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China's Emergence as a Major Economic Power: Implications for U.S. Interests

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Summary

China's likely development as a major economic power over the next quarter century holds important implications for U.S. interests. Assuming a continuation of current trends, by 2025 China is likely to become a medium income economy with an estimated \$3.5 trillion to \$5.8 trillion gross domestic product and a 1.5 billion population. An optimistic view of China in 2025 is for it to be well integrated into the world economy with global standards for trade, investments, finance, labor, and the environment and with a booming investment and trading relationship with the United States conducted in a peaceful world environment. A pessimistic view is that, in 2025, China with a huge and powerful economy and globally competitive industries would be presided over by a politically authoritarian regime with a modern military that views the United States as the enemy and with a government that poses a formidable threat to U.S. interests. The actual China in 2025 will probably contain elements of both these extremes.

Chinese economic prosperity depends on its internal micro- and macroeconomic policies and reforms. It also depends on access to markets, foreign capital and technology of the United States and other countries of the world. In recent years, China's economic ties with the U.S., in effect, have resulted in an annual gain of some \$60 billion for China from its bilateral trade surplus and direct foreign investment. Any major conflict between the two countries could jeopardize China's economic modernization and undermine its internal stability as well as its international status.

Rising Chinese demand for resources, particularly food and energy, as incomes rise and population grows and becomes more urbanized may become a source of conflict. China could seek to assert its claims to disputed islands in the East and South China Sea for their resource and military value. The U.S. could be drawn into these territorial disputes. The status of Taiwan also could become a source of conflict as Beijing has not ruled out the use of force in dealing with Taiwan.

With rapidly rising incomes, China could devote more resources to its military, but in view of growing domestic needs, military spending is likely to continue to take second place to economic expansion and modernization. Even if the military share of GDP remains constant, however, China's military spending could rise from about \$30-35 billion in 1998 to a projected \$135 billion to \$225 billion by 2025.

The Clinton Administration (as did the Bush Administration) has pursued a basic policy of "engagement" with China along with restrictions on exports of military and certain high-technology exports in response to Chinese activities deemed threatening to U.S. security. The "engagement" policy is based on a view that economic reforms and growth will make China less of a threat to U.S. interests. Those opposed to "engagement," seek a stiffer and less accommodating U.S. position toward China. This is based on a view that a China with greater economic and military power would increasingly threaten U.S. interests. Both sides in the policy debate would have the United States apply firm pressures and maintain a strong military presence as a counterweight to rising Chinese power in Asia.

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The Asian financial crisis slowed Chinese economic growth and exposed parallel weaknesses in its financial system, but the People's Republic of China largely avoided a sharp drop in its rate of economic expansion. The return of economic growth in Asia, while still fragile, renews the prospect that, over the long term, China might catch up with the United States and other industrial countries not only in economics but in the strategic and military spheres.

During the almost quarter century since the U.S. normalization of diplomatic relations with China and the beginning of economic reforms under the leadership of Deng Xiaoping, the PRC has achieved impressive, although not unprecedented, rates of economic growth. As the 21st century begins, China is about to join the World Trade Organization (WTO) and is bidding to become solidly integrated into the global economic system. What will China be like if it becomes a major power or even an economic "superpower?"

This report examines China's current growth rate in terms of where it is at the beginning of the 21st century, the sources of that growth, and certain constraints and negative effects of its rapid development. It also provides projections of China's gross domestic product to the year 2025 and examines certain international implications of China's emergence as a major economic power, such as future competition for natural resources and certain sovereignty and territorial issues.

China's economic prospects over the first quarter of the 21st century provide a backdrop to several Congressional concerns. These include China's accession to the WTO, adherence to WTO standards once it has joined the organization, the burgeoning U.S.-China merchandise trade deficit (\$68 billion in 1999), China's relationship with Taiwan, internal economic and other reforms, national security implications of a modernizing Chinese military and extensive productive capacity, and concern over issues such as the environment, labor, and human rights. The focus of this report is on economics – not security.

For further information and analysis of China, see: CRS Issue Brief IB91121, *China-U.S. Trade Issues*, by (name redacted); CRS Issue Brief IB98018, *China-U.S. Relations*, by Kerry B. Dumbaugh; CRS Issue Brief IB98014, *China's Economic Conditions*, by (name redacted); CRS Report 97-391, *China: Ballistic and Cruise Missiles*, by (name redacted), and CRS Report RL30557, *China's International Trade data and Trends* by (name redacted) and (name redacted).

Findings and Policy

The experience of other nations indicates that long-term economic growth paths typically follow an S-curve with a period of catching up in which growth rates are

high followed by a slowing down and eventual settling into average growth rates similar to those of industrialized economies. Since China is still in its “catching-up” phase, most projections of Chinese economic growth over the next quarter century see a fairly high rate at between 5 and 7% per year. China’s actual growth rate will depend on the continuation of some current favorable circumstances and overcoming significant constraints. These include further economic and financial reforms and opening of the Chinese market, continuing inflows of foreign capital and technology, no letdown in the high rates of savings and investment, no sustained banking or financial crisis, no protracted domestic political turmoil, and the resolution of certain environmental constraints.

If China lives up to the commitments it has made to join the World Trade Organization and if it takes the measures to achieve the goal of the Asia Pacific Economic Cooperation forum to establish free trade and investment in the Asia Pacific by the year 2020, its economic reforms and the opening of its economy should continue apace. Unless world economic sanctions are triggered by some sort of security crisis (such as an attack on Taiwan), China is unlikely to become recidivistic in its integration into the world economy. As market forces become more entrenched in the Chinese economy, however, the potential efficiency gains and growth from further reforms and rationalization of the economy will likely diminish.

China has relied heavily on foreign resources to finance its imports of technology, equipment, and raw materials. A notable characteristic of China’s economic growth in the 1990s has been its ability to amass the foreign exchange needed to fund its development. It has been able to finance investments beyond the savings its economy has generated domestically and to grow rapidly without a serious balance-of-payments constraint. China’s holdings of foreign exchange reserves rose from \$22.4 billion in 1993 to \$157.7 billion in 1999 and had risen to about \$162 billion by mid-2000.¹ The major sources of these foreign financial resources have been Hong Kong, the United States and Japan. These resources have taken the form of trade surpluses, foreign direct investments, bank borrowing, and foreign aid.

From 1996 to 1999, China’s average gain in financial resources from its trade and financial relations with the United States amounted to \$61.4 billion per year as compared with \$26.3 per year from Japan. The bulk of this \$61.4 billion came from the average \$56 billion U.S. trade deficit with China over the period. This trade deficit completely overshadows foreign direct investments (about \$3.5 billion per year from both the U.S. and Japan), loans (about \$2 billion per year from each country), and foreign aid (\$1 billion per year from Japan). China’s \$61.4 billion per year in financial resources gained from public and private sector interaction with the United States was equivalent to 133% of China’s average annual inflow of total foreign direct investments or about 25% of China’s annual rate of fixed capital formation.

The ability of China to continue to run bilateral trade surpluses in excess of \$50 billion with the United States as well as \$20 billion surpluses with Japan over the

¹ International Monetary Fund. *International Financial Statistics*. November 2000.

next 25 years is problematic. With the additional 180 million workers expected to be added to its labor force over this period of time, however, China is likely to remain a favored manufacturing base for exports by multinational corporations. In any case, future Chinese economic prosperity will require continued access to export markets in the United States, Japan, the European Union, and other industrialized nations. China also obtains much of its foreign capital and technology from those same countries. Since these nations have adopted coordinated economic sanctions under certain circumstances, China's rising dependence on overseas markets has created a domestic Chinese stake in stable international political and economic relations.

In terms of domestic economic and political stability, China's high rates of savings and investment are likely to continue, unless its banking sector fails. Beijing is fully aware of the problem of bad loans and technical insolvency in many banks mostly because of loans extended to money-losing, state-owned enterprises as part of the government's economic plans. It has taken some initial steps to address the problem but has experienced some backsliding in the face of political resistance from the state-owned enterprises and workers. As for political stability, while Beijing now seems to be overreacting to all potential opposition, it is betting that it can stay in power by delivering more economic growth and becoming more representative of the population. Still, rising problems of unemployment and disparities in income combined with nascent democracy movements could unleash forces in Chinese society that Beijing might not be able to contain. Aside from protracted civil unrest, however, a leadership struggle or political crisis is not likely to have a long-term, negative impact on growth.

If China remains on its current growth path, it should become a major economic power by 2025 or earlier. If its economy grows by 5% per year in real terms, its gross domestic product (GDP) would rise from the current \$1 trillion to around \$3.5 trillion in 2025. (For details and projections based on purchasing power parity, see the section of this report on Future Trends of Growth.) At a higher 7% growth rate, it would expand to around \$5.8 trillion – moderately large when compared with the current GDP of \$9.2 trillion for the U.S. or \$4.4 trillion for Japan. The \$3.5 trillion GDP would roughly be the size of the U.S. economy in the mid-1970s, while the \$5.8 trillion GDP would be about as large as the United States in the mid-1980s. In short, China would be a major world economic power but still considerably smaller than the projected \$15 trillion GDP for the United States in 2025 (assuming a 2% growth rate).

The large size of the Chinese economy in 2025 would come primarily from its huge population of a projected 1.5 billion people. On a per capita basis, GDP in China is likely to rise from the current \$790 to an estimated \$2,800 to \$4,600 depending on its growth rate. Considering that per capita GDP in the United States or in Japan currently is around \$34,000, China's average standard of living still would be relatively low. Consumers would be just entering the stage of the personal automobile.

A larger and more liberalized Chinese economy that is more dependent on foreign trade and investment is likely to have a greater stake in a stable global economy. Until now, foreign companies operating in China have been "hostage" to Beijing's policies. As more Chinese companies establish subsidiaries and

partnerships overseas, they likewise will become subject to local governments and economic conditions. Their profitability will hinge on policies of their respective host countries and economic conditions in those countries as well as in the world. A larger, more international Chinese economy also should provide incentives for Beijing to accelerate its adoption of international standards in several areas – not only in trade-related standards as will be required by WTO membership, but in accounting, banking, and other aspects of an industrialized economy.

An optimistic view of China in 2025 is for it to be well integrated into the world economy with global standards for trade, investments, finance, labor, and the environment and with a booming investment and trading relationship with the United States and other nations conducted in a peaceful world environment. A pessimistic view is that this huge and powerful economy with industries that compete directly with those from the United States would be like the former Soviet Union during the Cold War, presided over by a politically authoritarian and repressive regime armed with a modern military that views the United States as the enemy and with an international agenda that includes thwarting U.S. actions in all policy arenas. A middle-ground projection could include aspects of each of the two extremes.

With rapidly rising incomes, China could devote more resources to its military, even though currently Beijing is placing a higher priority on economic expansion and modernization. The Chinese military, therefore, likely will have difficulty increasing the share of GDP that it now takes.

Current estimates of Chinese defense spending vary widely. At the lower end is China's officially reported military spending of \$12.6 billion in 1998. Western analysts believe the actual figure to be several times higher than this official figure because a number of significant items are funded elsewhere. Taking this official figure as a base, by 2025, China's military spending would rise to \$45 billion at a 5% growth rate or \$69 billion at 7% growth. A consensus of government and academic experts suggests a more realistic estimate for military spending of \$30 to \$35 billion per year in 1996. That is close to an estimate by the International Institute for Strategic Studies (IISS) of \$36.7 billion in 1998. Using the IISS figure, China's total military expenditures in 2025 would rise to between \$137 billion and \$228 billion depending on the growth rate of GDP. The \$228 billion is roughly 75% of the level of defense spending that existed in the United States in 1999 – sufficiently large to be a major military power, although by 2025, U.S. defense expenditures also would likely have grown considerably. Roughly speaking, therefore, China's military expenditures in 2025 (official plus hidden) are expected to range between \$135 billion and \$225 billion.

For China, two conceivable sources of conflict with U.S. interests lie in Chinese claims to sovereignty. The first is the question of Taiwan. For China, reunification with Taiwan is a domestic issue that is intertwined with Chinese nationalism. Beijing continues to assert that the Taiwan issue is a "matter of China's internal affairs, and China is under no obligation to commit itself to rule out the use of force"

in resolving it.² Under this policy, the military option remains open regardless of the economic and international consequences.

The second possible conflict stems from the combination of overlapping claims to certain islands in the East and South China Sea and rising Chinese demand for food grains, energy, and other mineral resources. Economic growth places China in a situation faced by all economies. As a country develops, it requires more resources, both real and financial, to operate. These resource needs can be supplied either domestically or through international trade and investments. On one hand, China's rising demand for food is likely to make it increasingly dependent on the United States and other food exporters such as Canada and Australia who might be sympathetic to U.S. attempts to use trade as a weapon. This could make China more susceptible to economic sanctions and may establish political constituencies within China that oppose military or political actions that might jeopardize their sources of supply. On the other hand, China's rising dependency on imported petroleum and raw materials could induce Beijing to seek to enforce its territorial claims over disputed islands in the Pacific, particularly the Spratly, Paracels (Xisha), and Daiyutai (Senkaku) islands. China would do so, however, at the risk of conflict with neighboring countries or even the United States.

Aside from these potentially large conflicts, other issues, such as nuclear and missile technology proliferation, human rights, religious freedom, democracy, the environment, and differences on policies pursued by international organizations are likely to continue to be irritants on both sides.

For U.S. business and labor interests, a larger and more economically powerful China raises the possibility that it will become an even more formidable competitor in international markets. It could become a "second Japan" – an economy that began exporting toys and textiles and then moved progressively into steel, machine tools, automobiles, computers, and precision machinery.

A question for the United States is what economic policies to pursue in order to achieve outcomes that bring maximum benefits to U.S. interests. In the economic sphere, U.S. policy options include: (1) continuing present policies of engagement, opening markets, bringing China into the global market system, and attempting to ensure compliance with trade agreements (this includes providing economic incentives and disincentives aimed at assisting various Chinese groups to build institutions and values that are more in accord with those espoused by the United States), or (2) attempting to curtail China's economic power through sanctions, export controls, trade isolation, or capital controls.

The Clinton Administration (as did the Bush Administration) basically has pursued a policy of "engagement" with China along with restrictions on exports of military and certain high-technology exports or engagement in activities deemed

² People's Republic of China. The Taiwan Affairs Office and The Information Office of the State Council. *White Paper--The One-China Principle and the Taiwan Issue*. February 21, 2000. On Internet at [<http://www.china-embassy.org/papers/taiwan00.htm>].

threatening to U.S. security.³ This policy of engagement, of course, goes beyond the economic policies considered in this report. It seeks to maintain and enhance relations with China in the various policy realms. In economic terms, it attempts to bring China more into the world economy by opening it to U.S. exporters and investors and assisting it in its transition from a centrally planned to a more market-based economic system – albeit with Chinese characteristics. This includes providing permanent normal trade relations status for Chinese exports as well as bringing the Chinese system into accord with world norms – including membership in and adherence to the rules of the World Trade Organization.

The premise underlying this policy is that China is currently undergoing tremendous change. It is revamping its economic system, opening its markets, and seeking to join the mainstream of the global economy. Although the thrust of this change in China currently is mainly economic (and less political or military), in this state of flux, China's increasing engagement with the world, globalization, and the freer flow of information may induce the Chinese people to insist on more democratic institutions and espouse values less at odds with those of the United States. The approach also assumes that the more China is brought into the international system, the more it will have to adhere to international norms and the less likely Beijing will jeopardize gains by disruptive domestic or international behavior. Those favoring engagement also fear that belligerent policies toward China will only generate enmity unnecessarily – treat China as an enemy and it will become one.

From the viewpoint of global economic efficiency, policies that move China more into the global market economy in which resources are allocated according to their most productive needs are more likely to maximize world well-being. This is an economic argument favoring current policies of engagement. U.S. exporters and multinational corporations also seek the stability and openness that engagement tends to bring in order to maximize their market opportunities and protect their investments in China. They also seek to deal with the Chinese market on the same basis as businesses from competitor companies, particularly those from Asia and Europe whose home nations are seeking engagement with China.

Those opposed to the current policy of engagement see a China whose security outlook and political direction are basically unchanged from the period of the Korean War except that it now has nuclear weapons, missiles, and Russian-made naval vessels. According to this view, as the Chinese economy grows, its military buildup will continue. This heavily armed China increasingly could threaten peace and stability in Asia and, under certain circumstances, even challenge vital U.S. interests. This view reflects the fear that China's current focus on economic development and raising the standard of living of its people is temporary. Once it becomes an economic power, Beijing may revert to its pre-reform ways, and even while it is developing, its leaders may maintain repressive, authoritarian, and non-democratic policies. The assumption of this view is that engagement only accelerates the time that China will have the resources to openly challenge U.S. interests. Others

³ For discussion of U.S. policy toward China, see CRS Issue Brief IB98018, *China-U.S. Relations*, by Kerry B. Dumbaugh and CRS Issue Brief IB91121, *China-U.S. Trade Issues*, by (name redacted).

opposed to engagement with China include human rights and environmental interests.

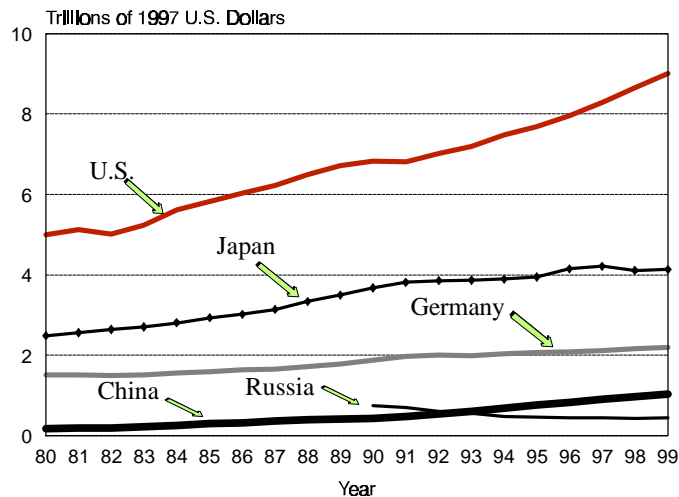
Under an extreme form of these views opposing engagement, U.S. policy would be aimed at “containing” China and promoting internal change while dealing strongly with Beijing’s disruptive foreign policy actions. Also, under this approach, the United States would provide no economic or diplomatic concessions without a *quid-pro-quo* response on the part of China, and the U.S. would enlist allied countries in concerted actions to achieve desired behavior by Beijing. This approach may call for sanctions and other punitive measures.

Both sides in the policy debate would have the United States apply firm pressures and maintain a strong military presence as a counterweight to rising Chinese power in Asia.

China's Economic Growth

This section examines the size of the Chinese economy, how it has grown, and compares it with other countries. China’s economy has grown from a gross domestic product (GDP) in 1980 of \$175.8 billion (as measured in 1997 U.S. dollars not adjusted for price differences) to \$426.9 billion in 1990, and to \$1,035.8 billion in 1999. China’s 1999 level of GDP was more than twice that of Russia (\$438.7 billion), about half that of Germany (\$2,187.5 billion), roughly a quarter that of Japan (\$4,133.3 billion), and about a ninth as large as that of the United States (\$9,017.5 billion) (see **Figure 1**).

Figure 1. Gross Domestic Product for China, U.S., Japan, Germany, and Russia, 1980-99

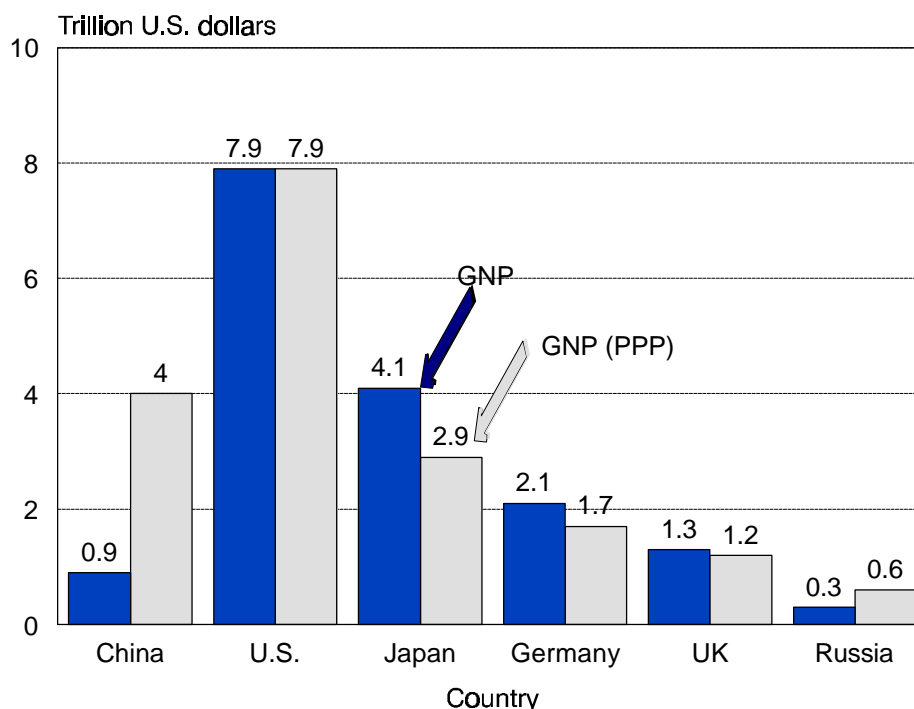


Source: Data from Standard & Poors Data Resources Inc.

China’s relatively low GDP, however, does not reflect its actual standards of living because of the low prices charged there for certain goods and services. China’s dollar-based GDP figures, therefore, can be converted to dollars using an exchange rate that has been adjusted to account for price differences (parity in

purchasing power – PPP). **Figure 2** shows levels of gross national product (GNP) in 1998 both in nominal terms and adjusted for purchasing power parity. Since prices are relatively low in China and relatively high in Japan, China's GNP is larger when adjusted for PPP, while Japan's is smaller as compared with that of the United States. In PPP terms, China with a GNP of \$4 trillion surpasses Japan (\$2.9 trillion) as the second largest economy in the world.⁴ This is a level about half that of the United States and twice that of Germany and six times that of Russia.

Figure 2. Nominal GNP and GNP Adjusted for Purchasing Power Parity in 1998 for China, the U.S., Germany, Japan, Russia, and the UK



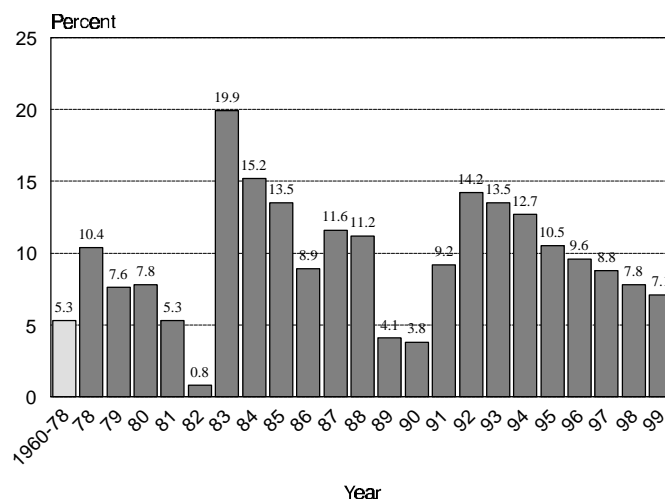
Data Source: World Bank

China's large population of 1.2 billion, however, means that its GNP on a per capita basis (calculated using PPP) is considerably lower than that in other major countries. In 1998, per capita GNP (PPP) for China was \$3,220, while it was \$29,340 for the United States, \$23,180 for Japan, \$20,810 for Germany, \$20,640 for the UK, and \$3,950 for Russia. These per capita income levels provide an approximate measure of average domestic levels of living, but they are less useful

⁴ The measurement of purchasing power parity is quite imprecise. For instance, estimates by Nick Lardy put China's per capita PPP at only around \$1000 to \$1200 as compared with the \$3,220 above. See Vincent Cable, 'The Outlook for Labor-intensive Manufacturing in China' in OECD, *China in the 21st Century: Long-term Global Implications* Paris, 1996, p.44. See also, N. Lardy, *China in the World Economy*, Institute of International Economics, Washington D.C., 1994. Differences in estimates arise because of the arbitrariness in selecting domestic prices of non-traded goods. Also certain data regarding agricultural products, particularly for self-consumption, is not very reliable in any developing country. PPP measures also do not operate well for GDP as a whole because it contains numerous non-traded items, which are not comparable among countries.

for assessing a country's overall economic strength. Such a status is measured by a nation's aggregate income and production level.⁵

Figure 3. China's Annual Growth Rates in Real Gross Domestic Product, 1960-1999



Source: Data from Standard & Poors Data Resources Inc.

Since 1978 when China began to open its economy, rates of economic growth have been substantial (see **Figure 3**). The overall rate of 9.7% per year over a period of two decades is considerable. Such rates have been significantly higher than those attained by the other major powers during the same period, but they have been on a downward trend.

Sources of Rapid Economic Growth

In any country, economic growth is generated through a combination of microeconomic and macroeconomic factors. On the microeconomic side, entrepreneurs and managers must organize new or expanded industries, and resources must be allocated to their most efficient uses. On the macroeconomic side, an economy must generate savings (by households refraining from consumption) which then must be transferred into investments in new plant and machinery, technology, and in education. If domestic savings are insufficient, an economy can import capital from abroad. In this section, we examine some of these factors for

⁵ Chinese scholars have recently developed the concept of Comprehensive National Power (CNP) which incorporates other than conventional economic variables. It includes gross domestic product and foreign trade, natural resources, social development, science and technology, military affairs, and government and foreign affairs capabilities. See Wang Songfen, (ed.) *Shijie Zhuyao Guojia Zonghe Guoli Bijiao Yanjiu (Comprehensive National Power of the World's Major Nations)*, Chinese Academy of Social Sciences (CASS), Changsha: Hunan Chubanshe, 1996 and Huang Shuofeng, *Guojia Zhonghe Guoli Lun (Comprehensive National Power)*, Zhongguo Shehui Kexue Chubanshe, Beijing, 1992. For a detailed description in English see Michael Pillsbur, *China Debates the Future Security Environment*, National Defense University, Washington DC, 2000, pp. 104-136. On Internet at [<http://www.ndu.edu/inss/books/pillsz.htm>].

China with a focus on resources coming outside the economy, particularly from the United States and Japan.

Economic Reform

On the microeconomic side, most of China's modernization has occurred since 1978 when Beijing began to implement economic reforms. In essence, these reforms have been to convert the economy from one that essentially was closed, based on public ownership of means of production, centrally controlled, and dependent on government (rather than market) allocation of resources into an economy still with elements of socialism but more based on individual initiative and market-based resource allocation. China's economic reforms have brought privatization, market-based pricing, and changes in management and corporate governance. These reforms were initially introduced in agriculture and small-scale industries, both in rural and urban areas, and subsequently have been applied in large-scale enterprises including some of the state-owned enterprises (SOEs). The economic incentives provided by these reforms accelerated growth and promoted economic efficiency in both agricultural and industrial production.

Concurrently, by opening the country to foreign trade and liberalizing the rules concerning foreign capital and the creation of the Special Economic Zones (SEZs), China facilitated the entry of foreign capital (investments) and technology. Based on these investments, it has been able to increase exports of labor-intensive manufactured goods tailored to Western technology, tastes, and fashions.

High Rates of Domestic Savings and Investment

Two of the major features of the Chinese economic development have been a high rate of domestic capital formation (investment) enabled by high rates of savings (a typical feature of the East Asian economies) and the creation of physical infrastructure by the massive use of surplus labor. Even during the "ten wasted years" of the Cultural Revolution (1966-76), Chinese domestic savings remained at around a third of GDP.

Since 1978 when the economic reform began, according to Chinese official statistics, domestic savings have averaged 37% of GDP – the World Bank estimates suggest 33-34%.⁶ At a capital/output ratio⁷ of 3:1 – a ratio that is typical for economies at China's stage of economic development, the current rate of domestic savings should yield a rate of growth of 10% per annum. This assumes, of course, that the savings are used for productive investments.

Foreign Economic and Financial Resources

⁶ World Bank, *China 2020 : Development Challenges in the New Century*, Washington D.C., 1997, p.4.

⁷ A capital/output ratio is the average amount of investment required for one unit of production or output. A ratio of 3:1 means that on average \$3 of investment increases production by \$1. For further discussion, see: Krugman, Paul. *The Myth of Asia's Miracle*, *Foreign Affairs*, v. 73, Nov./Dec. 1994. P. 62-78.

Over the past two decades, foreign resources obtained through trade, capital inflows, foreign economic assistance, and technology transfers have played an important role in Chinese economic development. In technical terms, these external resource flows consists of China's current account (trade) balance, net external financing, plus net official flows.⁸ These foreign resources provided the hard currency China needed to import machinery and technology and enabled the country to finance investments beyond its savings generated domestically and have allowed China to develop without a serious balance-of-payments constraint. During the 1990s, China's holdings of foreign exchange reserves rose from \$22.4 billion in 1993 to \$107.0 billion in 1996, to \$157.7 billion in 1999, and about \$162 billion in 2000.

China's Trade Surplus. Among the sources of foreign resources that have helped build China's foreign currency reserves, international trade has played the most important role. China has been following the economic development model of other East Asian nations in which industrialization is financed partly through trade. Countries, such as South Korea, have relied on access to foreign markets, particularly those in the United States, to generate the foreign exchange needed to finance purchases of equipment and technology.

The normalization of relations between the United States and China along with Chinese economic liberalization led to rapid expansion of China's trade. During the two decades following normalization, Chinese exports rose from a mere \$13.7 billion in 1979 to \$194.9 billion in 1999, while imports increased from \$15.7 billion to \$165.8 billion over the same period. A sizable proportion of these exports originated from manufacturing plants that were linked to foreign companies. In essence, Chinese exports have displaced those from newly industrialized economies (South Korea, Taiwan, Hong Kong and Singapore) in labor-intensive industries such as apparel, footwear, and household products. Chinese exports also have been both competing with and complementary to those from developing countries of Southeast Asia (Indonesia, Malaysia, the Philippines, and Thailand). In the process, China has generated considerable trade surpluses with the United States, Japan, and the European Union.⁹

Table 1. China's Exports To and Imports From Main Trading Partners, 1999
(\$ in billion U.S.)

Country/ Region	China's Exports	% of Total Exports	China's Imports	% of Total Imports
U.S.	41.9	21.5	19.5	11.8
Japan	32.4	16.6	33.8	20.3

⁸ Net external financing = Equity investment plus private credit. Equity investment = direct and portfolio investment. Private credit = net commercial bank and nonbank loans. Official flows = loans from international financial institutions and foreign aid.

⁹ CRS Report RL30557, *China's International Trade: Data and Trends*, by (name redacted) and (name redacted). See also: Loungani, Prakash. Comrades or Competitors? Trade Links Between China and other East Asian Economies. *Finance and Development*, June 2000.

Country/ Region	China's Exports	% of Total Exports	China's Imports	% of Total Imports
EU	30.2	15.5	25.5	15.4
Hong Kong	36.9	18.9	6.9	4.2
ASEAN	12.2	6.3	14.9	9.0
S. Korea	7.8	4.0	17.2	10.2
Taiwan	4.0	2.0	19.5	11.8
Australia	2.7	1.4	3.6	2.2
Russia	1.5	0.8	4.2	2.5
Canada	2.4	1.2	2.3	1.4

Source: *Beijing Review*, Vol. 43, and No. 14.

Note: These figures may not be the same as those reported by the other countries because of how trade with Hong Kong is counted and differences in definitions and methods of classification.

As shown in **Table 1**, among China's trading partners, by far, Japan and the United States are the largest (not considering Hong Kong), but recently, the European Union (EU) has also emerged as an important trading partner. In 1999, the advanced industrial economies of the United States, Japan and the EU accounted for 53.6% of Chinese exports and 47.5% of Chinese imports.¹⁰ The Association of Southeast Asian Nations (ASEAN), the Republic of Korea and Taiwan took another 31.2% of Chinese exports and accounted for nearly 35.2% of its imports.

Greater access to U.S. and Japanese markets along with favorable macroeconomic conditions have enabled China to increase its trade surplus with both countries – but more substantially with the United States (see **Table 2**). Over the four-year period 1996-99, China ran a merchandise trade surplus with the United States that averaged \$56.2 billion per year. (According to Chinese data, it was about \$17.6 billion per year.) During the same period the United States reported an average annual surplus of \$1.4 billion in its trade in services with China. Therefore, the overall Chinese surplus on goods and services trade (a close approximation to China's current account surplus) with the United States was \$54.8 billion (using U.S. data).

¹⁰ Hong Kong is treated as a separate customs area by most countries, including China and the United States, even though it reverted to Chinese rule in July 1997. In Chinese foreign trade statistics, most of its shipments to Hong Kong are treated as exports while other countries classify imports from Hong Kong as imports from China. This makes Chinese foreign trade statistics significantly different from those of the major trading partners.

**Table 2. U.S. and Japan's Merchandise Trade Balances with China
Selected Years, 1980-99**
(\$ in million U.S.)

Year	U.S. Trade Balance With China		Japan's Trade Balance With China	
	U.S. Data	Chinese Data	Japanese Data	Chinese Data
1980	2,591	2,847	763	1,137
1985	-368	2,863	6,056	9,087
1990	-11,489	1,277	-5,912	-1,554
1991	-14,018	1,812	-5,643	-220
1992	-19,943	304	-5,005	1,987
1993	-22,416	-6,343	-3,298	7,521
1994	-32,075	-7,444	-8,882	4,829
1995	-36,772	-8,621	-13,988	541
1996	-42,431	-10,552	-18,578	-1,698
1997	-53,027	-16,454	-20,135	-2,830
1998	-60,851	-21,004	-16,897	-1,411
1999	-68,668	-22,466	-19,620	-2,534

Note: U.S. import data are on a Customs basis. China's and Japan's are c.i.f.

Source: International Monetary Fund. *Direction of Trade Statistics Yearbook*. China. Ministry of Foreign Trade and Economic Cooperation.

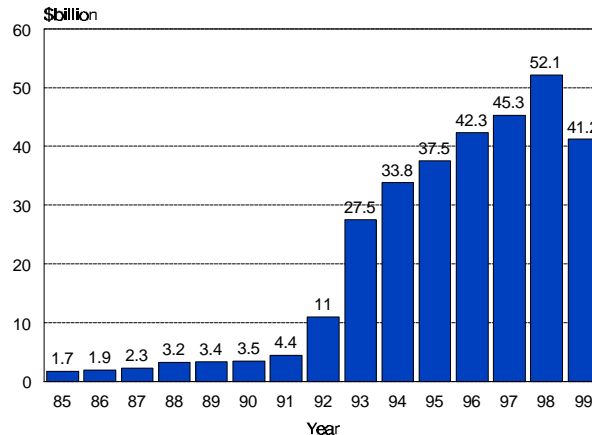
On the basis of Japanese data, the Chinese trade surplus with Japan averaged \$19.1 billion over the 1996-1999 period (\$2.1 billion on the basis of Chinese data). As measured by trade surpluses, therefore, China has been gaining more in foreign exchange resources from the United States than it has from Japan. The U.S. trade regime (combined with macroeconomic conditions) has been far more favorable for China than that of Japan.

Foreign Capital Inflows. The second source of foreign exchange for China has been in capital inflows, both private and official. With the economic reforms and the gradually improving terms on which China is prepared to invite foreign capital, China has emerged as the second largest recipient in the world of foreign investment (next to the United States). China also has received official development assistance (foreign aid – mainly from Japan) and has borrowed from both private and multilateral development banks. China also has issued international debt securities.

Foreign Direct Investment. Foreign investment includes direct investment (controlling shares of companies/subsidiaries) and indirect investment into portfolio equity (minority holdings of stocks). As shown in **Figure 4**, during the 1996-99 period, an average of \$45.2 billion per year came into China in the form of foreign direct investment (FDI) actually utilized (not merely contracted), an amount equivalent to almost a third of the total going to all developing countries. The amount of FDI remained less than \$4 billion in the 1980s but surged during the early

1990s as China liberalized its investment regime and foreign investors sought to establish businesses there. Foreign investment is flowing primarily into manufacturing, but there also are a significant number of projects in commerce, tourism, and construction.

Figure 4. Foreign Direct Investment (Utilized) Into China, 1980-99



Source: China. Ministry of Foreign Trade and Economic Cooperation

As indicated in **Table 3**, Hong Kong is the most important source of FDI for China. Investors there account for more than 40% of total FDI utilized. The inflow of FDI from Japan has been about the same as that from the United States. The inflows from Taiwan and Singapore also are notably high. Many Taiwanese investors also are channeling their investments to China through the Virgin Islands (in addition to going through Hong Kong). (Some Chinese investors invest through foreign companies to take advantage of special foreign investment incentives.)

International Borrowing and Foreign Aid. In addition to FDI, China has received foreign resources through loans and foreign aid. The loans are from private commercial banks as well as from international financial agencies – such as the International Monetary Fund, the World Bank, and the Asian Development Bank. China also issued debt securities on international markets and has received export credits either from governmental banks or credits that have been guaranteed by governments.

Table 3. Sources of Foreign Direct Investment Inflows into China, 1997-98
(\$ in billions)

Country Sources	1996		1997		1998	
	Amount	Percent	Amount	Percent	Amount	Percent
U.S.	3.44	8.1	3.23	7.1	3.90	8.6
U.K.	1.30	3.1	1.86	4.1	1.18	2.6
Germany	0.52*	1.2	0.99	2.2	0.74	1.6
Japan	3.68	8.7	4.33	9.6	3.40	7.5

Country Sources	1996		1997		1998	
	Amount	Percent	Amount	Percent	Amount	Percent
Hong Kong	20.68	48.8	20.68	45.7	18.51	40.6
Taiwan	3.47	8.2	3.29	7.3	2.92	6.4
Singapore	2.25*	5.3	2.61	5.8	3.40	7.5
S. Korea	1.50*	3.5	2.14	4.7	1.80	3.9
Virgin Islands	0.54*	1.3	1.71	3.8	4.03	8.8
Others	9.78	11.7	4.36	9.8	5.58	12.5
Total	42.35	100.0	45.28	100.0	45.58	100.0

*Includes FDI plus Other Forms of Foreign Investments (Overseas share issuance, international leasing, compensation trade, and processing and assembling).

Sources: China. MOFTEC. StatChina on Internet at [<http://www.statchina.com>]. U.S. Department of State. *Country Commercial Guide – China, Fiscal Year 2000*. Japan External Trade Organization, *JETRO White Paper on Foreign Direct Investment, 1999*, Tokyo, 1999, p. 14. On Internet at [<http://www.jetro.go.jp>].

Table 4 shows net annual private and official international borrowing by China for the 1994-99 period. As can be seen, during the mid-1990s, China was relying heavily on loans from private commercial banks, on securities issued in international markets and on loans from the World Bank, International Development Association, and Asian Development Bank. In 1996 and 1997 prior to the full onslaught of the Asian financial crisis, China was borrowing around \$20 billion per year. During 1998 and 1999, however, China has been retiring more debt securities than it has issued and has been reducing its burden of bank borrowing. On a cumulative basis, as of March 2000, China had outstanding foreign bank debt of \$62.2 billion of which \$11.1 billion was from Japan, \$8.1 billion from France, \$7.6 billion from Germany, and \$1.8 billion from the United States.¹¹ China's net borrowing from foreign banks fell by \$10.3 billion in 1998 and \$16.0 billion in 1999. For China, borrowing from multilateral development banks has stayed relatively steady at about \$2 billion. Trade credits have been up and down at about \$1 billion to \$3 billion per year. They are short-term loans that finance trade transactions.

Table 4. Annual Private and Official International Borrowing by China 1994-99
(\$ in millions)

Type of Borrowing	1994	1995	1996	1997	1998	1999
Debt Securities Issued	3,787	288	1,520	2,497	-751	-703
Non-bank Trade Credits	1,124	933	1,051	2,911	-672	2,030
Multilateral Bank Loans	2,205	2,424	2,402	2,501	2,338	1,903
Foreign Aid (Official Bilateral) Loans	1,744	3,029	1,703	1,145	337	251
Borrowing from Banks	7,743	10,191	13,491	10,458	-10,310	-15,994
Total:	16,603	16,865	20,167	19,512	-9,058	-12,513

¹¹ Bank for International Settlements. Debt Tables. June 2000.

Notes: Amounts are annual flows (derived from stock data). Bank trade credits are included in Total Borrowing from Banks. Multilateral Loans are from the World Bank, International Development Association, and Asian Development Bank. Foreign Aid (Official Bilateral) Loans are provided mainly for development purposes by the 21 member countries of the OECD Development Assistance Committee.

Source: Joint BIS-IMF-OECD-World Bank statistics on External Debt. Bank for International Settlements. On Internet at [<http://www.bis.org>].

Foreign aid to China peaked in 1995 at about \$3 billion but had dropped to \$0.25 billion by 1999. Japan has provided about \$1 billion in bilateral aid to China per year – a third of which has come in form of grants and technical assistance and the rest in the form of loans. The United States does not provide bilateral aid to China.

In summary, the major sources of foreign financial resources for China have been Hong Kong, the United States, and Japan. Hong Kong, however, is now a part of China. As shown in **Table 5**, the average annual amount of foreign resources China gained from the United States over the period (1996-1999) amounted to \$61.4 billion against \$26.3 billion for Japan. The \$61.4 billion per year from the United States is equivalent to 133% of China's average annual inflow of total FDI or about 25% of China's annual rate of fixed capital formation.

Table 5. China's Annual Average Foreign Resource Gains from the United States and Japan (1996-1999)
(\$ in billions)

Country	Trade Surplus	Foreign Direct Investment*	Loans	Foreign Aid	Total
U.S.	56.2	3.6	1.6	-	61.4
Japan	19.1	3.9	2.3	1.0	26.3

* Average of 1997 and 1998

Technology Transfers. The major sources of technology for China have been the industrialized countries with which it trades. Chinese business executives generally state that they prefer to buy technology from or participate in joint ventures with American companies, rather than those from Japan, because U.S. companies tend to transfer more advanced technology and are more open with it. The transfer of sophisticated technologies from Japanese firms tends to be slow, and the Japanese style of management along with their methods of technology transfer through on-the-job training and small group discussions tends to be less effective in transferring cutting-edge technology.¹²

In recent years, both the United States and Japan have provided educational opportunities to a large number of the Chinese young men and women. Over 50,000 Chinese students are being trained in both countries. However, a substantial number of Chinese students in Japan are registered in Japanese language schools. An entry into a language school there, entitles a student to obtain a visa to live and work in

¹² Urata, Shujiro, "Japanese Foreign Direct Investment and Technology Transfer in Asia." p. 10. On Internet at [<http://www.ap.harvard.edu/papers/RECOOP/Urata/Urata.html>].

Japan. Many Chinese students there actually work as waiters or bar hostesses or in low-paying jobs in industry. Contrary to the situation in the United States, not many pursue advanced college degrees in science and technology.¹³

Future Trends of Growth

In this section, projections are made for Chinese economic growth over the next quarter century. The purpose of this is twofold. First, China is so large that the growth path the Chinese economy takes will greatly affect the rest of the world. Second, China's economic power is the most important underlying factor in China's ability to develop military power.

Of course, projections of Chinese gross domestic product or per capita income over the long term is by its nature risky and somewhat conjectural. Much depends on Chinese domestic as well as international circumstances that are yet to develop. On the domestic side, growth will depend on some success in implementing economic reforms, having a tolerable level of social unrest, and achieving a reasonable level of entrepreneurial and bureaucratic efficiency. On the international side, growth will require access to world markets for Chinese exports, continued access to foreign capital and technology, and regional peace.

The experience of other nations indicates that growth paths typically follow an "S-curve" with a period of catching up in which growth rates are high followed by a slowing down and eventual settling into average growth rates similar to those of industrialized economies. With increasing economic maturity, growth tends to slow because new technology has to be generated domestically rather than borrowed, and the same rate of investment brings about less of an increase in production. (The capital/output ratio, or amount of capital needed per unit of production, tends to increase.) Also with economic growth, shortages of various resources and inputs necessary for production (particularly labor) lead to a rise in their prices and increases in manufacturing costs.

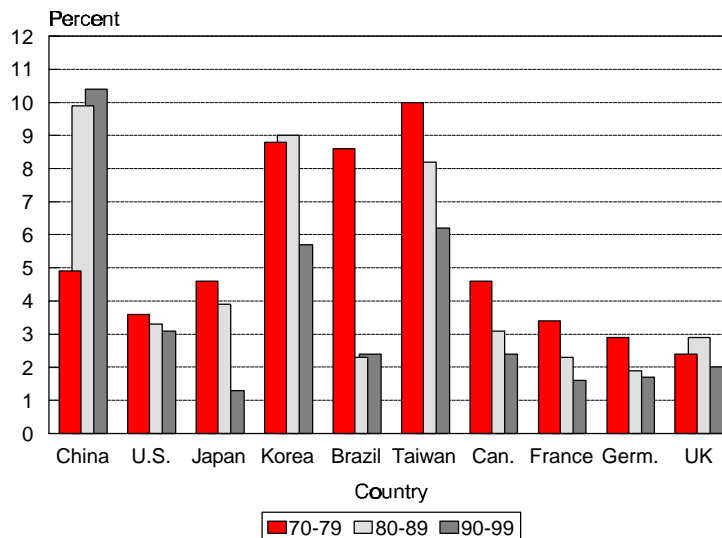
As shown in **Figure 5**, the experience of a variety of industrialized economies over the last 30 years of the 1900s indicates they experienced relatively high economic growth followed by a significant drop off in rates of expansion. By the 1970s, Japan's growth had slowed considerably from the 1960s when its rates of were around 10% per year. The growth rates dropped to the 4% or 5% level in the 1970s and 1980s and to only about 1% in the 1990s.¹⁴ Similarly, the Republic of Korea, Brazil, and Taiwan experienced growth rates of 8 to 10% in the 1970s and 1980s, followed by lower rates in the 1990s. The Chinese rates of growth since 1978, therefore, are impressive but not particularly exceptional for an East Asian

¹³ In 1992-93 of a total of 55,000 Chinese students studying in the United States; 53% were studying physical and life sciences, engineering, or mathematics, while another 17.5% were studying health sciences, business or agriculture. Only a third of the students return to China. See Frieman, Wendy, 'The Understated Revolution in Chinese Science and Technology' in Lilley, James R. and David Shambaugh (eds), *China's Military Faces The Future*, M.E. Sharpe, , Armonk, N.Y.,1999., pp. 255-6.

¹⁴ Ministry of Foreign Affairs. *The Economic Development of Japan for 100 Years*. Tokyo, 1967. P. 2.

country in its “catch-up” phase of development. The experience of other countries, however, is that maintaining those high rates of growth is difficult once the economy reaches a middle or high level of development.

Figure 5. Average Annual Growth in Real GDP for Various Countries, 1970-79, 1980-89, 1990-99



Data Source: Standard & Poor's DRI

The future rates of growth of the Chinese economy depend on both domestic social and political stability as well as on a favorable international environment.¹⁵ The present Chinese leadership is committed to continuing economic reform under “market socialism,” which involves privatization, marketization, price and managerial reforms, and opening the country to foreign influence – albeit at a controlled pace. Whether they can continue the economic reforms without some political reforms and still maintain internal stability is to be seen. While Beijing currently seems to be overreacting to all potential opposition, it is betting that it can become representative enough of the population’s needs to stay in power. Still, lack of personal freedoms, rising problems of unemployment, and disparities in income could unleash forces in Chinese society that Beijing might be unable to contain. Aside from protracted civil unrest, however, a political crisis is not likely to have a long-term, negative impact on growth.

Most projections of Chinese economic growth over the next quarter century range between 5 and 7% per year.¹⁶ For example, Dwight Perkins of Harvard

¹⁵ Perkins, Dwight H., ‘Future Economic and Social Development Scenarios for the Twenty-first Century’ in OECD, *China in the 21st Century: Long-term Global Implications*, OECD, 1996, pp., 21-36.

¹⁶ The Chinese Academy of Social Science (CASS), in its estimation of Comprehensive National Power (CNP) assumes a rate of growth of GDP at 5.8% for China, 2.7% for the United States and 3.2% for Japan for the period 2000 to 2020. See Pillsbury (2000), *op. cit.*, Table 9, p. 130. In estimating the demand for oil, Ronald Soligo and Amy Jaffe use a GDP growth rate of 3.2% and 7.9% for the period between 2000 and 2020. See Ronald Soligo (continued...)

University projects that even under unfavorable circumstances, such as a hostile international economic environment, China's growth rate still would not go below 4.5%. On the other hand, under most favorable circumstances, he suggests that the Chinese economy might grow by 8 or 9% per annum.¹⁷ A 7% growth rate represents roughly the mid point of his best and worst scenarios.¹⁸ This also is consistent with the World Bank projection of 7.1% growth for China for 2000-2001 and growth potential of 5.5 to 7.5% between 2002 and 2010.¹⁹ Standard & Poor's Data Resources, Inc., a leading econometric firm, forecasts 6.7% growth for China between 2006 and 2020.²⁰ Even with the constraints and possible problems facing the Chinese economy, growth of 5 to 7% over 25 years would be relatively high and which, if achieved, would propel China into the ranks of middle-developed nations.

Table 6 shows projections for China's economy for the year 2025 based on growth rates of 5% and 7%. The table also includes projections for Japan and the United States based on average growth rates of 2% and 3% for each country.²¹

If the Chinese economy grows by 5% per year until 2025, its nominal GDP would be around \$3.5 trillion against \$7.3 trillion for Japan and \$15.5 trillion for the United States (at the lower 2% growth rates for Japan and the U.S.) China would still have an economy less than half the size of Japan's and less than a quarter the size of the United States. Still, a \$3.5 trillion GDP would roughly be the size of the United States economy in the mid-1970s. Even if China were to grow at the higher 7%, its GDP in 2025 would be \$5.8 trillion – still considerably lower than the \$9.4 trillion of Japan or the \$19.9 trillion of the U.S. (assuming the higher 3% growth rate) – but roughly the size of the United States in the mid-1980s.

By 2025, China's population is projected to reach 1.5 billion. In terms of per capita income (GDP) China's would be an estimated \$2,809 (at 5% growth) as compared with \$57,764 for Japan and \$56,710 for the United States (at 2% growth). At these growth rates of 5% for China and 2% for Japan and the United States, the absolute gap in per capita incomes would have grown.²² Even if China were to grow

¹⁶ (...continued)

and Amy Jaffe. *China's Growing Energy Dependence: The Costs and Policy Implications of Supply Alternatives*. The Center For International for International Political Economy and the James A. Baker Institute for Public Policy. On Internet at [<http://www.rice.edu/projects/baker/publications/claes/cpls/cpls.html>].

¹⁷ Perkins, Dwight H., "Future Economic and Social Development Scenarios for the Twenty-first Century." In Organisation for Economic Cooperation and Development, *China in the 21st. Century: Long-term Global Implications*, OECD, 1996. pp. 30-35.

¹⁸ Cable also suggest a high growth rate of 8 to 10% and a low rate of 6%. See Cable, *op.cit.*, pp. 48-50.

¹⁹ World Bank. *East Asia, Recovery and Beyond*. May 2000. P. 146.

²⁰ Standard & Poor's DRI. *Country Outlook*, Vol. I. 3rd Quarter, 2000.

²¹ Standard & Poor's DRI forecasts growth rates between 1999 and 2020 at 3.0% for the United States and at 1.5% for Japan.

²² U.N. population projections for 2025 are 1.48 billion (medium projection) for China, 314 million for the United States, and 115 million for Japan. See: United Nations. Population Division. *Long-term Population Projection Based on 1998 Revision*, Table 2, p. 6.

at 7% per year, its per capita income in 2025 would be somewhat higher at \$4,587 but still relatively low.

Table 6. Gross Domestic Product and Per Capita GDP at Nominal and PPP Values, Actual 1999 and Projections for the Year 2025 at Selected Growth Rates
(in U.S. dollars)

	China		Japan		U.S.	
1999 Base Year Figures						
Nominal GDP (billion)		997		4,370		9,256
GDP (PPP) (billion)		5,201		2,935		9,256
Nom. GDP Per Capita		790		34,519		33,889
GDP Per Capita (PPP)		4,228		23,465		33,889
Projections for 2025 at Selected Growth Rates						
Growth Rate/Amount	%	Amount	%	Amount	%	Amount
Projected Nominal GDP (billion)	5	3,545	2	7,313	2	15,452
	7	5,790	3	9,424	3	19,914
Projected GDP (PPP) (billion)	5	18,493	2	4,911	2	15,452
	7	30,204	3	6,330	3	19,914
Projected Nominal Per Capita GDP	5	2,809	2	57,764	2	56,710
	7	4,587	3	74,443	3	73,085
Projected Per Capita GDP (PPP)	5	15,033	2	39,267	2	56,710
	7	24,553	3	50,604	3	73,085

Note: PPP = purchasing power parity. Projections by CRS assuming alternative growth rates for China of 5% and 7% per year over the next 25 years and 2% and 3% per year for both Japan and the United States. Projected amounts are in 1999 prices.

In purchasing power parity terms, the Chinese GDP in 2025 at \$18.5 trillion (at 5% growth) would exceed that of the United States and would be nearly four times that of Japan (primarily because of China's huge population), but China's standard of living as reflected by per capita GDP in PPP would only be \$15,033 against \$39,267 for Japan and \$56,710 for the United States.²³ Projections using PPP, however, are even more problematic than those based on market prices, because

²³ The Chinese leadership is hoping China to be a 'moderately developed country' by 2050. See "Chi Haotian on Defense Policy" in *Zhongguo Xin Wen She*, Feb. 4, 1998 (Translated by FBIS, Feb.6, 1998). See also: U.S. Secretary of Defense. *Annual Report on the Military Power of the People's Republic of China, FY2000*. The Report points out that, "If the present trends continue, Beijing believes that it will achieve the status of a "medium sized" great power by 2050 at a minimum." See [<http://www.defenselink.mil/news/june2000/china06222000>], p.1. However, some Chinese military analysts speculate that by 2030 China and possibly Japan may overtake the United States in comprehensive national power. Pillsbury (2000), *op. cit.*, pp.162-3.

prices in China for basic necessities are expected to rise relative to those in the United States as the country develops and urbanizes. Still, these PPP projections are useful, because they provide a somewhat more realistic size of the base year from which the projections are made.

These calculations indicate that under standard projections for China's growth rate over the next quarter century, China is expected to become a major economic power, comparable in total GDP to the size of the United States in the 1970s or 1980s. The development of this mega-economy for China brings both potentialities and problems. On one hand, the larger economic base implies that China can allocate more resources toward meeting the social needs of its citizenry but also toward strengthening its military and pursuing the strategic interests of the country. On the other hand, this mega-economy will require resources, organization, and markets to keep functioning.

Constraints and Costs of Rapid Economic Growth

While rapid economic growth in China has generated higher income levels and considerable modernization, it also has brought significant costs and has revealed possible constraints on future growth. These costs and constraints include rising disparities of income, unemployment, social discontent, environmental degradation, and health problems.

Rising Disparities of Income

Rising disparities in income levels – both among individuals and regions – are divisive and can be detrimental to political stability. Chinese experience during past political upheavals – such as the Cultural Revolution – has been that such instability can severely retard modernization and development. In any fast growing economy, some in society catch the wave of new opportunities and prosperity while others are left behind. Even though the “rising tide” of an expanding economy can lift the average income earner, entrepreneurs, capitalists, business executives, and landowners may become rich while workers in factories using obsolete technology or who do not have the skills to compete in a globalized market may become unemployed. Benefits of growth eventually may trickle down to the lower strata of society, but this often takes considerable time.

In China, income has become less equally distributed as the economy has grown. In the distribution of personal income, for example, a standard measure of income disparities rose by 50% between 1988 and 1994.²⁴ This indicates that over this six-year period, a considerably larger share of income was going to the higher than lower income earners. The same is true for disparities among regions. In 1988,

²⁴ The Gini coefficient for urban areas rose from 0.23 in 1988 to 0.37 in 1994. (A coefficient of 0 indicates perfect equality, while a coefficient of 1 indicates perfect inequality.) During the same period the Gini coefficient for rural areas increased from 0.38 to 0.41. On the whole, the distribution of income in urban areas was more equal than in the rural areas. The Gini coefficient in the private sector at 0.49 was much higher than 0.23 in rural areas. See: Amei Zhang, Economic growth and Human Development in China, UNDP Occasional Paper No. 28, pp. 11-2. On Internet at [<http://www.undp.org/hdro/oc28a.htm>].

urban incomes were 2.4 times greater than rural incomes. By 1994, they were 2.6 times greater.²⁵ Although some “trickle down” effect from the eastern coastal region²⁶ has helped other regions, differences in average income levels among the regions have increased. In 1995, per capita income in the eastern region was twice as high as in the western. The differential was only 1.2 in 1978. The income differential between the eastern and central region regions, however, remained virtually constant or declined slightly – particularly between 1985 and 1995.²⁷ Such disparities create resentment among ethnic minorities, who make up about 8% of China’s population and largely inhabit the western region.

China’s western and central regions also have the largest share of poor counties.²⁸ While the incidence of poverty in the coastal region in 1989 was only 3.6%, in the western and central regions, it was 18.4% and 11.2%, respectively. Half of the counties in the western region and 42% in the central region had per capita incomes below the poverty line (defined at 300 yuan in 1989).²⁹ Even though China has made remarkable progress in reducing the number of people living below the poverty line from 250 million in 1978 to 42 million in 1998³⁰ (4.6% of population using the government poverty line of \$0.70 per day), poverty still is a major policy problem for Beijing.

Unemployment

Growing unemployment is causing serious anxiety and disenchantment among certain workers. Even though the official rate of unemployment is only around 2%, China’s “floating population” or temporary and illegal rural migrant workers is estimated to be as much as 100 million. These workers tend to be in low-level jobs and because they have no permanent resident certificates, they lack access to

²⁵ *Ibid.*, p.12. There was decline between 1978 and 1985 from 2.4 to 1.7 but from 1985 the differential began to rise. See also Yongzheng Yang and Yiping Huang, *China’s Economy: The Impact of Trade Liberalisation on Income Distribution in China*, Research School of Pacific and Asian Studies, Australian National University, Canberra, 1997, Table 1, p. 7.

²⁶ The coastal region consists of Guangdong, Jiangsu, Zhejiang, Fujian, Shandong, Liaoning and the three municipalities of Beijing, Shanghai and Tianjin. All these are the most prosperous areas and attract the lion’s share of foreign capital and state investment. This region also includes relatively poorer, but now rapidly developing, provinces of Hebei, Hainan and Guangxi. The coastal region accounts for 42% of China’s population and 58% of GDP. The central region consists of Heilongjiang, Jilin, Inner Mongolia, Shanxi, Henan, Anhui, Hubei, Hunan, Jiangxi. These are middle and lower middle income provinces accounting for 31% of population and 28% of GDP. The Western region consists of Sichuan, Guizhou, Yunana, Shaanxi, Gansu, Qinghai, Ningxia, Tibet (Xizang) and Xinjiang. This region accounts for 27% of population and 14% of the GDP.

²⁷ *Ibid.*, Table 2, p.7.

²⁸ The overall number of the poor in China had come down from nearly 262 million in 1978. It came down substantially in the 1980s but it virtually stopped declining and may have increased somewhat after 1989-91. Riskin, *op.cit.*, Table 2, p. 365.

²⁹ Zhang, *op. cit.*, p.14.

³⁰ Chinese Embassy in Washington, DC. Statistics Show China’s 50-Year Economic Development. October 3, 1999. On Internet at [<http://www.china-embassy.org>].

housing, medical care, welfare support, and schooling.³¹ The number of rural surplus workers could rise to as much as 200 million.³² This rising unemployment already is creating discontent and resentment in Chinese society.³³

WTO accession is likely to worsen the problems of rural unemployment and rural-to-urban migration as agricultural imports are liberalized. One estimate is that as many as 11 million Chinese workers could be displaced as a result of the removal of trade protection in 25 key sectors in China. This would include some 3.5 to 5 million in industry and 5 to 7.5 million in agriculture. China's farm sector, in particular, may suffer seriously because of increased competition from imports from the United States, Australia, Canada, and other food suppliers. On the positive side, up to 1.5 million jobs could be created in sectors gaining from trade liberalization overseas – making an overall loss of employment arising from China's accession to the WTO as high as 10 million.³⁴ This estimate, however, appears to be high because it did not calculate China's increased exports in industries such as textiles and clothing that are likely to occur as workers move from agriculture to industry.

China's problem of unemployment and underemployment also is being exacerbated as a result of much needed reform of China's state-owned enterprises (SOEs).³⁵ About half of the SOEs are unprofitable and, of those, most are behind in repaying loans held by China's banks. This undermines the viability of China's banking system and creates conditions that might trigger a Chinese financial crisis.³⁶ While reforming the SOEs is imperative for the overall health of the Chinese economy, the rationalization and corporatization of SOEs, in the short-run, not only adds to the unemployment rolls but also undermines the availability of social welfare services (housing, education, and health care) which have been the responsibility of the SOEs for their employees and their families.

The unemployment problem in China will probably worsen before it improves. By the year 2025, China is expected to have added another 190 million people to its labor force.³⁷ This will be in addition to the estimated unemployed and

³¹ Asian Development Bank, *China, Macroeconomic Update*, p. 14.

³² Riskin, Carl. Social Development, Quality of Life and the Environment. In U.S. Congress, Joint Economic Committee. *China's Economic Future: Challenges to U.S. Policy*, Washington D.C., 1996. P. 366.

³³ See: CRS Report RL30531. *China and Labor Unrest: Issues and Options for U.S. Policy*. By (name redacted) Research Institute for Peace and Security, *Asian Security, 1999-2000*, Tokyo, 1999, pp.71-72.

³⁴ Zhang, Shuguang, Zhang Yansheng and Wan Zhongxin. *Measuring the Costs of Protection in China*. Institute of International Economics, Washington, 1999. P. 28.

³⁵ In 1995 SOEs employed 40% of the industrial workers and produced 33% of the industrial output. See East Asia Analytical Unit (EAAU), *China Embraces the Market: Achievements, Constraints and Opportunities*, Department of Foreign affairs and Trade, Canberra, 1997, Table 5.13, p. 333 (Internet version)

³⁶ Lardy, Nicholas R. *China's New Economic Scenario: The Imperative of Financial Reform*. *Orbis*, Spring 1999. pp. 181-191.

³⁷ According to the World Bank, the labor force in China in 1998 was around 743 million and it was projected to grow to 822 million by 2010. If one assumes that the same rate

underemployed population of over 200 million.³⁸ China, therefore, may have to provide new or more meaningful employment for nearly 390 million people over the next quarter century. This number is similar in magnitude to total employment in industry and services in all high-income developed countries put together.

Environmental Degradation

Environmental degradation and its resulting consequences for health and productivity also is a concern for Beijing. According to official Chinese sources, in 85% of cities in the northern part of the country, pollution levels have exceeded the stipulated standard by more than 30%. Pollution was most serious in Beijing, Chongqing and Guangzhou.³⁹ The energy and industrial sectors have been the largest polluters, but the transport sector is becoming a close second. The number of cars rose from 2.4 million in 1984 to 9.4 million in 1994. By 2020, the number may increase by as much as 20 times. Chinese vehicles, moreover, are among the most polluting in the world. Cars are said to be responsible for nearly 70% of the carbon monoxide emissions in Beijing, Shanghai, Hangzhou and Guangzhou.⁴⁰

Other environmental concerns include the extensive use of coal (causing smoke and acid rain) and poor water quality, particularly in waters close to the industrially advanced cities and towns.⁴¹ About 70% of the water flowing into the cities from rivers is unsuitable for human use; 50% of ground water is polluted, and acid rain affects some 30% of China's territory. The Chinese National Environmental Protection Agency estimates that the economic costs associated with ecological destruction and environmental pollution amounts to around 14% of Chinese GDP.⁴² China's progress on the environment, however, is likely to be slow because pollution control equipment is costly.

In addition to rising disparities in income, unemployment, and environmental degradation, China also faces major bottlenecks in transportation and communications – both of which require considerable financial resources, capital,

³⁷ (...continued)

continues up to 2025, the labor force will have reached 932 million. Thus adding nearly 190 million people over 1998.

³⁸ Riskin, *op. cit.*, p. 366. See also EAAU. *op. cit.*, which mentions that according to the Chinese Ministry of labor during 1995-2000, as many as 54 million workers will be looking for jobs in the urban sectors. This will include 18 million school leavers, 17 million new rural migrants with urban residency rights, 5 million currently unemployed, and 14 million made redundant by the SOEs. Of these only 36 million will be absorbed in urban jobs, while 18 million will remain unemployed. According to these forecasts by 2000, labor surplus in rural areas totals 137 million. (p. 100).

³⁹ China. National Environmental Protection Agency. *Bulletin on the Environmental Situation in China*. 1997.

⁴⁰ World Resource Institute. *China's Health and Environment: Air Pollution and Health Effects*, p.3. On Internet at [<http://www.igc.apc.org/wri/wr-98-99/prc2air.htm>].

⁴¹ Yu Mouchang. What Restrains China's Future Development: China is facing Serious Environmental Deterioration. *Zhongguo Pinglun*, Hong Kong (in Chinese), Translated by FBIS, August 5, 1998, FTS 19980818001618.

⁴² World Resource Institute, "China's Health and Environment," p. 4-6.

and technology-intensive equipment. Beijing's ability to collect tax revenue also may not keep up with central government needs. As the economy has grown, government revenues as a share of GDP has dropped from 28.4% in 1978 to 10.7% in 1995.⁴³ On top of revenues not keeping up with economic growth, what revenues that are collected may be allocated in greater amounts to social welfare and toward raising incomes in the poorer provinces in the western and central regions. For Beijing, not only social cohesion, but the very credibility of the Communist Party, depends on delivering sustained improvements in the Chinese standard of living. This requires substantial additions to housing, health and other social infrastructure. Under these circumstances, maintaining an abnormally high rate of growth could become increasingly difficult.⁴⁴ On the other side of the coin, if China fails to maintain adequate growth, political instability could also rise. That, in turn, could further depress economic growth.

International Implications

China's emergence as a major economic power carries several implications for U.S. economic and security interests. In this section, we examine five of particular interest to the United States: (1) increasing competition for resources, particularly food and petroleum, on world markets, (2) China's spending on modernizing its military, (3) the rising U.S. trade deficit with China, and (4) democracy and human rights in China. In the previous section on constraints to growth, we already have examined China's internal problems associated with income distribution, unemployment, and environmental degradation which also may be of interest.

Increasing Competition for Resources.

As any economy develops, it generates rising demand for food, raw materials, and energy. With a population nearing 1.5 billion and legitimacy for the ruling communist party dependent on delivering a higher standard of living to the Chinese people, the meeting of such resource requirements through global markets is likely to become an inescapable avenue for Beijing. Not only will this require harmonious relations with supplying nations, but access to sea lanes and world ports. According to one study, China will have to depend on maritime shipping for as much as 30% of its oil, 50% of its iron ore, and 80% of international trade.⁴⁵

A question for the United States is whether the magnitude of China's future demand for food and energy will disrupt world markets or become a threat to U.S. economic or military security. The United States and essentially all its allied

⁴³ Lardy, Nicholas, "When Will China's Financial System Meet China's Needs?" A paper presented to the Conference on Policy Reforms in China. Center for Research on Economic Development and Policy Reform in China, Stanford University, Stanford, November 18-20, 1998. On Internet at [<http://www.brook.edu/views/papers/lardy/19991118.htm>].

⁴⁴ Social welfare expenditures as compared to the direct developmental expenditures, even though socially desirable, take a much longer time to contribute their share to growth.

⁴⁵ Yuan, Jing-dong, *Asia Pacific Security: China's Conditional Multilateralism and Great Power Entente*, Strategic Studies Institute, U.S. Army War College, January 2000, p. 18 (Internet version).

economies also depend heavily on imported food, raw materials, and energy. Currently, world food supplies seem ample, but certain commodities, such as petroleum, are in tight supply. Will China's emergence as a major economic power significantly affect the demand and supply situation (prices) in world markets? How will China's dependence on imported commodities affect its military strategy – particularly with respect to its territorial claims?

China's Future Food Demand. China's future demand for food on international markets depends on several key factors. These include China's rate of economic growth, the pace of urbanization, shifts in eating habits, population changes, and the relative prices of substitutes. Future domestic supplies of food depend on weather conditions, the rate of growth of investment in agriculture and agricultural inputs (e.g. fertilizer), research and development, the availability of water, relative prices, and infrastructural developments (transportation, communications, and storage). Still rough calculations can be made based primarily on alternative assumptions regarding the most important variables such as population and income.

Although individual estimates of China's future international food requirements vary widely, the current consensus suggests that by 2025 China may be importing about 40 to 50 million tons of food grains per year. A recent study by the Organisation for Economic Cooperation and Development (OECD) estimated a baseline projection of annual net imports of 43 million metric tons by the year 2020.⁴⁶ Other studies give figures that range from 20 to 30 million metric tons per year.⁴⁷ If China fails to invest significantly in agriculture and implement appropriate agricultural policies, however, its imports could rise to 106 million metric tons. Even 100 million metric tons of Chinese demand on international markets per year, though, may not have a significant impact on world food grain markets.⁴⁸ In 1999, total U.S. exports of grains and feeds totaled \$104.5 million tons – half of which went to Asia.⁴⁹

For the Beijing leadership, imports of up to 100 million tons per year of food grains (roughly equivalent to 15% of total Chinese grain demand) may be viewed as an unacceptable vulnerability – particularly because much of this imported grain would have to be obtained from the United States, Canada, Australia, and Argentina or countries friendly with the United States. (China currently maintains a policy of 95% agricultural self-sufficiency.) In the past, the United States has used food as a political weapon.⁵⁰ Given, the potential for a clash with the United States over the status of Taiwan, China might not be willing to tolerate such dependence on U.S.

⁴⁶ Lin *et al.* (OECD, 1996), *op cit.*, 84.

⁴⁷ The range suggested by the World Bank for 2020 is 28 to 89 million tons. The U. S. Department of Agriculture put the import requirement for 2006 at 20 million tons. See World Bank, *China 2020: Development Challenge in the New Century*, Washington D.C. 1997, Table 5.3, p.68.

⁴⁸ Lin, Justin Yifa, "China's Food Economy," in *China in the 21st Century*, p. 85.

⁴⁹ U.S. Department of Agriculture. Economic Research Service. *Foreign Agricultural Trade of the United States*. On Internet at: [<http://www.ers.usda.gov/db/FATUS>].

⁵⁰ See CRS Issue Brief, IB10061: *Exempting Food and Agriculture Products from U.S. Economic Sanctions: Current Issues and Proposals*, by (name redacted).

food suppliers, although it is not clear what it could do about it – given its membership in the WTO.

Petroleum Demand. The rapid economic development of China over the last two decades already has resulted in China's becoming a major importer of oil in spite of its large petroleum and coal resources. China's production of crude petroleum in 1999 was 3.2 million barrels per day, but its oil consumption was estimated to be 4.3 million barrels per day. It has proven oil reserves of 24 billion barrels, and refining capacity of 4.3 million barrels per day. Its net imports were 1.1 million barrels per day or about 25% of its consumption. China, therefore, has become a major importer of oil.⁵¹ It is estimated that Chinese dependence on imported oil will increase to 30-35% in 2005 and up to 45% by 2010. Experts project China's dependency on Middle Eastern oil to increase from the present 50% to as much as 80% by the year 2010.⁵²

The effects of China's rising petroleum demand are threefold. First, China's rising purchases of oil adds to demand for supplies kept limited by the OPEC oil cartel. This conflicts with the interests of the United States, EU, Japan, and South Korea who also are major importers of oil. An increase in the price of crude oil as a result of China's demand on world oil markets will affect American and other consumers, although OPEC may simply increase supply as China develops in order to keep prices stable. Second, China's increasing dependence on oil from the Middle East may be viewed by Beijing as a strategic vulnerability. Third, China's increasing dependence on oil imports may move it into a closer relationship with Iran and Iraq.

As for the third point, the United States disagrees strongly with China over that country's relations with Iran and Iraq. These two oil producers loom heavily in China's energy strategy and its efforts to build pipelines reaching the Middle East. China also has been developing friendly relationships with Central Asian Republics, some of which are rich in oil. In a deal with Kazakhstan, China acquired the right to develop two oil fields and has agreed to build a 3,000-kilometer pipeline from the Kazakhstan oilfields to China's western Xinjiang province and a 250-kilometer pipeline to the borders of Iran.⁵³ China, Russia, and North Korea are the principal suppliers to Iran of weapons-related technology. The United States already holds serious concerns about China's role in the transfer of nuclear technology to Iran and

⁵¹ U.S. Department of Energy. Energy Information Administration. *China*. April 2000. On Internet at [<http://www.eia.doe.gov>]. Robert Priddle, (*OECD, 1996*), *op. cit.*, 118.

⁵² Trough, Sergei, "China's Changing Oil Strategy and Its Foreign Policy Implications," CNPS Working paper, Fall 1999, p. 2-4. On Internet at [http://www.brookings.edu/fp/cnaps/papers/1999_trough.htm]. Another estimate suggests that China's oil import levels would be between 2 to 4 million barrels a day over the next ten years. This will roughly represent 17 to 23% of Asian oil demand and 5 to 7% of the world demand for oil. See: Ronald Soligo and Amy Jaffe, *China's Growing Energy Dependence: The Costs and Policy Implications of Supply Alternatives*. The Center For International for International Political Economy and the James A. Baker Institute for Public Policy. On Internet at [<http://www.rice.edu/projects/baker/publications/claes/cpis/cpis.html>]. See also Kenneth B. Madoc and Ronald Soligo, *The Composition and Growth of Energy Demand in China*, in the same series.

⁵³ Trough (1999), *op. cit.*, pp. 3 and 6.

has received a pledge from China's President not to continue such transfers.⁵⁴ China also has pledged not to transfer anti-ship cruise missiles or the related technology to Iran or to assist it in indigenous development of missiles.⁵⁵

Sovereignty and Territorial Issues. China's growing needs for imports of petroleum, food, and raw materials carries important implications for certain of its territorial claims. In recent years, Beijing has been pressing its claims to certain islands in the East and South China Sea.⁵⁶ The Chinese leadership views these actions as more than just a matter of sovereignty. The seas surrounding these islands are rich in fish, potentially rich in hydrocarbons, and have deposits of minerals, including copper, zinc, lead, nickel, cobalt, manganese, iron, gold, and silver.⁵⁷ The South China Sea also is important for shipping. More than half the world's merchant fleet tonnage passes through the Straits of Malacca, Sunda, and Lombok with much of it continuing into the South China Sea. Those ships passing through the Malacca and Sunda straits follow lanes near the disputed Spratly Islands. Much of the cargo being carried by these ships consists of crude oil, liquified natural gas, coal, and iron ore.⁵⁸

The issue of competing claims of sovereignty has been further complicated by the fact that the 1982 U.N. Law of the Sea Convention allows for a twelve-nautical mile territorial sea and 200 nautical miles for Exclusive Economic Zones (EEZs), as well as archipelagic waters (the waters defined as part of the territory of an island nation determined by drawing baselines joining outermost island points) for Indonesia, the Philippines, and other island states in the region. The archipelagic countries in the region unilaterally have claimed EEZs, but as of yet no EEZ boundary has been officially delimited between opposite and adjacent countries. Of the 73 different boundaries required, only seven have been agreed upon.⁵⁹

More confusion also has been created by The Law on the Territorial Sea and Contiguous Zone of the People's Republic of China (Territorial Sea Law) adopted by the Standing Committee of the National People's Congress in 1992. This law claims sovereignty over the Spratly, Paracels (Xisha), and Diaoyutai (Senkaku)

⁵⁴ For more information, see CRS Issue Brief, IB93033, *Iran: Current Developments and U.S. Policy*, by (name redacted).

⁵⁵ CRS Issue Brief IB92056, *Chinese Proliferation of Weapons of Mass Destruction: Current Policy Issues*, by (name redacted). See also Byman, Daniel and Roger Cliff, *China's Arms Sales: Motivations and Implications*, RAND's Project Air Force, 1999, p. 10.

⁵⁶ The South China Sea stretches roughly from Singapore and the Strait of Malacca in the southwest to the Strait of Taiwan in the northeast.

⁵⁷ Valencia, Mark J. 'International Conflict Over Marine Resources in South-East Asia: trends in Politicization and Militarization' in Lim Teck Ghee and Mark J. Valencia, (eds.), *Conflicts over Natural Resources in South-East Asia and the Pacific*, Oxford University Press, Singapore, p. 91.

⁵⁸ U.S. Energy Information Administration, *South China Sea Region*, January 2000, p. 6. On Internet at [<http://www.eia.doe.gov/emeu/cabs/schinafull.html>].

⁵⁹ Baterman, Sam, *East Asia's Marine Resources and Regional Security*, a paper presented to the Workshop on East Asia Security conducted at Wilton Park, UK, July 1996, p. 5-6. On Internet at [http://www.anu.edu.au/law/pub/icl/mstudi...time_studies_89/ms_marineresources.html].

islands.⁶⁰ The Chinese claims are extraordinarily broad and would indicate that the country claims sovereignty over the entire South China Sea with the exception of a narrow belt varying between 12 and 80 miles in breadth. A Chinese scholar points out, however, that the boundary line on the Chinese map is merely a line that delineates ownership of islands rather than a maritime boundary in the conventional sense.⁶¹

In order to stress its claims further, in February 1992, China organized a seismic survey to explore for oil and also constructed a military installation on the Mischief Reef.⁶² The disputes over the islands have led to military skirmishes – the most serious in 1974 when China attacked and captured Paracel Island from Vietnam and again in 1988 when a clash between Chinese and Vietnamese navies at Johnson Reef on Spratly Island led to the death of 70 sailors. In November 1998, the Philippine Navy fired warning shots at the Chinese ships that had come too close to Mischief Reef.⁶³ These island disputes are likely to continue for some time.

In summary, China's rising resource needs must be supplied either domestically or internationally. On one hand, China's rising demand for food is likely to make it increasingly dependent on the United States and other food exporters such as Canada and Australia who might be sympathetic to U.S. attempts to use trade as a weapon. This could make China more susceptible to economic sanctions and may establish political constituencies within China that oppose military or political actions that might jeopardize their sources of supply. On the other hand, China's rising dependency on imported petroleum and raw materials could induce Beijing to seek to enforce its territorial claims over disputed islands in the Pacific and to expand its sales (particularly of military equipment) to countries, such as Iran. Such actions could bring it into conflict with neighboring countries and the United States.

China's Military Spending

The focus of this report is China's economy, not its military or security issues, but China's further economic development would enable it to devote more resources toward modernizing its military. Currently, military expenditures are lower on Beijing's list of budget priorities than allocating funds for economic development, but the growing economy is providing additional funds for the People's Liberation Army – both from government revenues and from its own business enterprises.

Beijing currently feels that national power depends both on a modern military and on a material component derived from a country's economic base. Not only is growth and modernization of the Chinese economy essential for the stability of the

⁶⁰ For discussion, see: Herriman, Max. China's Territorial Sea Law and International Law of the Sea. *Maritime Studies*, Vol. 15, 1997, published by The Australian Centre for Maritime Studies.

⁶¹ Zhiguo Gao, 'The South China Sea: From Conflict to Cooperation?' *Ocean Development and International Law*, Vol. 25, 1994, p.346.

⁶² Yuan, Jing-dong, China's Conditional Multilateralism and Great Power Entente. *Asia Pacific Security*. U.S. Army War College, January 2000. pp.. 20-21.

⁶³ U.S. Energy Information Administration, *South China Sea Region*, January 2000, p. 3-4. On Internet at [<http://www.eia.doe.gov/emeu/cabs/schinafull.html>].

domestic social environment, but the economy with its foreign trade and investment links are keys to the development of a modern military. The leadership also is wary that assigning a high priority to defense could provide justification for the United States to move toward a policy of “containment” while also providing Japan with the impetus to improve its force projection capabilities. Senior PLA strategists have consistently advised the leadership in Beijing against a lopsided arms race against the United States because it would undermine economic modernization.⁶⁴

An assessment of China’s military capability and future threat to U.S. interests is beyond the scope of this report. Here we focus on how China’s economic growth could allow it to devote more resources to the military over the next quarter century by projecting military expenditures for the year 2025. Of course, projecting such expenditures a quarter century into the future is inherently difficult and imprecise and depends on the same factors discussed previously in projecting China’s GDP.

Estimates of current military spending by China range from its officially reported figure of \$12.6 billion (1.2% of GDP in FY99), which is considered to be understated considerably, to \$18.4 billion (1998) by the Stockholm International Peace Research Institute (SIPRI), to \$36.7 billion (1998) estimated by the International Institute for Strategic Studies (IISS). Another estimate provided by the U.S. Department of State’s Bureau of Arms Control of \$74.9 billion is calculated in terms of purchasing power parity (PPP) and, therefore, not directly comparable to the other estimates.⁶⁵ The State Department’s figure uses a PPP exchange rate that uses world prices for products such as food, lodging, and other consumer goods that are sold at relatively low prices in China. A consensus of government and academic experts suggests an figure of \$30 to \$35 billion per year around 1996.⁶⁶

In view of the stated priorities of Beijing, it seems that the Chinese military is not likely to be allotted a much higher proportion of GDP than it presently receives. With China’s relatively high rates of GDP growth, however, even the present allocation would result in a substantial increase in the Chinese military expenditures.

As shown in **Figure 6**, projections of Chinese defense spending based on current shares of GDP vary widely depending on the initial estimate for 1988 and on future growth rates. If one takes low official figure of \$12.6 billion and 1.2% of GDP in 1998, that would rise to \$47 billion or \$78 billion in 2025 at growth rates of 5 or 7%, respectively. At the higher IISS estimate of \$36.7 billion in 1998, China’s total military expenditures in 2025 would rise to a projected \$137 billion or \$228 billion depending on the growth rate of GDP. The \$228 billion is considerable and begins to approach the \$283 billion that the United States spent on defense in 1999.

⁶⁴ Pentagon Report (2000), p. 4.

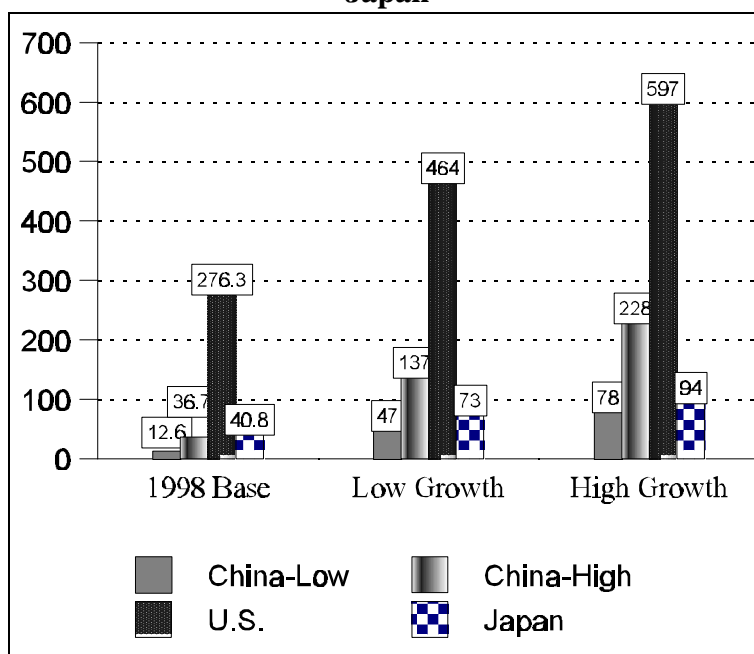
⁶⁵ U.S. Central Intelligence Agency, *World Factbook*. Data are for 1999. International Institute for Strategic Studies, *The World Military Balance, 1999/2000*. Data are for 1998. Stockholm International Peace Research Institute, Military Expenditure and Arms Production Project Database. Data are for 1999 (at 1995 constant prices and exchange rates). U.S. Department of State, Bureau of Arms Control, *World Military Expenditures and Arms Transfer, 1998*, Washington DC, 2000, Table 97. (Data are for 1998 using purchasing power parity exchange rates.)

⁶⁶ Harrison, Selig S. and Clyde V. Prestowitz, Jr. eds. *Asia After the “Miracle.”* Washington, Economic Strategy Institute, 1998. P. 17.

Roughly speaking, China's military expenditures in 2025 are expected to range between \$135 billion and \$225 billion.

What U.S. defense expenditures would be in the year 2025 is likewise difficult to gauge. Department of Defense plans call for a spending level of \$316 billion in 2005. If U.S. defense spending is maintained at 3% of GDP, it would rise to roughly \$464 billion at a U.S. growth rate of 2% per year. At a higher GDP growth rate of 3% per year, spending would rise to about \$599 billion. In either case, Chinese military expenditures would be less than half those of the United States.

Figure 6. Actual 1998 and Projected Military Expenditures in 2025 for China, the United States, and Japan



With respect to Japan, it currently spends \$37 billion on defense. This is roughly the same as the higher IISS estimate for China. Japan holds its defense spending to roughly 1% of GDP. Since China's economic growth rate is expected to be considerably higher than that of Japan, by 2025, Japanese military expenditures of a projected \$73 billion or \$94 billion (at 2 or 3% growth rates, respectively) would be higher than China's \$47 billion lower estimate (based on China's officially reported military spending level in 1998), but it would be considerably lower than the \$228 billion upper estimate for China.

In short, China would be capable of spending enough on defense in 2025 to support a sizable military. The level of military expenditures, however, are but one indicator of military strength. Other important elements are whether the country has sufficient sophisticated weaponry, whether those weapons can be incorporated into their military framework, and whether their armed personnel have sufficient knowledge and training to use such sophisticated weapons.⁶⁷ A modern military also

⁶⁷ See also Frieman, *op. cit.*, p. 264. Frieman suggests that "...it is not possible to assert with (continued...)

requires a solid base of high-technology industrial as well as communication systems and a regular flow of scientific and technological innovations.⁶⁸

With rapid economic development, China has been acquiring modern weaponry that enables it to project power to some degree. Since 1990, it has acquired Mi17 helicopters, Il-76 transports, Su-27 fighter planes, S-300 surface-to-air missiles, Kilo submarines, and Sovremenny destroyers from Russia.⁶⁹ Still, most observers view the China's military as being primarily a regional nuclear force that has some strengths but also basic problems.

In 2000, the U.S. Secretary of Defense assessed the strengths and weaknesses of the Chinese military and its defense strategy as a whole. This report suggested that a "fundamental objective of China's military modernization program is to create a force sufficient to defend against any regional opponent, maintain the credibility of territorial claims, protect national interests, maintain internal security, deter any moves by Taiwan toward *de jure* independence, and deter aggression." The Secretary of Defense's report also points out that China's defense industrial complex is far behind that of the West and is not capable of producing weapons that could directly challenge more technologically advanced countries like the United States or Japan for the foreseeable future.⁷⁰

The issue of Taiwan remains the major imponderable in China's military situation. Although Beijing views this as a Chinese internal problem, it could entangle the United States and the rest of the world. Beijing sees Taiwan as a core issue, an issue of principle and one crucial in Sino-U.S. relations.⁷¹ Current opinion in China seems divided on military action against Taiwan. The PLA does not rule out a military solution even if it means a confrontation with the United States. The political leadership, however, still gives priority to economic modernization and the cultivation of friendly relations with the United States. The defense policy announced by the State Council of the PRC in July 1998 clearly stated that "economic construction be taken as the center and that defense be considered as subordinate to and in the service of the nation's overall economic construction and that the armed forces actively participate and support the nations' economic

⁶⁷ (...continued)

confidence that the Chinese defense industries or military forces *will be able to apply* advanced information and telecommunications technology. Nevertheless, it is plausible to conclude that *there will, in fact, be something there to apply.*"

⁶⁸ The Chinese analysts concede that China's 'low level of technology and its low "social development' are the two important weaknesses.' Pillsbury (2000), *op. cit.*, p.126.

⁶⁹ See CRS Report RL30700, *China's Foreign Conventional Arms Acquisitions: Background and Analysis*, by (name redacted), (name redacted), and Ronald O'Rourke.

⁷⁰ U.S. Secretary of Defense. *Annual Report on the Military Power of the People's Republic of China, FY 2000*. P. 6. On Internet at [<http://www.defenselink.mil>]. See also Swaine, Michael D., Chinese Military Modernization: Motives, Objectives, and Requirements in Joint Economic Committee, *op. cit.*, pp.321-329. Rear Admiral Eric Mc Vadon, System Integration in China's People's Liberation Army, in James C. Mulvenon and Richard H. Yang, *The People's Liberation Army: In the Information Age*, Rand, Santa Monica, 1999. Pp. 237-238.

⁷¹ China. Ministry of Foreign Affairs. *The Taiwan Question in China-U.S. Relations*. On Internet at [<http://www.fmprc.gov.cn/english/dhtml>].

construction,⁷² Zhu Rongji, the Chinese Premier, in a Beidahe meeting in September, 1999 categorically objected to the idea of invading Taiwan. He stressed, “If we attack Taiwan, it would make it harder for us to deal with the United States. If Sino-American relations deteriorate, we shall be shut out of the WTO, the two sides will engage in trade war, and the Chinese economy will get worse.”⁷³ In February 2000, China stated in a white paper on Taiwan that it will “do its best to achieve peaceful reunification, but will not commit itself to ruling out the use of force.”⁷⁴ In a defense white paper, China reiterated this position stating that “if a grave turn of events occurs leading to the separation of Taiwan from China in any name, or if Taiwan is invaded and occupied by foreign countries, or if the Taiwan authorities refuse, *sine die*, the peaceful settlement of cross-Straits reunification through negotiations, then the Chinese Government will have no choice but to adopt all drastic measures possible, including the use of force, to safeguard China's sovereignty and territorial integrity, and achieve the great cause of reunification.”⁷⁵ If China's relations with Taiwan worsen, this could induce the country to devote more resources toward its military modernization program.

Trade Deficit and Import Competition

A third major effect of China's emergence as a major economic power is in its trading relations with the United States, particularly the rising bilateral U.S. trade deficit. This trade deficit has consistently been increasing and, in 1999, stood at \$68.8 billion. A bilateral trade deficit, however, does not occur in any fixed proportion to the size of an economy. A 5% growth in the Chinese economy does not imply a 5% growth in its trade surplus with the United States. Actually, a fast growing economy generally will run a trade deficit, since its import growth (which depends on rapidly growing domestic demand) will usually outpace export growth (which depends on slower growing foreign demand).

China's import regime also is scheduled to undergo considerable liberalization as it joins the World Trade Organization and fulfills its pledge under the Asia Pacific Economic Cooperation (APEC) forum to establish free trade and investment with the other 20 APEC member economies (including the United States) by the year 2020. With respect to China's entry into the WTO, according to a study by the Institute for International Economics, U.S. exports to China would increase by at least \$3.1 billion per year even in the short run. U.S. agricultural exports are expected to rise by about \$2 billion annually by 2005. Another study by Goldman Sachs suggests that U.S. exports to China could increase rise by \$12.7 to \$13.9 billion a year by

⁷² China's Defense White Paper, July 1998, pp. 6-7. On Internet at <<http://russia.shaps.hawaii.edu/security/china-defense-July1998.htm>>.

⁷³ Xia, Wensi, ‘Zhu Rongji Opposed to Invading Taiwan, in *Hong Kong Kai Fang* (Chinese), 3 September 1999, pp. 11-14. (Translated by FBIS)

⁷⁴ China. The Information Office of the State Council and The Taiwan Affairs Office. *White Paper--The One-China Principle and the Taiwan Issue*. February 21, 2000. On Internet at [<http://www.china-embassy.org/papers/taiwan00.htm>]. See also CRS Issue Brief IB98034: *Taiwan: Recent Developments and U.S. Policy Choices*, by Kerry B. Dumbaugh.

⁷⁵ China. State Council of the PRD. *China's National Defence in 2000*, October 16, 2000. On Internet at [<http://www.chinadaily.com.cn/highlights/paper/ndefence.html>].

2005.⁷⁶ The U.S. International Trade Commission (ITC) estimates that China's April 1990 tariff offer alone would decrease the overall U.S. trade deficit by about \$800 million.⁷⁷

A broad consensus exists that U.S. exports to and investment in China would rise as China's economy is liberalized. The rise in U.S. exports would amount to additional net demand for goods and services in the United States and would have a positive effect on U.S. growth. What is less clear is what would happen to U.S. imports from China as market forces induce Chinese firms to become more efficient and more international corporations use China as a manufacturing and exporting platform, but as China's labor and resource costs rise more to the level of those in competitor countries. As Chinese firms become more competitive and multinational corporations establish more factories there, China could become a more formidable competitor in export markets – including those in the United States. For example, Chinese sources indicate that China's textile exports will grow by 10% or more after its entry into the WTO.⁷⁸ China's recent gains in exports to the United States, however, have mainly come at the expense of other newly industrializing countries in Asia. The overall share of China, Taiwan, Hong Kong, Singapore, and Taiwan in U.S. imports has remained at roughly 17% since 1992.⁷⁹

The overall U.S. trade deficit, moreover, is determined primarily by U.S. macroeconomic forces in concert with international capital flows. The total U.S. trade deficit is affected only at the margin by Chinese trade liberalization or the export prowess of Chinese industries. Individual U.S. industries, however, could be affected considerably by a larger Chinese economy with a liberalized trading sector. This has been a particular concern by U.S. labor-intensive industries, such as textiles and apparel.

U.S. import competing industries also fear that a larger and more economically powerful China will become an even more formidable competitor in international markets. It could become a "second Japan" – an economy that began exporting toys and textiles and then moved progressively into steel, machine tools, automobiles, computers, and precision machinery. China, moreover, tends to be more open to foreign investment than Japan or other industrialized nations in Asia such as South Korea. This implies that China may move up the technology ladder even faster than did Japan or South Korea, since it does not have to develop that technology indigenously but can rely on subsidiaries of multinational corporations to identify world-class technology, transfer it into China, and ensure that it works. Another concern is that China will be able to manufacture without abiding by its trade

⁷⁶ China Trade Relations Working Group. The White House. The U.S.-China WTO Accession Agreement: Effects on Trade Flows', *Fact Sheet*, April 1, 2000, p.1. See also Rosen, Daniel H. China and the World Trade Organization: An Economic Balance Sheet. Institute for International Economics Brief No. 99-6, June 1999. P. 2.

⁷⁷ China Trade Relations Group. The White House. 'Comments on the U.S. International Trade Commission Report: Assessment of Economic Effects on the United States of China's Accession to the World Trade Organization.' *Fact Sheet*, April 6, 2000, p.1.

⁷⁸ Guo Kesha, *op.cit.*, p. 8.

⁷⁹ China Trade Relations Group (The White House), *Fact Sheet*, April 6, 2000, p.1,

agreements (since monitoring of trade agreements is weak) or adhering to standards of labor and the environment that will give it a competitive advantage in exports.

One effect is apparent – a larger and more liberalized Chinese economy that is more dependent on foreign trade and investment will have a greater stake in a stable global economy. Until now, foreign companies operating in China have been “hostage” to Beijing’s policies. As more Chinese companies establish subsidiaries and partnerships overseas, they likewise will become subject to local governments and economic conditions. Their profitability will hinge on policies of their respective host countries and economic conditions in those countries as well as in the world. A larger, more international Chinese economy also will provide incentives for Beijing to accelerate its adoption of international standards in a multitude of areas. This not only includes trade-related standards as will be required by WTO membership but in accounting, banking, and other aspects of a modern economy.

Democracy and Human Rights

Whether or not economic development and greater globalization of the Chinese economy will accelerate the pace of democracy and promote human rights is unclear. Currently, Beijing seems to be giving economic betterment a higher priority than improving human rights or yielding to outside pressures. It claims that eliminating starvation through economic growth to be equivalent to assuring the right to live – the most important human right of all. In view of the experience of the former Soviet Union and the demise of communist rule in many countries, however, Beijing is cautious about the pace of democratization and firm in its suppression of dissent. Even though Beijing has allowed local competitive elections in rural areas, it seems to have no appetite for allowing the people to choose leaders higher up the governing hierarchy.

In terms of democracy and human rights, economic development is a two-edged sword. On one hand, it has broadened the sources of information and generated resources for opposition and religious groups. As more of China’s population attains economic security, they are able to turn their attention toward issues such as democracy, rights as individuals, and antiestablishmentarianism. On the other hand, economic development gives the established government more resources to suppress dissent and police it.

With respect to human rights, the government is making political and judicial processes more transparent and holding law enforcement officials more accountable for their actions. One problem with human rights enforcement, however, is that much of the reported infringement has come at lower levels of the political hierarchy where progress is slow. The U.S. State Department reported that in 1999, China’s already poor record on human rights deteriorated markedly throughout the year. Beijing increased its arrests of prominent activists and meted out harsh jail sentences, particularly for those forming organizations that could compete with the Communist Party for political power.⁸⁰ The government also has outlawed and cracked down on

⁸⁰ U.S. Department of State. *1999 Country Reports on Human Rights Practices: China*, February 25, 2000. On Internet at [http://www.state.gov/www/global/human_rights/1999_hrp_report/china.html].

followers of Falun Gong, a spiritual movement said to combine Buddhist and Taoist meditation practices with a series of exercises.⁸¹

⁸¹ See: CRS Issue Brief IB98018, *China-U.S. Relations*, by (name redacted).

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