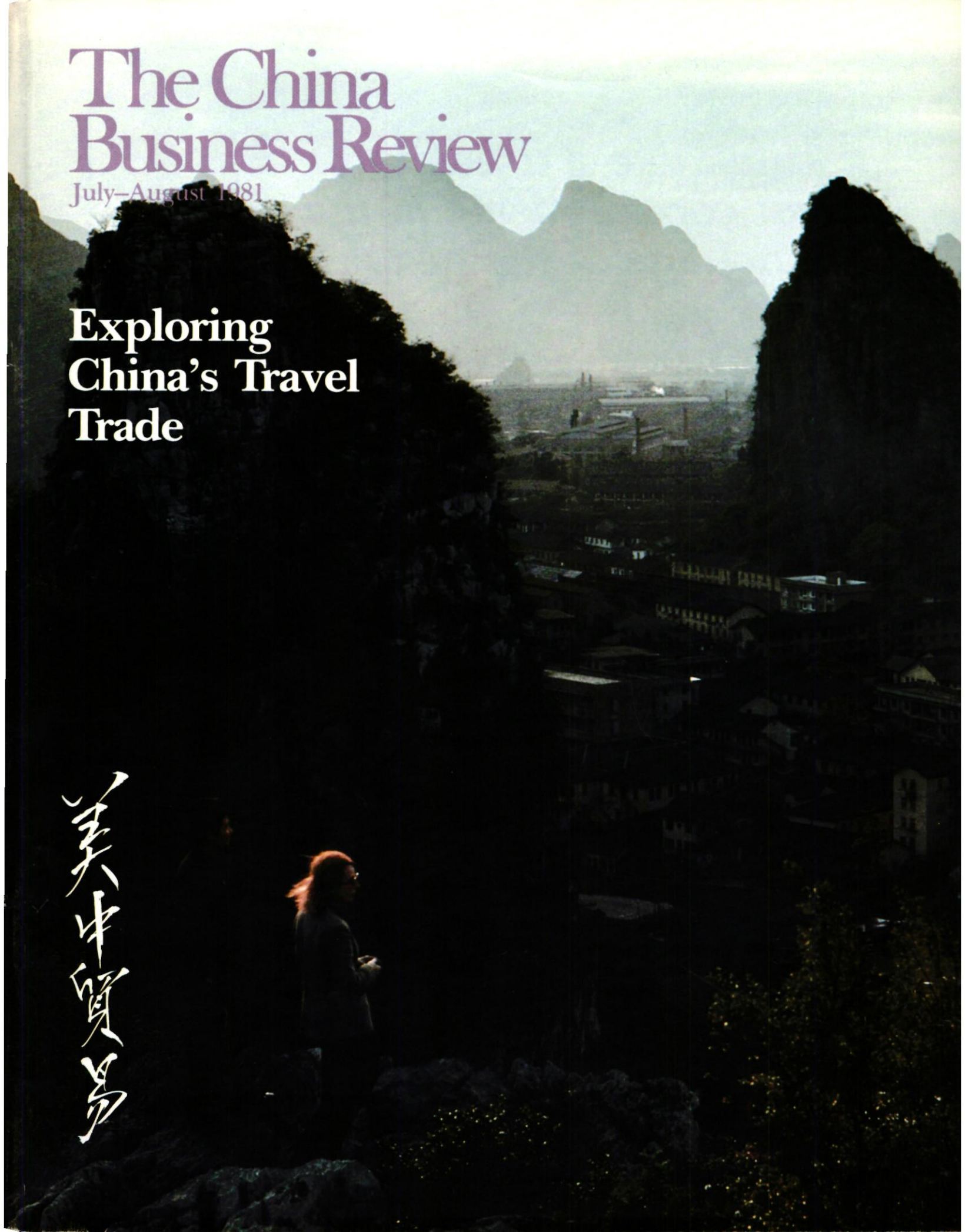
The China Business Review

July–August 1981



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The China Business Review

The Magazine of the National Council for US-China Trade

July–August 1981 Volume 8, Number 4

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Front Cover: *Photo courtesy of National Geographic.*
Sketches on pages 25, 28, 30, 32, and 59 by Fitzgerald & Swaim

The China Business Review welcomes articles from outside contributors. Manuscripts submitted for consideration should be typed double-space and normally may not exceed 5,000 words. They should be sent to the Editor, *China Business Review*, Suite 350, 1050 17th Street, NW, Washington, DC 20036, USA.

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China Calendar

CULTURE AND BUSINESS

☐ **New York City, through August 30.** An exhibition of about 150 17th- to 20th-century imperial robes with a selection of other Qing dynasty objects at the Metropolitan Museum of Art.

☐ **Cleveland, August 5–September 6.** Exhibition of more than 90 Chinese ceramics pieces at the Cleveland Museum of Art.

☐ **Honolulu, July 17–September 13.** Exhibition of Chinese jades from Han to Qing at the Honolulu Academy of Arts.

☐ **Oneonta, New York, October 9–10.** New York Conference on Asian Studies. Hartwick College will host the yearly event, which will include two sessions specifically China-related: "Socialist Legality in The People's Republic of China," and "Perspectives on Modern China." For information, contact John Lindell, New York Conference on Asian Studies, Hartwick College, Oneonta, New York 13820; (607) 432–4200.

☐ **Washington, D.C., October 10–December 6.** A photography exhibition. F. R. Wulsin, in a 1923 scientific exhibition to Inner Mongolia, left behind a unique record of the area and people. The exhibit is organized under the auspices of the Peabody Museum of Harvard University and the National Geographic Society. The exhibit will be held in the National Museum of Natural History's Thomas M. Evans Gallery.

☐ **Detroit.** Exhibition of Chinese, Japanese, and Korean art. The Detroit Institute of Arts reopened a gallery that features Chinese and Japanese painting, a wide variety of lacquers from China, Japan, and the Ryukyus, Korean ceramics, and screens from Japan.

EXHIBITIONS IN CHINA

☐ **Guangzhou, August.** Electronics products exhibition. Sponsored by Hong Kong-based Chiu Hua Electronic Enterprises, Ltd., the exhibition will be held in the Guangzhou Foreign Trade Center.

☐ **Guangzhou, September.** Modern business exposition, organized by The Adsale People and the Economic Information Agency.

☐ **Beijing, October.** Technical meeting, organized by the Society of Exploration Geophysicists (SEG). For information, contact John Hyden, executive director, SEG, P.O. Box 3098, Tulsa, OK 74101; (918) 743–1365.

☐ **Guangzhou, October 1–6.** Packaging machinery exhibition, organized by the Sino-American Trade Advancement Company.

☐ **Guangzhou, December.** Textile machinery exhibition. Hong Kong-Shanghai Technology Development Co., Inc., will sponsor the event at the Foreign Trade Center.

☐ **Beijing, December 1–8.** International Electronic and Optical Show, and seminar. Sponsored by Sunlight Promotion, Ltd., the exhibition will be held in the Beijing Exhibition Center. For information contact Agneta Elmsved, 132 Madison Ave., New York, NY 10016; (800) 221–7179; telex 233693 POTIUR.

☐ **Guangdong, December 10–15.** Exhibition of wood-processing machinery, equipment, and technology. "CHINAWOOD," sponsored by Industrial & Trade Fairs International, Ltd., will take place at the Guangdong Commodities Exhibition and Marketing Service Center.

☐ **Beijing, Nanjing, Chengdu, December.** Electronic products and instrumentation catalogue exhibition. "ELECTRO LIT EXPO '81," organized by China Translation and Printing Services-USA (SF), Inc., and the China Electronics Import and Export Corporation (CEIEC), will be the first products catalogue exhibition in the PRC for the US electronics community. The scope of the exhibition ranges from suppliers of raw materials to manufacturers of finished products. For information contact Judy Poon or Russ Lowe, CTPS-USA (SF), Inc., 153 Kearny St., Suite 511, San Francisco, CA 94108; (415) 362–2445.

☐ **Tianjin, March 24–April 1, 1982.** International plastics and rubber industries technology exhibition. "CHINAPLAST '82" will feature plastics and rubber machinery and materials. For information contact Overseas Exhibition Services, Ltd., 11 Manchester Square, London W1M 5AB; tel. 01–486 1951; telex 24591.

☐ **Tianjin, April 27–May 6, 1982.** International construction and mining equipment exhibition. "CHINABUILD '82," the first exhibition in China to combine the construction and mining industries, is being organized by Clapp & Poliak International, and sponsored by the China Council for the Promotion of International Trade (CCPIT). For information contact Clapp & Poliak International, 7315 Wisconsin Ave., Suite 1147N, Bethesda, MD 20014; (301) 657–3090.

CHINA'S EXHIBITIONS ABROAD

☐ **Kinshasa, Zaire, July 14–19.** A light industrial products, handicrafts, and textiles exhibition.

☐ **Vancouver, B.C., Canada, August 22–September 7.** Pacific International Exhibit of light and heavy industrial products.

☐ **New York City,** Multiproduct exhibition from Jiangsu Province.
ince.

☐ **Bari, Italy, September.** An international light industrial products, textiles, and handicrafts exhibit.

☐ **Baghdad, Iraq, October 1–15.** An international light industrial products, textiles, and handicrafts exhibition.

☐ **Nouakchott, Mauritania, November.** A light industrial products, textiles, and handicrafts exhibition.

UPDATE

The nuclear technology exhibit (*see The CBR*, May–June, 1981, p. 3) will take place October 23–31 in Beijing. For information contact Patricia Pollock, (312) 352–6611.

"我不知道你是谁
"I don't know who you are.
我不知道你的公司
I don't know your company.
我不知道你的公司的产品
I don't know your company's product.
我不知道你的公司代表什么
I don't know what your company stands for.
我不知道你的公司有那些顾客
I don't know your company's customers.
我不知道你的公司办得怎样
I don't know your company's record.
我不知道你的公司的声誉如何——
I don't know your company's reputation.
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World Bank Report:

China's Options in the 1980s Hinge on Saving Energy

Nicholas H. Ludlow

The World Bank's June 1981, thousand-plus page report on China is a scintillating diagnostic primer on the PRC's economy and its future prospects. Foreign observers and Chinese planners alike will surely appreciate its clear vision of the PRC's capabilities and options. Backed by a wealth of hitherto unreleased data (which will be treasured by those who grapple daily with the organizational and statistical mysteries of the PRC), the report focuses on fundamental choices Beijing must face if it wants to sustain healthy economic growth in the 1980s. Critical to the success of these scenarios will be the effectiveness of China's energy conservation program, and the PRC's access to soft loans from international credit institutions.

Among the World Bank's revelations:

• China's GDP rose 6 percent per annum in real terms during 1970-1979, and its per-capita GNP grew by 2.5–3.0 percent per year during 1957-1979. These rates are significantly above the average for other low-income countries.

• During the reform and readjustment of China's economy, foreign trade and capital could play an important role in enabling imports to overcome supply bottlenecks.

• Foreign exchange is likely to be a much tighter constraint on economic development in the future than it was in the 1970s, due primarily to a deteriorating energy situation in which energy exports (worth about $5 billion in 1980, a quarter of China's foreign exchange savings), will decline substantially in the next ten years.

• China's "most remarkable achievement" has been to make low-income groups far better off in terms of basic needs (employment, food, schooling, health, and family planning) than their counterparts in most other poor nations. Life expectancy, at 64 years, is "outstandingly high."

• Gross agricultural output has risen by 2.5–3.0 percent annually between 1957–1979, but agricultural output per worker dropped 12 percent between 1957 and 1977. The World Bank found that marked rural inequality and poverty still exist in some areas.

• Net industrial output increased 10 percent per annum between 1957 and 1979 in real terms; now China's industrial output per capita is three times the average for other low-income countries.

• The bank nonetheless found China to be strikingly inefficient in its energy use. Industry accounts for more than 70 percent of total commercial energy use. On a per-capita basis, this is nearly four times the average for most poor nations in the world. And energy consumption in the PRC per dollar of GNP is about three times the average both for other developing countries and industrialized market economies.

• China's transport system, enlarged primarily through freight-oriented rail expansion, has produced a rail network handicapped by steam traction and short-haul traffic, but which is "strikingly efficient" in terms of density and turnaround time.

Increasing the Efficiency of the Economy

Throughout the report several themes are repeated. One is that "Future growth will inevitably depend mainly on improving the efficiency of resource use, rather than on massive mobilization of resources and fundamental institutional change." But the transition ahead will be difficult: "A nation that has spent three decades pursuing a particular set of goals with particular instruments will inevitably find it hard to shift to a path that is not only new for China, but has been successfully trodden by few, if any, other countries."

To improve efficiency, the bank calls for:

Planning. Medium- and long-term planning is a fundamental need, as is better training for planners. A "rolling plan" covering five years, but revised annually or biennially, may help resolve this question. Better statistics and analysis, and wider dissemination of statistics, would also contribute to constructive economic research, debate, and improved decisionmaking at all levels of government.

Pricing. Revamping the price struc-

ture is "crucial to the success of other reforms." Decontrol cannot be abrupt, however. The bank recommends a blend of free-market pricing and price controls. This approach would involve deregulating the prices of many producer goods while retaining price controls on consumer goods. Priority would be given to rectifying the most serious price anomalies—those of energy and raw materials.

Optimizing Investment Decisions. The World Bank urges that banks and other financial institutions, rather than government departments, assume more responsibility for making investment decisions. The bank emphasized that it is "essential to improve the system of allocating investment funds, including the technical quality of project appraisal in the planning agencies. . .this will require extensive use of shadow pricing. It will also require better analysis of the interaction of major investment projects, which can be done only in the sort of medium-term planning framework that is currently lacking in China."

Labor Allocation. The bank recommends that technical and trained manpower be allowed to transfer from one organization or area to another, so that skilled personnel are more fully utilized.

Foreign Trade. The report has plenty to say about foreign trade, especially about the sector's need for reforms. Noting that Beijing is anticipating a modest rise in its trade deficit due to reduced export growth, the bank points out that if China used the available foreign credits—most of which it has not touched—the PRC could buy time for economic reforms that "could be well worth the cost in interest charges."

Such a policy would permit China to substantially increase imports of raw materials such as cotton, petroleum products, timber, and metals—a less costly alternative than drastically chopping 40 percent off the country's investment budget in 1981 and restraining output of useful commodities simply because certain inputs are in short supply.

Among the reforms suggested to improve foreign trade:

- Exporters should be given greater freedom to import materials and components where domestic substitutes are scarce, or of poor quality.
- Wherever possible, administrative procedures for trade should be streamlined.
- Producers should be allowed to establish sustained and direct contact with actual and potential foreign buyers. Import allocation procedures should be based on better economic criteria and better investment decisions.
- Individual producers and consumers should be given greater freedom to make export and import decisions on the basis of "rational prices."
- The question of the appropriate relationship between domestic and world prices in a country of China's size must be addressed. Meanwhile, trade planners should immediately adopt cost-benefit analysis of trade options using shadow prices, even prior to the implementation of price reform.

Sector Prospects and Recommendations

The World Bank maps out the prospects for three main sectors—agriculture, energy, and transportation—as follows:

Agriculture. Agricultural output in the next decade is projected to grow by 2.0–2.5 percent annually, with foodgrain consumption rising by 2.3 percent per year through 1990. In view of the government's emphasis on meeting consumer needs, agriculture will have to diversify its commodity mix in the future to accommodate changes in the pattern of demand. A growth target of, say, 5 percent per year in real consumption might require a 3.5–3.7 percent growth in agricultural production.

Among the products in greatest demand: meat, fish, vegetable oils, sugar, textile products (cotton and wool), various side line and forestry products.

Demand for imports of cotton, grains, and soybeans may fluctuate more than in the past, as China brings marginal areas into production. Future world trade in grains and fibers will continue to be determined "to a significant extent" by China's agricultural performance.

Energy. China's energy prospects are deteriorating, with coal and oil output declining. Oil output will remain around 100 million metric tons through 1985, "with little prospect of an increase in the latter part of the decade." Coal production is not expected to exceed 730 million tons by 1985 and 900 million tons by 1990, even if it is given high priority.

China's primary energy production growth rate is not predicted to exceed 2.8 percent per year in the 1980s (maximum: 2.2 percent during 1980–85), with electricity output increasing 4–5 percent per annum. With only moderate energy savings, oil exports in 1980 of 17 million tons would turn into oil *imports* of 17 million tons by 1990. With high energy savings, these oil imports could be avoided.

In view of declining production at Shengli, Renqiu, and Dagang, with Daqing barely holding steady (and China's remaining recoverable oil reserves put at 1.81 billion tons), the bank considers it essential that the PRC:

Robert Boulogne

To the surprise and sorrow of the China trade community, Bob Boulogne died suddenly June 19 of a cerebral hemorrhage. Bob was one of the earliest China traders in the new era of Sino–US commerce. As director of J.C. Penney's International Buying Department, he spurred the purchases of Chinese products by one of the largest US department/mail order companies.

Bob followed up the initial interest in China expressed by J.C. Penney Chairman Mil Batten, a member of the National Council's first Board of Directors who represented US importers on the first US trade mission to the PRC in 1973. Bob worked not only with his company, but with the Importers' Steering Committee of the National Council, of which he was a founding member.

Through eight years of Council activities in China, Bob was a persistent advocate of expanded trade. He was good-humored about problems that arose and instrumental in resolving many of those problems, often by developing programs to help Chinese products gain better acceptance in the US market. As an experienced and sophisticated international buyer, his supportive role was very much appreciated by both Chinese and American colleagues. He will be sorely missed by the China trade community.

• Improve exploration technology and field practices, and acquire equipment for deeper drilling;

• Improve recovery programs, reservoir engineering, drilling equipment and performance, cementing of well casings, and well-logging tools used to monitor water in oil reservoirs;

• Invest in refineries to upgrade its petroleum products. (Chinese gasoline is presently 67–70 octane.)

Coal. In the 1980s, most new capacity is expected from underground mines. Any major open-pit expansion "will depend on procurement, operation, and maintenance of foreign equipment," since large-scale equipment is not made domestically. And increasing coal output by 280 million tons between now and 1990 will require "substantial" investment in railroad facilities, large-scale mine-mouth power plants, long-distance transmission lines, and coal washing and processing plants.

Electricity. A ten-year national power plan is expected in draft by end-1981. The bank strongly recommends that:

• Greater power should be given to planning agencies to formulate regional and national development plans. Such agencies must be empowered to decide the least-cost sequences for building projects. The bank recommends using external assistance in the initial period, pointing to the fact that each percentage point subtracted from overall cost would amount to savings "far in excess of the cost of carrying out the analysis."

• Hydropower projects should receive a "vast and near-term effort" accompanied by a large commitment of capital resources.

• A large-scale technical training program should be established, along with computer centers for power system studies.

Transportation. Among the bank's many recommendations are proposals to develop more deep-water ports; increase short-haul road freight and passenger traffic; and modernize electric and diesel locomotives, short-distance rail passenger equipment, and small and heavy diesel trucks.

Studies by research institutes—assisted by foreign experts—are urgently needed in the fields of coal transport, intermodal and short-haul traffic management, the socio-economic benefits of secondary and tertiary road networks and, finally, deep-water port development.

Trade Options: Energy Conservation Holds The Key

China's trade expansion in the next 15 years, as seen by the bank, will depend on how well China saves energy (the most critical factor in all future scenarios); the success of China's exports of manufactured products; and the availability of concessionary financing.

Moderate Growth. The bank's moderate growth scenario calls for a 4 percent annual growth of real GDP during 1980–85, and a 5 percent rate during 1985–90. This scenario depends on "highly successful efforts" in energy saving, and in switching from oil to coal. China's oil exports would decline from 17 million metric tons in 1980 to 1 million tons in 1990, while coal exports would rise from 6 million tons from last year to 40 million tons in 1990.

If the PRC's exports of manufactured goods increase modestly (by 10 percent yearly in constant prices), the bank estimates that China's foreign exchange earnings could reach $33.4 billion by 1990, in 1980 dollars. With moderate inflows of foreign capital reaching $4.6 billion in 1990, China's capacity to import would rise only by 6 percent yearly in the next decade. This would limit imports of raw material, machinery, and equipment at a time when they would be sorely needed to meet rising consumer demands.

Higher Growth. The bank's higher growth scenario projects a 5 percent-per-annum real GDP growth rate during the first half of the 80s, and 6 percent p.a. in the latter half. In this case oil *imports* would only rise to about 14 million tons by 1990 (coal exports would average 20 million tons). A higher GDP growth rate would also boost manufactured-goods exports by 15 percent per year—thereby increasing China's total foreign exchange earnings, including services and net transfers, to $44.6 billion in 1990 (in 1980 constant dollars).

Both scenarios are contingent on *highly successful energy savings.* If conservation efforts are only moderately successful, future oil imports would have to be even higher—a warning that serves to underline "the fragility of China's foreign exchange situation in the 1980s."

The Bottom Line

What do these scenarios mean for China's balance of payments? What kind of foreign-borrowing picture does the bank foresee?

The bottom line, in the bank's view, is that if China maintains moderate growth in borrowing, GDP, and manufactured exports, the PRC's total debt outstanding and disbursed in 1990 would amount to only about $20 billion in 1980 prices—or $41 billion at projected 1990 prices. This isn't much larger than the present external debt levels of India, Indonesia, or the Republic of Korea.

The higher borrowing scenario projects a debt level in 1990 of $40 billion ($79 billion at 1990 prices). This would represent only about 6 percent of the outstanding debt of developing countries projected for that year by the bank. As the report states, such indebtedness is "indeed quite modest" for a country with a third of the developing world's population.

China's debt-service ratios in these scenarios would be modest, too, rising to 7.6 percent in 1995 in the moderate growth projection with concessionary credit terms, or 9.9 percent with harder credit terms; and, to 10.3 percent and 13.8 percent, respectively, for the higher growth scenario.

The problem is that if China's economy expands rapidly, and if the PRC decides on a high rate of borrowing, it will be essential for manufactured exports to grow at 15 percent a year. With only moderate growth (10 percent p.a.), the debt-service ratio would rise to 17.9 percent in 1995 with concessionary financing, and to 23.9 percent with little concessionary financing.

The immediate prospect, as the bank notes, is that "the general international environment of possibly contracting real aid flows will make it difficult for China to obtain the amount of concessionary capital it might deserve solely on the basis of the country's needs and low level of income." In other words, a lot will rest in the next ten years or so on China's capacity to increase exports of its manufactured goods, a capacity it should be taking very serious steps to develop right now.

Member firms can contact the National Council to obtain further information about the World Bank's China report. 完

CHINA BUSINESS MANUAL 1981

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Archie R. McCardell
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Tourism

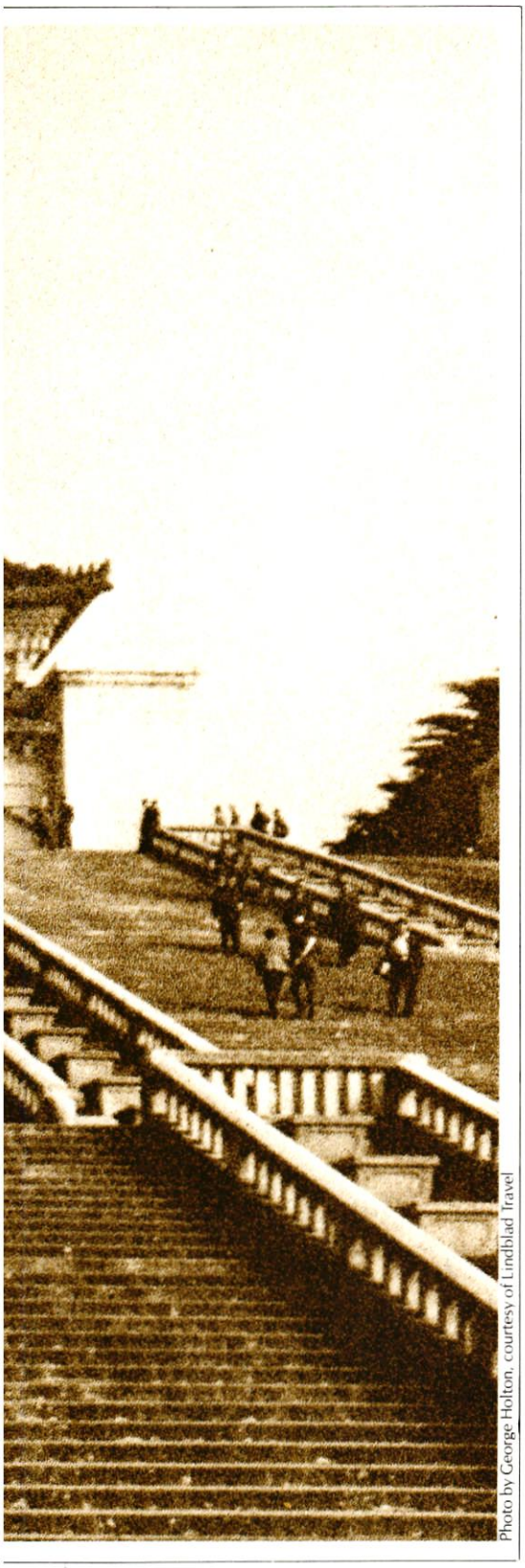

Photo by George Holton, courtesy of Lindblad Travel

For centuries emperors and peasants have made the long, arduous climb to the cloud-enveloped peak of Shandong's magnificent Mt. Tai. From more than 5,000 feet above sea level, the sun was said to begin its morning journey toward China's three cardinal mountains in the West. Transportation has changed little over the centuries. Though a tramway and motorbus route are under construction, pilgrims for now must scale the mountain's 6,000 hand-carved steps on foot.

No place on earth rivals the legendary beauty, the potential, and the monumental problems of China as a developing tourist site. Here, where the red-and-gold grandeur of ancient temples looms above the peasants' humble gray dwellings, the striking contrasts that characterize China describe its growing tourism industry as well.

Just three years ago China opened its gates to visitors from around the globe. In 1978 nearly 125,000 tourists from more than 60 countries (excluding overseas Chinese and residents of Hong Kong, Macao, and Taiwan) traveled to the PRC—a number surpassing the sum total of visitors over the previous 24 years. Last year's influx of 218,000 foreign tourists marked a one-third increase over 1979, according to the China International Travel Service (CITS), bringing the 1980 total to 900,000 foreigners and overseas Chinese.

Revenues took a corresponding jump. Figures released in April by the State Statistical Bureau report 1980 tourism revenues of $613.3 million, a significant increase over the $449 million in receipts the year before.

Such growth, remarkable as it seems, is expected to continue. The General Administration for Travel and Tourism in early June predicted that the number of tourists will increase by 30 percent each year for the next five years. Officials look forward to at least 2 million tourists—some put the figure closer to 3 million—by 1985. That would generate around $2 billion in revenues, along with serious problems in handling the load. Stories of travel-weary tourists arriving at 2 A.M. to find no place to stay, or of being bumped more than once from domestic flights, already are legend. At present China has only about 100 hotels, 2,000 guides and interpreters, and 3,000 drivers to meet the demand.

Readjustment has made tourism development a high priority without a sturdy financial base. There is a prevalent feeling, expressed in so many speeches and editorials of late, that the "export of scenery" needs relatively little backing to generate handsome returns. A commentary last year in Beijing's *Economic Management* touted tourism as "an industry in which investment is small, results are quick, costs are low, and profits great."

Indeed, China has made noticeable progress in developing tourism even during this past Year of the Austere Budget. Every few weeks it seems the Chinese press headlines some encouraging event: "Yunnan Opens Ancient Pagodas"; "Classical Sites Renovated In Beijing." Hotels across the country are undergoing facelifts—adding a new wing, installing air conditioning, opening restaurants and an occasional swimming pool or sauna. (Guangzhou's Dong Fang Hotel, with its disco and sculptured lagoons calling up visions of Miami Beach, just welcomed a French hairdresser to its beauty salon.)

In three years' time China has come to understand that many tourists want to experience the country's unspoiled beauty *not* from a bicycle or the back of a camel (though such tours are offered), but from the window of a cushioned bus or train. The latest lure for such Westerners, according to

Carol S. Goldsmith

in China

Pacific Travel News: luxury cruises along the scenic Chinese coast and into the South Pacific aboard the 580-passenger Minghua, complete with swimming pools and four bars serving the specialty of the house—a "Great Wallbanger."

These brush strokes of color have brightened the tourism picture without covering the black-and-white problems underneath. One CITS official describes the tourism industry as "full of contradictions." To date, 122 scenic spots have been opened, most of them in need of more and better hotels, transportation, restaurants, guides, and shops. Tourists nonetheless keep crowding into the same dozen or so locations from April to October, despite off-season air and hotel discounts. For most it would be unthinkable to return from China without pictures of the Forbidden City, the Ming Tombs, the diggings at Xian, or Shanghai's busy waterfront. Sheng Shoujun, a vice-chief of the CITS head office, says tourists frequently cancel their trips upon learning they won't be trekking up the Great Wall.

As a result, he continues, "Beijing, Shanghai, and Xian have many tourists and a shortage of rooms. Yangzhou and Zhenjiang have many hotels but they are short of tourists."

Ask a Chinese official which tourism areas need to be developed, and he'll answer with flowing descriptions of the Poyang Lake resting at the foot of the Lu Mountains, of the spiraling gray-blue peaks that stretch along either side of the Yangzi River as it courses through the rugged Three Gorges. He'll talk in broad terms about the shortage of tour guides, lodging, transportation, publications, souvenirs. But press him on specifics—exactly how and in what areas foreign firms might help—and he leans back in silent thought.

China is groping for ideas, searching for help in developing its tourism trade. Business visitors are constantly being asked to make suggestions about the overall tour operation and to evaluate the hotel rooms (or whatever makeshift quarters are passing for hotel rooms at the time). The smart ones don't look to Chinese officials for firm ideas or plans on cooperating in tourism ventures; they look at each area, each scene encountered with the eyes of a tourist and the mind of an entrepreneur. For awaiting discovery in virtually every corner of this infant industry are business opportunities large and small for those imaginative enough to seek them out.

China Airlines

The frail, uncertain stewardess aboard China's official airline, CAAC, addresses the passenger with a barely audible, "Chinese wine?" or "Souvenirs?" From a large silver tray she proffers a choice of red or blue socks, printed scarves, or round plastic thermometers with red birds painted on front. Less exotic offerings, like coffee, tea, or milk, are harder to come by.

CAAC flight 987 idles on the runway for an hour and a half. It is the first of three lengthy stopovers on this grueling 25½-hour direct flight to Beijing, as the Chinese crew tries to correct vague "electrical problems."

Passengers board the Boeing 747 with an uneasy curiosity. In the short time Pan Am and CAAC have been operating regular flights between the two countries (Pan Am began its twice-weekly service in January and CAAC in March), stories about the mediocre service and frequent delays have taken wing. Actually, CAAC's reputation preceded its American touchdown. Even domestic passengers in China with nothing to compare it to complain of CAAC's overcrowded seating, overbooking, choppy rides, and cold, unappealing boxed lunches.

A first-class ticket aboard the international flight entitles the traveler to the best CAAC has to offer—which is frequently very good. Soft-spoken stewardesses in dark blue, buttoned-to-the-collar pantsuits serve a variety of unusual food, prepared through an eight-year joint venture with Hong Kong's China Air Catering. The huge three-course lunches and four-course dinners typically include a salad with various types of raw seafood and quail eggs, main courses of duck and curry chicken, and assorted fruits and cakes for dessert.

Breakfast is more of the same. At 6:45 A.M., like it or not, the undeniable aroma of cold salmon and Mongolian lamb tugs insistently at the sleeping traveler's blanket.

CAAC officials admit that foreign assistance is most needed in the service department. Those shy, young stewardesses frequently seem confused by even the simplest requests, due mainly to their tenuous understanding of English. Liquor and dairy products are foreign concepts. Two stewardesses could not grasp the difference between 7-Up and tonic water, and a third gave a passenger a glass of Half-and-Half instead of milk, and a slab of butter instead of cheese—a mistake which could only be detected in the tasting.

There is an awkwardness in dealing with passengers, too, that seems born of China's polite deference toward foreigners. To the dismay of several first-class customers, passengers who had paid coach fare came up front to sample the wine, watch the films, and take a nap on the reclining lounge seats.

True to socialist ethics, everyone is equal, regardless of class.

At present CAAC flies 17 international and 160 domestic routes; there are plans for further expansion. The airline shares the country's intense interest in tourism and is taking steps toward its promotion. The former head of CITS's North American division, Bi

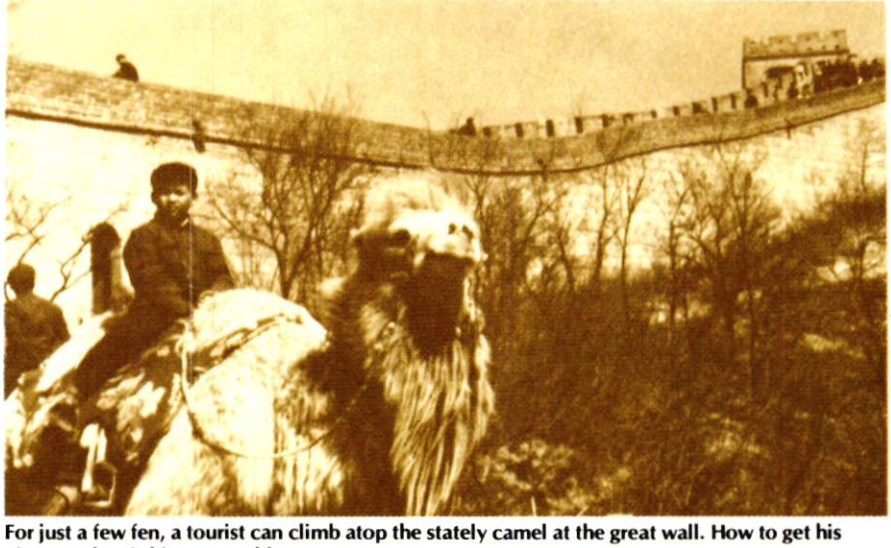

Photo by Carol S. Goldsmith

For just a few fen, a tourist can climb atop the stately camel at the great wall. How to get his picture taken is his own problem.

Illustrations by Jane Fitzgerald

Xueqian, recently brought his tourism expertise to his new position as CAAC's head of international affairs. The department works closely with foreign airlines on bookings and training programs.

Bi has a firm grounding in the range of problems plaguing China's tourism industry. And if he has his way, CAAC will play a greater role in promoting the trade. The airline already holds a share of the foreign visas allotted by the General Administration for Travel and Tourism, but still must rely on CITS for most travel arrangements. It also operates airport hotels in Beijing, Shanghai, Guangzhou, Hangzhou, and Kuming, says Bi.

Right now CAAC is considering further invasions into CITS territory by building and operating hotels in its own name, he continues, perhaps in joint ventures with US, Hong Kong, and Singapore firms.

To accomplish many of its goals, CAAC is hoping to develop a major travel department like "almost every big airline company has," says Bi. "But we are not very familiar with big foreign travel companies. And we haven't found a good way to make cooperation with them."

China Travel: The CITS

Visitors wandering around the half-lit hall of an ancient Foshan temple gaze up at the ornate shapes of man and beast carved so precisely in the granite beams. No scrolls explain their meaning or reveal the story behind the dozen gold-cast noblemen towering above the tourists, their unbending bodies thrust forward as though in forced homage to an unseen god. A tour guide is there to discuss the history and symbols of this temple outside Guangzhou. But his hesitant, incomplete narrative frequently clouds the meaning.

Orchestrating the grand mix of tourism arrangements is a challenging task in China. Not only are there myriad state and local bureaus involved in travel, hotels, and tourist transportation, but there is some disagreement over how they all should operate. Even Bi, reflecting his experience at both CITS and CAAC, gives mixed signals.

"We expect somehow to centralize tourism," he remarks, "since some groups involved are not professional. But if CITS does all the travel business, it seems it cannot do the job well. We don't want only one travel business. At the same time we don't want as many as in the USA."

With a shrug he interrupts himself and says, "Maybe the people in CITS do not agree. They may want to do all the business themselves."

From 1954 to the recent past, tourism was CITS's near-exclusive domain. Operating under the General Administration for Travel and Tourism, formed in 1964 to coordinate overall tourism policy, CITS took on the responsibilities of organizing tours, handling travel documents, escorting exhibition participants, and overseeing hotel development.

Today the roughly 500-member head office divides its authority among 101 provincial and municipal branches, and "cooperates," as the Chinese put it, with tourism institutes and supply groups that are popping up with increasing frequency. Some recent examples: the China Tourism Service Corporation, which organizes under CITS the production and supply of souvenirs and foodstuffs for duty-free shops; the China Tourist Goods Study and Supply Corporation, which does basically the same thing under the State Economic Commission and Ministry of Light Industry; the China Youth Travel Service, whose guests are heightening competition for scarce hotel rooms; and various tourism policy/research groups—the most prominent being a new interagency group under the State Council, headed by Vice-premier Chen Muhua. Its broad mandate for examining and coordinating policy regarding visas, transportation, hotels, construction, pollution, and tourism revenues opens speculation this could be a forerunner to a ministry-level travel and tourism commission.

For now, CITS decides the fate of nearly all who visit China. (Last year, 5.7 million tourists, overseas Chinese, business persons, scholars, and athletes traveled to the PRC.) The branch offices make all the hotel and travel arrangements for tourists. Nothing is confirmed before a group's arrival, despite a travel agent's best assertions; itineraries inside China can change on a daily basis. It is true that an *established* agent might have more luck getting what he or she paid for by negotiating with officials as the tour proceeds. But the trip's ultimate success is out of the agent's hands.

CITS tours are offered in about 20 popular models. Wholesale tour operators generally pay CITS about $1,000 for a standard two-week tour of four or five cities and nearby sites, including hotels, meals, and transportation inside China. (The tour's final US market price varies with the retail agents.) Special-interest trips to out-of-the-way areas, bicycle tours (*see* box), and foreign individual tours (FITs) allowing smaller groups more flexibility, have been introduced by some American operators—even though most travelers, they say, prefer to trust CITS on the standard circuits.

A typical group is accompanied throughout China by a guide from the CITS head office, and hosted at each tourist spot by a branch office guide. The skills and interests of the escorts vary with the landscape. One eager guide in Suzhou related the legends of the temples and famous gardens with a zest that belied their many tellings. A western-oriented Beijing guide, clad in trench coat and polyester slacks, made his group promise to ask no questions on the bus trip back from the Great Wall. He wanted to take a nap.

Hotels

It's the middle of the night when two US delegations arrive at the Beijing Hotel, about an hour apart, each to claim the dozen single rooms its host promised would overlook the Forbidden City. The hotel received the two requests from CITS, and knew at the time it couldn't accommodate both. But why dash the hopes of one prematurely? Better to await their arrival and see which group can find its way in through the "back door."

The tone and tenor of a China trip are often set at the hotel door. Whether a group gets into the coveted Beijing Hotel or finds itself being bused an hour away to the Friendship Hotel says as much about the group's status in

China as it does about the hotel market.

China is desperate for lodging. To handle the 2 million or more tourists expected by 1985, officials estimate 60,000 beds will be needed. That's about twice the number available now. Two years ago, when China opened its door to travelers, hotel firms were crushing one another in the mad rush to burst first on the tourism scene. Hyatt, Hilton, Western International, Intercontinental, and all the rest made grand proposals for luxury high-rise hotels, before realizing China was acting like a lawn-chair tourist who can only afford to enjoy the brochures. Soon the word went out that China was in the market only for smaller, economy hotels. But that idea lost credence when a few international-standard hotels started going up while plans for some economy models were falling through.

CITS over the past year has penned agreements and broken ground on a limited number of hotels in every size and shape, primarily with Hong Kong partners. The terms tend to follow these guidelines: no money down by the Chinese, and repayment through shared receipts.

In Guangzhou, home to fully a third of China's hotel beds, three major hotels are under construction and several more are being discussed. Now under way next to the Dong Fang is the Guangzhou Hotel, a $60 million venture with a Hong Kong consortium headed by Sun Hung Kai Securities. The consortium is covering construction and furnishing costs for the 1,200-room structure, to be completed in late 1982 or '83; Sun Hung Kai reportedly will receive the entire net profits for the first five years. Opposite the Baiyun Hotel on Huanshi Road, the foundation is being laid for the 2,300-room Garden Hotel. Hong Kong's Garden Hotel Investment, Ltd. is supposed to manage the $115 million operation for 15 years, and share profits with China's Lingnan Properties Company in a 60–40 split. Foundation work also is under way on the White Swan Pond (Baietan) Hotel on the Shamian waterfront. A joint venture between the Provincial Bureau of Travel and Tourism and Hong Kong principals Henry Fok and Pan Kwok-chen, the 28-story, 1,000-room hotel is scheduled for completion in 1982 or '83.

In the economy class, foreign firms have gotten a foot in the door by cooperating on a number of hotels in the 100- to 300-room range. The Australian developer Great Sincere (Victoria) Ltd. last fall cashed in on a series of 110-room hotels in five cities: three in Guilin, two in Nanjing, and one each in Chonqing, Wuxi, and Suzhou. The Aus. $20 million contract, reportedly financed with an Aus. $50 million line of credit from an Australian financier to the Bank of China, was secured because of the hotels' rapid delivery. Great Sincere had the prefabricated units up and operating in 22 weeks.

Hong Kong companies and overseas Chinese have been involved in many such modest ventures throughout the country.

US firms have had limited success in both categories of hotels. Two US firms are well on the way toward opening a pair of international-standard hotels in Beijing; one major hotel concern is still working on eleventh-hour details of another project; and two smaller American firms are trying to iron out problems with their mini-hotels.

Photo by Carol S. Goldsmith

Each day hundreds of Chinese "tourists" visit the Forbidden City in downtown Beijing.

Ground was broken this spring for the trio of 21-story, square-shouldered wings comprising Beijing's Great Wall Hotel. E-S Pacific Development Construction Company (a US venture owned by California-based architect Welton Becket Associates and Developer C. B. Sung) secured the $78 million contract with CITS-Beijing. The two partners will share management responsibilities for the 1,007-room, glass-encased hotel for 10 years, during which time E-S will receive 49 percent of the profits. The US firm financed the deal with a loan from Nordic Bank Ltd. of London; the Chinese reportedly have agreed to repay it over 13 years at 7¾ percent interest.

A block and a half from Beijing's Friendship Store, the frame of the $20 million Jianguo Hotel is rapidly taking shape. This 528-room joint venture marks the first move into the China hotel field by San Francisco architect-developer Clement Chen. Under the name of his Hong Kong holding company, Zhong Mei Hotel Development, Ltd. (*see* chart), Chen arranged full financing through the Hong Kong–Shanghai Bank, and became a 49 percent partner with CITS-Beijing in February 1979. Chen will manage the hotel for 10 years after its November opening and take payment in room rents and leasing fees.

During these talks Chen was negotiating a similar venture in Shanghai, but has since decided to hold off further talks until the Beijing hotel is operating. The Shanghai hotel market is pretty tight at present. Developmental property is scarce and the tourism trade there has been lagging behind other major cities. Officials at the Shanghai Tourism Corporation recently said no hotels with foreign involvement are being planned. Chen knows of only two Chinese-run projects going on: an apartment building in the former French Concession being converted to a hotel, and a new 500-room hotel. According to Chen, officials told him each room in the new hotel is costing $60,000—50 percent above the cost of each Jianguo room.

The word for the past six months has been "any week now" on the $85 million hotel and office/apartment complex Intercontinental has been chasing since December 1977. The joint venture between the Pan Am hotel chain and CITS-Beijing would lock the two into a 10-year management arrangement, whereby Intercontinental would operate the hotel in exchange for office and apartment rents and a set management fee. Financing would be arranged through 1st National Bank of Chicago, engineering supervised by Bechtel, and labor provided by the Chinese, according to John F. Shoemaker, Pan Am's director of China services.

Shoemaker says all the proposed contracts so far have been "too loose, not enough pinned down. In order to get a deal so many companies are willing to sign *anything*."

Smaller tour companies especially are eager to use hotel contracts to secure bookings for their own travel groups. The visa situation is almost as tight as the hotel scene. Agneta Elmsved of Pacific Delight Tours says the 10 or so major US wholesalers have been joined in the visa bid by smaller operations too numerous to count. In 1980, China issued about 218,000 foreign visas—28,000 of them to the US. This year, because of widespread complaints of overbooking, CITS says it will clamp down on the situation by issuing only about 200,000 visas. (As of June 1, CITS said it had issued about 10,000 visas to the US.)

The San Francisco-based Chinamerican Corporation is now completing the first two units of a hotel in Taishan County as a first step in securing tour rights to this rural area southwest of Guangzhou. The Stone Flower Mountain Inn, a joint venture with CITS-Taishan, will give Chinamerican tourists an alternative to the standard-city tours available to most visitors. Once the inevitable cost-and-materials snarls already surfacing have been ironed out and the seven-unit inn has been opened, the parties will share management and profits for 10 years. Afterward, Taishan will retain sole ownership while Chinamerican receives priority booking rights.

A New York wholesale travel agent tried a similar arrangement to secure hotel rooms in Beijing, but instead received an eviction notice from the Chinese. Express United concluded an agreement in 1979 with CITS-Beijing for the 144-room, prefabricated Yanxiang Hotel, at a cost of about $3 million. According to company Secretary Julius Bezozo, Express United expected payment in three-year visa allotments (8,000 in 1980; 8,000 in 1981; and 6,000 in 1982) and reservations on 20 rooms. There also was talk in this loosely constructed deal of Express United deducting further payment from CITS tour booking fees.

The modern, Holiday Inn-style hotel on the airport road opened as scheduled in February 1981, but Express United was not invited to the ceremony. It seems the agent had not paid all its past booking fees, so CITS promptly canceled the visas and kept the hotel.

Recently a smiling Yanxiang bellboy, still buoyant at 3:00 A.M., was only too happy to show off the hotel's paneled, well-appointed rooms to American intruders. When asked where the hotel came from, he answered unabashedly, "It is a gift from the United States."

Tours

Two hours separate the end of an exhausting day sightseeing and visiting factories from a drawn-out evening in Anytown, PRC. Night life is lacking in even the major cities. After seeing the Shanghai ballet and magic shows in Beijing and Guangzhou, visitors find themselves settling into the same barrooms night after night. In Shanghai's Jing Jiang Club the main attraction is an aging four-piece orchestra turning out worn renditions of "Red River Valley" and "Jambalaya." In the Beijing Hotel, crowds are drawn to the bar by the chocolate sundaes.

Touring China may remind the traveler of being led by the hand of a willing child. The youth is quite earnest and eager to please, but uncertain just how to make his guest happy.

First-time tourists tend to shrug off many of China's whole-hearted, half-successful attempts to meet their needs. CITS recently went out of its way to arrange a private tour of the Forbidden City for a Pacific Delight Tours traveler; during the four-hour trip, guide and guest barely understood a dozen of each other's words. A waiter in a Shanghai restaurant was greeted with amusement and applause as he turned out all the lights for the grand entrance of the flaming Baked Alaska. The manage-

Beijing's New Hotels

According to a recent editorial in the Renmin Ribao, *"For every 1,000 beds added to Beijing hotels, the country will be able to receive 70,000 more tourists." Work is now under way on seven hotels that should give nearly a half million tourists someplace to sleep.*

Hotel	Location	Number of Rooms	Number of Floors	Total Area	Ground Broken	Expected Completion	Estimated Cost	Financing	Additional Information
Xiangshan 香山	Xiangshan; northwest of Beijing	313	3 sections: 2,3,4	more than 20,000m²	June 1980	early 1982	$15 million	Funds borrowed from Esquel Enterprises, Ltd., a Hong Kong-based company	
Jianguo 建国	Jianguomen Wai	528	2 sections: 5,10	31,000m²	June 1980	Oct. 1982	20–30 million	Joint venture with Zhong Mei Hotel Development, Ltd., the Hong Kong-based holding company for Clement Chen Associates.	Zhong Mei will receive 49% of hotel profits each year for 10 years.
Minzu (addition) 民族	Fuxingmen Nei	100	10	6,000m²	May 1980	early 1982	*	Funds borrowed from Esquel Enterprises, Ltd.	Project includes renovation of existing Minzu Hotel.
Huaqiao 华侨	Zuojiazhuang (Donzhimen Wai)	530	6	43,700m²	May 1980	spring 1982	¥30 million	Central government grant to Beijing municipality.	
Jianhua 建华	Jianguomen Wai	650	12	37,000m²	1981 or early 1982	unclear	$24 million	Compensation agreement with Chong and Noble, a Canadian company.	Chong and Noble will have use of 50% of hotel rooms for 10 years.
Xiyuan 西苑	Xizhimen Wai (across from Beijing Zoo)	756	23**	60,000m²	March 1981	Sept. 1983	*	Funds borrowed from Esquel Enterprises, Ltd.	
Chang Cheng (Great Wall) 长城	Liang Maqiao (north of Agricultural Exhibition Center)	1,007	2 sections: 19,22	80,000m²	March 1981	1983	$78 million	Joint venture with E-S Pacific Development and Construction Company, Ltd., an American company.	Loan to be repaid from revenues over 10-year period.

*Between $36 and $44 million has been borrowed from Esquel Enterprises, Ltd. for construction of the Xianghan, Minzu addition, and the Xiyuan. Money will be repaid over a 10-year period by a formula based on income from rental of 30% of the rooms.

**Plus a three-story restaurant and service floor on the top, bringing the total to 27 floors.

Chart prepared by Scott Seligman, National Council Beijing representative.

ment of the Jing Jiang Hotel has tried to make foreigners feel at home by copying the little extras most Western hotels put in each room: a room-service directory (with no numbers), stationery (with no pens), and sewing kit (with no needle). Guests even have at their disposal a no-nonsense wake-up call. Answer the phone and the voice shouts, "Get up!"

Such incidents for now are chalked up to *The China Experience*. One only worries about the reception they will receive once the novelty wears off. Laments one Western business woman, "It breaks your heart to see the Chinese come *so* close and just miss getting it right."

Lately China has been making efforts to polish its tourism image. According to Han Kehua, director of the General Administration for Travel and Tourism, six universities are now offering tourism training. The country held its first national training course for hotel managers early this year, bringing in tourism and hotel representatives from 25 provinces, municipalities, and autonomous regions. Japan, which supplies about a third of the PRC's non-Chinese tourists, is cooperating on service training. Japan Travel Bureau, Inc. has taken a few tourism officials on US tours and into its Tokyo office, according to *The Wall Street Journal*, and All Nippon Airways has been training 10 stewardesses for CAAC. Venture Tours of Minneapolis has been providing supplemental tour management to China since 1978. Now 18 of Venture's own Hong Kong-trained escorts will guide all of the company's China tours.

Hyatt International has entered into an agreement with YTT Tourism Advisers, Ltd. (Hong Kong) to provide technical assistance and training at four hotels being built or remodeled in Beijing (Fragrant Hills, Minzu, Xin Qiao, and the Beijing Hotel). This is reportedly the first such service contract for an American hotel company. Clement Chen hopes to train about 30 of the Jianguo Hotel's more than 400 Chinese employees. Ten trainees already have arrived in San Francisco, and as Chen puts it, "Even teaching them to make a salad is a big ordeal."

Tourism officials hope to attract further cooperation in the area of advertising and promotion—or "propaganda," as they candidly call it. Sheng Shoujun, who directs CITS's publicity and information department, says some branches have developed tourism films and slide shows to sell to foreign travel agents. Far Eastern firms in travel and public relations have been cooperating with China on publishing ventures—which CITS officials cite as one of their most underdeveloped areas.

Sheng proudly displays a glossy Beijing tourist map produced by a Hong Kong promotion company, the flames of the cover's golden dragon licking the edge of a Rémy Martin cognac ad.

Billboards along Beijing's Chang An Street have yet to proclaim, "Let One Thousand Lines of Credit Bloom." Yet the major cities are doing their best to accommodate Western shoppers bearing plastic cards. MasterCard and Visa, through an arrangement between Bank of America and the Bank of East Asia, can be used at Friendship stores and tourist hotels in 11 cities: Beijing, Guangzhou, Shanghai, Tianjin, Hangzhou, Suzhou, Wuxi, Nanjing, Yangzhou, Changzhou, and Zhenjiang. Cash advances to cardholders are granted at Bank of China branches. American Express cards allow bearers to cash personal checks of up to $1,500 a day at Bank of China branches in Beijing, Guangzhou, Shanghai, Tianjin, and Hangzhou at no added commission. (In those cities plus Qingdao, tourists can now have their American Express travelers checks replaced at Bank of China branches.) Purchases cannot be charged, however.

The PRC is even encouraging credit with its own newly issued Prosperity Card. The trouble is, the Chinese don't think tourists are offered enough goods and entertainment to charge.

A Chinese research article released last fall urged the establishment of Hong Kong-style chain stores, and the production by commune brigades of more local handicrafts. Li Haiji of the General Administration for Travel and Tourism has recommended producing for tourists bamboo hats, panda pins, and that most commercial of all Chinese souvenirs—sweatshirts bearing the names of Beijing, Shanghai, and Guangzhou.

As any business traveler who has spent a week in the Beijing Hotel will testify, China's night life also is ripe for investment. Few restaurants are open past seven o'clock, the movies seldom have foreign captions, and the synthetic thump of the discos after a while is enough to drive a visitor back to the physics lessons on TV.

Presumably China would welcome any type of tourists-only entertainment that wouldn't corrupt its citizens, and would earn valuable foreign exchange. For some time now the management at the Dong Fang Hotel nightclub has been making a killing selling soggy potato chips and sticky-sweet wine. Imagine what it could do with fried zucchini.

Domestic Tourism

Last year a record 15 million visitors strolled along scenic Lake Tai in Jiangsu Province, nearly all of them Chinese. More than 6,000 peasants journeyed to the lakeside city of Wuxi in July and August alone; 1,500 young couples there joined hands beneath a leafy bower in private wedding ceremonies, many of them arranged by the tourism bureau.

"The peasants have stepped into the tourist stream," the director of the Wuxi travel bureau recently remarked. "This is a good sign for the tourist industry."

Whether on a windy perch atop the Great Wall or beneath the many gardens shading the Ming Tombs, throngs of Chinese peasants elbow their way forward for a view of their common past. A young couple lead their daughter through more than 70 palaces inside the majestic Forbidden City, they in awe of the riches, she intent on her popsicle. Two seventeen-year-old seniors from a Guangzhou school take the afternoon to stroll through Dr. Sun Yat-Sen's memorial hall—and to watch the many foreign tourists doing the same.

Travel by Chinese tourists has become a popular pastime in the last two years. According to some Chinese press reports, the standard of living has been raised just enough to give the average peasant a little more money and leisure time, though generally not enough to join organized tours. Thousands each day flock to the same spots enjoyed by Western visitors. Beijing peasants on a Sunday afternoon might tour a local museum, or perhaps take a picnic lunch out to the peaceful Summer Palace. Most are content with Nature as guide.

It is difficult to determine the actual number of Chinese tourists or to learn

much about their spending habits. But tourism officials apparently see some market potential. One Chinese press report says the public transportation and commercial departments of more than 40 cities have organized one-day to seven-day tours for local people. Shanghai now conducts day visits to Suzhou and Wuxi and three-day visits to Hangzhou, while Hangzhou arranges tours to Shaoxing, Ningbo, and the Huang Mountains.

It is an important development for China—and undoubtedly a challenging one. Chinese and foreign tourists may be lured by the same legends and scenes that have painted a colorful cross-country mural over the course of 4,000 years. But upon arrival they have different expectations. For locals it might be enough to bicycle through the countryside and visit a nearby shrine. For most foreigners, however, the tour bus should be air-conditioned and the temple adjacent to a souvenir shop.

How to accommodate one group without corrupting the other saddles China with an unenviable task. Tourism cuts across many cultures, many lifestyles in the PRC. To prosper, it must preserve the beauties and traditions of ancient China while meeting the demands of the modern world.

Carol S. Goldsmith, managing editor of The China Business Review, *spent two weeks traveling along China's east coast in March and early April as part of a business delegation hosted by Pacific Delight Tours.*

Bicycling Through Guangdong

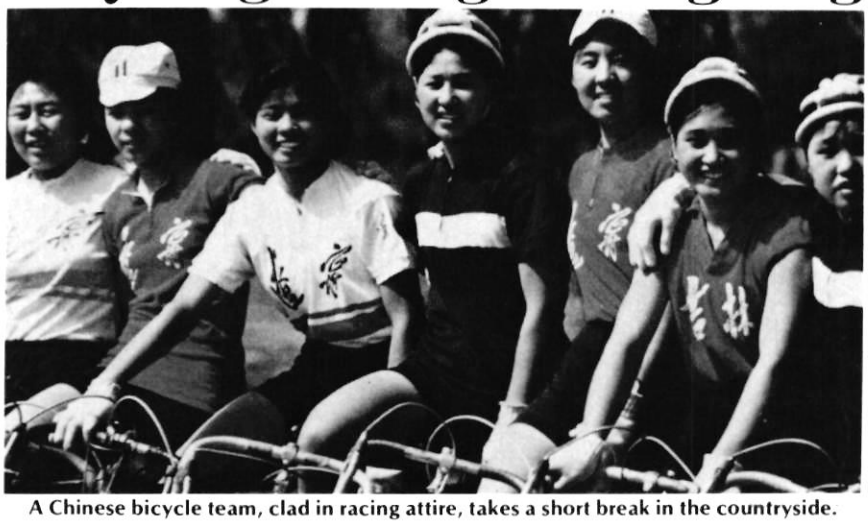

Photo courtesy of Venture Tours

A Chinese bicycle team, clad in racing attire, takes a short break in the countryside.

Myra Alperson

Careening through the crowded side streets on a Japanese bus, tourists can cover quite a bit of China in a short space of time. But at 50 miles per hour, they can miss some of the prettiest, most telling scenes.

There is an alternative to the standard group tours that race visitors through four or five cities in two weeks' time—a bicycle tour. Although it marks a radical departure from the usual way visitors tour China, in this country of 80 million bikes, it seems a natural way to go.

I participated in the United States' inaugural bicycle trip to China in January of this year. Since then, several organizations—including New York-based American Youth Hostels and China Passage Inc.—have been sponsoring 16-day bike trips in and around Guangzhou. Cyclists ride at a fairly leisurely pace on the 250-mile journey, enjoying a good deal of independence along the way.

Our itinerary allowed us to wander through Guangzhou, where we met university students at Chinese discos and danced to jazzed-up versions of "Jingle Bells" and other predominantly American tunes. In Foshan we visited the famous ceramics and paper-cutting factories, as well as the 900-year-old Daoist Temple of the Ancestors. In Xiqiao we spent an entire afternoon hiking up the same Xiqiao Hill path that Buddhist monks traveled centuries before. From a tourist spot in Shao Xing we saw the romantic Tripod Lake outlined in the distance by the legendary Seven Star Crags, which gives the region its beauty and name. A stop in the resort town of Zonghua, where mineral spring water flows into the hotel bathtubs, provided welcome relief from the long, dusty days of cycling.

Mornings usually were spent cycling between tourist sites; as long as we followed the prescribed route, we had the freedom to stop as we pleased, take photographs, and practice our Chinese with the locals—many of whom spoke English very well. At roadside stops we passed around postcards from the US, buttons, decals, and various mementos we had picked up along the way. Polaroid snapshots of an American cyclist with a Chinese friend proved the most popular gift of all.

A tour of a flourishing bicycle plant in Guangzhou, along with sidetrips to agricultural communes, offered rare glimpses into factory and farming life. An overnight steamer ride from Kowloon harbor into Guangzhou showed the proverbial "slow boat to China" to be a thriving enterprise.

Before and after bicycling, the group enjoyed free time in Hong Kong. An additional three days in Beijing—which we spent without bikes—coincided with the Chinese New Year.

The trip was meticulously planned by the Guangdong Province Travel Department of the All-China Youth Federation. Our accommodations ranged from western-style lodgings (such as the Baiyun Hotel in Guangzhou) to traditional Chinese guest houses. Throughout the trip the 27 cyclists were accompanied by skilled guides and translators—riding along in a bus. We all were prepared to have a formal relationship with our Chinese guides, but soon we became one big traveling family; we even dubbed our elder guide "Uncle Chen."

By trip's end we were exchanging rides on our 10-speeds for language lessons during the meals.

Travelers interested in touring China this way need not be experienced cyclists, or even bike owners. The terrain is level enough for three-speed bikes. Arrangements to rent bicycles can now be made through China Passage and other tour operators.

The total cost for the 16-day trip, including airfare, all lodgings and meals in China, and all lodging with most meals in Hong Kong, is about $2,600. A limited number of three-day excursions to Beijing, Shanghai, Guilin, and Hainan Island cost an additional $250 apiece.

More information can be obtained from American Youth Hostels, 132 Spring Street, New York, N.Y. 10012; (212) 431–7100, and from China Passage, 302 5th Avenue, New York, N.Y. 10001; (212) 564–4099.

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READJUSTMENT Phase II

Now that heavy industry has been cut back, the problem is how to pull China's economy out of recession

Martin Weil

As the true extent of China's difficulties becomes apparent, the country's leaders have scrapped their tentative 1981–1985 economic plan and embarked on a deepened readjustment program as ambitious in its own way as the original Four Modernizations program of three years ago. The immediate impetus is China's worst inflation since the Communist Party took power, and the alarm of planners at what they perceive as the central government's growing loss of control since 1979. At a deeper level, however, China's new readjustment policies are an attempt to make a fundamental break with the Stalinist-Maoist pattern of development which has characterized the country since 1949.

Important short- and long-term features of the readjustment program include:

- A balanced 1981 state budget, to be achieved mainly by reducing capital construction outlays by 44 percent over 1980 levels, to ¥30 billion ($18.75 billion).
- Tighter monetary policies, aimed at withdrawing currency from circulation.
- Major shifts in resource allocation patterns from investment to consumption, and from producer goods to consumer goods. This means slashing heavy industrial output targets, and accepting a lower overall growth rate for the economy than would have been acceptable in previous years.
- Selective plant closings, and a fairly broad reorganization of the relations between plants, as part of a drive to rationalize the industrial structure.
- Moves to shore up central government control over foreign expenditures.

These readjustment measures are having a considerably greater impact than the government's half-hearted moves in 1979–1980. But there is growing evidence in mid–1981 to suggest that the government will not meet its short-term goals—the balanced budget in particular—and that current policies may have to change yet again to accommodate new problems that have arisen.

Construction cutbacks and plant closings are meeting major bureaucratic, and in some cases popular, resistance. Well-advanced projects are proving difficult to stop. Worse still, efforts to balance the budget and stabilize the economy have driven China into recession.

Yet there is no sign the leadership is turning away from its long-term goals to emphasize light industry and revamp industrial organization. "Readjustment" is looking less like a temporary retreat to repair damage caused by the Cultural Revolution, and more like a strategic shift in development policy which will be in effect for many years to come.

First Priority: Plugging Holes in the Budget

The PRC has suffered annual budget deficits on 13 occasions, but never any so large or prolonged as in recent years. The country's budget deficits between 1978 and 1980 averaged 10 percent of expenditures, according to a report attributed to Premier Zhao Ziyang. The officially reported deficits for 1979–1980 totaled ¥29.15 billion ($19.1 billion). Although the 1978 budget originally was reported as a slight surplus, Zhao's statement suggests an actual deficit of about ¥6–¥7 billion; recent reports of construction expenditures that year showed figures nearly ¥3 billion higher than the original numbers.

The fundamental causes of the deficits were twofold. On the one hand, after 20 years of steady or declining living standards, the leadership in 1979 moved to increase urban wages, state agricultural prices paid to farmers, and social welfare expenditures. On the other hand, investment expenditures, instead of falling according to plan, continued to rise.

To cite one example: The state planned to spend ¥10 billion on increased wages and purchase prices in 1979, but actually ended up spending ¥14 billion, according to a recent report in *Red Flag*.

None of these expenditures show up as line items in the state budget, which

is a consolidated budget incorporating the figures of central, provincial, and county governments. They are reflected, however, in lower government revenues from sales taxes and enterprise profits. (Profits of state-owned enterprises remitted to the government constituted 44.7 percent of total revenues in 1979, the state's largest single income category.) This can be seen in 1980, in particular, when the combined value of agricultural and industrial production increased by 8.4 percent over 1979, but tax revenues increased by only 4.5 percent and profits from state enterprises actually dropped.

In addition, expenditures for scientific, educational, and cultural projects exceeded their targets by a total of ¥2.1 billion during 1979–1980, although in per-capita terms, PRC educational expenditures are lower than for most countries of comparable per-capita GNP.

The investment figures show a far more drastic pattern of uncontrolled spending. State budget investments reportedly declined from ¥39.5 billion in 1978 to ¥28.1 billion in 1980—a figure still about ¥4 billion higher than the target. But actual expenditures rose steadily from ¥47.3 billion to ¥53.9 billion ($39.9 billion). In other words, almost half of those above-target construction expenditures came from outside normal budgetary channels—through bank loans, the unauthorized use of reserve funds, supplemental appropriations by local governments, and profits retained by enterprises under decentralization reforms. The use of foreign loans probably is included in the extrabudgetary category. Chinese planners were especially alarmed to learn that much of these extrabudgetary expenditures went into small, light industrial factories that drained resources from more efficient large-scale plants.

The power of local governments to allocate extra funds for construction clearly has increased in recent years. Whereas only 30 percent of state revenues could be allocated at the discretion of local authorities in 1957, half of China's state revenues in 1980 were allocated by local governments. Local governments actually have been awash with surplus (RMB) funds during the past three years, and thus have felt little urge to control investment spending.

An additional factor behind 1979–80 fiscal deficits that has been downplayed by the Chinese media was the country's conflict with Vietnam. The only price of the conflict the government has publicly acknowledged was the ¥2.04 billion, or 10.1 percent in cost overruns, by which the defense budget exceeded its target in 1979. Given the high probability that Chinese statistics understate the true level of military spending (US government analysts believe that weapons procurement is not covered by the defense budget), it is likely that the war's true costs were higher.

Inevitable Inflation

To cover the deficits and workers' rising wages, the government resorted to the printing press. In 1980 alone, currency issued by the government shot up to ¥7.6 billion—¥4.6 billion more than planned. Between 1978 and 1980, currency in circulation increased by 65 percent, to ¥34.6 billion.

As consumer-goods production could not keep pace with currency in circulation, inflation occurred for the first time since the aftermath of the Great Leap Forward. Retail prices officially rose by 6 percent in 1980, and food prices jumped by more than 10 percent:

Official Chinese Retail Prices in 1980

(Percentage Increase Over 1979)

Overall	6.0
Urban	8.1
Rural	4.1
Consumer goods	7.1
Of which:	
Foodstuffs	10.5
Non-staple foodstuffs	13.8
Clothing	0.0
"Daily necessities"	1.2
"Commodities for cultural and recreational activities"	0.7
Pharmaceuticals	0.9
Fuel	0.7
Agricultural machinery	1.0

Much of the inflation stemmed from government-mandated food price increases at state-run stores. But many units carried out unsanctioned price increases. The true rate of inflation may have been closer to 15–20 percent in cities, many observers estimate. Inflation is particularly serious in a country like China, where the existing rationing system makes it hard to obtain goods even when prices are stable.

PRC economic planners, whose first job upon assuming power in 1949 was to bring China's hyper-inflation under control, have always been very sensitive about the effects of inflation on political and social stability. The inflation of 1979–1980, furthermore, came just at the time when the leadership was making its first serious attempt in 20 years to raise general living standards. In this period of rising expectations, inflation threatens to wipe out the newly won gains of the urban population.

The leaders' alarm at this prospect was heightened by the impact of the Polish crisis, which received surprisingly in-depth and objective coverage in the Chinese media in the fall of 1980. PRC leaders have acknowledged that similarities exist between the situation in Poland and China (including overextended capital construction, official corruption, and alienation of the Communist Party from the people). The fact that rising meat prices triggered the Polish upheaval likewise has drawn comment. After scattered instances of industrial unrest and demands for Polish-style free trade unions surfaced in China in late 1980, Party Vice-Chairman Chen Yun is reported by the Hong Kong magazine *Cheng Ming* to have said, "It is too early to say that the Polish incident could not happen in China." Newly selected Chairman Hu Yaobang also reportedly said: "Our domestic problems are like a pile of dry kindling. A single match could start a blaze."

All of these developments strengthen the hand of China's fiscal conservatives, led by Chen Yun. With the help of personnel shifts at the top engineered by Deng Xiaoping, they managed to strengthen their control over economic policymaking at the Communist Party central work conference in December 1980.

Their most determined move has been to tighten monetary and fiscal policy. A first step was to empower the main office of the People's Bank of China to enforce the government's monetary targets—a job that local branches had evidently failed to do, inasmuch as they had proved susceptible to local pressures to increase loans.

An important currency-retiring tactic is the decision to issue central government treasury bonds, the first domestic bond sale in more than 20 years. Four billion yuan will be sold in 1981, an amount approximately equal to the amount of currency issued in excess of the plan in 1980. Local governments, enterprises, and industrial bureaus are being given compulsory

Spending China's 1981 Investment Budget

More than $5 billion is earmarked for housing, while new investments in light industry, electric power, coal, and railways will each receive more than $1 billion out of the $18.8 billion total.

Cutting up China's diminished budget has been an extremely difficult process politically. Whether central planners will be able to hold to their targets under the pressures of affected interests remains to be seen. The new budget plans:

Electric power: 9.1 percent of the investment budget, or ¥ 2.73 billion ($1.7 billion), according to a January statement by Vice-Minister Li Rui. This is higher in percentage terms, but lower in absolute terms, than the 1980 level of expenditures. It represents the largest allocation going to any single industrial sector. Half is for the more than 10 hydro projects now under construction, a slightly larger percentage than the previous year; 28.1 percent is for transmission lines, a weak link in the industry, and the rest presumably is going to coal-fired plants. The electric power sector is one of the very few that has not experienced the postponement or cancellation of an ongoing project.

Coal: 6.7 percent of the total, or ¥ 2 billion ($1.3 billion), according to information obtained by the National Council's Beijing representative. Apparently most of the money will be spent on existing underground projects. Ministry sources have told one US company that the ambitious Huolinhe open-pit lignite project in Northeast Inner Mongolia, for which US and German firms already have sold equipment, will not be built beyond a capacity of 4–5 million tons in the immediate future. The Pingshuo mine near Datong, under discussion with three US coal companies, seems to be the number-one open-pit priority. But there is no indication work will begin soon.

Railroads: 6.7 percent of the total, or ¥ 2.0 billion ($1.3 billion). A December Chinese press report claimed that 3–4 years would be required to finish the ¥ 7 billion in projects under way, given current funding levels. In a reversal of previous policy, the government is now placing greatest emphasis on upgrading long-neglected trunk lines in the heavily industrialized North, East, and Northeast. Fifty percent of the 1981 railway budget will go toward double-tracking, electrification, and other technical improvements. The Beijing-Datong line, a major coal shipment route, will receive special emphasis. Only 23 percent of the budget is for new line construction; these lines probably include the coal lines being built in Hebei and Shandong, which are funded in part by Japanese government (OECF) loans. Construction projects in China's remote Western regions, where most new lines have been concentrated since 1949, probably are being postponed.

Building materials: At least 1.6 percent of the total investment budget, or about ¥ 500 million ($313 million), assuming this bottleneck industry will receive the same share of the budget in 1981 as last year. About half of this investment has gone toward the construction of cement plants in recent years.

Housing and community development: At least 30 percent of the total, or ¥ 9 billion ($5.6 billion). Expenditures on housing have risen steadily in recent years, and it is probably safe to assume the budget share devoted to housing and community development in 1981 will be somewhat higher than the 1980 target of 29 percent.

Light industry: At least 9.1 percent, as in 1980, or ¥ 2.7 billion ($1.7 billion), assuming this sector's share of the budget will be no lower than that reported for 1980. Much of the investment in light industry is appropriated from bank loans. The highest investment priorities are in manufacturing televisions, wristwatches, bicycles, sewing machines, wool and synthetic textiles, beer, and processed sugar.

purchase quotas (Shanghai was required to buy ¥ 340 million worth of bonds, and Henan Province ¥ 130 million), as it is their excess cash that most worries the government. Individuals will be allowed to purchase a small number of bonds.

The terms would not look attractive to western investors. Interest rates are 4 percent, and the principal is to be paid off in five annual installments beginning in the sixth year after issuance. Similar bonds may be sold in subsequent years, the government has revealed.

Another tactic has been to raise the price of luxury consumer goods, a measure that also contributes to China's rate of inflation.

Factors Behind Readjustment

Readjustment is as much a reaction to long-term trends as it is to the fiscal problems of the past two years. After 30 years of following the basically Stalinist policy of high investment rates with a bias towards heavy industrial development (colored by the Maoist belief in the possibility of rapid "Leaps Forward"), Chen Yun and his colleagues have been searching for a development strategy more suited to China's conditions.

Although it only became apparent to many Westerners with the Four Modernizations' debacle, Chinese economic thinking since 1949 has consistently revealed an almost fanatical desire for rapid industrial growth. Mao's exhortations in the 1950s to "overtake Britain" and "catch up with the United States" set the tone.

In practice, this has meant a Chinese obsession with maintaining a high rate of "accumulation," a term roughly equivalent to the Western notion of fixed capital formation. Accumulation has averaged more than 25 percent of GDP since 1957. Rates were even higher during the Great Leap Forward of 1958–1960, and during the 1970s. These are very high rates for a country as poor as China; in recent years, India's investment as a share of GDP averaged 24 percent, while in China the comparable figure in 1979 exceeded 31 percent.

Heavy industry, the chief beneficiary of this new investment, grew to such an extent that today China's heavy industrial sector has twice the share of GDP of any other country of comparable per-capita income level.

Recent accounts of China's planning process suggest that Mao's slogan,

"Take steel as the key link" was taken literally. Each year a high steel production target was set, after which all other output targets complied with the resource requirements of steel production. The failure to meet targets was attributed to the lack of steel, continuing the vicious cycle. The negative consequences of such a system were many:

- A bias toward continuously building new factories, as opposed to more efficiently utilizing existing ones.
- A neglect of rational project planning and thorough feasibility studies.
- The breakdown in coordination between industrial sectors, owing to the single-minded attention to favored sectors, such as steel. Also, resources were spread among so many projects that few could be completed on schedule.

But the most important, and politically dangerous, drawback was repressed consumption. China's industrialization, particularly between 1957 and 1977, was accompanied by an almost negligible rise in living standards: grain production rose by 107 percent, but the population probably increased by a slightly larger margin; the average cotton cloth ration remained in the vicinity of six square meters per year; and the available housing space in cities decreased to 3.6 square meters per capita (*see The CBR*, March–April 1981, p. 20).

A Different Strategy

Chen Yun and his colleagues now advocate that better living conditions, rather than rapid heavy industrial growth, must be the country's foremost development goal. A country with 800 million peasants with relatively low productivity, they argue, cannot follow the Soviet model of heavy industrial growth, or even an East Asian model of rapid growth fueled by exports. To talk of catching up with Britain or the US is ridiculous, they feel. Growth can only be fueled by increasing the productivity and incomes of peasants and urban dwellers, a process that can only proceed gradually, given the magnitude of China's agricultural problems.

The emphasis on consumer-goods production will reduce heavy industrial output in the short run, but the positive effects on public morale and productivity will more than compensate, according to this view. Investment rates that are too high also can mean that construction projects deprive existing enterprises of needed inputs such as steel and electricity.

These realities have prompted Chinese planners to recommend that China gradually reduce investment expenditures to about 25 percent of net material product (or 23 percent of GDP, according to Chinese estimates).

The 1981 Budget

Restoring discipline to the budgetary process is now Beijing's top priority. The December work conference scrapped the tentative 1981 budget with its projected ¥5 billion deficit, and drafted an alternative which balances expenditures and revenues (excluding foreign loans) at ¥97.6 billion ($57.4 billion).

Within the consolidated budget, the central government will continue to run a deficit, with the local governments showing a corresponding surplus. The central government, however, plans to "borrow" ¥8 billion from the provinces to both balance its budget and reduce the local governments' propensity to overspend.

The new budget was developed with great haste between the December work conference and Planning Commission Chairman Yao Yilin's public announcement in late February. Hence, the cuts probably were rushed and not carefully thought out.

The sharpest cutbacks are in the areas of investment and government consumption. It would appear from

Capital Construction Expenditures, 1978–1979

	1978		1979	
	Value (billion ¥)	Percent of total	Value (billion ¥)	Percent of total
Total	**47.9**	**100.0**	**50.0***	**100.0**
Agriculture	5.6	11.7	6.3	12.6
Light industry	2.7	5.6	3.0	6.0
Of which:				
Textile	1.3	2.7	1.4	2.8
Of which:				
Synthetic fiber	0.9	1.9	0.8	1.6
Food, beverage and tobacco	0.5	1.0	0.5	1.0
Pulp and paperboard	0.2	0.6	0.3	0.6
Heavy Industry	26.7	55.7	25.2	50.4
Of which:				
Energy	11.4	23.8	10.4	20.8
Of which:				
Coal	3.2	6.7	3.2	6.4
Petroleum	3.2	6.7	3.1	6.2
Electric power	5.1	10.6	5.1	10.2
Metallurgy	4.7	9.8	3.5	7.0
Machine building	4.1	8.6	3.6	7.2
Building materials	0.9	1.9	1.2	2.4
Timber and wood products	0.4	0.9	0.5	1.0
Transportation and communications	7.2	15.0	6.6	13.2
Commerce, foreign trade, banking	1.5	3.1	1.9	3.8
Housing and municipal construction	1.4	2.9	2.7	5.4
Culture, education, and health	1.4	2.9	2.1	4.2
Other	1.5	3.1	2.2	4.4

*Other official sources state that construction expenditures in 1979 totaled ¥51.45 billion. This figure probably supersedes the ¥50.0 billion total, but the proportions of the various sectors are likely to be the same.

SOURCE: State Statistical Bureau.

A Boom-to-Bust TV Saga

The following verbatim account from the Chinese journal World Economic Herald *of May 18, 1981, graphically depicts the kinds of problems that beset the rapid expansion and "amalgamation" of light industrial plants, one of China's more urgent industrial campaigns currently in full swing:*

A radio factory in a certain county of Jiangsu Province started to trial produce 19-inch televisions two years ago. It produced over 1,600 in 1979. Quality was not up to the mark. The factory was originally assigned only 2,000 in 1980.

Around the first quarter, certain persons of responsible departments subjectively assumed that since people's living standards were rising, there would be an upsurge of television sales. They proposed production of 10,000, or even 30,000, and 100,000. They did this without investigating market needs, or specific plant construction conditions. Prefectural and county leadership blindly went into action without delay. Heedless of objective conditions, they immediately amalgamated the radio plant with an electric motor factory and an electronics research institute, and hastily started on the project in May 1980.

Amid total confusion, the plant carried out large-scale production of 19-inch television sets on the one hand, and sent personnel to crash-purchase electronic parts on the other.

Just at that moment, the plant suddenly received a notice from departments concerned, stating that procurement of only 1,000 sets for the year had been approved, and that the plant would have to sell the rest on its own.

This bolt from the blue dumbfounded everyone in the plant. It desperately sent people to upper-level units to ask how to handle the matter. One responsible person spread his hands and said, "The situation is changed and there is nothing I can do." The Communist Party Committee had no alternative but to order an immediate production halt, and order the split-up of the plant.

The result is that the three components of the plant had a loss for the year of ¥440,000 compared with a ¥600,000 profit the previous year. Large quantities of electronic parts were discarded as useless.

Yao Yilin's February speech that the major social welfare expenditures—namely, aid to agriculture, science, culture, and education—are being kept at their original levels. No mention has been made of further wage increases; in fact, the leadership hopes to restrict bonuses to 12 percent of monthly wages. Yao Yilin seemed to indicate, however, that subsidies for grain procurement and marketing would be even greater than in 1980, which may be one reason why anticipated 1981 revenues are lower. Among the chief cuts:

- Government administrative expenses, defense, and subsidies for unprofitable enterprises—by ¥6.4 billion, a reduction of approximately 20 percent. Military expenditures for new equipment, not believed to be part of the defense budget, are thought to have been cut as well.

- Subsidies for the technical transformation of existing enterprises, and the trial production of new products—by ¥1.67 billion, or about 25 percent off the original budget (which was already below the previous year's expenditures). Central leaders feel that the state bureaucracy and individual enterprises have diverted these funds to unauthorized capital construction, and are reportedly planning to eliminate technical renovation as a budget item; in the future, enterprises would have to use their own funds for this purpose.

- Capital construction, by a full 45 percent, to ¥30 billion. In early 1981,

Gross Value of Industrial Production in China, 1977–81

(In billion yuan at 1970 constant prices.
Percentage increases are measured over the same period of the previous year.)

	1977	1978		1979					
		Total	Percent Increase	QI	QII	QIII	QIV	Total	Percent Increase
Total industrial output value	¥376.8	¥423.1	12.3	¥101.80	¥115.37	¥115.57	¥126.36	¥459.1	8.5
Light industry	—	¥180.7	—	¥42.66	¥47.62	¥49.80	¥57.92	¥198.0	9.6
(Percent of total)	—	(43)	—	(42)	(41)	(43)	(46)	(43)	—
Heavy industry	—	¥242.4	—	¥59.14	¥67.75	¥65.77	¥68.44	¥261.1	7.7
(Percent of total)	—	(57)	—	(58)	(59)	(57)	(54)	(57)	—

SOURCE: Various Chinese media reports. Of necessity, the numbers are not consistent with all statements in the Chinese press. All inconsistencies, however, appear to be minor.

the government decided to include the extrabudgetary expenditures of enterprises, localities, and industrial bureaus within the revised budget under a unified national construction plan. These outlays would have reached ¥18 billion, on top of the ¥37.58 billion contained in the original 1981 budget. Of the ¥30 billion in the revised budget, regular construction funds account for 57 percent, or ¥17 million, considerably higher in percentage terms than in 1980. The remainder includes foreign loans, reserve funds, possibly special funds for the reconstruction of earthquake-devastated Tangshan, and funds retained by enterprises, localities, and bureaus.

Cutbacks Arouse Opposition

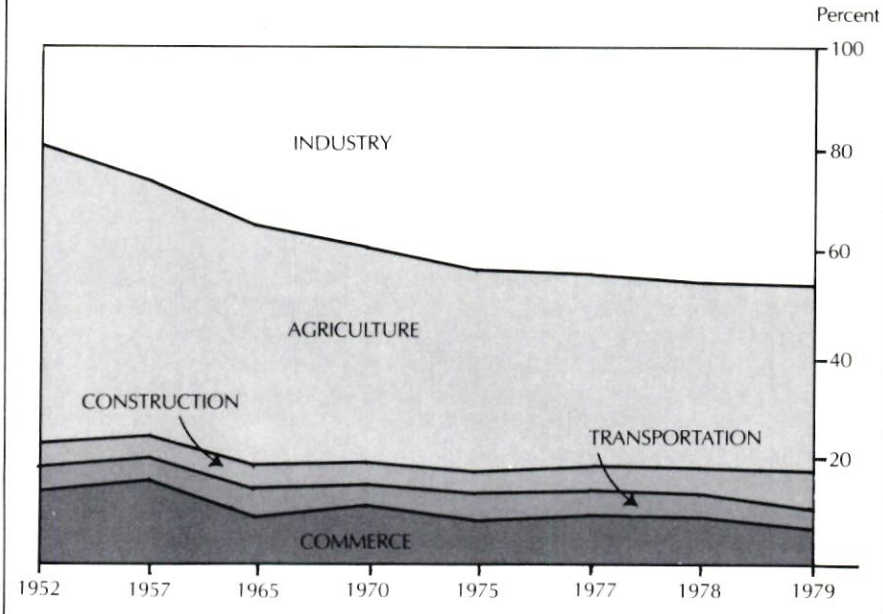
These austere budget measures are meeting stiff opposition from affected interest groups. Full implementation of the cutbacks now seems unlikely. As a New China News Agency report at an April capital construction conference put it, "Certain comrades in some areas, departments, and units still do not understand the need to readjust significantly. They support readjustment only in principle, but when specific . . . projects are involved, they emphasize 'exceptions' and 'urgency,' thinking only to proceed with projects instead of making the necessary readjustment to scale them down. This has impeded the control of the scale of capital construction."

The competition for funds among different industries is apparently cut-

China's Net Material Product by Sector

(Billion yuan at current market prices)

	1952	1957	1965	1970	1975	1977	1978	1979
Industry	11.66	25.42	50.44	77.04	112.73	119.66	138.51	154.1
Agriculture	33.82	42.68	64.45	78.97	97.70	98.38	108.40	127.3
Construction	2.33	4.54	5.60	7.70	10.02	10.64	12.04	13.4
Transportation	2.33	3.63	5.60	7.70	10.02	10.64	12.04	13.4
Commerce	8.75	14.53	12.61	21.19	20.04	26.59	30.11	26.8
Total	58.90	90.80	138.70	192.60	250.50	265.90	301.10	335.0



Note: "Net material product" is a measure of aggregate output, and is the closest thing in China's accounting system to GNP. The State Statistical Bureau has estimated that China's GNP in recent years is approximately 1.13 times greater than net material product.

SOURCE: State Statistical Bureau, Beijing.

The table below demonstrates how light industry has increased its share of total industrial output since early 1979, when readjustment was first announced. Since the fourth quarter of 1980, however, industrial production as a whole has stagnated. This can be best seen by comparing quarterly figures to the same quarter of the previous year, since this eliminates distortions caused by seasonal variations.

First quarter output figures are normally low, possibly because there is less pressure on cadres in January and February when the annual plan is being finalized and implemented; third quarter figures tend to be low due in part to the summer heat; and the fourth quarter tends to be high as enterprises rush to fulfill their annual quotas.

1980										1981	
QI	Percent Increase	QII	Percent Increase	QIII	Percent Increase	QIV	Percent Increase	Total	Percent Increase	QI	Percent Increase
¥115.85	13.8	¥130.85	13.4	¥124.97	8.1	¥127.53	.9	¥499:2	8.7	¥115.64	−0.2*
¥52.83	23.8	¥59.37	24.7	¥57.65	15.8	¥64.55	11.4	¥234.4	18.4	¥58.08	9.9
(46)	—	(45)	—	(46)	—	(51)	—	(47)	—	(50)	—
¥63.02	6.6	¥71.48	5.5	¥67.32	2.4	¥62.98	−8.0	¥264.8	1.4	¥57.56	−8.7
(54)	—	(55)	—	(54)	—	(49)	—	(53)	—	(50)	—

*Increase is 1.0 percent if calculated on a daily basis, due to the leap year.

Table prepared by Martin Weil.

throat, and many organizations are already putting intense pressure on Beijing for supplemental appropriations.

Central leaders are dealing with bureaucrats who have become expert at finding loopholes in funding, and at feigning compliance with central directives while working to overturn them. A May 8 editorial in the *People's Daily* indicated that "Some localities left loopholes to fund such weak links as housing construction... We must no longer discontinue a project in the first half of the year and then restart it in the second half of the year..."

Heavy industrial interests, in particular, oppose the government's shift towards light industry. For years China's best-trained engineers and technicians were assigned to defense and heavy industries. As a result, specialists in light industrial fields currently account for only 3.2 percent of the graduates of universities and technical schools, according to the May 24 *People's Daily*.

On the other hand, there is an abundance of skilled heavy industrial engineers with a vested interest in continuing heavy industrial production and construction. The *People's Daily* article, for example, tells of a Metallurgical Research Institute in Baotou which basically has had nothing to do since 1978, but has leaders who are resisting attempts to transfer personnel to light industrial design tasks.

Meanwhile Heavy Industry Takes a Nose Dive

The lid on spending has brought about the anticipated effects. Since the fourth quarter of 1980, heavy industrial production has plummeted eight percentage points. The machine-building industry has suffered the severest declines, with output falling 20 percent in many lines of equipment. Chemical products have also declined (with the conspicuous exception of chemical fibers). Significantly, energy production has been part of the downward trend, with coal and gas output in the first quarter of 1981 down by 8.5 percent from the year before, oil by 5.4 percent, and electricity by 0.3 percent.

Light industrial production, on the other hand, has continued to show significant gains. In the first quarter of 1981, the share of total industrial output occupied by light industry passed the 50 percent mark for the first time in nearly 15 years. The most dramatic increases were registered in the area of profitable consumer durables: the output of television sets and radios practically doubled in the first quarter of 1981 over the same period last year; and cameras, bicycles, watches, and sewing machines all rose by more than 20 percent. These gains come on top of similarly sizable growth rates in 1979 and 1980.

Textiles output, the most important light industrial category, is growing at a much slower rate. Wool and synthetic fiber production grew by more than 15 percent in the first quarter of 1980, but it still accounts for a small proportion of total textile output. Cotton yarn and cloth, the major commodities, grew at rates of 5.1 and 0.8 percent, respectively.

Broadly speaking, these shifts in industrial production patterns are welcomed by the leadership. In the steel and machine-building industries, for example, the production decline seems largely in line with central targets. Previous attempts to restrain steel output in 1979–80 failed.

Problems That Won't Go Away

There are nonetheless many worrisome aspects about industrial production trends for central leaders. Among them:

• *Energy production.* Coal output was targeted to drop by 3.2 percent to 600 million tons, but not by the larger margin reported in the first quarter of 1981. Electricity output was expected to rise by 5 percent, but it actually fell in the first quarter. Energy shortages are undoubtedly a major factor behind the recession in the heavy industrial sector, particularly in industries such as nitrogenous fertilizer, where there is no obvious reason to assume that Beijing would want to lower the output target.

• *Declining industrial productivity.* The abrupt shift to lower output targets has apparently shaken the morale of workers and managers weaned on high targets. To quote *Red Flag:* "There are indeed some people who have... slackened their efforts in production since the introduction of readjustment...and turned down tasks which could have been accomplished with some efforts because high targets were criticized. As a result, some enterprises which did not have sufficient production tasks passively waited for their turn to be closed, suspended, merged or shifted; leading cadres of some units became dispirited and slackened their leadership; the attendance rate dropped at a number of factories and mines."

As a result, average production costs rose in the first quarter of 1981, according to the *Red Flag* report. Instead of reducing subsidies to unprofitable enterprises, the government was forced to increase them, as more units reported losses.

• *Revenue losses.* As government revenues are almost completely derived from sales taxes and enterprise profits, a decrease in production and efficiency means a corresponding decline in revenue. The government has admitted that first-quarter revenue targets were not met. That bodes ill for the prospects of balancing the budget.

Management Reforms: Can They Survive?

China's current economic difficulties have heated up an old debate: How much management autonomy should be given to enterprises? How far should decentralization go? Has it already gone too far?

The most astringent comments on decentralization began to appear upon Chen Yun's return to power last year. It was charged that a major factor in the 1980 decline in state revenues (not to mention the chaos on the foreign trade front) was the decision to allow lower-level units to retain a portion of their profits, including foreign exchange earnings.

"Reform must be subordinate to readjustment," became the slogan of the old-guard central planners. They advocated that restoring an overall balance to the economy is more important than carrying out reforms. A December 2 *People's Daily* editorial even suggested that some reforms should be rolled back: "We should slow down or suspend those restructuring measures that are in conflict with our readjustment task, even if they are appropriate in the long run."

It did not take reform advocates long to counterattack. They pointed out in early March that 5,777 of the 6,600 experimental enterprises allowed to retain part of their profits increased the absolute amount of profits handed over to the state by ¥2 billion over 1979, owing to their increased output and profitability. The enterprises *not* covered by the reforms suffered declines in profit of an estimated 17.4 percent, according to a sample survey conducted by the State Statistical Bureau.

Strong support for the reformist

viewpoint comes from Premier Zhao Ziyang, whose reputation was built on the success of his early reforms in Sichuan Province, and from Zhao's patron, Deng Xiaoping.

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In practice, today's reforms seem to fall somewhere between the positions advocated by Chen and Xue. Certainly the reform program has not suffered to the extent that recent rhetoric suggests. The 6,600 enterprises are maintaining their right to retain a portion of profits, although the central government seems to be taking a more critical look at the use of these profits for investment purposes. State Economic Commission Chairman Yuan Baohua told an April conference on transportation and industry that a system would be gradually introduced under which the "various branches of industry in big- and medium-sized cities" would be given profit targets, and allowed to retain any surpluses. Individual enterprises running at a loss also would be allowed to keep all profits above a certain target. On the other side of the coin, the state would refuse to subsidize them beyond a certain limit.

An Oversimplified Approach

One of the striking features in China's 1981 readjustment is that it resembles—in certain respects—the 1958 Great Leap Forward approach to development. Now, as then, the country is expected to achieve difficult economic goals (in this case a balanced budget, reduced investment, and expanded light industrial production) on a crash basis without a well-thought-out, long-term plan. The result, as in the past, is considerable economic disruption.

While there is little doubt that less capital construction would be beneficial to the economy, the chaos surrounding the current wholesale rollback creates the danger that many feasible and necessary investments, as in the energy industries, will not be made in a timely fashion. Likewise, increased consumer-goods production is a worthy goal, but the unplanned rush to construct new consumer production lines threatens to bring about more economic waste.

This phenomenon is perhaps due to the intensely political nature of economic administration in China, many observers feel. As a result, the planning system sometimes becomes the jousting arena of Politburo members. At such times, lower-level officials are frequently afraid to make decisions without clear-cut political guidance. But this only perpetuates the need for leaders to present their programs in a heavy-handed manner. 完

Chen Yun

The architect of readjustment, who fashioned China's successful anti-inflation program in the 1940s, is back at the drawing board

Martin Weil

The triumph of his readjustment policies caps the remarkable comeback of one of the leading figures in Chinese communist economic planning, Vice-Chairman Chen Yun. His political battles are themselves a chronicle of the most controversial experiments in China's post-war economic history.

Born near Shanghai in the early 1900s, Chen worked in that city as a typesetter in the 1920s. His first known political activity was in trade union work in 1924–1925, when he joined the Communist Party and became a close collaborator of Liu Shaoqi.

In the mid- to late-1930s, he spent several years in the Soviet Union and in Xinjiang Province, which at that time was under Soviet influence. The Soviet Union appears to have been the only foreign country to which he has had much exposure.

By the early 1940s, he had become one of the Party's top officials, and was already beginning to concentrate on economic work. When the PRC was established in 1949, he became a dominant figure in economic planning. His title until 1958 was first vice-premier, which ranked him second only to Zhou Enlai in the State Council. In the mid-1950s he attained the rank of number five in the Communist Party hierarchy, just behind Zhu De, Zhou, Liu Shaoqi, and Mao Zedong.

Chen was the major force that throttled China's runaway inflation in the late 1940s and established the PRC's

first national financial system. These are experiences that clearly color his current views on inflation. In late 1956 he took on the added title of minister of commerce, a position that made him acutely aware of the country's shortage of food and consumer goods. His current concern with better living standards undoubtedly reflects that experience.

Chen's major battle in the 1950s had to do with the pace of development. Mao was pressing for a policy of rapid development based on extraordinarily high rates of investment and the mass mobilization of people. Chen, the man in charge of implementing the state plan, urged restraint, caution, and development within the limits of available resources. He also opposed Mao on the issue of rapid collectivization.

Chen lost the battle, as well as his position as first vice-premier and commerce minister in early 1958. The "Great Leap Forward" took off at that time. Soon central government control broke down completely, as the nation bent its back in a paroxysm of labor to build, for instance, 50,000 "backyard" iron smelters in just one month. Chen was given a face-saving sinecure as head of the newly formed State Capital Construction Commission, an organization that was totally ineffective during the Leap.

"Chen Was Right After All"

Remarkably, Chen is one of China's few senior leaders to remain completely untainted by any association with the Leap. The waste it entailed (the government now admits that ¥100 billion was thrown away in ill-conceived projects), not to mention the human hardship that resulted, ultimately vindicated Chen's position. Mao reportedly admitted: "Chen was right after all." Although he did not recover his official rank, behind the scenes he regained dominance in economic policy-making in the early 1960s.

The influence of that period on his current views cannot be overestimated. Chen dubbed the policy of the early 1960s one of "readjustment, consolidation, filling out, and raising standards"—remarkably similar to the slogan of "readjustment, reform, rectification, and raising standards" used to describe *current* policy.

Chen successfully cut the 1960 capital construction budget by two-thirds in 1961, and again by half in 1962. Project after project—including large-scale plants begun with Soviet help—were abandoned. As the central government regained control over the flow of materials and funds, the inefficient plants built during the Leap were shut down, and currency was withdrawn from circulation through such tactics as raising the prices of luxury consumer goods. In view of the crisis then at hand, these policies met with little overt opposition. By the mid-1960s, the economy had regained its equilibrium.

Chen fell from power again during the Cultural Revolution, but like many other economic experts in the State Council—such as Li Xiannian—he did not suffer the persecution undergone by senior Party figures such as Liu Shaoqi and Deng. Chen retained his central committee membership throughout the 1960s and 1970s.

Deng engineered Chen's return to the Politburo in December 1978, probably to counteract what Deng viewed as the more "Maoist" political and economic inclinations of Hua Guofeng and leaders close to Hua, such as Yu Qiuli, Wu De, and Wang Dongxing. Hua is reported by Hong Kong sources to have opposed Chen's return.

It did not take Chen long to assert himself; indeed, a new "readjustment" program was unveiled in February 1979 in reaction to the "Four Modernizations" program, which Chen sardonically viewed as a second Great Leap.

Chen, however, was unable to impose cuts until political resistance from both the reformists and heavy industry interests had been beaten back. He now appears to be the undisputed number-one man in economic policy, and in the first half of 1981 has received more favorable publicity than any other Chinese leader.

When he rehabilitated Chen, Deng may have gotten more than he bargained for. Chen is widely suspected to have opposed Deng's Vietnam war in 1979 on economic grounds. Circumstantial evidence suggests that Chen is less enthusiastic about expanded trade and political relations with the West than Deng. Unlike Deng, who spent formative youthful years in France, Chen has had no wide exposure to the West. His lack of sensitivity to foreign opinion became evident when he instigated the major plant cancellation decision (*see The CBR*, May–June, 1981, p. 31). Chen clearly was less concerned about the effect on China's foreign relations than Deng, who appealed to the Japanese to find a way to revive the contracts.

Furthermore, Chen has been somewhat leery of the decentralization reforms widely associated with Deng and Deng's protégé, Premier Zhao Ziyang.

On some crucial political issues, though, there remains a considerable rapport between Deng and Chen that makes the possibility of a major political break unlikely. Both men are strong advocates of "de-Maoification" in the political and economic realms. And they are among the most committed of all Chinese leaders to internal reform within the Communist Party, aimed at combating corruption and privilege and at improving the Party's poor image.

In the end, it is hard to attach a label to Chen. His belief in the need for strong centralized planning indicates an affinity for the Soviet system. Yet, he rejects the heavy industry orientation of the Stalinist model, and considers improved living standards the main goal of development. In politics, he is an anti-Mao reformer. But in economics, he seems to be a cautious, fiscally conservative opponent of rapid reform.

More than any other leader, he has maintained his integrity during the political shifts of the last 30 years. This, combined with his economic expertise and his concern for the people's livelihood, has led the Hong Kong magazine *Cheng Ming* to comment:

> Chen Yun is a person of integrity, courage, and firmness. He has real ability and learning, is free from vulgar tastes, and does not seek personal privileges. Members with such high Party spirit are few at the higher, middle, and lower levels of the Chinese Communist Party. Over the past 30 years, the Communist Party's successes in economic work could not be separated from Chen Yun's arduous efforts, but he had nothing to do with leftist deviations, rashness, and crisis in economic work. Such a veteran cadre has few parallels in Chinese history among the officials who helped in founding or building the country. Moreover, Chen Yun enjoys increasingly higher prestige among the people in the last few years.

Now Chen must demonstrate that his policies will be as successful in the 1980s as they were in previous years.

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China's Rising Stars

The New Generation of Economic Leaders

Christopher M. Clarke

A new generation of economic and political administrators is rising to the top ranks in China, gradually replacing those who have ruled the People's Republic of China for more than 30 years. Among them are China's new Premier Zhao Ziyang, and Communist Party Secretary General Hu Yaobang.

Less well known, but in many respects equally important, are the leaders at the level just beneath Zhao and Hu. These men run China's economic and political system on a daily basis, formulating and implementing policies that shape the lives of 1 billion Chinese.

Three of these rising stars are Yao Yilin, minister-in-charge of the State Planning Commission, Wan Li, first vice-premier, and Yuan Baohua, newly appointed minister-in-charge of the State Economic Commission. It is important to become familiar with these officials—they are likely to be leading China in the 1990s.

Yao Yilin

"Economic readjustment calls for reduced investment in capital construction, and there will not be much increase for several years. In the circumstances . . . the key lies in greatly raising economic efficiency in all fields."

—Speech to 17th Standing Committee meeting of the National People's Congress, February, 1981

Yao Yilin is the man to watch in China during the next few years. Born in 1917 in Anhui Province, Yao has risen to the pinnacle of power in the state government and may soon join the top leadership of the Chinese Communist Party.

As a young man in the 1920s Yao Yilin studied in a Christian school in China and became fluent in English. His middle school was part of Shanghai's Guanghua University, and in 1934 he enrolled at Qinghua University in Beijing to study history. Yao joined the Chinese Communist Party the next year, serving as secretary of the CCP group within the Beijing Student Union during the "December Ninth Movement" of 1935, a student movement protesting the appeasement policies of the ruling Guomindang toward Japan's aggression in Northeast China.

During the 1930s Yao Yilin served under Peng Zhen as secretary of Tianjin's Municipal Party Committee, and as secretary general and head of the propaganda department of the Hebei Provincial Party Committee under Peng's North China Bureau of the Chinese Communist Party. After a brief tour of duty as a political commissar under Nie Rongzhen, Yao became head of the Industry and Commerce Department and member of the Finance and Economic Committee of the North China People's Government in 1948.

Yao moved into national politics when he was appointed vice-minister of trade in October 1949. Yao's responsibility, and that of the ministry, was to supervise domestic and foreign trade. On the domestic side, Yao was active in creating and administering the All-China Federation of Supply and Marketing Cooperatives, which was responsible for overseeing China's collective (as distinct from state-controlled) commerce. He also served under Bo Yibo on the National Austerity Commission during the years of the Korean

conflict, administering wartime rationing and conservation measures.

Between 1950 and 1952 Yao also was involved in foreign trade. He signed several agreements with Hungary and Poland, and was involved in the complicated aid and trade negotiations with the Soviet Union during the formulation of the first five-year plan.

In 1952 the Ministry of Trade was divided into two ministries—Commerce and Foreign Trade; Yao Yilin continued as vice-minister of the former. From 1954 to 1959 he also served as a member of the Budget Committee of China's legislature, the National People's Congress. (His boss from 1956 to 1958, Chen Yun, is regarded as the mastermind and initiator of China's current readjustment plans.) At the Eighth Party Congress in 1956, when the planners achieved a temporary victory over Mao's economic strategy, Yao was elected an alternate member of the Central Committee.

Yao's experience in finance really began with his appointment in September 1959 as deputy director of the State Council's Finance and Trade Office. This office, headed by current Party Vice-Chairman Li Xiannian, was a superministerial body guiding the commissions, ministries, bureaus, and banking organizations involved in financial and trade affairs. At the same time, Yao served as deputy director of the equivalent Party agency, the Central Committee's Finance and Trade Work Department. He became acting director of this Party organ in 1961, and by 1964 assumed the post of director of the newly formed Party Finance and Trade Political Department. In the meantime Yao also succeeded—in February 1960—to the minister of commerce post. These concomitant positions made him one of the most powerful economic administrators in China between the Great Leap Forward and the Cultural Revolution.

It was not suprising, then, that Yao was accused of revisionism and counterrevolutionary tendencies in April 1967. After a six-year absence, Yao appeared publicly in 1973 when he was elected an alternate member of the Communist Party's Central Committee. In October of the same year he was also identified as vice-minister of foreign trade, although he may have been acting in that position since at least May 1973.

Yao continued his steady rise to the top after the fall of the "gang of four." In April 1977 he was promoted to the rank of first vice-minister of foreign

China's Provincial Leadership

	Party First Secretary	Governor or Mayor	Standing Committee Chairman of People's Congress	Commander of Military District or Region
Province-level municipalities				
Beijing	Duan Junyi	Jiao Ruoyu	Jia Tingsan	Pan Yan
Shanghai	Chen Guodong	Wang Daohan	Hu Lijiao	He Yixiang
Tianjin	Chen Weida	Hu Qili	Yan Dakai	Cao Xikang
Provinces				
Anhui	Zhang Jingfu	Zhou Zijian	Gu Zhuoxin	Yu Guangmao
Fujian	Liao Zhigao	Ma Xingyuan	Liao Zhigao	Cong Dezhi
Gansu	Feng Jixin (acting)	Li Dengying	Wang Shitai	Li Bin
Guangdong	Ren Zhongyi	Liu Tianfu	Li Jianzhen (f)	Su Kezhi
Guizhou	Chi Biqing	Su Gang	Xu Jiansheng	Ren Ying
Hebei	Jin Ming	Li Erzhong	Jiang Yizhen	Ma Hui
Heilongjiang	Yang Yichen	Chen Lei	Zhao Dezun	Zhao Xianshun
Henan	Liu Jie	Dai Suli (acting)	vacant	Shang Gan
Hubei	Chen Pixian	Han Ningfu	Chen Pixian	Zhang Xiulong
Hunan	Mao Zhiyong	Sun Guozhi	Wan Da	Liu Zhanrong
Jiangsu	Xu Jiatan	Hui Yuyu	Xu Jiatun	Hugan Zhaotian
Jiangxi	Jiang Weiqing	Bai Dongcai	Yang Shangkui	Xin Junjie
Jilin	Wang Enmao	Yu Ke	Li Youwen	He Youfa
Liaoning	Guo Feng	Chen Puru	Huang Oudong	Yang Dayi
Qinghai	Liang Buting	Zhang Guosheng	Ji Chunguang	Wu Shengrong
Shaanxi	Ma Wenrui	Yu Mingtao	Ma Wenrui	Hu Bingyun
Shandong	Bai Rubing	Su Yiran	Zhao Lin	Zhao Feng
Shanxi	Huo Shilian	Luo Guibo	Ruan Bosheng	Wang Fuzhi
Sichuan	Tan Qilong	Lu Dadong	Du Xinyuan	Zhao Wenjin
Yunnan	An Pingsheng	Liu Minghui	An Pingsheng	Zhang Haitang
Zhejiang	Tie Ying	Li Fengping	Tie Ying	Guan Junting
Autonomous regions				
Guangxi	Qiao Xiaoguang	Qin Yingji	Huang Rong	Zhang Xudeng
Nei Monggol	Zhou Hui	Kong Fei	Ting Mao	Huang Hou
Ningxia	Li Xuezhi	Ma Xin	Ma Qingnian	Huang Jingyao
Tibet	Yin Fatang	Ngapoi Ngawang Jigme	Yang Dongsheng	Xi Jinwu
Xinjiang	Wang Feng	Ismail Amat	Tomur Dawamat	Xiao Quanfu

SOURCES: Leadership, organizational, and provincial files of the National Council; *China Directory 1981,* Tokyo: Radiopress, 1980. Chart prepared by Christopher M. Clarke.

trade; in August he was elevated to full membership in the Central Committee. In August 1978 Yao was appointed minister of commerce, relinquishing the post in February of the next year to Wang Lei, who still holds the position.

Only a month before giving up his commerce portfolio, Yao was appointed director of the Communist Party Central Committee's powerful General Office. (Its previous director had been Wang Dongxing, also a member of the Standing Committee of the Politburo until early 1980.) By July 1979 Yao also had reached the summit of state power with his appointment as vice-premier and as secretary general of the State Finance and Economic Commission. The latter position, which again placed him directly under his old boss, Chen Yun, gave Yao day-to-day responsibility over China's current retrenchment program. His administrative and planning talents were further rewarded by his appointment to the recently re-established Party Secretariat in February 1980, and his elevation to the post of minister of the powerful State Planning Commission that August. As minister of the SPC, he is responsible for formulating China's long-range and five-year plans for economic development.

Yao's position as China's chief economic staff officer was bolstered in early 1981 with a third key appointment as deputy director of the newly formed State Council Economic Readjustment Office. In February, with the dissolution of the State Finance and Economic Commission, this office took over responsibility for guiding China's economic readjustment. Furthermore, as Yao's speech at the February meeting of the Standing Committee of the National People's Congress revealed, the responsibilities of the SPC would be enlarged, especially with respect to controlling capital construction expenditures.

Yao's elevation to the Politburo, possibly even to its Standing Committee, is expected to occur at the forthcoming 12th Party Congress.

"I myself have made revolution my whole life, and I am continuing to make revolution. I personally suffered a lot. As a party, we have learned much from our suffering. That is why we have the courage to make these reforms. We have made mistakes in the past. If we make any more mistakes, it won't be very good."

—Interview with *Time*, November, 1980

Wan Li

Wan Li, age 64, has a reputation in China as a no-nonsense administrator with a successful record in difficult and controversial assignments. Not surprisingly, Wan has received substantially increased responsibility and authority during the confused and contentious period of economic readjustment. Last August, Wan was appointed head of the State Agricultural Commission, and in late December became the top-ranked vice-premier among China's 13 vice-premiers.

As one of Deng Xiaoping's foremost protégés, Wan has endured ups and downs of his career that match those of his patron. According to his official biography, Wan was born in 1916 in Shandong Province. Other sources, however, indicate he was a student in France along with Deng, Zhou Enlai, Nie Rongzhen, and others. Since they were in France in the 1920s, Wan is either older than is officially admitted or the rumors of his overseas experience are inaccurate. It is fairly certain, however, that Wan was a student in Beijing during the 1930s, and he is known to have joined the Chinese Communist Party in 1936.

During the 1930s and 1940s, Wan served successively as a Communist Party secretary at the county level, prefectural level, and regional level in North China. He was active in guerrilla activities against Japan and in organizational and political-military support work during the civil war.

Wan began to accumulate his experience in economic affairs in 1949, when he served briefly in the Nanjing city government. By December 1949 he had moved to Sichuan Province, where he served as a member of the Financial and Economic Committee of the Southwest Military and Administrative Committee, and as deputy director of its Industry Department. These positions placed him respectively under Deng and Duan Junyi, who later succeeded Wan as minister of railroads, and now serves as Party first secretary of Beijing.

Shortly after Deng's transfer to Beijing in 1952, Wan was called to the capital and was appointed vice-minister of the Construction Ministry in November. (The ministry was charged with rebuilding China's war-damaged cities and industry.) Wan was active in giving lectures on construction at professional and political meetings, and in April 1955 was appointed concurrently as director of the State Council's Bureau of Urban Construction. In 1956, when the bureau was raised to ministry status, he relinquished his position as vice-minister of construction to become minister of urban construction. This position presented a major challenge in view of the extensive construction program envisioned in the Soviet-assisted first five-year plan. However, because of the organizational retrenchment accompanying the Great Leap Forward, the Urban Construction Ministry merged in 1958 with the Ministry of Construction.

Wan's increasing political importance

was recognized in February 1958, when he became a secretary of the Beijing Municipal Communist Party Committee, followed in August by his election as vice-mayor of Beijing. Between 1958 and 1966, he was involved in a variety of protocol and ceremonial activities in the nation's capital, and was often called upon to stand in for Beijing's mayor, Peng Zhen.

Like his patron, Deng, and his boss, Peng Zhen, Wan became embroiled in the Sino-Soviet rift. He was an especially outspoken opponent of Soviet revisionism, and a critic of such manifestations of Soviet-American "collusion" as the 1963 Nuclear Test Ban Treaty.

Wan's connections to officials who opposed Mao's plans for a great proletarian cultural revolution were costly. In December 1966 he was purged as a follower of Liu Shaoqi, Deng, and Peng, remaining out of sight for five years. However, in March 1971 Wan was elected a member of the Beijing Municipal Communist Party Standing Committee, making him one of the earliest-rehabilitated victims of the Cultural Revolution. In November 1974 he was elevated to the Secretariat of the Beijing Municipal Party Committee.

Wan's connection to Deng, and his reputation as a tough guy capable of handling tough assignments became obvious when Deng returned to power, and subsequently assumed day-to-day responsibilities at the State Council after January 1975. Wan was appointed minister of railroads with a mandate to end the chaos in the transportation sector following the Cultural Revolution. He was just beginning to be successful when Zhou Enlai died in January 1976. In March, Deng again fell from grace and Wan dropped in rank to first vice-minister of light industry and disappeared from public view.

After Mao's death in September 1976 and the arrest of the "gang of four" one month later, Wan again was appointed to a sensitive post with a mandate to neutralize and root out opponents of Deng's policies. In June 1977 he became Party first secretary and governor of Anhui, a province plagued by radical disruptions and a stronghold of the "gang of four." Wan's performance in this difficult assignment was rewarded in August 1977 with his election as a member of the Communist Party's Central Committee. When the Party reestablished a central Secretariat in February 1980, Wan was made a member of that organ as well.

Wan's talent for performing under pressure led to his return to Beijing in April 1980 and his appointment as vice-premier of the State Council. In August he was appointed concurrent minister of the State Agricultural Commission. Wan's commission is responsible for the difficult and sensitive tasks of carrying out market-oriented reforms in rural areas and increasing agricultural output.

Wan was again promoted in late 1980 to the position of first vice-premier. Wan was therefore responsible for the day-to-day operations of the State Council (as well as for his Agricultural Commission tasks). The fact that Deng played the same role under Zhou Enlai in 1975 and 1976 underlines the importance of Wan's position.

A further indication that Wan's power and prestige are increasing is his appointment early in 1981 to head the new State Council Economic Readjustment Office. In February 1981 this agency displaced the State Financial and Economic Commission as the organ responsible for supervising the implementation of China's policy of economic "readjustment, restructuring, consolidation, and improvement." Before its dissolution the Financial and Economic Commission was headed by China's economic czar, Chen Yun, and was the top-ranking State Council organ.

Wan's broad experience in diverse administrative posts contrasts with the backgrounds of most of China's other "rising stars." It also departs from the career patterns of China's two top "young" cadres, 62-year-old Premier Zhao Ziyang, and 67-year-old Party Secretary General Hu Yaobang. Thje former was a career provincial cadre until 1980; the latter's experience is confined to party affairs. Nor has either visited the US, whereas Wan led a delegation from Anhui Province to the US last June which was hosted by the State of Maryland.

As Deng Xiaoping's most successful lieutenants, Wan, Hu, and Zhao were hand-picked by Deng as successors. Whether Wan and his reform-minded colleagues can hang on to power after their mentor and protector retires remains to be seen.

Yuan Baohua

"China wants to import advanced technology and equipment from the US, but we must export a comparable amount of our products in order to cover costs and in order to achieve balanced trade."

—Interview with *The CBR*, November, 1979

Throughout his 25-year career in the central government, Yuan Baohua has formed ties with a variety of top leaders, notably Bo Yibo and Yu Qiuli. None of these links, however, seems to have damaged or compromised Yuan with other leaders. In fact, his promotion to minister of the State Economic Commission on March 6, 1981, seems to reflect the widespread respect of his colleagues. But little is known of the early career of China's new minister of the State Economic Commission. From 1950 to 1957, Yuan served as a financial and economic administrator in local government. In 1957, however, he moved to Beijing and began a steady and rather rapid rise in the national government.

In June 1957 however, he moved to Beijing where his talents as an economic administrator were given wider scope when he became assistant to the minister of metallurgical industry. He was promoted to vice-minister in September 1959 and in November

PRC Government

Premier
Zhao Ziyang
First Vice-Premier
Wan Li
Vice-Premiers
Bo Yibo
Chen Muhua (f)
Fang Yi
Geng Biao
Gu Mu
Huang Hua
Ji Pengfei
Kang Shien
Yang Jingren
Yao Yilin
Yu Qiuli
Zhang Aiping
Secretary General of the State Council
Du Xingyuan
Deputy Secretaries General
Wu Qingtong
Zheng Siyuan
Feng Jiping
Li Liyan
Commissions of the State Council (12)
State Agricultural Commission
Wan Li
State Capital Construction Commission
Han Guang*
State Economic Commission
Yuan Baohua*
State Energy Commission
Yu Qiuli
State Foreign Cultural Relations Commission**
Huang Zhen*
State Foreign Investment Control/Import-Export Commission
Gu Mu
State Machine Building Industry Commission
Bo Yibo
State Nationalities Affairs Commission
Yang Jingren
State Physical Culture and Sports Commission
Wang Meng
State Planned Birth Commission**
Chen Muhua (f)*
State Planning Commission
Yao Yilin
State Science and Technology Commission
Fang Yi

Ministries (38)
Agricultural Machinery
Yang Ligong
Agriculture
Lin Hujia*
Building Materials
Song Yangchu
Chemical Industry
Sun Jingwen
Civil Affairs
Cheng Zihua
Coal Industry
Gao Yangwen
Commerce
Wang Lei
Communications
Peng Deqing*
Culture
Zhou Weizhi (acting)*
Economic Relations with Foreign Countries
Chen Muhua (f)
Education
Jiang Nanxiang
Electric Power
Li Peng*
Finance
Wang Bingqian
Food
Zhao Xinchu
Foreign Affairs
Huang Hua
Foreign Trade
Li Qiang
Forestry
Yong Wentao
Geology
Sun Daguang
Justice
Wei Wenbo
Light Industry
Song Jiwen (acting)*
Machine Building I
Rao Bin*
Machine Building II
Liu Wei
Machine Building III
Lü Dong
Machine Building IV
Qian Min
Machine Building V
Zhang Zhen
Machine Building VI
An Zhiwen*
Machine Building VII
Zheng Tianxiang
Machine Building VIII
NA
Metallurgical Industry
Tang Ke
National Defense
Geng Biao*
Petroleum Industry
Kang Shien*
Posts and Telecommunications
Wen Minsheng*
Public Health
Qian Xinzhong
Public Security
Zhao Cangbi
Railways
Guo Weicheng
State Farms and Land Reclamation
Gao Yang
Textile Industry
Hao Jianxiu (f)*
Water Conservancy
Qian Zhengying (f)

Ministry-level Organizations (9)
All-China Federation of Supply and Marketing Cooperatives
Niu Yingyuan
Chinese Academy of Sciences
Fang Yi
Chinese Academy of Social Sciences
Hu Qiaomu
People's Bank of China
Li Baohua
State Council Finance and Trade Small Group
Wang Lei
State Council General Office
Wu Qingtong
State Council Office for Hong Kong and Macao Affairs
Liao Chengzhi
State Council National Defense Industries Office
Hong Xuezhi
State Council Office for Overseas Chinese Affairs
Liao Chengzhi

Bureaus of the State Council (26)
Bureau of Broadcasting and Television Industry
Li Yuanru
Central Meteorological Bureau
Rao Xing
Foreign Experts Bureau
Yang Fangzhi

addressed an industrial conference on the need to increase cooperation and improve coordination among several key ministries, including his own Ministry of Metallurgy.

Yuan's management abilities were rewarded in September 1960 when he was appointed vice-chairman of the State Economic Commission under Bo Yibo, a position he held until he was made director in 1963 of the newly created General Bureau for the Allocation of Materials. His primary responsibility there was to coordinate supply and demand for centrally controlled and allocated materials. When the bureau was elevated to ministry status in November 1964, Yuan became its minister. He remained minister of the Allocations of Materials Bureau until the Cultural Revolution.

Yuan's eclipse during the years of chaos was not lengthy. As early as 1969 he was being identified as a "leading member" of an unidentified department of the State Council. By April 1974 Yuan had become a vice-chairman of the State Planning Commission under Yu Qiuli. (During this time the State Economic Commission had merged with the SPC.) He was elected an alternate member of the Chinese Communist Party's 11th Central Committee in 1977, and was shifted to the SEC as a vice-chairman when the commission was reestablished in 1978. Yuan is also currently president of the Chinese Enterprise Management Association (CEMA), honorary president of the Society for the Study of the Distribution of the Means of Production, and chairman of the National Committee in Charge of Workers' Education.

Yuan led an 18-member delegation to the United States in November 1979 as a guest of the National Council for US-China Trade. In a *CBR* interview given then he indicated that chief among China's priorities was the need to strengthen technical training and management.

In 1980, Yuan seems to have taken a special interest in energy conservation. Since a major function of the SEC is to coordinate supply and demand of resources within the boundaries of China's yearly plan, Yuan's move into Kang Shien's job at this time is particularly interesting. Kang was appointed head of the SEC in early 1978, when the prospects for China's energy development were rosy; exports of oil were expected to finance the four modernizations. However, by 1981 it became clear that increased energy production is impossible in the near term. Kang, whose experience and expertise centered on the *production* of oil, has been shifted back to his old job as minister of petroleum. Yuan, taking his place, has vast experience in stretching supply to meet demand, and in efficient resource management. 完

Leadership

Foreign Languages Publication and Distribution Bureau
  Luo Jun
General Bureau of Aquatic Products
  Xiao Peng
Government Offices Bureau
  Li Mengfu
Religious Affairs Bureau
  Xiao Xianfa
Scientific and Technical Cadres Bureau
  Huang Wei (f)
State Administrative Bureau of Publishing
  Chen Hanbo
State Archives Bureau
  Zhang Zhong
State Building Materials Industry Bureau
  Bai Xiangyin
State Census Bureau
  NA
State Commodity Price Bureau
  Liu Zhuofu
State Bureau for Complete Sets of Equipment and Machinery
  Xie Beiyi
State Bureau of Construction Engineering
  Xiao Tong
State Bureau of Museums and Archæological Data
  Ren Zhibin
State Bureau of Supplies
  Li Kaixin
State Bureau of Surveying and Cartography
  Wang Dajun
State Bureau of Urban Construction
  Shao Jingwa
State General Bureau for Instruments and Meters
  NA
State General Bureau of Labor
  Kang Yonghe
State Metrology Bureau
  Li Leshan
State Oceanography Bureau
  Shen Zhendong
State Seismology Bureau
  Zou Yu
State Standardization Bureau
  Yue Zhijian
State Statistical Bureau
  Chen Xian

Special Agencies of the State Council (30)

Advisor's Office
  Liu Yi
Agricultural Bank of China
  Fang Gao
Central Broadcasting Administration
  Zhang Xiangshan
Committee for Chinese Language Reform
  Ye Lianshi
Committee to Coordinate Work for Children
  Kang Keqing (f)
Committee to Draft a Maritime Law
  He Chongsheng
Educated Youth Leading Group
  Wang Renzhong
Environmental Protection General Administration
  Li Chaobo
General Administration of Civil Aviation
  Shen Tu
General Administration of Customs
  Zhu Jianbai
General Administration of Exchange Control
  Bu Ming
General Administration for Industry and Commerce
  Wei Jinfei
General Administration of Travel and Tourism
  Han Kehua*
Office in Charge of Farmland Capital Construction
  Qian Zhengying (f)
Office in Charge of Nationwide Direct County Elections
  Cheng Zihua
National Academic Degrees Committee
  Fang Yi
New China News Agency (Xinhua)
  Zeng Tao
Nursery Work Leading Group
  Chen Muhua (f)
People's Construction Bank of China
  Wu Boshan
People's Insurance Company of China
  Feng Tianshun
Political Work Group
  NA
State Bureau for the Electronic Computer Industry
  Li Rui
State Committee on Authorized Strength of Government Organs
  NA
State Committee on Man and the Biosphere
  NA
State Committee on Survey of National Resources and Agricultural Zoning
  Wan Li
State Council Leading Group on the Tourist Trade**
  Chen Muhua (f)
State Council Readjustment Office
  Wan Li
State Council Office for the Reform of the Management System
  NA
State General Administration for the Inspection of Import and Export Commodities
  Zhang Ming
State Pharmaceuticals Administration
  Hu Zhaocheng

Chart prepared by Christopher M. Clarke.

*new appointment
**new agency
NA = not available

SOURCES: *Zhongguo Baike Nianjian*, Beijing: Zhongguo Da Baike Quan shu Chuban She, 1980; *Renmin Shouce 1979*, Beijing: Renmin Ribao Chuban She, 1980; *China Business Manual*, Washington, DC, National Council for US-China Trade, 1981; leadership and organizational files of the National Council.

Interview with David S. Tappan, Jr.

". . . we seem to be our own worst enemy in restricting sales of the kinds of technology for which we have the greatest comparative advantage."

Nicholas H. Ludlow

David S. Tappan, Jr., chairman of the National Council and vice-chairman of Fluor Corporation, told the House Subcommittee on Asian and Pacific Affairs on June 3 that it is time the US treat China on its own right, separately from Soviet bloc nations. In an interview with The CBR*'s Editor-in-Chief Nicholas H. Ludlow, he also called for the removal of outdated impediments to business with the PRC so that America's trade with China can reach its full potential.*

CBR: Why are you calling for Congress to take action now?

Tappan: This year is the tenth anniversary of the resumption of US–China trade. In the past decade, US business has been playing catch-up in trying to develop trade with China.

China is going through a period of economic readjustment. This pause serves to emphasize the timeliness of our taking corrective action now and begin treating our relations with China in their own right rather than in an East–West context. If we take advantage of the opportunity presented by this period of readjustment, we will prepare the groundwork for significant future growth in our economic relations with China.

Earlier this year, together with other members of the Board of Directors of the National Council, I met with key members of the new cabinet here in Washington and with Chinese leaders in Beijing to present this position. I found that there was understanding and general agreement between American and Chinese leaders with our view of where we are and what is needed to develop the full potential of US–China economic relations.

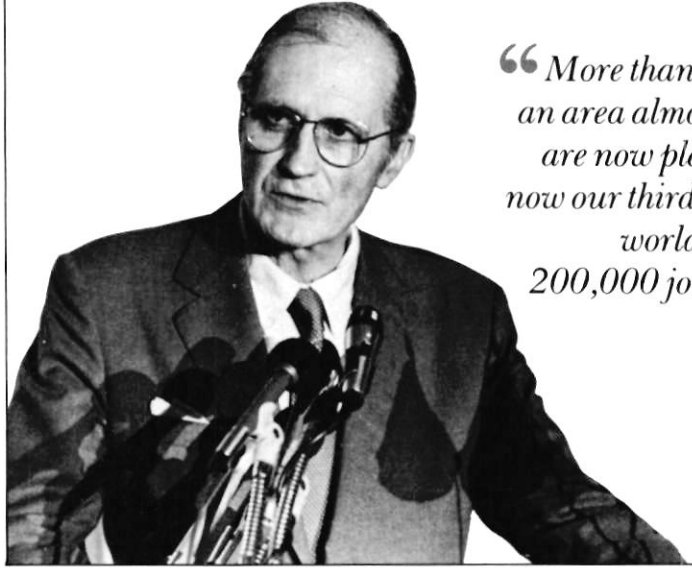
CBR: How well is the US doing in the China market?

Tappan: As an American businessman I am particularly concerned with the competitiveness of the United States in China, now one of America's top export markets. As of the first quarter of 1981, China (after Japan and South Korea) is our third-largest market in Asia.

But the US still has a small share of China's total trade—only 12 percent last year—despite normalization of political and economic relations with China in 1979. And the majority of our exports to China—about 60 percent—have been agricultural products.

Ironically, due to the baggage of our legislative past, we seem to be our own worst enemy in restricting sales of the kinds of technology for which we have the greatest comparative advantage. The Japanese and Europeans are running rings around us when it comes to approving sales of high-technology items to the PRC.

It's important for us to act now in removing the obstacles to our trade with China while the Chinese, during their



"More than 11 million acres of American farmland, an area almost twice the size of the State of Maryland, are now planted for the China market, and China is now our third largest agricultural export market in the world. We estimate that between 150,000 and 200,000 jobs in this country can be attributed to new trade with China."

—Secretary of Commerce Malcolm Baldridge at the National Council's annual meeting, June 4, 1981

readjustment program, are building a base for long-term trade and economic activity.

CBR: What needs to be done to remove impediments to business with the PRC?

Tappan: I wholeheartedly endorse President Reagan's policy to further the normalization process in our relations with China. And yet many anachronistic laws remain that directly or indirectly impede exports to China and imports from the PRC. These were designed to hinder trade with the Soviet Union and its satellites, of which China was once considered one.

For example, the US Trade Act of 1974 and the Jackson-Vanik Amendment are laws that impede US–China trade, as does the Trade Agreement Extension Act of 1951, Section 11, which prohibits the entry into the US of seven furs from China. This law was enacted when Chinese and American troops were fighting in Korea.

The Foreign Assistance Act of 1961 prohibits US assistance to countries dominated by "international communism"—which was clearly meant to be associated with the Soviet Union at the time it was enacted.

These restrictions on trade with China represent policy of another, past era, and should be lifted.

CBR: What about export controls?

Tappan: This question really concerns the proper implementation of laws already enacted. The purpose of the Export Administration Act of 1979, to quote the act, is "To provide authority to regulate exports, to improve the efficiency of export regulation and to minimize interference with the ability to engage in commerce." As a businessman, I endorse that purpose.

The problem is that these policies have not been carried out. Interference with our ability to engage in trade has *not* been minimized in all too many cases. Last year a number of controls were taken off exports to the People's Republic of China, and the decontrol schedule was made known to both US businessmen and to the Chinese.

But the message does not seem to have been understood by the bureaucracy responsible for implementing these policies. As a result, in a large number of export-control cases, applications that appear to comply with the new policies have been logjammed, impeding the growth of our technology trade with the PRC.

We are as interested as Congress itself in seeing their policies actually carried out. We want minimal interference with trade.

Indeed, as businessmen, we see no reason to restrict our ability to trade with China or any other country unless there are clear and demonstrable national-security reasons for restricting that trade.

CBR: You mentioned logjammed export-control applications—could you give some examples?

Tappan: Certainly. One company has had pending for over a year a license request to sell 24 microcomputers. Despite the fact that the company was given licenses in 1979 to ship China these same machines, they have yet to receive either approval or disapproval. According to the company, the Defense Department is raising questions. As a company spokesman says, "It's a case of turning over every small stone in the stream to find a reason for denying the license."

Another firm received a "negative consideration" from OEA in August 1980 on a May 1979 application to sell seismic data-processing computers to a Chinese ministry. The company has appealed, but has heard nothing further from Commerce. The company complains: "By the time we get an approval, the prices and technology will have changed so much we will have to renegotiate the contract."

A third company has had a license application pending since August 1979 for the sale of a microprocessor to a Chinese institute. The company has already obtained licenses to sell the same equipment to three other institutes in China. DOD is reportedly holding up this license.

CBR: You said earlier that we should "begin treating our relations with China in their own right"?

Tappan: Certainly. It is time that we were realistic. We should treat China in its own right. We should not treat the PRC as a member of the Soviet bloc, nor particularly as a communist country, nor particularly as a developing country. It is not productive to think of China in either an East–West or North–South context.

We should treat China as China—for the country that it is, in terms of the whole range of interests it represents for us.

CBR: Are there other hindrances to our trade with the PRC?

"It is not productive to think of China in either an East-West or North-South context. We should treat China as China—for the country that it is, in terms of the whole range of interests it represents for us."

—National Council Chairman David S. Tappan, Jr., before the House Subcommittee on Asian and Pacific Affairs, June 3, 1981

Tappan: Yes, another hindrance to Sino–US trade is the lack of coordination of our trade relating to China. This is a practical question.

A government bureaucrat, when confronted by confusing signals from the Administration, Congress, and the regulations that he has to carry out, will almost inevitably choose a cautious approach.

When a bureaucrat sees legislation, such as the Export Administration Act, with language encouraging relations with China, then different language or other legislation that discourages relations with China, what is he to think?

When, for example, the Foreign Assistance Act of 1961 refers to the "communist bloc," is he supposed to think the bloc includes both the Soviets and Chinese?

The Agricultural Trade Development and Assistance Act limits the sales of agricultural commodities and food assistance to "friendly countries," or those countries not "dominated or controlled by a government or organization which also controls the world communist movement." That's clearly an anachronism in today's world.

CBR: You mentioned the Jackson-Vanik Amendment. How does that affect trade with China?

Tappan: The Jackson-Vanik Freedom-of-Emigration Amendment, Section 402 of the US Trade Act of 1974, was aimed primarily at the Soviet Union. But it lumps all nonmarket nations together, putting China in the same bloc, and sends confusing signals to US government officials administering the act. The complex provisions of the amendment also present obstacles to trade with the PRC.

Importers are particularly affected by the amendment, since it requires that the president review China's emigration practices annually in order to allow China to continue to receive most-favored-nation tariff treatment, and US government credits and investment guarantees.

The annual waiver requirement causes uncertainty among US companies as to the continuation of MFN from year to year. Importers normally conclude contracts for purchases from China from six to 18 months in advance of delivery of the goods.

Furthermore, a US company negotiating a countertrade agreement, whereby American technology or equipment is paid back with Chinese manufactured products over a period of years, is faced with an even more serious dilemma. Such long-term arrangements may depend heavily on the continuation of MFN as well as OPIC insurance.

If China were not to be exempted from the provisions of the Jackson-Vanik Amendment, at least a multiyear waiver for two or three years would lend more continuity and ensure a more stable environment for the growth of Sino–US trade.

CBR: Would you treat China as a beneficiary nation so that it is not discriminated against on dumping, technology exports, PL-480, or development assistance?

Tappan: Absolutely. There is no reason to discriminate against China in these matters. We should treat China in the same way we do India.

CBR: Would you favor treating China as a friendly developing country so that it qualifies for preferential tariffs (GSP)?

Tappan: Yes, I see no reason why China, as the world's largest developing country with a GNP per capita of $253 (1979) should not receive GSP from the United States. China has received GSP treatment for many years from Japan, Australia, and almost every industrialized nation in Europe.

CBR: What are our long-term trade prospects with China?

Tappan: The outlook is good. It could be even better if the impediments are removed. Our trade with China has doubled each of the last three years. We'll have record trade with the PRC again in 1981, probably ranging between $5 and $6 billion. We expect our PRC trade to reach at least $10 billion by 1985, and as much as $20 billion annually by 1990 or so. But to reach this potential, we must completely normalize our trade with the Chinese.

We anticipate that agricultural exports will continue to dominate our sales to China in the foreseeable future, but expect technology exports, particularly those related to coal, offshore petroleum, and transportation, to increase markedly in the late 1980s.

CBR: How do you rate China's long-term political and economic stability?

Tappan: I'm not a political expert on China, but I feel very positive about China's economic prospects even though we may see only limited growth over the next two or three years. The PRC has exerted unusual discipline in cutting back plant projects such as Baoshan, and in reducing its budget deficits. China's planners have emphasized that in the future, they intend to move *slowly* in order to move faster later. The Chinese are determined now to proceed from the *realities* of their situation, rather than from idealistic plans and objectives. In the long-term this must be positive, for them and for us.

Chief US High-Technology Exports to China in 1980

- Oil-drilling equipment of all kinds, including $25 million worth of rock drilling bits, and $17 million of drilling machinery.
- Specialized industrial equipment including steam and gas turbines and generators, refrigerating and freezing equipment, and metalworking machinery for such tasks as milling, forging, and gear cutting.
- Agricultural equipment such as disc plows, tractor cultivators, harrows, harvestors, planting and seeding machines.
- TV and communications equipment including telex machines, radio transmitters, and TV receivers.
- Transportation equipment including trucks, barges, aircraft, rail cars, buses, passenger cars, tractors, and cranes.
- Medical equipment including pacemakers, dental equipment, as well as X-ray and radiation apparatuses.
- Specialized instruments for geophysical surveys, strength testing, and chemical and physical analysis.
- Computer and other electronic equipment, including more than $20 million worth of digital and analog computers, terminals, and printers.

In addition, technology transfer arrangements in the form of licensing and compensation trade also increased substantially in 1980, particularly in energy-related fields such as coal-washing, and thermal-power-plant boilers and generators.

China's Agricultural Imports

Though grain sales lead the list, the sales of fertilizer, seed processing equipment, and agricultural chemicals are burgeoning too

Karen Berney

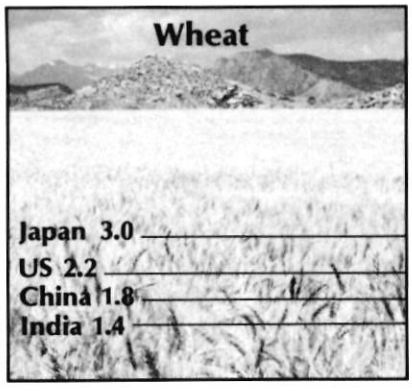
American agribusiness can look forward to increasing commercial opportunities in the PRC, given agriculture's secure position as Beijing's top development priority. At present, grain and cotton represent the lion's share of US agricultural exports to China. But with the Washington-Beijing grain pact, which stabilizes grain sales at 6–9 million tons during 1981–84, agricultural chemicals, forestry products (*see* p. 43), and specialized farm machinery have emerged as the fastest-growing agricultural markets in China for US firms. These categories accounted for nearly $400 million, or 11 percent of total US exports to the PRC last year. And prospects seem even brighter for 1981; first quarter US-China trade statistics show US firms continuing to penetrate these budding markets with sales in excess of $100 million.

Agricultural Chemical Market Expands

Fertilizer and other agricultural chemicals are among the rapid climbers in US exports to China. US companies won $150 million in sales in 1980, more than tripling the amount of business done a year ago. This gave the US about 30 percent of Beijing's total purchases of foreign fertilizers. Japan's share was about 50 percent; the remaining business went to Canada and the EEC (led by Italy).

In terms of volume, China's total fertilizer imports in 1980 consisted of more than 1.3 million tons of nitrogen; 560,000 tons of phosphate; and 360,000 tons of Canadian potash. These were added to China's own output of these fertilizers of 9.9 million tons, 2.4 million tons, and 20,000 tons,

CROP YIELDS
(Metric tons per acre, 1980/81)



Source: US Department of Agriculture, Foreign Agricultural Service.

Artwork by John Yanson

respectively, to reach an average fertilizer application of 127.8 kg. per hectare. That marks a 17 percent increase over 1979. By contrast, current fertilizer use per hectare is 398.5 kg. in Japan, 149 kg. in the US, and 29 kg. in India.

In the years ahead China is expected to buy increasing amounts of phosphate fertilizer to fortify plant roots, and decreasing quantities of urea, a nitrogenous fertilizer that strengthens leaf structures. The latter market is shrinking because China soon will be self-sufficient in the production of urea.

During the 1970s Beijing imported 13 sets of ammonia plants (eight were built by Pullman Kellogg, now the M. W. Kellogg Company) with a combined output capacity of 6.24 million tons of urea a year. Also reducing China's dependence on imported urea is its growing use of natural sources of nitrogen. In one technique, Chinese farmers aid rice fertilization with azollas, an aquatic fern that uses blue algae in its leaves to produce nitrogen.

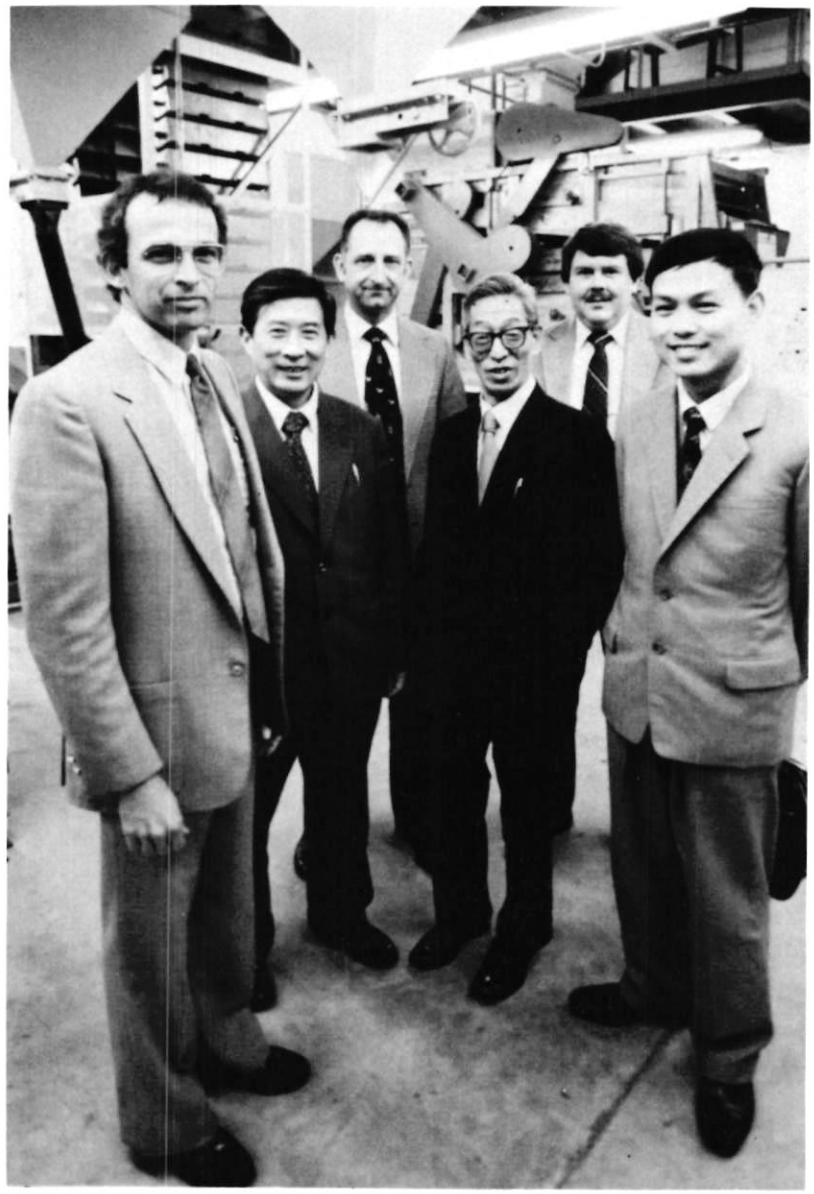
Japan, China's chief source of nitrogenous fertilizers, already is feeling a pinch. For the first half of 1981, the Japan Ammonium Sulphate Export Company contracted for deliveries of 400,000 tons of urea and 200,000 tons of ammonium sulphate, down by 12.5 percent and 66 percent, respectively, from the same period last year.

The United States' Hold on the Phosphate Market

Since Beijing entered the world market for phosphate fertilizers in 1978, the US has been the PRC's sole supplier. Last year's sales reached a record high of 392,000 tons of diammonium phosphate and 168,000 tons of concentrated superphosphate fertilizer. Beijing annually imports from Morocco between 150,000 and 200,000 tons of unprocessed phosphate rock, which is then ground up and placed directly in the soil. In an untreated form, phosphate is a less effective fertilizer.

Though China has substantial phosphate deposits of uneven quality in the provinces of Hubei, Hunan, Guangdong, Jiangsu, Yunnan, and Guizhou, very few areas have been subject to exploitation. Only one phosphate mine in Heilonjiang Province, with a yearly capacity of 100–300 thousand tons, is known to exist. On numerous occasions the US engineering firm Davy McKee has proposed designing and constructing a phosphate fertilizer plant to tap Hubei's reserves located 150 miles west of Wuhan. But such plants require a five-year construction cycle and must rely on oil or natural gas for feedstock. Many chemical fertilizer plants recently have been forced to operate at less than full capacity due to shortages of oil and gas, according to one Chinese report.

Thus, the US is in a position to fill the gap between China's phosphate demand and supply for the foreseeable future, with sales growing by an estimated 10–20 percent a year. But US businesses hoping to enter the market face stiff competition. Under the 1918 Webb-Pomerene Act allowing US industries to form special associations to boost exports, eight US phosphate producers in 1975 organized a nonprofit marketing organization to negotiate deals with foreign buyers. Called the Phosphate Chemical Association (PHOSCHEM), the New York group is made up of Agrico Chemical-Williams; American Cyanamid; Beker Industries; Freeport Minerals; First Mississippi Corp.; International Minerals; Texasgulf Inc., and W. R. Grace & Co. Proceeds from its business flow back to



Representatives of the China National Seed Corporation visited the US in March. Shown here, at the Alabama Crop Improvement Association's Seed Technology Center are, from left: Gary Billups, Blount World Trade International Projects Director; Li Meisen, CNSC Engineering Representative; Dr. Robert Burdett, ACIA Director; Ma Ka Rang, CNSC Vice Manager; Steve Key, Blount/mix-mill Regional Manager; and Ma Zhapu, CNSC Representative.

member firms, which are paid according to their percentage contribution to PHOSCHEM's working inventory. Agrico Chemical-Williams is the largest member, accounting for 30 percent of total US phosphate fertilizer production.

PHOSCHEM has a hefty chunk of the US export market; its yearly contracts account for about one-half of America's worldwide phosphate fertilizer sales of 3.5 million tons. With respect to China, PHOSCHEM members cashed in on 80 percent of last year's transactions.

Due to what it describes as "intensive marketing efforts," the association maintains an informal and fruitful business relationship with Beijing's buying arm, the China National Chemicals Import and Export Corporation (SINOCHEM). Having proved itself a reliable and competitive supplier, PHOSCHEM hopes to snatch a large portion of SINOCHEM's future orders.

But the 22 other US phosphate manufacturers are not intimidated by PHOSCHEM's China connection. "PHOSCHEM is a major factor," says a businessman at Transmeridian, a West Coast fertilizer trading company, "but [it] isn't driving potential newcomers out of the market;...there are many ways to sell to China. The company is now talking to SINOCHEM's customers in Northern China about the possibility of supplying phosphate and other fertilizers purchased from South Korean producers. Low transportation costs make the three-way partnership an attractive alternative to buying American-made fertilizers.

Transmeridian now sends people to the Guangzhou trade fairs to meet SINOCHEM representatives who can put them in touch with the proper purchasing authorities.

Insecticides and Fungicides

People within the US insecticide and fungicide industry wryly assert that the most promising Chinese market lies in sparsely populated areas, where laborers cannot be spared to remove insects and weeds by hand. One company representative claims to have seen a small troop of farmers in Shanxi Province spend 20 to 30 days weeding one acre of wheat. Beijing is well aware that increasing food production by 3–4 percent a year (10–15 million tons) requires nothing less than the introduction of a complete scientific package: resilient seeds, chemical fertilizer, water control, insecticides, and fungicides.

High costs and sophisticated manufacturing methods have kept China's production of synthetic insecticides and fungicides low. Consequently, biological-control methods are used wherever feasible. These focus on introducing species of insect predators and parasitoids as well as a variety of plant pathogens. For example, as much as 20 percent of the total rice acreage in Guangdong Province is protected by the release of trichogramma, an adult female wasp that destroys the eggs of pests. This program is supplemented by the herding of insect-eating ducks through rice fields, a practice that is reported to reduce the population of rice pests by 65–70 percent.*

Chinese insecticide production currently stands at 537,000 tons a year, mainly of organophosphorous compounds formulated in the US 20 years ago. Those insecticides most widely applied today include trichlorofon (Dipterex), dichlorovos (DDVOP), dimethoate (Rogor), and derivatives of methyl parathion. The volume of fungicide production is unknown. Visiting plant protection specialists report the common use of Bavistin in the lower

New Markets for Agricultural Technology

Blount Inc. has sold a $3 million contract to design and equip a seed-processing plant in Ningxia Province. The firm heeded Beijing's new agricultural development strategy of channeling investments into local projects that yield quick returns.

The seed sector, involving breeding, harvesting, washing, and milling know-how, is one of the largest untapped markets in China today. Says a Blount spokesman: "Each province literally needs hundreds of seed processing plants, and we're in the process of negotiating for some more with the China National Seed Corporation, the Ministry of Agriculture, and MACHIMPEX." As in the case of heavy agricultural machinery, Blount believes China will purchase a few seed processing plants from different manufacturers, evaluate equipment performance, and then choose a partner for a long-term licensing agreement or joint venture.

It is also an auspicious time for US exporters of irrigation equipment. Last year's flood and drought calamities set alarm bells ringing in Beijing, since powered irrigation and drainage facilities only extend over 18 percent of China's 102.8 million arable hectares.

Lindsey Manufacturing Company, a subsidiary of Dekalb AgResearch, reports receiving more than 50 handwritten letters from Chinese officials requesting information on its fully automated lateral-move and central-pivot irrigation systems. In the fall of 1978, Lindsey contracted with MACHIMPEX for five lateral-move and four central-pivot systems worth $500,000.

Business opportunities will also accompany the World Bank's proposed irrigation and drainage project on the North China plain. In September, a bank team will visit 11 Chinese counties in Anhui, Hebei, Hunnan, Jiangsu and Shandong provinces requesting an estimated $100 million for equipment to irrigate 325,000 hectares of farmland. By the end of the year, the bank is expected to be negotiating loan documents, after which China will dispatch survey delegations to visit the US and other foreign suppliers.

US manufacturers of farm machinery are encountering less success. Since 1977, John Deere and International Harvester have grossed $6 and $15 million, respectively, in sales of agricultural machinery to China. Together with Ford, they also have been competing for a deal to license the production of tractors and farm implements in China. Those discussions, like Beijing's original goal of 80 percent mechanization by 1985, are now languishing. Meanwhile, Ford Motor Company has initiated another type of business. "The name of the game is foreign exchange," said a Ford executive, whose firm is buying $2 million worth of tractor parts from the Jiangxi Tractor Works this year in the hope of concluding a co-assembly agreement for 60 hp tractors in 1982.

Changjiang River area for control of wheat scab, and the application of bordeaux mixtures for control of potato and tomato blight.

Two US agricultural chemical companies with long track records in China are FMC and Diamond Shamrock Corp. For the past few years, FMC has been selling $5–$25 million worth of Furadan insecticide a year. Furadan has met with such success in increasing Chinese rice and maize yields that Beijing, at the urging of FMC, is now shopping for a US partner to equip and design a formulating facility to process Furadan into easy-to-handle granules. This would tie FMC into a long-term supply arrangement for both technical data and raw Furadan.

Monsanto, which has sold China small amounts of two herbicides—Lasso and Avadex for weed and wild-oat control in wheat—is also exploring the possibility of exchanging its formulating know-how for the right to sell its basic products in China.

Diamond Shamrock attributes its success to the indefatigable efforts of its China representative John Kamm, who is now managing director of Diamond Shamrock China, Ltd.

Diamond Shamrock's biggest Chinese customer is the Ministry of Chemical Industry, which buys more than $20 million worth of industrial chemicals a year. The company's marketing strategy has been to promote agricultural chemicals directly benefitting China's export crops such

Table 1. Major US Agricultural Exports to the PRC
(million US dollars)

Commodity	1977	1978	1979	1980	First quarter 1981
Grain*	7.53	403.31	625.26	1,457.35	434.52
Cotton	17.51	157.27	356.76	696.97	314.11
Agricultural chemicals	8.07	47.05	60.4	181.87	45.81**
Of which:					
Diammonium phosphate fertilizer	—	19.74	3.72	85.16	24.83
Urea fertilizer	8.07	15.17	27.17	35.03	2.97
Concentrated superphosphate fertilizer	—	3.79	13.70	29.54	11.72
Other insecticides	—	2.50	3.61	25.55	NA
Organophosphorous insecticide	—	3.91	6.29	3.84	1.52
Fungicides and herbicides	—	1.94	5.91	2.75	1.77
Paper products and logs	4.69	4.50	5.40	234.79	57.12
Leather	—	—	0.90	28.60	16.50
Cattle hides	0.021	0.19	1.80	10.37	1.78
Agricultural machinery	—	3.40	4.73	7.50	0.87
Total	37.82	615.72	1,055.25	2,617.45	870.71
Percent of total US exports to China	22.1	74.8	61.5	69.8	73.8

*Includes wheat, corn, soybeans, and soybean oil.
**Includes $3.0 million worth of fertilizers not specified by type.

SOURCE: National Council for US-China Trade, *Sino-US Trade Statistics*, 1977, 1978, 1979, and 1980.

Chart prepared by Karen Berney.

Table 2. Diamond Shamrock Takes Its Case to the Chinese Farmer
Demonstration Results of Using Daconil 2787 Fungicide on Chinese Crops in Guangdong Province

Crop	Rate of application (kg./hectare)	Cost of treatment* (yuan)	Value of crop (yuan/kg.)	Yield increase over untreated crop (kg./hectare)	Total value of crop-yield increase (yuan)	Return on Investment (value of crop increase minus cost of Daconil) (yuan/hectare)
Rice	2.0	¥40	¥0.3	500	¥150	¥110
Peanut	1.7	¥85	¥0.5	1,500	¥810	¥725
Soybean	2.5	¥50	¥0.5	450	¥225	¥175
Tomato	3.4	¥238	¥0.2	20,000	¥4,000	¥3,762

*Based on an enduser price of ¥10 per kg. of Daconil 2787.
SOURCE: Diamond Shamrock Corporation.

as tea and peanuts. Its most recent success has been the marketing of its fungicide, Daconil 2787.

Developing a Market

Generating a demand for new agricultural chemicals in China normally begins with a company providing free samples to the Ministry of Agriculture's Institute of Agro-Chemical Control. Foreign companies also can send samples directly to provincial research institutes. In 1980, the Guangdong Entymology Institute, for example, screened between eight and 15 foreign pesticides (among them *Banne*, *Mipo*, *Calceron*, and *Topsin*). If the product is judged worthy of an efficacy test, the institute arranges for a testing site at one of its agricultural extension centers in China. The participating company is charged about $700 per crop treatment to subsidize the costs of land, facilities, researchers, and an interpreter. Providing that the test is successful, the next step involves determining application rates and costs under normal weather and field conditions.

Diamond Shamrock tested Daconil 2787 on a variety of crops in Guangdong Province. Results showed it to be superior to commonly used Chinese fungicides in terms of cost, ecological safety, and increased yields (*see* Table 2.)

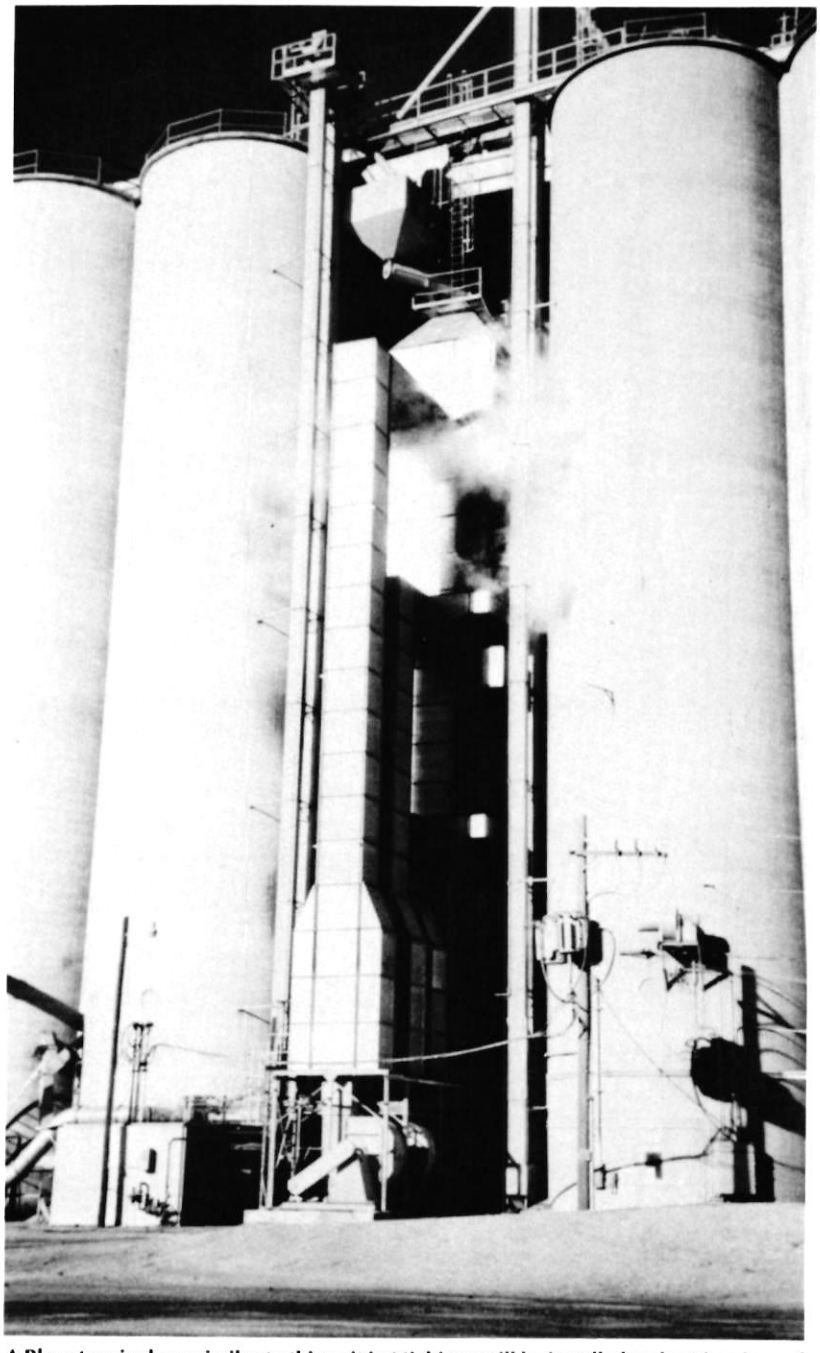
News that a foreign agricultural chemical scored improvements in cultivating a particular crop on a small test site in China will not necessarily be broadcast to other relevant endusers. Therefore, in June, Diamond Shamrock launched another Daconil 2787 experiment on peanuts, this time for a Shangdong audience. As in Guangdong, the aim was to develop data that will translate into product demand.

A variety of pests and crop diseases continues to jeopardize China's food production (*see* Table 3). Hence, many US agricultural chemical companies see a market potential for such products as *Nudrin* and *Azodrin* pesticides, and *Bladex* herbicide (Shell Chemical Company), *Tecto* fungicide (Merck Sharp & Dohme International), *Weedar 64*, *Weedar 64-A*, and *Amiben* herbicides (Union Carbide), *Ramrod* herbicide (Dupont and Monsanto), *Carbofuran* insecticide (FMC), *Avenge* and *Stomp* herbicides (Cyanamid Americas Far East), *Goal* and *Blazer* fungicides (Rohm and Haas), and *Busan 30* seed treatment fungicide (Buckman Laboratories Inc.). The latter three firms are in the process of testing their products in China, but remain skeptical about the prospects for immediate sales.

Echoing an opinion shared by others, a marketing specialist at Rohm and Haas views Beijing's lack of foreign exchange and a detailed blueprint for upgrading the agricultural chemical industry as the main stumbling blocks to future sales.

Lack of Patent Protection

An even deeper cause of concern is the fact that the PRC's draft patent law does not extend protection to any chemical products (*see The CBR*, May–June 1981, p. 39). "With at least a seven-year R&D investment to cover on new technology, we can't afford to sell state-of-the-art chemicals in countries not honoring patents," claimed a Mon-



A Blount grain dryer similar to this unit in Michigan will be installed at the Ningxia seed processing facility.

Correction: In *The CBR*, May–June, 1981, p. 57, the announcement concerning possible Israeli arms sales to China is erroneous.

santo spokesman.

The fear is legitimate. Union Carbide discovered, much to its dismay, that its insecticide *Sevin* (carbaryl) was being promoted for export by SINOCHEM at a Guangzhou fair a few years back. *Sevin* is China's main insecticide used for cotton. Rohm and Haas also worries about the erosion of its technological advantage, should Beijing happen to disclose unprotected pre-sales information on its product to competitors (*see The CBR*, May–June, 1981, p. 58).

But copying a published patent under controlled laboratory conditions is hardly tantamount to designing the methods needed to mass produce an environmentally sound agricultural chemical, argues a scientist at Diamond Shamrock. China's attempt to commercially produce Dow Chemical's pesticide, *N-Serve*, in the late 1970s failed miserably, owing to the compound's complex production process. Woes over patent protection, he indicated, do not warrant giving up on China, especially when considering its need to use more cost-effective and up-to-date agricultural chemicals.

*For a detailed account of current plant protection methods and policies in China *see* Robert L. Metcalf and Arthur Kelman, "Plant Protection," in Leo A. Orleans' *Science in Contemporary China* (Stanford, Calif.: Stanford University Press, 1980). pp. 313–341.

Table 3. China's Major Pest and Plant Diseases

Crop*	Region	Major Pest	Major Plant Disease
Rice	South and South-Central China	Green leafhopper, brown planthopper, stem borer, leaf roller, whorl maggot, case butterfly, and thrips	Blast, bacterial leaf blight, sheath blight, and helminthosporium
Wheat	Northeast China	Aphids and army worm	Stem and leaf rust, glume blotch, fusarium wilt, septoria leaf blotch, bunt, and smut
Wheat	Beijing vicinity and Northwest China	NA	Stripe, stem and leaf rust, leaf spots, scab, barley yellow dwarf virus, and helminthosporium
Wheat	Nanjing vicinity and East China	NA	Stem rust, scab, and septoria nodorum
Wheat	Guangdong Province and South China	NA	Mildew, leaf and stem rust, scab, cribberella zeae, and fusarium wilt
Corn	Northeast China	European corn borer, army worm, grubs, aphids, and stackborer	Northern and southern leaf blight, head smut, ustilago zeae, kabatiella zeae, gibberella zeae, and helminthosporium
Millet	Northeast China	NA	Rust, powdery mildew, and head smut
Oilseeds	Northeast and North-Central China	Soybean pod borer, aphids, and pod borer	Soybean mosaic and stunt, bud blight, target spot, bacterial leaf blight, and peanut rust
Fruits	Northeast China	Woolly aphids	Scab, alternaria, valsa trunk canker, scar skin, and apple leaf mosaic
Cotton	Northern China	Boll worms and aphids	Cotton rust, damping off, phyllostica, alternaria and angular leaf spot, anthracnose, ascochyta blight, verticillium wilt, and boll rots

*The following pathogens are of major concern to Chinese vegetable growers: erwinia aroideae, peronospora parasitica, brassica virus-2, tobacco and cucumber mosaic, alternaria solani, pseudoperonospora cubensis, erysiphe cichoracearum, and colletotrichum lagenarium.
SOURCE: Data compiled by Edith Terry (Based on the *report of the US Plant Studies Delegation to China*, September, 1979).

China's Forestry Sector:

Growing Opportunities for the US

Already the third largest export market for US timber products, China may offer greater sales potential for softwood logs, wood pulp, and paper manufacturing technology

Karen Berney

Beijing's imports of more than $234 million worth of US paper, pulp, and logs last year signaled its turning to the American forestry products industry for help in offsetting decades of poor land management. China's goal is to increase its total forested area from the current 12.7 percent of total land area (compared to 33 percent in the US) to 20 percent by the close of the century. But since forests grow slowly, experts predict that major payoffs from China's "greening" efforts lie at least 50 years away.

While China awaits increased timber harvests, US papermakers can count on steadily rising sales. Domestic demand by all users of paper, especially newspaper and book publishers, is growing rapidly. Moreover, as Beijing boosts exports of textiles, handicrafts, canned foods, and other consumer products, more and more paper will be needed to wrap, pack, and box goods headed for Western department stores.

Beijing placed its first order for softwood logs from the states of Washington and Oregon last year, making China the third largest foreign customer for US timber producers. A total of 88 million board-feet were delivered; Chinese purchases during 1981 are expected to climb to between 150 and 200 million board-feet. These logs are being used to support priority transportation projects such as bridges, bulkheads, and railway ties. Chinese construction planners also hope to minimize the use of energy-intensive building materials like cement and bricks by using wood as a partial substitute.

Aiding the Paper Industry

The scarcity of wood in China has played havoc with the paper and pulp industry. Without the fiber to expand production, Beijing has been forced to delay its plans to build new plants. Current emphasis is on introducing cost-saving technology and equipment to renovate China's most important paper mills.

Specialty chemicals represents one such technology. Early this year, Buckman Laboratories, Inc. of Memphis submitted free samples of its corrosion-control chemicals to the Chinese Paper Institute of the Ministry of Light Industry. The chemicals are now undergoing performance tests at the Guangzhou, Mingfeng, and Hangzhou Paper Mills. If the results are positive, Buckman is confident of negotiating a long-term supply agreement with the China National Light Industrial Products Import and Export Corporation.

Swedish manufacturers who sponsored a Beijing conference on the paper industry in early 1980 see untapped sales opportunities in a number of areas: cooking and recovery methods for straw pulping; paper-coating techniques and equipment; hydrocyclone cleaners for treatment of pulps; portable moisture meters for identifying defects in paper machinery; and computerized testing systems for improved quality control.

So far, pollution control has received cursory attention in China's pulp and paper mills, where foreign visitors have witnessed the dumping of untreated effluents. The Ministry of Metallurgical Industry builds electrostatic precipitators designed along the lines of German models, but of the total 400 known to be operating, only two have been installed in paper mills (*see The CBR*, Jan.–Feb., 1981, p. 52). However, the recent levying of financial penalties for noncompliance with China's 1979 environmental protection law is bound to heighten interest in low-cost pollution control devices.

Reaching the Forestry Industry

In coming years, China also will need Western technology to transform its obsolete forestry-products sector. Commercial development of state-owned forests (which comprise about one-half, or 61 million hectares, of China's total forested areas) is handled by the Ministry of State Farms and Land Reclamation. Its foreign transactions are conducted through MACHIMPEX, which negotiated a $7.5 million contract with International Harvester last

year for skidding, yarding, and loading machines.

The Ministry of Forestry's National Forestry Machinery and Equipment Corporation is responsible for handling foreign trade matters involving forests managed by provincial and municipal governments. The trading group maintains influential branch offices in the major wood-processing centers of Beijing, Shanghai, Guangzhou, and Fuzhou. Current priorities include fiberboard and veneer-slicing technologies, in addition to log storage, breakdown, and handling equipment.

Last April, Washington Iron Works signed an $11 million contract with the Fujian Provincial Forestry Machinery and Equipment Corporation for a 150-ton-per-day medium-density fiberboard plant. Ministry plans call for two more plants—a 150-ton-per-day facility in Heilongjiang province and a 75-ton-per-day plant in Shanghai. Washington Iron Works, Weyerhauser, and the Swedish firm, Sund Fibrator, are the principal contenders for the equipment contract. Stone and Webster Engineering Company is being considered for the design and engineering work.

Also under negotiation with Capital Machines International of Indianapolis is a 100,000-board-feet-per-day veneer-slicing mill for Jilin Province. The Ministry of Forestry is requesting a turnkey job, and has invited the firm and its design and engineering consultant, David R. Webb, to Beijing in October for further consultations. Capital Machines hopes to sew up a contract by February of next year.

US producers of forestry equipment should not overlook the relative business autonomy that has been granted to Heilongjiang province, China's most important forestry center. The province contains 25 percent of China's commercial timber resources and produces a third to a half (14 to 17 million cubic meters) of its commercial output.

Provincial authorities are aggressively pursuing ventures with foreign firms, though all contracts appear to need final approval from Beijing. Most recently, the province initialed a co-production agreement with a Swedish company to manufacture artificial fiber, shaving, and veneer board. Now the province is seeking a furniture-manufacturing partner to make use of its extensive and undeveloped resources of ash and birch. 完

China's Papermakers

The art of papermaking was invented by China and even today entirely hand-run installations continue to turn out small quantities of paper. China's approximately 4,000 paper and pulp mills, mainly using vintage technology of the 1950s, administered by the Ministry of Light Industry's Papermaking Bureau headed by Zhao Shuhua. These mills produced a total of 5.35 million tons of paper in 1980, of which roughly 70 percent was used for printing and writing, 20 percent for packing and shipping exports, and 10 percent for newsprint.

China's total wood-pulp capacity is 2.9 million tons. Non-wood fibers, including reeds, bagasse (a sugar cane residue), and other vegetables contribute an additional 5.9 million tons of pulp.

The industry's long-range plan calls for a doubling of production in less than 10 years. But for now, demand exceeds supply, requiring Beijing to import one million tons of various grades of wood pulp worth about $400 million each year.

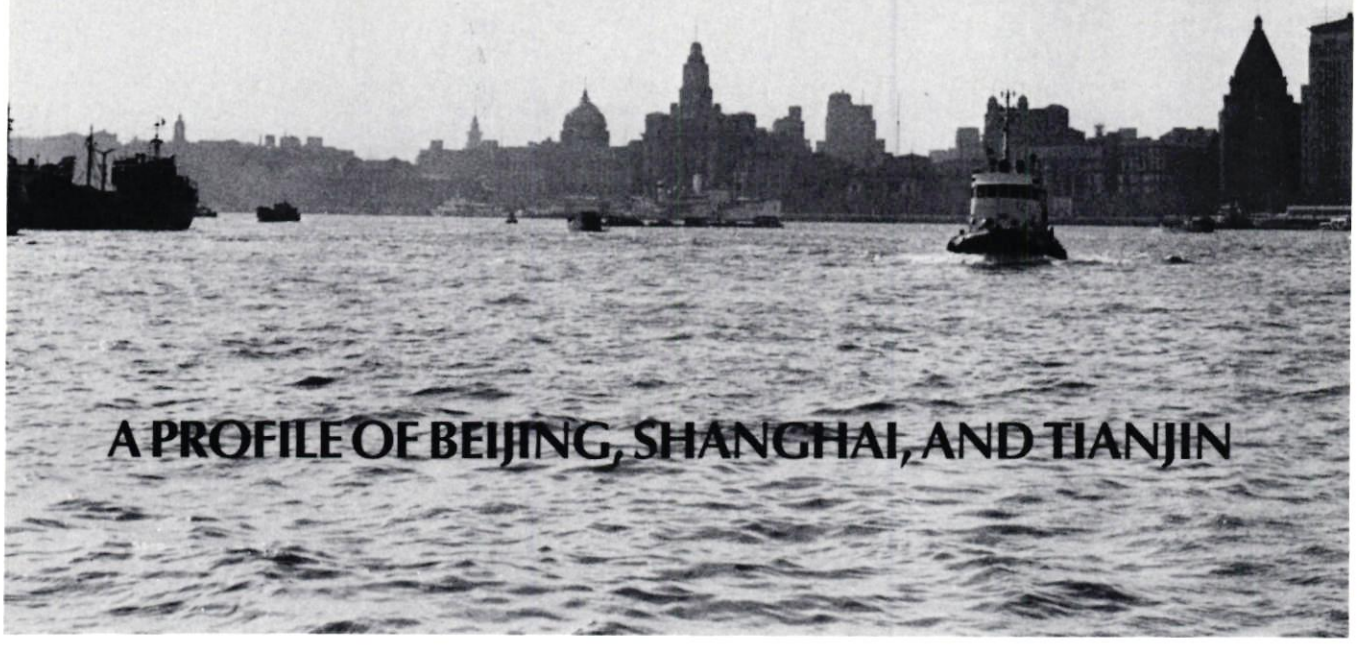
SOURCE: American Paper Institute, *Pulp and Paper International*, October 1980, pp. 57–60.

China's Imports of US Forestry Products, 1980

	Value (thousand $US)	Volume (metric tons)
Paperboard	123,401	388,386
Of which:		
Kraft linerboard, unbleached	93,327	289,418
Recycled paper	19,103	62,534
Semichemical corrugating medium	8,603	30,892
Bleached paperboard	2,368	5,542
Wood pulp	66,848	138,117
Printing and writing paper	2,931	5,838
Packing and special industrial paper	616	264
Softwood logs	41,000	88 million board-feet
Total	234,796	532,605*

*Paperboard, pulp, and paper only.
SOURCE: American Paper Institute, New York.

Beijing, Shanghai, and Tianjin, China's three centrally administered municipalities, have the same status in the People's Republic as provinces. They are the principal hubs of commerce, industry, culture, and politics in North and East China. These three cities represent a substantial portion of the nation's population, industrial output, and trade (*see* chart). Although relatively small in area by Chinese standards, all three encompass sizable communities. For example Shanghai, the smallest in area of the three, is almost six times as large as Hong Kong (including the New Territories), and more than 10 times as large as Singapore. Because these three cities now have much greater foreign trade autonomy than in the past, it is crucial for foreign businesses to have as much information about their economies as possible.



A PROFILE OF BEIJING, SHANGHAI, AND TIANJIN

Christopher M. Clarke and Elizabeth Jurkacek

北京

BEIJING

Beijing, China's political center and cultural showpiece, and a city of almost 9 million people, is also an important center of industry and commerce. Although the city produces only 4–5 percent of national gross value of industrial output, its more than 1.3 million industrial employees include many of the country's most skilled technicians and artisans.

Beijing's industry is especially strong in five sectors. The textile industry in 1980 produced export earnings for the city of $100 million, almost one-fifth of Beijing's total export value. Some 86 enterprises employ 85,000 textile workers and staff; in 1980 they produced approximately 260 million meters of cotton and cotton-polyester cloth, and 10 million meters of wool textiles. More than 60 apparel factories with 23,000 workers produced garments with an export value of another $100 million.

Beijing's 25,000 arts and crafts workers are employed in 44 production enterprises, which in turn are organized into four specialized subcorporations under the Beijing Arts and Crafts Corporation. This company, formed in September 1980, is under the joint control of the municipal government and the national Ministry of Light Industry. The 44 enterprises are supplemented by almost 150,000 rural artisans working on a piece-rate basis. Their combined output in 1979 was worth ¥595 million ($390 million).

The capital city is a major producer

of chemicals, petrochemicals, and pharmaceuticals. These are the fastest-growing export industries in Beijing. In 1979, the city's 43 chemical enterprises exported ¥80 million ($52 million) in chemical products, up more than three times the level of 1978 exports. Led by the Yanshan Petrochemical Corporation, Beijing's petrochemical exports jumped about 200 percent in 1979, and by almost 150 percent in 1980. The Beijing Pharmaceutical Corporation exported about ¥50 million ($32.8 million) in 1980, its first full year of existence.

Beijing's sizable machinery and equipment industry is quite diversified, ranging from production of heavy machinery and machine tools to wristwatches, electronic equipment, and medical instruments. Imports and exports are handled principally by the Beijing branches of MACHIMPEX and EQUIMPEX. The former did almost $6 million in export business in 1979, and reportedly about 10 times as much in imports. EQUIMPEX exported about $6 million worth of machinery and equipment in 1979.

The Shoudu ("capital") Iron and Steel Works is the backbone of Beijing's metallurgical industry. Its 1978 production of pig iron surpassed 2.32 million tons, and raw steel production was more than 1.3 million tons. This represented about 7 percent of national pig iron output, and about 4 percent of steel production.

Despite vegetable shortages last summer, compounded by this year's drought in surrounding areas, Beijing's agriculture has been relatively successful. Nearly self-sufficient in grain, vegetables, livestock, and poultry, the municipality's 4.8 million rural inhabitants export some specialty commodities like ducks, rabbits, and nuts.

Like Shanghai, Beijing's increased autonomy in foreign trade has encouraged a rapid growth in foreign commercial relations. Exports rose by more than one-third in both 1979 and 1980.

Beijing is home to more than 100 research institutes and some 20,000 workers engaged in scientific research. The city allocated ¥233 million ($155 million in 1980 to support this work. Almost 50 institutions of higher education give instruction to more than 83,000 pupils, including nearly 4,000 graduate students.

Plans for 1981 include only a 3 percent rise in Beijing's gross value of industrial output; heavy industry is to be held at current levels while light industry will grow at a rate of 8 to 10 percent. Grain output is expected to fall slightly. The city's top priorities are to increase the production and distribution of consumer goods, clean up the environment, and improving tourist facilities and cultural attractions. With the number of tourists visiting the capital expected to increase from 180,000 in 1980 to more than 600,000 by 1985, Beijing has committed resources to the construction of eight new hotels (*see* p. 16).

	1979	1980	Percent change 1980/1979	Percent of national total[1]
KEY INDICATORS				
Total industrial and agricultural output value (billion yuan, 1970 prices)	¥22.36 $14.44	¥24.51 $16.34	9.6 13.2	3.7 —
Gross value of industrial output (billion yuan, 1970 prices)	¥21.10 $13.62	¥23.21 $15.47	10.0 13.6	4.6 —
Of which:				
Heavy industry	¥13.44 $8.68	¥14.04 $9.06	4.5 4.4	5.3 —
Percent of total	63.7	60.5	—	—
Light industry	¥7.66 $4.95	¥9.17 $6.11	19.7 23.4	3.9 —
Percent of total	36.3	39.5	—	—
Gross value of agricultural output (billion yuan, 1970 prices)	¥1.26 $0.81	¥1.30 $0.87	3.2 7.4	0.8 —
Population (year-end, million)	8.71	8.80	1.0	0.9
Rural	4.76	4.80	1.0	0.6
Urban	3.95	4.00	1.3	3.1
Area (square kilometers)	—	16,807	—	0.2
Revenues collected (billion yuan)	¥4.75 $3.07	¥5.13 $3.42	8.0 11.4	4.8 —
Budgeted expenditures (billion yuan)	— —	¥1.49 $0.99	— —	1.3 —
Number of industrial enterprises	3,738	—	—	2.0
State-owned	1,099	—	—	1.3
Collectively owned	2,639	—	—	2.6

	1979	1980	Percent change 1980/1979	Percent of national total[1]
FOREIGN TRADE				
Exports (million yuan)	¥647.68 $418.13	¥889.1 $592.7	37.3 41.75	3.3 —
Of which:				
Garments	¥39.50 $25.50	¥150.00 $100.00	280.0 292.0	— —
Textiles	— —	¥150.00 $100.00	— —	— —
Chemicals	¥80.55 $52.00	¥100.69 $67.13	25.0 29.1	— —
Petrochemicals	¥49.60 $32.02	¥118.05 $78.70	138.0 146.0	— —
Pharmaceuticals	— —	¥50.00 $33.34	— —	— —
Machinery	¥18.26 $11.79	— —	— —	— —
Cloisonné	¥12.39 $8.00	— —	— —	— —
Tourists	150,00	180,000	20.0	30.4
INDUSTRIAL PRODUCTION (million metric tons unless otherwise indicated)				
Steel	—	—	—	5.8
Pig iron	2.52	2.85	13.1	7.5
Electricity (billion kwh)	8.91	—	—	3.0
Machine tools (units)	—	—	4.5	
CONSUMER GOODS				
Cotton cloth (million square meters)	—	—	—	2.0
Woolen piece goods (million meters)	—	10	—	9.9
Carpets (square meters)	170,000	260,000	20.7	—

	1979	1980	Percent change 1980/1979	Percent of national total[1]
Wristwatches (million units)	1.29	1.50	16.3	6.8
TV sets (units)	250,420	150,900	−39.7	6.1
Washing machines (units)	6,900	40,000	480.0	—
Sewing machines (units)	375,000	420,000	12.0	5.5
Furniture (household, million pieces)	1.71	1.84	7.4	—
Arts and crafts (million yuan)	¥595 $384	— —	— —	— —
AGRICULTURAL PRODUCTION (metric tons unless otherwise indicated)				
Grain (million)	1.73	1.86	7.5	0.6
Milk	57,400	60,000	4.5	5.3
Eggs (sold to state, million)	22,325	24,200	8.4	—
Edible oil crops	25,500	28,000	9.8	—
Marketable vegetables (million)	1.07	1.06	−0.9	—
Pork (sold to the state, head)	110,000	110,386	0.4	—
Rabbits (million head)	318	—	—	—
Chestnuts	5,000	—	—	—
Walnuts	7,500	—	—	—
Almonds	500	—	—	—
Cultivated land (hectares)	95,000	—	—	0.1
CAPITAL CONSTRUCTION				
Total investment in capital construction (billion yuan)	¥2.30	¥2.65	15.2	4.7
Total floor space completed (million square meters)				
Of which:				
Residential housing	2.6	3.48	30.0	2.4
Investment in urban construction (million yuan)	¥267.0 $172.4	¥437.0 $291.3	63.7 69.0	— —
Investment in rural enterprise construction (million yuan)	¥535.00 $345.38	¥615.00 $410.00	14.9 18.7	— —
Investment in agriculture (million yuan)	¥86.07 $53.57	¥78.81 $52.54	−8.4 −5.5	1.8 —
Road construction (million square meters)	1.60	—	—	—
Pipeline construction (kilometers)	190	—	—	—
TRANSPORTATION AND TRADE				
Railway freight (million metric tons)	34.85	32.5	−6.74	—
Passengers (millions)	25.04	25.0	−1.60	—
Highway freight (million metric tons)	—	42.98	—	—
Cab and subway passengers (million)	47.85	—	—	—
Stock of:				
Bicycles (million)	—	3.0	—	—
Air transportation				
Total terminal floor space (square meters)	—	60,000	—	—
Passengers per hour, peak total	—	1,500	—	—
Total value of retail sales (billion yuan)	¥5.20 $3.36	¥6.24 $4.16	20.0 23.8	2.9 —
EMPLOYMENT AND WAGES				
Total urban employees (million persons)	2.95	3.08	4.44	—
Number of industrial employees (million persons)	1.258	—	—	1.2
Of which:				
Employees in state-owned enterprises	0.9	—	—	1.1
Employees in collectively owned enterprises	0.358	—	—	1.5
Old-age pensioners	—	243,000	—	—
WAGES				
Average urban wages	¥1,920 $1,240	— —	— —	— —
Average peasant income[2]	¥151 $96.84	¥182 $121.34	21.3 25.3	— —
GNP per capita	¥2,026.0 $1,308.0	— —	— —	417.0 —
SCIENCE AND EDUCATION				
Scientific and research institutes	102	—	—	—
Total employees	20,000	—	—	—
Of which:				
Scientific personnel	6,000	—	—	—
Municipal expenditures for science, education, and public health (million yuan)	¥294.43 $190.08	¥323.84 $215.89	10.0 13.6	2.6 —
Of which:				
Education	¥177.03 $114.29	¥194.21 $129.47	9.7 13.3	— —
Public health	¥83.53 $53.92	¥90.63 $60.42	8.5 12.0	— —
Science	¥5.27 $3.40	¥6.62 $4.41	25.6 29.7	— —
Institutions of higher learning	48	—	—	7.6
Number of students enrolled	72,991	83,000	13.7	7.2
Number of graduate students	3,737	—	—	—
Technical-industrial schools	203	—	—	10.3
Number of students	25,000	—	—	3.5
Middle schools	995	—	—	1.0
Number of students	837,400	—	—	1.4
Primary schools	4,534	—	—	—
Number of students	968,700	—	—	0.7
Nurseries	4,623	—	—	0.7
Children enrolled	237,000	—	—	2.7
HEALTH				
Hospitals	387	—	—	0.6
Hospital beds	26,788	30,605	14.2	1.4
Number of doctors	32,000	—	—	8.1
Number of barefoot doctors	12,500	—	—	0.8

[1]Most recent year for which both national and local data were available.
[2]Probably only income derived from collective activity.

上海
SHANGHAI

Shanghai is the most populous city in the world, packing some 11.5 million persons into less than 6,200 square kilometers. With less than 2 percent of the nation's population and much less than one percent of its area, however, Shanghai produces more than 12 percent of China's industrial output value. Moreover, the city is a center for both heavy and light industry, producing some 14 percent of the nation's steel, and 11.3 percent of overall heavy industrial output value in 1980.

Yet it is in light industry, and especially in the high-technology and consumer-goods sectors, that Shanghai makes the most important contribution. Though its overall share of light industrial output in 1980 was 14.1 percent, Shanghai's factories produced around 30 percent of China's bicycles, televisions, and wristwatches, and more than 55 percent of its cameras.

The city's ratio of light-to-heavy industry in 1980 reached 52.6 percent, up from 1979's figure of 49.9 percent. As China undergoes the process of economic readjustment, Shanghai can be expected to continue its shift from heavy to light industry. Thus, key areas for development in the next few years in Shanghai will be textiles, food processing, consumer goods, electronics, telecommunications, electric power generation equipment, and building materials.

Shanghai's industrial base and location near the Yangzi River make the city a prime site for foreign trade. About 23 percent of the nation's exports are produced in the city, and in 1979 about 40 percent of China's total foreign trade passed through the port of Shanghai. Almost 200,000 tourists visited the city in 1979, increasing 50 percent in 1980 to 312,000.

Although designated as one of five areas with increased autonomy in foreign trade, Shanghai has been slow to develop its foreign commercial relations. Administrative confusion and policy shifts—often the fault of Beijing planners—have slowed the development of joint ventures and other business arrangements with foreign firms. Still, municipal authorities are keen on obtaining equipment and technical assistance that will support the development of light industry and exportable goods.

Shanghai's agricultural base is relatively modest. The city's rural population of about 5.5 million produced a gross value of agricultural output of ¥2.5 million in 1980, or about 1.5 percent of the national total. In 1980, bad weather contributed to a serious downturn in the city's output of farm products, ranging from decreases of 15 percent for pork, and 17 percent for vegetables (both products are largely grown privately by citizens).

Rural incomes averaged ¥696 in 1979, of which ¥278 per capita was derived form the collective economy. This was not far from the ¥752 per-capita annual income of Shanghai's urban residents. However, while urban wages rose in 1980 to an average annual figure of ¥866.4, rural collective income remained at ¥278.

The home of China's industrial revolution, Shanghai was also at the center of China's political upheavals during the Cultural Revolution (1966–76). Now the city seems to have settle down; its 4.2 million workers continue to carry on Shanghai's tradition as the nation's industrial pacesetter. Last year the city's progressive enterprise management policies were held up as a model for all of China.

Historically, Shanghai's wealth and productivity have been the mainstay of the Chinese economy. The municipality continues to remit to the central government between 80 and 90 percent of its total collected revenues. Despite its largess to the rest of the nation, Shanghai manages to provide most of the amenities of modern life, as well as the highest standard of living in China—equivalent to a per-capita GNP of $1,590. Urban wages are some 20 percent above the national average, and rural incomes average about 325 percent higher. Not surprisingly, the bank accounts of Shanghai residents are nearly seven times larger than an average citizen's savings.

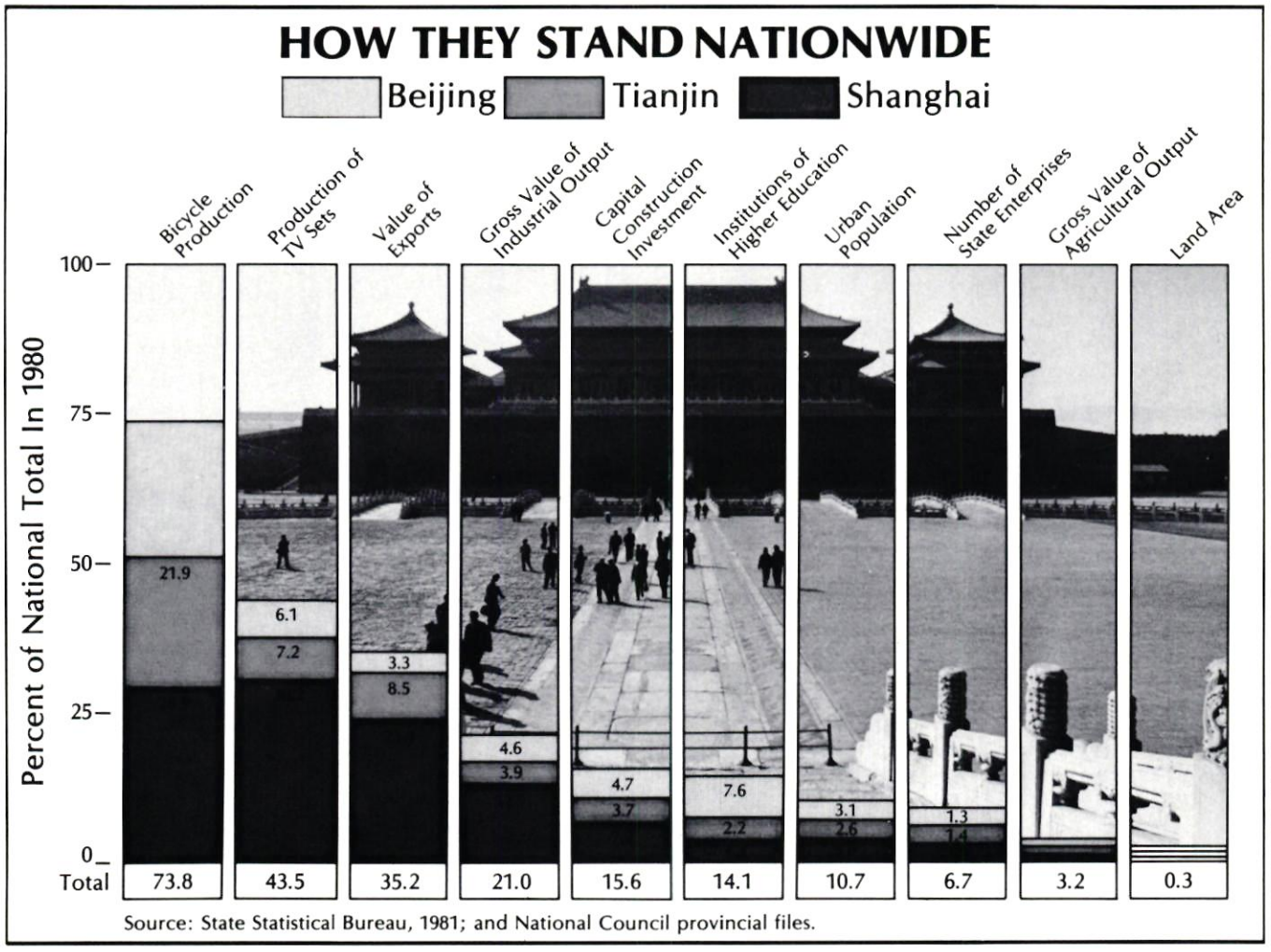
Shanghai enjoys the added distinction of being one of China's centers of education and research. It proudly claims 250 research centers and a community of 330,000 scientists, engineers, and technical personnel.

KEY INDICATORS	1979	1980	Percent change 1980/1979	Percent of national total[1]
Total gross industrial and agricultural output value (billion yuan, 1970 prices)	¥61.36 $39.46	¥65.10 $43.40	6.1 10.0	9.8 —
Gross value of industrial output (billion yuan, 1970 prices)	¥58.97 $38.07	¥62.60 $41.73	6.2 9.6	12.5 —
Heavy industry	¥29.61 $19.17	¥29.70 $19.83	0.3 3.3	11.3 —
Percent of total	50.1	47.4	—	—
Light industry	¥29.40 $18.98	¥32.90 $21.93	11.9 15.5	14.1 —
Percent of total	49.9	52.6	5.4	—
Value of industrial products included in state plan	— —	¥46.95 $31.30	— —	— —
Gross value of agricultural output (billion yuan, 1970 prices)	¥2.35 $1.52	¥2.47 $1.65	5.3 8.6	1.5 —
Population (year-end, million)	11.32	11.46	1.2	1.7
Rural	5.71	5.45	−4.6	0.6
Urban	5.91	6.01	1.7	4.7
GNP per capita	¥2,463 $1,590	— —	— —	528.5 —
State-local revenue sharing (percent)[2]	—	11.2	—	—
Area (square kilometers)	6,185	—	—	0.001

	1979	1980	Percent change 1980/1979	Percent of national total[1]
City	145	—	—	Negl.
Suburbs	6,040	—	—	Negl.
Total savings deposits of municipal residents (billion yuan)	¥2.49 $1.61	¥3.02 $2.01	21.5 24.8	7.6 —
Number of industrial enterprises	8,000	7,000	−12.5	—
State-owned	3,400	—	—	4.0
Collectively owned	4,600	—	—	4.6
FOREIGN TRADE				
Exports via the port of Shanghai (billion yuan)	¥8.81 $5.69	— —	— —	41.6 —
Exports (of goods made in Shanghai, billion yuan)	¥5.70 $3.68	¥6.36 $4.24	11.6 15.2	23.4 —
Imports (billion yuan)	¥11.61 $7.50	— —	— —	39.9 —
Tourists	195,000	312,000	60.0	52.8
INDUSTRIAL PRODUCTION (million metric tons unless otherwise indicated)				
Steel	4.94	5.216	5.6	14.05
Rolled steel	3.97	4.126	3.8	11.1
Electricity (billion kwh)	20.54	20.64	0.5	6.9
Coke (machine made)	2.06	2.258	9.4	6.6
Cement	1.81	1.867	2.9	2.3

	1979	1980	Percent change 1980/1979	Percent of national total[1]
Plate glass (standard panes)	1.33	1.658	24.6	5.98
Sulphuric acid (thousand tons)	363.6	388	6.7	5.1
Caustic soda (thousand tons)	232.3	240	3.3	12.5
Chemical fertilizer (thousand tons)	158.6	164	3.4	1.3
Chemical insecticides (thousand tons)	25.4	24	−5.5	4.47
Ethylene (thousand tons)	135.9	136	0.1	27.8
Plastics (thousand tons)	140.9	146	3.6	16.3
Chemical pharmaceuticals (thousand tons)	6.6	6.182	−6.1	15.42
Calcium carbide (thousand tons)	68.8	74.7	8.6	4.9
Synthetic rubber (thousand tons)	12.3	13	5.6	—
Rubber tires (million)	1.73	1.749	1.3	15.3
Motor vehicles (units)	10,783	14,675	36.1	6.6
Machine tools (units)	15,621	16,949	8.5	12.6
Mining equipment (tons)	26,100	20,900	−23.3	12.8
Power generating equipment (thousand kwh)	1,260	582	−53.4	13.9
Tractors (units)	14,800	14,377	−2.9	14.7
Internal combustion engines (million hp)	3.53	4.155	17.6	16.4
Steel for civilian ships (thousand tons)	155.6	172.6	10.9	21.0
Diesel engines (units)	9,018	11,121	23.3	—

HOW THEY STAND NATIONWIDE



Source: State Statistical Bureau, 1981; and National Council provincial files.

Artwork by John Yanson

	1979	1980	Percent change 1980/1979	Percent of national total[1]
CONSUMER GOODS (million units unless otherwise indicated)				
Bicycles	3.42	3.76	10.1	28.9
TV sets (units)	514,012	752,000	46.3	30.2
Cameras (units)	156,800	207,000	32.0	55.5
Wristwatches	7.02	8.2	16.8	37.0
Electric fans (units)	400,000	500,000	25.0	—
Transistor radios	2.914	3.794	30.2	12.6
Cigarettes (thousand cases)	847	823	−2.8	5.4
Detergents (thousand tons)	63.8	67	5.0	17.0
Sewing machines	2.134	2.265	6.1	29.5
Light bulbs	135	130	−3.1	13.7
Machine-made paper and paperboard (thousand tons)	286.6	296	3.5	5.5
Textiles				
Value of output (billion yuan)	¥11.73 $7.57	¥13.10 $8.73	11.7 15.5	— —
Profit delivered to the state (billion yuan)	¥2.39 $1.54	¥2.77 $1.85	15.6 20.1	— —
Number of workers	—	450,000	—	—
Chemical fibers (thousand mt)	136.2	152	11.6	33.8
Synthetic fibers	109.2	123	12.6	39.2
Cotton yarn	358.0	382	6.7	13.0
Cotton cloth (billion meters)	1.54	1.62	5.5	12.0
Woolens (million meters)	29.0	30.42	5.0	30.1
Silk textiles (million meters)	101.2	109.95	8.6	14.5
Knitting wool (thousand tons)	11.262	13.345	18.5	—
AGRICULTURAL PRODUCTION (thousand metric tons)				
Grain	240.35	186.9	−22.2	Negl.
Cotton	88.77	76.0	−14.4	2.8
Rapeseed	119.42	96.0	−19.6	4.0
Marketable vegetables (million mt)	1.35	1.125	−17.0	—
Cultivated land (hectares)	360,000	—	—	0.3
Eggs (metric tons)	—	180.0	—	—
Pork (metric tons)	196,600	168,000	−14.9	1.5
Aquatic products (metric tons)	213,500	205,000	−4.0	4.6
Of which:				
Freshwater products (metric tons)	18,756	19,000	1.3	—
CAPITAL CONSTRUCTION				
Total investment in capital construction (billion yuan)	¥3.18 $2.05	¥3.9 $2.6	22.6 26.8	7.2 —
Total floor space completed:				
Of which:				
Factory (square meters)	—	500,000	—	—
Residential (million square meters)	2.160	3.043	40.9	—
TRANSPORTATION AND TRADE				
Port handling capacity (million tons)	83.5	84.71	1.4	28.0
Volume of railway freight (billion ton-km)	8.42	8.71	3.5	1.5
Volume of waterway cargo (billion ton-km)	129.82	139.17	7.2	27.5
Passenger transport by railroads (million passenger-journeys	14.70	16.92	15.1	—
Total value of retail sales (billion yuan)	7.33	8.7	15.7	4.1
Total output of industries run by suburban counties, communes, towns, and farms (billion yuan)	¥3.0 $1.9	— —	— —	6.1 —
EMPLOYMENT AND WAGES				
Number of industrial employees (million persons)	4.2	—	—	4.2
Of which:				
Employees in state-owned enterprises	3.3	—	—	4.3
Employees in collectively owned enterprises	0.9	—	—	4.0
Average urban wage	¥765.4 $494.1	¥866.4 $577.6	13.2 16.9	— —
Average wage of urban workers and staff in state-owned enterprises	¥812 $524	¥912 $608	12.3 16.0	113.6 —
Average rural wage	¥696 $449	— —	— —	— —
Total wage bill (billion yuan)	3.26	3.8	16.4	4.9
Peasant per-capita income derived from collectives	¥278 $179	¥278 $185	0.0 3.4	323.6 —
SCIENCE AND EDUCATION				
Total number of research personnel, technicians, and professors	276,000	330,000	19.6	6.2
Universities and institutions of higher education	27	—	—	4.3
Number of graduate students	2,363	2,696	14.1	—
Number of full-time undergraduate students	67,404	73,400	8.9	6.4
Middle schools	1,140	—	—	1.2
Number of students	800,000	—	—	1.4
Number of primary school students	900,000	—	—	0.6
Number of nursery school students	268,450	—	—	3.0
Number of books in Shanghai Public Library (millions)	6.2	—	—	—
HEALTH				
Hospitals	394	—	—	—
Number of hospital beds	47,383	49,000	3.3	2.5
Population per bed	239	234	—	—
Factory clinics	3,500	—	—	—
Commune clinics	201	—	—	0.4
Neighborhood clinics	1,300	—	—	—
Health care workers	88,454	94,100	6	3.4
Barefoot doctors	9,500	—	—	0.6

[1]Most recent year for which both national and local data are available.
[2]Percent of total state revenues collected in municipality retained by municipality.

天津

TIANJIN

Tianjin, with 7.8 million people inhabiting an area of 11,475 square kilometers, is China's third most populous municipality. Unlike Beijing and Shanghai, however, Tianjin is almost exclusively an industrial and commercial center, offering a much less varied cultural life. Heavily damaged by the 1976 earthquake, Tianjin has rebuilt more than 70 percent of its destroyed buildings, which partly explains the city's annual increase of industrial output of about 10 percent.

Like the other two cities, Tianjin has a relatively diversified industrial base. In 1978 light industry accounted for almost half of industrial output value, climbing to 53 percent in 1980. Of Tianjin's 2.2 million workers, almost 1.5 million hold industrial jobs.

Heavy industry in Tianjin consists primarily of iron and steel, motor vehicles, and heavy machinery. Elevators made in Tianjin, for example, are used all over China, and are even exported. Much of Tianjin's heavy industry supports the nearby Tangshan coal mines and Shengli and Dagang oilfields. In turn, these oilfields supply a number of Tianjin's major chemical and pharmaceutical centers.

Tianjin is a production center for instruments, electronic equipment, paper, and foodstuffs. Its carpets are one of the city's most famous products; output in 1980 was more than half a million square meters. In addition, agriculture in Tianjin supports a large food-processing industry.

In line with current policies to increase the production of consumer goods, Tianjin's output of cotton rose by two-thirds in 1980, and oil-bearing crops jumped by about one-third. Tianjin also maintains substantial dairy and fruit industries.

Economic activity centers around Tianjin's busy port, which is second only to Shanghai's in the volume of cargo handled. Exports worth more than $1.5 billion passed through the city in 1980—$650 million of it produced by Tianjin itself. The port contains 22 berths and can handle ships of up to 10,000 dwt. City authorities plan to increase the number of berths to 57, and the port's cargo-handling capacity from 12 million to 25 million tons annually by 1985.

Plans for the future of Tianjin's economy involve shifting the ratio of light to heavy industry from roughly 50–50 to 70–30 by 1985. Industrial expansion will be concentrated in the energy, electric power, communications, and construction industries. Foreign assistance and funding are being sought in the areas of petrochemical products, food processing, electrical equipment, textiles, instruments, sewing machines, and internal combustion engines. After discussions with foreigners on more than 25 major projects, Tianjin has signed some 10 contracts for compensation trade, and four joint venture and co-production contracts. Foreign loans have been used to develop 121 additional projects.

	1979	1980	Percent change 1980/1979	Percent of national total[1]
KEY INDICATORS				
Total gross industrial and agricultural output value (billion yuan, 1970 prices)	¥18.80 $12.14	¥20.83 $13.89	10.8 14.6	3.1 —
Gross value of industrial output (billion yuan, 1970 prices)	¥17.50 $11.30	¥19.37 $12.91	10.7 14.2	3.9 —
Of which:				
Heavy industry	¥8.86 $5.72	¥9.09 $6.06	2.6 5.9	3.4 —
Percent of total	50.6	46.9	—	—
Light industry	¥8.64 $5.58	¥10.28 $6.85	19.0 22.6	4.4 —
Percent of total	49.4	53.1	—	—
Gross value of agricultural output (billion yuan, 1970 prices)	¥1.35 $0.87	¥1.46 $2.62	8.1 11.7	0.9 —
Municipal revenue (million)	¥3.62 $2.34	¥3.93 $2.62	8.6 11.9	— —
Area (square kilometers)	—	11,475	—	0.12
State-local revenue sharing (percent)[1]	—	31.2	—	—
Population (year-end, million)	7.458	7.789	4.4	0.79
Urban	—	—	—	2.6
Rural	—	—	—	0.5
Number of industrial enterprises	4,000	—	—	2.2
Of which:				
State-owned	1,200	—	—	1.4
Collectively owned	2,800	—	—	2.8
Number of state farms	—	—	—	0.7
FOREIGN TRADE				
Total value of exports via the port of Tianjin (billion yuan)	¥1.89 $1.22	¥2.31 $1.54	22.2 26.2	8.5 —
Exports of goods produced in Tianjin (million yuan)	¥751.30 $485.02	¥975.0 $650.0	29.8 34.0	3.6 —
Of which:				
Cereals and edible oil	¥82.07 $52.98	¥120.48 $80.32	46.8 51.6	— —
Foodstuffs	¥157.15 $101.45	¥214.60 $143.07	36.5 41.0	— —
Textiles	¥422.28 $272.61	¥443.28 $295.52	5.0 8.4	— —
Native products	¥203.10 $131.12	¥196.75 $131.17	−3.1 0.0	— —
Arts and crafts	¥111.39 $71.91	¥129.01 $86.01	15.8 19.6	— —
Animal products	¥258.36 $166.79	¥260.19 $173.46	0.7 4.0	— —

	1979	1980	Percent change 1980/1979	Percent of national total[1]
Carpets	¥78.89 $50.93	¥93.06 $62.04	17.9 21.8	67.4 —
Light industrial products	¥159.38 $102.89	¥222.39 $148.26	42.0 44.1	— —
Metals and minerals	¥130.64 $84.34	¥207.85 $138.57	59.1 64.3	— —
Machinery	¥50.17 $32.39	¥87.46 $58.31	74.3 80.0	— —
Machinery equipment	¥70.85 $45.74	¥92.35 $61.57	30.3 34.6	— —
Port cargo volume (million tons)	12.70	11.91	−6.2	6.0
Tourists	17,700	—	—	2.0
Tourist revenue (millions)	¥5.50 $3.55	— —	— —	0.9 —
INDUSTRIAL PRODUCTION				
Electricity (billion kwh)	5.64	6.4	15.2	2.2
Circuit diagram boards (million units)	4.0	8.0	100.0	—
Chemical fertilizers (metric tons)[2]	53,122	57,000	7.3	0.5
Tractors (units)	8,111	8,500	4.8	8.6
CONSUMER GOODS (million units unless otherwise indicated)				
Bicycles	2.46	2.85	15.9	21.9
Wristwatches	1.64	1.85	12.8	8.3
TV sets	74,000	180,000	143.2	7.2
Sewing machines	325,000	370,000	13.7	4.82
Radio sets	—	825,000	—	2.7
Glassware	60.0	—	—	—
Enamelware	18.0	—	—	—
Carpets (square meters)	446,300	580,190	30.0	—
AGRICULTURAL PRODUCTIONS (million metric tons unless otherwise indicated)				
Grain	1.385	1.34	−3.2	0.4
Cotton (thousand tons)	—	—	66.6	—
Oil-bearing crops	13,305	18,188	36.7	0.2
Marketed vegetables	1.27	—	—	—
CAPITAL CONSTRUCTION				
Total investment in capital construction (billion yuan)	¥1.88 $1.21	¥2.0 $1.3	6.4 7.4	3.7 –
Total floorspace completed (million square meters)				
Of which:				
Residential	2.06	2.0	−2.9	1.4
Commercial	—	0.4	—	—
Annual increase in production capacity				
Additional pipelines (km)	—	38	—	—
Additional roads (km)	—	18	—	—
Number of new cargo berths	—	5	—	—
DOMESTIC TRADE				
Total retail sales (billion yuan)	¥3.80 $2.45	¥3.47 $2.31	−8.7 −5.7	1.62 —
Value of transactions at village fairs (million yuan)	¥33.86 $21.86	¥66.70 $44.47	97.0 103.4	— —
Retail volume of restaurants and service trades (billion yuan)	¥3.19 $2.06	¥3.68 $2.45	15.4 18.9	— —
EMPLOYMENT				
Industrial employees (million persons)	1.17	1.45	23.9	1.4
Of which:				
Workers and staff in state-owned units	810,000	—	—	1.0
Workers and staff in collectively owned units	360,000	650,000	80.6	2.7
Service, communications, commercial, educational, and cultural workers	—	840,000	—	—
Average worker income from rural collectives	¥145.0 $93.6	— —	— —	— —
Average worker income from state-owned enterprises	¥780 $504	— —	— —	110.6 —
Total savings deposits (million yuan)	¥523.0 $337.6	— —	— —	1.9 —
SCIENCE AND EDUCATION				
Number of scientific and research institutes	120	—	—	—
Number of employees	119,400	—	—	2.5
Of which:				
Researchers	7,700	—	—	—
Engineering and technical personnel	53,700	—	—	—
Agricultural technicians	2,000	—	—	—
Public health technical personnel	30,000	—	—	—
Scientific, industrial, medical, and agricultural specialists	26,000	—	—	—
Institutions of higher education	15	—	—	2.2
Number of students enrolled	22,400	—	—	—
Number of graduate students	450	—	—	—
Technical schools	111	—	—	—
Number of students	24,000	—	—	—
Middle schools	1,054	—	—	—
Number of students	645,000	—	—	—
Primary schools	3,370	—	—	—
Number of students	800,000	—	—	—
HEALTH				
Hospitals	327	—	—	—
Hospital beds	17,900	—	—	—
Neighborhood clinics	390	—	—	—
Neighborhood medics	2,500	—	—	—
Factory health stations	2,800	—	—	—
Exchange rate, yuan per US dollar	1.549	1.500	—	—

[1]Most recent year for which both national and local data are available.
[2]Percentage of total state revenues collected in municipality retained by municipality.
[3]Calculated on the basis of 100 percent effectiveness.
SOURCE: National Council provincial files.

Letter from Beijing

Opening Your Resident Office

Scott D. Seligman

Six months after promulgating regulations governing the registration of resident offices of foreign enterprises, China has more than 200 such offices. The lion's share of those registered with the State General Administration of Industry and Commerce (GAIC) are Japanese firms, with barely a tenth of the total accounted for by American corporations (*see* box). Nearly all of the offices are in Beijing.

The regulations, issued October 30, 1980, require registration by all foreign enterprises that carry on "business activities in the nature of a resident office."

Though the exact meaning of the regulations has been sketchy up to now, it recently became apparent not only that registration will confer certain privileges on firms doing business in China, but that failure to register may result in certain penalties. Tighter control and increased coordination on the part of various organs of the Chinese government will almost certainly circumscribe the activities of nonregistered businesses.

According to the regulations, an enterprise maintaining an office in China must apply to its host organization for a certificate of approval. A few foreign firms without business ties to the hosts have had difficulty persuading those host organizations to assist them with the necessary procedures. The GAIC has intervened on behalf of these firms in a few cases, but it generally prefers the matter to be worked out between the parties.

Once obtained, a certificate of approval must be submitted within 30 days to the GAIC, together with supporting documents such as a certificate of incorporation, a financial statement, information concerning the identity and authority of the resident representative, and a fee of ¥600 ($345 at current exchange rates). The GAIC's policy is to process applications as they are received, though some firms have reported delays of up to a month or two. Nearly all companies that have received certificates of approval and filed the appropriate forms have ultimately received final approval. The GAIC is not a rubber-stamp operation; however, it occasionally rejects applications supported by all the required documents, including certificates of approval from Chinese hosts.

Of considerable concern are recent reports that no new applications are being approved by the GAIC, due to a severe shortage of both commercial and residential space here in the capital city. The GAIC has neither confirmed nor denied these reports.

Registration entitles companies to certain benefits. It allows a firm to import an automobile for its own use (though the import tax of 40 percent of purchase price discourages this), and to bring in large pieces of office equipment (assessed at varying customs rates); company representatives may import one duty-free shipment of personal belongings.

Permanent representatives may apply for long-term residence certificates, which obviate the need for visas and visa extensions during their stay in China. The GAIC recently announced that permanent representatives of registered enterprises will now be entitled to multiple exit and reentry permits. The Beijing Public Security Bureau confirms that representatives of registered enterprises wishing to travel within China may now apply directly to them for travel permits, without first obtaining approval from their host organization.

The provisional regulations also make a new pledge to resident companies, to protect "the legitimate rights and interests of resident representative offices and their normal business activities." This may not amount to a comprehensive bill of rights, but it is at the very least an acknowledgment of some responsibility on China's part toward foreign firms.

"In general," says the Beijing resident vice-president of a US firm currently seeking registration, "you feel much more secure if you're registered."

There is good reason to believe that it will become harder for nonregistered firms with offices in China to continue to function here. Warnings, fines, and even criminal penalties can be levied on foreign firms that violate the regulations, though no such measures have been taken to date. The Beijing Customs Bureau has indicated that in the future nonregistered firms will not be allowed to import office equipment at all, nor will their representatives be permitted to bring in large shipments of personal belongings. Most significantly, failure to comply with the regulations may result in loss of accommodations. Representative offices may be required to enter into long-term contracts with hotels or local organizations that rent them commercial space; these organizations may be forbidden to deal with nonregistered firms. Until now the fragmentation of the Chinese bureaucracy has created a fairly loose system that permits foreign firms to deal separately with various departments. Increased coordination threatens to tighten up the system considerably.

Many firms have been hesitant to register in China for fear of making themselves liable to Chinese corporate taxes. Some current tax legislation dating from the 1950s can be read as ap-

plying to foreign corporations operating in China, though there is little indication the Chinese plan to enforce it. It is far more likely that a new tax governing foreign enterprises (other than joint ventures, regulated under existing law) will be levied; such a law is already being drafted, according to an informed source. Still, the GAIC denies that there are any immediate plans to levy such a tax, noting that such a law would be equally applicable to registered and nonregistered firms.

If the way Beijing tax authorities have administered the recently promulgated personal income tax is any guide, registration is likely to be viewed as of secondary importance. Liability for individual income tax in the recent past has been interpreted primarily as a function of time spent in China, with relatively little reference to the question of registration. Though the GAIC has shared its records with tax authorities, the two bodies have essentially acted independently until now. It is probably fair to say that the tax bureau has taken as little interest in the registration status of foreign firms as the GAIC has taken in their tax liability.

The regulations do not clearly define "business activities in the nature of a resident office." The vagueness is undoubtedly deliberate, since it allows the Chinese to interpret the law to their advantage on a case-by-case basis. Most categories of foreign enterprises have been welcomed, though the Chinese have decided, at least for the moment, to exclude law firms. Numerous law firms have long-term resident representatives in China, but in every case instructing Chinese officials is considered their *raison d'être*. The Chinese are of course aware that the attorneys also provide services to their foreign clients, but these activities are neither officially sanctioned nor proscribed.

The key criterion in determining whether a firm needs to register seems to be length of stay. According to the GAIC, firms renting accommodations for periods of six months or more are required under the law to register, whether or not they employ long-term resident staff in China. For those without long-term accommodations, registration is not required.

In general, it is probably in the best interest of all firms maintaining resident offices here at least to attempt to secure registration. Those companies debating whether the regulations cover them should consult their host organizations. The strongest argument for registration is that operating in China will probably become increasingly difficult for nonregistered resident companies.

—May 20, 1981

24 US Firms With Registered Representative Offices in China

As of June 1

American International Group
American Technology Corporation
Ampex World Operations, China Trade Division
Arco, Inc.
Bank of America
Bechtel International Services
Carvax Corporation
Chase Manhattan Bank, N.A.
China Business Consultants, Inc.
Continental Corporation
Coopers and Lybrand
Dravo China, Inc.
Ernst and Whinney
E & S Pacific Corporation
First National Bank of Chicago
General Electric Company
Kamsky Associates, Inc. (KISCO)
Mobil Exploration Orient, Ltd.
National Council for US-China Trade
Occidental Petroleum
Pan American World Airways, Inc.
Parker Drilling Company
Phillipp Brothers
US-China Business Association, Inc.

NOTE: National Council members can obtain a list of non-US foreign registered representative offices in China by contacting *The CBR*.

SOURCE: The General Administration of Industry and Commerce, Beijing.

RMB:DOLLAR RATES

	RMB/ US$	US¢/ RMB
May 14		
Bid	1.7359	57.6070
Offer	1.7273	57.8938
Median	1.7316	57.7501
May 21		
Bid	1.7272	57.8972
Offer	1.7186	58.1869
Median	1.7229	58.0417
May 22		
Bid	1.7427	57.3822
Offer	1.7341	57.6668
Median	1.7384	57.5242
May 27		
Bid	1.7480	57.2082
Offer	1.7392	57.4977
Median	1.7436	57.3526
June 2		
Bid	1.7567	56.9249
Offer	1.7479	57.2115
Median	1.7523	57.0679
June 5		
Bid	1.7813	56.1388
Offer	1.7725	56.4175
Median	1.7769	56.2778
June 10		
Bid	1.7742	56.3634
Offer	1.7654	56.6444
Median	1.7698	56.5036
June 12		
Bid	1.7813	56.1388
Offer	1.7725	56.4175
Median	1.7769	56.2778
June 15		
Bid	1.7724	56.4207
Offer	1.7636	56.7022
Median	1.7680	56.5611
June 16		
Bid	1.7512	57.1037
Offer	1.7424	57.3921
Median	1.7468	57.2475
June 19		
Bid	1.7599	56.8214
Offer	1.7511	57.1070
Median	1.7555	56.9638
June 23		
Bid	1.7511	57.1070
Offer	1.7423	57.3954
Median	1.7467	57.2508

SOURCE: Standard Chartered Bank, Ltd., New York.

The Offshore-Oil Race

ARCO and Santa Fe lead the competition, but most operators are holding back until China explains the rules

Stephanie R. Green

Excitement and anticipation have been building within many American oil companies' headquarters since the June 4 announcement that two American companies—Atlantic Richfield and Santa Fe International—signed a contract with the China National Oil and Gas Exploration and Development Corporation (CNOGEDC). The production-sharing contract, granting ARCO and Santa Fe oil rights for 25 years, and in some circumstances 35 years, calls for the exploration and development of a 3,500-square-mile section of the Yinggehai Basin south of the Hainan Island in the South China Sea. Drilling should begin by late fall.

In concluding the agreement, which took three years to negotiate, ARCO became the first US oil company to sign an exclusive contract with the People's Republic since its establishment in 1949.

The CNOGEDC confirmed to the Council's Beijing office that the ARCO contract has not yet been approved by "higher authorities," meaning the State Council. No further details will be released until the contract is approved.

The final stages of ARCO's negotiations were watched closely by other firms jockeying for position on China's continental shelf. Besides ARCO's section, other areas of the South China Sea (including the Pearl River) and the Gulf of Tonkin have been divided among five additional US companies, or operators, for conducting seismic surveys.

Operating from north to south are Phillips, Chevron/Texaco, Exxon, Mobil, and Amoco (*see The CBR* map, July–Aug. 1979, p. 62). Some 15 other US companies are participants, including Allied Chemical's Union Texas Asia Offshore, Cities Service, Conoco, Getty Oil, Hunt-Sedco, Pecten, Murphy Oil, Natomas, Occidental, Pennzoil, Shell, Sunmark, Superior Oil, Texas Eastern, and Union Oil of California. American companies are also participating in the BP and Elf/Total survey areas.

Altogether 46 companies are involved in offshore Chinese ventures. Many are participating in more than one area—30 in the Gulf of Tonkin (Amoco block), 31 in the Pearl River, 34 in the BP area, and 32 in the Elf/Total area.

Contracts by Early 1983?

All of these firms were stymied in the six months before the ARCO announcement. Turmoil at the top of the political hierarchy resulted in the axing of the PRC's petroleum minister Song Zhenming, which led to six months of factional disputes until his successor Kang Shien was appointed in March. (Kang is regarded as a supporter of cooperation with US companies.) In the meantime the CNOGEDC, overwhelmed with an extraordinary volume of seismic data to interpret, proceeded steadily, but slowly, with its work.

ARCO was negotiating actively until last September, when it hit some snags and headed home. The company was not invited to return until April. At that time the invitation to return to Beijing was "seen as a bellwether by the rest of us," said Tom Meurer, vice-president of administration at Hunt-Sedco.

But how fast can events move? And in which direction?

There is some possibility that ARCO's contract will be used as the basis for negotiations with the other US oil companies competing in China's offshore areas. If this is the case, many oil executives are worried that ARCO may have agreed to terms they would be unwilling to accept. The Chinese may agree, however, that ARCO's contract, as an exclusive document, does not apply to the other South China Sea operators. Negotiations might then proceed more quickly, since the Chinese would then be free to concentrate on other contracts.

"We have not been privy to the details of ARCO's negotiations," commented Yeow Ming Choo, International Attorney at Amoco. "We also don't know the contents of the contract, which is outside the bidding process for the rest of us anyway. So we are not prepared to comment further."

Despite the successful conclusion of the ARCO contract, and some degree of renewed optimism, most industry sources conjectured that bidding for the South China Sea, which already was delayed from May to late fall, probably would be held up until the first or second quarter of 1982. Few industry observers believe that the Chinese can adhere to their announced target date of November. Referring to the ARCO contract, one oilman said cautiously, "The Chinese may be further along than I had thought. Maybe they can meet their schedule on time or just a little behind. But I really don't know."

Nor is it known which survey area will be opened first for bidding. "I would be very surprised if the Yellow Sea gets higher priority than the Pearl River," one oil executive remarked. Another noted, however, that the Chinese might want to shoot the Yellow Sea block first in order to learn from the experience, and avoid making mistakes in the South China Sea block. Elf Aquitaine was asked to begin bidding on the Yellow Sea block in December.

Once bidding is out of the way, contracts may be finalized and signed within a year, or by early 1983. Some experts believe that commercial production still could begin by the current target period of 1985–86.

Selecting the Right Contract Clauses

China has tried to compress into only three years the preliminary study and

operations that have taken other developing countries as long as 30 years. Some company executives, while chafing at the general slow progress, have nevertheless expressed admiration for the way the Chinese have tackled such a mammoth operation. Other executives simply have shaken their heads in frustration, noting that they could be enticed away from laborious efforts in China, should another potentially profitable discovery be made in another part of the world.

From late 1980 to early 1981, firms paraded into Beijing to present seismic reports on single blocks, and then unified seismic reports on all areas. For the latter reports, the Chinese invited only the block operators and other selected firms including Hunt-Sedco and Occidental, for a total of 16 companies. These reports were completed in early July.

At the same time seismic reports were being submitted, companies were making an extraordinary effort to educate the Chinese about the intricacies of offshore petroleum contracts. A large number of US firms provided the CNOGEDC with model contracts, many of which were translated into Chinese. These were basic legal primers that presented the clauses US companies felt should be included in final contracts. In addition, whole model tax laws were provided. Almost all of the major oil companies have taken full complements of attorneys, including tax lawyers, to Beijing to instruct the Chinese.

In March, four oil company chairmen traveled to Beijing to assess the situation. Amoco's John E. Swearingen met with Vice-Premier Yu Qiuli, head of the State Energy Commission; Exxon's Clifton C. Garvin met with Yu Qiuli and Yao Yilin, chief of the State Planning Commission. In addition, William C. Douce of Phillips, and James M. Voss of Caltex, participated in the March delegation of the National Council for US-China Trade's Board of Directors to Beijing.

The Remaining Steps

Two major steps are necessary before US companies will feel comfortable about concluding negotiations: the Chinese must draft laws on petroleum resources and on taxes. In addition, the Chinese themselves feel it is necessary to draft a model contract based on what they have learned from other oil-producers like the Norwegians and Indonesians, as well as from discussions with US oil companies. To attain the force of law the model contract must be approved by the State Council, the PRC's highest administrative body.

The petroleum resources law must contain certain clauses to gain the acceptance of US negotiators. It must ensure the protection of investments, and a reasonable return on investment. It must spell out the rights and obligations of each side, ensure that the oil discovered may be exported, and state the obligations of operators, among other stipulations.

A model contract had not yet been finalized as of May, according to the CNOGEDC. Some sources report, however, that a draft model contract is already being reviewed by the Import-Export Commission, China's highest foreign trade planning body just below the State Council. The model contract must conform to the petroleum resources law, and will be a starting point for further negotiations between the CNOGEDC and foreign companies.

According to US industry sources, the Chinese have developed a 10-month schedule from bidding through contract conclusion. First they will send out bidding notices, allowing companies one month to respond. Those indicating interest will be mailed bidding documents, including China's petroleum resource regulations, income tax law, model contract, bidding-fee invoice, maps, and other materials. Fees must be paid within one month.

Next, firms will have three months to review the documents and submit bids. The Chinese will spend two months evaluating the bids, and then will invite successful candidates for negotiations. Contracts should be concluded within three months.

This schedule assumes that the petroleum law, tax law, and model contract will be completed by the time of bidding. The draft tax law reportedly will be completed in early August, after which it will be reviewed by international tax specialists.

In a related effort, the Chinese are negotiating with a group of US and foreign petroleum-service companies on service joint ventures for offshore development. At least one oil company wondered, "What will this cost us?" Another said, "We will accept Chinese equipment and services as long as they are definitely of quality comparable to that offered by other sources."

Other problems ahead for US companies:

Tax creditability. Perhaps the single most ticklish problem is whether or not the Chinese will design a national tax code permitting US oil companies' taxes to be creditable for US income tax purposes. A number of executives feel it would be impossible to go ahead in China if the Chinese tax code did not allow for US income tax creditability.

While many experts believe the Chinese joint venture tax is creditable, the oil companies are concerned the Chinese might decide to impose a new and potentially higher tax on oil income. Such a tax, claims one international tax expert, may not meet US creditability standards. Under recent IRS credit regulations, China can obtain the total revenue cut that it wants through a production-sharing split, as it did with ARCO. By setting its share of production at the required level and allowing US companies' income tax liabilities to be satisfied out of the government's share of production, the PRC could still accomplish its aims. Thus, China need not exact a high tax, which might not be creditable, to meet its revenue objectives.

In late May, China's Ministry of Finance sent to the US a tax and accounting delegation that included officials working on the petroleum taxation issue. The Chinese met with the assistant treasury secretary for tax policy, John Chapoton, and IRS Commissioner Roscoe Eggers, to obtain a clearer understanding of the ramifications involved in the tax creditability issue. The results of the meeting are not known. IRS procedures require that any oil company seeking an IRS opinion as to the creditability of Chinese tax proposals must formally request an IRS ruling. This process may take some time.

The director of the tax bureau of the Ministry of Finance, Liu Zhicheng, implied in a New York seminar in June that bidding could go ahead even without finalization of the tax issue. He noted, "We'll try to have the tax codes in place by the time of bidding."

The fact that ARCO went ahead with its contract prior to the publication of the tax code implies that the Chinese gave assurances the code *will* allow creditability. Although this should relieve other companies' worries, ARCO's contract may contain a release clause if the PRC does not mold its law to the requirements of US tax regulations.

Terms of the contract. "Things are in disarray," said one company spokesperson. The Chinese just haven't made

up their minds yet." It is probable that the Chinese will incorporate the most attractive terms of model contract forms from Indonesia, Brazil, Kuwait, Norway, and other countries. The contract terms in dispute:

▶ *Length of exploration and drilling phases.* Many standard international contracts generally allow for a 30-year period that includes 10 years of exploration and 20 years of production before the venture is turned over to the host country. The Chinese are eager for development and want to compress this period into five years of exploration and 15 years of production.

▶ *Pricing of crude.* Noted one executive, "The crude must be priced at some acceptable world standard."

▶ *Financing of the Chinese part of the arrangement.* Companies are concerned about where the Chinese will find the funds to meet their share of production costs. It is highly unlikely that such funding could be provided by the World Bank, since the bank already has given priority to a number of other industrial sectors.

Conflicting organizational claims. According to one industry observer, the CNOGEDC does not have authority from the State Council to conduct offshore development and export crude oil. A feud between the Ministry of Petroleum and the Ministry of Geology has been continuing on many fronts. The Ministry of Geology technically retains rights to offshore exploration. The role of the Ministry of Foreign Trade is still unclear, a matter of considerable concern to oil companies who hope that China's future exports of offshore crude will bypass China's cumbersome foreign trade apparatus.

Bureaucratism. The ponderousness of the bureaucracy is perhaps the most difficult aspect for Chinese and American negotiators alike. "The regrettable thing," Caltex Chairman James M. Voss noted at the National Council's June 4 annual meeting, "is that because of the slow-moving bureaucracy, we simply can't get to the bargaining table. The Chinese are still analyzing data and learning."

"Every time we go to China, more organizations seem to be involved," commented another executive, who also made the suggestion that the Chinese could simplify and speed up the process by establishing a consolidated group to act together in making decisions.

One executive observed that the French at one point had 23 people inside China negotiating with different organizations over a nine-month period.

Forced marriages? What will happen after the Chinese complete analysis of all unified seismic reports? Will the 16 firms which gave the unified reports be treated the same? Will present block operators receive preference? Most people think the latter will be the case. Yet the major companies are worried the Chinese will give all 46 companies a place in the eventual scheme. The companies fear that "forced marriages," in which block operators will be forced to cooperate with other firms, will diminish profit returns.

On the other hand, smaller companies want the Chinese to insist on some type of partnership, which would give them a better competitive position against the larger companies.

Limited trained personnel. "They have paper lining the walls, the desks, everywhere," observed one Beijing company representative recently back from the Beijing office where Chinese technicians were analyzing seismic data submitted by foreign companies.

With only a limited corps of trained manpower, the CNOGEDC has been grappling with an immense quantity of seismic information. The enormousness of the task has led to a slowdown in the ability of the CNOGEDC to respond more quickly in general contract negotiations.

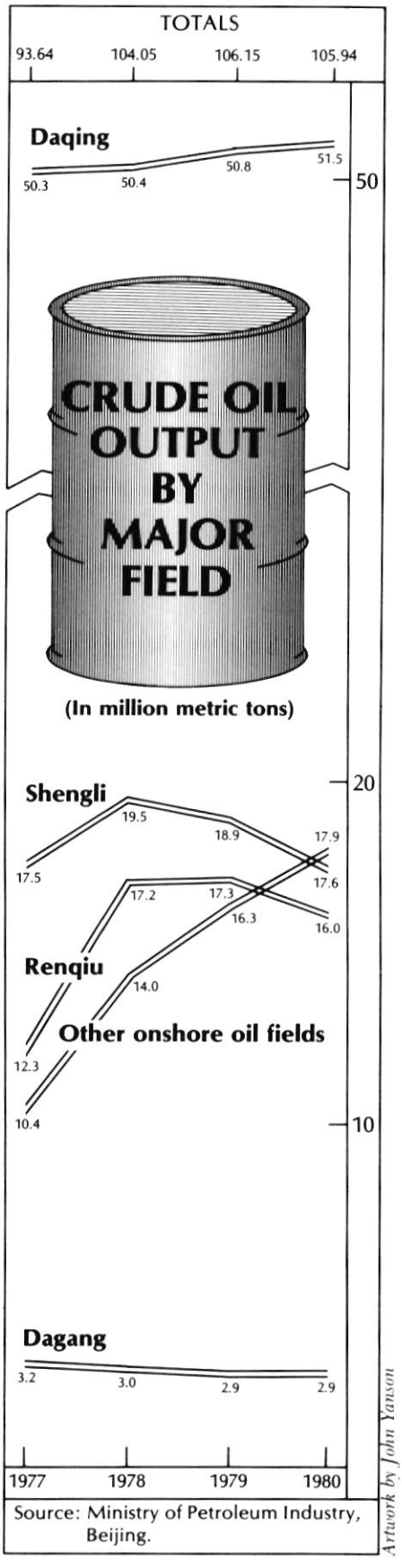
All in all, however, the Chinese are still giving priority to the petroleum sector, which should lead to eventual fruits for US oil firms. Perhaps the general feeling is best expressed in the words of one executive, "We wouldn't be playing the game unless we thought there was something to play with."

Stephanie R. Green is director of the National Council's Department of Programs and Government Relations. She accompanied five petroleum engineering delegations to China between 1977 and 1980, visiting the Daqing, Shengli, and Bohai oilfields, as well as the Weiyuan gas field in Sichuan Province.

* *

National Council members interested in further details may contact the author.

Offshore oil is needed to replace China's static onshore production.



Source: Ministry of Petroleum Industry, Beijing.

Artwork by John Yanson

Interview with Xue Muqiao

China's top advisor to the State Planning Commission, and director of the commission's Economic Research Institute, was recently interviewed by Zhang Hua of the Xinhua News Agency for exclusive publication in The CBR. *The views of Xue Muqiao, a leading champion of Deng Xiaoping's economic reforms:*

Xinhua: Does the present economic readjustment mean that China has failed to decentralize her economy?

Xue: China has gained good results over the past two years and the economic reform has not failed. The current readjustment is made necessary by the large scope of capital construction which has caused an industrial imbalance.

Our error was being overanxious for success in the past 20 years and more. Nor did we make a full estimate of the damage done to our economy in the Cultural Revolution [1966–76].

In December 1978, the third plenary session of the Central Committee of the Chinese Communist Party put forward the policy of readjustment, restructuring, consolidation, and improvement, with the accent on readjustment. However, many officials at central and local levels failed to understand the policy and did not implement it effectively.

The general scope of capital construction still went beyond China's financial power, and we imported far too much equipment from abroad.

Add to this the pay increases given to workers and the better prices paid to peasants for farm products, the resultant surge in spending, excessive issuance of paper money, and the prices of too few consumer goods chasing the extra money supply, and you can see some of the problems we face.

But the readjustment does not indicate failure in decentralizing the economic system. It is meant to create the necessary conditions for further reforms, like shifting priorities from heavy industry to agriculture and light industry.

Xinhua: How many years will the readjustment last?

Xue: Three years or longer—possibly five years.

Xinhua: Is it possible that the economic management system will go back to the old path of centralism?

Xue: No, it is impossible. In the light of the experience in the past 30 years, we can see that a socialist country must keep a tight control over macroeconomic activities, with special reference to the scope of capital construction. All socialist countries can easily commit the error of being too eager to accelerate the development of production, carrying out capital construction on too large a scale.

For this they have to cut down on expenditures for raising living standards. If they try to improve the livelihood of the people at the same time, they must increase public spending; and this, together with reinvestment funds, will total more than the national revenue.

This is naturally followed by a deficit, inflation, and imbalance in the national economy.

So the scope of capital construction must be limited, and the extent to which the people's living standards are raised must also be controlled.

After they got more independence under the plan of decentralization, the localities and enterprises had more money in their hands. This should have been a good thing. Localities could have used it to develop agricultural production, build municipal projects, and build projects for economic construction based on local conditions and needs.

But, over the past two years, owing to lack of experience and ignorance of the

"Marxism holds that socialism must be founded on the basis of a highly developed capitalist economy. A highly developed capitalism first of all means a highly developed commodity economy, on the basis of which develops large-scale social production.

Socialism has to be built on the foundation of socialized large-scale production. At present the commodity economy has not yet developed fully in the countryside and the socialized large-scale production has not developed fully in the cities in China. Therefore, we shall actually go against Marxism if we do not make efforts to develop the commodity economy and socialized large-scale production."

overall national situation, local officials and factory managers did not spend the money wisely. On the contrary, they built many redundant projects.

Take textiles for instance. The very large textile mills in Shanghai, Beijing, Tianjin, and Qingdao are short of raw materials, while more than 100 small mills have sprung up in cotton-growing regions throughout the country.

There is a similar problem in the cigarette industry. Many small cigarette factories have been built in tobacco-growing regions, while large cigarette factories are in want of tobacco. The production of high-grade products has dropped, while small factories and plants turn out inferior products at high cost.

As many as 1,000 new electric fan, refrigerator, and washing machine plants have sprung up like mushrooms in the past year or so, but most of their products cannot find a market. This is also a big waste. This state of affairs must be corrected.

Therefore, the State Council has decided to enforce a high degree of centralism in the period of readjustment. Construction of all new large- and medium-sized factories must be approved by the State Capital Construction Commission.

Factories producing poor-quality products, or with high costs, high energy consumption, and heavy losses must all be closed down or merged with other factories.

Xinhua: If some of the factories are closed down, what will the workers do?

Xue: All the factories that are likely to be closed down are small ones, and most of them can be merged with big factories. Before these factories are merged or handled otherwise, their workers will receive the same wages and be helped to organize themselves in vocational study or take part in the construction of public facilities.

If some workers from the countryside volunteer to go back to their home villages, they can draw redundancy pay or a percentage of their wages to help them resettle in their home villages and do farm work. When needed, they can be recruited again.

Xinhua: What positive results has the reform produced? Are there any problems?

Xue: The key link in the reform of the economic system is giving enterprises greater independence in their management. Workers in Sichuan Province say that since the enterprises got greater independence, the directors of the factories have shown greater initiative. The factory directors were not stupid, but when the enterprises did everything strictly according to the state plan—production, handing over their products and profits—the directors or managers did not need to use their brains. Even if they did, it was useless.

Now that they have more power in making decisions, they have to try to improve the quality of their products, reduce the costs, and pay attention to market demands if they hope to increase the profits of their enterprises. Therefore, market study, managerial improvement, and technical innovations become indispensable to giving their products a competitive edge.

There has been a marked rise in labor productivity since enterprises were given greater independence in management. In 1980, greater decisionmaking power was given to 6,600 factories accounting for 16 percent of the state industrial enterprises. And these factories accounted for 60 percent of the total industrial output value and 70 percent of the total industrial profits. This means that almost all the major industrial enterprises have been given greater decisionmaking power. The rest will not be given greater independence for the time being. Those that have been losing money all along will be closed down or merged with other enterprises or their production suspended.

pended.

Xinhua: Will the awarding of bonuses create a new, high-salary stratum?

Xue: Excessive and indiscriminate distribution of bonuses must not be allowed. However, the egalitarian tendency was very strong in the past. For instance, masters and apprentices received the same pay in some factories. At present, it is reasonable to widen a little the difference in income but only to a certain extent.

Xinhua: Why is it necessary to reform prices?

Xue: Today the prices of many commodities here are very unfair. Farm produce and minerals, for instance, belong to this category. Because production of these things is very much influenced by natural conditions, usually the more they are produced, the more they cost.

The processing industry is just the opposite. We haven't made timely readjustments, with the result that raw mate-

Xue Muqiao

noted in the preface. A separate section includes biographies of important deceased and purged officials. In a lengthy appendix, charts and tables

outlines the basic concepts of techno-economics and analyzes their implications for political and administrative authorities in China. The Chinese Soci-

Jason H. Parker. New York: Social Science Research Council (605 Third Avenue, 10158), 1980. 175 pp. Single copies available at no charge. In De-

rials cost a lot but sell at a low price, whereas the finished articles cost little to make but sell at a high price.

As the prices have been unfair for so many years, there is a serious supply-demand discrepancy. However, a drastic

much paper money in the past two years. So prices are not stable. That is why the State Council has issued a directive to tighten control on prices. But this is a temporary phenomenon. By the time the budget is in the black and cur-

the state-owned economy. This will be useful to the state and the people. Such private enterprises have only limited scope for development since the state-owned economy is in a predominant position.

cember 1979, 13 social scientists and humanists visited China to learn the state of and plans for scholarly research in the social sciences and humanities and to explore avenues of collaboration and exchange. Separate discussions of each subject area generally include a state of research report and lists of Chinese research institutes and scholars.

EDUCATION

Higher Education in the People's Republic of China: Report of the Stanford University Delegation, May 22–June 11, 1980, edited by Thomas Fingar. Stanford: Northeast Asia-United States Forum on International Policy, Stanford University, November 1980. 129 pp. $6.50 plus $1 postage. The delegation trip report focuses on higher education but also provides an overview of education in China. The organization, personnel, funding, and selection procedures of colleges and universities are described, and university-based research is discussed. Two chapters on lecturing in China will be especially useful to exchange scholars. Appendices provide information on several institutions, a list of national key universities and colleges, key military institutions, selected student programs, and relevant regulations.

HEALTH

Rural Health in the People's Republic of China. US Department of Health and Human Service, Public Health Services, National Institutes of Health, November 1980. NIH Publication No. 81-2124. 207 pp. $5.50. Available from the Superintendent of Documents, US Government Printing Office, Washington, DC 20402. Prepayment is required. In 1978 the Rural Health Systems Delegation visited China, sponsored by the Committee on Scholarly Communication with the People's Republic of China and hosted by the Chinese Medical Association. The delegation report provides a very useful overview of rural health care in China. Members of the delegation report on disease patterns, medical care financing, ambulatory and hospital care, barefoot doctors, traditional medicine, training of nurses and doctors, preventive care, birth control, diffusion of innovations, and mental illness. Appendices illustrate a variety of health care forms. Indexed.

Proceedings, US-China Pharmacology Symposium, National Academy of Sciences, Washington, DC, October 29-31, 1979. Washington, DC: Committee on Scholarly Communication with the People's Republic of China, 1980. 354 pp. Available from the National Academy Press, 2101 Constitution Ave., NW, Washington, DC 20418 for $1.65 postage and handling. The US-China Pharmacology Symposium was the first bilateral scientific symposium to be held in the United States. The proceedings contain five plenary lectures in which Chinese and American pharmacologists present findings in important areas of research, and papers and abstracts of papers presented at workshops on natural products, cancer chemotherapy, neuropharmacology, drug development, analytical techniques, and drug receptors. 完

Books and business guides submitted for possible review in The China Business Review *should be sent to the National Council's book editor, Marianna Graham.*

Official PRC Statistics

KEY INDICATORS	1979	Percent change	1980	Percent change
GNP (billion yuan, current prices)	¥391.38 $252.67	11.9 21.5	¥424.1 $282.7	8.4 11.9
Total gross industrial and agricultural output value (billion yuan, 1970 prices)	¥617.5 $398.6	8.5[1] 17.8	¥661.9 $441.3	7.2[1] 10.7
Gross value of industrial output (billion yuan, 1970 prices)	¥459.1 $296.4	8.5 17.9	¥499.2 $332.8	8.7[2] 12.3
Of which:				
Heavy industry	¥261.1 $168.6	7.7 17.0	¥264.8 $176.5	1.4 4.7
Light industry	¥198.0 $127.8	9.6 19.0	¥234.4 $156.3	18.4 22.3
Gross value of agricultural output (billion yuan, 1970 prices)[3]	¥158.4 $102.3	8.6[4] 18.0	¥162.7 $108.5	2.7[4] 6.1
National income (billion yuan, current prices)[5]	¥335.0 $216.3	6.3 15.5	¥363.0 $242.0	8.4[6] 11.9
Profitability (percent of state-owned enterprises run at varying degrees of loss	23.7	—	23.3	—
Population (year end, million)	970.92	1.3	982.55	1.2
Of which:				
Urban	128.16	—	—	—
Rural	842.76	—	—	—
Overall retail prices	—	5.8	—	6.0
FOREIGN TRADE (billion yuan)				
Total trade (fob/cif)	¥45.5 $29.4	28.0 39.1	¥56.3 $37.5	23.6 27.6
Exports (fob)	¥21.20 $13.69	26.3 37.2	¥27.2 $18.1	28.7 32.2
Imports (cif)	¥24.30 $15.69	29.6 40.7	¥29.1 $19.4	19.2 23.6
Trade balance (exports minus imports)	−¥3.10 −$2.00	— —	−¥1.9 −$1.3	— —
Tourist revenues (million yuan)	¥697.0 $450.0	54.0 66.9	¥920.0 $613.3	32.0 36.5
Total number of foreign visitors (million persons)	4.2	121.0	5.7	35.6
INDUSTRIAL PRODUCTION (million metric tons unless otherwise indicated)				
Steel	34.48	8.5	37.12	7.7
Rolled steel	24.97	13.1	27.16	8.8
Pig iron	36.73	5.6	38.02	3.5
Coke, machine-made	33.54	3.6	34.05	1.5
Coal	635.0	2.8	620.0	−2.4
Crude oil	106.15	2.0	105.95	−0.2
Natural gas (billion cubic meters)	14.51	5.7	14.27	−1.7
Electricity (billion kwh)	281.95	9.9	300.6	6.6
Timber (million cubic meters)	54.39	5.4	53.59	−1.5
Cement	73.9	13.3	79.86	8.8
Plate glass (million standard cases)	23.3	16.3	27.71	18.9
Sulfuric acid	7.0	5.9	7.64	9.1
Soda ash	1.486	11.8	1.613	8.5
Caustic soda	1.826	11.3	1.923	5.3
Ethylene (thousand mt)	435.0	14.5	490.0	12.6
Plastics (thousand mt)	793.0	16.8	898.0	13.2
Chemical pharmaceuticals (thousand mt)	41.7	2.5	40.1	−3.8
Calcium carbide	1.407	13.7	1.52	8.0
Outer rubber tires (million units)	11.69	24.9	11.46	−2.0
EQUIPMENT				
Power generating equipment (million kw)	6.212	28.4	4.193	−32.5
Machine tools (thousand units)	140.0	−23.5	134.0	−4.3
Motor vehicles (thousand units)	186.0	24.8	222.0	19.4
Internal combustion engines sold outside state plan (million hp)	29.08	3.2	25.39	−12.7
Locomotives (units)	573	10.0	512	−10.6
Railway passenger coaches (units)	856.0	9.2	1,002	17.1
Railway freight wagons (units)	16.042	−5.4	10,571	−34.1
Steel ships, civilian (thousand tons, probably dwt)	809.0	−6.0	818.0	1.1
Mining equipment (thousand mt)	264.2	—	163.0	−38.3
CONSUMER GOODS (million units unless otherwise indicated)				
Bicycles	10.09	18.1	13.02	29.0
Sewing machines	5.87	20.8	7.68	30.8
Wristwatches	17.07	26.4	22.16	29.8
TV sets (thousand units)	1,329.0	157.1	2.492	87.5
Radio sets	13.81	18.2	30.04	117.5
Cameras (thousand units)	238.0	33.0	373.0	56.7

Light bulbs	850.0	11.8	950.0	11.8
Chemical fibers (thousand mt)	326.0	14.4	450.0	38.0
Cotton yarn (million tons)	2.63	10.5	2.93	11.4
Cotton cloth				
Of which:				
billion linear meters	12.15	10.2	13.47	10.9
billion square meters	11.43	11.1	12.80	12.0
Woolen piece goods (million meters)	90.17	1.5	101.0	12.2
Silk (thousand mt)	29.749	0.2	35.4	19.2
Silk textiles (million meters)	663.45	8.7	759.0	14.5
Gunnysacks	343.92	—	433.0	25.9
Machine-made paper and paperboard (million tons)	4.93	12.3	5.35	8.5
Detergents (thousand mt)	397.0	22.5	393.0	−1.0
Sugar	2.5	10.1	2.57	2.8
Salt	14.77	−24.4	17.28	17.0
Cigarettes (million cases)	13.02	—	15.2	16.7
Beer (thousand tons)	516.13	—	688.0	33.3

AGRICULTURAL PRODUCTION (million metric tons unless otherwise indicated)

Grain	332.115	9.0	318.22	−4.2
Of which:				
Paddy rice	143.71	—	139.255	−3.1
Wheat	62.75	—	54.155	−13.7
Tubers[7]	28.47	—	27.845	−2.2
Soybeans	5.05	—	7.88	5.6
Cotton	2.207	1.8	2.707	22.7
Oil-bearing crops	6.435	23.3	7.691	19.5
Of which:				
Peanuts	2.822	18.7	3.6	27.6
Rapeseed	2.402	28.6	2.384	−0.7
Sesame (thousand mt)	417.0	29.5	259.0	−37.9
Sugar cane	21.508	1.9	22.807	6.0
Beet root	3.106	15.0	6.305	103.0
Jute, ambary hemp	1.089	0.1	1.098	0.8
Silkworm cocoons (thousand mt)	271.0	18.9	326.0	20.3
Tea (thousand mt)	277.0	3.4	304.0	9.7
Reforestation (million hectares)	4.489	−0.2	4.552	1.4
Aquatic products	4.305	−7.5	4.497	4.5[8]
Total output of pork, beef, and mutton	10.624	24.1	12.055	13.5
Of which:				
Pork	10.0	—	11.341	13.3
Beef (thousand mt)	229.91	—	269.0	17.0
Mutton (thousand mt)	380.0	—	445.0	17.1
Milk	1.07	—	1.141	6.6
Sheep wool (thousand mt)	153.0	—	176.0	15.0
Hogs slaughtered (million head)	187.72	—	198.607	5.8

AGRICULTURAL INPUTS

Chemical fertilizer production[9]	10.654	22.6	12.32	15.7
Of which:				
Nitrogenous fertilizer	8.821	15.5	9.99	13.3
Phosphate fertilizer	1.817	75.9	2.31	26.9
Potash fertilizer (thousand mt)	16.0	−23.8	20.0	25.0
Chemical fertilizer application[9]	10.850	—	12.694	17.0
Average application of chemical fertilizer per hectare of farmland (kg)[9]	109.0	22.5	127.8	17.2
Chemical insecticides (thousand mt)	537.0	0.8	537.0	0.0
Tractors (thousand units)	126.0	10.5	98.0	−22.2
Hand tractors (thousand units)	318.0	−1.9	218.0	−31.4
Electricity consumed in rural areas (billion kwh)	28.27	11.7	32.1	13.5
Application of chemical fertilizer per hectare of farmland (kilos, calculated on the basis of 100 percent effectiveness)	109.0	22.5	127.8	17.0
Machine-ploughed farmland (percent of total farmland)	42.4	—	41.3	—

AGRICULTURAL CAPITAL

Stock of large- and medium-sized tractors (thousand units)	667.0	19.7	745.0	11.7
Stock of hand tractors (million units)	1.671	21.7	1.874	12.2
Stock of power-driven drainage and irrigation machines for rural use (million hp)	71.23	8.6	74.654	4.8
Stock of hogs (year end, million head)	319.705	6.1	305.431	−4.5
Stock of large animals (million head)	94.591	0.7	95.246	0.7
Stock of sheep and goats (million head)	183.142	7.8	187.311	2.3
Farm trucks (thousand units, 38,000 more than in 1979)	97.0	—	135.0	39.2
Diesel and electric pump wells (year end, million units)	—	—	2.09	—

CAPITAL CONSTRUCTION

Total investment in capital construction by state-owned units (billion yuan)	¥50.00 $32.28	4.4 13.3	¥53.9 $35.9	7.8 11.2
Of which:				
National budget	¥39.50 $25.50	0.0 8.6	¥28.1 $18.7	−28.9 −26.7
Budgets of provinces and localities	¥10.50 $6.78	25.0 35.9	¥25.8 $17.2	145.7 153.7
Investment by type of activity (percent of total):				
Production-oriented projects	73.0	—	66.3	−9.2
Non-production projects[10]	27.0	—	33.7	24.8
Of which:				
Housing construction	14.8	—	20.0	35.1
Light industry	6.4	—	9.1	42.2
Other	5.8	—	4.6	−20.7
Total fixed assets of capital construction units (billion yuan)	¥41.80 $26.99	17.4 27.5	¥42.7 $28.5	2.2 5.6
Proportion of total fixed assets of capital construction units in working order (percent)	82.9	—	79.2	−4.5

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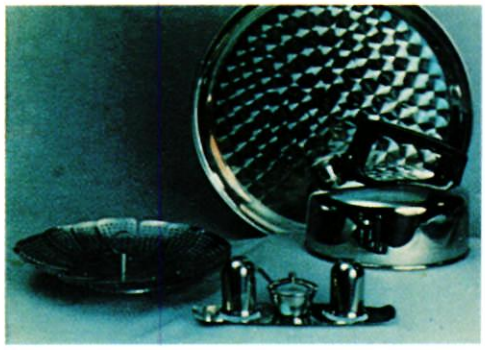
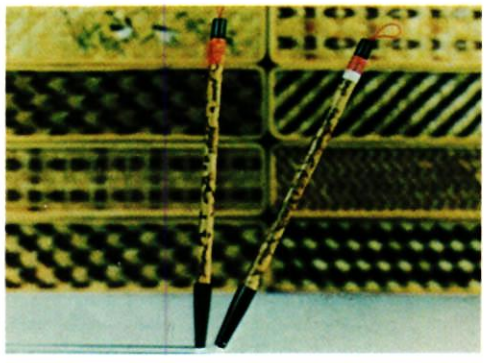






Our Corporation is a leading supplier of light industrial products in China. The products handled by our Corporation are General Merchandise, Stationery, Sports Goods, Household Electric Appliances and Building Materials. Buyers' brands, designs and materials are also accepted.

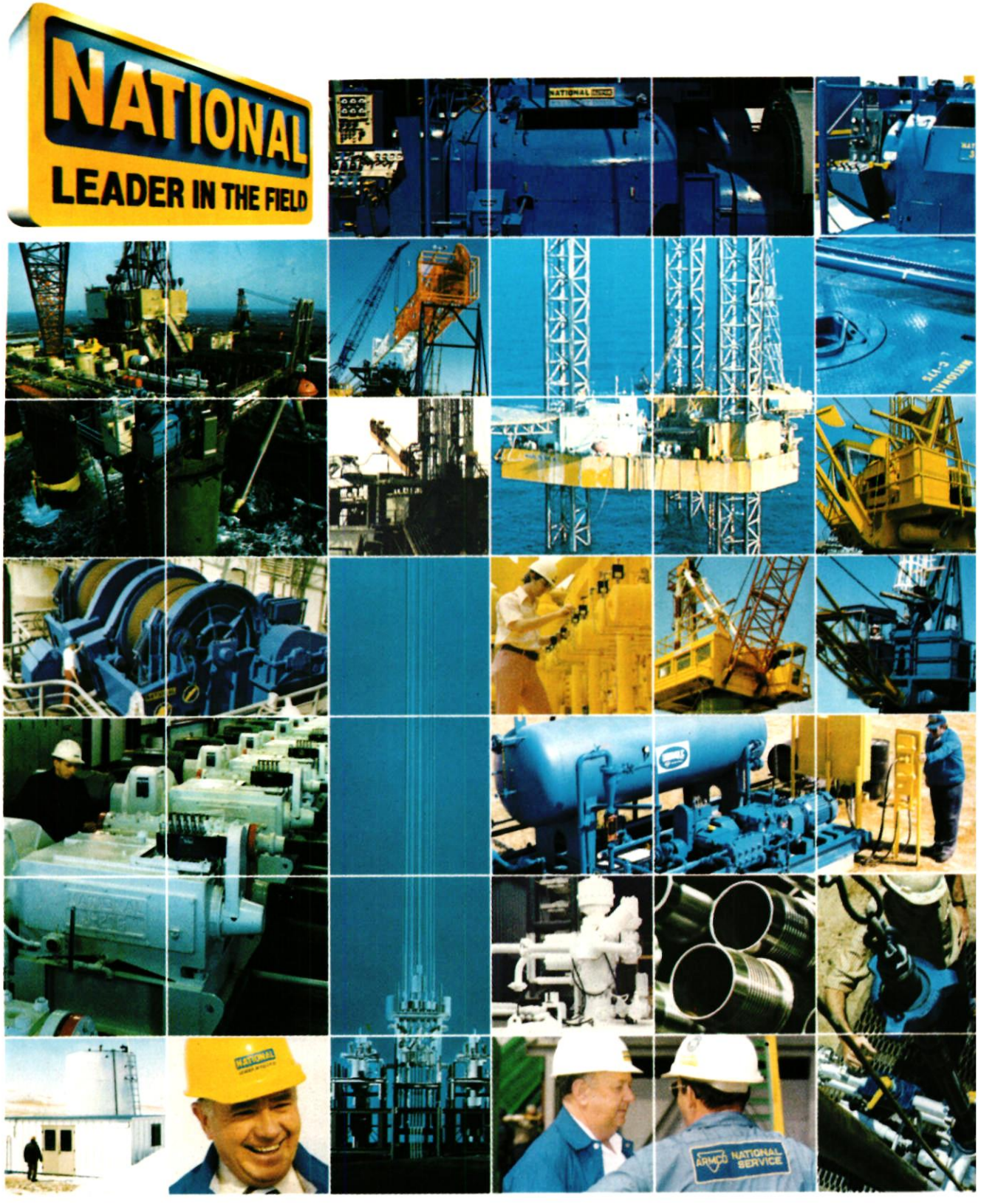
For further details, please contact: China National Light Industrial Products Import & Export Corporation, Shanghai Branch. Address: 128 Huqiu Road, Shanghai, China. Cable: INDUSTRY,SHANGHAI. Telex: 33054 INDUS CN.

Residential building (million square meters)[11]	120.0	33.0	145.0	20.8
Of which:				
Housing for industrial workers and staff	62.56	66.0	82.3	31.6
EMPLOYMENT AND WAGES				
Workers and staff (year-end national total, million persons)	99.67	4.9	104.44	4.8
Of which:				
Workers and staff in state-owned units	76.93	3.2	80.19	4.2
Workers and staff in urban collectively owned units	22.74	11.0	24.25	6.6
Individual businesses	0.310	—	0.810	161.3
Commune per capita cash income derived from collective economy (yuan)	¥83.40 $53.84	12.7 22.4	¥85.9 $57.3	3.0 6.4
Total wage bill (billion yuan)	¥64.70 $41.77	13.7 23.5	¥77.30 $51.53	19.5 23.4
Of which:				
Total wages of workers and staff in state-owned units	¥53.00 $34.22	13.0 22.7	¥62.8 $41.9	18.5 22.4
Total wages of workers and staff in urban collectively owned units	¥11.70 $7.55	17.0 26.9	¥14.5 $9.7	23.9 28.5
Average wage of workers and staff (yuan) in:				
State-owned units	¥705.00 $455.13	9.5 18.9	¥803.0 $535.3	13.9 17.6
Collectively owned units	¥514.50 $332.15	5.4 14.4	¥634.0 $416.0	21.3 25.2
Savings deposits of urban and rural population (billion yuan)	¥28.12 $18.15	— —	¥39.9 $26.6	41.9 46.7
TRANSPORTATION AND COMMUNICATIONS				
Total freight volume (billion metric ton-kilometers unless otherwise indicated)	1,138.8	—	1,202.6	5.6
Of which:				
Railway	558.8	4.8	571.7	2.1
Waterway	456.4	20.8	505.3	10.7
Highway	74.5	−2.2	76.4	2.6
Air (million metric ton-km)	123.4	27.2	140.6	13.9
Oil and gas carried through pipelines	47.6	10.8	49.1	3.2
Major seaports (million mt)	212.57	6.0	217.31	2.2
Passenger transport (billion passenger-km)	196.98	—	228.1	15.8
Of which:				
Railway	121.4	11.3	138.3	13.7
Highway	60.3	15.7	72.9	20.9
Waterway	11.4	13.3	12.9	13.2
Air	3.5	25.3	4.0	14.3
Total value of posts and telecommunications (billion yuan)	¥1.255 $0.810	7.7 16.9	¥1.334 $0.889	6.3 9.8
Of which:				
Long-distance calls	—	10.8	—	4.0
Letters	—	8.6	—	7.6
Telegrams	—	5.9	—	8.7
DOMESTIC TRADE				
Total value of commodities purchased by commercial departments (billion yuan)	¥199.24 $128.62	14.5 24.3	¥226.3 $150.9	13.6 16.7
Of which:				
Manufactured goods	¥140.56 $90.74	9.8 19.2	¥156.76 $104.51	12.8 15.2
Farm and sideline produce	¥58.68 $37.88	27.6 38.5	67.7 45.1	15.4 19.1
Total value of retail sales (billion yuan)	¥180.00 $116.20	17.8 28.0	¥214.00 $142.67	18.9[12] 22.8
Of which:				
Retail sales by peasants to non-agricultural population	—	—	6.9	—
SCIENCE AND EDUCATION				
Total number of scientists and technicians working in state-owned units (million)	4.705	8.3	5.296	12.6
Institutions of higher learning	633	5.9	675	66.4
Students in institutions of higher learning (thousand)	1,020.0	19.2	1,144.0	12.2
New enrollment in institutions of higher learning (thousand)	275.0	−31.6	281.0	2.2
Students in TV colleges (thousand)	280.0	—	324.0	15.7
Students in factory-run and spare-time colleges (thousand)	580.0	5.5	455.0	−21.6
Students in secondary technical schools (thousand)	1,199.0	34.9	1,243.0	3.7
Middle school students (million)	58.82	−9.8	55.081	−6.4
Primary school pupils (million)	146.63	0.3	146.27	0.3
Kindergarten children (million)	8.79	11.7	11.51	30.9
Students sent abroad for study	1,762	—	2,124	20.5
CULTURE				
Cultural centers	2,892	7.1	2,912	6.9
Film projection units (thousand)	122.0	10.9	125.0	2.5
Art troupes	3,482	12.3	3,533	1.5
Public libraries	1,651	31.4	1,732	4.9
Museums	—	—	365	—
Radio stations	99	6.5	106	7.1
Radio transmitting and relay stations	—	—	484	—
TV stations	38	18.8	38	0.0
TV transmitting and relay stations	—	—	246	—
Circulation of national and provincial newspapers (billion copies per year)	13.08	19.6	14.04	7.3
Magazine circulation (billion copies per year)	1.18	55.3	1.12	−5.1
Books published (billion copies)	4.07	−4.5	4.59	12.8
HEALTH				
Hospital beds (million)	1.932	4.1	1.982	2.6
Professional medical workers (million)	2.642	7.2	2.789	5.9

Of which (thousand):				
Doctors of traditional Chinese medicine	258.0	3.2	262.0	1.6
Senior doctors of Western medicine	393.0	12.3	447.0	13.7
Junior doctors of Western medicine	435.0	3.6	444.0	2.1
Nurses	421.0	—	466.0	10.7
Exchange rate, yuan per US dollar	1.549	—	1.500	—

[1]Original plan target was 7.0 percent in 1979 and 3.9 in 1980.
[2]Original plan target was 5.4 percent in 1980.
[3]GVAO includes the output value of farm products, forestry, animal husbandry, sideline occupations, fisheries, and the output of brigade-run industries.
[4]Original plan target was 4.4 in 1979 and −0.6 in 1980.
[5]National income includes five components calculated on a net basis to eliminate double counting: industry, agriculture, construction, communication/transportation, and commerce.
[6]Percent increase is 6.9 percent if national income is calculated on the basis of constant 1970 prices.
[7]Five kg of tubers is equivalent to one kg of grain.
[8]Output of freshwater products increased 11.1 percent, marine products 2.1 percent.
[9]Chemical fertilizer statistics calculated on the basis of 100 percent effectiveness.
[10]Such as parks, hospitals, and other public facilities.
[11]Includes new housing built with central and local government investment funds. Home construction by communes and other collective units is presumably excluded.
[12]The increase in retail sales was only 12.2 percent if inflation is taken into account.
SOURCE: State Statistical Bureau, *Communiqué on the Fulfillment of the 1980 National Economic Plan*, issued by Xinhua on April 29, 1981. Official 1977–78 statistics appear in the July–Aug. 1979 *CBR*, pp. 42–45, and May–June 1980 *CBR*, pp. 54–56.

Table prepared by Anne K. Thornton



国民石油器材公司 业务全览

俗语说：百闻不如一见。我公
备、油田用各类管子，以及上
务等项，不但在全球任何地区
，其他公司实望尘莫及。

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ARMCO National Supply Company

CHINA BUSINESS

Catherine Yelloz
Assistant Librarian

The following tables contain recent press reports of business arrangements exclusive of those listed in previous issues. The total-value figures for China's exports and imports distinguish between sales (which press reports indicate are definite) and negotiations (which are deals still under discussion). Joint ventures, licensing arrangements, and other forms of business arrangements are included if classified as such in Chinese and foreign media reports. The accuracy of these reports is not independently confirmed by *The CBR*.

National Council members can contact the library (202-828-8376) to obtain a copy of news sources and other available background information concerning the business arrangements appearing below. Moreover, member firms whose sales and other business arrangements with China do not normally appear in press reports may have them published in *The CBR* by sending the information to the attention of Catherine Yelloz.

中外贸易 EXPORTS TO CHINA: 1981 SALES AND NEGOTIATIONS THROUGH MAY 31st

Company/Country	Product/Plant/Technology	Value	Status Date Announced
Agricultural Commodities			
(US)	100 million board-feet logs	NVG	Purchase Contracted 2/81
(Morocco)	700 tons of cotton for 1980	NVG	Exported 3/81
(US)	China has purchased an additional 50,000 metric tons of corn, 7,500 metric tons of wheat, and 5,000 metric tons of soybean oil, and has reduced its commitments for cotton by 1,000 running bales	NVG	Announced 3/25/81
Agricultural Technology			
Agricultural Committee of Canada-China Trade Council (Canada)	Organization of a model farm in Heilongjiang	NVG	Agreement Reached 5/20/81
Chemicals			
ENI (Italy)	Supply of plastics, acrylic fiber, and polyester during the first half of 1981	$28 million	Contract Signed 3/25/81
Superfos (Denmark)	100,000 metric tons of fertilizer	$22.6 million (Dkr150 million)	Order Received 3/25/81
Avon Products Inc. (US)	Agreement to manufacture and market a facial moisturizer in cooperation with the China National Import-Export Service Corporation for Light Industry	NVG	Agreement Reached 5/6/81
Construction Materials and Plants			
Claudius Peters (US)	Silo facilities, loadout equipment, and a bagging plant for a 4,200-tpd cement plant	NVG	Ordered 2/81
Electronics			
Paul Yang & Associates, Inc. (US)	a) Magna-Tech Equipment for Re-Recording Studio. Enduser: Emei Film Studio, Chengdu	$154,201	Contract Signed 11/21/80
	b) Magna-Tech Equipment for Re-Recording Studio. Enduser: Xian Film Studio, Xian	$138,008	Contract Signed 11/21/80
	c) Hollywood Film Company Total Immersion Bi-Directional Panel Printer. Enduser: August First Film Studio, Beijing	$145,657	Contract Signed 11/24/80

	d) Hollywood Film Company Total Immersion Bi-Directional Panel Printer. Enduser: Central Newsreel Film Studio, Beijing	$145,657	Contract Signed 11/24/80
	e) Magna-Tech MD4036 16/35mm Optical and Magnetic Reproducer	$11,860	Contract Signed 1/13/81
David Jamison Carlyle Corp. (US)	Computers and peripherals	$1.5 million	Contract Announced 3/10/81
LM Ericsson (Sweden)	A digital telephone exchange to be installed in Beijing	NVG	Order Received 4/11/81
Trane Co. (US)	Will furnish technology for Trane air-conditioning products and compressors to be produced at two air-conditioning plants in Shanghai	NVG	Agreement Signed 4/23/81
Burroughs (US)	Will provide a computer system to China's Jiao Tong University (Shanghai)	Free	Agreement Signed 5/81
Sangamo Co. (US)	Cooperation with Hangzhou Instruments Plant in the production of single-phase watt hour meters	NVG	Contract Signed 5/81
Whitehall Corp. (US)	A marine seismic system to INSTRIMPEX to be used in offshore geophysical exploration	NVG	Sale Announced 5/27/81
Food Processing and Packing			
(Australia)	Will design and construct a slaughter plant at Guangdong	NVG	Announced 3/81
Metal Box Engineering (UK)	Canning machinery	NVG	Contract Signed 3/11/81
Flour Mills (Hong Kong) and Khong Guan Group (Singapore)	Will set up the first biscuit plant	NVG	Contract Signed 5/19/81
Machinery			
Vibranetics Inc. (US)	A sand and gravel business in China, with two 7-foot vibrating feeders	NVG	Supplied 2/81
British American Tobacco (UK)	A Molins Mark 9.5 cigarette maker, a P.A. 8.5 filter attachment, an Oscar reservoir unit, and a Molins HLP4 packer for a factory constructed by Beijing Light Industrial Bureau	NVG	Shipped 4/81
Towler Hydraulics Ltd. (UK)	Advanced hydraulic equipment including high-pressure pumps, valves, and a manifold station	$111,470 (£50,000)	Will Supply 4/21/81
Newman Electric Grinders; ABC Diamond Tools, Ltd.; and J. Collyer Engineering, Ltd. (UK)	Lens-grinding machines	$891,760 (£400,000)	Order Won 4/22/81
Japan Leasing Corp. (Japan) and Japan Leasing Ltd. (Hong Kong)	Contract to lease equipment imported to China from Japan; the companies also will train Chinese personnel in leasing skills	NVG	Contract Signed 5/81
Machine Tools			
H. W. Ward and Co. (UK)	19 machine tools, including 7D "Perlector" turret lathes with a 133-mm spindle bore and 3DB capstan lathes	$1.1 million (£500,000)	Supplied 4/18/81
Petroleum and Natural Gas			
Tosco Corp. (US)	Has agreed to help China develop its oil shale deposits	NVG	Agreement Announced 3/23/81

McEvoy Oilfield Equipment (UK)	Two complete wellheads and "Christmas tree" valve assemblies	NVG	Order Received 3/25/81
Nippon Steel (Japan)	An offshore production platform for the Japan-China Oil Development Corporation	$23.9 million (¥ 5 billion)	Letter of Intent Received 4/22/81
Shipping			
American Bureau of Shipping (US)	Agreement signed with the Register of Shipping for reciprocal performance of classification and other services, such as assigning load lines	NVG	Agreement Signed 3/31/81
Jeuro Container Transport Inc. (Japan)	Agreement to help China carry out its internal and external container transport	NVG	Agreement Concluded 4/7/81
Dravo Corp. (US)	Contract with the Changjiang Shipping Administration to provide training for the operation of new pushboats	NVG	Contract Signed 4/18/81
US Petroleum and Mining Industrial Group, Perry Oceanographics Inc., Subsea Systems, Inc. and Klein Associates Inc. (US)	Possibility of technical cooperation and co-production for deep-water diving apparatus	NVG	Letter of Intent Signed 4/27/81
Hitachi Shipbuilding and Engineering Co. (Japan)	Four diesel engines to be installed in bulk carriers	$7.7 million	Order Received 4/30/81
Steel Plants and Equipment			
Georg Fisher (Switzerland)	Complete molding and forging equipment to a new steel foundry for casting bulldozer components	$20.8 million (Sfr40 million)	Contract Announced 3/11/81
Textile Plants and Equipment			
Gunze Sangyo Co. and Mitsui and Co. (Japan)	Underwear manufacturing factory in Shandong	NVG	Agreement Reached 3/25/81
William Tatham (UK)	Wool-carding machines	$1.6 million (£750,000)	Order Won 5/6/81
Tourism			
Laticrète International (France)	High-strength mortar additives to be used in connection with the facility's exterior surfaces (the Fragrant Blossom Hyatt House)	NVG	Chosen 2/81
Transportation			
Wilco Inc. (US)	Aircraft refueling equipment, including four 10,000-gallon aircraft refuelers, four 10,000-gallon pull trailers, and four hydrant servicers	$1.2 million	Contract Completed 3/81
Mitsui Warehouse Co. (Japan)	Agreement with China Foreign Trade Transport Corp. to serve as each other's agent in goods transport between the two countries	NVG	Agreement Signed 3/18/81
Agusta (Italy)	Will assist China in building helicopters for agricultural use as well as parts for a twin turboprop	NVG	Announced 5/20/81
Miscellaneous			
TDI International Holdings Pty., Ltd. (Australia)	Contract to set up advertising in the Shanghai international airport	$2 million	Contract Won 2/26/81
W. H. Smith Advertising Ltd. (UK)	3-year contract with the China Advertising Company for prime advertising space at the International Satellite of the new Beijing International Airport	NVG	Contract Signed 3/81

Daimaru (Japan)	Business tie-up with the First Department Store in Shanghai	NVG	Memorandum Signed 3/7/81
Tsumura Juntendo Co. (Japan)	Joint research of traditional Chinese medical science, herbs and unrefined drugs	NVG	Agreement Signed 3/14/81
(Japan)	Cultural assistance	$239,440 (¥ 50 million)	Signed 3/24/81
ABC (US)	Will film a 50-minute documentary on the performing arts of China	NVG	Agreement Signed 3/27/81
Unican Security Systems (Canada)	Has agreed to sell its methods for manufacturing padlocks to the China National Light Industrial Products Import-Export Corp.	$3 million	Contract Signed 4/13/81
Seiko, Citizen and Orient Cos. (Japan)	Bulk order to supply women's wristwatches during FY 1981	NVG	Order Won 4/22/81
Daini Seikosha Co. (Japan)	Contract with Hangzhou Watch Corporation to produce 10,000 watches a month in China on an experimental basis	NVG	Contract Signed 5/81
EMI (UK)	a) Records and tapes (30 percent of the order is for Beatles and Pink Floyd albums)	$78,029 (£35,000)	Orders Received 5/81
	b) Albums under the Music for Pleasure label	$26,752 (£12,000)	
Unicover (US)	Agreement with the China National Stamp Corp. for the establishment and opening of the China Stamp Agency in North America	NVG	Agreement Signed 5/11/81
Educational Testing Service (US)	Agreement allowing ETS to administer standardized tests to Chinese students seeking admission to US universities	NVG	Agreement Signed 5/12/81
(Canada)	Glassware	$629,617 (C$750,000)	Will Sell 5/20/81

Total value of 1981 sales listed through May 31st ..... $878.6 million +
Total value of 1981 negotiations listed through May 31st ..... $4.2 billion +

中外贸易

CHINA'S EXPORTS: 1981 SALES AND NEGOTIATIONS THROUGH MAY 31st

Company/Country	Product/Plant/Technology	Value	Status Date Announced
Electronics			
Peruvian Electrical Co. (Peru)	a) Will import 22 electric generating sets for its 14 small hydroelectric stations	NVG	Agreements Announced 4/9/81
	b) Will receive engineering and technical personnel to provide instruction during the construction of these power stations		
Foreign Aid			
UN	Contributions to the UN fund for Namibia and UN trust fund for South Africa on the occasion of the international day for the elimination of racial discrimination, and in support of the just struggles of the two countries	$40,000	Contributions Received 3/20/81
(Papua New Guinea)	Road design and construction, rice growing, logging and timber processing, and cane furniture manufacturing	NVG	Announced 5/15/81

(Zimbabwe)	Agricultural and other aid	NVG	Promise Received 5/18/81
Light Industries			
Franz Furniture Co. (W. Germany)	a) Three contracts with the Jiangxi branch of ARTCHINA which will sell the firm bamboo and straw articles	$40,000	Contracts Signed 4/6/81
	b) Contract to buy tapestries from the Jiangxi branch of CHINATUHSU	$45,000	
Quezze Co. (W. Germany)	5,000 21-piece coffee sets	$40,500	Contract Signed 4/8/81
Machinery			
Milledge Group (Australia)	1,200 diesel engines in the 6-150 HP category	$1 million	Will Import 4/28/81
Metals and Minerals			
(US)	Tourmaline, aquamarine, and garnet precious stones, produced in Mount Altai	NVG	Bought 1/26/81
(Iraq)	120 pounds of enriched uranium	NVG	Agreed to Buy 3/81
WJS Company (US)	a) Initial contract for the purchase of 200 tons of titanium alloy in ingots	$5 million	Agreement Signed 3/81
	b) 680 tons of titanium alloy in ingots between May 1981 and December 1982	NVG	Long-Term Agreement Signed 3/81
(Japan)	1.2 million metric tons of steaming-coal	NVG	Will Buy 4/15/81
Japan Soda Industry Assn. (Japan)	550,000 metric tons of salt this year	NVG	Agreed to Purchase 4/22/81
(Papua New Guinea)	Renegotiation of an expired agreement to sell copper	NVG	Announced 5/15/81
Petroleum Products and Equipment			
LBS Industries (US) and NPS Industries (Canada)	2,300 oil pumps	$50 million	Ordered 3/2/81
Tourism			
(Egypt)	Exchange of experts in the tourism field	NVG	Agreement Signed 4/16/81
Trade Agreements			
(Tunisia)	Trade agreement for doubling the Tunis to Sfaz railway, and technical assistance for farming and pharmaceuticals	NVG	Signed 3/13/81
(Togo)	First trade agreement under which the two countries are to give each other most-favored-nation status in tariffs, import and export duties, re-export and transit duties, and in customs formalities	NVG	Signed 3/20/81
(Congo)	Cooperation in medical work and public health	NVG	Protocol Signed 4/10/81
Transportation			
(Pakistan)	Joint project to link the strategic Karakoram Highway with Pakistani-occupied sections of Kashmir	NVG	Announced 4/10/81

Shipping			
Hong Kong-Asia Shipping (Hong Kong)	A 36,000-ton bulk carrier	NVG	Bought 3/28/81
Miscellaneous			
(Guinea Bissau)	A 100-bed hospital	NVG	Agreement Signed 4/16/81
Bunn's Diving Equipment (Hong Kong)	10,000 valve bodies of the oxygen cylinder	NVG	Order Placed 4/27/81
ATI Equities (US)	Mongolian horsemen will tour the US this fall	NVG	Announced 4/28/81

Total value of 1981 sales listed through May 31st ..... **$33.6 million +**
Total value of 1981 negotiations listed through May 31st ..... **$1,128.8* million +**

中外贸易

JOINT VENTURES: 1981 PRESS REPORTS THROUGH MAY 31st

Foreign Party	Chinese Party	Technology/Terms	Value	Status
Construction Materials Ltd. (Hong Kong)	Shenzhen City Construction Materials Corp.	The Woo Shek Koo Quarry to provide continuous supply of Chinese concrete aggregate to Hong Kong's building industry; 90 percent of the annual production will be shipped to Hong Kong	$6 million	Agreement Announced 2/81
Wong's Engineering Consultant Co. (Hong Kong)	Shanghai Dredging Corp.	The China Technical and Commercial Consultant Corp. will concentrate initially on winning projects in the Far and Middle East, and also in the US and Canada; 50-50 joint venture	NVG	Announced 3/11/81
Ng Ping Cheong Co. (Hong Kong)	China National Machinery and Equipment Import-Export Corp.	The China Everbest Machinery Enterprises Co. Ltd. (CEM) will mainly handle entrepôt trade to the US and other countries and regions	NVG	Contract Signed 3/16/81
(Hong Kong and Macao)	Zhanjiang Plastic Factory	Joint venture to produce 1,000 tons of polyamide fiber nets a year	NVG	Discussions Announced 3/16/81
(Japan)	Zhanjiang Artificial Leather Factory	Joint venture for the production of 5 million meters of artificial leather	NVG	Discussions Announced 3/16/81
Airtrust (Singapore)	Tianjin Municipality	51-49 investment split in favor of the Chinese to provide fixed-wing air services for offshore operations; has received approval of the Ministry of Communications	NVG	Agreement Signed 4/81
Tropical Products (Singapore)	NA	Factory to make textile and garment products for domestic and foreign markets	NVG	Announced 4/10/81
Novel Enterprises (Hong Kong)	China Precision Machinery Corp.	Novel Precision Machinery Co. will export automatic pilots, radar, navigation equipment, lasers, optical goods, computers, facsimile equipment, batteries, synthetic ammonia, various gases, medical equipment, and machinery for light industry, construction, transportation, farming, and food processing	NVG	Set Up 4/22/81
Investment Overseas Systems Corp. (Hong Kong and Japan)	Fujian and Guangdong Provinces	Two 50-50 joint fishing companies, Zhao Ching Marine Products Associate Co. in Fujian and Pan Ching Marine Culture Associate Co. in Guangdong	NVG	Announced 4/28/81

*Joint ventures already approved by China's Foreign Investment Control Commission are listed in the March–April 1981 *CBR*, pp. 22–23.

LICENSES: 1981 PRESS REPORTS THROUGH MAY 31st

Foreign Party	Chinese Party	Technology/Terms	Value	Status
Warman International Ltd. (Australia)	NA	Agreement to manufacture its range of slurry pumps in China	NVG	Agreement Signed 3/20/81
CBS Records International (US)	China Record Co.	Worldwide licensing deal for "Phases of the Moon," an album of traditional Chinese music	NVG	Deal Signed 4/13/81

OTHER ARRANGEMENTS—COUNTERTRADE (C); COMPENSATION TRADE (CT); PROCESSING (P); AND BARTER (B).

1981 PRESS REPORTS THROUGH MAY 31st

Foreign Party	Chinese Party	Technology/Terms	Value	Status
(France)	Luocun Tannery in Nanhai County	CT: Leather products	NVG	Discussions Announced 3/30/81
(Hong Kong)	Stainless Steelware Plant in Yangjiang County	CT: 5-year contract for electrical finishing devices	NVG	Negotiations Announced 3/30/81
(Italy)	Guangzhou General Lock Factory	CT: 3-year contract for production of high- and medium-grade locks	NVG	Ready to Enter 3/30/81
(Japan)	Sanshui County	CT: 5-year contract for production of 12 million meters of nylon per year	NVG	Discussions Announced 3/30/81
(US)	Guangzhou Lighter Factory	CT: 4-year contract for the production of 300,000 lighters a year	NVG	Talks Held 3/30/81
(W. Germany)	Guangzhou No. 3 Plastic Factory	CT: Production of 1,500 tons of adhesive plastic floor parts a year	NVG	Negotiations Announced 3/30/81
(Yugoslavia)	Liaoning Province	CT: Liaoning Province will provide marble and granite to Yugoslavia in exchange for technology and equipment	NVG	Agreement Announced 3/30/81
(Zimbabwe)	NA	B: Hopes to sell tobacco in return for tractors, textiles, textiles machinery, and hospital equipment	NVG	Announced 4/17/81
Mitsubishi Corp.; Meiwa Trading Co.; and Otoku Kogyo Co. (Japan)	Dalian Branch of MINMETALS, and Yingkou County Talcum Mine	CT: Chinese mine to produce talcum powder to compensate Japanese side in exchange for technical data, grinding machinery, and instruments for quality inspection	NVG	Agreement Signed 4/27/81

NVG = No value given
*The total for negotiations in the May–June, 1981, *CBR* should have read $44.1 million, not billion.
NOTES: Contracts denominated in foreign currencies are converted into US dollars at the most recent monthly average rate quoted in *International Financial Statistics (IMF)*.
Contracts concluded over two months ago are also included if they were not reported in the last issue of *The CBR*.

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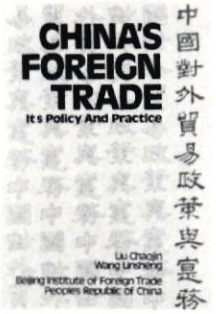

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	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981*
US Exports	—	63.5	740.2	819.1	303.6	135.4	171.3	823.6	1716.5	3749.0	4600
US Imports	4.9	32.4	64.9	114.7	158.4	201.0	202.7	324.1	592.3	1058.3	1400
Total	4.9	95.9	805.1	933.8	461.9	336.4	374.0	1147.7	2308.8	4807.3	6000

*National Council projection.

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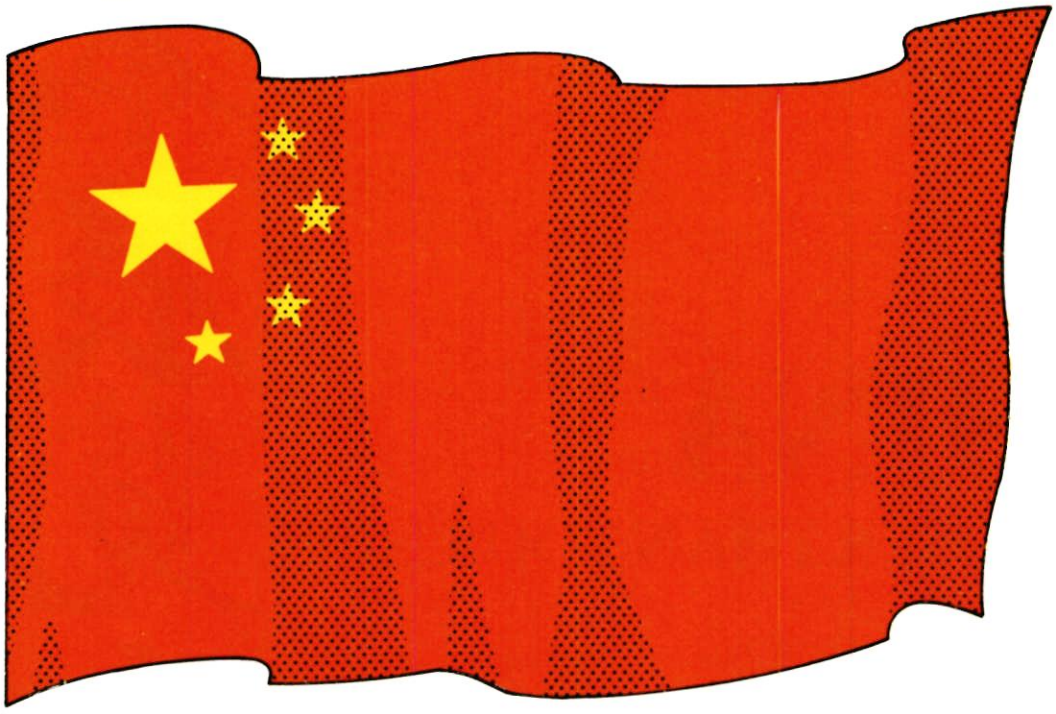

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