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China's Challenge to the Global Economic Order

We know we have to play the game your way now but in ten years we will set the rules!

— Chinese ambassador to the World Trade Organization during China's negotiations to enter the institution

China has become a global economic superpower. It has the second largest national economy[1] and is the second largest exporter.[2] It has by far the world's largest current account surplus and foreign exchange reserves. Growth has averaged 10 percent for the past 30 years, the most stunning record in history. Real GDP in 2006 was about 13 times the level of 1978, when Deng Xiaoping initiated economic reforms.

A country must meet three criteria to be a global economic superpower. It must be large enough to significantly affect the world economy. It must be dynamic enough to contribute importantly to global growth. It must be sufficiently open to trade and capital flows to have a major impact on other countries.

Three economies now meet these criteria. The United States remains the largest national economy, the issuer of the world's key currency, and in most years the leading host (and home) country for foreign investment. The European Union is now the largest economic entity and the largest trader, even excluding commerce within its membership, and its euro increasingly competes with the dollar as a global currency.

China, however, is far more deeply integrated into the world economy than either of the other economic superpowers. Despite being a continental economy like both of them, and despite three decades of autarky prior to the 1978 reforms, trade accounts for more than twice as much of China's economy as it does for the United States or the European Union as a group. Hence China's dramatic expansion has a powerful effect on the rest of the world. It shared global growth leadership with the much larger United States during the record world expansion of 2004–07 and, with

Box 1.1 Other economic superpowers?

China is often paired with India in discussions of global economic superpowers, but there is no comparison between them at this time. India's GDP is less than half that of China's, and trade accounts for less than half as much of its overall economy. The annual growth in China's trade exceeds the total level of India's trade. China attracts more foreign direct investment each year than India has received in the 60 years since its independence. India is now developing dramatically and could start growing faster than China and is the most likely candidate to become the fourth global economic superpower in a decade or so, but China will totally dominate its Asian neighbor on all three of the key criteria for the foreseeable future.

Japan is the only other possible contender for global economic superpower status. There were indeed periods, in the 1980s and even into the early 1990s, when Japan appeared to be playing such a role. When the yen reached its peak in 1995, at about 80:1 against the dollar, Japan's total GDP was fully 80 percent that of the United States (despite a population that was less than half as large). The country's competitive prowess led to widespread perceptions of "Japan as Number One." But its trade and other economic transactions with the rest of the world remained relatively limited as a share of its economy, its financial markets never liberalized sufficiently to enable the yen to play an important international role, its economy collapsed for the entire decade of the 1990s, and its population is now declining. Japan has already lost to China its regional dominance and with it any pretensions to global leadership. Japan missed its moment.

the current US slowdown, has become the undisputed chief driver of world growth.[3] (See box 1.1 on other contenders for economic superpower status.)

China poses a major challenge to the United States and the rest of the world simply by virtue of its status as a new global economic superpower. Such rising powers can disturb the existing international order and trigger security as well as economic conflicts. The most notorious cases are Germany in the late 19th century and Japan and Germany again in the early 20th century. There are, of course, more benign cases as well, notably the United States in the late 19th century and the European Union and Japan in the second half of the 20th century.

The challenge is vastly complicated in the case of contemporary China because it is a historically unique global economic superpower in three very important senses. It is still a poor country with per capita income of around $3,000, less than 10 percent that of the European Union and United States. It is still a nonmarket economy—one in which the government makes major decisions on prices and allocating goods and resources—to an important extent despite the dramatic marketization of the past three decades. In political terms, it is, of course, not yet a democracy—and perhaps its greatest challenge to the overall global system is its determination to become a successful high-income country without thorough reform of its authoritarian political system. All three elements reduce the likelihood that China will easily accept the systemic responsibilities that traditionally accompany superpower status, and they in fact lead some to conclude that acceptance of such responsibilities by China would not even be in the interest of the United States. The integration of China into the existing global economic order would in any event be a far more daunting effort than the integration of Japan from the early 1970s, difficult and still incomplete as that task has proved to be.

The challenge posed by China in security terms is less dramatic but still of great significance, as described in chapters 8 to 10. China has been expanding and modernizing its military capacity rapidly and, though it cannot yet match the United States on a global basis, its forces have become capable of much wider projection and will soon enable it to operate outside its region. The country's economic success is expanding its ability to support and deploy military assets with sufficient speed to alarm many of its neighbors and pose potential threats in ever-wider theaters. China, of course, remains a nuclear power with delivery systems that could reach at least some parts of the United States.

A third cluster of political issues is also part of the "China challenge" to existing international norms: nonproliferation, self-determination, human rights, labor standards, and others. International standards, with greater or lesser precision, exist in all these areas. As in the economic domain, China adheres to most of them in principle but often deviates in practice. China's challenge on these topics most frequently arises through its cooperation with countries that are violating the agreed international norms, such as Iran on nuclear proliferation or Burma on human rights, and thus undercuts the ability of the global order to address those problems effectively. Most fundamentally, "there is the strong possibility that China is trying to develop a new model of politics that it will call democratic but that will not include the elements of pluralism, contestation and direct elections that the U.S. regards as essential parts of democracy."[4] Hence, "the China challenge" ranges well beyond the economic dimension, which is the focus of this chapter.

The Systemic Challenge

The revealed preference of the incumbent powers, in this case primarily the United States and the European Union in terms of the international economic order, is to seek to coopt the powerful newcomer into the global regime that they have built and defended for a prolonged period. There are increasing signs, however, that China is not comfortable with the current international economic system. As described in chapter 2, both Chinese officials and scholars are actively discussing alternative structures in which China can be present at the creation and thus serve as a coequal partner in constructing the regime. As noted in chapter 3, China "not only wants to sit at the table but also be given a seat at the top." Mark Leonard concludes that "The first thirty years of the People's Republic reform program have been mainly about China joining the world . . . [while] the story of the next thirty years will be about how . . . China reaches out and shapes the world."[5] By early 2008, China was bold enough to publicly and harshly criticize the United States for its own shortcomings in managing the world economy, especially the failure of its regulatory regime to prevent the global financial crisis; the steady fall of the dollar, which was pushing up oil and other commodity prices; and its allegedly discriminatory rules against incoming foreign investments.[6]

In numerous areas of its economic interaction with other countries, China is now pursuing strategies that conflict with the norms, rules, and institutional arrangements that attempt to structure the global order. This can be viewed simply as the usual free-riding and skirting of responsibility by a powerful player, cleverly exploiting the gaping loopholes in and weak enforcement of existing international rules to pursue its perceived national interests. Moreover, China is hardly alone in deviating from the existing rules of the game. The United States and European Union themselves, the key architects of the current system and its putative defenders, clearly flout those norms on occasion even if they are usually careful to adhere to the letter of the law, as when the United States implements its antidumping rules in ways that violate the spirit (and even perhaps the letter) of the World Trade Organization (WTO) rules. Other major emerging-market economies, such as India and Brazil, also deviate from systemic purity from time to time.

As the powerful newcomer that jars existing economic and political relationships at a systemic level, however, China has a profound interest in the effectiveness of international rules and institutions. It should be seeking to fortify the robustness of the system, whether the present version or an alternative more to its liking, to prevent widespread economic conflict. This chapter attempts to develop a strategy for pursuing that objective that will be attractive to both China itself and the United States and that could therefore play a central role in both future US-China relations and global adjustment to "the China challenge."

There is no evidence that China's challenges to the current economic order derive from any cohesive, let alone comprehensive, strategy concocted by the political or even intellectual leadership of the country. It is certainly not based on any desire to restore Marxist or Communist economic principles. Despite periodic calls for "a new international economic order," each component seems to have emerged pragmatically within the individual issue-areas. To date, China's alternative approaches have emerged de facto and piecemeal rather than across-the-board or even with explicit articulation. China's recent behavior, however, compounds its size as a challenge to the existing world economic regime.

Like the United States and many other countries, China is experiencing considerable negative domestic reaction to its cooperation with other countries and international institutions on economic issues. The nearly universal backlash against globalization, responding mainly to the uneven distributional effects of that phenomenon, is clearly present in China and explains at least part of its current attitude toward the world economy. "New Left" intellectuals are vocal in their criticism of Western models of development and global cooperation as described in chapter 2. Their questioning of China's present economic strategy pointedly includes its international dimension. A new round of internal debate on all these issues is planned for the post-Olympics period starting in late 2008.

The Chinese version of the backlash, as in most countries, has a unique national flavor. In China's case, the Communist Party's claim to continuing authoritarian power now rests primarily on its ability to maintain rapid economic growth. That growth, however, has spawned distributional and environmental consequences that have provoked widespread domestic protests against the Party's leadership. Hence the government's response addresses key elements of the present development model, including some of its international aspects, as well as political processes within the country. Economic nationalism is clearly on the rise in China, as manifest in portions of the new Anti-Monopoly Law and the government's new supervisory role over mergers and acquisitions vis-à-vis foreign firms. China's challenge to the world economy links directly to its core internal agenda and the debates over how it should proceed on a series of vital domestic issues.

Such a systemic challenge represents a worrisome evolution in China's behavior over time. At the very outset of its reform process, in the late 1970s, China was eager to join (and to displace Taiwan in) the International Monetary Fund (IMF) and World Bank. These institutional ties subsequently played important, and apparently highly welcome, roles in China's early development success. Subsequently, China not only endured a lengthy negotiation and ever-escalating set of requirements to join the WTO but proactively used the promarket rules of that institution to overcome domestic resistance to internal reform. It seemed quite willing to operate within the existing system until relatively recently. But the attitudes of countries can change dramatically with changes in their objective circumstances, and China appears to be undergoing a significant evolution in its attitude toward the global economic order as it recognizes its vastly increased capability to influence global events.

Trade

On trade, China has been playing at best a passive and at worst a disruptive role with respect to the global system. Its current account surplus in 2007 approximated 11 percent of its GDP. Its annual global surplus came in at $372 billion and, even if it declines a bit in 2008, will still be by far the largest in the world. Its hoard of foreign currency exceeded $1.8 trillion by mid-2008 and is by far the world's largest despite the continued low incomes of the Chinese population. These results are unprecedented for a major trading country and place substantial pressures on the global economy.

Moreover, these surpluses are generated to a large extent by China's massive intervention in the foreign exchange markets to prevent the needed appreciation of its currency, the renminbi. China has the right to peg its currency under IMF rules, but it does not have the right to intervene massively in the foreign exchange market, as it has for the past five years, to maintain a substantially undervalued price for its national currency and thus enormously boost its international competitive position. This behavior violates the most basic norms of the IMF Articles of Agreement, which require members to "avoid manipulating exchange rates . . . to avoid effective balance of payments adjustment or to gain unfair competitive advantage" and whose implementing guidelines explicitly proscribe the use of "prolonged, large-scale, one-way" intervention to maintain competitive undervaluation.[7] The US current account deficit is, of course, at the heart of the global imbalances and stems largely from internal US economic problems and policy errors. China's large trade surpluses compound the problem substantially, however, and to an important extent result from policies that are widely regarded around the world as unfair and indeed inconsistent with the global rules.

Large and persistent trade and currency imbalances have traditionally been major sources of protectionist pressures in deficit countries. This is particularly true in the United States, where the surges of import relief actions in the early 1970s and mid-1980s were predicated on sizable currency misalignments that ultimately required substantial depreciations of the dollar. Present restrictive attitudes are indicated by the numerous bills proposed in the US Congress to address the China currency issue with trade sanctions if other remedies fail. Similar attitudes can be increasingly observed in Europe as well, especially now that it has replaced the United States as China's largest export market.

On trade policy itself, China makes no effort to hide its preference for low-quality, politically motivated bilateral and regional arrangements over more economically meaningful (and demanding) multilateral liberalization through the WTO or even high-quality agreements with individual trading partners. Since China is the world's largest surplus country and second largest exporter, and thus has enormous impact on world trading patterns and policies, this poses two important challenges to the existing global regime.

First, China's rejection of the compromise proposed for the Doha Round in July 2008 was a key reason for the historic failure of that multilateral initiative. China in fact declared throughout most of the negotiations that it should have no liberalization obligations whatsoever in the Round and even invented a new category ("recently acceded members") to justify its recalcitrance. Such a stance by a major trading power is akin to rejection or abstention by the United States or the European Union, either of which would have torpedoed the Doha Round or even precluded it from ever getting off the ground.

We know from history that the global trading system is dynamically unstable: It either moves forward toward steady liberalization or falls backward under the constant pressure of protectionism and mercantilism. The demise of the Doha Round represents the first failure of a major multilateral negotiation in the postwar period and places the entire WTO system in jeopardy. Whatever one thinks of the virtues of the Doha initiative, or indeed of the current global rules that proscribe preferential agreements unless they meet fairly rigorous economic criteria, these are central norms of the existing system, the violation of which will, over time, severely undermine the entire regime.

China is, of course, not the only culprit in the Doha drama. The United States and European Union were unwilling to enact the needed reductions in their agricultural support programs, though to their credit they placed extensive offers on the negotiating table and kept the round alive. Other emerging-market economies, especially India, were also unwilling to open their markets meaningfully. But China, with its major stake in open trade because of its heavy dependence on global markets and its huge surpluses, exhibited the sharpest contrast between its objective interests and its revealed policy.

Second, China's pursuit of bilateral and regional trade agreements with neighboring countries is almost wholly political. Its "free trade agreement" with the Association of Southeast Asian Nations (ASEAN) accepts those countries' own penchant for weak accords, covering only a small share of its commerce with them in an effort mainly to assuage their fears of being swamped (especially in terms of attracting foreign investment) by their huge neighbor. When China has agreed to consider liberalization pacts with countries that seek economically meaningful agreements, such as Australia, progress has been limited.[8]

The United States and other major trading powers, of course, factor foreign policy considerations into their selection of partners for regional and especially bilateral trade agreements. But they also insist on reasonably high economic standards that conform to the (admittedly loose and poorly enforced) rules of the WTO, especially coverage of "substantially all" trade. China is able to escape legal application of those rules by continuing to declare itself a "developing country" and invoking the systemic norm of "special and differential treatment." But for China, as a major global trading power, to hide behind such loopholes provokes substantial international strains and represents a second fundamental challenge to the global trading system.

In addition to jeopardizing the WTO system directly by undermining both the Doha Round and the norms for multilateralism, China's trade policy strategy will do so indirectly, and probably even more importantly, by leading to the creation of a loose but potent Asian trading bloc. The network of bilateral and plurilateral agreements in the region, which started with China-ASEAN, is now steadily expanding to include virtually all other possible permutations: parallel Japan-ASEAN and Korea-ASEAN deals; many other bilateral agreements including perhaps China-India; a "10+3" arrangement, which brings together the 10 ASEAN countries and all three northeast Asian countries (China, Korea, and Japan); and maybe even a "10+6," which broadens the group to include Australia, India, and New Zealand. Especially with the failure of the Doha Round, this evolution is likely to produce an East Asia Free Trade Area led by China within the next decade as part of its broader strategy of promoting regional identity and solidarity.

Such a regional grouping centered on China will, as noted earlier, be full of exceptions and deviations from WTO norms that limit its economic impact. But it is still virtually certain to trigger a sharp backlash from the United States and European Union, and probably numerous developing countries, because of its new discrimination against them (despite their own adoption in the past of similarly discriminatory agreements such as the North American Free Trade Agreement [NAFTA] and the European Union itself). Even more important systemically, it will create a tripolar global regime with a new Asian pole to counterpoise the existing power centers in Europe and North America. Such a configuration is not inherently antithetical to multilateral cooperation, and could even abet it if managed to that end, but would pose a serious threat to the present institutional construct and could accelerate the deterioration of today's global system. It comports nicely, however, with China's foreign policy goal of promoting a multipolar world that constrains the global power of the United States.

China's challenges to the global trading system fuse in its opposition to the US proposal in the Asia Pacific Economic Cooperation (APEC) forum in 2006 for a Free Trade Area of the Asia Pacific. This APEC initiative was immediately endorsed by a number of smaller member economies that fervently want to prevent trade conflict between the group's two superpowers. It seeks to head off the potential confrontation between an Asia-only trading bloc and the United States, which could "draw a line down the middle of the Pacific," curb and eventually consolidate the proliferating "noodle bowl" of preferential pacts in the Asia-Pacific region, and offer an economically meaningful "Plan B" for widespread trade liberalization in the event of a definitive failure of the Doha Round.[9] China has clearly opposed the idea, however, revealing its preference for bilateral deals without much economic content and its disinterest in pursuing strategies to defend the broader trading order.

International Monetary System

China's challenge to the international monetary order is at least as serious. Alone among the world's major economies, China has rejected the adoption of a flexible exchange rate policy, which would promote adjustment of its balance-of-payments position and help avoid a buildup of large imbalances. As noted earlier, it has in fact intervened massively in the currency markets to maintain a substantially undervalued exchange rate, which has produced huge trade and current account surpluses that are by far the largest counterparty to the US trade and current account deficits. These imbalances and the unprecedented flow of international funds that they require could trigger at almost any time a crash of the dollar and "hard landing" of the global economy, severely compounding the current financial crisis (box 1.2). China's challenge to the international monetary order also adds considerably to the risks it is posing for the global trading system, as noted above.

To date, however, China has resisted the pleas of the United States and others to conform to the international monetary norms. Its announced move to "a managed floating exchange rate based on market supply and demand" in July 2005 has still produced only a modest rise in the trade-weighted rate of its currency, despite the recent acceleration of its bilateral appreciation against the dollar, and a small moderation at best in the continued huge surpluses in its external accounts. Its intervention in the currency markets to block faster appreciation has in fact at least doubled since that time, implying a policy that is less rather than more market-oriented.

Hence China's behavior poses a fundamental challenge to the operation of the global monetary regime and to the effectiveness of its institutional guardian, the International Monetary Fund. China has in fact questioned the basic concept of international cooperation in dealing with these problems, claiming that the exchange rate is "an issue of national sovereignty" when it is of course a quintessential international question in which foreign counterparties have an equivalent interest. Far from accepting IMF advice, it has strenuously objected even to the principle of Fund involvement in the issue. Underlying this debate is the implicit threat that China might promote creation of an Asian Monetary Fund—based on the Chiang Mai Initiative, which provides the fulcrum for Asian

Box 1.2 Will China dump its dollars?

China's foreign exchange reserves had risen to about $1.8 trillion, by far the largest national hoard in the world, by May 2008. They were rising by about $50 billion every month as the authorities intervened in the currency markets to limit the appreciation of the renminbi, and so could easily climb to $2 trillion or more by the end of the year. China does not publish the composition of its holdings, but most estimates suggest that 60 to 75 percent, or more than $1 trillion, are invested in dollar assets (with most of the rest in euros and perhaps a smattering in yen and other currencies).

Some observers worry that these holdings represent a major Chinese threat to the United States. They fear that China could "dump" some or all of its dollars, driving down the exchange rate of the US currency in a rapid and disorderly manner. This could trigger a sharp rise in US inflation and interest rates, especially since any such action by the Chinese, or even serious rumors thereof,[1] would presumably lead to panicky dollar sales by other holders around the world. Such a sequence would have particularly costly effects during a period when the US economy is simultaneously hovering near recession and experiencing uncomfortably high inflation, as in 2008.

Such a step by the Chinese is highly unlikely, however, for three reasons: First, any partial sale of their current dollar holdings (or rumors thereof) would drive down the value of their remaining dollar holdings, probably sharply. The Chinese authorities are already under considerable domestic criticism for the sizable losses they have incurred as the dollar has dropped over the past six years, by a cumulative average of 25 to 30 percent against other currencies, by more than 50 percent against the euro and some other plausible alternatives, and by even more against "real" assets such as oil and many other commodities. Since it would be technically impossible for the Chinese to sell anything close to their dollar total of $1 trillion or so instantaneously, they would be shooting themselves in the financial foot in a major way through such action.

Second, Chinese sales of dollars would drive up the price of whatever currencies they converted into. The authorities would sharply raise the price of their own renminbi if they sold dollars to other Chinese entities, such as banks or companies, for local currency. The resulting appreciation of the renminbi would adversely affect China's trade competitiveness and represent a total reversal of the country's currency policy of the past five years, under which they have bought large amounts of dollars to maintain an undervalued exchange rate. It would thus be more plausible for China to sell dollars for euros and other foreign currencies. Such a move would be highly unwelcome to the Europeans and other recipients of the shifts,

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Box 1.2 Will China dump its dollars? *(continued)*

however, because their currencies would then become overvalued, with negative effects on their international competitiveness, and could trigger additional protectionist reactions against China as a result.

Third, unlike the sizable but gradual appreciation of the renminbi that China should permit to help correct the global imbalances, China would be branded an international pariah if it were to "dump" its dollars in a precipitous manner that generated global financial and economic instability. This would be opposite the international praise they rightly garnered during the Asian financial crisis in 1997–98 when they helped counter further contagion and possible worldwide panic by avoiding sympathetic depreciation of their own currency. Dollar "dumping" would rightly attract far more international opprobrium than China has already endured in recent years for keeping its currency so undervalued through overt manipulation.

The only plausible circumstance under which China might "dump" its dollars is if it thought the United States might be about to freeze those holdings itself, as it did with Iran's dollar assets in 1979 after the revolution in that country and its takeover of the US embassy. China has already protected itself against this risk to a considerable extent by holding many of its dollars outside the United States, however, and such a sequence could only occur in the extremely unlikely event of very sharp confrontation between the two countries over Taiwan or some other political "hot spot." The much more likely scenario is that China will gradually diversify its reserve composition away from the dollar over time, primarily at the margin by converting a modest portion of its additional dollar acquisitions into euros and perhaps other currencies.

1. Rumors that Kuwait planned to sell $100 million in dollar assets, which were never confirmed, were a major factor in triggering the free fall of the US currency in late 1978, which remains the most serious dollar crisis to this time.

monetary cooperation, in addition to the regional trade plans described earlier—and further erode the global role of the IMF.

Energy

On energy, China's challenge is less frontal because no body of agreed global doctrine, rules, and institutions exists. Moreover, China's search for "assured sources of supply" can lead to increased global production of oil and gas and thus help alleviate upward pressure on prices and any possible shortages. The challenge in this area is no less important, however, because China will become the world's largest consumer of energy over the next few years and has been a major contributor to the dramatic rise in world oil prices over the past five years (chapter 7).

There are at least two conflicting regimes in this issue-area: the (periodically effective) producer cartel embodied in the Organization of Petroleum Exporting Countries (OPEC) and the (very loose and incomplete) consumer anticartel in the International Energy Agency (IEA). China has essentially challenged both with its drive to line up "secure sources of supply" by providing support to Chinese oil companies in their pursuit of overseas oil investment through tied aid and other types of assistance that member countries of the Organization for Economic Cooperation and Development (OECD) have sought to discipline. Beijing's efforts in Sudan and Iran have been of particular concern as they have led China to constrain the efforts of the UN Security Council to impose sanctions on those countries. As with the other issue-areas, China is hardly alone in its search for "equity oil" and allegedly preferred access. But as a major driving force of the single most important commodity market in the world, the country has a particular interest in, and responsibility for, forging systemic responses rather than trying to carve out exceptions and special privileges for itself.

The other consuming countries have not sought to engage China in their cooperative arrangements, however, at least until very recently. It has been denied membership in the IEA because it is not a member of the OECD, which requires its members to be committed to an open market economy and democratic pluralism. The United States, for its part, rejected the proposed takeover of Unocal by the China National Offshore Oil Corporation (CNOOC) in 2005 and thus indicated an unwillingness to permit perfectly normal and reasonable Chinese investment in additional energy resources.[10] As indicated in chapter 7, China will become an active and constructive partner in ensuring the security of international energy markets only if it is allowed to help shape energy policy at the multilateral level and if Chinese oil companies are allowed to compete freely for investment opportunities in the United States and other Western countries.

Foreign Aid

On foreign aid, China has already become a major donor (depending on how aid is defined) and poses a direct challenge to prevailing norms by ostentatiously ignoring the types of conditionality that have evolved throughout the donor community over the past quarter century. It rejects not only the social conditions (human rights, labor standards, and environmental norms) that have become prevalent but also the basic economic criteria (starting with poverty alleviation and good governance) that virtually all bilateral and multilateral aid agencies now require as a matter of course.

As with its trade and commodity pacts, China's "conditionality" is almost wholly political: insistence that the recipient countries support China's positions on global issues, in the United Nations and elsewhere, and funnel their primary products to it as reliable suppliers. As with trade, China has now become such a sizable player that its deviation from global norms matters a great deal. It provides its recipients with an escape from despised "Western conditionality" or the Washington Consensus that is both financially profitable and politically satisfying to them but that may vitiate any lasting value they can obtain from Chinese assistance itself and, even more so, from the non-Chinese assistance that it may supplant.

Global Implications

All these policies, and the national mindset they represent, reveal that China's attitude toward its global economic responsibilities has not kept pace with the breathtaking ascent of its security and (especially) economic impact on the rest of the world. China continues to behave primarily like a small country with little systemic effect and therefore systemic responsibility. In economic terms, it acts like a price-taker rather than the price-maker with enormous, sometimes decisive, influence on critical global economic outcomes it has so clearly become.

Such a lag in perceptions is not difficult to understand, particularly for a very conservative leadership that is still guided to an important extent by Deng Xiaoping's directive to maintain a low international profile. Indeed, the central thrust of contemporary Chinese foreign policy is to avoid international developments that could disrupt the country's ability to focus on its huge domestic challenges. Moreover, the speed at which China has assumed international prominence, and its systemic consequences, is difficult for even the most experienced observers to assimilate.

Even the strongest defenders of the current global system would also concede that at least some of China's criticisms are valid. Neither the United Nations, the WTO, the IMF, the World Bank nor their putative steering committees like the Group of Seven (G-7) have been models of effectiveness in recent years or even decades. The Doha Round would have achieved very little liberalization of world trade after almost a decade of effort. The IMF has failed to enforce its own rules and is being forced to downsize. The G-7 has adopted a mutual nonaggression pact among its members, under which they basically agree not to criticize each other very loudly, and their criticisms of outsiders (like China) ring hollow as a result. Global policy cooperation, let alone coordination, has largely gone out of style.

The significance of China's challenge will depend importantly on who else will join its effort. China is, of course, a significant challenger solely on its own because of its massive, and rapidly growing, economic weight and its formidable, though lesser, security counterpart. It will probably be unable to win widespread acceptance for alternative approaches, however, without a considerable array of important allies—who can be attracted either by persuasion or by coercion. Most of its Asian neighbors can already be counted on to support its initiatives or at least not oppose them, due to its preponderant impact on the region, as already observed in APEC, and an Asian economic bloc is in the making as noted earlier. Its increasing number of close economic partners, especially in Africa, are in a similar position and will tend at least to be neutral to avoid antagonizing a China that has demonstrated its willingness to retaliate against noncooperation. Its alliance with India in blocking the Doha Round bears close watching.

Challenges to the international order are not a new phenomenon, at least at the rhetorical level. "North-South conflict" has ebbed and flowed in intensity for over three decades. OPEC was initially perceived as a champion of the "South" for systemic reform after the first oil shock in the early 1970s (before it became clear that developing countries would suffer even more than rich nations from its manipulation of world energy markets. Abetted by a bevy of nongovernmental organizations (NGOs), some poor countries have continued to press for systemic modifications even as a growing number of emerging-market economies sought to enter the "rich men's club" and some of its formal institutions (with Korea and Mexico entering the OECD, and those two along with Brazil, China, and India becoming more-or-less regular invitees to side meetings of the G-7/G-8).

The challenge from China is fundamentally new and vastly more important than any of these earlier phases. It is different because it is based on pragmatic pursuit of very specific national interests rather than any ideological attack. It is much more salient because of the massive, and rapidly growing and multifaceted, economic weight of the challenger. OPEC and Japan, the only serious previous challengers to the postwar global order, in fact sought to join rather than alter the system. The challenge from China, though still in its early days, is potentially far more serious.

A New Approach

The United States should, therefore, implement a subtle but sharp change in its basic economic strategy toward China. Instead of focusing on bilateral problems and complaints, and seeking to coopt China into a global economic system that it would try to continue leading by itself, the United States should seek to develop a true partnership with China to provide joint leadership of that system, even if the system requires substantial modifications to persuade China to play that role. The two economic superpowers should begin to pursue together the development of coordinated, or at least cooperative, approaches to global issues that can be resolved effectively only through their active co-management. Such a "G-2" approach would accurately recognize, and be perceived by the Chinese as accurately recognizing, the new role of China as a legitimate architect and steward of the international economic order.

The proposed strategy is importantly different from current US policy. The present approach seeks to wean or coopt, whether one wants to use polite or blunt terminology, China into the global economic order that the United States has helped construct and sought to lead for over 60 years. Such a fondness for the status quo is understandable, given both the fundamental success of that regime throughout most of its existence and the prominent role it provides for the United States.

But China is quietly uncomfortable with the very notion of its integration into the current international system, which it had no role in developing. Moreover, the current system has become increasingly ineffective over the past decade or so, as outlined earlier. This is due importantly to its growing political illegitimacy as its decision-making machinery fails to evolve sufficiently to provide adequate voice for the emerging powers, of which China is by far the most important. Systemic reform is needed in any event, and the Chinese catalyst for it could turn out to be quite fortuitous and extremely healthy.

The ineffectiveness of the current system also derives from its failure to address the interrelationships among key issues. Currency imbalances foster trade protectionism. Capital-intensive development strategies accelerate environmental degradation. Energy imbalances lead to financial distortions and even crises. All these economic issues must be seen in the context, and addressed with full recognition, of the broad political and security settings within which they take place. It will be essential to address these seemingly separate topics much more holistically if management of the global economic system is to improve significantly.

Present US policy purports to include tough enforcement measures when China fails to cooperate on specific issues, and Congress frequently calls for much more of that medicine. The United States has in fact taken China to the dispute settlement mechanism at the WTO in a number of cases and has won virtually all of them, mainly through settlements out of court, but with very modest results. There have been a few instances of unilateral US "safeguard actions," but their economic impact has been minuscule. On the much bigger exchange rate issue, the administration has been unable to mobilize the IMF or the G-7 and has itself been unwilling to label China a "currency manipulator" even when its massive intervention has been obvious.[11] The Congress has not followed through on any of its own trade or currency threats. The United States has done very little to counter China's moves on energy and aid.

China contends that external pressure, especially when applied publicly, is counterproductive and virtually forces it to reject the proposed courses of action.[12] But the revealed impotence of hard-line US bilateral efforts derives primarily from three basic domestic factors: the clear benefits to many Americans of attractive Chinese products and financial support, its need for Chinese cooperation on noneconomic issues ranging from North Korea to Iran, and the keen interest of many US-based companies in avoiding confrontations with Beijing for fear of retaliation. There is simply too much US opposition to "tough" policies for them to be sustained, even if adopted on occasion. Foreign allies for a confrontational approach are even harder to find, for similar reasons. The likely continuation of this futility suggests that there is no real alternative to a cooperative approach. It indeed implies that the main, or perhaps only, hope for persuading China to start providing constructive systemic leadership lies in convincing it of the critical importance to itself of doing so and then actively partnering with it to that end.

The proposed strategy would treat old issues in new ways. The United States and China could agree to construct their proposed bilateral and regional trade agreements, including megadeals like the Free Trade Area of the Americas and an East Asia Free Trade Area, in ways that would support subsequent multilateral liberalization and even permit eventual linkage between the regional bodies. There would be recognition that dollar overvaluation has reflected errant US fiscal policy and inadequate US private saving just as renminbi undervaluation has reflected inadequate Chinese internal demand and excessive intervention. Competitive currency misalignments would be treated as deviations from the agreed norms of the IMF and as beggar-thy-neighbor policies that hurt all trading partners, especially including other poor countries (as India and others are now vocally emphasizing). The United States could escort China, figuratively if not literally, into the IEA so that the two together could help organize the response of consuming countries to high global oil prices and longer-run security of supply.

The proposed strategy could apply even more forcefully to the creation of new international norms and institutional arrangements to govern economic issues where no such arrangements have previously existed. The two most important candidates at present are global warming and sovereign wealth funds. China is a central player on both. On the former, it likely has passed the United States as the world's largest emitter of greenhouse gases. On the latter, its recently created sovereign wealth fund—the China Investment Corporation—could quickly become one of the world's largest as China is by far the world's largest holder of foreign exchange reserves, the source of financing for most such funds. There will be no possibility of constructing effective global regimes on these issues without full and active participation by China and indeed close cooperation between China and the United States.

China's challenge to the current global economic order could in fact come to a head on these two topics. To date, China has steadfastly refused to contemplate binding constraints on its aggregate emissions of greenhouse gases (and other developing countries, including India, are hiding behind its resistance). So has the United States, but that stance fortunately seems likely to change dramatically with a new US administration in 2009, and the United States may even seek to take an aggressive lead in forging a new international compact on the issue. Moreover, as noted in chapter 7, China now seems willing to commit to "nationally appropriate mitigation actions" under a post-Kyoto framework. Hence there may well be a fruitful opportunity for new US-China collaboration on the issue.

Such a regime, however, could also lead to the installation of trade or other barriers in participating countries against carbon-intensive products from countries with less exacting (or no) standards. A US-China trade war with retaliation and counterretaliation could result unless the two countries cooperate intensively in constructing a new global regime on the issue. Such a regime would, of course, be implemented through a much broader grouping of nations, in which China could maintain its role as a leader of the developing countries, but can be forged in the first instance only through intimate if informal "G-2" collaboration.

China has already indicated some skepticism about the emerging consensus on the adoption of new international guidelines, even if voluntary and nonbinding, on the structure and investment activities of sovereign wealth funds. The United States is championing such codes, primarily to head off the risk of protectionist domestic reactions to specific investments, because it so desperately needs the foreign money to fund its huge external and internal deficits. It is especially dependent on China, with its massive currency reserves and large annual additions to them from its ongoing surpluses. A frontal clash could develop over this issue as well, triggered either by Chinese rejection of proposed new guidelines or US rejection of particularly sensitive Chinese investments (as in the CNOOC case).

Hence the United States should reach out to Beijing on both global warming and sovereign wealth funds, as well as modify its approach in a number of ongoing negotiations, to start implementing the new strategy. The basic idea is to develop a very informal but increasingly effective "G-2" between the United States and China to help guide the global governance process on an increasing number of economic topics. The concept would not apply in the security area, where the issues and relationships are very different, but could have a major impact on both the functioning of the world economy and on the China-US economic relationship.

Such a new steering committee would not seek to displace any of the existing international economic institutions. Other major countries, notably the European Union and on some issues Japan and the large oil exporters, would, of course, need to remain deeply involved as well. The new rules, codes, or norms would frequently be implemented through existing multilateral institutions, like the IMF, WTO, and IEA. Some of them might work through new worldwide organizations created to deal with truly new issues, such as a Global Environmental Organization to manage climate change policy.[13] But effective systemic defenses in today's world must start with active cooperation between its two dominant economies, the United States and China.

It would be impolitic for the two governments to use the term "G-2" publicly, and they should not do so. For the strategy to work, however, the United States will have to accord true priority to China as its main partner in managing the world economy. This will be true even vis-à-vis the European Union, the other global economic superpower and traditional partner in any de facto "G-2" that may have existed in the past, in important part because the European Union still has neither a cohesive policy nor an effective spokesman except in a very few issue-areas (like international trade, where it *has* spoken with a single voice from its creation and has thus played a central global role). The European Union, Japan, and perhaps some other traditional US allies might be unhappy with the relative downgrading of their own relationship with the United States. But their pique should be assuaged by the enhanced effectiveness of the global economy, which is the objective of the exercise, and would be minimized if the "G-2" structure were pursued diplomatically without fanfare. In any event, nothing short of the intimate relationship implied by the "G-2" concept is likely to attract China, and engage the United States sufficiently, to create the effective leadership core that the two countries and the world as a whole need so desperately.

Initial steps are already being taken toward implementing this concept. After the initial proposal for a US-China "G-2,"[14] Robert Zoellick as deputy secretary of state in the second George W. Bush administration launched a Senior Dialogue with Chinese counterparts, and Secretary of the Treasury Henry Paulson, Jr. escalated the engagement in 2007 to a Strategic Economic Dialogue (SED) among the leaders of 10 or so cabinet agencies in each country. On the military side, Secretary of Defense Robert Gates recently inaugurated a direct hotline with his Chinese counterparts to respond to any crisis risks. The beginnings of an institutional framework for a working G-2 have thus been put in place, and patterns of cooperation are already developing on some topics, including the environment and international finance. Energy and the environment were in fact central topics of discussion at the third and fourth meetings of the SED in December 2007 and June 2008. These recent innovations have produced useful, if not dramatic, results and should certainly be continued.

But it is not nearly enough to seek to induce China to become a "responsible stakeholder" in the global system, as the US government has sought to do since Zoellick initiated that concept in 2005, though that would be an important step forward. It must be seen, and accorded full rights, as a true leadership partner in the evolving global economy of the 21st century. As Harry Harding has recently testified to the Congress,[15] China "should be invited to participate in the norm drafting process . . . [and] should be treated as a rule-maker and not simply as a rule-taker."[16]

It may in fact prove impossible to persuade China to behave like a "responsible stakeholder" without according it full leadership status.

The logical next step is for China and the United States to initiate annual, or even semiannual,[17] summit meetings to both symbolize and implement such a new relationship. Only the heads of government can integrate the wide range of economic and foreign policy/national security issues that must be included in the partnership. Only they can make decisions on the essential trade-offs within and among the key areas, even within the economic domain. Only the regular convocation of summits can galvanize officials of the two countries to develop the intensive procedures for consultation and cooperation that are essential underpinnings for an effective "G-2." The SED or some equivalent cabinet-level body should prepare for, and carry out the decisions of, the heads of government on an increasingly routinized basis.

A partnership for global economic leadership between a rich developed country and a poor developing country would be unprecedented in human history, as befits the uniqueness of China's becoming the first poor economic superpower. Examples of such cooperation, however, suggest that converting bilateral disputes into systemic management initiatives can be extremely effective. In the late 1970s, for example, the United States was applying countervailing duties to scores of Brazilian products because Brazil's export subsidies accounted for almost half the value of all its foreign sales. A frontal assault on the subsidies was politically unacceptable in Brazil, but the two countries agreed to cooperate closely, and in fact took the lead, in negotiating a new Subsidy Code in the General Agreement on Tariffs and Trade (GATT). That code simultaneously became the linchpin of a successful Tokyo Round, a basis for adding an injury clause to the US countervailing duty law, and a foundation for phasing out the Brazilian rebate policy. That US-Brazil trade issue greatly resembles, both bilaterally and systemically, the China currency issue of today.

Are the United States and China ready to substantially reorient their policies toward each other and, indeed, their entire foreign economic policies? At least three shifts in mindset will be needed in the United States: acceptance of a true partner in managing global economic affairs, working intimately with an Asian country rather than the traditional European allies, and collaborating with an authoritarian political regime instead of the usual democracy. All three will pose substantial challenges for any American policymaker seeking to carry out such a new approach, not least because of the domestic political resistance that will be encountered on each of them.

Is China ready for such cooperation with the United States or indeed to play a responsible leadership role in the world economy under any institutional setting?[18] The historical answer is that no country, even the British and American hegemons during their eras of dominance, has been "ready" for such a role until it was forced upon the country by its own national interests and the realities of the global economic situation. As a country that is still quite poor in the aggregate, and whose currency remains inconvertible and protected by extensive capital controls, China will be sorely tempted to resist and instead maintain its demeanor as a small country or, at most, as a leader of the developing nations. As noted earlier (and in chapter 2), an internal backlash against globalization (as in the United States) is challenging some of the basic tenets of the country's international economic engagement. The revealed preference for systemic challenges outlined earlier indicates a willingness to jeopardize global stability.

It would seem that China is rapidly approaching a position, however, where the consequences of its chosen strategy of integration with the world economy will push it to assume ever-increasing responsibility for the successful functioning of that economy. Its trade exceeds 60 percent of GDP, twice the share in the United States or the European Union as a group, and that ratio continues to rise rapidly. Its foreign financial assets are approaching half the size of its economy and are a major component of its national wealth, and they too will steadily become much larger. China has almost surely passed the point where its leadership can responsibly, or even in its own narrow political interests, pursue a policy of benign neglect.

China's own central interest in an effectively functioning world economy is the cardinal reason why it might be willing to participate in a new joint leadership arrangement with the United States. Its broad foreign policy interests in projecting "soft power" worldwide and avoiding confrontation with the United States reinforce such a stance. So does the Party's desire to solidify central control over the provinces, as discussed in chapter 4, because deeper global engagement (such as participation in the WTO's dispute settlement mechanism and strengthening the independence of monetary policy by adopting a more flexible exchange rate system) will almost always tend to add to the decision-making power of the national authorities. Intellectuals in China are hotly debating whether China should work within the system or proceed unilaterally, perhaps including with harsh criticism of the United States over alternative models of financial regulation and currency management (as has already begun to surface in the wake of the US housing and financial crises of 2007–08). US willingness to pursue genuine partnership in shaping the future international economic order could tilt the outcome in a constructive direction. From China's standpoint, the historic challenge is to alter the global system in its direction without precipitating widespread conflict as other emerging powers have done in the past.

If China proves to be leery of getting too close to the United States and would be more inclined to accept the needed global leadership responsibilities in a different institutional setting, perhaps because the United States maintains a cautious stance toward Beijing on security issues, alternatives are available. The European Union could be a member from the outset of a "G-3" of the current global economic superpowers, especially now that it has become China's largest trading partner, source of new technologies, and host to Chinese students. The "new G-5" recently created by the IMF to conduct its intensified multilateral consultative process, which adds Japan and Saudi Arabia (to represent the oil producers) to these three, is another if less promising possibility. China could simply be invited to join the existing G-7 and/or G-8.[19] The central need is to embrace China in an effective leadership compact in light of its critical role in the world economy and its legitimate desire to be engaged in systemic management at all relevant stages of the process, including the creation of any new rules and (formal or informal) institutions. China itself will have to judge which of these institutional approaches would be most attractive and convey that preference to the rest of the world.

But there remains the question whether China would prefer to continue going it largely alone, challenging the existing global system rather than joining with the United States or anyone else in an effort to modify that system in a gradual and orderly manner. Even the closest observers outside China, and maybe even the Chinese themselves, cannot know the answer to that question any more than they can foresee the orientation of overall Chinese foreign policy in the years and decades ahead.

The only way to test these ideas is to try the proposed approach in specific cases. The upcoming negotiations to create a global architecture to counter global warming, with their critically important trade policy dimension and huge implications for energy policy along with the emissions controls themselves, offer a compelling opportunity. As indicated in chapter 7, the United States and China could fruitfully cooperate on a number of climate change issues in addition to working out the needed overarching regime: carbon capture and sequestration, industrial energy efficiency, biofuels, green buildings, and nuclear power. Full Chinese cooperation is essential, and the United States has no chance of succeeding on the issue unilaterally or even in effective partnership with only the Europeans and other rich countries.

The new US administration that will take office in early 2009 is committed to launching a major global initiative on the issue. The two countries have already pledged, at the SED meeting in June 2008, to work closely on energy and the environment for the next 10 years. Hence climate change is a tailor-made test case for a new "G-2," coupling informal China-US collaboration at the core of the process with the conduct of formal negotiations and implementation in broader groupings that imbed China with other developing as well as industrialized countries.

Under seven successive presidents, the United States has chosen to engage rather than confront China on the eminently sensible view that confrontation could only provoke the evolution of a hostile China, which would be profoundly contrary to US interests. China's impressive economic advance is likely to continue, perhaps leading it to become the world's largest economy as well as the world's largest trading nation, and the United States should thus on similar logic make every effort to engage it as a true partner in steering global economic affairs. The initiative could fail, but its success would bring huge benefits, and the effort itself would pay important dividends for the United States in terms of both relations with China itself and the broader US image in Asia and around the world.

Bilateral issues will, of course, remain between the United States and China, in both the economic and security spheres, as between any pair of countries with high levels of trade and investment. But even those issues could be more easily resolved in a relationship that emphasizes the global coleadership responsibilities of the partners by providing a much broader context, and a much wider basis for trust and cooperation, within which to address them than can possibly exist today.

Conclusion

China's challenge to the existing norms, rules, and institutions of a growing number of components of the global economic order could be enormously disruptive both to the United States and to world stability. That challenge could escalate further as China's economic power, military capabilities, and self-confidence continue to grow rapidly and as the effectiveness of the existing regime and the scope for US leadership of it continue to erode. Peaceful transfer of international power has been elusive over the centuries of human history, and the numerous failures thereof have proven to be extremely dangerous.

On the other hand, the opportunity for an orderly realignment of global economic leadership has seldom been so promising. There is very little threat of conflict between China and the United States, nor indeed between any of the other great powers, into which they might be drawn. Overall relations between the two, while wary on both sides, have improved substantially in recent years. Economic, and especially financial, interdependence between them has deepened substantially. Institutional linkages, as noted above, are at an early stage but are clearly being constructed at the direction of the top leadership in both countries. As Henry Kissinger has recently reminded us, US foreign policy must evolve steadily from its transatlantic focus of the past to an inevitable transpacific focus for the future.[20]

There is considerable risk in continuing to respond to each issue that arises in a primarily bilateral and ad hoc manner. There is very little shared basis, as yet, for seeing such issues in a common framework that can produce routine rather than confrontational solutions. The proposed initiative to create a US-China "G-2" should, at a minimum, limit the risk that individual disputes will escalate and disrupt both the relationship and broader economic activities. At best, it could create a process that will, over time, generate sufficient trust and mutual understanding to produce active cooperation on at least those occasions when the national interests of the two countries come close to intersection.

It may be difficult for some to foresee such active cooperation between countries that possess such starkly different characteristics. At the same time, those same two countries possess noteworthy similarities, from their entrepreneurial cultures to their global foreign policy perspectives. Their international positions, as the incumbent power retaining great capabilities and the rising power with far-reaching aspirations, are converging on paths that make the proposed cooperation not only possible but also seemingly inevitable at least to an important degree. It will clearly take time to develop the proposed "G-2" and even the essential cooperation on global warming through which it might be launched. But the next administration in the United States should make a major effort to pursue that prospect as a, if not the, central purpose of its overall foreign policy.

Notes

1. With exchange rates calculated at purchasing power parity per the standard practice of the International Monetary Fund and World Bank. Using market exchange rates, China's economy is now the fourth largest in the world but will shortly pass Germany to move into third place behind only the United States and Japan.

2. China is the third largest trading nation but it is running a huge trade surplus so its exports far exceed its imports, and it is the second largest exporter, trailing only Germany and ahead of both Japan and the United States.

3. China accounts for about 10 percent of global output (with exchange rates at purchasing power parity) and is growing at about 10 percent annually. Hence, it alone accounts for about one percentage point of total world growth, or about one-quarter of the current global expansion rate of a bit less than 4 percent.

4. Harry Harding, testimony before the Senate Foreign Relations Committee, Washington, May 15, 2008.

5. Mark Leonard, *What Does China Think?* (New York: PublicAffairs, 2008).

6. Edward Wong, "Booming, China Faults US Policy on the Economy," *New York Times,* June 17, 2008.

7. Morris Goldstein and Nicholas R. Lardy, eds., *Debating China's Exchange Rate Policy* (Washington: Peterson Institute for International Economics, 2008).

8. Its bilateral free trade agreement with New Zealand, signed in early 2008, is an anomalous exception with a very small country (China's 50th largest trading partner) that appears to be largely motivated by gratitude for New Zealand's being the first country to approve China's WTO accession and the first to grant it "market economy" status.

9. C. Fred Bergsten, "A Free Trade Area of the Asia-Pacific in the Wake of the Faltering Doha Round: Trade Policy Alternatives for APEC," in *The APEC Trade Agenda? The Political Economy of a Free Trade Area of the Asia-Pacific,* eds. Charles E.

6

Sustaining Economic Growth in China

China's economic growth is unsteady, unbalanced, uncoordinated, and unsustainable.

—Wen Jiabao, March 2007

Premier Wen Jiabao's statement at his press conference following the close of the annual meeting of China's legislature in March 2007 was remarkable for two reasons. First, China's growth record is the envy of the world, with expansion averaging 10 percent for three decades. Second, since the assessment came from the man who had been in charge of the economy for the previous five years, it was an unusual self-criticism. What thinking underlies Premier Wen's assessment, and what policies is he promoting to make China's growth more sustainable?

Premier Wen and the rest of China's top political leadership seek to rebalance the sources of economic growth. In place of investment and export-led development, they have endorsed transitioning to a growth path that relies more on expanding domestic consumption. The Chinese Communist Party formally embraced this goal as early as December 2004 at the annual Central Economic Work Conference.[1] Since then, Premier Wen has reiterated the goal of making domestic consumption a much more important source of China's economic growth.[2]

China's goal of rebalancing the sources of economic growth is laudable. It increases the likelihood of China's sustaining its strong growth, creating jobs more rapidly, improving the distribution of income or at least slowing the pace of rising income inequality, and reducing China's outsized increases in energy consumption and carbon emissions. It also would help reduce global economic imbalances and thus lessen the risks to the global economy and reduce the possibility that China would be subject to protectionist pressure, especially in Europe and the United States. For these reasons, US Treasury Secretary Henry Paulson, Jr. has repeatedly urged Chinese leaders to rebalance the sources of growth, and Federal Reserve

Chairman Ben Bernanke, in his only speech on the Chinese economy, focused his remarks almost entirely on the case for rebalancing.[3]

But rebalancing the sources of economic growth has proven to be a much greater challenge than initially expected, and in certain respects China's economic growth has become even more imbalanced since 2004. Although the growth of investment expenditures moderated slightly after 2004, net exports of goods and services soared. China's external surplus ballooned to a global record in 2006 and continued to expand at a breakneck pace in 2007. Most importantly, private consumption expenditure as a share of GDP continued to fall through 2007.

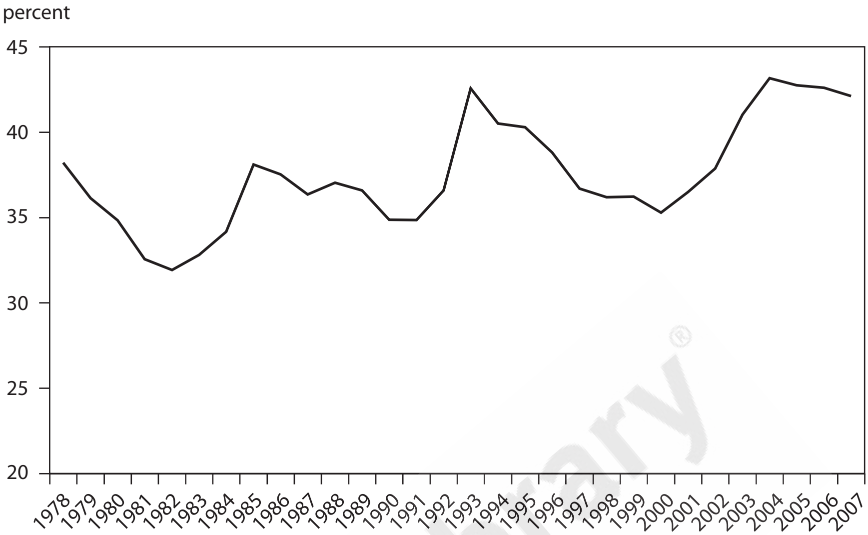
Sources of China's Economic Growth

China has been the fastest growing economy in the world for over three decades, expanding at 10 percent a year in real terms. As a result, real GDP in 2006 was about 13 times the level of 1978, when Deng Xiaoping launched China on the path of economic reform.[4] China is now the world's third largest trader and, measured at market exchange rates, its fourth largest economy. It is highly likely to move up a notch in each category in 2009. Given this stunning long-term success, why would China's leadership seek to shift to a new growth paradigm? In global perspective, how imbalanced is China's recent economic growth?

In all economies, the expansion of output is the sum of the change in three components: consumption (both private and government), investment, and net exports of goods and services. Expanding investment has been a major and increasingly important driver of China's growth. As shown in figure 6.1, investment averaged 36 percent of GDP in the first decade or so of economic reform, relatively high by the standard of developing countries generally but not in comparison with China's East Asian neighbors when their investment shares were at their highest.[5] But since the beginning of the 1990s, China's average investment rate has been higher and in 1993 and again in 2004–07 exceeded 40 percent of GDP, a level above the experience of China's East Asian neighbors in their high growth periods.[6] Rising investment has been fueled by a rise in the national saving rate, which reached an unprecedented level of more than half of GDP in 2006.[7] Rising investment was particularly important in 2001–05, when on average it contributed just over half of China's economic growth, an unusually high share by international standards.[8]

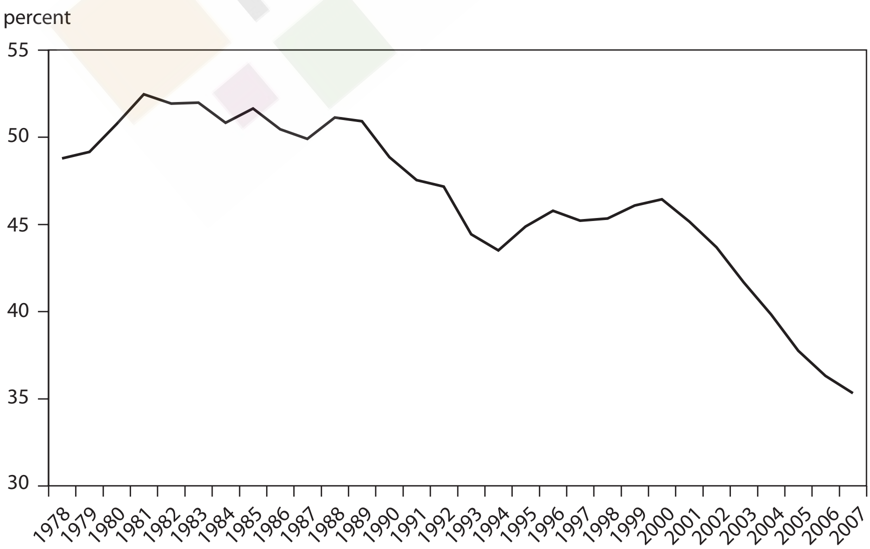
The growth of both household and government consumption has been rapid in absolute terms throughout the reform period. But in most years, growth of consumption has lagged the underlying growth of the economy, a lag that has become particularly noticeable since 2000. As shown in figure 6.2, in the 1980s household consumption averaged slightly more than half of GDP. This share fell to an average of 46 percent in the 1990s. But

Figure 6.1 Investment as percent of GDP, 1978–2007



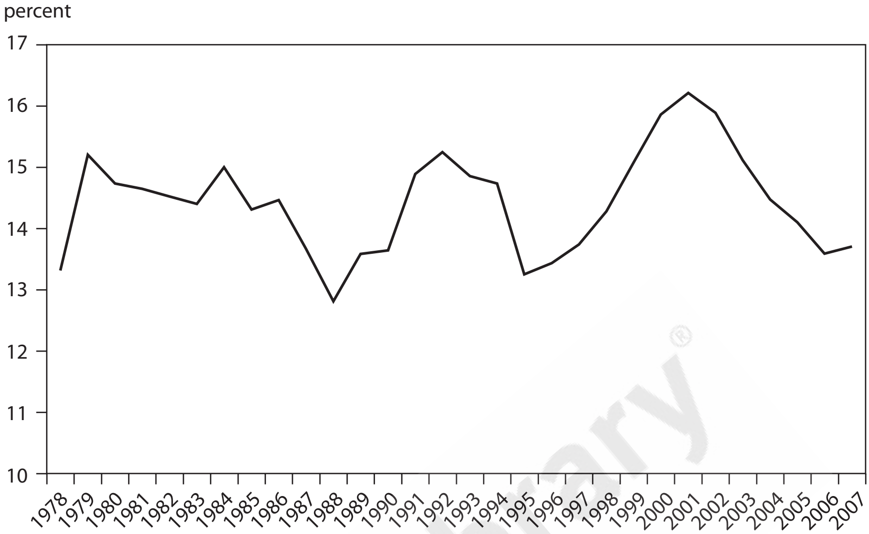
Sources: National Bureau of Statistics of China, *China Statistical Yearbook 2007*; ISI Emerging Markets, CEIC Database.

Figure 6.2 Household consumption as percent of GDP, 1978–2007



Sources: National Bureau of Statistics of China, *China Statistical Yearbook 2007*; ISI Emerging Markets, CEIC Database.

Figure 6.3 Government consumption as percent of GDP, 1978–2007



Sources: National Bureau of Statistics of China, *China Statistical Yearbook 2007*; ISI Emerging Markets, CEIC Database.

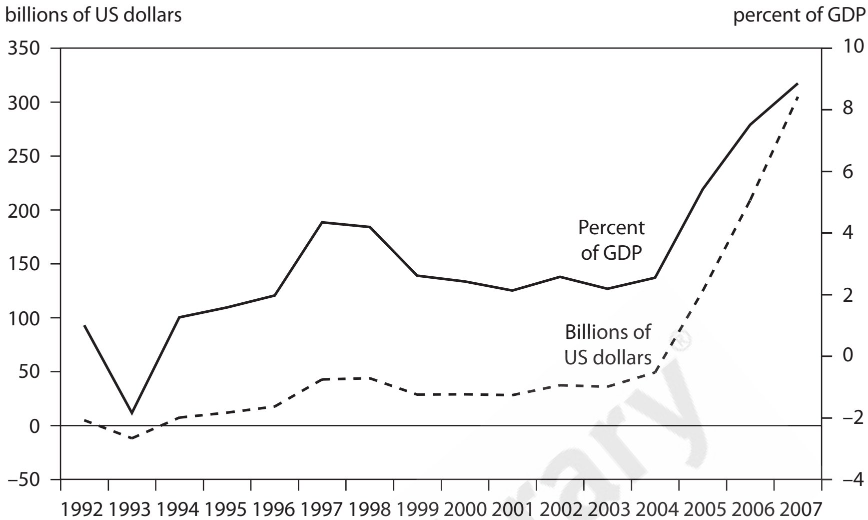
after 2000, household consumption as a share of GDP fell sharply—and by 2007 accounted for only 35 percent of GDP, the lowest share of any major economy in the world.[9] In the United States, household consumption accounted for 70 percent of GDP in the same year.[10] In the United Kingdom, it was 63 percent, and in India, 56 percent.[11]

As shown in figure 6.3, government consumption as a share of GDP has been relatively stable, averaging around 14 percent throughout the reform period. But it declined from a peak of over 16 percent of GDP in 2001 to under 14 percent in both 2006 and 2007.

As a result of these trends in household and government consumption, the relative importance of consumption as a source of growth during the past two decades diminished substantially, particularly compared with that of investment. In the first half of the 1980s, consumption growth accounted for almost four-fifths of China's economic expansion, whereas since 2003, this share has fallen to less than two-fifths.[12]

Beginning in 2005 the growth of net exports of goods and services also became, for the first time in almost a decade, a major source of economic growth. As shown in figure 6.4, net exports of goods and services in 2005 more than doubled to reach $125 billion, or 5.4 percent of GDP. They expanded rapidly in the ensuing two years, by 2007 reaching $305 billion, or 8.9 percent of GDP. On average, in 2005–07 the expansion of net exports accounted for over a fifth of China's growth.[13]

Figure 6.4 Net exports of goods and services, 1992–2007



Sources: National Bureau of Statistics of China, *China Statistical Yearbook 2007*; ISI Emerging Markets, CEIC Database.

In sum, despite the decision of the Party in 2004 to increase the role of domestic consumption demand in sustaining economic growth, consumption as a share of GDP has continued to fall and its contribution to China's economic growth has been modest. The government has been successful in slightly moderating the growth of investment. By 2007 the investment share of GDP had fallen by one percentage point and the contribution of investment to GDP expansion had fallen to about two-fifths, substantially less than the extraordinarily high average of 60 percent in 2003–04. On the other hand, net exports of goods and services have soared both absolutely and as a share of GDP, and thus their contribution to economic growth is currently unusually large, leading Premier Wen to opine at the National People's Congress in the spring of 2006 that "we must strive to reduce our excessively large trade surplus."

Rethinking China's Growth Strategy

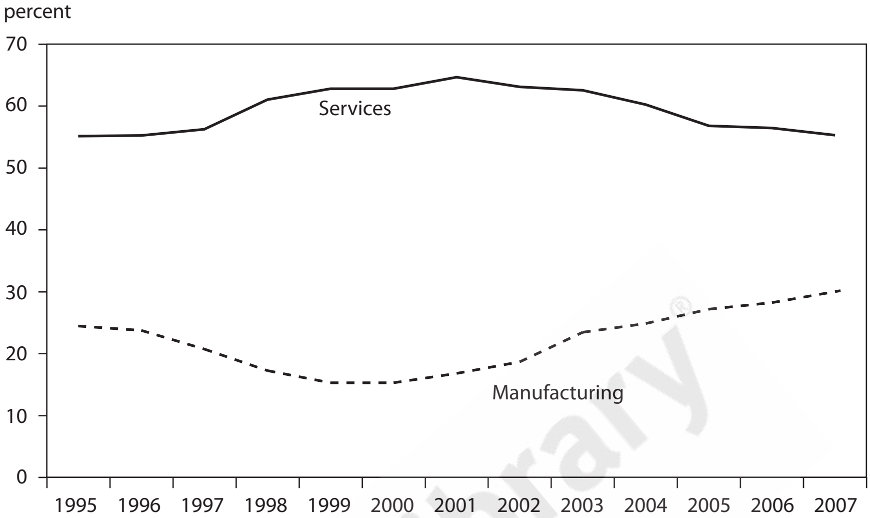
Several considerations informed the formal decision of China's leadership in 2004 to rebalance the sources of growth. First, investment-driven growth, or what the Chinese sometimes call extensive growth, appeared to be leading to less efficient use of resources. By some metrics, as investment growth accelerated, the efficiency of resource use declined. Multifactor productivity growth, a critical contributor to economic expansion in all economies, averaged almost 4 percent per annum in the first 15 years of economic reform (1978–93) but has slowed to only 3 percent since 1993.[14] In short, as the investment share of GDP rose, the contribution of productivity improvements to GDP growth fell. In the words of Martin Wolf, chief economics commentator for the *Financial Times*, the surprising thing about the Chinese economy in recent years is not, as is so frequently asserted, how fast it is growing but rather, given the outsized share of output devoted to investment, that it is not growing even faster.[15]

The second reason underlying the leadership decision to rebalance the sources of growth is the desire to increase personal consumption and alleviate or at least slow the pace of increasing income inequality. In 2005 personal consumption in China was 30 percent less in real terms than the level that would have been achieved if the household consumption share of GDP had remained at the 1990 level rather than falling by more than 10 percentage points. India offers a useful comparison. In 2004 China's per capita GDP was two-and-a-half times that of India. But, because household consumption as a share of GDP was so much lower in China, per capita consumption exceeded that in India by only two-thirds.[16] The ultimate purpose of economic growth everywhere is to improve human welfare. By this standard, China is falling far below potential.

Similarly, a portion of the increase in income inequality in recent years can be attributed to the highly imbalanced regional pattern of growth. The positive differential in the pace of growth in coastal provinces compared with the national average has increased along with the sharply higher pace of growth of foreign trade (particularly exports) that has occurred since 2000.[17] Moving away from heavy reliance on export-led growth thus is consistent with President Hu Jintao's emphasis on creating a more "harmonious society," which requires, among other things, more balanced development between coastal and inland areas.

Third, China's extensive development has generated very modest gains in employment. Between 1978 and 1993, employment expanded by 2.5 percent per annum, but between 1993 and 2004, when the investment share of GDP was much higher than in the 1980s, employment growth slowed to only slightly over 1 percent.[18] The recent more capital-intensive pattern of growth contributed to a slower pace of job creation for the simple reason that the steel, aluminum, cement, and other investment goods industries employ far fewer workers per unit of capital than do consumer goods industries, not to mention the even less favorable comparison with services. But, as shown in figure 6.5, as investment boomed and the renminbi became increasingly undervalued, the share of investment in urban areas going to the services sector declined from 63 percent in 1999 and 2000 to 55 percent by 2007. Over the same period, the share of investment going to manufacturing doubled from 15 to 30 percent.[19] This clearly slowed the

Figure 6.5 Manufacturing and services share of urban investment, 1995–2007



Note: Investment in services includes property development.

Sources: National Bureau of Statistics of China, *China Statistical Yearbook 2007*; ISI Emerging Markets, CEIC Database.

rate of growth of job creation compared with what would have occurred with more balanced growth.

The fourth reason China's leadership wishes to transition to a more consumption-driven growth path is burgeoning energy consumption and its detrimental effects on the environment. Investment-driven growth has required the output of machinery and equipment, and the inputs to produce them, to grow much more rapidly than the output of consumer goods. Rapid growth of output of investment goods, in turn, disproportionately increases the demand for energy.[20] China's energy elasticity of GDP growth (the number of units of energy required to produce an additional unit of output) averaged a modest 0.4 in the 1980s and 1990s, leading over time to a substantial reduction in the amount of energy required to produce each unit of GDP. But this ratio almost tripled to an average of 1.1 in 2001–06.[21] Although China continued to achieve energy efficiency gains in the production of virtually all products, from 2001 through 2006 these gains were no longer sufficient to offset the effect of the rapid expansion of the most energy-intensive sectors of manufacturing, especially steel, chemicals, and cement.[22]

Since two-thirds of China's energy comes from coal, the burgeoning demand for energy generated by capital-intensive growth boosted coal consumption by two-thirds between 2000 and 2005. Coal consumption reached more than 2 billion tons in 2005, almost twice the level of coal consumption in the United States, even though China's economy is only one-sixth the size of that of the United States. As a result, China is now the largest emitter of greenhouse gases. China is home to 16 of the 20 cities with the worst air pollution on the globe. Because of the massive increase in coal consumption, the State Environmental Protection Agency (SEPA) reported that rather than sulfur dioxide emissions declining in 2000–2005 by 10 percent to 18 million tons as planned, they rose to 25.5 million tons by 2005, 42 percent above the goal.[23]

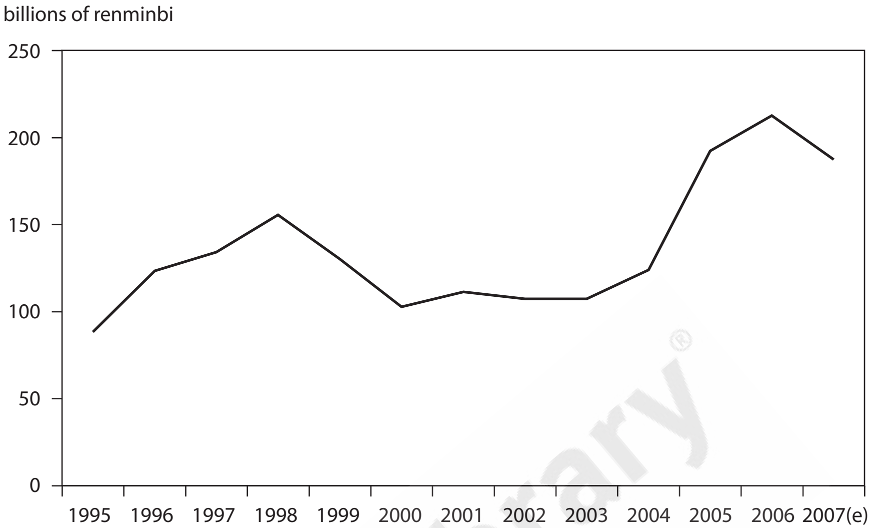
A fifth factor motivating China's leadership is less obvious but still important. Excessive reliance on investment and net exports to drive growth threatens to undo some of the progress China has made in recent years in developing a commercial banking system. A critical component of this process has been the injection of almost RMB4 trillion ($500 billion), mostly from the government, to cover past loan losses and to raise capital adequacy to meet prudential standards.[24]

Excess investment in some sectors of manufacturing could eventually lead to excess capacity and falling prices, which could create a new wave of nonperforming loans. These loans would erode the substantial improvements that state-owned banks have made in their balance sheets over the past few years and could push some city commercial banks, which on average are far weaker, into insolvency. An undervalued currency naturally raises profitability in the export sector—i.e., manufacturing—and thus tends to tilt investment in that direction. This has certainly been the case in China in recent years, where, as already noted, the share of investment going into manufacturing has doubled. Part of this shift of investment toward manufacturing reflects the increased demand for capital goods associated with the rapidly rising rate of investment in the first half of this decade (figure 6.1). But this shift has almost certainly been reinforced by the fillip to manufacturing profitability provided by an increasingly undervalued currency.

The National Development and Reform Commission (NDRC) has acknowledged that excess investment will have adverse financial consequences.[25] In its report to the National People's Congress in 2006, it pointed out that "adverse effects of surplus production capacity in some industries have begun to emerge. Prices for the products of these industries dropped and inventories grew, corporate profits shrank and losses mounted, and potential financial risk has increased."

The rapid increase in the magnitude of financial losses of unprofitable industrial enterprises supports this analysis. As shown in figure 6.6, after several years of stability, losses more than doubled in 2003–06 and then fell slightly in 2007. Since net profits of all enterprises rose sharply in this period (see figure 6.7), the dispersion of the profitability of China's industrial firms has apparently sharply increased over the past three years.

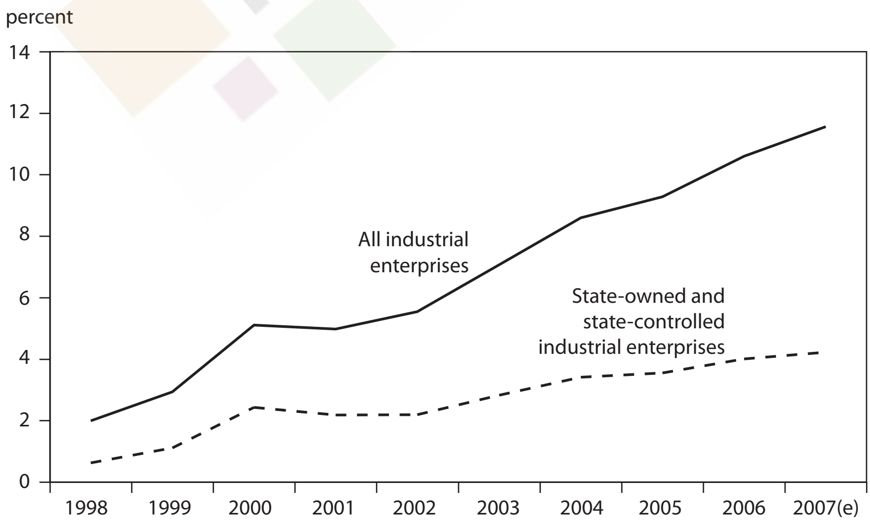
Figure 6.6 Losses of unprofitable industrial enterprises, 1995–2007(e)



(e) = estimate

Sources: National Bureau of Statistics of China, *China Statistical Yearbook 2007*; ISI Emerging Markets, CEIC Database; author's calculations.

Figure 6.7 Industry profits as percent of GDP, 1998–2007(e)



(e) = estimate

Sources: National Bureau of Statistics of China, *China Statistical Yearbook 2007*.

The continued decline in the share of nonperforming loans in the banking system in the past few years is not necessarily a sign that all is well. By 2007, on the back of five consecutive years of double-digit growth and an increasingly undervalued currency, profitability in the tradable goods sector—i.e., manufacturing—had surged to unprecedented levels (see figure 6.7). Thus most corporates have been in a strong position to service their bank debt. Distress in the banking system could emerge, however, either from a slowdown in economic growth over the next few years or from a significant appreciation of the currency. The former would reduce profitability throughout the economy while the latter would concentrate the reduction in profits to firms producing tradable goods. In either case the ability of firms to service their bank debt could be impaired.[26]

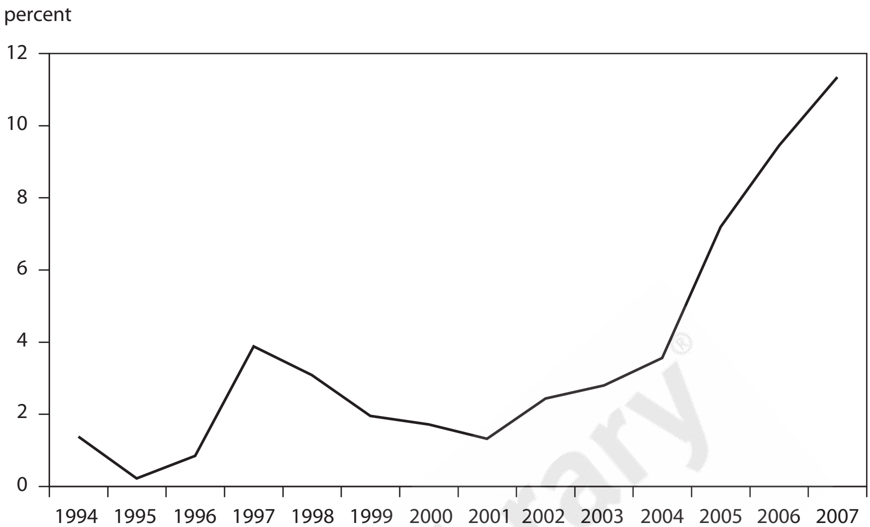
A final factor underlining the leadership's desire to transition to a more consumption-oriented growth path is that excessive reliance on expansion of net exports—i.e., a growing trade surplus—raises the prospect of a protectionist backlash in the United States, Europe, and other important markets for Chinese exports. China's central bank, the People's Bank of China, was perhaps the first to explicitly acknowledge this factor in its *Report on the Implementation of Monetary Policy 2005Q2*, in which it candidly stated that China's excessive trade surplus "will escalate trade frictions."[27]

In sum, for a variety of reasons China's top political leadership and its leading economic advisory institutions came to the view by late 2004 that sustaining long-term rapid growth required a significant modification of the underlying growth strategy.

Implications for the Global Economy

If realized, China's new growth strategy would have positive implications not only for China but also for the global economy. As shown in figure 6.8, China's current account surplus has soared in recent years. In 2006 it reached $249 billion, making China, for the first time, the world's largest global current account surplus country. The surplus expanded further to $372 billion, or 11 percent of GDP in 2007, both unprecedented for a large country that is not a large exporter of resources such as oil.[28] In 2007 China's current account surplus as a share of GDP was almost three times that of Japan in the mid-1980s when its current account surplus as a share of GDP peaked. China now is the second largest contributor to global economic imbalances, after only the United States, which has the world's largest current account deficit. China's successful transition to a pattern of growth driven more by domestic consumption demand necessarily entails a reduction in China's national saving rate relative to its investment rate. That, in turn, would reduce China's current account surplus. Thus rebalancing of China's economic growth would contribute to a reduction of global economic imbalances as well.

Figure 6.8 Current account balance as percent of GDP, 1994–2007



Sources: National Bureau of Statistics of China, *China Statistical Yearbook 2007*; State Administration of Foreign Exchange of China, www.safe.gov.cn.

Similarly, rebalancing economic growth would reduce upward pressure on global oil prices. Although China accounts for less than 10 percent of global oil demand, its increasingly energy-intensive growth path between 2000 and 2006 meant that China alone accounted for more than 30 percent of the increase in global oil demand and global oil imports, far more than any other country. On current trends China alone will continue to account for 30 percent of the increase in global oil demand to 2030.[29] Rebalancing growth would reduce (1) the pace of growth of China's domestic energy consumption, (2) upward pressure on global oil prices, and (3) the pace of growth of China's carbon emissions.[30]

Promoting Consumption-Driven Growth

Promoting domestic consumption demand as a more important source of economic expansion requires that the growth of household and/or government consumption increase faster than the combined growth of investment and net exports. The government can promote consumption via fiscal, financial, exchange rate, and price policy. Fiscal policy options include cutting personal taxes, increasing government consumption expenditures (i.e., government noninvestment outlays), or introducing a dividend tax on state-owned companies. Financial reform could increase interest income received by households, thus raising household disposable income and potentially consumption. The government's policy of maintaining caps on interest rates on bank deposits has reduced substantially the return on savings, reducing household incomes below the level that would prevail in a more liberalized interest rate environment. Appreciation of the renminbi would simultaneously reduce net exports and allow the government greater flexibility in the use of interest rate policy.[31] As will be argued later, higher real interest rates on bank lending are almost certainly necessary to reduce China's excessive rate of investment, which in turn is a prerequisite to a successful transition to a more consumption-driven growth path. Finally, price reforms could contribute to the rebalancing of economic growth. In recent years the Chinese authorities have tightly limited the extent to which rising global oil prices are reflected in the domestic prices of gasoline and diesel fuel. Similarly, they have limited the extent to which rising coal prices are reflected in the domestic price of electricity. These policies have provided a growing subsidy to manufacturing, particularly energy-intensive production.

Fiscal Policy

One obvious policy to stimulate private consumption is to cut personal taxes, thus raising disposable income and personal consumption expenditures. In addition, governments can increase their own budgetary expenditures, notably those on health, education, welfare, and pensions, to add to domestic consumption demand. The low level of social expenditures on the eve of the Party's decision to rebalance the sources of economic growth was reflected in the very limited share of the population covered by health, unemployment, and workers' compensation insurance. In 2003 only about half the urban population was covered by basic health insurance and less than a fifth of the rural population was covered by a cooperative health insurance program initiated on a trial basis in 2002.[32] In the same year, only 14 percent of China's workforce was covered by unemployment insurance, and only 6 percent was covered by workers' compensation. In 2003 the pension scheme covered 116 million workers, only 16 percent of those employed, plus 39 million retirees.[33]

The government has considerable potential to increase its social expenditures without raising taxes on households. Raising taxes likely would depress household consumption, offsetting to some degree the increase in government consumption. The government could simply reduce its own investment expenditures and reallocate the funds to consumption.[34] The government itself directly undertakes about 5 percent of all investment, an amount equivalent to a little over 2 percent of GDP.[35] In addition, the government budget provides "capital transfers," which are used to finance additional investment expenditures.[36] For 2004 these capital transfers were RMB380 billion, the equivalent of 6 percent of all fixed investment.[37] Thus the government's direct and indirect investment outlays combined amount to about 5 percent of GDP. Reducing the government's direct investment and cutting capital transfers would free up resources to increase government consumption—i.e., outlays for health, education, welfare, and pensions. This would contribute significantly to a rebalancing of the structure of demand away from investment and toward consumption.

Increased government consumption expenditures also would contribute indirectly to increasing household consumption as a share of GDP by reducing the household saving rate, which rose significantly in the 1990s and has been running at about 25 percent of disposable income since 2000.[38] One reason for the rise in the saving rate was the reduction in the social services provided by the government and state-owned enterprises. For example, the share of total health outlays borne by individuals on an out-of-pocket basis increased from around 20 percent in 1978 to a peak of 60 percent in 2001.[39]

Increased provision of health care and unemployment compensation through the government budget can reduce household precautionary saving. As families gain confidence that the government will provide more of these services, they voluntarily will reduce their own saving—i.e., increase consumption as a share of their own disposable income. Similarly, greater government provision of educational services and old age support could lead to a reduction in saving associated with lifecycle events, such as children's education and retirement.

In other countries, increased government provision of health services has stimulated increased household consumption.[40] For example, the introduction of National Health Insurance in Taiwan, which raised the fraction of the insured population from 57 percent in 1994 to 97 percent in 1998, substantially reduced household uncertainty about future health expenditures and thus stimulated increased consumption. Households that previously enjoyed no health insurance coverage increased their consumption expenditures by an average of over 4 percent.[41] Thus, China's transition to a more consumption-driven growth path needs to start with increased government consumption expenditures but with time is likely to be reinforced by changes in household consumption and saving decisions.

Finally, corporate tax policy should contribute importantly to the rebalancing of China's sources of economic growth. As shown in figure 6.7, from 1999 through 2007, profits of industrial enterprises in China soared from 3 percent to almost 12 percent of GDP.[42] Although these profits are subject to China's corporate income tax, estimated retained after-tax earnings of industrial firms in 2006 amounted to 8 percent of GDP, compared with an estimated 1.5 percent in 1998.[43] In addition, industrial firms retain depreciation funds that amount to another 6 to 7 percent of GDP.[44]

Unfortunately, in state-owned firms these funds are not subject to a significant rate of return test prior to being reinvested. The reason is that the only available legal alternative to reinvestment is low-yielding bank deposits. Taking into account the relevant measure of inflation, the real after-tax rate of return on corporate deposits is typically negative.[45] Given a negative real rate of return on deposits, it is rational for enterprise managers to reinvest all retained profits and depreciation funds—even when the investment projects have slightly negative anticipated rates of return.

Given the strong upward trend in profits as a share of GDP since 1999 and an apparent upward trend in depreciation funds as a share of GDP as well, retained earnings have become an increasingly important source of investment financing in China's corporate sector and have contributed to the rising investment share of GDP in recent years.

For a number of years, the authorities have discussed requiring state-owned enterprises to pay dividends to their owner—the government.[46] A dividend tax would directly reduce business saving and investment as well as provide the government with additional resources that could be used to enhance government-provided social services.

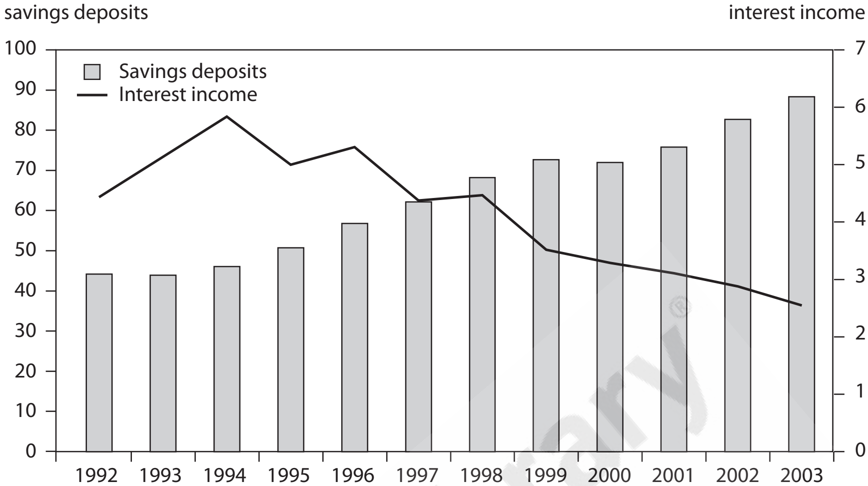
Financial Reform

The decline in household consumption as a share of GDP (figure 6.2) reflects not only an increase in savings as a share of household disposable income in the 1990s but also a decline in the share of disposable income in GDP. Between 1992 and 2003 household disposable income as a share of GDP fell by 4.8 percentage points.[47]

Part of the explanation of this decline is increasing financial repression. China's financial sector has been undergoing far-reaching reform for more than a decade, suggesting that the degree of repression has eased. However, from the point of view of households this is not the case. As shown in figure 6.9, although household deposits in the banking system as a share of GDP increased by about two-thirds between the early 1990s and 2003, the stream of pre-tax interest earnings generated by these savings declined from an average of about 5 percent in 1992–95 to only 2.5 percent of GDP in 2003. The contribution of interest earnings to disposable income has declined even further since the government introduced a 20 percent tax on interest income in 1999.

The reason for this decline was government interest rate policy on savings deposits. As inflation rose to record highs in 1993, the flow of savings deposits into the banking system plummeted. To avert a crisis the government in July introduced so-called value-guarantee deposits designed to insulate longer-term deposits from inflation. These accounts paid a base interest rate plus a subsidy interest rate. The subsidy rate, calculated when the deposit matured, was set so that the total nominal interest rate offset the inflation that occurred while the funds were on deposit. Thus savers willing to shift their funds into longer-term time deposits received a real rate of return that was at least zero. These value-guarantee deposits

Figure 6.9 Household savings and interest income, 1992–2003
(percent of GDP)



Sources: National Bureau of Statistics of China, *China Statistical Yearbook 2006*; ISI Emerging Markets, CEIC Database.

were offered to new depositors from July 1993 through April 1996.[48] Subsequently, however, the government fixed interest rates on household savings deposits that were much lower in real terms, leading to the decline in interest income reflected in figure 6.9.

The shrinking contribution of after-tax interest income to household disposable income accounts for almost two-thirds of the decline in household disposable income as a share of GDP between 1992 and 2003. More importantly, if interest earnings after the early 1990s had grown in line with the stock of household bank deposits and the tax on interest income had not been introduced, by 2003 the contribution of interest income to household disposable income would have been 8.9 percent of GDP, 6.4 percentage points greater than the actual contribution.

Exchange Rate Policy

Exchange rate policy should be a third element supporting China's transition to a more consumption-driven growth path for two reasons. First, through its effect on relative prices, appreciation of the renminbi will reduce the growth of exports and increase the growth of imports, reducing China's external imbalance. Second, China's highly undervalued exchange rate constrains the independence of monetary policy.[49] China's central bank has had some success in sterilizing large foreign capital inflows, a key element in its program of controlling the growth of monetary aggregates and bank credit. But it has generally been reluctant to raise domestic interest rates, since that would reduce the carry costs of foreigners moving money into China in anticipation of further renminbi appreciation. Since lower carry costs increase profits from any renminbi appreciation, the authorities fear that raising domestic interest rates could cause capital inflows to become unmanageably large. Fixed nominal domestic interest rates on loans in 2002–03, when domestic price inflation was rising, led to a sharp decline in and ultimately to negative real interest rates on loans. Between the first half of 2002 through the third quarter of 2004, the real interest rate on loans fell by 13 percentage points, from almost 9 to –4 percent.[50] This decline fueled a very large increase in the demand for bank loans and thus a sharp increase in capital formation.

A more appreciated exchange rate would allow the central bank greater flexibility in setting domestic interest rates and thus increase the potential to mitigate macroeconomic cycles by raising lending rates to moderate investment booms. That would lead, on average, to a lower rate of investment. A reduction in the rate of investment is a critical component of the policies to transition to a more consumption-driven growth path. In the absence of a reduction in investment, increased consumption demand would lead to inflation.

Price Reform

A final policy domain is pricing. Among the most important prices that are currently not in accordance with relative scarcities and social preferences are those for land, energy, water, utilities, and the environment.[51] All of these are important manufacturing inputs, so more appropriate pricing, including enforcement of existing environmental standards, would tend to reduce investment in manufacturing, particularly the most energy-intensive industries, and increase investment in services. Appropriate pricing at a minimum means full cost recovery and more ambitiously would mean marginal opportunity cost pricing—i.e., include the cost of environmental damage in both production and consumption as well as the opportunity cost of resource depletion.[52]

China's Pursuit of Consumption-Driven Growth

Fiscal Policy

Even before the December 2004 Central Economic Work Conference, which formally endorsed the transition to a more domestic consumption-driven growth path, in mid-2004 the government initiated a program to raise farm incomes by reducing the agricultural tax levied on farm income.[53] The government reduced the tax in stages, with the largest reductions in 2004 and 2005, and eliminated it entirely by 2007.

The early initiative to eliminate the agricultural tax was followed in 2006 with a doubling, from RMB800 to RMB1,600, in the monthly income exempt from the personal income tax levied on wage earners. The government raised the exemption amount to RMB2,000 per month in 2008.

Another policy that raised disposable income above the levels it would otherwise have achieved was the reduction in the tax on interest income to 5 percent effective August 15, 2007.

The central government also has encouraged local governments to raise the minimum wage in urban areas, potentially increasing the incomes and thus consumption of low-income workers.

Taken together, the first three of these initiatives are raising household incomes above the levels they would otherwise attain. Cumulatively, in the four years ending in 2007 the agricultural tax burden was reduced by an average of RMB133.5 billion per year,[54] an amount equal to an average of 0.7 percent of GDP in those years. Similarly, the State Tax Bureau estimated that raising the personal income tax exemption in 2006 would reduce the personal income tax take by RMB28 billion in 2006, or 0.13 percent of GDP.[55] A further reduction of RMB30 billion was anticipated as a result of the further increase in the exemption in 2008. The cut in the tax on interest income similarly will increase household disposable income by at least RMB30 billion in 2008.

The fourth initiative, minimum wage policy, appears to have had at most only a modest effect on household income for two reasons. First, the Regulations on the Minimum Wage of the Chinese Ministry of Labor and Social Security give local governments considerable leeway in setting the minimum wage.[56] These governments have raised minimum wage rates at a pace substantially below the growth of average wages in their locality. In Beijing, for example, in recent years the minimum wage has been increased at an annual rate of less than 8 percent, far below the 16 percent pace of increase in the average wage of workers and staff in the city.[57] As a result, the minimum wage in Beijing fell from a third of the average wage of workers and staff in the city in 1999 to only a fifth in 2007.[58] Second, the share of the workforce earning the minimum wage appears to be quite small. In Beijing, for example, minimum wage workers accounted for only 2.4 percent of the workforce in 2002.[59] Given the low ratio of the minimum wage to the average wage and the small share of the workforce earning the minimum wage, recent annual increases in the capital's minimum wage had only a minuscule effect on the total wage bill.

In summary, the cuts in taxes on rural and urban incomes instituted in 2004 raised household disposable income by about 1 percent of GDP per year above the level it would otherwise have attained, contributing mod-

Table 6.1 Government expenditure on social programs, 2002–07 (billions of renminbi)

Year	Education	Health	Social security and employment	Total	Percent of GDP
2002	300.61	66.33	268.91	635.85	5.28
2003	335.21	83.08	271.22	689.52	5.08
2004	385.43	93.59	318.56	797.58	4.99
2005	452.78	113.26	378.71	944.75	5.14
2006	546.43	142.12	439.41	1,127.96	5.32
2007	706.54	197.38	539.60	1,443.51	5.78

Source: Xinhua News Agency, "The Course of Improvements in the People's Livelihood from the Perspective of Public Finance Expenditure over the (Past) Five Years," March 7, 2008, http://news.xinhuanet.com.

estly to higher levels of household consumption expenditures than would otherwise have been achieved.[60]

Government expenditures on health, education, and pensions and unemployment programs have increased significantly since 2004, with a record increase in 2007. As shown in table 6.1, by 2007 budgetary expenditures on education, health, social security, and employment combined were RMB1,444 billion, an increase of four-fifths compared with 2004. Of course this was a period of exceptionally rapid growth of the economy and of government budget revenues, so the increase is less impressive relative to those metrics.

One rationale for increased social outlays is Premier Wen's program to create a "new socialist countryside." The program entails increasing subsidies for grain producers, designed to raise the incomes of some of China's poorest farmers; expanding the coverage of the rural cooperative medical system, which was first rolled out on a trial basis in 2002; and eliminating educational fees for rural primary education.

The increase in expenditures on programs tied to the new socialist countryside initiative is impressive.[61] Central government outlays on the rural cooperative medical system rose to RMB11.4 billion in 2007, a twenty-fold increase compared with 2005, raising the number of rural residents covered by the program to more than 730 million, quadruple the number covered in 2005. This program is now available in 86 percent of China's county-level administrative units, an increase of more than seven-fold compared with 2004. The central government has budgeted RMB25.3 billion for this program in 2008, allowing both a broadening of the program to all administrative regions and an increase in the subsidy provided to each participant.

The government budgeted RMB220 billion ($27.5 billion) over five years (2006–10) to provide free rural primary school education, a significant commitment. Expenditures on this initiative in 2006 were RMB36.6 billion, allowing the government to eliminate tuition and miscellaneous school fees for 52 million students in 12 western provinces. Outlays jumped to RMB69 billion in 2007 as the program was extended to central and eastern provinces, reaching a total of 150 million students.

The government also greatly expanded some programs that reach primarily urban residents. Compared with 2004, by 2007 the number of workers covered by basic retirement, health, unemployment, and workers' compensation insurance expanded by 23, 80, 10, and 78 percent, respectively.[62]

Despite the initiatives summarized earlier, combined government expenditures at the national and subnational levels on education, health, and pensions and employment programs rose by less than one percentage point of GDP between 2004 and 2007, and a chunk of that increase simply offset the decline that occurred in 2003 and 2004—i.e., the share of GDP devoted to these programs in 2007 was only 0.5 percentage points higher than in 2002. Similarly, expenditures on these programs as a share of total government fiscal outlays increased by just over one percentage point between 2004 and 2007. But because of the decline in 2003, social expenditures as a share of the consolidated government budget in 2007 were only slightly more than in 2002.

The apparent contradiction between the large percentage increases in central government expenditures on selective social programs, notably the new rural cooperative medical system, and the somewhat more modest increase in total social outlays, is explained in part by the overwhelmingly dominant role of provincial and local governments in financing social programs. In 2005, for example, subnational governments financed 94 percent of all government spending on education and 98 percent of all government spending on public health. Thus until subnational governments increase the priority they assign to funding education and health programs, total expenditures on these programs will rise much more slowly than central government outlays.

Corporate tax policy initiatives are not facilitating a rebalancing of the sources of economic growth. On September 8, 2007 the State Council announced that the government would begin collecting dividends from state-owned industrial companies in 2007.[63] Dividends are being levied at 10, 5, and 0 percent of after-tax profits earned in 2006, depending on the sector in which the firm operates. For example, highly profitable firms in the petroleum, electric power, and telecommunications sectors are to pay at the rate of 10 percent of their after-tax profits, and firms in less profitable sectors such as steel, transportation, electronics, trade, and construction industries will pay at the rate of 5 percent, while a few firms, such as those in the military industry, are exempt from paying dividends at least for an initial three-year period. In 2007, as part of the phase-in process, dividends were to be paid at half of these statutory rates.

Three factors have undermined the potential of the dividend tax to contribute to economic rebalancing. First, the dividend tax rates are too low. The magnitude of dividend payments to be collected from central state-owned firms under the administrative guidance of China's State-Owned Asset Supervision and Administration Commission (SASAC) in 2007 was set at only RMB17 billion. That amount is vanishingly small, only 4 percent of the 2006 after-tax profits of the firms controlled by SASAC. Even if the half-rate phase-in had not been used and dividend payments had totaled RMB34 billion, that amount was only one-tenth of 1 percent of 2007 GDP. A more robust effort, for example, might have required all state-owned and state-controlled industrial companies, including those under the administrative guidance of local SASAC bureaus, to pay half their after-tax income as dividends. This would have amounted to RMB325 billion or 1.3 percent of 2007 GDP.[64] Additional dividends could also be collected from state-owned firms in the service sector, raising the potential of a dividend tax to reduce corporate savings and investment and thus contribute to rebalancing.

Second, and perhaps more importantly, it is not clear what portion of these dividend payments will be available to finance social programs and other forms of government consumption and what portion will be used to finance investment. Li Rongrong, the chairman of SASAC, initially argued that dividend payments should not be made to the Ministry of Finance, where they might be subject to budgetary allocation and thus could potentially fund additional social services. Rather, he asserted that dividend payments should be made directly to SASAC, which he said SASAC would use to finance additional investment outlays. If this approach had been adopted, a dividend policy would not have reduced the corporate saving and investment rate and would not have contributed to a rebalancing of the sources of economic growth.[65]

While the debate on the disposition of dividend payments is probably far from over, a compromise seems to be emerging in which dividend payments are to be partially allocated to a capital management budget managed separately from the fiscal budget by the Ministry of Finance and partially allocated to support social programs. Proposals for the use of dividends paid by central state-owned enterprises are to come from SASAC, with the Ministry of Finance determining the final capital management budget and distributing the funds directly to units that will spend it. The amounts to be used for noninvestment expenditures appear to be under debate. When the dividend tax and the capital management budget were first announced in mid-September, it was said that "when necessary some" of the dividend tax payments could be used to fund social security expenditures.[66] A few months later in December 2007, when more details were announced, it was said that a majority of the dividend payments could be used to support social and pension programs.

A third reason corporate tax policy is not contributing to rebalancing is that the introduction of the dividend tax in 2007 coincided with a reduction in the corporate income tax rate. Domestic firms had long complained that their statutory tax rate of 33 percent was well above the 15 percent rate paid by foreign-invested firms. After years of debate the government decided to unify the rate paid by indigenous and foreign firms at 25 percent beginning in 2007. This reform reduced the corporate income tax payments of indigenous firms by an estimated RMB134 billion, offsetting by a factor of almost eight the additional dividend tax collection.[67] The result is that retained earnings of the corporate sector as a share of GDP continued to expand in 2007.

Financial Reform

Reforms of the banking system in recent years have not reduced the degree of repression of the banking system from the perspective of Chinese households. Central bank policy continues to place caps on the interest rates that banks can pay on deposits and floors on the interest rates that they can charge on loans, presumably to prop up bank profitability. This, in turn, makes it more likely that banks will be able to write off future nonperforming loans from their own earnings, thus minimizing the potential fiscal burden of additional bank recapitalization programs.

One measure of growing financial repression is the expanding differential between the interest rate households receive on savings deposits compared with consumer price inflation. In the first quarter of 2008 the central bank fixed the maximum interest rate banks could pay on household demand deposits at 0.72 percent, unchanged from February 2002.[68] But inflation, as measured by the consumer price index, had ticked up by almost 9 percentage points—from –0.8 percent in 2002 to 8 percent in the first quarter of 2008.[69] Thus the real rate of return on demand deposits went from 1.52 to –7.28 percent. The central bank has increased rates paid by banks on term deposits but by far less than the increase in inflation. For example, the one-year term deposit rate in the first quarter of 2008 was 4.14 percent, an increase of only 2.06 percentage points since February 2002. That increase is less than a fourth of the increase in the pace of inflation and has converted a real return of 3 percent in 2002 into a real return of –3.86 percent. If households in the first quarter of 2008 had received the same real rate of interest on their demand and time deposits as in 2002, the additional interest income they would have received would have been the equivalent of about 6 percent of GDP. Thus declining real returns to savings have significantly depressed household disposable income as a percentage of GDP.

Jonathan Anderson, a keen observer of China's financial and banking system, believes that "if the government were to completely liberalize interest rates tomorrow we believe average deposit rates would rise sharply."[70] But interest rate liberalization seems to have fallen off the reform agenda in Beijing. The last step of interest rate liberalization was in October 2004 when the central bank gave commercial banks the authority to raise lending rates without limit from the benchmark rates set by the central bank. However, benchmark interest rates set by the central bank on deposits remain rigid caps.

The implicit taxes imposed on households by the distorted interest rate structure fixed by the central bank resulted in a massive subsidy for corporate borrowers, further increasing profits in the corporate sector. In the first quarter of 2008 the benchmark interest rate paid by corporate customers for a one-year loan was 7.47 percent. But in March, prices for the machinery and equipment and other capital goods that firms would purchase to expand their businesses rose 7.95 percent, making the real rate of interest for corporate borrowers –0.5 percent, an extraordinarily low rate in an economy expanding at 10.6 percent.

Exchange Rate Policy

In July 2005 the Chinese authorities revalued the renminbi by 2.1 percent vis-à-vis the US dollar and announced that the currency could fluctuate by up to 0.3 percent per day and that the renminbi would be managed with reference to a basket of currencies, rather than simply being pegged to the US dollar. These reforms could have contributed to a slowing of the growth of China's external surplus and given the People's Bank of China greater flexibility in adjusting interest rates.

Cumulatively, by the end of the first quarter of 2008, the renminbi had appreciated by 18 percent vis-à-vis the dollar. But, as calculated by the International Monetary Fund, JPMorgan, and other investment banks, on a real effective basis the currency had appreciated by only 11 percent.[71]

Why have China's net exports as a share of GDP continued to rise rapidly while its exchange rate, on a real trade-weighted basis, has been appreciating by more than 3 percent per year since mid-2005? Normally, with a lag of a few quarters, an appreciating currency leads to a slowing expansion and then an absolute reduction in a country's trade surplus. One hypothesis is that the conventionally calculated real effective exchange rate of the renminbi understates China's growing competitiveness in international markets. JPMorgan and other institutions calculate the real exchange rate by comparing the rate of movement of prices in China and in its trading partners. For example, if while the nominal effective exchange rate of the renminbi was unchanged China experienced one percentage point more price inflation than the average of its trading partners, the real exchange rate of the renminbi would appreciate 1 percent. The problem is that the inflation measures used by investment banks and international financial organizations appear to be a poor measure of the prices of China's exports. For example, despite an 18 percent nominal appreciation of the renminbi vis-à-vis the US dollar, from June 2005 through March 2008 the price of Chinese goods imported into the United States had increased by only 2.5 percent.[72] Available data do not suggest that Chinese exporters cut their profit margins in order to avoid passing through the renminbi appreciation to US consumers. The most likely explanation is that productivity growth in China's export sector was sufficiently high that firms producing exports could absorb the effect of the rising value of the renminbi on their export earnings. In short, productivity growth in the export sector over the period must have been about 15 percent. Over that period, prices in China's major trading partners rose on average by about 8 percent. Thus the Chinese currency would have needed to appreciate in nominal terms by almost a quarter to maintain the initial level of competitiveness of Chinese exports. But nominal appreciation of the renminbi against its trading partners was only 7 percent, so Chinese goods grew in competitive terms. This calculation suggests that taking into account the rapid productivity growth in export manufacturing, China's real effective exchange rate depreciated by about 15 percent. In contrast, the standard calculation, which does not take into account the concentrated nature of productivity growth in China, shows appreciation of 11 percent between June 2005 and the end of March 2008.

Price Policy

In the 1980s, when China was still self sufficient in crude oil and not so deeply integrated into the global economy, the domestic price of crude was a small fraction of the international level. But in the 1990s the Chinese government gradually raised crude oil prices to international levels and by 1998, when convergence was completed, adopted a formal plan to adjust domestic crude oil prices monthly to keep them in line with international prices. Similarly, the government raised the retail prices of refined petroleum products toward international levels and in mid-2000 adopted a program to adjust these prices on a monthly basis so that refined product prices reflected crude prices.[73] However, as the global price of crude oil began to rise rapidly in 2004, Chinese pricing policy changed. The domestic price of crude continued to be adjusted in line with the international price, but only a part of the rising price was passed through to retail prices. As a result, in 2005 China's major oil companies lost money on their refining operations, part of which was offset with government subsidies.

By early 2008 retail prices in China for gasoline and diesel fuel were the lowest of any oil-importing country in the world. Sinopec, China's largest oil refiner, reported in April that it lost RMB25 billion on its refining operations in the first quarter of 2008. The government provided

RMB7.4 billion to offset a portion of its losses, but the firm's net profit plunged by two-thirds. In June 2008 the NDRC raised the retail prices for diesel and gasoline by 18 and 17 percent, respectively. These increases will still leave Chinese refiners with significant operating losses and no return on the capital employed in refining. Thus unless the authorities raise the retail prices of diesel and gasoline further or the global price of crude falls and retail prices are not adjusted downward, shortages of refined products subject to price control are likely to persist.

A similar development has emerged in electric power. Until recently thermal power generators have been profitable—i.e., full-cost pricing has been in effect. This was insured in part by a 2005 policy that called for an adjustment in electric power rates if the price of coal rose by more than 5 percent in a half-year. Like the policy for pass-through of rising crude prices to prices of gasoline and diesel fuel, it was abandoned as coal prices rose sharply. Long-term contract coal prices paid by China's five main power-generating companies rose 9 percent in 2007 and an additional 10 percent beginning in January 2008. Moreover, the market price of coal rose much more rapidly, meaning that coal companies frequently defaulted on their contracts, forcing generators to buy a larger share of their coal needs at the market price. At the same time, however, the price the generators received for the power they deliver to the grid companies had remained unchanged since the summer of 2006. With coal accounting for 60 to 70 percent of the total cost of electricity, by the first quarter of 2008, the five largest generators all lost money on their thermal power business.

The NDRC also in June raised the average price paid by industrial users of electric power by RMB0.025 per kilowatt hour or about 5 percent. Barring an unexpected decline in the price of coal, this increase, like the one for fuels, is unlikely to restore profitability to the generating business. The price increase is too small and households are exempt. Abandoning full-cost prices is likely to lead to shortages of electric power as generators pare production.

Glass Half Full or Half Empty?

The government has taken some steps to initiate the transition to a more consumption-driven growth path. For example, outlays on social programs increased more rapidly, particularly in 2005–07, which should contribute over time to a reduction in precautionary savings by households. Cuts in taxes on agricultural, wage, and interest income added modestly to the growth of household income.

But some policies are undermining the goal of rebalancing. For example, recent corporate tax reform has had the perverse effect of raising after-tax retained earnings of Chinese firms, contributing to the ongoing high rate of investment; interest rate caps on savings deposits in the face of rising inflation mean that the real returns to savers are increasingly penurious while the subsidy to corporate borrowers is soaring. Adjusting for productivity gains in the production of export goods, an alternative measure of the real effective exchange rate suggests that the Chinese currency has depreciated rather than appreciated over the past three years, adding to China's external imbalance. And increased government intervention has resulted in a growing subsidy of energy use, likely undermining the goal of reducing the energy intensity of economic growth.

The adverse effect of these policies is reflected in some measures that show economic growth actually has become even more unbalanced since 2004. In 2005–07, the pace of investment demand moderated slightly, as reflected in a cumulative one percentage point reduction in investment as a share of GDP compared with 2004. But China became increasingly dependent on a growing trade surplus to sustain high growth. Net exports jumped from 2.5 percent of GDP in 2004 to 8.9 percent of GDP in 2007 and accounted for one-fifth of China's economic growth in 2005–07. Over the same period household and government consumption as a share of GDP declined by 5.3 percentage points of GDP.[74]

Energy consumption per unit of GDP fell by 1.2 percentage points in 2006 and an additional 3.3 percent in 2007. However, this falls short of the government's goal of reducing the consumption of energy per unit of output by 4 percent annually in the five years through 2010. And even after these improvements, energy intensity per unit of GDP remains well above the average of the first two decades of economic reform.

Other macro measures also suggest the limited effect of rebalancing policies. The share of investment in urban areas allocated to manufacturing continues to rise, reaching 30 percent by 2007, while the share devoted to investment in the services sector continues to fall. This is not surprising. China is a market economy in which firms respond to price signals. China's undervalued exchange rate boosts profitability in manufacturing, a trend that is reinforced by low or even negative real interest rates on loans and the more recent underpricing of energy.

The same trend is reflected in the share of services in GDP. In the first 25 years of economic reform, the share of services in GDP roughly doubled, reaching 41 percent in 2002–03. This is a typical pattern of development for a rapidly growing low-income country. But since then the services share has actually declined slightly, a very peculiar if not wholly unprecedented development for a country with a per capita income of about $2,000 to $3,000.

This evidence suggests that a transition toward more consumption-driven growth in China will require more vigorous government policy action than we have seen to date in all four domains—fiscal, financial, exchange rate, and pricing. The implications for the global economy of slow policy adjustment in China are adverse. China's external surplus will grow much more moderately in 2008 and could even shrink in absolute terms, but this would reflect as much the slowdown of growth in the United States and elsewhere as the modest currency appreciation seen to date. Absent more appreciation of the currency, China's external surplus likely will resume expanding when global growth returns to trend. China's continued high dependence on investment to generate growth contributes to upward pressure on global prices of oil and other commodities and could lead to continued outsized increases in China's energy consumption and carbon emissions.

Notes

1. *People's Daily*, "Central Economic Work Conference Convenes in Beijing December 3 to 5," December 6, 2004, www.people.com.cn (accessed July 21, 2006).

2. Wen Jiabao, "Report on the Work of the Government," *People's Daily*, March 14, 2006, http://english.people.com.cn (accessed March 14, 2006); New China News Agency, "We must concretely grasp eight work items to do well in next year's economic work," December 1, 2006, http://politics.people.com.cn (accessed December 12, 2006); Wen Jiabao, *Report on the Work of the Government* (Beijing, March 5, 2007); Wen Jiabao, *Report on Work of the Government* (Beijing, March 5, 2008), www.npc.gov.cn (accessed April 18, 2008).

3. Ben S. Bernanke, "The Chinese Economy: Progress and Challenges" (speech, Chinese Academy of Social Sciences, Beijing, December 15, 2006).

4. National Bureau of Statistics of China, *China Statistical Yearbook 2007* (Beijing: China Statistics Press, 2007), 60.

5. For details, see Nicholas R. Lardy, "China: Toward a Consumption-Driven Growth Path," Policy Briefs in International Economics 06-6 (Washington: Peterson Institute for International Economics, October 2006), www.petersoninstitute.org.

6. National Bureau of Statistics of China, *China Statistical Yearbook 2007*, 72. All of the analysis of the expenditure components of GDP—i.e., consumption, investment, and net exports—is based on the revised GDP expenditure data for the years 1978 through 2005 released by the National Bureau of Statistics of China, *China Statistical Yearbook 2006,* in late September 2006. Data for 2007 were released in May 2008 and are available from ISI Emerging Markets CEIC Database, available by subscription at www.securities.com (hereafter CEIC).

7. By definition, the national saving rate is equal to investment as a share of GDP plus the current account as a percent of GDP. In China, these were 42 and 9 percent of GDP, respectively, in 2006.

8. National Bureau of Statistics of China, *China Statistical Yearbook 2007*, 75.

9. The declining share of consumption in GDP is due to both a decline in household disposable income as a share of GDP and a decline in consumption as a share of disposable income. Some analysts believe that the National Bureau of Statistics of China undercounts household consumption, particularly of services, and thus

the share of household consumption in GDP is biased downwards. If GDP was undercounted by 8 or 12 percent, and the entire increment was private consumption of services, household consumption would have constituted 42 and 44 percent, respectively, of GDP in 2005; see Dragoneconomics Research & Advisory, "Consumption: A Chinese Puzzle," *China Insight*, no. 33 (February 13, 2007). Even on these alternative assumptions, however, private consumption as a share of GDP would be unusually low by international standards. These adjustments would also lower the investment share of GDP by three and four percentage points, respectively. The higher consumption and lower investment share of GDP would mean the degree of internal imbalance is less than that reflected in the official data. Note, however, that on these alternative assumptions, China's large and growing external imbalance would decline by only a few tenths of a percentage point of GDP.

10. US data are available at US Department of Commerce, Bureau of Economic Analysis, National Income and Product Accounts Tables, www.bea.gov (accessed May 15, 2008).

11. UK data are available at UK Statistics Authority, National Statistics, "First Release: UK Output, Income and Expenditure, 4th Quarter 2007," www.statistics.gov.uk; Indian data are available at Press Information Bureau, Government of India, "Press Note: Quick Estimates of National Income, Consumption Expenditure, Saving, and Capital Formation, 2006–07," January 31, 2008, http://mospi.nic.in (accessed May 15, 2008).

12. National Bureau of Statistics of China, *China Statistical Yearbook 2007*, 75; CEIC.

13. Ibid.

14. Louis Kuijs and Tao Wang, "China's Pattern of Growth: Moving to Sustainability and Reducing Inequality," World Bank Policy Research Working Paper 3767 (Washington: World Bank, November 2005), 2.

15. Martin Wolf, "Why Is China Growing So Slowly?" *Foreign Policy* (January–February 2005), www.foreignpolicy.com (accessed August 4, 2005).

16. Calculated on the basis of the Indian Ministry of Statistics and Program Implementation, *National Account Statistics*, http://mospi.nic.in; IMF, *International Financial Statistics*; National Bureau of Statistics of China, *China Statistical Yearbook 2006* (Beijing: China Statistics Press, 2006), 34, 36, 171.

17. From 1978 through 2000, China's trade turnover (imports plus exports) measured in value terms expanded at an average rate of 15 percent per year. From 2000 through 2006, the pace accelerated to 25 percent per year.

18. Kuijs and Wang, World Bank Policy Research Working Paper 3767.

19. National Bureau of Statistics of China, *China Statistical Yearbook 2005*, 208, and *China Statistical Yearbook 2007*, 214. For recent years China's statistical authorities have released data on total investment in manufacturing and investment in manufacturing in urban areas. For these years urban investment has consistently accounted for about 75 percent of all investment in manufacturing. Thus the rising share of urban investment going to manufacturing is likely a good proxy for the share of total investment going to manufacturing.

20. For a detailed analysis, see Daniel Rosen and Trevor Houser, "China Energy: A Guide for the Perplexed," (report, Washington: Peterson Institute for International Economics, May 2007), www.petersoninstitute.org.

21. National Bureau of Statistics of China, *China Statistical Abstract 2006* (Beijing: China Statistics Press, 2006), 147.

22. For example, in 2003 overall efficiency gains were the equivalent of about 30 percent of the adverse effects on energy efficiency stemming from the structural shift toward the most energy-intensive subsectors of the industrial sector. Jiang Jin, "Managing Energy Demand: The Bridge to Sustainability," *China Economic Quarterly* 10, no. 4: 31.

23. Shai Oster, "Pollution Takes Rising Toll in China," *Wall Street Journal*, August 4, 2006, http://online.wsj.com (accessed August 4, 2006).

24. Ma Guonan, "Who Foots China's Bank Restructuring Bill?" in *The Turning Point in China's Economic Development*, eds. Ross Garnaut and Ligang Song (Canberra: Asia Pacific Press at the Australian National University, 2006).

25. National Development and Reform Commission, *Report on the Implementation of the 2005 Plan for National Economic and Social Development and on the 2006 Draft Plan for National Economic and Social Development* (Beijing, March 5, 2006), www.npc.gov.cn.

26. This is hardly an argument against further appreciation of the renminbi, however. The longer China maintains an undervalued currency, the greater the distortion of investment in favor of tradables and the greater the size of the ultimate adjustment required when the currency does move toward a long-term equilibrium value.

27. People's Bank of China, Monetary Policy Analysis Small Group, *Report on the Implementation of Monetary Policy 2005Q2* (Beijing, August 4, 2005), www.pbc.gov.cn, 28.

28. ISI Emerging Markets CEIC Database, available by subscription at www.securities.com.

29. International Energy Agency, *World Energy Outlook—China and India Insights* (Paris, 2007).

30. For details, see chapter 7 of this book.

31. Marvin Goodfriend and Eswar Prasad, "A Framework for Independent Monetary Policy in China," IMF Working Paper 06/11 (Washington: International Monetary Fund, May 2006), www.imf.org (accessed October 6, 2006).

32. Organization for Economic Cooperation and Development, *China,* OECD Economic Surveys, 2005/13 (Paris, September 2005), 185.

33. National Bureau of Statistics of China, *China Statistical Abstract 2004* (Beijing: China Statistics Press, 2004), 41, 187.

34. This reallocation, of course, would reduce government savings, since the latter are defined as current revenues less current (i.e., noninvestment) outlays.

35. National Bureau of Statistics of China, *China Statistical Abstract 2006*, 52.

36. Louis Kuijs believes these funds are transferred to state-owned enterprises in electric power, water, transport, and other infrastructure sectors. See Kuijs, "How Will China's Savings-Investment Balance Evolve?" World Bank China Office Research Working Paper no. 5 (Beijing: World Bank China Office, May 2006), 7.

37. National Bureau of Statistics of China, *China Statistical Yearbook 2007*, 73, 92–93.

38. Kuijs, World Bank Research Working Paper no. 5.

39. IMF, *Regional Economic Outlook: Asia and Pacific* (Washington, May 2006), www.imf.org (accessed August 16, 2006); National Bureau of Statistics of China, *China Statistical Yearbook 2005*, 770; National Bureau of Statistics of China. *China Statistical Yearbook 2006*, 882.

40. China Economic Research and Advisory Programme, "China and the Global Economy: Medium-term Issues and Options," December 2005.

41. Consumption increased by 2.6 percent in households where one spouse was not in the labor force or unemployed and by 5.7 percent in households where both spouses worked. See Shin-Yi Chou, Jin-Tan Liu, and James K. Hammit, "National Health Insurance and Precautionary Saving: Evidence from Taiwan," *Journal of Public Economics* 87 (2002): 1873–94.

42. National Bureau of Statistics of China, *China Statistical Yearbook 2005*, 494; People's Bank of China, *Quarterly Statistical Bulletin*, no. 41 (Beijing, 2006), 33.

43. Before-tax profits of industrial firms with sales above RMB5 million were RMB1.95 trillion in 2006 (National Bureau of Statistics of China, *China Statistical Yearbook 2007*, 503–505). In 2004 the profits of all industrial firms exceeded those of firms with sales of more than RMB5 million by 15 percent. Assuming this ratio was unchanged in 2006, profits of all industrial firms in 2006 can be estimated at RMB2.2 trillion. China's three largest oil producers are subject to a windfall profits tax, which amounted to RMB45 billion in 2006. Profits also are subject to the corporate income tax. While the statutory rate is 33 percent, various tax waivers reduce the applied rate to 24 percent for most domestic enterprises (Zhu Zhe, "Unified 25% Corporate Tax Proposed," *China Daily*, December 25, 2006). Assuming the average corporate tax rate on domestic firms was 24 percent, after-tax profits can be estimated at RMB1.67 trillion or 8 percent of 2006 GDP.

44. Louis Kuijs, William Mako, and Chunlin Zhang, "SOE Dividends: How Much and to Whom?" World Bank Policy Note (Beijing: World Bank, October 17, 2005), www.worldbank.org (accessed August 9, 2006).

45. For example, effective August 19, 2006, the People's Bank of China raised the nominal interest rate on a one-year term corporate deposit to 2.52 percent. The corporate goods price index in August 2006 was up 2.9 percent compared with August 2005, making the real return –0.4 percent. Nominal returns on short-term deposits are less than 2.52 percent, as low as 0.72 percent for demand deposits, making the real return on deposits of less than one year as low as –2.2 percent. The next adjustment was effective May 19, 2007 when the one-year deposit rate was raised to 3.06 percent. But the corporate goods price index for May 2007 was up 5.1 percent compared with May 2006, making the real return –2 percent. The de-

mand deposit rate was left unchanged at 0.72 percent so by mid May the real return fell to –4.4. In short-deposit rates for corporates are becoming increasingly negative in real terms.

46. Kuijs, Mako, and Zhang, World Bank Policy Note.

47. Calculated from data in the flow of funds accounts reported in the annual *China Statistical Yearbook*. The flow of funds data for 2004, released in the fall of 2007, show a further 4.7 percentage point decline in household disposable income as a share of GDP in 2004 alone. However, because the 2004 flow of funds accounts are based on the revised GDP data released in late September 2006, the 2004 numbers on disposable income and GDP are not comparable with those previously published.

48. Nicholas R. Lardy, *China's Unfinished Economic Revolution* (Washington: Brookings Institution, 1998), 109.

49. Morris Goldstein and Nicholas Lardy, "China's Exchange Rate Policy: An Overview of Some Key Issues," in *Debating China's Exchange Rate Policy*, ed. Morris Goldstein and Nicholas Lardy (Washington: Peterson Institute for International Economics, 2008), 4–9.

50. The real interest rate is calculated as the one-year lending rate minus the inflation rate reflected in the corporate goods price index. The latter index is compiled and published by the People's Bank of China.

51. Jianwu He and Louis Kuijs, "Rebalancing China's Economy—Modeling A Policy Package," World Bank China Research Paper no. 7 (World Bank, September 2007), www.worldbank.org.cn.

52. World Bank, "Water Supply Pricing in China: Economic Efficiency, Environment, and Social Affordability," Policy Note (Washington, December 2007), 4.

53. Ministry of Finance, Ministry of Agriculture, and State Tax Bureau, "Notice Concerning Issues in Lowering the Agricultural Tax Rate and Carrying Out the Reform of Eliminating the Agricultural Tax in Trial Points" (Beijing, June 30, 2004), www.mof.gov.cn (accessed July 21, 2006).

54. Wen Jiabao, *Report on Work of the Government* (Beijing, April 18, 2008).

55. Based on the revised 2006 GDP figure of RMB21,192 billion the National Bureau of Statistics reported in April 2008. State Tax Bureau, "The Adjustment of the Individual Income Tax Will Bring RMB28 Billion in Benefit to Tax Payers" (Beijing, November 17, 2005), www.mof.gov.cn (accessed July 21, 2006); National Bureau of Statistics of China, "Report Concerning the Results of the Verified Final Data on 2006 GDP and the Verified Preliminary Data on 2007 GDP" (Beijing, April 10, 2008), www.stats.gov.cn (accessed June 12, 2008).

56. Ministry of Labor and Social Security, "Regulations on the Minimum Wage" (Beijing, December 30, 2003), www.trs.molss.gov.cn (accessed June 29, 2006).

57. Workers and staff is a category that includes a substantial portion of individuals employed in urban areas but excludes those working in private firms and the self employed, as well as foreigners and persons from Hong Kong, Macao, and Taiwan.

58. Beijing Municipal Labor and Social Insurance Bureau and Beijing Statistical Bureau, "Announcement on Developments in Beijing Municipal Wage and Social Insurance Affairs in 1999," www.bjld.gov.cn (accessed June 24, 2008); Beijing Municipal Labor and Social Insurance Bureau, "Notice Concerning the Adjustment of the Minimum Wage Standard in Beijing Municipality in 2007," www.bjld.gov.cn (accessed June 24, 2008); and ISI Emerging Markets, CEIC Database.

59. China Statistical Information Net, "Wages of Beijing Workers and Staff Increase Steadily; Differentials Across Industrial Branches Expand" (Beijing), www.hebei.gov.cn (accessed July 10, 2006).

60. This appears to have been partially offset by the actions of local officials in rural areas. In response to the abolition of the agricultural tax, which had accrued to local governments, they imposed increased levels of unauthorized fees on rural residents.

61. Data in the paragraphs that follow are taken from speeches presented at the National People's Congress in Beijing in early March 2008.

62. National Bureau of Statistics of China, *China Statistical Abstract 2007*, 209; National Bureau of Statistics of China, *Statistical Report on the Development of Labor and Social Insurance in 2007* (Beijing, May 21, 2008), www.stats.gov.cn (accessed May 21, 2008).

63. State Council, "Opinion on the Trial Implementation of the State Capital Management Budget" (Beijing, September 8, 2008), www.sasac.gov.cn (accessed September 25, 2007).

64. Profits of all industrial firms in 2006 are estimated to be RMB2.2 trillion (note 43). I assume that 41 percent accrued to state-owned and state-controlled firms, the share they accounted for in 2005; National Bureau of Statistics of China, *China Statistical Yearbook 2005*, 491, 497, and *China Statistical Yearbook 2006*, 509. Deducting the windfall profits tax of state-owned oil companies and the average corporate income tax of 24 percent (note 43) results in an estimate of after-tax profits of RMB650 billion.

65. Ministry of Finance, "Progress in the Work of Reforming Rural Taxes and Fees in 2004 and the Direction for Work in 2005" (Beijing, March 2, 2005), www.mof.gov.cn (accessed July 21, 2006).

66. Ministry of Finance, "The State Capital Management Budget Is Not the So-Called 'Taking from the Fat to Subsidize the Skinny'" (Beijing, September 14, 2007), http://news.xinhuanet.com (accessed October 3, 2007).

67. Zhe, *China Daily*, December 25, 2006.

68. The central bank did raise the demand deposit rate briefly by 9 basis points to 0.81 percent for five months in 2007, between July 21 and December 20.

69. National Bureau of Statistics of China, "Overall Stability in National Economic Circulation in the First Quarter" (Beijing, April 16, 2008), www.stats.gov.cn (accessed April 16, 2008).

70. Jonathan Anderson, *The Chinese Monetary Policy Handbook* (Hong Kong: UBS, November 2007).

71. An effective exchange rate is a weighted average of the bilateral exchange rates with each of a country's trading partners where the weights are the trade shares of each trading partner. A real exchange rate is one adjusted for relative price changes at home and abroad, typically based on consumer price data.

72. US Department of Labor, Bureau of Labor Statistics, "Import/Export Price Indexes," 2006, http://data.bls.gov (accessed April 17, 2008).

73. Nicholas R. Lardy, *Integrating China into the Global Economy* (Washington: Brookings Institution, 2002), 26.

74. National Bureau of Statistics of China, *China Statistical Yearbook 2007*, 72.