly are financed with bank loans rather than just grants from their supervisory bureaus, interest costs are entering into more inventory-investment decisions. But the interest rates are reportedly low, so the problem of overinvestment in inventory no

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®This term has been suggested by Professor William Fischer of the University of North Carolina.
doubt still exists. American managers operating in China must expect to train their Chinese counterparts in modern inventory-management practice, but in most instances this will still mean higher inventory levels than they are accustomed to in the United States.

Another common operating problem encountered by American managers concerns the quality and reliability of suppliers. Production plans based on the presumption of local supplies have commonly been thwarted because local supplies of the required quality have not been available. In some instances supplies of acceptable quality have been possible, but quality-control problems have been troublesome. In many cases the joint-venture enterprise has devoted considerable time and effort to the development of satisfactory local supply sources, with success. One respondent was convinced that one of the best contributions foreign joint ventures can make in China is the development of satisfactory sources of supply. His view was that prospective Chinese suppliers are prepared to learn how to produce to the standards required by Western firms. In at least some cases, however, finding or developing local supply sources that can meet the prices at which the products are available on the world market can be difficult. It is clearly a mistake to assume that because of low labor costs China is necessarily a source of low-cost inputs.

American managers generally agree that Chinese workers are quick to learn the technical requirements of the job, whether they are trained in China or in the U.S. But instilling good work habits such as reporting for work promptly apparently requires diligent and persistent attention.

In at least some instances the American managers of Sino-American joint ventures have found it difficult to get the Chinese managers to accept responsibility for decision making. The American manager should realize that the Chinese managing director of a manufacturing unit until recently has not been the manager of a full-scale company in the American scene, but instead might be thought of as a plant manager, responsible for production only. Financial management, marketing, product design, and the like were outside his purview. Even improvements in production methods, inventory control, and the like typically were not initiated by the managing director. Changes in these areas were most likely initiated by someone above the unit. Thus, in most cases, the manager was not expected to bring any imagination to the job. Accepting responsibility for managing change is a new phenomenon for most Chinese managers, and they will have to be coached in this new skill.

One Sino-American joint-venture manager reported an annoying experience that might or might not be encountered in other units. After a manager had gained some experience with the foreigners in the joint venture, he was removed from the joint venture and assigned to other
activities under the Chinese partner. Although reasons were proffered for the move, the American manager was convinced that the joint venture was simply being used as a training school by the Chinese partner.

A final problem, and a major one, that Sino-American joint ventures have encountered concerns foreign exchange. The Chinese authorities are understandably interested in maintaining a satisfactory level of foreign exchange reserves. So when reserves are under pressure, as they commonly are because of imports, particularly of capital goods, they are reluctant to let profits be repatriated. Repatriation of profits cannot be guaranteed in the original joint-venture agreement because the Bank of China, which has the ultimate authority in this matter, is not a party to that agreement. Joint ventures are also under pressure to earn sufficient foreign exchange to cover their import requirements as well. In short, the authorities are leaning on all joint ventures to generate enough foreign exchange to cover all their own requirements of foreign exchange needed both for imports and for profit repatriation.

For some joint ventures, export sales are such that this is not a problem. Others are considering establishing related operations simply for the purpose of generating exports and hence foreign exchange. An alternative means for obtaining foreign exchange is to buy it from such units as the tourist hotels, whose foreign exchange receipts consistently exceed their foreign exchange requirements. This informal foreign exchange market is legal.

The net of the foreign exchange problem for the foreign investor is that an element of extra risk attends the joint-venture investment because of this uncertainty.

The Outlook for Joint Ventures as a Vehicle for Foreign Investment in China

Conversations with American attorneys whose advice is sought by companies considering investment in China indicate that investment interest is distinctly limited. Not only is the Chinese market developing much more slowly than was anticipated in the heady days of the early 1980s, but also the publicity about the difficulties encountered by AMC-Jeep and others has cooled the earlier enthusiasm. However, my own impression, verified by some other observers, is that the American press has given more publicity to the problems than to the successes among the Sino-American joint ventures. Perhaps the companies that are enjoying satisfactory experiences in China are keeping quiet so they will not attract new competition.

The limited interest in investment in China is unfortunate. Economic development and modernization in China are consequently advancing at a
slower rate than would otherwise be possible. To accelerate foreign investment the authorities in China must try to see the world as the foreign investor, or the prospective foreign investor, sees it. The Chinese must realize that the multinational corporation has other places to apply its talent and financial and managerial resources. In effect, China is competing with other investment opportunities. If China is to attract the MNCs, it must be more attractive than the competing alternatives.

The Chinese have indeed been concerned about providing an alluring investment climate. In October of 1986 some twenty-two new regulations were promulgated to ease some of the difficulties the foreign joint ventures were encountering. These regulations appear to have been at least moderately effective, but still there is no great flood of interest in China on the part of foreign investors.

China is eager to modernize. The joint venture with foreign interests is considered an attractive vehicle for accelerating the implementation of modern technology in Chinese industry. We have argued here that China should avoid undue emphasis on the technology acquired through joint ventures. The international joint venture should be looked on as a means of developing new areas in which China has a comparative advantage in world markets, including its domestic market. Because comparative advantage is based on more than technology, the Chinese should attempt to let the international joint ventures introduce modern management methods across the full spectrum of management functions, not just the technological components. To date, foreign managers operating joint ventures in China have faced many obstacles as they have attempted to launch modern enterprises. The Chinese authorities have moved to improve the environment of foreign investment by minimizing these obstacles, but much remains to be done. At present, in too many instances the advantages of operating in China are perceived by foreigners as being swamped by the disadvantages. Until these disadvantages are overcome, foreign investment in China through international joint ventures will increase, no doubt, but at a rate that might be optimal for the firm but less than optimal for China.

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COMMENTS

Ye Gang comments:

With regard to Professor Holton’s paper on Sino-U.S. joint ventures, I wish to present two sets of observations based on interviews with foreign managers in international joint ventures in Shanghai. The survey was jointly conducted by foreign professors and us early last year (see China Business Review, March–April 1988).

First, an appropriate appraisal of U.S. investment in China requires comparisons with Sino-European, Sino-Japanese and Shanghai–Hong Kong joint ventures investigated in the survey.

The comparative features of the U.S.-China ventures are as follows: (1) the largest ventures, in terms of investment, are by Western European firms, while the smallest are by Japan and Hong Kong firms; the U.S. joint ventures are between these two extremes; (2) many U.S.-China ventures are technologically advanced, while Japan-China and Hong Kong–China ventures are, to a large extent, export-oriented; (3) in more than 60 percent of the U.S.-China and Western Europe–China ventures, the foreign partners have their own resident managers in Shanghai, while many managers sent by Hong Kong and Japanese partners stay in China on business for only several days a month, and some firms do not even send their own managers; (4) regarding investment motivations, apart from their common interest in establishing long-term economic relations with China, both the U.S. and Western European partners desire to obtain a good share of China’s domestic market, while Hong Kong and Japanese partners focus on China’s low labor cost. These crude comparisons tell us that in some respects the U.S.-China ventures meet China’s needs better, but in other respects they did not do as well as the other joint ventures. They are far from bringing all their development potential into full play. This is not in proportion to the U.S. economic strength, nor in accordance with what the United States wished. An appropriate assessment of the progress and the room for improvement will help us see the strong points and weak points so as to make united efforts to develop our cooperation.

Second, there are many things for both sides to do to promote investment. I fully agree that the slow progress and small scale of U.S.-China joint ventures have their causes on both sides. I agree with Professor Holton that the contradictions in U.S.-China joint ventures arise from differences in objectives, backgrounds, and cultures. Both sides must strive to improve on the present situation.

At this conference, many American scholars have noted the problems on the Chinese side. The above-mentioned survey also lists a number of
specific problems in China's investment environment. These have to be solved, and I will not reiterate them here. I do, however, want to suggest how U.S.-China ventures might improve their operations, and, especially the perception of both sides.

First, both parties in the joint venture should try to see things dynamically, not statically. Many American scholars have, in their writings, mentioned various problems. These problems do exist, but quite a few of them have been solved; some were solved long ago, some are being solved. We do wish that the American scholars would focus more attention on recent developments.

Second, both parties should be less conservative and have more risk-taking spirit. In the survey mentioned, the enterprises with U.S. partners were well behind other countries both in number and in scale. Considering its economic strength and tradition, the United States ought to have done much better than other countries. This shows that many U.S. businessmen lack far-sightedness. If the present situation continues, one would expect the United States to lose the advantages of investing in China, just as certain of its industries have lost competitive advantage to other countries that have more risk-taking spirit. I don't think U.S. entrepreneurs like to see this kind of thing happen.

Third, U.S.-China ventures should not only utilize American advantages, but also the advantages of the local community. A successful overseas enterprise needs to combine both its own advantages and those of the community where it operates. This is a conclusion drawn by many foreign economists. However, some investors (including American investors) only consider their own interest, with the least regard to China's interest. For instance, some joint ventures import not only machinery and equipment, but also raw materials, even packaging materials, while local resources are underutilized.

Fourth, American investors should pay attention to favorable special conditions and not link all the problems to China's overall institutional reforms. Most Westerners, when discussing China's investment environment, mainly refer to its overall economic institutional reforms, leaving the impression that if its economic reforms are not completed, China cannot afford to promote its foreign economic ties. But in fact, since the promulgation of the "Provisions for the Encouragement of Foreign Investment" in October 1986, China has repeatedly promised to create favorable special conditions to enhance foreign economic relations, especially to absorb foreign capital. It provides more preferential terms for foreign invested enterprises so that they can do their business in accordance with international practice. Up to date we have already adopted a series of practical measures in such realms as foreign exchange regulation, material supply,
and labor employment. I wish my American colleagues would note these favorable special conditions, which will help investors in making investment decisions. But unfortunately, these favorable conditions attract little attention.

_Zhen Shaolian_ comments:

In their papers, both Professor Holton and Professor Simon affirm that in the past ten years China's open policy and the policy of importing technology and capital have played a positive role in the country's economic growth. Professor Holton analyzes the conflicts and obstacles that deter the development of Sino-U.S. joint ventures. His analysis is valuable, but he argues that "at present, in too many instances the advantages of operating joint ventures in China are perceived by foreigners as being swamped by the disadvantages." This might reflect the opinion of only a few "foreigners." In fact, the number of joint ventures has been increasing with the improvement of the investment climate in recent years. This shows that "advantages" are surpassing "disadvantages," rather than the other way round.

In his paper, Professor Simon notes several problems in China's technology acquisition system, such as insufficient coordination among the various organizations responsible for China's technology import program, low efficiency, excessive duplication of technology and equipment imports, and poor assimilation capabilities. Therefore, he says, "The decision-making process regarding technology import must not be viewed in terms of the purposeful actor model" because of the existence of the above-mentioned problems. These problems do exist, but the Chinese government is making efforts to solve them. In his analysis of the impact of China's technology import on the world economy, Simon maintains that "China's recent technological progress in industries such as textiles should not be taken to portend an inevitable clash between China's modernization program and the economic prosperity of the West or East Asia." At the same time, however, he says, "In a sense, China's growing participation in the world economy, engendered through its technology transfer relationships, will leave the leadership confronted with a fundamental dilemma." He refers to the dilemma that China is trying to make credible its claims to represent the developing world, while at the same time dealing with the superpowers and working within various international organizations. The situation he mentions does not exist, is reality. As everyone knows, China pursues the Five Principles in its foreign relations. It does not, as Simon says, "[continue] to see itself as a leader and protector of the Third World."
In 1979, China began its policy to reform its economy and to open up to the outside world. The important objectives of the open policy are to introduce foreign capital and to import advanced technology, while enhancing economic and academic exchanges with foreign countries, corporations, and individuals.

The investment of capital in a foreign country in joint-venture form is a common type of international economic cooperation. It is not only practiced between developed countries, but has also become increasingly popular between developed and developing countries. The main features of it are joint investment, joint management, joint bearing of risks, and joint sharing of profits.

The legal status of foreign-equity enterprises is guaranteed by the Chinese Constitution, the law of the People's Republic of China and Joint Ventures Using Chinese and Foreign Investment, and other pertinent laws and regulations. The Constitution of China states: "All foreign enterprises and other foreign economic organizations in China shall abide by the law of the People's Republic of China; their lawful rights and interests are protected by the law of the People's Republic of China." The law on Chinese-foreign joint ventures, too, clearly states: "The Chinese government protects, by the legislation in force, the resources invested by a foreign participant in a joint venture and the profits due to him pursuant to the agreements, contracts, and articles of association authorized by the Chinese government, as well as his other lawful rights and interests."

The Constitution of China provides that: "The People's Republic of China permits foreign enterprises and other economic organizations or individuals to invest in China, to carry out all kinds of economic cooperation with Chinese enterprises or other economic organizations according to the provisions of the law of the People's Republic of China." Hence, the state declares in its basic law that not only joint ventures with Chinese and foreign investments are permitted, but other types of foreign investment
Legal Status of Foreign Equity Enterprises 247

are also permitted to exist in China. A joint venture is a company with limited liability. The liability of each partner is limited to the registered capital in the joint venture. The investors will not bear the liability borne by the venture itself.

The joint venture is a Chinese legal person, which means that besides what the law otherwise provides, the enterprise has all the civil rights that can be used by Chinese state-owned enterprises. At present, a series of laws and regulations relate to all aspects of joint ventures, as follows:

1. **In the field of operations:** Chinese-foreign joint ventures by law are given greater decision-making power in the production and procurement of raw materials and the marketing of products than are state-owned enterprises. The production plans of Chinese state-owned enterprises are fixed and established directly by the state. Only after the national plan is carried out can the production of products outside the plan be permitted according to the demand of the market. Chinese joint ventures can decide their own production plans within the scope of their articles of association provided that they are submitted to the relevant department of the Chinese government for the record. The Chinese government will not impose any mandatory plan on the Chinese-foreign joint ventures.

Chinese law tolerates the expression of will in the operation of enterprises by both parties. They can prescribe the procedures of operation and management as well as the procedure of decision making in the negotiation of the joint-venture contract and in the drafting of the articles of association. The joint venture can itself determine the system of employment of personnel and the standards for salaries, wages, and bonuses.\(^1\) The Chinese Joint Venture Law has two mandatory rules for the management of Chinese-foreign joint ventures:

(1) The chairman of the board of directors of the Chinese-foreign joint venture shall be appointed by the Chinese partner.\(^2\)

(2) In handling important problems, such as the revision of the articles of association of the joint venture, the termination or transfer of the registered capital of the joint venture, and the merger of the joint venture with other economic organizations, a unanimous decision by all members of the board of directors present at the meeting is required.\(^3\) This fully protects the foreign investors, especially those in a minority position, as well as the Chinese partner.

2. **In the area of labor employment:** For a period of time, Chinese

\(^1\)See Article 15 of Regulations by the State Council for Encouraging Foreign Investment.


\(^3\)See Article 36 of the Rules for Implementation of the Law on Chinese-foreign Joint Ventures.
enterprises employed too many workers and staff members. It was difficult to fire workers whose work was unsatisfactory. Now the labor-employment system is undergoing a transformation. The law permits joint ventures to recruit their workers and staff members through examination and to select the better ones among the participants in the examination. In order to recruit competent professional personnel, joint ventures have the right to recruit personnel outside the province or municipality where the joint venture is located. The discharge of workers is permitted.

In order to promote reform and give first consideration to areas with minority nationalities, border regions, old liberated areas, and economically less-developed areas, the government encourages professional personnel to work in these areas. If a professional person applies for resignation and wants to go to one of these areas, the enterprise where he or she is working should approve. This priority can also be enjoyed by joint ventures; that is, joint ventures that need professional personnel can recruit them in state-owned enterprises if the personnel offer to resign. The enterprise should then approve the resignation. In this way joint ventures have the same priority in labor employment as the above-mentioned areas.

3. In the purchasing of raw materials and the marketing of products: Joint ventures can, with their own foreign exchange, purchase raw materials in the world market as well as in the domestic market. For purchasing in the domestic market, four channels can be used:

(1) Those materials under planned distribution will be brought into the supply plan of the departments in charge of joint ventures and supplied by the material and commercial departments or production enterprises according to contracts.

(2) Those handled by the material and commercial departments can be purchased from those departments.

(3) Those freely circulating on the market can be purchased from production enterprises or commission agencies.

(4) Those export items handled by foreign trade corporations can be purchased from the appropriate foreign trade corporations.

The first channel is for materials that are controlled by the state mandatory plan. If the joint venture has been approved by its superior department, the joint venture can have the same right as the state-owned enterprises, and its material supply can be guaranteed. The materials in the second channel are the products produced in accordance with the state guidance plan by the factories that have completed the state mandatory plan. Joint ventures have the same right as state-owned enterprises in

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purchasing, but they must enter into contracts with sellers or producers. The government does not guarantee the supply of the materials through the second, third, and fourth channels. Certain products that are used directly in production for export must be purchased at the international market prices provided by the State Administration of Foreign Exchange Control (SAFE) or the foreign trade department. The prices for coal used as fuel and gas for motor vehicles that are needed for manufacturing products to be sold domestically and the fees charged for water, electricity, gas, heat, transportation, services, engineering, consultation services, and advertising will be the same for joint ventures as for state-owned enterprises. They can be paid in renminbi.5

As for marketing, Chinese law establishes four channels for the sales of each of the four types of materials in China. For instance, for those items under planned distribution, the departments in charge of joint ventures will bring them into the distribution plan of the materials administration departments, which sell them to designated users according to plan. For products of a joint venture that Chinese foreign trade companies need to import, the joint venture may sell them to Chinese foreign trade companies and be paid in foreign currency. For those products handled by the material and commercial departments, the material and commercial departments will purchase by order given to the joint venture. Production in excess of the plan or outside the plan can be sold by the joint venture as it wishes.

Joint ventures have the right to decide the price of their products for export and to apply for export licenses. The price of products for the domestic market will be decided in accordance with the price provided by the state.6

4. Regarding taxation: Chinese tax law gives preferential treatment to investment in certain areas. Foreign investment in enterprises that export products and enterprises that are technologically advanced enjoy preferential tax treatment. Enterprises with export products must meet the following conditions: (1) manufacturing products for export, (2) export more than 50 percent of total annual production by value, and (3) achieve foreign exchange balance in the year. Technologically advanced enterprises must meet the following conditions: (1) use advanced and practicable technology, processing methods, and equipment that are on the list encouraged by the state and needed badly in China; (2) manufacture

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6See Article 66 of the Rules for Implementation of the Law on Chinese-Foreign Joint Ventures, and the procedures of the Ministry of Foreign Economic Relations and Trade for foreign-invested enterprises' application for and grant of import and export licenses.
products newly developed; (3) produce products that are much better in quality or in function than the same products from local origin; and (4) produce goods that can replace imports or can be exported. By going through the procedure of application, reviewing, and confirmation, the above two types of foreign-invested enterprises can enjoy longer tax holidays and a longer period of tax reduction, and product-export enterprises can enjoy a 50 percent reduction in the income tax rate.

Investments in the special economic zones and in the fourteen coastal cities enjoy some preferential tax treatment. The tax rate in the special economic zones is lower than that of the fourteen coastal cities. The tax rate in the coastal cities is lower than that in the general areas. And even the rate in the developing zones of the coastal cities is lower than that of the old urban areas of the coastal cities.

The rights of foreign investors in China are more than those enjoyed by state-owned enterprises with certain exceptions. Foreign investment proposals must be screened, the scope of the foreign investment must be approved, and the foreign investment project is expected to maintain a balance in its foreign exchange transactions.

In most countries, foreign investment proposals must follow certain procedures. They should be reviewed by the institutions specially established by the authorities of the host country. The purpose of the review procedures is to find out whether the contract is legal, whether it facilitates the expansion of production of that country, whether it increases labor productivity and exports, and whether it contributes to establishing new production or new production technology and the protection of the human environment.

Each country establishes its own criteria for the review and approval of foreign investment according to its own economic development. It is the same in China. According to the Law of Chinese-Foreign Joint Ventures, the establishment of foreign enterprises or joint ventures in China has to follow four steps: negotiation, contract signing, review and approval, and registration. In general, foreign investments are reviewed and approved by the Ministry of Foreign Economic Relations and Trade (MOFERT). For enterprises involving investment below certain levels, if no additional raw materials, energy resources, and transportation facilities are required and export quotas are not affected, they can be reviewed and approved by the

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7See the procedures of the Ministry of Foreign Economic Relations and Trade for confirmation and evaluation of foreign-invested enterprises manufacturing export products and enterprises with advanced technology.

8See Articles 7, 8, and 9 of Regulations by the State Council for Encouraging Foreign Investment.
governments of provinces, municipalities, and autonomous regions or their authorized local agencies.

The scope of allowable foreign investment projects is generally provided by law. In China the scope includes many industries, such as energy, building materials, chemistry and metallurgy, machinery, instruments and meters, equipment for offshore oil exploitation, electronics, computers, telecommunications, light industry, textiles, the food industry, agriculture, tourism, and services. Local government can also design their own plans for development in accordance with local conditions, designating key projects appropriate for foreign investment.\(^9\)

Maintaining a balance of foreign exchange receipts and expenditures in joint ventures is required by law and is a precondition for foreign investment. The government of a developing country cannot subsidize foreign exchange for the joint ventures that cannot keep their foreign exchange in balance. Only if the joint ventures themselves earn enough foreign currency can they pay the profit of foreign investors and salaries and wages of foreign workers and staff members.

To help foreign-equity enterprises achieve a balance between receipts and expenditures of foreign exchange, the government permits a set of practices. For example, the enterprise can sell to a local enterprise for foreign exchange if the products sold are substitutes for imports; the enterprise can purchase domestic goods for renminbi and export them; or the imbalance might be solved by the Ministry of Foreign Economic Relations and Trade if the joint-venture contract approved by the authorities provided that the products would be for domestic marketing.\(^10\)

In case a foreign partner involved in two or more joint ventures runs into a foreign exchange deficit in one enterprise and has a surplus in another, the balance can be pooled, subject to the approval of foreign exchange control authorities and the agreement of the Chinese partners.

Finally, foreign-equity enterprises can trade foreign exchange among themselves under the supervision of SAFEC.\(^11\)

Achieving a balance of foreign exchange has always been an upsetting problem to foreign investors and is one of the obstacles to the flow of

\(^{9}\)See Article 3 of the Rules for Implementation of the Law on Chinese-Foreign Joint Ventures. The Wenhui Daily of Shanghai reported on March 6, 1988, that the municipal government announced ninety foreign-invested projects for machinery and electronics, instruments and meters, chemical industry, medicine, light industry, textiles, building materials, and so on.

\(^{10}\)See Article 75 of the Rules for Implementation of the Law on Chinese-Foreign Joint Ventures, and regulations by the State Council for the balance of foreign exchange of Chinese-foreign joint ventures.

\(^{11}\)See Article 14 of Regulations by the State Council for Encouraging Foreign Investment.
foreign capital into China. While undergoing rapid economic development, China lacks foreign currency and has not yet reached the stage where foreign exchange can be completely uncontrolled. If the balance of foreign exchange is not maintained at the national level, the whole national economy could be harmed.

To help solve the problem of achieving balance in foreign exchange transactions of foreign-equity enterprises in China, the government enacted several regulations. The Regulations on Balance of Foreign Exchange for Chinese-foreign Joint Ventures is the most basic document. Rules were later formulated to cover such matters as foreign-equity enterprises selling "import substitution" products domestically for foreign exchange,\textsuperscript{12} review and approval methods,\textsuperscript{13} and specific products that could be considered import substitution goods.\textsuperscript{14} And MOFERT has promulgated regulations that permit foreign-equity enterprises to receive foreign exchange by buying domestic products for export.\textsuperscript{15}

To solve the foreign-equity enterprises problem of lack of capital, especially the temporary lack of foreign currency, the Chinese People's Bank promulgated Interim Procedures for Loans of Renminbi with Foreign

\begin{itemize}
\item \textsuperscript{12} The conditions for substitution for import are as follows:
\begin{enumerate}
\item The products manufactured by joint ventures and co-operative enterprises with advanced technology are badly needed on the domestic market and are put into production for only a short time, and the enterprises have temporary difficulties in maintaining the balance of foreign exchange in the process of domestic manufacture.
\item The products manufactured by joint ventures and co-operative enterprises are those that are to be imported by the central and local governments at present or in the coming years.
\item The specification, function, and delivery date of the products as applied to being included in the category of substitution for import and the technical service and training for the use of the products should meet the requirements of the domestic users and must be appraised by the national product appraising center. It must be confirmed that the quality of the product has reached that of the imported product of the same type. Usually the price of the product should not be higher than that on the international market at the time.
\end{enumerate}
\item \textsuperscript{13} See Articles 5, 6, and 7 of the procedures for substitution for import by Chinese-foreign joint ventures and co-operative enterprises.
\item \textsuperscript{14} See the procedures for substitution for import of machinery and electronics by Chinese-foreign joint ventures and co-operative enterprises.
\item \textsuperscript{15} Procedures of the Ministry of Foreign Economic Relations and Trade for foreign-invested enterprises buying domestic products for export to maintain the balance of foreign exchange provide that foreign-invested productive enterprises that have temporary difficulties in keeping the foreign-exchange balance should apply in advance to the local provincial departments of foreign economic relations and trade concerning the quantity of the product they want to buy for export. The amount of foreign currency obtained through this method is limited to the amount that the enterprise needs for productive operation in the year, for paying the profits of foreign investors, and for the liquidation of the enterprise's debt.
\end{itemize}
Currency as Mortgage to Foreign-Equity Enterprises.\textsuperscript{16} The state also approved Procedures for the Handling of Loans by the Bank of China to Foreign-Equity Enterprises, providing the handling of loans for fixed assets, fluid capital, cash, and reserve funds. The loans can be in either renminbi or foreign currency, including the U.S. dollar, British pound, Japanese yen, Hong Kong dollar, German mark or other convertible currencies approved by the Bank of China.\textsuperscript{17}

Finally, regulations permit the foreign-equity enterprises, under the supervision of foreign currency control authorities, to make up their deficiency of foreign currency by buying the surplus of other foreign-equity enterprises.\textsuperscript{18} Some cities have not only set up foreign currency readjustment centers to facilitate this trading, but they have also extended these trading facilities to state-owned enterprises, collective enterprises, and foreign-invested enterprises, under the supervision of foreign currency control authorities. The price at which these transactions take place is negotiated between the two parties involved in a given transaction.\textsuperscript{19} This gives foreign-equity enterprises more chances to maintain the balance of foreign exchange and encourages foreigners to invest in China.

Such measures as these promise to continue to encourage foreign investment in China.

\section*{COMMENTS}

\textit{David R. Dollar} comments:

The paper by Richard Holton raises the hypothesis that Chinese policy tends to overemphasize the physical equipment associated with technology and to underemphasize the intangibles involved in technological development—intangibles such as human skills and knowledge. This

\textsuperscript{16}The mortgage loans can be used for fluid capital as well as for investment of fixed assets, usually for a period of less than a year; a few loans can be for five years. At present the foreign currencies used as mortgage are limited to the U.S. dollar, Japanese yen, Hong Kong dollar, German mark, and British pound.

\textsuperscript{17}See Articles 5 and 6 of procedures of the Bank of China for loans to foreign-invested enterprises.

\textsuperscript{18}See Article 14 of the Regulations by the State Council for Encouraging Foreign Investment.

approach is not at all unique to China; it is, in fact, a common approach to industrialization seen to differing extents in virtually all developing economies, from South Korea to Brazil. This approach can be labeled the capital-intensive road to industrialization and development, because its distinctive feature is policy that (1) favors capital-intensive industries over labor-intensive industries and (2) within each industry favors capital-intensive techniques over labor-intensive techniques.

Concentration in capital-intensive industries and the development of highly capital-intensive techniques is one of the distinguishing characteristics of advanced industrial economies like Japan and the United States. In these countries, however, this is a market-driven phenomenon: high and rising wages make it cost-effective to replace labor with capital. In many developing countries, on the other hand, the policy-induced substitution of capital for labor is not at all economical; that is, it fails to reduce costs. The capital-intensive road to development favors capital-deepening even when it is not economical to carry out such substitution.

A number of the difficulties with technology transfer and joint ventures in China mentioned in the papers can be traced to this problem: that decisions about importing foreign machinery and other inputs are often not subjected to the simple economic test of whether the benefits justify the costs. For instance, the excessive duplication of technology imports discussed by Denis Simon clearly represents an accumulation of machinery that is not economical. Poor assimilation of technology is also the result of attempting technology transfer for which there is not a sound economic basis. Furthermore, some of the conflicts within joint ventures described by Richard Holton stem from the fact that U.S. managers by and large are interested in investments that are economically sound, whereas their Chinese counterparts are often more concerned with whether a project meets certain technical criteria.

For example, a German firm producing chemicals in a joint venture in Tianjin wanted to concentrate on producing one or two chemicals, in order to facilitate learning and achieve economies of scale. The Chinese partner, on the other hand, wanted the joint venture to produce the full range of chemicals that the German firm produced at home, deeming this to be a more significant technology transfer, even though the latter approach would result in small production runs and require a long period before the venture would be economically viable. Denis Simon notes that there has been progress in this area and that the worst excesses, such as the Baoshan Steelworks, are unlikely to be repeated; nevertheless, the reluctance to judge technology transfer and joint ventures by economic criteria remains a problem, with much room for further improvement.

In adopting the open door policy, Chinese leaders no doubt were
influenced in part by the impressive growth recorded by export-oriented economies like Japan and South Korea. Both of these economies benefited from the importation of foreign machinery and technology during their phases of rapid industrialization. I believe, however, that the single most important lesson we can learn from these rapid developers is that there are important sources of productivity growth other than application of more machinery. My own research on South Korean manufacturing industries indicates that the use of more capital accounts for little more than 40 percent of the rapid labor productivity growth achieved there. The other 60 percent is the result of intangibles, such as more efficient organization of production, realizing economies of scale, development of human skills, and acquisition of knowledge on the international market. The contribution of these intangibles to economic growth is well documented in other countries as well.

Another important lesson that we learn from the export-oriented developers is the importance of an appropriate exchange rate and currency convertibility. What I mean by an appropriate exchange rate is one that provides a strong incentive to exporters and also results in a realistic price for imported machinery. The papers by Chen Baosen and Dong Shizhong dwell at great length on the foreign exchange shortage and limited currency convertibility in China, which are an indication that the currency is overvalued. Most products exported by China are priced in dollars on the world market. An overvalued currency means that work units that export get less domestic currency for their products than they would with a more appropriate exchange rate. Furthermore, work units that have access to foreign exchange face an artificially low price for foreign machinery, encouraging overinvestment in such machinery.

The experiences of South Korea and other countries suggest that a large devaluation will greatly increase the incentive to export and also curtail the uneconomic import of machinery. I understand that Chinese policymakers are worried about the so-called vicious circle of devaluation fueling inflation, leading to further devaluation. This is a legitimate concern in China given the rapid growth of the money supply in recent years. The experiences of the Latin American countries, however, make clear that the vicious circle is not avoided by maintaining an overvalued exchange rate, but rather by conducting responsible monetary policy. China needs a "real" devaluation: devaluation of the yuan followed by moderate monetary growth.

Another damaging result of the overvalued exchange rate is that it limits foreign investment and joint ventures to those projects that earn foreign exchange through exports. According to Dong Shizhong, "Realization of foreign exchange balance in joint ventures is required by law," with
few exceptions allowed. There are many potential U.S.-China joint ventures, however, that would be beneficial to China, but which will not lead to exports in the near future. For instance, a U.S. firm that produces fire hose considered investing in China but was not interested in a joint venture to export from China. The firm had all of the capacity that it needed in the United States to service its worldwide market, which is a very limited and specialized one. After exploring the situation, the firm was unwilling to invest in China, despite that the fact that it perceived a large demand for its product within China, because it had no confidence that it would be able to convert its earnings into foreign exchange. This is a good example of a technology import that may be beneficial to China and economically sound, but which is very difficult to organize with the existing foreign exchange shortage.

With a realistic exchange rate and currency convertibility, it would not be necessary for each joint venture to be self-sufficient in foreign exchange. The logic of comparative advantage is that China should be able to export products in which it has a cost advantage, like textiles, toys, and appliances; earn foreign exchange; and then import technology and machinery for other industries. The industries in which China needs technology and machinery are typically not the same ones in which China will be a successful exporter. Hence the requirement that each joint venture be self-sufficient in foreign exchange is a severe restriction on foreign investment.

This restriction is particularly harsh for U.S. firms. In the manufacturing industries in which China exports, U.S. firms often do not make good partners because U.S. firms have already abandoned these product lines. In the light industries it makes more sense for China to link up with entrepreneurs from Hong Kong—and also from South Korea and Taiwan, which are beginning to invest in China. Entrepreneurs from these newly industrialized countries (NICs) will be able to organize export-oriented joint ventures in China that are profitable. Hence it is no surprise that the statistics quoted by Chen Baosen indicate that tiny Hong Kong has invested four times as much in China as has been invested by all U.S. companies.

Chinese policy, as noted by Dong Shizhong, favors high-tech joint ventures with advanced economies like the U.S. and Japan. Few such projects are economical, however, hence the disappointing results with foreign investment from these countries. Currency convertibility would make more high-tech projects viable, but it would be naive to think that there could be a huge increase in high-tech investment.

What apparently is economical, is low- and medium-technology investments, often on a small scale, by entrepreneurs from the NICs, especially Hong Kong. Chinese leaders may not think of this as technology transfer at
all, when a Hong Kong firm produces apparel or toys in a Guangdong factory. Yet an important technological development is occurring. The Hong Kong entrepreneur will take existing labor and machinery and organize it to produce more output and higher-quality output. This results from more efficient organization and an upgrading of human skills. These are the intangibles that are so important in technological development. Probably the single most important technological development that could occur in China is the more efficient organization of existing capital and labor. Joint ventures with the NICs will help bring this about; but all of the domestic reform discussed in Dwight Perkins's paper and elsewhere in this volume will also be necessary to ensure that efficiency gains in joint ventures will diffuse throughout Chinese industry.

In conclusion, let me come back to the theme of this conference: Sino-U.S. economic relations. I do not see any great potential for U.S. investment in or technology transfer to China, because few such projects will be economical. Devaluation and currency convertibility would improve the situation, but I reiterate that expectations should not be too high. On the other hand, we see many successful small-scale joint ventures from Hong Kong; and South Korea and Taiwan might follow suit. Again, currency convertibility would accelerate this development. These low- and medium-technology joint ventures will bring important technical benefits to China. They have the potential to raise the productivity of large numbers of workers quickly. It may be possible to create a few pockets of excellence through large-scale, high-tech joint ventures with U.S. firms; in my opinion, however, such pockets of excellence will never employ more than a tiny minority of workers and are not an economical way to proceed with industrialization.
Part Seven
The Role of Agriculture
in U.S.-PRC Economic Relations
14. The Role of Agriculture in U.S.-PRC Relations

ROBERT F. DERNBERGER

Although I accepted the invitation to present "The American Perspective" of the present and future role of agriculture in U.S.-PRC relations, this chapter represents only one American perspective, my own, which may or may not reflect the consensus of informed business and academic circles in the United States. Obviously, it does not represent the official position of the U.S. government. As for my own views, I am not an expert in agricultural economics or a specialist on world agricultural markets and trade or on many of the wide variety of both political and economic factors in each country—and in the world at large—that will determine the future role of agriculture in U.S.-PRC economic relations. This disclaimer is made at the outset because of my record as a forecaster of economic relations between the United States and China, especially the role of agriculture in those relations.

In the late 1960s, when economic relations between the United States and China did not exist, as part of the effort then being made to persuade the U.S. government to change its policy and restore those economic relations, I undertook a research project to forecast potential U.S.-China trade if that policy change were to be made.¹ My forecasts for potential Sino-American trade by 1980 ranged from Chinese exports to and imports from the United States of US$504 million and US$819 million, respectively, in my "least pessimistic" estimates or US$630 million and US$1638 million, respectively, in my "optimistic" estimates.² I had the right sign on the balance of trade, but I underestimated the actual Sino-American trade


²When I made these estimates, i.e., at the end of the 1960s, China's foreign trade dependency ratio (X + M/GNP) was under 10 percent and declining, while both China's exports and imports did not increase from 1967 to 1969.
in 1980 by about 50 percent (see Tables 1 and 2). My "optimistic" estimates were fairly good estimates of Sino-American nonagricultural trade in 1980, but by failing to include an estimate for trade in agricultural products, I failed to foresee the most dynamic and dominant portion of U.S. exports to China. In 1980, U.S. exports of agricultural products to China amounted to more than US$2 billion and accounted for 56.5 percent of all U.S. exports to that country.

Nonetheless, I accepted the invitation to write this chapter because I believed the purpose of the chapter was to survey the general trends in Sino-American agricultural trade in the past and suggest key issues in determining its future. Not only is a point estimate for future Sino-American agricultural trade not necessary for our purposes, but the number and nature of political and economic factors that must be considered and forecast in order to derive a point estimate, as I hope to indicate in this paper, preclude the possibility of doing so within a reasonable range of accuracy, even if we desired such a prediction. In any event, I assume I have been asked to identify the possible major developments in the role of agriculture in the economic relations between the United States and China, the major factors that will influence those developments, and the major problems these developments are likely to create over the foreseeable future, that is, in the next decade. That is my purpose in this chapter. For that purpose, the discussion is organized into two sections. First, I will survey the history of the role of agriculture in Sino-American relations, summarizing the statistical record and deriving the lessons to be learned from that record, in order to identify the major determinants of the future role of agriculture in Sino-American relations. Second, I will attempt to evaluate the probable impact of future changes on the major determinants of the role of agriculture in Sino-American relations: the economic factors, the political factors, and the exogenous factors, that is, exogenous to the agricultural trade. On the basis of this analysis, the conclusion presents some arguments about the future role of agriculture in Sino-American economic relations.

The Role of Agriculture in U.S.-PRC Relations: History

The hard evidence for any forecast is what has happened in the past, and therefore, most predictions are strongly influenced by the historical trend. China's contemporary economic history, however, informs us that the short-run deviations about the long-run trend can be terribly important. In the foreign-trade sector, these short-run deviations from the trend and deflections of the trend itself have been the result of sporadic, but ever present, exogenous domestic and international policy and economic
shocks, such as the Cultural Revolution—for example the attempt to pursue a policy of extreme economic autarky at the end of the 1960s and the impact of the drought and oil crises in the early 1970s. During the 1960s, no economic relations existed between the United States and China, and much of the short historical record of trade after normalization can hardly be cited as indicative of a long-run trend. Yet, a review of this historical record cannot be ignored and does provide us with some valuable hints about the key factors to consider in forecasting the role of agriculture in Sino-American relations, especially the possible limits of that role.

The Record of the Past

Historically, China's comparative advantage has always been in agricultural products. Some have found that this comparative advantage has been eroded under the pre-reform regime of autarkic policies and administrative controls and that the net surplus in the balance of agricultural trade was steadily declining over time. In the early 1970s, over 40 percent of China's exports were accounted for by exports of agricultural products (see Table 1). However, the most dynamic growth of China's exports has occurred in the post-Mao period, that is, after 1977—this growth was driven by exports of energy products and textiles, not by agricultural products. Between 1977 and 1986, China's total exports increased by an annual average rate of 17 percent, while exports of agricultural products increased by 11.5 percent; agricultural products declined from over one-third of China's exports to about one-fifth during this period.

In the early stages of the resumption of Sino-American trade, Chinese exports of agricultural products to the United States accounted for 29 percent of U.S. imports from China; but the total U.S. imports from China were only US$202 million in 1976, and U.S. imports of agricultural products from China in that year were only 2 percent of China's total exports of agricultural products. As with China's total exports, China's

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3As a result of stagnant agricultural production in the early 1970s, the Chinese imported foodstuffs, fertilizer, and plants to produce fertilizer in an attempt to ease domestic shortages of agricultural products. The oil crisis led to a significant price increase for fertilizer (it is an energy-intensive product) and for food grains as well. The change in policy with regard to imports from the West is an earlier attempt by Deng Xiaoping to implement the open-economy policy, and he paid a heavy political price for this attempt when these "unexpected" price increases created a serious import surplus in the balance of trade. Despite this earlier unhappy experience, it is noteworthy that Deng implemented the open-economy policy with even greater vigor when he reemerged as the foremost member of the post-Mao leadership.

Table 1
China's Agricultural Exports to the United States
(US$ millions)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Exports (A)</th>
<th>Agricultural Exports (B)</th>
<th>% (B/A)</th>
<th>Total Exports (C)</th>
<th>Agricultural Exports (D)</th>
<th>% (D/C)</th>
<th>% (D/B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1969</td>
<td>2,200</td>
<td>865</td>
<td>39.3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1970</td>
<td>2,260</td>
<td>980</td>
<td>43.4</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1971</td>
<td>2,640</td>
<td>1,160</td>
<td>43.9</td>
<td>5</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1972</td>
<td>3,440</td>
<td>1,470</td>
<td>42.7</td>
<td>32</td>
<td>16</td>
<td>50.0</td>
<td>1.2</td>
</tr>
<tr>
<td>1973</td>
<td>5,820</td>
<td>2,175</td>
<td>37.4</td>
<td>65</td>
<td>21</td>
<td>32.3</td>
<td>1.0</td>
</tr>
<tr>
<td>1974</td>
<td>6,950</td>
<td>2,585</td>
<td>37.2</td>
<td>115</td>
<td>31</td>
<td>27.0</td>
<td>1.2</td>
</tr>
<tr>
<td>1975</td>
<td>7,260</td>
<td>2,855</td>
<td>39.3</td>
<td>155</td>
<td>26</td>
<td>16.8</td>
<td>0.9</td>
</tr>
<tr>
<td>1976</td>
<td>6,860</td>
<td>2,670</td>
<td>38.9</td>
<td>202</td>
<td>55</td>
<td>27.2</td>
<td>2.1</td>
</tr>
<tr>
<td>1977</td>
<td>7,590</td>
<td>2,735</td>
<td>36.0</td>
<td>203</td>
<td>62</td>
<td>30.5</td>
<td>2.3</td>
</tr>
<tr>
<td>1978</td>
<td>9,750</td>
<td>3,205</td>
<td>32.9</td>
<td>324</td>
<td>72</td>
<td>22.2</td>
<td>2.3</td>
</tr>
<tr>
<td>1979</td>
<td>13,660</td>
<td>3,865</td>
<td>28.3</td>
<td>594</td>
<td>86</td>
<td>14.5</td>
<td>2.2</td>
</tr>
<tr>
<td>1980</td>
<td>18,270</td>
<td>4,664</td>
<td>25.5</td>
<td>1,059</td>
<td>133</td>
<td>12.6</td>
<td>2.9</td>
</tr>
<tr>
<td>1981</td>
<td>22,010</td>
<td>5,126</td>
<td>23.3</td>
<td>1,875</td>
<td>299</td>
<td>16.0</td>
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<tr>
<td>1982</td>
<td>22,350</td>
<td>5,068</td>
<td>22.7</td>
<td>2,275</td>
<td>170</td>
<td>7.5</td>
<td>3.4</td>
</tr>
<tr>
<td>1983</td>
<td>22,230</td>
<td>5,170</td>
<td>23.3</td>
<td>2,252</td>
<td>168</td>
<td>7.5</td>
<td>3.3</td>
</tr>
<tr>
<td>1984</td>
<td>26,140</td>
<td>5,479</td>
<td>21.0</td>
<td>3,065</td>
<td>191</td>
<td>6.2</td>
<td>3.5</td>
</tr>
<tr>
<td>1985</td>
<td>27,360</td>
<td>6,196</td>
<td>22.6</td>
<td>3,863</td>
<td>197</td>
<td>5.1</td>
<td>3.2</td>
</tr>
<tr>
<td>1986</td>
<td>30,940</td>
<td>7,328</td>
<td>23.7</td>
<td>4,698</td>
<td>200</td>
<td>4.3</td>
<td>2.7</td>
</tr>
</tbody>
</table>


exports to the United States also grew dramatically in the post-Mao period, increasing by 42 percent a year in 1977–86. Again, as with the growth in China's total exports, agricultural exports to the United States did not play a significant role, accounting for less than 5 percent of total U.S. imports from China and less than 3 percent of China's total agricultural exports.5

In general, this same trend of the declining importance of agricultural products is observed in the statistics for China's total imports and in U.S. exports to China (see Table 2), but the decline is not as dramatic or consistent as on the export side. During the early 1970s, China's imports of agricultural products accounted for about one-fourth to one-third of China's total imports, but the absolute level of total imports and imports of agricultural products was no higher in 1977 than in 1974. Total imports more than doubled between 1977 and 1981, while imports of agricultural products increased by less than 50 percent over the same period because of the rapid increase in domestic production.6 That rapid increase in domestic production was obtained, in part, by a significant increase in current inputs, imports of chemical fertilizer increasing almost four-fold between 1977 and 1981.7 Total imports of agriculture-related goods (agricultural products and fertilizer) also doubled between 1977 and 1981.

As a result of the cumulative import surplus of US$4.43 billion in 1977–81, controls were reimposed over imports and the level of China's

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5In order of importance, Hong Kong and Japan were the largest buyers of cotton from China in the 1985–86 marketing year; the Soviet Union and Japan were the major buyers of soybeans and coarse grains. United States Department of Agriculture, *China: Situation and Outlook Report* (Washington, D.C.: U.S. Government Printing Office, July 1986), pp. 42–43.

6The gross value of agricultural output increased by 31 percent between 1977 and 1981 (in constant prices), crop cultivation by 23.5 percent; animal husbandry by 36 percent; fishery by 8.5 percent; and sideline occupations by 67 percent. *Statistical Yearbook of China, 1986* (Hong Kong: Economic Information and Agency, 1986), p. 130.

### Table 2
China's Agricultural Imports from the United States
(US$millions)

#### China's Total Trade

<table>
<thead>
<tr>
<th>Year</th>
<th>Total M (A)</th>
<th>Total Agr. Related (B)</th>
<th>$(B/A)$</th>
<th>Total Agr. (C)</th>
<th>$(C/A)$</th>
<th>Fert. (D)</th>
<th>$(D/A)$</th>
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<tbody>
<tr>
<td>1969</td>
<td>1,830</td>
<td>800</td>
<td>43.7</td>
<td>595</td>
<td>32.5</td>
<td>205</td>
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</tr>
<tr>
<td>1970</td>
<td>2,330</td>
<td>830</td>
<td>35.6</td>
<td>600</td>
<td>25.8</td>
<td>230</td>
<td>9.9</td>
</tr>
<tr>
<td>1971</td>
<td>2,220</td>
<td>735</td>
<td>33.1</td>
<td>535</td>
<td>24.1</td>
<td>200</td>
<td>9.0</td>
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<tr>
<td>1972</td>
<td>2,860</td>
<td>1,015</td>
<td>39.7</td>
<td>825</td>
<td>28.9</td>
<td>190</td>
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<tr>
<td>1973</td>
<td>5,160</td>
<td>1,970</td>
<td>38.2</td>
<td>1,750</td>
<td>33.9</td>
<td>220</td>
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<tr>
<td>1974</td>
<td>7,620</td>
<td>2,565</td>
<td>33.7</td>
<td>2,345</td>
<td>30.8</td>
<td>220</td>
<td>2.9</td>
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<tr>
<td>1975</td>
<td>7,490</td>
<td>1,760</td>
<td>23.5</td>
<td>1,355</td>
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<td>950</td>
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<td>2,430</td>
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<td>29.1</td>
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<td>3,609</td>
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<td>3,620</td>
<td>16.5</td>
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<td>8.0</td>
<td>2,719</td>
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<td>712</td>
<td>1.7</td>
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#### Trade with United States

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<thead>
<tr>
<th>Year</th>
<th>Total M (E)</th>
<th>% Related (F)</th>
<th>% Total Agr. Related (G)</th>
<th>% Fert. (H)</th>
<th>% Pert. (I)</th>
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<td>1971</td>
<td>—</td>
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<tr>
<td>1972</td>
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<td>61</td>
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<td>668</td>
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<tr>
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<tr>
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<tr>
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<td>153</td>
<td>5.0</td>
<td>4.5</td>
</tr>
</tbody>
</table>
The Role of Agriculture in U.S.-PRC Relations

Sources: China's total imports: See sources for China's total exports, Table 1.

China's total imports of agriculture-related commodities: Sum of China's total imports of agricultural products and fertilizer, this table.


Total imports of agriculture-related products from the United States: Sum of imports of agricultural products from the United States and imports of fertilizer from the United States, this table.


total imports did not increase in 1981–83. Chemical fertilizer imports remained at the same level, while imports of agricultural products declined significantly; the import share of agriculture-related products fell to only about one-fifth of China's total imports in 1983. With the relaxation in import controls, total imports doubled in 1983–85, largely because of imports of producers' goods and consumers' durables; total imports of agriculture-related products accounted for only one-tenth of total imports in 1985. The rapid increase in imports saw the reemergence of a large import surplus, and controls were reimposed over imports in 1986. When the level of total imports did not increase, total agricultural product imports declined by 15 percent, and fertilizer imports declined by 50...
percent. Taking the period 1969–86 as a whole, therefore, while China's total imports increased dramatically, imports of agricultural products declined from one-third to less than one-tenth and fertilizer imports declined from one-tenth to less than 2 percent of China's total imports.

Agriculture-related products in China's imports from the United States have a more unstable record than is true of their role in China's import trade as a whole. China's imports from the United States grew from none in 1971 to over US$800 million in 1974; U.S. exports of agricultural products accounted for 85 percent of these imports. Then, in 1974–77, U.S. total exports to China fell to less than US$200 million, while U.S. exports of agricultural products to China were completely eliminated. Between 1977 and 1980, China's imports from the United States increased by an average annual rate of 180 percent, accounting for 20 percent of China's import trade in 1980. Two-thirds of this dramatic increase in U.S. exports to China was accounted for by exports of agricultural products, and these exports from the United States accounted for over 60 percent of China's total imports of agricultural products in 1980. U.S. exports to China have been held below the peak level of 1980 in 1981–86, the share of China's total imports accounted for by U.S. exports declining to only 7 percent. However, this stable level of total U.S. exports to China hides a significant increase in nonagricultural exports to China and an equally dramatic decline in U.S. exports of agricultural products and fertilizer. By 1986, U.S. exports of agriculture-related products to China were only 5 percent of total U.S. exports to China and less than 5 percent of China's total imports of agriculture-related products.

Thus, on both the import and export side of the U.S.-China trade, agricultural products and agriculture-related products in the mid-1980s were becoming relatively insignificant. The commodity trade, however, is not the only area where agriculture has played a role in Sino-American economic relations. For example, in 1973, M. W. Kellogg (a U.S. company) agreed to build eight ammonia plants in China, worth US$205 million, that would provide feedstock for the production of urea. These, along with five other imported plants, began to come on line in 1975 and accounted for approximately half of the 7-million-ton increase in fertilizer production between 1975 and 1982. In November of 1978, the U.S. Department of Agriculture signed an Agricultural Exchanges agreement with the Ministry of Agriculture, PRC. Between then and November 1983, the two sides exchanged a total of forty-seven delegations in such fields as animal health, plant production and protection, and forestry and soil conservation, while longer-term cooperative programs were initiated in improving fruit crop

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8 Specifics for the fertilizer plant imports from the United States from Richard E. Batsavage and John L. Davie, "China's International Trade and Finance," Joint Economic Committee, Chinese
characteristics, sediment research, saline and alkaline soil study, and joint tree improvement. Unfortunately, activities under this agreement were suspended in November 1983 because the Chinese failed to import the quantity of grain that was called for in the long-term agreement that was then in effect. Activities under this exchange agreement, however, have recently resumed. In addition, many individual states and individual universities in the United States have exchange agreements with provinces and universities in the PRC; some of these exchanges involve research and commercial projects related to agriculture.

Finally, while the United States has not given foreign aid to the PRC, the Export-Import Bank had extended three loans totaling US$120 million to China by the fall of 1986; none were for agricultural projects, however. As of mid-1985, U.S. direct equity investment in China exceeded US$750 million, mostly in oil, vehicles, hotels, and so on. Those investments directly involved with agriculture, for example, a poultry hatchery and feedmill (Continental), would account for less than 1 percent of the total.

In general, insofar as the record of the past is concerned, the role of agriculture in Sino-American economic relations is to be found largely in commodity trade; technology transfers, financial flows, and direct investment in agriculture are areas with potential for the future, but they have not been of major importance in the past.

The Lessons of the Past

The record of the past provides us with ample illustrations of the importance that political developments, economic considerations, and exogenous shocks have had as determinants of China's foreign trade in general and trade with the United States in particular. The total foreign trade of any country is basically related to domestic and international economic forces, but the extent of foreign trade dependence is influenced by policymakers, as is the direction of trade. This politicalization of foreign trade is a major phenomenon of the twentieth century, and foreign trade policy has now become an instrument of foreign policy in international relations. Also, especially in a country such as China with an extensive economic administrative bureaucracy and control over foreign trade, the commodity composition of trade is subject to policy choices. Finally,

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exogenous shocks, such as the price increase for petroleum in the early 1970s, are the unpredictable and random events that inevitably cause our carefully derived forecasts to be wrong.

The economic basis of trade would appear to be dominant in determining China's total export trade. Yet even here, political factors are important. The significant upward deflection in the growth rate of China's total exports obviously is the result of the post-Mao leadership's rejection of autarky in favor of the open-economy policy adopted in 1978 and the strong political will they have shown in implementing that policy since then. The declining share of agriculture in China's total exports is partially explained by the decision to divert oil supplies to the export sector in reaction to the increase in oil prices—an exogenous shock.

The role of political factors and exogenous shocks in determining the level and commodity composition of China's total import trade is much more pronounced. Zhou Enlai, and a rehabilitated Deng Xiaoping, met the problem of China's agricultural shortages in the early 1970s by increasing China's imports of foodstuffs, fertilizers, and complete fertilizer plants. Because of the exogenous shock of the increase in the price of petroleum, the costs of these imports increased rapidly, and a serious import surplus in the balance of trade emerged in 1971–74. In reacting to this problem, as they have several times since, the Chinese political leadership decided to reimpose administrative constraints on the level of imports and cut the level of agricultural product imports in 1975 and 1976.¹¹

The new post-Mao leadership adopted the open-economy policy in 1977, which led to the rapid increase in total imports and imports of agricultural products in 1977–81, creating another problem of disequilibrium in the current account balance. This time the political reaction to the problem saw the canceling of many contracts that had been signed for the delivery of complete imported plants as well as the reimposition of constraints on imports. With the significant improvement in agricultural output, partly the result of the economic reforms (another political factor—perhaps it could even be classified as an exogenous shock), imports of both agricultural products and fertilizer declined and the balance on current account improved in 1984, leading to a relaxation in administrative controls over foreign trade once again. This move merely unleashed a flood of nonagricultural imports in 1985, an increase in total

¹¹However, it should be noted that in the successive periods when central control over the foreign-trade sector was reasserted, there was a perceptible move from direct administrative controls to a greater reliance on economic levers or instruments more in keeping with the spirit of the economic reform. See Organization of Economic Cooperation and Development (OECD), "Report of the Working Party of the Trade Committee on East-West Trade," notes by the Secretariat on "Problems Posed by China's Possible Application to Accede to the GATT," April 1986, p. 10.
imports of over 50 percent in one year, and the reimposition of controls in 1986.

Political factors and exogenous shocks can overwhelm economic considerations in a country's bilateral trade with another country. Sino-American trade shows this most clearly. It was a political decision, the decision of the Chinese to seek the normalization of relations with the U.S., that led to the resumption of Sino-American trade after 1971. While the slow growth of Chinese exports to the United States, especially exports of agricultural products, is explained partly by supply and demand conditions in the United States and the commodity composition of China's exports, the relatively slow growth of those exports is partly because of the imposition of controls on textile imports by the United States. China's exports to the United States grew as fast as they did because the Chinese showed considerable skill in shifting the mix of textile exports in favor of uncontrolled categories, keeping one step ahead of the steady expansion of categories covered by the U.S. controls.

While U.S. imports from China were growing slowly after the opening of trade between these two countries, China's imports from the United States jumped from zero in 1971 to over US$800 million in 1974 largely because of imports of wheat, corn, soybeans, and cotton, despite China's long-term agreements with other suppliers. The Chinese leadership obviously wanted to give the Americans a positive signal about the benefits to be gained from normalizing relations with China. Unhappy with the pace of normalization and irritated over the bilateral balance of trade heavily in favor of the United States, among other unresolved problems, the Chinese eliminated imports of agricultural products from the United States by 1976; China's total imports from the United States fell to less than US$200 million. When the new post-Mao leadership adopted the open-economy policies, however, that policy change was strongly biased in favor of the United States; the United States increased significantly its share of China's total imports, imports of agricultural products, and imports of fertilizers in 1977–80. However, following normalization and the continued sluggish growth of Chinese exports to the United States, the Chinese reduced their imports from the United States in 1982, and they remained at that lower level through 1986. Within this stagnant level of total imports from the United States, however, imports of agricultural products and fertilizers from the United States have been steadily reduced to insignificant levels.


*It should be pointed out that the U.S. statistics for Sino-American trade used in this paper include exports shipped via Hong Kong as Chinese exports to the United States; those same
This review of the history of Sino-American trade has shown the importance of political factors and exogenous shocks in explaining both significant short-run deviations from the long-run trends and deflections in that trend, although basic economic considerations may yield a first approximation of the long-run trend. This review also shows why we believe an attempt to provide a detailed and sophisticated quantitative estimate of the future role of agriculture in Sino-American relations would not be worth much. Thus, we have chosen to present some informed speculations about the most likely possibilities for future Sino-American economic relations and the role of agriculture in those relations. The above review, however, does suggest what considerations should dominate these speculations.

The Determinants of the Future

The development of China's import and export potential will largely depend on the continuation of the economic reform program, its impact on the domestic economy, and the implications of these developments for China's future foreign trade. A major consideration will be whether the Chinese will be able to diversify the commodity composition of exports in order to increase the growth of exports and alleviate the foreign-exchange constraint. To look specifically at agricultural imports and exports, one must assess the ability of the reform program to sustain past increases in agricultural productivity, the demand for and the capacity of Chinese industry to provide agricultural inputs, and the domestic demand for agricultural products. It is important in considering these factors to distinguish grain for human consumption, animal feed, and industrial crops. To relate these supply and demand conditions specifically to trade with the United States, one needs some appreciation of likely market developments in the United States and in the economies of China's alternative buyers and sources of supply.

Among the more important political considerations is whether the generational transition in the leadership will reinforce support for the process of economic reform, especially the open-economy policy, that is, will China continue to increase the foreign-trade dependency ratio, become more integrated into the world economic system and institutions, and secure the requisite flow of capital from abroad to alleviate the foreign-exchange constraint? With regard to potential Sino-American trade, what is the likely course of Sino-American political relations and how will they be

exports are reported in the Chinese statistics as exports to Hong Kong. Thus, the U.S. statistics show a lower U.S. export surplus and a higher level of total Sino-American trade than is reported in the Chinese statistics.
affected by the change in leadership in both countries? With regard to agricultural trade, as a result of their economic reform program and their growing involvement in the international economy, will the Chinese leadership rid themselves of prevailing attitudes and behavior, adopting a true appreciation of the benefits of markets and how they work? And will they act to obtain greater gains from trade by promoting specialization according to comparative advantage even within agricultural products and agricultural regions of China?

Finally, there are those unexpected events or exogenous factors that are likely to be the real determinants of the economic record for Sino-American economic relations over the next decade or so. Could the economic reform program encounter sluggish growth, or could the open-economy policy lead to balance-of-payments problems and spiritual pollution to the extent that a reaction and a return to a basically inward-looking policy would take place? Will the new leadership in both the Soviet Union and China continue their reforms and resolve their differences to recreate a united socialist bloc and revive anti-imperialist policies? Will the Chinese takeover of Hong Kong go so badly that the U.S. relationship with China would become cool? Or will a prolonged drought on the North China Plain and a more rapid population increase than planned lead to a crisis in the domestic supply and demand conditions for agricultural products? These are among the exogenous events that have been suggested by others as possibilities, although I do not believe they have a significant probability, which is why I listed them as exogenous shocks. If they were to occur, they obviously would have a large impact on the role of agriculture in Sino-American relations in the future. These and a host of other unlikely events can all be placed in the category of “other, presently unknown and unexpected” future possibilities. However, on the basis of the developments in China’s foreign trade and in Sino-American economic relations over the past four decades, we know that the probability to be assigned to this residual category as a whole may be greater than 50 percent.

The above list provides a sketchy outline of the various factors that should be considered in predicting the future role of agriculture in Sino-American relations, but we cannot thoroughly examine each of these questions. However, in what follows I present what I believe to be the most important questions, my tentative answers to them, and the implication of those answers for the future role of agriculture in Sino-American relations.

Role of Agriculture in U.S.-PRC Relations: Future

Our review of the empirical record of the role of agriculture in Sino-American relations in the mid-1980s would lead us to a hasty conclusion
that the future role of agriculture would not have much significance, if any. By 1986, agriculture product exports were less than 5 percent of China's total exports to the United States and the latter were less than 3 percent of China's total exports of agricultural products. Exports of agriculture and related products were only 5 percent of total U.S. exports to China, while the U.S. market share in China's import market was less than 3 percent for agricultural products and only 13.5 percent in a rapidly declining import market for fertilizer. Yet, our earlier attempt to forecast Sino-American trade warns us to expect the unexpected. What would have to happen in order for agriculture to become an important aspect of Sino-American relations in the future as it once was in the past?

**The Economic Issues**

Whether the pace of economic reform will be increased or constrained in the future and whether China will reject the open-economy policy and turn inward are questions to be considered in the following section. In the present discussion, however, we assume that current support for the economic reform program and the efforts to implement those reform policies already adopted or now being introduced will continue. However, the transformation of the economic system and policy to a new system of "socialism with Chinese characteristics" and China's more complete integration into the world economy will remain as a target to be achieved well beyond the "short-run" horizon of our forecasts in this paper.14

Taking the current reform program as a given, how are the purely economic forces likely to work themselves out in the next decade or so, especially insofar as China's agriculture and the role of agriculture in Sino-American relations are concerned? Reform of the agricultural sector was at the forefront of the reform program (along with the open-economy policy) and is widely accepted as having been very successful. This success has contributed to the growing support for the economic reform program and its adoption in the urban-industrial sector at the end of 1984. However, most knowledgeable observers and the studies they have made conclude that the impact of the economic reforms on crop production has been captured largely in a significant outward shift in the realized production possibilities frontier in the early 1980s. Further, they conclude that the

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14 In his meeting with a U.S. delegation, of which I was a member, Vice-Premier Yao Yilin responded along the following lines to my question, "What will the new system of socialism with Chinese characteristics look like when it is finally adopted, and how long will it take before it is in place?" According to Yao, inasmuch as it will be well into the next century—perhaps as long as fifty years—before their new economic system is in place, it will be up to the next generation of leaders to determine what that system will be; the process of economic reform is only in its initial stages, and many problems have yet to be resolved.
high growth rate in the agricultural sector is being sustained by growth in noncrop agricultural activities (including services in rural towns) and in rural industrial activity. These same observers believe that the sustained increase in crop production in agriculture depends on a second wave of agricultural reform: a rationalization of prices, with the elimination of the two-tier price system for agricultural crops, and the significant spread and improved functioning of rural factor markets. Neither of these latter objectives is likely to be achieved in the near future.

Of course, rapid growth in agricultural production in the past led to the significant reductions in imports of agricultural products. Although domestic demand is likely to keep ahead of domestic supply in the nongrain area, the growth of nongrain output will probably be high enough to avoid a resurgence in the demand for the import of these commodities on a large scale. The Chinese are encountering problems with the rate of growth in food grain production, largely because of the problem of relative prices, and therefore, relative rates of profitability among the various crops and, even more important, between incomes earned in crop versus noncrop production activities. Nonetheless, even in the production of food grains, past increases in output have already allowed for a shift in consumption from the poorer grains (barley, millet, kaoliang, and corn) to the richer grains (rice and wheat) and for an increase in consumption of food grains to a level not far below that enjoyed by higher-income Chinese in other areas of Asia. Thus, it is unlikely that the income elasticity of demand for food grains is very high in China today, and, while some problems with depressed areas and segments of the population continue to exist, even

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15Based on the methodology adopted in his Ph.D. thesis, Justin Yifu Lin analyzed the impact of the institutional changes introduced by the economic reforms in agriculture, i.e., the contract responsibility system, and found that it contributed to about 40 percent of the increase in output in 1979–83. A larger share was due to the increase in inputs, and the contribution of the institutional change to increases in output was declining over time. Justin Yifu Lin, “Measuring the Impacts of the Household Responsibility System on China’s Agricultural Production,” unpublished paper, Department of Economics, University of Chicago, April 1986. In an extension of the work in his thesis, Lin utilizes a different methodology and estimates that the contribution of this institutional change to the increase in output in 1980–83 was 60 percent, but he makes no estimate of the trend in its contribution over time. Justin Yifu Lin, “Household Farm, Cooperative Farm, and Efficiency: Evidence from Rural De-Collectivization in China,” Economic Growth Center, Yale University, Center Discussion Paper No. 533, March 1987.


slow and steady gains in the production of food grains should satisfy
domestic demand. This slow and steady growth in production should
allow for continued slow and steady growth in China's export capacity in
foodstuffs.

The picture is less rosy for those grains used for feed. According to
Wiens, the problem stems from the retention of the state procurement
system and low prices for livestock products (the two-tier price and
supply system) and low profitability in animal husbandry (also true in the
dairy industry). This shortage of feeds has driven up their prices, further
discouraging animal husbandry. Furthermore, a regional problem exists in
regard to animal feeds; the feed production areas are in the North, while
the most intense animal product activity is in the South. The potential
demand for feed grain and, therefore, feed-grain imports could be large if
the Chinese were to promote animal husbandry and the specialization
based on comparative advantage both domestically and internationally to
a significantly greater extent—that is, the North producing feed grains for
export to Japan and the south importing feed grains to support their animal
husbandry activity. Given the current state of market development, com-
mercial activities, transportation facilities, household farming by risk-
averse peasants, the economies of scale in animal product production, and
so on, such a change is unlikely to occur in the near future. Rather, the
current pace of development in animal husbandry will probably continue,
as will the shortage of feed grain—that is, feed grains will remain a major
feature of China's agricultural product imports, but the rate of increase of
those imports will not increase significantly.19

18 Ibid.
19 The argument that U.S. exports of feed grains will become a major feature of China's import
trade in the future is presented in the text as one of the possible results of an exogenous
shock—i.e., the economic reforms are successful to the extent that markets operate to satisfy
consumer demands and the increase in incomes generates demands for meat and dairy
products that are met by a significant increase in China's animal husbandry sector, requiring
inputs of animal feeds on a large scale with these inputs being obtained through imports. My
argument for slow and steady growth in the imports of feed grains is based on the observed
income elasticity of demand for meat and dairy products and the derived demand for feed
grains over the past several years as Chinese consumers' incomes increased, i.e., within the
context of the constraints imposed by the authorities to control the growth in the demand for
meat and dairy products—higher administered prices and rationing, shortages, and import
controls.

For example, assume that per capita incomes grow at the same rate realized during the early
1980s or at the lower rate needed to achieve the targeted level of per capita income by the
year 2000, providing a range to the estimates obtained; assume needed supplies are
determined by demand; and assume there are no price increases to reduce demand. Using
these assumptions, along with observed elasticities of demand, Terry Siclar has estimated
the grain requirements for direct human consumption and animal feed, concluding that
In general, then, in the next decade or so we expect China's domestic production and demand in the agricultural sector to be such that a steady increase in the output of food grain and industrial crops (cotton) will allow for the continuation of a slow and steady growth of exports of these commodities, but that feed grain output will fall short of demand and the Chinese will maintain and possibly steadily increase their imports of these products. Domestic production of chemical fertilizers increased rather slowly during the 1980s, but some observers believe that producers had been forced to use too much fertilizer under the commune system and then cut back on the use of this input after the economic reforms, thus allowing for the reduction of imports. Nonetheless, when the proper mixture of fertilizers is considered, the Chinese have an excess supply of nitrogenous fertilizer and a shortage of other types; thus the need to increase the domestic production and importation of phosphate and potassium fertilizers will continue.

To match these Chinese supply and demand developments with world market developments in general and U.S. market developments in particular, we assume that agricultural surpluses and soft prices will continue in the world market. In other words, our analysis of the role of agriculture in Sino-American economic relations is only partial, taking the global context of these bilateral relations as given. The Chinese must compete with alternative sources of supply to increase their agricultural exports, and the United States is unlikely to be a significant buyer. As for imports of feed grains, the Chinese should be able to choose among several sources of supply, but here the United States should be a competitive supplier. Import supplies should be constrained only in the area of phosphate and potassium fertilizer. Yet, while the United States is a competitive supplier of chemical fertilizers, cheaper transportation costs from Japan (although a strong yen and cheap dollar may offset this advantage) and slow or even no growth in Chinese imports of chemical fertilizers would mean that U.S.

"China is unlikely to turn into a major grain exporter. Exports of particular grain varieties may emerge, but on balance net imports will continue." Terry Sicular, "China's Grain and Meat Economy: Recent Developments and Implications for Trade," *American Journal of Agricultural Economics* 67(5) (December 1985):1055–62. Quote is from p. 1062. It should be pointed out that, insofar as excess demand is met with imports, the failure to cut off excess demand by raising domestic prices is costly to the Chinese government, as it must subsidize consumers for the difference between the world price and the lower domestic price. The subsidies made necessary by grain imports are accounted for as deductions on the revenue side of the budget, and they are not trivial.

"In some regions cadre pressure led to the use of more fertilizer than was economical at prevailing prices, and when such pressure was eased . . . reduced quantities of fertilizers were purchased." Nicholas R. Lardy, *Agriculture in China's Modern Economic Development* (New York: Cambridge University Press, 1985), p. 215.
exports of these commodities to China are unlikely to grow significantly in the future.

These general conclusions about the declining role of agriculture in China's total trade and its minor significance in Sino-American relations are further supported by an Australian study of China's future agricultural trade.21 According to the statistical analysis and projections in that study, over the past several decades the Chinese have lost their comparative advantage in agricultural products (because of a serious deterioration in quality of output, the growing technological gap, and higher costs of production). Even if the recent rapid increase in agricultural productivity continues, the increase in domestic consumption will mean that China's share of the world rice market will increase significantly on the export side. Our conclusion is more modest, that is, China's level of food grain exports might increase, but the growth will be slow and steady; agricultural imports will consist mainly of feed grains, and here too the growth will be slow and steady. Unlike the Australian study, I do not expect the Chinese to become increasingly dependent on foreign sources for their food supply in the foreseeable future.

All this is not to argue that agriculture will play no role in Sino-American relations. In traditional agriculture, the Chinese are among the most skilled and knowledgeable peasants in the world. In order to modernize that sector, however, the Chinese need to catch up to world technology levels, increase specialization and diversification, and modernize their production and distribution system. The United States can make a tremendous contribution to this effort. Improvements in hybrid seeds, breeding stock, management systems, fertilizer, water storage and distribution systems, storage facilities, dried food techniques (including freeze-drying), marketing systems, marketing information, packaging, and transportation methods will be useful. Such improvements could lead to increased agricultural productivity and exports as well as a higher standard of living in the countryside.

The United States is already engaged in the transfer of these technologies, but these projects tend to be small-scale and carried out with lower-level administrative and economic units in China. In terms of total value, they do not add up to very much and, thus, are lost in the aggregate statistics for Sino-American economic relations. In addition, these projects and transfers have encountered many obstacles, and a more rapid expansion of this process remains constrained. These efforts are sustained mainly by loans and grants specifically tied to these projects by international institutions concerned with agricultural development in the

21See Anderson and Tyers, "China's Economic Growth."
developing countries. Even though I remain somewhat pessimistic about the rapid expansion of the transfer of technology to Chinese agriculture—especially from the United States—those transfers that do take place will be among the most important aspects of Sino-American agricultural relations in the future and, if successful, can make a significant contribution to the development of China's agricultural output and export potential.

To what extent are political factors and exogenous shocks likely to change the rather limited role forecast for agriculture in future Sino-American relations when only the economic factors involved are considered?

The Political Issues

Domestic developments in the agricultural sector and China's total agricultural trade will have some impact on the general state of relations between the United States and China, but changes in the political relations between those two countries can be expected to have a significant impact on their economic relations. In other words, while these developments are interdependent, the dominant direction of causation may run from the political factors to the economic relationship. The major political developments that can be expected to have an impact on Sino-American trade and the trade in agricultural products predicted are to be found in three general areas: a change in leadership and its support for the program of economic reform; a change in development strategy from an open-economy policy to that of import substitution; and a break in the policy of “leaning to the West” in favor of “leaning to the East.” These are obviously questions that are best answered by political scientists more knowledgeable about political developments, decision making, and interest groups in China. Having studied China's economic development and policies over the past three decades, however, I have learned that the political scientists can forecast China's political future as poorly as economists can predict its economic future.

The Deng leadership has devoted considerable effort over the past decade to the development of a consensus and a transition of leadership that will assure the continuation of the economic reform program. However, the success of their efforts is far from assured. In addition, no matter how hard they try, they cannot prevent the successor generation from taking over and making their own choices; the natural process of aging will lead to that result. The benefits of the economic reform program have created strong support for its continuation, and few want to go back to the system of the Cultural Revolution or even that of the 1950s. The problems of inflation and corruption alone, however, could mobilize opposition to economic reform and lead to backtracking from the gains already
achieved. On the basis of the record over the past decade, I tend to be somewhat optimistic in this regard, and the assumption made in estimating the role of agriculture in Sino-American economic relations in the future is a rather limited one. It is a continuation of the present pace of reform or piecemeal moves forward, followed by periods of consolidation and even some retreat, basically moving in the right direction to ultimately achieve a stable and new economic system—a mixed economic system—sometime in the next century. This is, I believe, an optimistic assumption, but one that can now be made with a probability that dominates each of the possible alternatives.

As for the continuation of the open-economy policy in particular, reformers who have tried to modernize China by opening the economy and relying on the West have always met with failure in the past. Yet those attempts were made when the Chinese were dealing with the foreigner on unequal terms. Few would argue today that the Chinese are not in control of their own economy. The reforms have greatly increased the problems the Chinese leaders face in maintaining this control at the local level, but they have been able to retain considerable control in the area of foreign trade and foreign investment activities and are able to deal with the foreigner from a position of strength. In fact, they have utilized their bargaining position very well in creating the framework for China's integration in the world economy. Most developed regions of China have created strong trade ties with and solicited considerable foreign investments from Western business, and most of the interior and less developed regions are clamoring for their share of foreign trade and investment. The major problem faced by the central government has been to limit imports and foreign borrowing by the Chinese and to stimulate foreign direct investment in China. China's foreign trade dependency ratio is well above that for other socialist and large continental economies, and it is likely to remain so. While China has the resources and potential market size for maintaining a relatively self-sufficient economy, its level of development,
technological capabilities, and poorly developed specialization and market networks would make it costly for the Chinese to revert to a self-sufficient development strategy. I believe they are unlikely to do so.

Finally, while not rejecting their higher dependence on foreign trade and investment, the Chinese could decide to shift the bulk of that dependence toward the socialist bloc of countries, as in the 1950s. Yet these countries are also in the process of reform and, in a real sense, China is ahead of them in the process. Also, China needs to develop its export capacity and this depends on quality and productivity—that is, the Chinese need Western technology, especially in agriculture and light industry. China's trade with the socialist bloc as a share of total trade will undoubtedly grow as the Chinese seek a more balanced distribution of trading partners. Nonetheless, the economic reform program, the greater foreign trade dependency ratio, and trade and investment relations with the industrialized countries of the West are all of one piece and can be expected to remain as major features of China's development strategy.

Obviously, there will be deviations from this predicted trend for economic policies and Chinese relations with the West. More important, even if this trend is realized, is there any reason that political relations between China and the United States could not turn sour and their economic relationship, therefore, stagnate? Happily, Sino-American relations have graduated from the stage where every difference of opinion or problem that arose threatened the existence of the relationship; the relationship can now survive these arguments and confrontations—as the record shows. Furthermore, as far as the role of agriculture in Sino-American economic relations is concerned, our prediction is that that role will be small and not likely to be greatly affected by a general decline in the economic relationship itself.

All this goes to argue that our prediction of the role of agriculture in Sino-American relations based on economic considerations alone is not likely to be disrupted because of political changes that contradict our assumption that the present reform policies, the open-economy policy, and the choice of trading partners will continue in the future.

**Exogenous Shocks**

Exogenous shocks have already been identified as major determinants of Sino-American economic relations, especially the role of agriculture in that ratio by a considerable margin. In 1985, these statistics would show a foreign trade dependency of one-third. However, even a more realistic estimate based on a true purchasing-power parity exchange rate would show a foreign trade dependency of from one-fifth to one-fourth.
those relations. Yet because those exogenous events are unpredictable by definition, it is hard to present a list of the exogenous shocks that are most likely to occur in the next decade or so. For the purpose of illustration, however, we can imagine two possible, but not likely, events that would have a major impact on the role of agriculture in Sino-American relations.

One of the fundamental exogenous shocks that plagues any planner in a developing country is weather, and the Chinese have yet to insulate their economy against the serious negative impact of bad weather—too much or too little rain. Some knowledgeable observers argue that the efficiency of China's accumulated irrigation and water control system is declining as is the supply of water for that system, especially in North China. Also, a series of bad weather years within the normal cycle of good and bad weather, not unknown throughout China's history, could well occur sometime during the next decade or so, and it has even been suggested that the record of the past one hundred years argues for a secular trend of ever poorer weather conditions. What would happen if a series of years of bad weather were to occur?

I believe the answer should be obvious. Domestic agricultural production would fall short of demand, and, as happened in the early 1960s and again in the early 1970s, the Chinese can be expected to sustain minimum standards of living by importing agricultural products in short supply, mainly foodstuffs. Thus, as in the early 1970s, agriculture could reemerge as a major factor in Sino-American economic relations. Its importance could be further enhanced by another exogenous shock—a breakdown in the birth-control program and a significant increase in the rate of population growth. Exogenous shocks that are well within the realm of possibility could easily restore the dominant role of agriculture in Sino-American relations.

What about the opposite result, that is, an event that would eliminate any role of agriculture in the bilateral economic relations between China and the United States? Most discussions of the Chinese economic reform program revolve around arguments between those who believe there are serious obstacles to that program because of the tremendous weight of inherited attitudes, behavior, and institutions, and those who believe the slow and steady progress of the economic reforms, despite the fits and starts along the way, will achieve the objectives of the program sometime in the future.

According to a study group appointed by the Organization for Economic Cooperation and Development (OECD) to sketch out the possible

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ramifications of China's entry into the General Agreement on Tariffs and Trade (GATT),

Despite the not inconsiderable efforts on the part of the Chinese authorities to allow greater management autonomy to the State trading companies, local authorities and certain enterprises, the organization of foreign trade remains centralized. Because of the recent disequilibria of the trade balance, no further drive towards decentralization is likely for some time.

These points of resemblance between the trading systems of China and the East European countries are due to the way their economies function and especially to their irrational pricing system. The absence of any linkage between domestic and external prices means that Chinese enterprises have no indicator as to the profitability of their transactions with foreign firms. In order to direct business activities in accordance with profitability criteria and with the broad aims of development, the authorities have to intervene by controlling the volume and nature of trade, notably through import and export licensing. Therefore the existence of centralized control through administrative measures is due to the shortcomings of the system, which prevents economic regulation mechanisms, especially prices, from playing their role.

This correlation between the functioning of the foreign trading system on the one hand, and the specificity of the economy overall on the other, has far-reaching implications for any plans for reform that might be proposed, since it is hard to see how adjustments in the organization and workings of foreign trade towards alignment with the market economies could be possible without a thorough overhaul of the economy as a whole.26

Rather than continuous experiments and adjustments, what if the economic reform program were to achieve a major breakthrough and succeed in the near future? Certainly the current leadership is trying hard to achieve that result, and a sizable interest group has been built up to support those efforts. Of the four dominant groups that disagree over the necessary path the reforms should take, one argues for the crucial importance of a price reform, while another argues for the need to free the production-level unit from administrative controls and interference.27 While these groups disagree over what should come first, there is no logical reason why the political leadership cannot be convinced to implement both steps in the near future. In addition, the OECD working group cited above recommended that GATT follow the action it took with regard


27The first argument is championed by Wu Jinglian of the State Planning Commission, the second by Liyining, a professor at Beijing University. Both have been prolific writers and contributors to the debate. See Joseph Fewsmith, Foreign Broadcast Information Service, "Approaches to Economic Reform and the Making of Economic Policy in Contemporary China," unpublished manuscript, no date or place.
to accepting Hungary and Yugoslavia as members, rather than following the conditions imposed on Poland and Romania—that is, demanding that China pursue a scheduled continuation of reforms, rather than assigning China a target level of trade with GATT members. Finally, as the generational change in leadership proceeds, the ranks of those with a vested interest in the old system should diminish, while those who have been the most successful within the new system should rise to positions of political leadership—perhaps. Thus, although the probability of a breakthrough in the economic reform program in the next decade or so may not be terribly high, it is certainly higher than it was just ten years ago.

If this breakthrough were to occur and China's economy become decentralized, with output and distribution decisions strongly influenced by relative scarcity prices—including prices in foreign trade—greater specialization would result in the structure of domestic production and more emphasis would be given to the gains from trade and the international division of labor in China's foreign trade. Thus, while China's foreign trade dependency may be no greater than at present, with some success in the attempt to raise productivity and modernize the economy, China could regain its comparative advantage in agriculture and increase the export share of manufactured goods in its total export trade as well.

This optimistic forecast merely indicates that China could move up the ranks of the developing countries, developing its animal husbandry industry in reaction to the income elasticity of demand by its consumers—that is, increasing significantly its imports of feed, with some of these imports obtained from the United States. On the export side, the Chinese would become competitive with other agricultural countries and with those developing countries successful in moving up the early stages of the technology ladder in the production of manufactured goods for export to the developed countries. This would not lead to large U.S. importation of agricultural products, but it would lead to the often-expressed fear of China's emergence as a competitor to the United States for agricultural

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28Some of the American and Chinese participants took strong exceptions to my argument that the present pace of the economic reforms would not see the creation of a consumer's sovereignty, market economy in the near future, at least to the extent that the authorities would "stand aside" and allow the rise in consumer incomes and the resulting demand for meat and dairy products to spill over into an effective demand for large-scale imports of feed grains to support a considerable animal husbandry sector. I admit that is a possible development, but I list it here among the outcomes of an exogenous shock—China's evolution from a bureaucratically administered economy to a market socialist one by the end of the century. A more probable result is that the bureaucrats administering the economy will retain many of the constraints over the exercise of consumer sovereignty via markets that they now hold. For the argument about why this more probable result will lead to only a slow and steady growth of feed grain imports, see footnote 19.
import markets in third countries. In this case, the role of agriculture in Sino-American relations could be negative and serious. However, if the United States and China are unable to resolve one of the major problems facing us in the world today—that is, preventing difficulties in bilateral economic relations between countries from leading to serious problems in their political relations—Sino-American relations are in for a rocky future, with or without agriculture playing a major role in those economic relations. Fortunately, however, the record so far clearly indicates a growing ability to resolve this problem satisfactorily.

Conclusion

Obviously, agriculture played an important role in the early stages of contemporary Sino-American relations. That role has been steadily shrinking, however, and is now insignificant. Agricultural modernization is a crucial element in the modernization of China's economy, and the United States can play an important role in that process. But that role might not be very significant in quantitative terms. Only in the case of an exogenous shock is this forecast likely to change. Such a shock might require the United States to supply shortfalls in current consumption needs in China (the result of several years of disastrous weather); or the U.S. might become a major supplier of animal feed for China's burgeoning animal husbandry industry if reforms allow consumer demands to have priority in the allocation of resources and imports are allowed to meet these demands. However, the United States could find itself a major competitor of the Chinese in third country markets if the modernization of the Chinese agricultural economy were to be achieved in the next decade or so. Yet I believe these possibilities are not very probable and that my forecast is not only the most likely outcome, but a most optimistic one for future Sino-American relations as well.

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29 China is already a serious rival of the United States for maize, cotton, and soybean sales in the Japanese market.
30 At the present time, on the basis of recent developments, there is reason to be much more optimistic about Sino-American relations than about Sino-Japanese relations.
Hong Jun-yan comments:

In his paper, Professor Dernberger concludes that agriculture played an important role at the early stage of bilateral trade, but its importance has been gradually declining. I wish to emphasize that although the volume of agricultural trade might decline, it is still an important part of the trade between China and the United States.

Before 1982, China was the largest market for U.S. grain and cotton exports. With the development of the commodity economy in China's countryside, the degree of self-sufficiency in grain and cotton has increased, and the portion of grain and cotton imports within the bilateral trade has declined drastically. This is good for China, because China can thus spend less foreign exchange on importing grain and cotton. However, China's agriculture is still backward. Per capita output of grain is small, and per capita consumption of meat, eggs, and milk is even smaller. The output of agriculture relies on natural conditions to a great extent. For quite a long period into the future, China will continue importing grain from the United States; imports of feed grain, particularly, will increase in order to meet the need of the developing animal husbandry industry in China. China must go a long way to reach self-sufficiency in agriculture. So, at present, it is impossible for China to be a competitor of the United States in the international market for agricultural products.

The United States and China can cooperate in many ways in agricultural matters. Modern agricultural machinery and facilities that were introduced from the United States have helped improve productivity in China's agriculture. We can also do more exchange of science and technology; Professor Zhang Zhongli mentions biological technology in particular. China is especially weak in agricultural management; more management training programs will certainly promote the modernization of China's agriculture. Thus there are many things that can be done by the United States to help modernize China's agriculture.
Although the political and economic system of China and that of the United States are different and there is a disparity between their levels of scientific and technological development, agriculture occupies an important position in the development of the national economy in both countries. The development or decline, success or failure, of agriculture can affect the overall situation of the national economy. Not only is agriculture the source of food and clothing and the means of existence of human society, but it is also the foundation and premise of development of other branches of the national economy. The level of development of agricultural production and the level of agricultural labor productivity in large measure restrain the scale and rate of development of the other branches of the national economy.

China is a large socialist country with a population of 1.1 billion, of which 800 million are peasants; thus agriculture occupies an important position in her national economy. “For the masses, food is of paramount importance” is a well-known Chinese saying. Agriculture in our country first of all has the task of supplying food and clothing for 1.1 billion people. The daily needs of grain and foodstuffs for such a large population must be met by agricultural production. At present, only about 20 percent of clothing materials are synthetic, while 80 percent are cotton, hemp, or woolen products provided by agricultural production, and 70 percent of the fuel for cooking and heating in the countryside consists of agricultural products such as straw or firewood. Construction materials such as timber, sand, and bricks also fall mainly into the agricultural sector. Suffice it to say, the agricultural situation in our country is directly related to the basic survival of one-fourth of the world's population. The proportion of agricultural products as raw materials in the output value of our industry,
especially of our light industry, is still very high. Seventy percent of the raw materials for light industry and 90 percent of those for the textile industry are supplied by agriculture. The labor required in the industrial, communication, commercial, and service sectors is also provided largely by the agricultural sector.

As 800 million of our 1.1 billion people live in the countryside, rural markets constitute the main body of our markets. Agriculture is also the chief source of accumulation in our national economy and a main export resource. About half of our state revenue comes directly or indirectly from agriculture. A relatively high proportion of our exports is either agricultural or the processed agricultural products. Agriculture is of decisive significance in the development of our national economy.

The United States, though an economically highly developed country, cannot do without an agricultural foundation. Marx pointed out: "All development of capital has for its natural basis the productiveness of agricultural labor. . . . An agricultural-labor productivity exceeding the individual requirements of the laborer is the basis of all societies and is above all the basis of capitalist production." After independence was won, agriculture was the main source of national income for the new American republic. The United States was able to become a large capitalist, industrialized country because her agriculture provided labor, raw materials, food, and a consumer market. The development of modern industry in the United States has in turn stimulated agricultural modernization, so that not only her own demand for agricultural products has been met, but there have been large supplies of surplus grain and other agricultural products for export, and the export of agricultural products has become one of the major means for the United States to realize her global strategy.

Since the United States became highly industrialized in this century, the proportion of agriculture in total U.S. output has been drastically reduced, and the growth rate of agricultural production no longer determines the rate and magnitude of industrial growth. However, as agriculture is the branch of production that utilizes solar energy and relies on the growth of living things, its unique function of utilizing and transforming natural forces and energy and its role in providing human beings with the most basic physical materials for survival can hardly be replaced by any other branch of the economy. Thus, even in the United States, where science and technology are highly developed, the development of the national economy cannot do without agriculture. This shows that this objective economic law, that agriculture is the foundation of the national economy, is independent of man's will; whether it is an economically backward

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country or a developed country, whether it is a country with a socialist system or a capitalist system, this law applies to all—only the form of manifestation and the degree of the role played vary.

China is an old and large agricultural country with plentiful natural resources, but its per capita resources are relatively low. The world per capita cultivated land is 5.5 mu. It is 14.6 mu in the United States, but for China, it is only 1.5 mu, one of the lowest in the world. The proportion of agricultural population in the total population is generally under 20 percent in developed countries, 30 to 50 percent in middle-level countries, and generally from 50 to 80 percent in economically backward countries. China has 800 million people in the countryside, with an agricultural labor force of more than 300 million, which is an advantage for the development of agriculture, yet also brings with it the problem of the placement of surplus labor.

China's agricultural sector has a long history and is rich in traditional experience, yet is backward scientifically and technically. Except for the coastal areas, the majority of China's rural regions are still in the stage of manual labor based on household management. In 1981, the fixed assets of each agricultural laborer were 333 yuan, and the fixed assets per mu of cultivated land were only a little over 60 yuan. As the peasants have little education and scientific-technical know-how and lack technical equipment, agricultural production mainly relies on experience and traditional technology. Such conditions are a far cry from the needs of agricultural development.

In order to accelerate China's agricultural development, we must rely first on correct policies and second on science. We rely on policies to arouse fully the enthusiasm of the peasant masses. We rely on science to develop and utilize fully all potential natural and economic resources in agriculture. To speed up the process of agricultural modernization in China, we must open up to other regions both at home and abroad, strenuously expand international exchange and learn and borrow advanced technology and experience, especially from the United States.

Conditions favor agricultural exchange between China and the United States. The latitudinal range of the two countries is similar, the area of land is about the same, and the majority of farmland in both countries belongs to the north temperate and subtropic zones. The temperature and amount of rainfall differ very little. Such similarities in natural environment create favorable conditions for a wide range of exchange and cooperation between the two countries in terms of crop cultivation, breeding of new varieties of seeds, prevention of insect pests, and so on. A long history of exchanges between the two countries already exists in agricultural economics and sciences. As early as February 1784, the first merchant ship to
sail direct to China, the *Empress of China*, arrived at the port of Huangpu in Guangzhou (Canton), thus raising the curtain on Sino-American relations. The commodities exchanged then were mainly agricultural and processed goods including cotton, ginseng, fur, tea, cotton cloth, china, silk goods, and so forth. This friendly trade exchange lasted for more than a century and a half before it suffered serious setbacks for well-known reasons.

From the establishment of the People's Republic of China up to the early 1970s, although Sino-American relations deteriorated, nonofficial exchanges in agricultural technology were not completely cut off. “Delta pine 15” cotton and other improved varieties of American seeds have been introduced extensively in a number of regions in China. Our American friend William H. Hinton visited China on a number of occasions to train Chinese tractor drivers and pass on advanced agricultural technology. American friends Sib Engst and Joan Hinton have worked in China for more than thirty years and in October of 1979 became advisors to China's Ministry of Agricultural Machinery. In 1972, U.S. President Richard Nixon visited China and signed the Shanghai Communiqué, thus opening up new avenues for the restoration and development of exchange between the two countries in agricultural economics and science.

**The Present State of Sino-American Agricultural Economic Relations**

Since the establishment of diplomatic relations between China and the United States in 1979, agricultural economic exchanges between the two countries have been expanded. In 1981, bilateral trade in agricultural products reached US$3.3 billion, 52.53 percent of the total Sino-American trade (US$6.31 billion) for that year. In that year, we imported 8.5 million tons of such products as wheat and corn from the United States. In recent years, because of important reforms carried out in our rural economic structure and the introduction of the output-oriented contract responsibility system, an impressive increase in our agricultural output has been brought about. Therefore, in the last few years, our import of staple agricultural products, such as cereal products from the United States, has dwindled, but as the trade of other agricultural products expanded, the total import and export value of Sino-American agricultural products in 1986 still reached US$0.7 billion, which was 9.7 percent of total Sino-American trade. In the first six years of the 1980s, the total value of bilateral agricultural trade amounted to US$10.8 billion, surpassing the value of our agricultural trade with any other country in the world.

Simultaneous with the healthy growth of Sino-American agricultural
trade, economic cooperation in agriculture has made relatively fast progress. According to incomplete statistics, by the end of 1986, total American direct investment in China amounted to US $1.5 billion with more than 140 Sino-American joint ventures having been established. A number of these joint and cooperative ventures are agricultural and food processing projects, for example, a chicken farm in Hainan Island, a soda factory in Shenzhen, a hog farm breeding 4 million head per year in Guangdong, Reynolds' Camel cigarette factory, and the Del Monte sweet corn production base in Shanghai. These ventures are mainly located in Beijing and the coastal provinces and ports of Guangdong, Shanghai, and Tianjin.

Exchange and cooperation in Sino-American agricultural science and technology have developed since U.S. Secretary of Agriculture Bergland visited China in November 1978. At that time the two countries signed a memorandum on Sino-American cooperation in agricultural science and technology, and in 1979 each country sent an agricultural delegation to visit the other. Altogether, five governmental working conferences on cooperation in agricultural science and technology were held between 1981 and 1986. As a result of these conferences, 106 exchange visits involving 582 persons (283 Chinese and 299 Americans) took place. These visits covered many aspects of agriculture of concern to both sides.

The chief characteristics of Sino-American agricultural trade and economic and technological cooperation in the past several years are as follows:

First, staple agricultural products in Sino-American trade have been gradually established, each side having found some items to be emphasized.

In terms of imports, before 1982, our main agricultural imports from the United States included grain, cotton, and cotton products. According to our Customs statistics, of our total agricultural imports from the United States, grain and cotton accounted for 81.41 percent (grain and grain products 67.53 percent, cotton textiles 13.88 percent). At that time, China was the largest buyer of grain and cotton from the United States. But with the development of the commodity economy in our rural areas, our self-sufficiency in grain and cotton grew continuously. Our cotton output in the fiscal year 1984–85 reached 28.7 million tons, 15 percent more than the output of the United States and the U.S.S.R. combined. With the increase

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3Data provided by Rural and Township Enterprises Bureau of the Ministry of Agriculture, Animal Husbandry and Fishery.
4Data provided by Foreign Affairs Division of Ministry of Agriculture, Animal Husbandry and Fishery.
in grain and cotton output, the structure of agricultural imports has changed significantly. The percentage of total imports represented by grain and cotton fell drastically and was only 17.56 percent of total agricultural imports in 1986. However, imports of timber and hides, especially cowhide, gradually increased. These two items, which constituted 5.75 percent of total agricultural imports in 1981, rose to 33.34 percent in 1984 and reached 57.38 percent in 1986. It is expected that timber and hides will continue to be our major items of agricultural imports from the United States for a relatively long period in the future.

China's agricultural exports to the United States are mainly vegetables, fruit and related products, tea, sugar and its products, beverages, vegetable oil, and marine products such as fried eels, prawns, and crabs. These are our traditional export items. Our prawns, crabs, vegetables, and fruit, being less polluted and of superior quality, are welcomed by American customers. Among our vegetable oils, tung oil, which dries easily and has good insulation qualities, has always been in great demand. In recent years, exports of these products have been relatively stable. These products' share of our total agricultural exports to the United States rose from 37.22 percent in 1981 to 70.68 percent in 1986, and they promise to continue as important items of export to the United States.

Secondly, the scope of agricultural economic cooperation between the two countries has been expanding and deepening continuously. This manifests itself chiefly in three ways.

First, we have moved from just bilateral trade in agricultural products to both bilateral trade and investment in agricultural products. This is an important mark of the deepening of bilateral economic relations. At present, as our country is undergoing large-scale economic construction, we are relatively short of capital, and we need more foreign enterprises to come and invest in China. In terms of numbers, it is only natural that American investment in China overwhelmingly surpasses our investment in the United States. But cases of success in our investment in the United States are not lacking. For instance, in 1984, one of our companies purchased a piece of forest land in Washington State for timber production, and the first shipment of 25,000 cubic meters of timber arrived in Yantai [Chefoo], China, in January 1985. This project represents a promising step toward the opening of rich American agricultural resources for our use and provides good experience for our other cooperative projects in the United States.

Second, in our economic cooperation, new types of projects that

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have long-term objectives combining technology, economic management, and trade have been developed. For instance, we have cooperated with America's Petoseed Corporation in vegetable production. Petoseed provides seed, technology, and capital, while we provide land, labor, and part of the capital, to produce hybrid vegetables and melons according to the needs of Petoseed, with products to be purchased by Petoseed for sale abroad.\(^6\) Also, the cooperation between Chongming County in Shanghai and Del Monte Corporation in the sweet corn production base is in this category. This kind of three-in-one cooperative form can bring scientific-technological, economic, and resource advantages into full play and also make the best use of U.S. sales channels. Such arrangements are much welcomed by the agricultural entrepreneurs of the two countries.

Third, the "embargo" on a number of traditional products has started to be lifted. The United States is the largest seed export country, and every year this export is valued in terms of hundreds of millions of U.S. dollars, reaching US$364 million in 1986. In the past, because of the attitude toward socialist countries on the part of the Coordinating Committee for Multilateral Export Controls (COCOM), exporting fine varieties of breeding fowls and breeding stock to China was forbidden. In recent years, through efforts made on both sides, the United States has partially relaxed its control over exports to China and has influenced COCOM to reduce by more than half the number of items subject to controlled export to China. This breakthrough also includes the export of technical products. By 1986, 470 fine breeding cows, 1,820 breeding pigs, and a quantity of fine American ginseng, vegetables, grain, and forage grass seeds had been exported to China, thus raising the level of agricultural scientific-technological exchanges and cooperation between the two countries.\(^7\)

Finally, agricultural scientific-technological exchanges and cooperation between the two countries have evolved into a new pattern of official and nonofficial exchanges. Both exchanges are thriving, with nonofficial exchanges taking the lead. After the establishment of diplomatic relations between China and the United States, the two countries signed an agreement of scientific and technological cooperation, which stipulates that according to the goals of this agreement, both parties should encourage and facilitate exchange and cooperation between government departments, universities, institutions, and other units of the two countries as well as encourage and facilitate the signing of agreements of cooperative activities between these units. In line with this spirit, we have cooperated

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\(^7\)Data provided by Foreign Affairs Division of Ministry of Agriculture, Animal Husbandry and Fishery.
in the field of Sino-American agricultural scientific-technological exchange. We have taken full advantage of the different features of official, semiofficial, and nonofficial channels. We have also actively promoted Sino-American nonofficial agricultural exchange and cooperation, while simultaneously developing governmental economic-technological cooperation. In terms of personnel exchanges, cooperation between universities, institutes, groups, and individuals has steadily increased. For example, in recent years the Association for International Exchanges of the Chinese Ministry of Agriculture, Animal Husbandry and Fishery has had many personnel exchange programs with America's People-to-People International Citizen Ambassador Program. Many joint research projects have been undertaken as a result of the visits by scholars to both countries. The record of agricultural economic-technological cooperation since the normalization of China-U.S. official relations is laudable because it has promoted the agricultural development of the two countries.

With regard to trade in agricultural products, China has purchased large quantities of grain and forage in the past several years. During 1981–84, our grain purchases amounted to 50.8 billion catties, averaging 12.7 billion catties a year. This import of grain and forage has helped our countryside adjust its product mix, provide necessary conditions to gradually transform our traditional pattern of “taking grain as the key link” in agricultural production in our coastal regions, and regulate production consciously according to market demand.

The results are several. First, the supply of vegetables, pork, poultry, eggs, milk, fish, and other fresh and live agricultural products has increased. For example, by utilizing imported wheat and corn, the six big cities of Beijing, Tianjin, Wuhan, Xi'an, Shanghai, and Nanjing have developed their dairy industries, thus relieving the shortage in milk supply. Second, the import of more than 50 billion catties of grain is equal to the output of 39 million mu of grain area, assuming the annual output is 1,300 catties per mu. This means that this much land can be used to expand production of other crops, thus increasing our capacity for export. According to statistics, from 1981 to 1986, our export of vegetables and fruit to the United States increased from 58 million catties to 108 million catties, an increase of 86.21 percent; the export of tea increased from 17 million catties to 35 million catties, an increase of 105.8 percent. Third, the import of farm machinery and modern agricultural implements from the United States has also played a role in enhancing agricultural labor productivity and the commercialization rate of agricultural products. For example, in April 1978 the Second Team of the Fifth Branch Farm of the Friendship

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8Ibid.

Farm in Heilongjiang imported a complete set of farm machinery from the John Deere Corporation of America. Since then, the number of agricultural laborers has been reduced from 242 to 20, the cultivated area has increased from 14,730 mu to 18,540 mu, average per capita output of grain and beans has reached 210,346 catties, an increase of ten times that of 1977, and per mu output has also risen, from 253 catties to 332.6 catties, an increase of 31.5 percent. Again, the importation of modern automatic temperature control equipment for hothouses in Shanghai County has boosted development of improved varieties of flowers and the commercialization of flower production.

In terms of agricultural, scientific, and technological cooperation and exchange, the Chinese Academy of Agricultural Science Delegation to the United States, after a comprehensive investigation of the protection of U.S. seed resources, reached an agreement with the Rockefeller Foundation and the International Board of Plant Genetic Resources, under which the American side invested 1.1 million yuan and the Chinese side 6 million yuan to establish the largest state seed resources storehouse in Asia. America's fine quality, high-yield "Delta pine 16" cotton introduced into our Yellow River and Huai River valleys now covers an area of about 7 million mu. By using American corn as parent seed, our scientists also developed fine hybrid seed that is more adaptive, disease-resistant, and high yielding, leading to an increase in output of about 150 catties per mu. This variety is now cultivated on 20 million mu of land, and the increase in output has amounted to 3 billion catties a year. As the seed powder of the variety of nonpoisonous cotton introduced from the United States contains more than 50 percent protein as well as vitamins A and B, new avenues for cotton seed food processing have been opened up.¹⁰

The United States also benefits from the agricultural scientific-technological cooperation between China and the United States. For instance, the United States has been introduced by China to more than forty kinds of natural enemies of insect pests; our paddy hybrid-breeding technology, utilization of marsh gas, use of water plants as green fodder, and so on, have also attracted the attention of U.S. scientists.

The Prospect and Problems of Sino-American Agricultural Economic Relations

In recent years, China and the United States have achieved some results in agricultural economic exchange and have established a measure of

¹⁰Data provided by Foreign Affairs Division of Ministry of Agriculture, Animal Husbandry and Fishery.
confidence in cooperation. But in view of the market potentialities, production capacity, and technological resources of the two countries, much more can be done. Although Sino-American agricultural economic relations are much more developed than they were before, their full potential has yet to be realized and there are great prospects ahead.

Great Potential in Trade of Agricultural Products
Between China and the United States

Trade in agricultural products can be expanded in several respects. In the case of grain trade, China's grain production has increased, and we have exported a certain amount of grain at times. In 1985, for instance, we exported 1.5 million tons of corn to Japan. But on the whole, our problem of grain production has not been solved yet. Per capita grain output in 1983 was only 759 catties, merely 35 percent of the United States' 2,171 catties. Furthermore, the year-to-year fluctuation of our grain output is rather large. The bumper crop of 1984 reaped 814 billion catties, yet for the following two years of 1985–86, there was a reduction in output. Up to the present, the 1984 output has not been surpassed. Also, our consumption of grain is still at a primary stage; and per capita consumption of meat, eggs, and milk, which can only be obtained through grain used as feed, is still low. Thus, for some time in the future, China will need to import grain from the United States, but it would be mainly coarse-feed grain to meet the needs of our developing animal husbandry industry.

The outlook for the processing of agricultural products is also bright. With the pace of modern life accelerating, fast foods and canned foods are increasingly welcomed. Improved equipment for precision processing has led to a rise in the quality requirements for raw materials, and the processing of agricultural products has received increasing public attention. Processed agricultural products of high nutrition and high added value will sell well in the world market of the future. The United States is a high-income, high-consumption country, and its demand for agricultural products is great. The development of Sino-American trade in processed agricultural products has very broad prospects. In addition, it can also be expected that the trade in raw materials for industrial use, such as fats and timber, will rise above the present level.

The United States is the largest foreign investment country in the world; its total foreign investment in 1985 amounted to US$232.68 billion,

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11Shi-ji jin-ji diao-yan (World Economic Survey), 1985, no. 28.
which was 45 percent of total world investment. In 1985, U.S. investment in China was US$1.5 billion, only 0.64 percent of U.S. total foreign investment. U.S. investment in China is mostly in the fields of energy development, electronics, railroads, textiles, hotels, and construction. U.S. investment in agriculture is still rather limited. There are only about a dozen agricultural projects. China is a developing country, and the level of agricultural production is rather low. To achieve agricultural modernization, the shortage of capital must be overcome. We hope to develop more extensive economic cooperation and to absorb more U.S. investment in order to enhance China's progress toward agricultural modernization.

However, we must not overlook the problems that exist in the process of development of Sino-American agricultural economic and trade relationships, which are worth noting.

One problem is the protracted deficit in Sino-American agricultural trade. China's exports of agricultural products to the United States are always less than her imports from the United States. In 1981, this deficit amounted to US$2.931 billion. China expanded its exports to the United States in 1986, but there was still a deficit of US$0.355 billion. For the first six years in the 1980s (1981–86), the deficit in the trade of agricultural products between the two countries amounted to US$8.986 billion, thus further increasing the deficit in the whole of Sino-American trade. A basically balanced trade is China's consistent goal. A two-to-three-year deficit will affect China's economic interests.

One cause leading to the deficit in the trade of agricultural products between the two countries is America's tariff and nontariff barriers toward China's agricultural products. These still constitute a serious problem. Our agricultural products sent to the United States are often abnormally turned back, thereby greatly restricting China's export to the United States. To maintain the favorable momentum in Sino-American trade in agricultural products, the United States should take a positive attitude, open its market, reduce its tariff, and abandon its restrictions.

The second problem is that up to now, China has not yet benefited from GSP, the Generalized System of Preferences. The generalized preferential treatment is a kind of preferential treatment given by Western countries to their foreign trade partners with regard to customs duties and maritime transportation. At present, except for the United States, all Western countries that have GSP have given China preferential treatment. According to the prevailing policy of the United States, if China can receive preferential treatment, 960 items out of China's current export items to

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13Ye Qixiang, *Zhong-Mei jin-ji mou-yi guan-xi de fa-zhan Ji cheng-zai de zhu-yao wen-ti* (The Development of Sino-American Economic and Trade Relationship and the Main
the United States can enjoy exemptions from import duty, which would benefit the expansion of China's exports of agricultural and other products. In 1985, Taiwan's export commodities to the United States were granted tax exemptions amounting to US$3.2 billion, and this constitutes 24 percent of total U.S. imports receiving preferential tax treatment; thus Taiwan was the region that benefited most. President Reagan wrote a letter to Congress on June 3, 1985, requesting most-favored-nation treatment for China, Hungary, and Romania, but it was rejected by Congress on the ground that the president cannot designate communist countries as beneficiary countries for the generalized preferential system.

The fact that China is unable to benefit from the generalized preferential system harms not only China's exports of agricultural products, but also the United States. For instance, according to the 1981-84 Sino-American grain trade agreement, in 1983 China should have imported 8 million tons of grain from the United States, but because an agreement of maritime transportation was not reached, China reduced her grain imports from the United States by 2 million tons. Thus from a long-term view of mutual benefit, it is pertinent that the United States should give China preferential treatment as soon as possible.

The third problem is our lack of investigation and analysis of the American market. The U.S. agricultural produce market has very great potential, but competition is fierce. For instance, vegetables, fruit, and canned food used to be China's key products, and there has been some increase in recent years. But we have not modified the varieties, prices, packaging, and advertising for the U.S. market. Consequently, Chinese products have accounted for only an insignificant proportion of total U.S. imports of such commodities, ranking far below Japan, Taiwan, or South Korea. In order to expand our exports to the United States, we must carefully investigate and analyze the American market, learn to understand the psychology and habits of the consumers, and then put out new varieties, reduce our costs, and improve packaging according to market demand.

Broad Prospects for Sino-American Agricultural Scientific and Technological Cooperation

U.S. agriculture is highly developed and its agricultural technology is in the vanguard of the world. China's level of agricultural technology is relatively low, but we have a good tradition of intensive cultivation and

Problems), Institute of International Trade, Ministry of External Economy and Trade, October 1986.

14Ibid.
rich varieties of resources. The expansion of Sino-American exchanges and cooperation in agricultural science and technology will enable both countries to learn from the other's strong points to offset one's own weaknesses. For instance, U.S. agriculture is highly mechanized, consumes a large amount of energy, and has taken the path of "petro-agriculture." U.S. agricultural labor productivity is very high, but the high energy inputs lead to pollution and energy shortage. Some well-known American agriculturists have already pointed out that in the future, the United States should take the road of combining biological measures with mechanization measures and that the United States should learn from the Chinese tradition of intensive cultivation.

In the field of biological technology, there is much room for cooperation between the two countries. China's wild plant resources are most abundant. According to estimates made by various scientists, there are approximately thirty thousand varieties of flowering plants, gymnosperm, and pteridophyte. China's wild plants are about one-eighth of the world total, and China is said to be a plant survival center. Also, China is in the lead in cultivation technology, biological nitrogen fixation, the multiple crop system, acupuncture applied in veterinary surgery, a number of varieties of livestock, comprehensive devices for prevention of insect pests, and other practical technologies.

By comparison, the United States is very strong in theoretical research in biological technology. At present, there are more than 300 biological technology companies in the United States, with more than ten thousand employees, mainly in the fields of medicine, agriculture and animal husbandry, and genetic engineering, cellular engineering, and enzyme engineering. If the superiority in biological technology of the two countries can be combined, this will certainly play an important role in the development of agriculture in the two countries.

In agricultural management, the United States has much advanced experience that China can learn from. Agricultural production in the United States is highly specialized and socialized. The farmers actually only engage in one part of the process of agricultural production, and a large number of tasks are performed by specialized companies. For instance, seeds are provided by seed companies after being selected by scientific research organizations; application of fertilizers, processing of agricultural products, transportation, and marketing are generally accomplished through the services of specialized companies. Nowadays, a farmer in the United States has nine persons serving him, while in China, scores of peasants have only one person serving them. The management of U.S. farm enterprises has also become more and more modernized. It is reported that in 1986, 40 percent of U.S. farms used computers, and increasingly
computer software is being used by the majority of farmers, so that they can learn the prevailing prices of agricultural products, cultivated areas of crops, and marketing and financial situations without leaving their homes, enabling them to make calculations and decisions immediately. China's level of agricultural management, on the whole, is rather low and falls far behind the United States. But in recent years, exchanges in this field have made a good beginning. Jiang Chundi, Deputy Director of the Songjiang Bureau of Agriculture in Shanghai, has borrowed the American experience about farms of appropriate size and helped the Xinqiao township of Songjiang to operate 74 cooperative farms of appropriate size. Xinqiao is now one of the modernized townships in the suburban counties of Shanghai.¹⁵

Of course the conditions in China and the United States are different, and to copy the complete set of American management methods is impossible, but we can exchange our experiences. Either side can send people to the other side to make field studies through governmental or nongovernmental channels.

Stability in China's open policy is the strong political foundation for the healthy development of Sino-American economic and technological cooperation. "To enliven within the country and to open to the outside world" is a basic state policy stipulated after the summing up of our historical lessons learned in the past decades by our party and government. Hereafter, along with the development of our economic reconstruction, we shall speed up the pace of our opening to the outside world. As Director Deng Xiaoping has pointed out, if there is a change in the open policy, it will only be toward opening even more. So long as China and the United States uphold the principle of mutual benefit and overcome difficulties in the development of cooperation, agricultural trade and development in the two countries should progress satisfactorily. Especially if the United States speedily dispenses with discriminatory legislation and policies toward China in order to convert unfavorable factors into favorable factors, trade in agricultural products and cooperation in agricultural economy and technology between the two countries will inevitably develop impressively, resulting in closer economic relationships between the two countries.

One thing that emerges clearly from the essays by Robert Dernberger and by Zhang Zhongli and Xie Zifen is the tremendous volatility in Sino-American agricultural trade in recent years and the uncertainty about the future volume of such trade. The uncertainty about agricultural trade is related to the general uncertainty about whether there will be further reform of the price system that will allow for an expansion of exports and imports. In the absence of price reform, it seems unlikely that China's trade, including agricultural trade, will continue to expand rapidly. Furthermore, with the current price system it is not at all clear where China's comparative advantage lies. Current prices do not reflect economic costs; hence, it is not possible to use these prices to determine the pattern of trade that is beneficial to China. This makes it even more difficult to speculate about China's agricultural trade; even if domestic price reform is carried out, it is not obvious what would happen with China's agricultural trade.

Despite these difficulties, I am nevertheless willing to speculate about the future of Sino-American agricultural trade. My point of departure is Robert Dernberger's data and statement that China's comparative advantage has traditionally been in agricultural products. This apparently remains true today; in 1986 China was a large net exporter of agricultural products, with a trade surplus of $4.6 billion. Frankly, it seems unlikely that this surplus will persist. I doubt that China's long-term comparative advantage lies in agricultural products. I base this statement partly on the remarkable figures in the paper by Zhang Zhongli and Xie Zifen, indicating that the amount of cultivated land per capita in China is about one-quarter the world average and one-tenth the U.S. level. It is clear that, in relative terms, China is a land-poor country. Also, we can appeal to the experiences of other countries that have industrialized.

In a market-based economy, what happens to net agricultural trade depends on growth in the supply of and demand for agricultural products. No doubt, supply of agricultural products will grow in China, as a result of mechanization and technological development. However, it seems likely that the demand for agricultural products will grow even more rapidly. As industrialization and reform proceed in China, demand for food—especially meat—will increase rapidly. There will also be increased demand for agricultural products that are processed into manufactured goods, such as timber and hides. Even with a conservative estimate of the income elasticity of demand for food and an optimistic estimate of growth in
China's food supply, one reaches the conclusion that there will be a growing excess demand for food. Imports, especially of feed grains, could be an economical way to meet this excess demand. (Rationing or sharp increases or both in the relative price of food are other ways in which an excess of demand over supply can be managed.)

Hence one plausible scenario is that China will develop a growing deficit in agricultural trade, and that much of its demand will be met by the United States. I raise this possibility because if China's trade does develop in this direction—with an emerging deficit in agricultural trade—it should not necessarily be viewed as a bad thing. The paper by Zhang and Xie states that China's interest is in "basically balanced trade." This is a wise concern, if what is meant is the overall trade balance, with all countries in all product lines. It is irrational, however, to be concerned with China's bilateral balance with any one country. Similarly, there is no good economic reason to be concerned with the trade balance in any particular sector, such as agriculture.

In the long run, it may be efficient for China to export services, like tourism, and manufactured goods, and import agricultural products. There will of course continue to be some agricultural products that China exports, such as tea; but it may be economical for China to be a net importer of agricultural products. As long as food imports are paid for by the exports from other sectors, there is no economic problem with such a pattern of trade.

I think that there is a real danger, however, that China will develop a growing need for food imports, but will not have the export capability to pay for those imports easily. On the outskirts of Shanghai, for instance, one sees much land being taken out of cultivation and transferred to industrial uses (or housing). This alienation of land out of agriculture may be a good economic choice—if the developing industry can export a quantity of manufactured goods more than sufficient to replace, through imports, the lost agricultural output. But at the moment these manufacturers often face stronger incentives to sell on the domestic market, rather than export, because the currency is overvalued. The liberalizing of domestic markets for many consumer goods has created strong incentives to manufacture for the domestic market. At the same time, some key food prices, such as the price of pork in many cities, remain controlled at a low level, discouraging the production of these items; and the overvalued currency discourages manufacture for export. It is this mix of policies that encourages the alienation of land out of agriculture into manufacturing production for the domestic market, inviting a growing shortage of food combined with weak export capacity. This is a good example of how liberalizing some markets (i.e., consumer durables) while controlling
others (pork and foreign exchange) can lead to serious economic problems if some economic agents have the freedom to shift production from the controlled items to those whose prices have been deregulated.

Let me turn finally to Professor Zhang's suggestion that there be more foreign investment and technology transfer into Chinese agriculture. This is an excellent idea. But at the moment it is greatly hampered by the *de facto* requirement that all foreign investment be export-oriented. The areas in which China can benefit from foreign investment and technology, however, are not necessarily the areas in which China should export. Agricultural projects are an excellent example of this. There are many joint projects involving the import of agricultural technology in which the greatest benefit would result from selling the output in China. There would be no difficulty organizing such ventures if there were an efficient mechanism for transferring foreign exchange from the sectors where it is earned to the sectors where it can be used most profitably. At the moment there is no such mechanism—hence the concern for balancing foreign exchange within each sector and even within each enterprise. This greatly hampers China's trade from developing on the basis of comparative advantage, and this problem must be dealt with before there will be any further large increase in China's trade, agricultural or nonagricultural.
Part Eight
The PRC and International
Economic Organizations
Following the People's Republic of China (PRC) takeover of China's seat in the United Nations General Assembly in 1971, the PRC entered numerous other intergovernmental organizations such as the UN Conference on Trade and Development (UNCTAD), the World Health Organization (WHO), and the International Monetary Fund (IMF). In June 1986 it indicated its desire to become a contracting party to the General Agreement on Tariffs and Trade (GATT). With that, it will complete its membership in the existing panoply of international organizations with the exception of a few international commodity agreements.

Why has the PRC joined so many organizations? Membership in such organizations has a number of costs. First, the country typically must make financial contributions to the organization's budget. Second, it must send diplomats and technical experts to meetings, at considerable expense, especially in time; and it must devote even more man-hours to preparations for such meetings at home. Third, it often must maintain permanent missions with such organizations. Fourth, and not least, membership often entails substantial commitments and obligations that restrain the country's freedom of action.

To overcome these disadvantages, a country must perceive offsetting advantages to joining international organizations. The first advantage is status. A government may feel that it needs to be a member of a club in principle, as an attribution of national sovereignty, and have legations in New York and Geneva to demonstrate interest in the organization's proceedings, even if there are no other benefits. If status is the principal reason for joining, the nation is likely to make little effort to address the substantive issues, unless the drive for status is interpreted as requiring not only a presence, but also a visibility that can be achieved only by active participation.
Second, the country may acquire intelligence or information. Participating in formal and informal deliberations, including "corridor conversations," of international organizations is one way of gathering advance information on what actions various nations or secretariats are proposing in the areas of the organizations' competence and also of forming judgments about the strength of support, the motivations for support or opposition to the proposed actions, the likelihood that the actions will take place, and when. The country is also able to gather useful information about political, economic, or technological developments incidental to the action proposals or information reports under formal consideration.

Of course, direct participation is not the only or even the most efficient way to gather intelligence on a variety of issues. A vast public and specialized press covers most international meetings, and studying public accounts of meetings may be a more efficient way to gather some kinds of information. Such information gathering at a distance, however, excludes the possibility of pursuing issues more thoroughly or more systematically through direct questioning. Moreover, matters of great importance to one or a few countries may go unreported if they are not of general interest. Finally, the information typically comes with a lag: it is received and digested too late to take optimal preventive or remedial action, if such action is called for.

Therefore, a third reason for joining international organizations is to participate in deliberations with a view to influencing the outcome of any decisions in the direction of the country's interest. Inevitably, not all issues will be highly significant for all countries. But where an issue is significant, the country will want to influence any decisions on that issue—including the prevention of action through objection if a decision is likely to be disadvantageous. This influence can sometimes be exerted from a distance without membership, but usually involves acquiring a certain onus for objection and nonparticipation. Shaping or blocking decisions can be done more quietly and with less opprobrium as a member of the club, as an active participant on many issues, with votes and favors to be traded now and in the future or past favors recalled, than from outside the club.

A fourth reason to join international organizations, not universally applicable, is that membership may confer tangible benefits, such as greater security (e.g., from a defensive alliance) or economic gains. For example, a country must be a member of the World Bank to be eligible for World Bank loans, and especially for the highly concessional International Development Association (IDA) loans; and it must be a member of the IMF to be a member of the World Bank. A country must be a contracting party of the GATT to be assured of most-favored-nation (MFN) treatment under
GATT's Article 1, but unlike the case of World Bank loans, GATT membership is not a necessary condition for MFN treatment; many countries receive MFN status who are not contracting parties to the GATT.

Finally, it must be admitted that countries sometimes join international organizations because an influential group of officials wants to join, even if an objective cost-benefit calculation shows that membership is of doubtful value to the country as a whole. Officials may want to join because it enhances their status or influence at home or abroad, or simply because they enjoy travel (or think they would) or the prospect of living abroad.

Some desirable activities cannot be undertaken without a framework for international cooperation. Examples would be the elimination of smallpox or the careful tracking of nuclear materials with a view to inhibiting the proliferation of nuclear weapons. Such activities have an "all or nothing" character. Socially expensive inoculation against smallpox cannot be safely eliminated by any country unless the threat has been eliminated. Yet elimination of the threat cannot be achieved by any single nation acting alone. An extensive, collaborative international effort was necessary in the case of smallpox, which required at a minimum the cooperation of all those countries where smallpox was still present. WHO took the lead in the 1960s and announced the total elimination of the disease in 1979, to the enormous benefit of public health in all countries.

Similarly, with several countries in competition to provide construction of and technology for running nuclear power plants, and with plutonium, a bomb material, being a natural by-product of the fuel consumption in most of those plants, actions by any single nuclear supplier to control the fuel cycle could not succeed in preventing the escape of bomb-grade fuel without cooperation from others. An international framework applying to all of the nuclear powers was necessary to achieve control of the fuel cycle through safeguards of various kinds, and an international organization, the International Atomic Energy Agency (IAEA), was created to perform the technical functions.

In such cases, someone must take the initiative to organize the new activity, which by assumption will benefit many countries. Since the 1940s, the United States has often played this role. International public goods of the future may include prohibition of the use of ozone-destroying chemicals or limitations on the use of fossil fuels to slow down the emergence of the so-called greenhouse effect around the earth. The PRC has not taken such initiatives to date, although it may do so in the future. Rather, it faced a world in which a large number of organizations already existed, and it had to decide which ones to join.

This chapter will focus on the principal economic organizations that
the PRC joined—in particular on the International Monetary Fund, the World Bank and its associated institutions, the Asian Development Bank (ADB), and the General Agreement on Tariffs and Trade. It will be useful at the outset to set China's participation in these organizations into the broader context of China's increasing participation in all international organizations.

In 1949 the government of the Republic of China was expelled from the mainland, but continued to function from the island of Taiwan and purported to represent all of China. As a result, it continued to represent China in those international organizations of which China had been a member before 1949. The international isolation of the new People's Republic of China was sharpened by its entry into the Korean War in 1951 against U.S.-led forces formally under the auspices of the United Nations. And the isolation was preserved in part by the PRC's strong inward-looking policy. U.S. foreign policy during this period supported the Republic of China and isolated the People's Republic of China. But several other countries recognized the PRC, and many would have welcomed greater contact with it. The limitations on that contact were driven in considerable measure by the PRC's own policy.

The PRC took the view from the beginning that it should represent China in the United Nations, including China's permanent seat on the Security Council. Its efforts to claim the China seat were rebuffed by a majority of the United Nations, reflecting opposition from the United States and other countries. Gradually the U.S.-led majority diminished; and at successive U.N. sessions in the late 1960s, the United States found it increasingly difficult to muster a majority to prevent seating the PRC as the representative of all China (the only status acceptable to the PRC) and the corollary expulsion of the ROC (hereafter called Taiwan). The PRC was finally seated in November 1971. In the meantime, the United States was secretly changing its policy on the PRC. Following border clashes between the Soviet Union and the PRC, the PRC was increasingly willing to see some warming in its relations with the United States. Henry Kissinger made a now famous secret trip to China in July 1971, and President Nixon made a highly publicized visit in February 1972.

The PRC's entry into the United Nations as the representative of all China opened the possibility of membership in many U.N. subsidiary organizations. The PRC insisted on the expulsion of Taiwan, but took its time in taking up active participation in the various organizations. Table 1 lists the intergovernmental organizations in which the PRC began to participate and the month of its first participation. As shown on the table, the PRC did not take the China position at once, but rather began its participation in international organizations gradually, starting mainly with
Table 1

China's Participation in International Organizations

<table>
<thead>
<tr>
<th>Organization</th>
<th>Date of Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.N. General Assembly</td>
<td>11/1971</td>
</tr>
<tr>
<td>UNCTAD</td>
<td>10/1972</td>
</tr>
<tr>
<td>UNESCO</td>
<td>10/1972</td>
</tr>
<tr>
<td>UNDP (development aid)</td>
<td>11/1972</td>
</tr>
<tr>
<td>UPU (post)</td>
<td>11/1972</td>
</tr>
<tr>
<td>ITU (telegraph)</td>
<td>11/1972</td>
</tr>
<tr>
<td>WHO (health)</td>
<td>5/1973</td>
</tr>
<tr>
<td>UNIDO (industrial development)</td>
<td>5/1973</td>
</tr>
<tr>
<td>UNEP (environment)</td>
<td>6/1973</td>
</tr>
<tr>
<td>WMO (meteorological)</td>
<td>7/1973</td>
</tr>
<tr>
<td>FAO (food and agriculture)</td>
<td>11/1973</td>
</tr>
<tr>
<td>IMCO (maritime)</td>
<td>11/1973</td>
</tr>
<tr>
<td>WIPO (intellectual property)</td>
<td>11/1973</td>
</tr>
<tr>
<td>ICAO (aviation)</td>
<td>9/1974</td>
</tr>
<tr>
<td>Intelsat (satellites)</td>
<td>8/1977</td>
</tr>
<tr>
<td>IMF</td>
<td>4/1980</td>
</tr>
<tr>
<td>World Bank/IDA/IPC</td>
<td>5/1980</td>
</tr>
<tr>
<td>CGIAR (agricultural research)</td>
<td>11/1983</td>
</tr>
<tr>
<td>IAEA (atomic energy)</td>
<td>1/1984</td>
</tr>
<tr>
<td>ADB</td>
<td>3/1986</td>
</tr>
<tr>
<td>GATT</td>
<td>?</td>
</tr>
</tbody>
</table>


those most directly associated with the United Nations, such as UNCTAD and the U.N. Environmental Program (UNEP), and including some of the most useful specialized organizations such as the Universal Postal Union (UPU) and the International Telegraphic Union (ITU). In all, it joined five organizations in 1972 and seven in 1973. It took a longer period of time to enter the substantive economic organizations, discussed further below.

I will not speculate on the mixture of motivations that governed the PRC's decisions to join these organizations. That must await the publication of Chinese archives and the memoirs of Chinese officials, neither of which is in Chinese tradition. However, it is clear that a principal motivation was the longstanding policy, pursued with determination and perseverance, to isolate Taiwan in the community of nations and to establish the PRC as the sole representative of all China. By the end of the 1970s, with normalization between the PRC and the United States, that objective was largely accomplished, and the PRC needed more positive motivation to join international organizations. On some occasions, the negative
objective of isolating Taiwan could be combined with more positive inducements. Such was the case with joining the World Bank and its sister institution the IMF, to which we now turn.

**International Financial Institutions**

While the PRC entered many international organizations in the period 1971 to 1974, the international financial institutions were not included. The PRC had criticized these institutions on several grounds. First, Taiwan continued to be represented there, a possibility that was not excluded by seating the PRC in the United Nations, since these institutions operate independently of, although in association with, the United Nations system. The financial institutions were also criticized for making decisions with weighted voting, in contrast to the one country—one vote system of the United Nations, and they were criticized more generally for being both citadels and guardians of capitalism.

But the tone changed in 1979, and the PRC spoke of the possibility of joining the IMF and the World Bank. Beyond displacing Taiwan, the attractions of membership were to gain access to new sources of funding. The PRC had greatly expanded imports in 1978–79, and its foreign exchange reserves had declined. Retrenchment of import liberalization was necessary. Traditionally, the PRC had eschewed borrowing in international capital markets, in keeping with communist ideology against the capitalist system of financial lending and borrowing and the payment of interest. But its Four Modernizations program was going to require extensive capital and could proceed more rapidly if some funds came from abroad. Thus a gradual readjustment of Chinese policy with respect to foreign borrowing took place, and it became respectable. However, market interest rates rose considerably in 1979, and steeply in 1980, thus sharply increasing the costs of foreign borrowing just as China had decided that such borrowing was consistent with Chinese policy. One of the tangible advantages of having access to the IMF and the World Bank would be interest rates that were below market rates. Moreover, in 1978 these organizations decided that a new allocation of Special Drawing Rights (SDRs)—international paper gold—would take place in 1979 through 1981, and this too would represent a source of funds for the PRC.

The United States has a heavy voice both in the IMF and in the World Bank, and thus would have an important say on whether and under what terms the PRC could take over the China seat. Normalization with the United States in practice was a precondition for membership in these institutions. This normalization occurred in January 1979, thus paving the way for entry into the international financial institutions.
A technical problem arose in connection with the PRC taking the China seat, occupied until then by Taiwan. Taiwan held assets in the IMF, but owed money to the World Bank and its subsidiary institutions. In claiming the China seat, the PRC also claimed the assets that China had originally deposited in the IMF, but it did not accept the liabilities for post-1949 loans from the World Bank to Taiwan. This problem was resolved by taking advantage of the large difference between the official price and the market price of gold that had been subscribed to the IMF in the 1940s. Taiwan was permitted to repurchase its original gold subscription at the official price of $42 an ounce, provided it defrayed its obligations to the IMF and continued to make payments on its outstanding World Bank loans according to the original terms. Taiwan sold the gold at a market price in excess of $500 an ounce and used most of the proceeds to repay its obligations to the IMF. It came out with a profit of about $80 million from the transaction.\(^1\)

Another problem involved setting an appropriate IMF quota for China and arranging for representation on the IMF’s board of executive directors. China’s quota had been exceptionally large in the 1940s, but by common agreement Taiwan’s quota had been frozen and had not increased with other quotas over the years. On the PRC’s entry into the IMF, a special upward adjustment was made in the quota, and then the PRC’s quota was increased differentially along with the general quota increase of December 1980, to a total of 1.8 billion SDRs (about US $2.3 billion), or 3 percent of the total IMF quotas, a fraction that also approximates voting rights. The question of representation was resolved simply and generously by increasing the number of seats on the executive board from twenty-one to twenty-two, permitting China to have its own seat, but at the expense of enlarging a board that was already becoming too large to be a true executive committee.

In joining the International Monetary Fund, China had to take on the obligations of membership. By 1980 these were not too onerous. Countries pledge to maintain convertible currencies with no payment restrictions on all current account transactions (goods, services, and other current payments, including profit remittances). But many developing countries operate under a long-term transitional allowance with regard to this important provision and do not in fact have convertible currencies. Thus the PRC could join by undertaking a general commitment to this objective, but without implementing it on any particular timetable.

Second, each country must declare an exchange rate system and

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operate it in such a way as to avoid placing its trading partners at a disadvantage or in other respects disturbing the international financial system—a requirement that was not too difficult for China to meet.

Third, however, the IMF requires substantial amounts of financial information from its member countries. Historically, much of this information had been regarded as state secrets in the PRC. But in the process of modernizing, Chinese authorities evidently decided that they needed to give more publicity to economic information about the Chinese economy internally in any case, and it became a natural next step to provide the information that was available to an international organization, some of it for publication, but some of it on a confidential basis. Moreover, the PRC could count on substantial technical assistance from the IMF in training Chinese officials in statistical techniques and in informing them about standardized methodology for compiling economic data.

A number of developing countries were concerned that a poor country as large as China would represent an excessive claim on the limited resources of both the IMF and the World Bank. With the depletion of China's reserves during 1980, the PRC did draw from the IMF in late 1980 and again in early 1981. Total drawings during its first year of membership came to $1.5 billion, certainly a large amount, but not beyond the capacity of the IMF to handle at that time. A portion of these drawings were in the so-called "first credit tranche" of the IMF and required modest conditionality. China had to agree to eliminate its budget deficit, control the growth of its money supply, and reduce its trade deficit. Thus China early on accepted some conditions on its domestic economic policy in exchange for a loan from the IMF, a standard IMF operating procedure that is sometimes heavily criticized by developing countries. More than any other single act, this acceptance of IMF conditionality perhaps marked the full-fledged entry of China into the interactive world of the international economic system. China made a second drawing from the International Monetary Fund in late 1986, in the amount of SDRs 598 million, or about US$730 million.

Membership in the IMF is a precondition for membership in the World Bank and its affiliate IDA, but it is these latter institutions that lend funds for economic development. A central problem regarding China's membership in the World Bank concerned IDA. This institution gives loans on extremely easy terms—repayable in fifty years with an effective interest rate below 1 percent—but funds for such purposes are in limited supply, relying on triennial contributions from the major donor countries. India had been a major recipient of IDA loans, alone taking 40 percent; the remainder went to other very poor countries. China could be expected to
Table 2
World Bank Loans to China

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Projects</th>
<th>(US$ millions)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>World Bank</td>
<td>IDA</td>
</tr>
<tr>
<td>1980–81</td>
<td>1</td>
<td>100</td>
<td>100</td>
<td>200</td>
</tr>
<tr>
<td>1981–82</td>
<td>1</td>
<td>—</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>1982–83</td>
<td>6</td>
<td>463</td>
<td>150</td>
<td>613</td>
</tr>
<tr>
<td>1983–84</td>
<td>10</td>
<td>616</td>
<td>424</td>
<td>1,040</td>
</tr>
<tr>
<td>1984–85</td>
<td>12</td>
<td>660</td>
<td>442</td>
<td>1,102</td>
</tr>
<tr>
<td>1985–86</td>
<td>11</td>
<td>687</td>
<td>450</td>
<td>1,137</td>
</tr>
<tr>
<td>1986–87</td>
<td>11</td>
<td>867</td>
<td>556</td>
<td>1,423</td>
</tr>
</tbody>
</table>


a International Development Association

China has generally supported the positions taken by the G-24 developing countries on such issues as world debt relief, easing up on conditionality, and giving developing countries more weight in IMF and World Bank decision making. But China has declined to join the G-24 formally and has adapted itself to the
norms and expectations of the international financial institutions, generally pursuing a line designed to maximize the benefits that it could receive from these institutions.²

The Asian Development Bank is a regional bank offering much the same kind of financial support as the World Bank—loans at close to market terms, combined with highly concessional loans from the Asian Development Fund to the lowest income countries in the region. Chinese membership in the ADB posed a new problem. Unlike most of the other institutions that the PRC had entered, the ADB was created after 1949 (in this case in 1966) so that when the Republic of China joined, it de facto represented only Taiwan. The United States and others took the view that the PRC could not simply take the "China seat," as it could in institutions that had been created before 1949. This U.S. position was strongly reinforced by congressional resolutions that urged that Taiwan not be excluded from the ADB. After much haggling, the ADB became the first organization in which the PRC and Taiwan are both members. This solution solved a number of financial problems that would have arisen had Taiwan been forced to withdraw from the institution. The PRC simply joined as a new member, as many other countries had done over the preceding twenty years.

Once the fundamental issues were settled, a dispute arose over how the two entities were to be named. The People's Republic of China entered under its official name. Retention of Taiwan under the label "Republic of China" was not acceptable to the PRC, but some of the older leaders in Taiwan would have preferred to withdraw rather than give up the name. A debate was precipitated in Taiwan, and the influence of a number of Taiwan's foreign friends in addition to the internal desire to remain in the ADB at last induced Taiwan to compromise and accept the label "Taipei, China." Because Taiwan is a net creditor of the ADB and did not need to borrow, the reason for this compromise was political rather than economic. The ADB is the last major international organization to which Taiwan belongs, and many of its younger officials and foreign supporters wish to avoid the total isolation that withdrawal would have implied. The PRC entered the ADB on this basis in March 1986. It received a modest technical assistance loan from the ADB, its first, in early 1987 and two regular loans totaling $133 million, for small enterprises and for power plant conversion, in late 1987.

²Ibid., p. 284.
The General Agreement on Tariffs and Trade

In July 1986 the PRC indicated formally its desire to become a contracting party to the General Agreement on Tariffs and Trade. It had been an observer since 1983 and a signatory to the Multilateral Fiber Arrangement since 1983. Technically, the GATT is not an organization and therefore does not have members; adherents are called “contracting parties,” but we will use the simpler term “member.” China’s interest in adhering to the GATT was not to replace Taiwan. Although China was an original signatory of GATT in 1947, the Republic of China formally withdrew from the GATT in 1950. It applied for and received observer status in 1965, but was dropped in 1971, following PRC acquisition of the China seat in the United Nations. So Taiwan was not an issue.

The GATT differs from the other organizations we have discussed in that it is not an organization; it is an agreement on rights and obligations in the field of international trade. The main right and obligation concerns the conferring of most-favored-nation status on all other contracting parties to the GATT, which now number over ninety countries. MFN status requires that each contracting party treat all other contracting parties no worse, when it comes to the application of import duties or other import restrictions, than it does any other contracting party, with limited and stipulated exceptions, mainly for free-trade areas and customs unions. In other words, GATT trading partners must not discriminate against one another.

The GATT also contains some other rules, for example, limiting the use of export subsidies and import quotas, regarding the behavior of state trading enterprises, and providing compensation for derogations from the rules. In addition, it entails a general commitment to liberalize trade, which has been reflected in five major multilateral rounds of tariff reductions since 1947. GATT members entered a new major round, the Uruguay Round, in September 1986. Finally, the GATT contains procedures for settling trade disputes among members.

All organizations entail some obligations, especially with respect to paying dues to keep the organization running. But only the IMF rivals the GATT in terms of the extent and severity of its obligations, which start with the need to make trade policies, regulations, and procedures “transparent”—that is, publicly known—to would-be trading partners. The obligations of the GATT greatly reduce national flexibility in trade policy, in the interest of reducing the political component of trade and of achieving efficiency in the allocation of world resources. By laying down rules, its purpose is to head off many potential trade disputes before they arise. For pluralistic societies, the GATT permits governments to use
international obligations as a shield against pressures for special privileges by special interests or against backsliding into past policies that run against the basic thrust of the international commitments.

As with all such arrangements, there is a certain elasticity in adherence to the formal obligations. The contracting parties have diverse economic systems and philosophies, and several socialist countries are among them. But it is also true that if the diversity among members becomes too great and the commitment too weak, the obligations become a sham, the commitments lose their force, and the organization or agreement loses its rationale. To be of continuing value, effective agreement on the central obligations must exist, and the economic philosophy and practices of a country must be in approximate harmony with the obligations undertaken.

Two points should be made about the existing contracting parties to the GATT, which numbered 96 in late 1987, considerably fewer than the 151 members of the IMF and fewer still than the membership in the United Nations. First, many former colonies became contracting parties automatically on achieving independence, representing a natural extension of coverage under the membership of the colonial power. Most African countries entered in this way, as did a number of other countries. These countries thus did not accede to the GATT in a normal way, with explicit discussion about the closeness of fit of their economic policies to the obligations of the GATT.

Second, each of the socialist countries in the GATT—Yugoslavia, Poland, Romania, and Hungary—has a special history, with a special effort made to assure at least an approximate fit of trade performance to GATT obligations. Yugoslavia and Hungary have had relatively few problems, since both of these countries have moved extensively to decentralized market-oriented systems; but the fit was strained in the case of Poland and Romania, and their association with the GATT remains somewhat anomalous. Of course, all of these countries are economically small in comparison to China.3

3Two central questions arise when a country is admitted as a contracting party to the GATT: (1) what commitments of reciprocity does it take on and (2) what exceptions to full GATT treatment do existing members insist on. In the first case, Poland and Romania made commitments regarding the future growth of their imports from other GATT members, which by general agreement have not worked out satisfactorily. Hungary, which had moved much further toward market-oriented prices, made a more conventional commitment with respect to tariff reductions and binding.

With respect to the second question, several GATT members (especially in the European Community) insisted on maintaining quantitative restrictions on imports from all three countries for a time. In addition, and more significantly, all members acquired the right, despite GATT Article 19, to introduce discriminatory restrictions against imports from the
The underlying philosophy of the GATT is that international trade free of artificial restrictions results in optimum use of world resources, and that in turn is good for all countries. Government interference with international trade should be minimal, with specific exceptions. But to be valid, this underlying proposition presupposes that national economies roughly correspond to the competitive model. Without saying so explicitly, the GATT is predicated on the competitive model of an economy. Under the competitive model, sales prices reflect costs, and in turn costs to the enterprise reflect the true social cost of its major factors of production, including labor and capital as well as intermediate inputs. Strictly speaking, the competitive model does not presuppose free enterprise, but a competitive system functions best with free enterprise, provided monopoly can be avoided. Under state ownership, decisions must be decentralized to the enterprises; and enterprises in turn must operate on the basis of their costs, which is best achieved if there is vigorous competition among them, or between them and outside suppliers. State subventions should play a minor role, except insofar as they are required to compensate for differences between social cost and price to the enterprise of their inputs.

Real economies, of course, deviate from the competitive model, but the extent of deviation varies greatly. The greater the deviation, the greater the strain created by bringing countries together with common obligations that presuppose an underlying functional convergence of economic systems.

An example may help. Exporting at prices that are well below the average (even if not marginal) costs of production will lead to charges in importing countries of dumping or subsidization. This charge is difficult to prove or disprove with government-imposed pricing, especially because pricing above marginal but below average cost will cover operating costs without allowing an adequate return to government-owned capital. The United States "solved" the problem of government-imposed pricing in the case of Polish golf carts by simulating Polish costs by looking at the costs and prices in a market economy at a comparable stage of development, Spain in this case. This represented a plausible but fundamentally arbitrary procedure, which the Poles could have questioned if the decision had come out adversely to their case. But it illustrates the point that the GATT framework is not well set up for dealing with nonmarket economies.

Thus one problem with a nonmarket economy concerns the possibility of what profit-oriented firms will consider unfair competition: sales at

prices that do not reflect costs. Another quite different problem concerns
the assurance of nondiscriminatory purchasing by state enterprises from
exporters in other countries—in particular, that such purchases should be
made on the basis of commercial rather than political considerations.

In the absence of sufficient convergence of economic systems, con-
tinual disagreement of interpretation over obligations is likely. That raises
the question of whether GATT membership for the PRC is desirable, from
the viewpoint either of the PRC or of other GATT members, until the PRC
has moved its economy much further in the direction of a decentralized,
market-oriented economy, with prices reflecting costs. Whatever its future
intentions, the PRC remains far from a market-oriented economy. Officials
still describe the PRC as a socialist country with a planned economy.4 This
is not merely abstract rhetoric. Following the rush of imports in 1985, the
PRC suggested that "price competition between enterprises that deal with
foreign trade will be stopped and barter trade and import-based export
will be encouraged."5

It might be thought that the existing wide diversity of practices among
developing countries, covered by Part IV of GATT, would provide ample
scope for the entry of the PRC. On this view, its low per capita income
would entitle it to wide latitude. But the recent accession to GATT of
Mexico, which joined only in 1986, suggests this view is incorrect. Mexico
debated internally for years whether to join GATT. Encouragement by the
United States helped prolong the debate, because some opponents as-
sumed that if the United States was for it, Mexicans should be against it.

In the end, Mexico acceded to the GATT by accepting its main
provisions, with few substantive concessions to it as a developing country.
Concretely, it agreed to eliminate official prices and other arbitrary
practices for the purposes of customs valuation and duty assessment. It
also agreed to eliminate prior import licensing to the fullest extent
possible. It agreed to accede to many of the specialized codes under GATT
and to start negotiations on the sensitive subsidies code. Mexican tariffs
will be limited to a maximum of 50 percent after an eight-year transition
period, and tariffs that exceed 50 percent during this period will be only
temporary. On the key question of state-owned enterprises, Mexico
affirmed that under Mexican law and regulations state-owned enterprises
conformed with GATT Article 17, including nondiscrimination and the
application of commercial criteria for trade transactions. In addition,

4Robert E. Herzstein, "China and the GATT: Legal and Policy Issues Raised by China's
Participation in the General Agreement on Tariffs and Trade," Law and Policy in Inter-
national Business 18(22) (1986):396.

5Ibid., p. 395n.
purchases by these enterprises would conform to GATT-approved procedures, including those with respect to public notification. Mexico was able to reserve its rights to restrict exports of raw materials, especially petroleum.

The underlying assumption in the protocol of accession is that Mexico is a market-oriented economy, and the main issues involved reducing government interference in market transactions. China today is far from fitting this model.

If the difficulties are great and the obligations are extensive, it raises the question of why the PRC applied for entry to GATT in 1986. As noted, Taiwan was not at issue in this case. The general motives mentioned at the outset—status, intelligence, participation in decision making—can be satisfied in part, although only in part, by observer status and by participation in the Uruguay Round, which had already been agreed separately.

What about more tangible benefits? China already enjoys MFN treatment from the key countries, and others could legally reserve that obligation as a condition for China's accession to the GATT in any case. (This issue is more complicated if the PRC resumes the China seat rather than acceding afresh, but little substantive difference is likely between the two possible treatments.) China would become eligible for GSP tariff treatment by the United States, and that could provide some tangible benefit. But under the U.S. form of GSP, the benefits would be limited at best to the remission of low duties on many manufactured goods. Sensitive items such as apparel and textiles are excluded from coverage, and all other products are subject to "competitive need" criteria that, if met, result in the withdrawal of GSP treatment. In any case GSP would not be assured by GATT membership. Under the U.S. Trade Act of 1974, for communist countries GATT membership is a necessary but not a sufficient condition for GSP. Some opposition to the extension of GSP to China has already been mounted in the United States, although in the end some version is likely to be extended once China accedes to the GATT.

Perhaps the PRC feels the need of an international framework for settling trade disputes. It is difficult for an outsider to learn what difficulties China may be having in settling bilateral trade disputes. Those disputes with the United States have been mainly over textile and apparel exports from China and over hi-tech exports from the United States to China, neither of which is effectively covered by the GATT. The GATT has a general exemption for national security, and textiles and apparel are covered by the Multi-Fiber Agreement of which China has been an adherent since 1983, without being a member of GATT.

Finally, adhering to the GATT, with its market-oriented philosophy, might strengthen the hands of those within the PRC who want to press
their country toward a more market-oriented system. It would entail undertaking an international obligation for a direction of economic reform that some wish to pursue anyway. This motivation suggests that a status involving less than full accession to the GATT may be appropriate early on, before a market-oriented economy is achieved, but entailing a clear commitment to move in that direction. Full status would then be contingent on achieving that result. This procedure would make clear that the PRC is welcome in the leading international trade forum, but would provide some continuing pressure to meet the conditions that had been pledged—and that really are necessary to function effectively in that forum.

The relative weights that the PRC attaches to the possible reasons for its application to the GATT are unclear; hence it is difficult to suggest the most appropriate solution to what clearly involves not only difficult technical questions, but questions of basic economic philosophy.

Conclusion

In conclusion, the PRC has emerged rapidly from its isolation from the international community since its entry into the United Nations in 1971. It has joined a large number of specialized intergovernmental organizations. China's role in most of these organizations has been constructive and low-key. It has sided with developing countries on broad issues of economic management, but has adopted a pragmatic rather than a strident or ideological stance, and has pursued national interests on technical issues. It has also trained a new generation of people to deal with the specialized and sometimes arcane world of international organizations.

The major omission from this membership is the General Agreement on Tariffs and Trade, which entails substantial obligations and at present involves a serious mismatch between the presumed mode of economic organization and that actually existing today in China. It remains to be seen whether the PRC can adapt its economy to the point at which GATT membership represents a comfortable fit both for China and for the GATT itself.
The International Monetary Fund (IMF), the World Bank, and the General Agreement on Tariffs and Trade (GATT) are the keystone international economic organizations in the world. These three organizations have been playing an important role in coordinating and stabilizing the international trade and monetary systems and in providing loans to promote the development of the international economy since their establishment.

The IMF and the World Bank (formally named the International Bank of Reconstruction and Development—IBRD) were founded in December 1945. The IMF is mainly in charge of international monetary affairs. It promotes the stabilization of currencies and the expansion of trade by providing short-term credits to deal with the balance-of-payment difficulties of the member countries. The World Bank is responsible for economic reconstruction and development. It provides capital assistance to countries to promote economic growth and social welfare. These two organizations cooperate with each other. The International Finance Corporation (IFC) and the International Development Association (IDA) were founded in July 1956 and September 1960, respectively. The IFC provides credits and investment for private industrial and mining companies in the developing countries, while the IDA handles requests for soft loans to the developing countries to be repaid over a longer time interval. These two organizations are affiliates of the World Bank. The World Bank Group includes the IBRD, the IFC, and the IDA. The IMF and the World Bank are specialized agencies of the United Nations (UN).

The GATT was founded in October 1947 and came into effect on January 1, 1948. It is an international multilateral agreement among governments. It aims at reducing tariffs and other trade barriers and eliminating discrimination in international trade. The GATT is not a specialized agency of the UN, but it keeps in touch with the UN.

China is one of the original members of the IMF and the World Bank. Its
membership was held by the Taiwan authorities until 1980. China is also one of the original signatories of the GATT. The Taiwan authorities quit the GATT illegally in March 1950. In 1956 they applied for observer status in the GATT. Soon after the legal status of the People's Republic of China was restored in the UN in 1971, the GATT deprived Taiwan authorities of their observer status. In 1984 the PRC joined the Multilateral Fiber Arrangement (MFA). In July 1987, the PRC applied to the GATT for a resumption of its membership.

This chapter will discuss two issues: the reason that China wanted to resume its legal membership in the IMF and the World Bank, and the background of China's application for resuming its membership in the GATT.

**Early History of Relations with IMF and World Bank**

In resuming its legal membership in both the IMF and the World Bank, the Chinese government went through a long, tortuous process that could not be separated from the change and development of the political and economic situations at home and abroad.

As early as 1950, the Chinese government informed both the IMF and the World Bank that the government of the PRC was the sole legal government of China and that the representation of the Taiwan authorities in these two organizations was illegal. At that time this issue was put aside because of the opposition of the U.S. government. In 1971, an overwhelming majority of the 26th General Meeting of the UN passed a resolution calling for the resumption of the legal representation of the PRC in the UN and removing the Taiwan authorities, and the eleven specialized organizations of the UN followed suit. Only the IMF and the World Bank Group did not implement the UN resolution. In September 1973, the Chinese foreign minister called on the IMF and the World Bank to recognize the PRC and to remove the Taiwan representatives. The Chinese government affirmed the principles of "One China" and the government of the PRC as the sole legal government of China. Only the PRC could represent China both in the IMF and the World Bank. Furthermore, China affirmed that it was one of the original members of these two organizations. It pressed for resumption of its legal membership rather than acceptance as a new member. These two international financial organizations could hardly reflect their universality if China, representing one-fourth of the world's population, was excluded. Some friendly countries and some judicious Westerners repeatedly expressed their support for this standpoint. However, there were still obstacles. It should be noted that the United States had much say in these two
organizations. The establishment of diplomatic relations between China and the United States in 1979 offered the possibility of removing the obstacles.

In 1979 the Chinese government adopted a policy of invigorating the economy at home and opening to the outside world. This was a great change in the strategy of China's economic development. Since then, the opening to the outside world has been taken as a long-term basic policy. Today's world is an open world. No country can develop by closing up while international economic relations become closer and closer and the production and consumption of almost every country become international. Opening to the outside world is to extend our vision to the whole world, to make use of domestic and world resources, to explore the markets both at home and abroad, to learn to manage the internal economy and develop economic relations with other countries, to bring every positive factor into play for us both at home and abroad, and to learn from others' strong points to offset our weaknesses under the guidance of the principles of maintaining independence and keeping the initiative in our own hands—of equality and mutual benefits—so that we can speed up the socialist modernization.

Because of the political and economic changes both at home and abroad, the Chinese government hopes to resume its membership in the keystone international economic organizations. These organizations are worldwide, joined by the most important countries in the world. So the resumption of China's membership will facilitate cooperation in finance and trade between China and other countries, and it will promote the unity between China and the Third World countries that will uphold the interests of the Third World. At the forums of the keystone international economic organizations, China can state its foreign policies. Its membership in the organizations will certainly help strengthen North-South dialog and enhance and expand unity and cooperation among all nations. Economically, China's membership will help attract more foreign capital into China, improve the system of multilateral trade, promote the development of international trade, help introduce advanced technology into China, and improve our technology and management so that China can speed up its modernization program.

**IMF and World Bank: 1980 to the Present**

Since 1980 China has had more contacts with the IMF and the World Bank. This is very positive for China's economic construction and economic reforms in three ways.
Loans

The loans to China from these two organizations helped it to maintain its international balance of payments. The introduction of advanced technology and management brought forth more economic and social benefits.

China only recently began to use the loans from the World Bank. The World Bank lays down a variety of strict requirements when providing loans. The World Bank lends mainly to the developing countries who are members. The repayment covers fifteen to twenty years, including five years' extension. (In the first five years, only the interest, not the principal, must be paid.) Loans on these terms are considered "hard loans." The interest rate is adjusted every six months according to the interest rate in the international financial market. The International Development Association provides loans for the low-income developing countries whose GNP per capita is less than US$791. These are "soft loans"; the repayment period is thirty-five years with ten years' extension.

Up to June 1987 (the end of the World Bank's 1987 fiscal year), the Chinese government had signed sixty-nine loan contracts with the World Bank, covering fifty-two projects and totaling US$5.5 billion; 60 percent of this total is in "hard loans" and the other 40 percent is in "soft loans" (see Table 1). By the end of 1987, China had withdrawn more than $2 billion of the $5.5 billion total available.

Of the fifty-two projects agreed to by the end of 1987, eleven were energy projects, accounting for 23.3 percent of the total loans, seven were transportation projects (20.1 percent), eight were industrial projects (19.3 percent), and fourteen were agricultural projects (16.3 percent). The sectoral distribution of the World Bank loan is shown in Table 2.

Our senior leaders hope that the World Bank can expand its loans to China during the Seventh Five-Year Plan period, raising the amount of its annual loans from US$1 billion during the late Sixth Five-Year Plan period to US$2 billion (even $3 billion). The World Bank has expressed its consent in principle.

Using the World Bank loans effectively involves certain problems. For instance, providing efficient domestic investment, arranging for satisfactory management and repayment of the loans, encouraging domestic enterprises to take part in the international competitive bidding, and so on, must be arranged.

According to the regulations of the IMF, member countries may utilize the Fund's resources to ease balance-of-payment difficulties. Repayments to the IMF are normally to be made within three to five years. The maximum amount of drawings should not exceed 25 percent of the quota of each member country. In 1970, the IMF created the Special Drawing
The PRC and International Economic Organizations

### Table 1
World Bank Loans to China
(US$millions)

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Hard Loans</th>
<th>Soft Loans</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981</td>
<td>100.0</td>
<td>100.0</td>
<td>200.0</td>
</tr>
<tr>
<td>1982</td>
<td>60.0</td>
<td>60.0</td>
<td></td>
</tr>
<tr>
<td>1983</td>
<td>408.1</td>
<td>150.4</td>
<td>558.5</td>
</tr>
<tr>
<td>1984</td>
<td>616.0</td>
<td>423.5</td>
<td>1,039.5</td>
</tr>
<tr>
<td>1985</td>
<td>659.6</td>
<td>442.3</td>
<td>1,101.9</td>
</tr>
<tr>
<td>1986</td>
<td>687.0</td>
<td>450.0</td>
<td>1,137.0</td>
</tr>
<tr>
<td>1987</td>
<td>867.4</td>
<td>556.2</td>
<td>1,423.6</td>
</tr>
<tr>
<td>Total</td>
<td>3,338.1</td>
<td>2,182.4</td>
<td>5,520.5</td>
</tr>
</tbody>
</table>

Source: World Bank's representative office in China (quoted from Intertrade, November 1987).

### Table 2
Sectoral Distribution of World Bank Loans to China
(to June 30, 1987, US$millions)

<table>
<thead>
<tr>
<th>Sector</th>
<th>Hard Loans</th>
<th>Soft Loans</th>
<th>Total</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy (11)</td>
<td>1,287.9</td>
<td>1,287.9</td>
<td></td>
<td>23.3</td>
</tr>
<tr>
<td>Electricity (6)</td>
<td>(869.4)</td>
<td>(869.4)</td>
<td></td>
<td>(15.7)</td>
</tr>
<tr>
<td>Petroleum (5)</td>
<td>(418.5)</td>
<td>(418.5)</td>
<td></td>
<td>(7.6)</td>
</tr>
<tr>
<td>Transportation (7)</td>
<td>881.6</td>
<td>225.0</td>
<td>1,106.6</td>
<td>20.1</td>
</tr>
<tr>
<td>Highway (2)</td>
<td>(97.6)</td>
<td>(155.0)</td>
<td>(252.6)</td>
<td>(4.6)</td>
</tr>
<tr>
<td>Port (2)</td>
<td>(169.0)</td>
<td>(169.0)</td>
<td>(338.0)</td>
<td>(6.1)</td>
</tr>
<tr>
<td>Railroad (3)</td>
<td>(615.0)</td>
<td>(70.0)</td>
<td>(685.0)</td>
<td>(12.4)</td>
</tr>
<tr>
<td>Industry (8)</td>
<td>891.0</td>
<td>175.0</td>
<td>1,066.0</td>
<td>19.3</td>
</tr>
<tr>
<td>Chemical fertilizer,</td>
<td>(420.4)</td>
<td>(420.4)</td>
<td></td>
<td>(7.6)</td>
</tr>
<tr>
<td>coal, machine tools (4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchase by investment bank</td>
<td>(470.6)</td>
<td>(175.0)</td>
<td>(645.6)</td>
<td>(11.7)</td>
</tr>
<tr>
<td>Agriculture (14)</td>
<td>97.6</td>
<td>801.2</td>
<td>898.8</td>
<td>16.3</td>
</tr>
<tr>
<td>Education (4)</td>
<td>100.0</td>
<td>450.0</td>
<td>550.0</td>
<td>10.0</td>
</tr>
<tr>
<td>Urban construction (2)</td>
<td>45.0</td>
<td>180.0</td>
<td>225.0</td>
<td>4.0</td>
</tr>
<tr>
<td>Developing Gan Su Province</td>
<td>20.0</td>
<td>150.5</td>
<td>170.5</td>
<td>3.1</td>
</tr>
<tr>
<td>Public health</td>
<td>15.0</td>
<td>150.0</td>
<td>165.0</td>
<td>3.0</td>
</tr>
<tr>
<td>Technological aid</td>
<td>50.7</td>
<td>50.7</td>
<td></td>
<td>0.9</td>
</tr>
<tr>
<td>Total</td>
<td>3,338.1</td>
<td>2,182.4</td>
<td>5,520.5</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Notes: aThe figures in parenthesis are project numbers.
bIncludes three agricultural education and research projects totaling $169.2 million.

Source: World Bank's representative office in China (quoted from Intertrade, November 1987).
Rights (SDRs) as a complement to the original drawing rights of its member countries. The SDRs are distributed among the member countries according to the percentage of the fund they contribute. Whenever a member country has balance-of-payment difficulties, it can exchange its distributed percentage of SDRs for the convertible currencies of other countries in order to offset the deficit of its international balance of payments. At present China has 2.39 billion SDRs in the IMF. China enjoys 2.6 percent of the total voting rights.

In 1980, China ran a deficit in its international balance of payments. To solve this problem, China applied to the IMF to the First Credit Tranche. In March 1981, the IMF passed the resolution, offering China 450 million SDRs. In the same year, China received 309 million SDRs from the Trust Fund. The two items added up to 759 million SDRs, approximately US$930 million according to the exchange rate at that time. The annual interest rate of the First Credit Tranche is 6.25 percent, lower than the international interest rate at that time. The annual interest rate of the Trust Fund is only 0.56 percent, with five years for repayment. In 1986, for the second time, China borrowed another First Credit Tranche of 598 million SDRs. All these loans helped to provide part of the funds China needed to meet its balance-of-payment requirements.

Over 70 percent of the World Bank loans are used to purchase advanced key equipment, scientific instruments, and computers. For instance, the Karamay Petroleum Project of Xin Jiang Petroleum Supervisory Office used a US$962 million World Bank loan to purchase computers for earthquake data processing and oil-field management, as well as equipment for exploration and experimental instruments for scientific research. The earthquake prediction techniques in some areas have reached the advanced world level of the late 1970s and early 1980s.

As another example, in the first University Development Project in China, US$200 million was used to buy over 10,600 sets of instruments and other equipment. As a result, the condition of university laboratories improved, and some colleges and universities established their own computer centers and centers for analysis and testing. These not only serve teaching and scientific research needs, but are open to the public as well. Students majoring in computer science at the colleges and universities in this program can use computers for 100 to 200 hours a year, and students of other majors for twenty to forty hours, eight to ten times as much as in 1980. The popularization of computer education and application is a significant mark of educational modernization.

The World Bank loans have also enhanced China's agricultural modernization; however, China's agricultural production and management are still at low levels. By the end of 1987, China had borrowed US$620 million
World Bank preferential loans for ten agricultural development projects. The main objectives of these ten projects are (1) developing efficient exploitation and utilization of land resources in China; (2) adopting modern agricultural production techniques; and (3) improving scientific research and teaching in the institutions of agricultural research and education.

For example, in the project area of Mengcheng County, Anhui Province, the soil used to be very poor with frequent drought and floods. Grain output was low and unreliable, and people lived in poverty. An irrigation and drainage system was established with 303 electrical irrigation stations. In two years, the area in rice was enlarged from 200 to 2500 hectares; the small high-output corn field was expanded to 2250 hectares; the total output of grain increased from 33.9 tons to 842 tons and the per capita income increased from 104 to 501 yuan. Recently, the World Bank has agreed that it will provide Gansu Province with a loan of US$170 million, of which $150 million is a “soft loan.” This loan is to help Dingxi County and the poor areas near Lanzhou City to develop agriculture and eliminate poverty.

World Bank loans have enhanced the construction of China’s infrastructure. Of the World Bank loans, 20.1 percent were used for developing transportation. For example, the projects of Tianjin, Shanghai, and Huangpu ports used $60 million of these loans, mainly to buy loading and unloading equipment, electrical equipment, and computers for seven container berths and two coal berths. In 1986, these three ports could handle up to 420,000 containers a year, over two-thirds of the entire country’s handling capacity for containers. Since the coal wharf of Huangpu port was completed, its annual handling capacity has come up to 4 million tons, thus greatly relieving the energy shortage in Guangzhou, Guangdong Province, as well as the entire South China area. As transportation is the bottleneck of national economy, improving the transportation system is of great significance to China’s modernization program.

By employing World Bank loans, China has introduced scientific management. Through international competitive bidding, structural reform of China’s economy on the departmental level has been enhanced. The Lubuge Power Station is a good example. It is a ladder-form power station situated in the lower reaches of the Huangni River where Yunnan Province and Guizhou Province meet. The US$140 million World Bank loan for this project was mainly used to purchase construction equipment and pay consulting and training expenses. International competitive bidding is a requirement of using World Bank loans and has helped reform the structure of China’s hydroelectric station construction. By adopting international bidding instead of having construction arranged by higher
authorities, the competitive mechanism was introduced. The contractor with advanced technology, sound credit, and the lowest offer was chosen, and the project was managed according to the international contract.

At the beginning of the Lubuge Power Station project, thirty-two contractors, not only foreign but also Chinese, took part in the preliminary qualification examination. Eight contractors entered the final stage. After keen competition and heated negotiations, a Japanese corporation was selected. This corporation employed new technology and equipment and a series of effective management methods. It also invited a special advisory group of people from the World Bank, Norway, and Australia to offer constructive advice on the design and construction of the project. Because of all these efforts, the project proceeded smoothly and rapidly. A new world record in large-scale tunnel digging was set during the construction—digging 373.5 meters in one month—which was twice as efficient as a Chinese construction firm.

**Advanced Techniques**

The World Bank and the IMF have made several surveys and studies of China's economic development and have introduced advanced management techniques.

In the past seven years, the World Bank has conducted two large-scale investigations of China's economy and completed several studies on special subjects. The first survey was conducted from October to December 1980. Its main purpose was to study the economic achievement and major problems of the Chinese economy since the founding of the PRC. The report, *China: Socialist Economic Development*, affirms the achievements of China's socialist construction and acknowledges that China is still a low-income developing country. In 1979, the per capita GNP of China was only US$256, so it was entitled to the IDA's "soft loans." The report helped set priorities in China's economic development. It also made constructive suggestions and provided grounds for the World Bank's long-term loans to China.

The second investigation was conducted from February to May 1984 and produced the report *China: Long-Term Economic Development Issues and Options*. The principal objective of the report is to forecast the Chinese economy to the year 2000. It digs deeply into China's long-term economic development programs. The Chinese leadership and the departments concerned praised the report.

China has cooperated with the IMF in many respects. For example, the IMF introduced monetary control methods to Chinese banks. It also provided guidance, based on debtor nations' experiences, in managing foreign debt, stressing that the scale of foreign debt must be based on the
medium-term forecast of a country's international balance of payments. The IMF is advising China in the area of macroeconomic statistics so that these will be consistent with international standards.

Because the investigations by the World Bank and the IMF and their introduction of other countries' experience were conducted with the cooperation of Chinese officials and experts in the relevant departments, the Chinese have gained experience in international practice, widened their knowledge of international economic development, and learned how their foreign counterparts do research. All this will improve economic research and the government's macroeconomic management in China.

**Economic Management Personnel**

The Economic Development Institute (EDI) of the World Bank was founded in 1955 to help developing member countries improve their economic management and investment efficiency. The trainees of the EDI are mainly government officials in charge of economic development planning, policymaking, investment analysis and project management. A wide range of training is provided by the EDI, from macroeconomic management to studies in such topics as planning, public finance, banking, transportation, energy, and education.

Cooperative training programs between the World Bank and China have been carried out successfully and effectively since 1981. By the end of June 1987, fifty-nine different workshops and seminars had been held, and 2,454 officials and teachers from ministries, commissions, provinces, cities, and autonomous regions had been trained. Four senior workshops had been attended by more than one hundred officials at the department or bureau level. Currently, twelve cooperative training institutions exist in China, with the Shanghai Finance and Economy University and the Central Finance and Economy College serving as the two key centers. Through the training programs, advanced international economic management has been introduced and applied to China's economic management.

Let's take project management—a primary task in the World Bank's loaning—as an example. The World Bank employs a set of strict methods and procedures, called the "Project Cycle," in its loaning operation. The Project Cycle is composed of six stages: (1) identification of the project, (2) preparation for the project, (3) appraisal of the project, (4) negotiation, (5) implementation of the project, and (6) evaluation. By adapting the techniques and experience of the World Bank project management to China's reality, China has developed a new set of Chinese project evaluation methods. Chinese project management officials have been trained to improve their management skills. Now the China Investment Bank, the Construction Bank, the Agricultural Bank, and other financial institutions
are applying this set of project management methods to their operations.

All this activity indicates that the seven-year-old cooperation between China and the World Bank and the IMF has been successful and has contributed to China's modernization.

China's Application for Resumption of Membership in the GATT

In July 1986, China applied to the GATT for resumption of its original membership. China hopes that, on the basis of equal rights and obligations, it can enjoy most-favored-nation treatment and among GATT members after its entry. This will enable Chinese enterprises to participate in international competition in a fair condition, to accelerate the reforms of economic and trade structures, and to expand trade with other member countries.

China has to make a number of entrance choices for its rights and obligations as a member, in accordance with the policy of the GATT. As for the rights, China should primarily obtain status as a developing country. The GATT sets the most-favored-nation treatment as one of its basic principles, but it also stipulates some other conditions, for example, giving a nonreciprocal favored treatment to developing countries. Such arrangements are designed to help developing countries with their balance-of-payment problems and to protect their domestic industries.

The entrance choice in the obligation side is more complicated. Because the GATT was established basically for market economies, no special regulations have been established for the entrance of countries with a centrally planned economy. The entrance obligations of these countries, however, can be divided into two categories: (1) increasing imports, as did Poland and Romania, and (2) reducing tariffs, as did Hungary and Yugoslavia. Considering the reality in China and the evolution of the GATT itself, it may be more appropriate for China to undertake the obligation of tariff reduction. China is willing to hold substantial negotiations focusing on tariff reduction with the GATT member countries. At present China is actively making preparations and will send invitations for tariff negotiations at the proper time.

As China's economic reforms are being carried out, a new system combining national planning and market regulation is being established. The issues, such as the conditions for China's entry into the GATT and whether China's economic and trade structures can be coordinated with the GATT system, have received more and more attention from all sides. The GATT is currently considering China's application for resumption of original signatory status.
Wang Linsheng comments:

Professor Hong and Professor Cooper have dealt with the same topic from different perspectives. Professor Hong stresses that China can benefit greatly from her participation in international economic organizations. The Chinese people greatly wish that China, after being isolated from the outside world for a long period, might re-enter the international community. They firmly believe that only by strengthening contacts with the international community can China make rapid progress in its reform and development. Professor Cooper emphasizes China's motives in participating in international organizations and the ways China might coordinate its relationship with those organizations. This analysis is helpful not only to Chinese scholars but also to Chinese decision makers. Of course, there are some aspects which deserve further discussion. I will note just three points.

First, Professor Cooper says in his paper that the major motive of the PRC's participation in international organizations is to isolate Taiwan from the international community. It seems to me that this statement is inaccurate. I think China's major motive is to seek the supreme interest for the nation, namely, state sovereignty and the unification of the country. However, another statement made by Professor Cooper is quite right. He says, "A government may feel that it needs to be a member of an international club in principle, as an attribution of national sovereignty." Regardless of different political views, the Chinese people on both sides of the Taiwan Strait, including the KMT's leaders, consider the unification of the country as the supreme political ideal, deeply rooted in China's centuries-old historical and cultural tradition. The Chinese people always believe that the leader who can unify China is the best leader. If foreign friends understand this, they will understand why the Chinese are so sensitive to such issues as Tibet and Taiwan.

Secondly, in his paper Professor Cooper says, "Traditionally, the PRC had eschewed borrowing in the international capital market, in keeping with communist ideology against the capitalist system of financial lending and borrowing and the payment of interest." We should admit that such wrong thinking did exist in the past, and its bad influence was tremendous. Therefore, Professor Cooper is right in this regard. However, I would like to add that this wrong thinking has long been abandoned by most Chinese scholars. Here, I cite a personal experience as an example: Since 1981, the China Association of International Trade, a nonprofit organization of which
I used to be the secretary-general and am now the vice-president, holds one or two seminars every year. The key topics discussed after 1982 and 1983 shifted to ways to attract foreign investment and to enter into the international financial markets. More than one hundred scholars and experts from all over China have attended those seminars. No one at those seminars has ever doubted whether the use of foreign capital is in line with Marxism or not, because even Lenin himself, as early as the 1920s, announced that it was necessary for the Soviet Union to utilize foreign funds.

Finally, I will briefly touch upon the issue of the resumption of China's membership in the General Agreement on Tariffs and Trade (GATT). The resumption involves a series of complicated legal procedures upon which I am not prepared to elaborate. What I intend to point out is that the lack of transparency in China's economy is really a problem about which the international community is concerned. However, taking into consideration the fact that the four socialist countries of Yugoslavia, Romania, Poland, and Hungary, whose economies bear some similarities to that of China, have already been admitted into the GATT, and the fact that China's economic reforms are at present advancing more rapidly than those of the four countries aforementioned, there is every reason to believe that the resumption of China's membership in the GATT should come soon. It is probably at this particular point that I differ somewhat with Professor Cooper's statement that there should be a slow pace for the resumption of China's membership in the GATT. It is well known that in recent years China has been building its market system, and the market mechanism has played and will continue to play an important role in China's economic and foreign trade activities. Therefore, it can be said that the transparency in China's economy and foreign trade will meet the requirements by the GATT. Therefore, the resumption of China's membership in the GATT should not be delayed. We believe that the earlier China's membership is resumed, the more benefits it will bring to GATT itself as well as to China and the whole world. The resumption will enable China to adapt its economy faster to the multilateral trading system of the world. Consequently, the close contact between China and the international community will, no doubt, not only promote the prosperity of the world's economy, but also stabilize the normal international order.
Nai-Ruenn Chen comments:

First, let me present my own view as to why the subject of PRC participation in the international economic organizations is important. Then, I will offer a few comments on Professor Hong's paper. Finally, I would like to discuss how the subject may be approached from different perspectives.

International economic organizations were designed generally to promote economic growth, minimize trade frictions, and seek more efficient allocation of world resources. Many of these organizations were initiated by the developed countries in the West for the purpose of facilitating and promoting cooperation among states with market economies. The operational rules of these organizations have grown out of market principles as well as out of the institutions and practices of the developed West.

China's participation in the international economic organizations is unique in several respects. China is the largest developing country seeking external resources to support its economic modernization. For nearly three decades the country had an overwhelming command economic structure, with central planning and administered prices. Even with the economic reforms implemented in recent years, China's economy still remains highly centralized in major areas. And the Chinese price system has a long way to go to reach a reasonably rational pattern where prices will more or less reflect costs. Until recently, China had pursued a self-reliance policy of economic autarky. It has developed its own trading procedures and practices, distinctive from established trading methods and patterns in the West. Although foreign trade is no longer a state monopoly, as during the first thirty years of the People's Republic, the management of foreign trade remains highly centralized.

These are some of the main features of the Chinese economy, which have been thoroughly discussed at this conference. Many of the features of the Chinese economy were, and some still remain, inconsistent with free-market principles and Western institutions and practices, which have been the foundation of the major international economic organizations. It is against this background that China's entry into the international economic organizations presents an important challenge not only to China, but also to these organizations and their member states. It also has major implications for would-be members in the future. Moreover, China's membership may have a significant effect on the world economic system and on the conduct of the international economy in the years to come.

Professor Hong's paper is devoted primarily to an assessment of the impact on the Chinese economy of China's membership in the International Monetary Fund and the World Bank. He focuses largely on the
benefits that China has received from participating in these two organizations without an analysis of the costs involved. As Professor Richard Cooper points out in his paper, membership in international organizations has a number of costs to a country. In the case of China's membership in the IMF and the World Bank, the costs may be not only monetary in form, but also political, such as those involved in overcoming domestic opposition and responding to external requests for change. A more meaningful analysis, therefore, should compare the advantages against the disadvantages of participating in the international economic organizations.

Toward the end of his paper, Professor Hong discusses China's prospective membership in the General Agreement on Tariffs and Trade. Again, the cost factor was not examined. It would be useful to include in the discussion an assessment of the likely costs and benefits to China for GATT's full membership in the light of Chinese experiences derived from membership in the IMF and the World Bank.

Professor Hong examined the subject strictly from China's point of view. But it will be useful for scholars to view China's participation in the international economic organizations from different perspectives, including those of the developed countries, the developing countries, and the organizations themselves.

From the viewpoint of the developed countries, especially the United States, Japan, and the European Economic Community, the key questions may include: What are the significant benefits that the West has gained from China's involvement in the international economic organizations? Has China's membership facilitated the resolution of bilateral and multilateral trade issues and the promotion and expansion of trade relations? Or has it been contentious and disruptive to international economic conduct? As Professor Simon states in his conference paper, China views itself as the leader and protector of the Third World. Has China's membership brought along with it frequent conflicts with the developed countries, especially the United States, Japan, the EEC, on issues affecting the Third World?

From the perspective of the developing countries, the main questions seem to be: Has China's presence in the international economic organizations provided a major voice in advancing the interests of the Third World? Or, to put it differently, have the developing countries gained important benefits from China's membership in the various international economic organizations? On the other hand, has China been competing with other developing countries over the resources allocated by the major international economic organizations?

From the viewpoint of the international economic organizations, the
key questions appear to be: What has been the impact of China's membership upon the structure, operations, and activities of these organizations? Has the integrity of the international economic organizations been affected by China's membership? Another useful question may be: What role may these organizations play in assisting and facilitating China's transition from the present economic system to a system of "planned market economy"?

Finally, a series of questions may be asked as to what lessons can be derived from China's participation in the international economic organizations. For example, does the experience between China and the major international economic organizations suggest any useful observations of the process involved in incorporating the Soviet Union into the international economy? What are the lessons to be derived from the experiences to date that might be helpful to China, GATT, and its contracting parties in dealing with the issues relating to China's full participation in GATT?

The questions I have just enumerated serve to illustrate the different dimensions of the subject. Some of the questions have been explored recently in *China and the Keystone International Economic Organizations*, a pioneering study by Professors Harold K. Jacobson and Michel Oksenberg of the University of Michigan. Professors Jacobson and Oksenberg provide an in-depth analysis of China's first seven years in the IMF and the World Bank and examine the likely consequences of China's full participation in GATT.

Professor Hong's paper, together with the paper presented by Professor Cooper, will add greatly to our limited knowledge of a very important subject.
Contributors

C. Fred Bergsten is director of the Institute for International Economics, Washington, D.C.
Chen Baosen is Chair, Department of Economics, Institute of American Studies, Chinese Academy of Social Sciences, Beijing.
Nai-Ruenn Chen is international economist in the Office of the People's Republic of China and Hong Kong, International Trade Administration, U.S. Department of Commerce, Washington, D.C.
Chen Yawen is professor of economics and chair of the Department of Economics, Xiamen University, Xiamen.
Richard N. Cooper is Mauritz C. Boas Professor of International Economics at the Center for International Affairs, Harvard University.
Robert F. Dernberger is professor of economics at the University of Michigan, Ann Arbor.
David R. Dollar is assistant director of the International Studies and Overseas Programs, Center for Pacific Rim Studies, University of California, Los Angeles.
Dong Shizhong is professor of law and chair of the Department of Law, Fudan University, Shanghai.
Richard H. Holton is E. T. Grether Professor of Marketing and Public Policy, Haas School of Business, University of California, Berkeley.
Hong Jun-yan is professor of economics and chair of the Department of International Economics, Beijing University.
Nicholas R. Lardy is professor of international studies, Henry M. Jackson School of International Studies, University of Washington, Seattle.
Marcus Noland is research associate, Institute for International Economics, Washington, D.C.
Dwight H. Perkins is director of the Harvard Institute for International Development, Harvard University.
Denis F. Simon is associate professor of international business relations, Fletcher School of Law and Diplomacy, Tufts University, Medford, Massachusetts.
Tang Shaoyun is a doctoral candidate of economics, Wuhan University, Wuhan.
Wang Linsheng is Vice-President, University of International Business and Economics, Beijing.

Wang Xi is professor of history and economics and deputy director of the Center for American Studies, Fudan University, Shanghai.

Wang Yaotian is professor of international trade, Shanghai Institute of Foreign Trade, and editor-in-chief of *Shanghai Foreign Trade*.

Wu Jixian is professor of economics at Wuhan University, Wuhan.

Xie Zifeng is deputy director of the Institute of National Economy, Shanghai Academy of Social Sciences, Shanghai.

Ye Gang is professor of economics and deputy director of the Institute of World Economy, Fudan University, Shanghai.

Zhang Jialin is director of the Department of American Studies, Shanghai Institute of International Studies.

Zhang Zhongli is President, Shanghai Academy of Social Sciences, Shanghai.

Zheng Shaolian is professor of management and dean of the College of Management, Fudan University, Shanghai.

Zi Zhongyun is deputy director of the Institute of American Studies, Chinese Academy of Social Sciences, Beijing.
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